
AWS General Reference

Reference guide

Version 1.0



AWS General Reference: Reference guide

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AWS General Reference

The AWS General Reference provides information that is useful across Amazon Web Services.

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AWS security credentials

When you interact with AWS, you specify your AWS *security credentials* to verify who you are and whether you have permission to access the resources that you are requesting. AWS uses the security credentials to authenticate and authorize your requests.

For example, if you want to download a protected file from an Amazon Simple Storage Service (Amazon S3) bucket, your credentials must allow that access. If your credentials aren't authorized to download the file, AWS denies your request. However, your AWS security credentials are not required to download a file in an Amazon S3 bucket that is publicly shared.

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AWS account root user credentials and IAM user credentials

There are two different types of users in AWS. You are either the account owner (root user) or you are an AWS Identity and Access Management (IAM) user. The root user is created when the AWS account is created and IAM users are created by the root user or an IAM administrator for the account. All AWS users have security credentials.

Root user credentials

The credentials of the account owner allow full access to all resources in the account. You cannot use [IAM policies](#) to explicitly deny the root user access to resources. You can only use an AWS Organizations [service control policy \(SCP\)](#) to limit the permissions of the root user. Because of this, we recommend that you create an IAM user with administrator permissions to use for everyday AWS tasks and lock away the access keys for the root user.

There are specific tasks that are restricted to the AWS account root user. For example, only the root user can close your account. If you need to perform a task that requires the root user, sign in to the AWS Management Console using the email address and password of the root user. For more information, see [Tasks that require root user credentials \(p. 3\)](#).

IAM credentials

With IAM, you can securely control access to AWS services and resources for users in your AWS account. For example, if you require administrator-level permissions, you can [create an IAM user](#), grant that user full access, and then use those credentials to interact with AWS. If you need to modify or revoke your permissions, you can delete or modify the policies that are associated with that IAM user.

If you have multiple users that require access to your AWS account, you can create unique credentials for each user and define who has access to which resources. You don't need to share credentials. For

example, you can create IAM users with read-only access to resources in your AWS account and distribute those credentials to users.

Tasks that require root user credentials

We recommend that you use an IAM user with appropriate permissions to perform tasks and access AWS resources. However, you can perform the tasks listed below only when you sign in as the root user of an account.

Tasks

- [Change your account settings](#). This includes the account name, email address, root user password, and root user access keys. Other account settings, such as contact information, payment currency preference, and Regions, do not require root user credentials.
- [Restore IAM user permissions](#). If the only IAM administrator accidentally revokes their own permissions, you can sign in as the root user to edit policies and restore those permissions.
- [Activate IAM access to the Billing and Cost Management console](#).
- View certain tax invoices. An IAM user with the [aws-portal:ViewBilling](#) permission can view and download VAT invoices from AWS Europe, but not AWS Inc or Amazon Internet Services Pvt. Ltd (AISPL).
- [Close your AWS account](#).
- [Change your AWS Support plan](#) or [Cancel your AWS Support plan](#). For more information, see [IAM for AWS Support](#).
- [Register as a seller](#) in the Reserved Instance Marketplace.
- [Configure MFA delete](#) for your S3 bucket.
- Edit or delete an Amazon S3 bucket policy that includes an invalid VPC ID or VPC endpoint ID.
- [Sign up for GovCloud](#).

Troubleshooting

If you cannot complete any of these tasks using your root user credentials, your account might be a member of an organization in AWS Organizations. If your organizational administrator used a service control policy (SCP) to limit the permissions of your account, your root user permissions might be affected. For more information, see [Service control policies](#) in the *AWS Organizations User Guide*.

Understanding and getting your AWS credentials

AWS requires different types of security credentials depending on how you access AWS. For example, you need a user name and password to sign in to the AWS Management Console and you need access keys to make programmatic calls to AWS or to use the AWS Command Line Interface or AWS Tools for PowerShell.

Considerations

- Be sure to save the following in a secure location: the email address associated with your AWS account, the AWS account ID, the root user password, and your account access keys. If you forget or lose your root user password, you must have access to the email address associated with your account in order to reset it. If you forget or lose your access keys, you must sign into your account to create new ones.
- We strongly recommend that you create an IAM user with administrator permissions to use for everyday AWS tasks and lock away the password and access keys for the root user. Use the root user only for the tasks that are restricted to the root user.

- Security credentials are account-specific. If you have access to multiple AWS accounts, you have separate credentials for each account.
- Do not provide your AWS credentials to a third party.

Credentials

- [Console access \(p. 4\)](#)
- [Programmatic access \(p. 5\)](#)
- [Temporary access keys \(p. 6\)](#)

Console access

There are two different types of users in AWS. You are either the account owner (root user) or you are an AWS Identity and Access Management (IAM) user. How you sign in to the AWS Management Console depends on whether you are the root user or an IAM user.

Contents

- [Root user email address and password \(p. 4\)](#)
- [IAM user name and password \(p. 4\)](#)
- [Multi-factor authentication \(MFA\) \(p. 4\)](#)

Root user email address and password

When you first create an AWS account, you specify an email address for the account and a password for the root user. To sign in to your AWS account as the root user, you provide this email address and password. The root user can sign in to the AWS Management Console and change the account name, email address, and password using the [Security Credentials](#) page. If you forget the password for the root user, open the [console sign-in page](#) and choose **Forgot your password?** to reset your password. This process requires access to the email address for the account.

IAM user name and password

IAM users are created by the root user or an IAM administrator within the AWS account. The user who created your IAM user should provide you with either the account alias or 12-digit AWS account ID, the IAM user name, and the password for the IAM user. An IAM user can sign in using either the console sign-in page or the following sign-in URL, replacing `account_id_or_alias` with either the account alias or AWS account ID provided to you:

```
https://account_id_or_alias.signin.aws.amazon.com/console/
```

If you forget the password for your IAM user, contact your IAM administrator or the account owner. If your IAM administrator gave you permissions to manage your own AWS credentials, then you can change your password periodically, which is a security best practice, using the [Security Credentials](#) page.

Multi-factor authentication (MFA)

Multi-factor authentication (MFA) provides an extra level of security that you can apply to your AWS account. For additional security, we recommend that you require MFA on the AWS account root user credentials and highly privileged IAM users. For more information, see [Using Multi-Factor Authentication \(MFA\) in AWS](#) in the [IAM User Guide](#).

With MFA enabled, when you sign in to your AWS account, you are prompted for your user name and password, plus an authentication code from an MFA device. Adding MFA provides increased security for your AWS account settings and resources.

By default, MFA (multi-factor authentication) is not enabled. You can enable and manage MFA devices for the AWS account root user by going to the [Security Credentials](#) page or the [IAM](#) dashboard in the AWS Management Console. For more information about enabling MFA for IAM users, see [Enabling MFA Devices](#) in the [IAM User Guide](#).

Programmatic access

You must provide your AWS access keys to make programmatic calls to AWS or to use the AWS Command Line Interface or AWS Tools for PowerShell.

When you create your access keys, you create the access key ID (for example, `AKIAIOSFODNN7EXAMPLE`) and secret access key (for example, `wJalrXUtnFEMI/K7MDENG/bPxRfCYEXAMPLEKEY`) as a set. The secret access key is available for download only when you create it. If you don't download your secret access key or if you lose it, you must create a new one.

You can assign up to two access keys per user (root user or IAM user). Having two access keys is useful when you want to rotate them. When you disable an access key, you can't use it, but it counts toward your limit of two access keys. After you delete an access key, it's gone forever and can't be restored, but it can be replaced with a new access key.

To manage access keys when signed in as the root user

1. Sign in to the AWS Management Console as the root user. For more information, see [Sign in as the root user](#) in the [IAM User Guide](#).
2. In the navigation bar on the upper right, choose your account name or number and then choose **My Security Credentials**.
3. Expand the **Access keys (access key ID and secret access key)** section.
4. Do one of the following:
 - To create an access key, choose **Create New Access Key**. If you already have two access keys, this button is disabled and you must delete an access key before you can create a new one. When prompted, choose either **Show Access Key** or **Download Key File**. This is your only opportunity to save your secret access key. After you've saved your secret access key in a secure location, chose **Close**.
 - To deactivate an access key, choose **Make Inactive**. When prompted for confirmation, choose **Deactivate**. A deactivated access key still counts toward your limit of two access keys.
 - To activate an access key, choose **Make Active**.
 - To delete an access key when you no longer need it, copy the access key ID and then choose **Delete**. Before you can delete the access key, you must choose **Deactivate**. We recommend that you verify that the access key is no longer in use before you permanently delete it. To confirm deletion, paste the access key ID in the text input field and then choose **Delete**.

To manage access keys when signed in as an IAM user

1. Sign in to the AWS Management Console as an IAM user. For more information, see [Sign in as an IAM user](#) in the [IAM User Guide](#).
2. In the navigation bar on the upper right, choose your user name and then choose **My Security Credentials**.

Tip

If you do not see the **My Security Credentials** page, you might be signed in as a federated user, not an IAM user. You can create and use [temporary access keys \(p. 6\)](#) instead.

3. Do one of the following:

- To create an access key, choose **Create access key**. If you already have two access keys, this button is disabled and you must delete an access key before you can create a new one. When prompted, choose either **Show secret access key** or **Download .csv file**. This is your only opportunity to save your secret access key. After you've saved your secret access key in a secure location, chose **Close**.
- To deactivate an access key, choose **Make inactive**. When prompted for confirmation, choose **Deactivate**. A deactivated access key still counts toward your limit of two access keys.
- To activate an access key, choose **Make active**. When prompted for confirmation, choose **Make active**.
- To delete an access key when you no longer need it, copy the access key ID and then choose **Delete**. This deactivates the access key. We recommend that you verify that the access key is no longer in use before you permanently delete it. To confirm deletion, paste the access key ID in the text input field and then choose **Delete**.

Temporary access keys

You can also create and use temporary access keys, known as *temporary security credentials*. In addition to the access key ID and secret access key, temporary security credentials include a security token that you must send to AWS when you use temporary security credentials. The advantage of temporary security credentials is that they are short term. After they expire, they're no longer valid. You can use temporary access keys in less secure environments or distribute them to grant users temporary access to resources in your AWS account. For example, you can grant entities from other AWS accounts access to resources in your AWS account (cross-account access). You can also grant users who don't have AWS security credentials access to resources in your AWS account (federation). For more information, see [aws sts assume-role](#).

Your AWS account identifiers

AWS assigns the following unique identifiers to each AWS account:

AWS account ID

A 12-digit number, such as 123456789012, that uniquely identifies an AWS account. Many AWS resources include the account ID in their [Amazon Resource Names \(ARNs\)](#). The account ID portion distinguishes resources in one account from the resources in another account. If you are an IAM user, you can sign in to the AWS Management Console using either the account ID or account alias.

Canonical user ID

An alpha-numeric identifier, such as 79a59df900b949e55d96a1e698fbacedfd6e09d98eacf8f8d5218e7cd47ef2be, that is an obfuscated form of the AWS account ID. You can use this ID to identify an AWS account when granting cross-account access to buckets and objects using Amazon S3. You can retrieve the canonical user ID for your AWS account as either the root user or an IAM user.

For more information, see [Finding the canonical user ID for your AWS account in the Amazon S3 User Guide](#).

You must be authenticated with AWS to view these identifiers.

Warning

Do not provide your [AWS credentials \(p. 3\)](#) to a third party that needs your AWS account identifiers to share AWS resources with you. Doing so would give them the same access to the AWS account that you have.

Finding your AWS account ID

You can find the AWS account ID in the AWS Management Console. The location of the account ID in the console depends on whether you are logged in as the root user or an IAM user. The account ID is the same whether you are logged in as the root user or an IAM user.

Prerequisite

You must be signed in to the AWS Management Console. For more information, see [Signing in to the AWS Management Console](#) in the *IAM User Guide*.

To find your AWS account ID when signed in as the root user

1. In the navigation bar on the upper right, choose your account name or number and then choose **My Security Credentials**.
2. Expand the **Account identifiers** section. The account number appears next to the label **AWS Account ID**.

To find your AWS account ID when signed in as an IAM user

1. In the navigation bar on the upper right, choose your user name and then choose **My Security Credentials**.

Tip

If you do not see the **My Security Credentials** page, you might be signed in as a federated user, not an IAM user.

2. At the top of the page, under **Account details**, the account number appears next to the label **AWS account ID**.

To find your AWS account ID using the AWS CLI

Use the [get-caller-identity](#) command as follows:

```
aws sts get-caller-identity --query Account --output text
```

Best practices for managing AWS access keys

When you use AWS programmatically, you provide your AWS access keys so that AWS can verify your identity in programmatic calls. Your access keys consist of an access key ID (for example, AKIAIOSFODNN7EXAMPLE) and a secret access key (for example, wJalrXUtnFEMI/K7MDENG/bPxRfiCYEXAMPLEKEY).

Anyone who has your access keys has the same level of access to your AWS resources that you do. Consequently, AWS goes to significant lengths to protect your access keys, and, in keeping with our [shared-responsibility model](#), you should as well.

The steps that follow can help you protect your access keys. For background information, see [AWS security credentials \(p. 2\)](#).

Note

Your organization may have different security requirements and policies than those described in this topic. The suggestions provided here are intended as general guidelines.

Protect or don't create your root user access key

You must use an access key (access key ID plus secret access key) to make programmatic requests to AWS. For example, when using the [AWS Command Line Interface](#), an [AWS SDK](#), or direct API calls. Anyone who has the access keys for your AWS account root user has unrestricted access to all resources in your AWS account, including billing information. You can't reduce the permissions associated with the access key for the AWS account root user.

For more information, see [Lock away your AWS account root user access keys](#) in the *IAM User Guide*.

Manage access keys for IAM users

Instead of sharing the credentials of the AWS account root user, create individual IAM users, granting each user only the permissions they require. For more information, see [Managing Access Keys for IAM Users](#) in the *IAM User Guide*.

Observe these precautions when using access keys:

- **Don't embed access keys directly into code.** The [AWS SDKs](#) and the [AWS Command Line Tools](#) enable you to put access keys in known locations so that you do not have to keep them in code.

Put access keys in one of the following locations:

- **The AWS credentials file.** The AWS SDKs and AWS CLI automatically use the credentials that you store in the AWS credentials file.

For information about using the AWS credentials file, see the documentation for your SDK. Examples include [Set up AWS Credentials and Region for Development](#) in the *AWS SDK for Java Developer Guide* and [Configuration and Credential Files](#) in the *AWS Command Line Interface User Guide*.

To store credentials for the AWS SDK for .NET and the AWS Tools for Windows PowerShell, we recommend that you use the SDK Store. For more information, see [Using the SDK Store](#) in the *AWS SDK for .NET Developer Guide*.

- **Environment variables.** On a multitenant system, choose user environment variables, not system environment variables.

For more information about using environment variables to store credentials, see [Environment Variables](#) in the *AWS Command Line Interface User Guide*.

- **Rotate access keys periodically.** Change access keys on a regular basis. For details, see [Rotating Access Keys \(AWS CLI, Tools for Windows PowerShell, and AWS API\)](#) in the *IAM User Guide* and [How to Rotate Access Keys for IAM Users](#) on the AWS Security Blog.
- **Remove unused access keys.** If a user leaves your organization, remove the corresponding IAM user so that the user can no longer access your resources. To find out when an access key was last used, use the [GetAccessKeyLastUsed](#) API (AWS CLI command: `aws iam get-access-key-last-used`).
- **Configure multi-factor authentication for your most sensitive operations.** For more information, see [Using Multi-Factor Authentication \(MFA\) in AWS](#) in the *IAM User Guide*.

Use IAM roles instead of long-term access keys

In many scenarios, you don't need long-term access keys that never expire (as you have with an IAM user). Instead, you can create IAM roles and generate temporary security credentials. Temporary security credentials consist of an access key ID and a secret access key, but they also include a security token that indicates when the credentials expire.

Long-term access keys, such as those associated with IAM users and AWS account root users, remain valid until you manually revoke them. However, temporary security credentials obtained through IAM roles

and other features of the AWS Security Token Service expire after a short period of time. Use temporary security credentials to help reduce your risk in case credentials are accidentally exposed.

Use an IAM role and temporary security credentials in these scenarios:

- **You have an application or AWS CLI scripts running on an Amazon EC2 instance.** Do not use access keys directly in your application. Don't pass access keys to the application, embed them in the application, or let the application read access keys from any source. Instead, define an IAM role that has appropriate permissions for your application and launch the Amazon EC2 instance with [roles for EC2](#). Doing this associates an IAM role with the Amazon EC2 instance. This practice also enables the application to get temporary security credentials that it can in turn use to make programmatic calls to AWS. The AWS SDKs and the AWS CLI can get temporary credentials from the role automatically.
- **You need to grant cross-account access.** Use an IAM role to establish trust between accounts, and then grant users in one account limited permissions to access the trusted account. For more information, see [Tutorial: Delegate Access Across AWS Accounts Using IAM Roles](#) in the *IAM User Guide*.
- **You have a mobile app.** Do not embed access keys with the app, even in encrypted storage. Instead, use [Amazon Cognito](#) to manage user identities in your app. This service lets you authenticate users using Login with Amazon, Facebook, Google, or any OpenID Connect (OIDC)-compatible identity provider. You can then use the Amazon Cognito credentials provider to manage credentials that your app uses to make requests to AWS. For more information, see [Using the Amazon Cognito Credentials Provider](#) on the AWS Mobile Blog.
- **You want to federate into AWS and your organization supports SAML 2.0.** If you work for an organization that has an identity provider that supports SAML 2.0, configure the provider to use SAML. You can use SAML to exchange authentication information with AWS and get back a set of temporary security credentials. For more information, see [About SAML 2.0-based Federation](#) in the *IAM User Guide*.
- **You want to federate into AWS and your organization has an on-premises identity store.** If users can authenticate inside your organization, you can write an application that can issue them temporary security credentials for access to AWS resources. For more information, see [Creating a URL that Enables Federated Users to Access the AWS Management Console \(Custom Federation Broker\)](#) in the *IAM User Guide*.

Access the mobile app using AWS access keys

You can access a limited set of AWS services and features using the AWS mobile app. The mobile app helps you support incident response while on the go. For more information and to download the app, see [AWS Console Mobile Application](#).

You can sign in to the mobile app using your console password or your access keys. As a best practice, do not use root user access keys. Instead, we strongly recommend that in addition to using a password or biometric lock on your mobile device, you [create an IAM user](#) to manage AWS resources. If you lose your mobile device, you can remove the IAM user's access. For more information about generating access keys for an IAM user, see [Managing Access Keys for IAM Users](#) in the *IAM User Guide*.

To sign in using access keys (mobile app)

1. Open the app on your mobile device.
2. If this is the first time that you're adding an identity to the device, choose **Add an identity** and then choose **Access keys**.

If you have already signed in using another identity, choose the menu icon and choose **Switch identity**. Then choose **Sign in as a different identity** and then **Access keys**.

3. On the **Access keys** page, enter your information:

- **Access key ID** – Enter your access key ID.

- **Secret access key** – Enter your secret access key.
- **Identity name** – Enter the name of the identity that will appear in the mobile app. This does not need to match your IAM user name.
- **Identity PIN** – Create a personal identification number (PIN) that you will use for future sign-ins.

Note

If you enable biometrics for the AWS mobile app, you will be prompted to use your fingerprint or facial recognition for verification instead of the PIN. If the biometrics fail, you might be prompted for the PIN instead.

4. Choose **Verify and add keys**.

You can now access a select set of your resources using the mobile app.

Learn more

For more information about best practices for keeping your AWS account secure, see the following resources:

- [IAM Best Practices](#). Contains suggestions for using the AWS Identity and Access Management (IAM) service to help secure your AWS resources.
- The following pages provide guidance for setting up the AWS SDKs and the AWS CLI to use access keys.
 - [Set up AWS Credentials and Region for Development](#) in the *AWS SDK for Java Developer Guide*.
 - [Using the SDK Store](#) in the *AWS SDK for .NET Developer Guide*.
 - [Providing Credentials to the SDK](#) in the *AWS SDK for PHP Developer Guide*.
 - [Configuration](#) in the Boto 3 (AWS SDK for Python) documentation.
 - [Using AWS Credentials](#) in the *AWS Tools for Windows PowerShell* guide.
 - [Configuration and Credential Files](#) in the *AWS Command Line Interface User Guide*.
- [Granting Access Using an IAM Role](#). Discusses how programs written using the .NET SDK can automatically get temporary security credentials when running on an Amazon EC2 instance. Similar information is available for the [AWS SDK for Java](#).

AWS security audit guidelines

You should periodically audit your security configuration to make sure it meets your current business needs. An audit gives you an opportunity to remove unneeded IAM users, roles, groups, and policies, and to make sure that your users and software have only the permissions that are required.

Following are guidelines for systematically reviewing and monitoring your AWS resources for security best practices.

Contents

- [When you should perform a security audit \(p. 11\)](#)
- [Guidelines for auditing \(p. 11\)](#)
- [Review your AWS account credentials \(p. 11\)](#)
- [Review your IAM users \(p. 11\)](#)
- [Review your IAM groups \(p. 12\)](#)
- [Review your IAM roles \(p. 12\)](#)
- [Review your IAM providers for SAML and OpenID Connect \(OIDC\) \(p. 12\)](#)

- [Review Your mobile apps \(p. 12\)](#)
- [Review your Amazon EC2 security configuration \(p. 13\)](#)
- [Review AWS policies in other services \(p. 13\)](#)
- [Monitor activity in your AWS account \(p. 13\)](#)
- [Tips for reviewing IAM policies \(p. 14\)](#)
- [Learn more \(p. 15\)](#)

When you should perform a security audit

You should audit your security configuration in the following situations:

- On a periodic basis. You should perform the steps described in this document at regular intervals as a best practice for security.
- If there are changes in your organization, such as people leaving.
- If you have stopped using one or more individual AWS services. This is important for removing permissions that users in your account no longer need.
- If you've added or removed software in your accounts, such as applications on Amazon EC2 instances, AWS OpsWorks stacks, AWS CloudFormation templates, etc.
- If you ever suspect that an unauthorized person might have accessed your account.

Guidelines for auditing

As you review your account's security configuration, follow these guidelines:

- **Be thorough.** Look at all aspects of your security configuration, including those you might not use regularly.
- **Don't assume.** If you are unfamiliar with some aspect of your security configuration (for example, the reasoning behind a particular policy or the existence of a role), investigate the business need until you are satisfied.
- **Keep things simple.** To make auditing (and management) easier, use IAM groups, consistent naming schemes, and straightforward policies.

Review your AWS account credentials

Take these steps when you audit your AWS account credentials:

1. If you're not using the root access keys for your account, you can remove them. We [strongly recommend](#) that you do not use root access keys for everyday work with AWS, and that instead you create IAM users.
2. If you do need to keep the access keys for your account, [rotate them regularly](#).

Review your IAM users

Take these steps when you audit your existing IAM users:

1. [List your users](#) and then [delete users](#) that are inactive.
2. [Remove users from groups](#) that they don't need to be a part of.
3. Review the policies attached to the groups the user is in. See [Tips for reviewing IAM policies \(p. 14\)](#).

4. Delete security credentials that the user doesn't need or that might have been exposed. For example, an IAM user that is used for an application does not need a password (which is necessary only to sign in to AWS websites). Similarly, if a user does not use access keys, there's no reason for the user to have one. For more information, see [Managing Passwords for IAM Users](#) and [Managing Access Keys for IAM Users](#) in the *IAM User Guide*.

You can generate and download a credential report that lists all IAM users in your account and the status of their various credentials, including passwords, access keys, and MFA devices. For passwords and access keys, the credential report shows how recently the password or access key has been used. Credentials that have not been used recently might be good candidates for removal. For more information, see [Getting Credential Reports for your AWS Account](#) in the *IAM User Guide*.

5. Rotate (change) user security credentials periodically, or immediately if you ever share them with an unauthorized person. For more information, see [Managing Passwords for IAM Users](#) and [Managing Access Keys for IAM Users](#) in the *IAM User Guide*.

Review your IAM groups

Take these steps when you audit your IAM groups:

1. [List your groups](#) and then [delete groups](#) that are unused.
2. [Review users](#) in each group and [remove users](#) that don't belong.
3. Review the policies attached to the group. See [Tips for reviewing IAM policies \(p. 14\)](#).

Review your IAM roles

Take these steps when you audit your IAM roles:

1. [List your roles](#) and then [delete roles](#) that are unused.
2. [Review](#) the role's trust policy. Make sure that you know who the principal is and that you understand why that account or user needs to be able to assume the role.
3. [Review](#) the access policy for the role to be sure that it grants suitable permissions to whoever assumes the role—see [Tips for reviewing IAM policies \(p. 14\)](#).

Review your IAM providers for SAML and OpenID Connect (OIDC)

If you have created an IAM entity for establishing trust with a [SAML or OIDC identity provider](#), take these steps:

1. Delete unused providers.
2. Download and review the AWS metadata documents for each SAML provider and make sure the documents reflect your current business needs. Alternatively, get the latest metadata documents from the SAML IdPs that you want to establish trust with and [update the provider in IAM](#).

Review Your mobile apps

If you have created a mobile app that makes requests to AWS, take these steps:

1. Make sure that the mobile app does not contain embedded access keys, even if they are in encrypted storage.

2. Get temporary credentials for the app by using APIs that are designed for that purpose. We recommend that you use [Amazon Cognito](#) to manage user identity in your app. This service lets you authenticate users using Login with Amazon, Facebook, Google, or any OpenID Connect (OIDC)-compatible identity provider. You can then use the [Amazon Cognito credentials provider](#) to manage credentials that your app uses to make requests to AWS.

If your mobile app doesn't support authentication using Login with Amazon, Facebook, Google, or any other OIDC-compatible identity provider, you can [create a proxy server](#) that can dispense temporary credentials to your app.

Review your Amazon EC2 security configuration

Take the following steps for [each AWS Region](#):

1. [Delete](#) Amazon EC2 key pairs that are unused or that might be known to people outside your organization.
2. Review your [Amazon EC2 security groups](#):
 - Remove security groups that no longer meet your needs.
 - Remove rules from security groups that no longer meet your needs. Make sure you know why the ports, protocols, and IP address ranges they permit have been allowed.
3. Terminate instances that aren't serving a business need or that might have been started by someone outside your organization for unapproved purposes. Remember that if an instance is started with a role, applications that run on that instance can access AWS resources using the permissions that are granted by that role.
4. Cancel [Spot Instance requests](#) that aren't serving a business need or that might have been made by someone outside your organization.
5. Review your [Auto Scaling](#) groups and configurations. [Shut down](#) any that no longer meet your needs or that might have been configured by someone outside your organization.

Review AWS policies in other services

Review the permissions for services that use resource-based policies or that support other security mechanisms. In each case, make sure that only users and roles with a current business need have access to the service's resources, and that the permissions granted on the resources are the fewest necessary to meet your business needs.

- Review your [Amazon S3 bucket policies and ACLs](#).
- Review your [Amazon SQS queue policies](#).
- Review your [Amazon SNS topic policies](#).
- Review your [AWS OpsWorks permissions](#).
- Review your [AWS KMS key policies](#).

Monitor activity in your AWS account

Follow these guidelines for monitoring AWS activity:

- Turn on [AWS CloudTrail](#) in each account and use it in each supported Region.
- Periodically examine CloudTrail log files. (CloudTrail has a number of [partners](#) who provide tools for reading and analyzing log files.)
- [Enable Amazon S3 bucket logging](#) to monitor requests made to each bucket.

- If you believe there has been unauthorized use of your account, pay particular attention to temporary credentials that have been issued. If temporary credentials have been issued that you don't recognize, **disable** their permissions.
- Enable **billing alerts** in each account and set a cost threshold that lets you know if your charges exceed your normal usage.

Tips for reviewing IAM policies

Policies are powerful and subtle, so it's important to study and understand the permissions that are granted by each policy. Use the following guidelines when reviewing policies:

- As a **best practice**, attach policies to groups instead of to individual users. If an individual user has a policy, make sure you understand why that user needs the policy.
- Make sure that IAM users, groups, and roles have only the permissions that they need.
- Use the [IAM Policy Simulator](#) to test policies that are attached to users or groups.
- Remember that a user's permissions are the result of all applicable policies—user policies, group policies, and resource-based policies (on Amazon S3 buckets, Amazon SQS queues, Amazon SNS topics, and AWS KMS keys). It's important to examine all the policies that apply to a user and to understand the complete set of permissions granted to an individual user.
- Be aware that allowing a user to create an IAM user, group, role, or policy and attach a policy to the principal entity is effectively granting that user all permissions to all resources in your account. That is, users who are allowed to create policies and attach them to a user, group, or role can grant themselves any permissions. In general, do not grant IAM permissions to users or roles whom you do not trust with full access to the resources in your account. The following list contains IAM permissions that you should review closely:
 - `iam:PutGroupPolicy`
 - `iam:PutRolePolicy`
 - `iam:PutUserPolicy`
 - `iam>CreatePolicy`
 - `iam:CreatePolicyVersion`
 - `iam:AttachGroupPolicy`
 - `iam:AttachRolePolicy`
 - `iam:AttachUserPolicy`
- Make sure policies don't grant permissions for services that you don't use. For example, if you use [AWS managed policies](#), make sure the AWS managed policies that are in use in your account are for services that you actually use. To find out which AWS managed policies are in use in your account, use the IAM [GetAccountAuthorizationDetails](#) API (AWS CLI command: `aws iam get-account-authorization-details`).
- If the policy grants a user permission to launch an Amazon EC2 instance, it might also allow the `iam:PassRole` action, but if so it should [explicitly list the roles](#) that the user is allowed to pass to the Amazon EC2 instance.
- Closely examine any values for the Action or Resource element that include *. It's a best practice to grant Allow access to only the individual actions and resources that users need. However, the following are reasons that it might be suitable to use * in a policy:
 - The policy is designed to grant administrative-level privileges.
 - The wildcard character is used for a set of similar actions (for example, `Describe*`) as a convenience, and you are comfortable with the complete list of actions that are referenced in this way.
 - The wildcard character is used to indicate a class of resources or a resource path (e.g., `arn:aws:iam::account-id:users/division_abc/*`), and you are comfortable granting access to all of the resources in that class or path.

- A service action does not support resource-level permissions, and the only choice for a resource is *.
- Examine policy names to make sure they reflect the policy's function. For example, although a policy might have a name that includes "read only," the policy might actually grant write or change permissions.

Learn more

For information about managing IAM resources, see the following:

- [IAM Users and Groups](#) in the *IAM User Guide*.
- [Permissions and Policies](#) in the *IAM User Guide*.
- [IAM Roles \(Delegation and Federation\)](#) in the *IAM User Guide*.
- [IAM Policy Simulator](#) in the *Using IAM Policy Simulator* guide.

For more information about Amazon EC2 security, see the following:

- [Network and Security](#) in the *Amazon EC2 User Guide for Linux Instances*.
- [Demystifying EC2 Resource-Level Permissions](#) on the AWS Security Blog.

For more information about monitoring an AWS account, see the re:Invent 2013 video presentation [Intrusion Detection in the Cloud](#).

Service endpoints and quotas

The following pages describe the service endpoints and service quotas for AWS services. To connect programmatically to an AWS service, you use an endpoint. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Click one of the following links to go to the page for that service. To view the service quotas for all AWS services in the documentation without switching pages, view the information in the [Service endpoints and quotas](#) page in the PDF instead.

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Alexa for Business endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|-----------------------------|----------|--|
| US East (N. Virginia) | us-east-1 | a4b.us-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---------------------------------|--------------------------------|------------|
| Address books | Each supported Region: 25 | Yes |
| Contacts per account | Each supported Region: 10,000 | Yes |
| Contacts per address book | Each supported Region: 100 | Yes |
| Number of conference appliances | Each supported Region: 10,000 | Yes |
| Number of devices | Each supported Region: 100,000 | Yes |
| Number of devices per room | Each supported Region: 10 | Yes |
| Number of gateways | Each supported Region: 100 | Yes |

| Name | Default | Adjustable |
|----------------------------------|-------------------------------|------------|
| Number of profiles | Each supported Region: 100 | Yes |
| Number of rooms | Each supported Region: 10,000 | Yes |
| Number of skill groups | Each supported Region: 1,000 | Yes |
| Number of skills | Each supported Region: 100 | Yes |
| Number of skills per skill group | Each supported Region: 25 | Yes |
| Number of users | Each supported Region: 10,000 | Yes |

AWS Amplify endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Amplify endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|--------------------------------------|----------|
| US East (Ohio) | us-east-2 | amplify.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | amplify.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | amplify.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | amplify.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | amplify.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | amplify.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | amplify.ap-northeast-2.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--------------------------------------|-----------------|--|
| Asia Pacific (Singapore) | ap-southeast-1 | amplify.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | amplify.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | amplify.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | amplify.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | amplify.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | amplify.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | amplify.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | amplify.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | amplify.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | amplify.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | amplify.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | amplify.sa-east-1.amazonaws.com | HTTPS | |

Amplify Studio (backend) endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|---------------|--|-----------------|--|
| US East (Ohio) | us-east-2 | amplifybackend.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | amplifybackend.us-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| US West (N. California) | us-west-1 | amplifybackend.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | amplifybackend.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | amplifybackend.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | amplifybackend.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | amplifybackend.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | amplifybackend.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | amplifybackend.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | amplifybackend.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | amplifybackend.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | amplifybackend.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | amplifybackend.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | amplifybackend.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | amplifybackend.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | amplifybackend.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | amplifybackend.sa-east-1.amazonaws.com | HTTPS | |

Amplify Studio (UI Builder) endpoints

| Region Name | Region | Endpoint | Protocol |
|---------------------------|----------------|---|----------|
| Europe (Stockholm) | eu-north-1 | amplifyuibuilder.eu-north-1.amazonaws.com | HTTPS |
| Middle East (Bahrain) | me-south-1 | amplifyuibuilder.me-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | amplifyuibuilder.ap-south-1.amazonaws.com | HTTPS |
| Europe (Paris) | eu-west-3 | amplifyuibuilder.eu-west-3.amazonaws.com | HTTPS |
| US East (Ohio) | us-east-2 | amplifyuibuilder.us-east-2.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | amplifyuibuilder.eu-west-1.amazonaws.com | HTTPS |
| Europe (Frankfurt) | eu-central-1 | amplifyuibuilder.eu-central-1.amazonaws.com | HTTPS |
| South America (Sao Paulo) | sa-east-1 | amplifyuibuilder.sa-east-1.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | amplifyuibuilder.us-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | amplifyuibuilder.ap-northeast-2.amazonaws.com | HTTPS |

Amplify Service quotas

| Name | Default | Adjustable |
|---------------------------------|------------------------------------|------------|
| Apps | Each supported Region: 25 | Yes |
| Branches per app | Each supported Region: 50 | Yes |
| Build artifact size | Each supported Region: 5 Gigabytes | No |
| Cache artifact size | Each supported Region: 5 Gigabytes | No |
| Concurrent jobs | Each supported Region: 5 | Yes |
| Domains per app | Each supported Region: 5 | Yes |
| Environment cache artifact size | Each supported Region: 5 Gigabytes | No |
| Manual deploy ZIP file size | Each supported Region: 5 Gigabytes | No |

| Name | Default | Adjustable |
|--------------------------------|---------------------------|------------|
| Maximum app creations per hour | Each supported Region: 25 | No |
| Subdomains per domain | Each supported Region: 50 | Yes |
| Webhooks per app | Each supported Region: 50 | Yes |

Amplify Studio (UI Builder) Service quotas

| Name | Default | Adjustable | |
|--------------------|--------------------------------------|------------|--|
| Components per app | All supported Regions: 1000 | No | |
| Component size | All supported Regions: 350 Kilobytes | No | |
| Themes per app | All supported Regions: 1000 | No | |
| Theme size | All supported Regions: 350 Kilobytes | No | |

Amazon API Gateway endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Amazon API Gateway includes the API Gateway Control Plane (for creating and managing APIs) and the API Gateway Data Plane (for calling deployed APIs).

The Route 53 Hosted Zone ID column shows the Route 53 Hosted Zone IDs for API Gateway Regional endpoints. Route 53 Hosted Zone IDs are for use with the `execute-api` (API Gateway component service for API execution) domain. For edge-optimized endpoints, the Route 53 Hosted Zone ID is Z2FDTNDATAQYW2 for all Regions.

Amazon API Gateway control plane

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|---|----------|--|
| US East (Ohio) | us-east-2 | apigateway.us-east-2.amazonaws.com | HTTPS | |
| | | apigateway-fips.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | apigateway.us-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|-----------------|--|
| | | apigateway-fips.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | apigateway.us-west-1.amazonaws.com | HTTPS | |
| | | apigateway-fips.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | apigateway.us-west-2.amazonaws.com | HTTPS | |
| | | apigateway-fips.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | apigateway.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | apigateway.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | apigateway.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | apigateway.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | apigateway.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | apigateway.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | apigateway.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | apigateway.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | apigateway.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | apigateway.ca-central-1.amazonaws.com | HTTPS | |
| | | apigateway-fips.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | apigateway.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | apigateway.eu-west-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|-----------------|--|
| Europe (London) | eu-west-2 | apigateway.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | apigateway.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | apigateway.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | apigateway.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | apigateway.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | apigateway.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | apigateway.us-gov-east-1.amazonaws.com apigateway-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | apigateway.us-gov-west-1.amazonaws.com apigateway-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Amazon API Gateway data plane

| Region Name | Region | Endpoint | Protocol | Route 53 Hosted Zone ID | |
|-------------------------|---------------|--------------------------------------|-----------------|--------------------------------|--|
| US East (Ohio) | us-east-2 | execute-api.us-east-2.amazonaws.com | HTTPS | ZOJJZC49E0EPZ | |
| US East (N. Virginia) | us-east-1 | execute-api.us-east-1.amazonaws.com | HTTPS | Z1UJRXOUUMOOFQ8 | |
| US West (N. California) | us-west-1 | execute-api.us-west-1.amazonaws.com | HTTPS | Z2MUQ32089INYE | |
| US West (Oregon) | us-west-2 | execute-api.us-west-2.amazonaws.com | HTTPS | Z2OJLYMUO9EFXC | |
| Africa (Cape Town) | af-south-1 | execute-api.af-south-1.amazonaws.com | HTTPS | Z2DHW2332DAMTN | |
| Asia Pacific | ap-east-1 | execute-api.ap-east-1.amazonaws.com | HTTPS | Z3FD1VL90ND7K5 | |

| Region Name | Region | Endpoint | Protocol | Route 53 Hosted Zone ID | |
|---------------------------|----------------|--|-----------------|--------------------------------|--|
| (Hong Kong) | | | | | |
| Asia Pacific (Mumbai) | ap-south-1 | execute-api.ap-south-1.amazonaws.com | HTTPS | Z3VO1THU9YC4UR | |
| Asia Pacific (Seoul) | ap-northeast-2 | execute-api.ap-northeast-2.amazonaws.com | HTTPS | Z20JF4UZKIW1U8 | |
| Asia Pacific (Singapore) | ap-southeast-1 | execute-api.ap-southeast-1.amazonaws.com | HTTPS | ZL327KTPIQFUL | |
| Asia Pacific (Sydney) | ap-southeast-2 | execute-api.ap-southeast-2.amazonaws.com | HTTPS | Z2RPCDW04V8134 | |
| Asia Pacific (Tokyo) | ap-northeast-1 | execute-api.ap-northeast-1.amazonaws.com | HTTPS | Z1YSHQZH15GKL | |
| Canada (Central) | ca-central-1 | execute-api.ca-central-1.amazonaws.com | HTTPS | Z19DQILCV0OWEC | |
| Europe (Frankfurt) | eu-central-1 | execute-api.eu-central-1.amazonaws.com | HTTPS | Z1U9ULNL0V5AJ3 | |
| Europe (Ireland) | eu-west-1 | execute-api.eu-west-1.amazonaws.com | HTTPS | ZLY8HYME6SFDD | |
| Europe (London) | eu-west-2 | execute-api.eu-west-2.amazonaws.com | HTTPS | ZJ5UAJN8Y3Z2Q | |
| Europe (Milan) | eu-south-1 | execute-api.eu-south-1.amazonaws.com | HTTPS | Z3BT4WSQ9TDYZV | |
| Europe (Paris) | eu-west-3 | execute-api.eu-west-3.amazonaws.com | HTTPS | Z3KY65QIEKYHQQ | |
| Europe (Stockholm) | eu-north-1 | execute-api.eu-north-1.amazonaws.com | HTTPS | Z3UWIKFBOOGXPP | |
| Middle East (Bahrain) | me-south-1 | execute-api.me-south-1.amazonaws.com | HTTPS | Z20ZBPCOSS8806 | |
| South America (São Paulo) | sa-east-1 | execute-api.sa-east-1.amazonaws.com | HTTPS | ZCMLWB8V5SYIT | |
| AWS GovCloud (US-East) | us-gov-east-1 | execute-api.us-gov-east-1.amazonaws.com | HTTPS | Z3SE9ATJYCRCZJ | |

| Region Name | Region | Endpoint | Protocol | Route 53 Hosted Zone ID | |
|------------------------|---------------|---|----------|-------------------------|--|
| AWS GovCloud (US-West) | us-gov-west-1 | execute-api.us-gov-west-1.amazonaws.com | HTTPS | Z1K6XKP9SAGWDV | |

Service quotas

| Name | Default | Adjustable |
|---|--|------------|
| API Payload Size | Each supported Region: 10 Megabytes | No |
| API Stage throttles in a usage plan | Each supported Region: 100 | No |
| API keys | Each supported Region: 10,000 | No |
| AWS Lambda authorizer result size | Each supported Region: 8 Kilobytes | No |
| Client certificates | Each supported Region: 60 | Yes |
| Connection duration for WebSocket API | Each supported Region: 7,200 Seconds | No |
| Custom Domain Names | Each supported Region: 120 | Yes |
| Edge API URL Length | Each supported Region: 8,192 | No |
| Edge-optimized APIs | Each supported Region: 120 | No |
| Maximum API caching TTL | Each supported Region: 3,600 Seconds | No |
| Maximum Cached Response Size | Each supported Region: 1,048,576 Bytes | No |
| Maximum Combined Header Size | Each supported Region: 10,240 Bytes | No |
| Maximum Iterations In Mapping Template | Each supported Region: 1,000 | No |
| Maximum integration timeout in milliseconds | Each supported Region: 29,000 Milliseconds | No |
| Maximum resource policy size in bytes | Each supported Region: 8,192 | Yes |
| Method ARN Length | Each supported Region: 1,600 Bytes | No |
| Private APIs | Each supported Region: 600 | No |

| Name | Default | Adjustable |
|---|---|------------|
| Regional API URL Length | Each supported Region: 10,240 | No |
| Regional APIs | Each supported Region: 600 | No |
| Resources/Routes per REST/WebSocket API | Each supported Region: 300 | Yes |
| Routes per HTTP API | Each supported Region: 300 | Yes |
| Stage Variable Key Length | Each supported Region: 64 | No |
| Stage Variable Value Length | Each supported Region: 512 | No |
| Stage variables per stage | Each supported Region: 100 | No |
| Stages per API | Each supported Region: 10 | Yes |
| Subnets per VPC link(V2) | Each supported Region: 10 | Yes |
| Tags Per Stage | Each supported Region: 50 | No |
| Throttle burst rate | af-south-1: 1,250 eu-south-1: 1,250 Each of the other supported Regions: 5,000 | No |
| Throttle rate | af-south-1: 2,500 eu-south-1: 2,500 Each of the other supported Regions: 10,000 | Yes |
| Usage plans | Each supported Region: 300 | Yes |
| Usage plans per API key | Each supported Region: 10 | Yes |
| VPC links | Each supported Region: 20 | Yes |
| VPC links(V2) | Each supported Region: 10 | Yes |
| WebSocket Idle Connection Timeout | Each supported Region: 600 Seconds | No |
| WebSocket frame size | Each supported Region: 32 Kilobytes | No |
| WebSocket message payload size | Each supported Region: 128 Kilobytes | No |
| WebSocket new connections burst rate | Each supported Region: 500 | No |
| WebSocket new connections rate | Each supported Region: 500 | Yes |

For more information, see [Quotas in Amazon API Gateway](#) in the *API Gateway Developer Guide*.

AWS AppConfig endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

AWS AppConfig is a capability of AWS Systems Manager. To view endpoints and quotas of other Systems Manager capabilities, see [AWS Systems Manager endpoints and quotas \(p. 695\)](#).

Service endpoints

The following sections describe the service endpoints for AWS AppConfig. AWS AppConfig uses *control plane* APIs for setting up and configuring AWS AppConfig applications, environments, configuration profiles, and deployment strategies. AWS AppConfig uses the AWS AppConfig Data service to call *data plane* APIs for retrieving stored configurations.

Topics

- [Control plane endpoints \(p. 32\)](#)
- [Data plane endpoints \(p. 34\)](#)

Control plane endpoints

The following table contains AWS Region-specific endpoints that AWS AppConfig supports for control plane operations. Control plane operations are used for creating, updating, and managing configuration data. For more information, see [AWS AppConfig operations](#) in the [AWS AppConfig API Reference](#).

| Region Name | Region | Endpoint | Protocol |
|--------------------------|------------|------------------------------------|----------|
| US East (Ohio) | us-east-2 | appconfig.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | appconfig.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | appconfig.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | appconfig.us-west-2.amazonaws.com | HTTPS |
| Africa (Cape Town) | af-south-1 | appconfig.af-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | appconfig.ap-east-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|-----------------|--|
| Asia Pacific (Jakarta) | ap-southeast-3 | appconfig.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | appconfig.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | appconfig.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | appconfig.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | appconfig.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | appconfig.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | appconfig.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | appconfig.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | appconfig.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | appconfig.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | appconfig.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | appconfig.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | appconfig.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | appconfig.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | appconfig.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | appconfig.sa-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|---------------------------------------|----------|--|
| AWS GovCloud (US-East) | us-gov-east-1 | appconfig.us-gov-east-1.amazonaws.com | HTTPS | |
| | | appconfig.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | appconfig.us-gov-west-1.amazonaws.com | HTTPS | |
| | | appconfig.us-gov-west-1.amazonaws.com | HTTPS | |

Data plane endpoints

The following table contains AWS Region-specific endpoints that AWS AppConfig Data supports for data plane operations. Data plane operations are used for retrieving configuration data. For more information, see [AWS AppConfig Data operations](#) in the *AWS AppConfig API Reference*.

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------|--|
| US East (Ohio) | us-east-2 | appconfigdata.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | appconfigdata.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | appconfigdata.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | appconfigdata.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | appconfigdata.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | appconfigdata.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | appconfigdata.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | appconfigdata.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | appconfigdata.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | appconfigdata.ap-southeast-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|----------|--|
| Asia Pacific (Sydney) | ap-southeast-2 | appconfigdata.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | appconfigdata.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | appconfigdata.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | appconfigdata.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | appconfigdata.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | appconfigdata.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | appconfigdata.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | appconfigdata.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | appconfigdata.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | appconfigdata.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | appconfigdata.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | appconfigdata.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | appconfigdata.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|--|------------|
| Configuration size limit in AWS AppConfig hosted configuration store | Each supported Region: 1,024 Kilobytes | Yes |

| Name | Default | Adjustable |
|--|--|------------|
| Deployment size limit | Each supported Region: 1,024 Kilobytes | Yes |
| Maximum number of applications | Each supported Region: 100 | Yes |
| Maximum number of configuration profiles per application | Each supported Region: 100 | Yes |
| Maximum number of deployment strategies | Each supported Region: 20 | Yes |
| Maximum number of environments per application | Each supported Region: 20 | Yes |

AWS App Mesh endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|------------|---|----------------|--|
| US East (Ohio) | us-east-2 | appmesh.us-east-2.amazonaws.com appmesh-envoy-management.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | appmesh.us-east-1.amazonaws.com appmesh-envoy-management.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | appmesh.us-west-1.amazonaws.com appmesh-envoy-management.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | appmesh.us-west-2.amazonaws.com appmesh-envoy-management.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | appmesh.af-south-1.amazonaws.com appmesh-envoy-management.af-south-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | appmesh.ap-east-1.amazonaws.com appmesh-envoy-management.ap-east-1.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| Asia Pacific (Mumbai) | ap-south-1 | appmesh.ap-south-1.amazonaws.com appmesh-envoy-management.ap-south-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | appmesh.ap-northeast-2.amazonaws.com appmesh-envoy-management.ap-northeast-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | appmesh.ap-southeast-1.amazonaws.com appmesh-envoy-management.ap-southeast-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | appmesh.ap-southeast-2.amazonaws.com appmesh-envoy-management.ap-southeast-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | appmesh.ap-northeast-1.amazonaws.com appmesh-envoy-management.ap-northeast-1.amazonaws.com | HTTPS HTTPS | |
| Canada (Central) | ca-central-1 | appmesh.ca-central-1.amazonaws.com appmesh-envoy-management.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | appmesh.eu-central-1.amazonaws.com appmesh-envoy-management.eu-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Ireland) | eu-west-1 | appmesh.eu-west-1.amazonaws.com appmesh-envoy-management.eu-west-1.amazonaws.com | HTTPS HTTPS | |
| Europe (London) | eu-west-2 | appmesh.eu-west-2.amazonaws.com appmesh-envoy-management.eu-west-2.amazonaws.com | HTTPS HTTPS | |
| Europe (Milan) | eu-south-1 | appmesh.eu-south-1.amazonaws.com appmesh-envoy-management.eu-south-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Paris) | eu-west-3 | appmesh.eu-west-3.amazonaws.com appmesh-envoy-management.eu-west-3.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|------------|---|----------------|--|
| Europe (Stockholm) | eu-north-1 | appmesh.eu-north-1.amazonaws.com appmesh-envoy-management.eu-north-1.amazonaws.com | HTTPS HTTPS | |
| Middle East (Bahrain) | me-south-1 | appmesh.me-south-1.amazonaws.com appmesh-envoy-management.me-south-1.amazonaws.com | HTTPS HTTPS | |
| South America (São Paulo) | sa-east-1 | appmesh.sa-east-1.amazonaws.com appmesh-envoy-management.sa-east-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|----------------------------|------------|
| Backends per virtual node | Each supported Region: 50 | Yes |
| Connected Envoy processes per virtual gateway | Each supported Region: 50 | Yes |
| Connected Envoy processes per virtual node | Each supported Region: 50 | Yes |
| Gateway routes per virtual gateway | Each supported Region: 10 | Yes |
| Meshes per account | Each supported Region: 15 | Yes |
| Routes per virtual router | Each supported Region: 50 | Yes |
| Virtual gateways per mesh | Each supported Region: 3 | Yes |
| Virtual nodes per mesh | Each supported Region: 200 | Yes |
| Virtual routers per mesh | Each supported Region: 200 | Yes |
| Virtual services per mesh | Each supported Region: 200 | Yes |
| Weighted targets per route | Each supported Region: 10 | No |

AWS App Runner endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | aprunner.us-east-2.amazonaws.com aprunner-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | aprunner.us-east-1.amazonaws.com aprunner-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | aprunner.us-west-2.amazonaws.com aprunner-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | aprunner.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | aprunner.eu-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-----------------------------|---------------------------|------------|
| Auto scaling configurations | Each supported Region: 10 | Yes |
| Connections | Each supported Region: 10 | Yes |
| Services | Each supported Region: 10 | Yes |
| VPC connectors | Each supported Region: 10 | Yes |

Amazon AppFlow endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

You can't use IP allow listing in your Amazon S3 bucket policy to deny access to any other IP addresses besides Amazon AppFlow IP addresses. This is because Amazon AppFlow uses a VPC endpoint when placing data in your Amazon S3 buckets.

For more information about the IP addresses used by Amazon AppFlow, see [AWS IP address ranges](#) in the [Amazon Web Services General Reference](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--------------------------------------|----------|--|
| US East (Ohio) | us-east-2 | appflow.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | appflow.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | appflow.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | appflow.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | appflow.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | appflow.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | appflow.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | appflow.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | appflow.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | appflow.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | appflow.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | appflow.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | appflow.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | appflow.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | appflow.eu-west-3.amazonaws.com | HTTPS | |
| South America | sa-east-1 | appflow.sa-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|-------------|--------|----------|----------|--|
| (São Paulo) | | | | |

Service quotas

| Name | Default | Adjustable |
|-------------------------------------|--------------------------------------|------------|
| Amazon AppFlow flow run size | Each supported Region: 100 Gigabytes | No |
| Amazon EventBridge event size | Each supported Region: 256 Kilobytes | No |
| Amplitude flow run size | Each supported Region: 25 Megabytes | No |
| Concurrent flow runs | Each supported Region: 1,000 | Yes |
| Connector profiles | Each supported Region: 100 | Yes |
| Google Analytics dimensions | Each supported Region: 9 | No |
| Google Analytics metrics | Each supported Region: 10 | No |
| Marketo flow run size | Each supported Region: 20 Megabytes | No |
| Monthly flow runs | Each supported Region: 10,000,000 | Yes |
| Rate of Amazon AppFlow flow runs | Each supported Region: 1 | No |
| Rate of Amazon S3 flow runs | Each supported Region: 1 | No |
| Rate of Amplitude flow runs | Each supported Region: 1 | No |
| Rate of Datadog flow runs | Each supported Region: 1 | No |
| Rate of Dynatrace flow runs | Each supported Region: 1 | No |
| Rate of Google Analytics flow runs | Each supported Region: 1 | No |
| Rate of Infor Nexus flow runs | Each supported Region: 1 | No |
| Rate of Marketo flow runs | Each supported Region: 1 | No |
| Rate of Salesforce Pardot flow runs | Each supported Region: 1 | No |
| Rate of Salesforce flow runs | Each supported Region: 1 | No |
| Rate of ServiceNow flow runs | Each supported Region: 1 | No |
| Rate of Singular flow runs | Each supported Region: 1 | No |
| Rate of Slack flow runs | Each supported Region: 1 | No |

| Name | Default | Adjustable |
|--------------------------------------|--------------------------------------|------------|
| Rate of TrendMicro flow runs | Each supported Region: 1 | No |
| Rate of Veeva flow runs | Each supported Region: 1 | No |
| Rate of Zendesk flow runs | Each supported Region: 1 | No |
| Salesforce event size | Each supported Region: 1 Megabytes | No |
| Salesforce flow run data export size | Each supported Region: 500 Megabytes | No |
| Salesforce flow run data import size | Each supported Region: 15 Gigabytes | No |
| ServiceNow records | Each supported Region: 100,000 | No |
| Total flows | Each supported Region: 1,000 | Yes |

For more information, see [Quotas for Amazon AppFlow](#) in the *Amazon AppFlow User Guide*.

Application Auto Scaling endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|-------------------------|------------|--|----------------|
| US East (Ohio) | us-east-2 | application-autoscaling.us-east-2.amazonaws.com | HTTP and HTTPS |
| US East (N. Virginia) | us-east-1 | application-autoscaling.us-east-1.amazonaws.com | HTTP and HTTPS |
| US West (N. California) | us-west-1 | application-autoscaling.us-west-1.amazonaws.com | HTTP and HTTPS |
| US West (Oregon) | us-west-2 | application-autoscaling.us-west-2.amazonaws.com | HTTP and HTTPS |
| Africa (Cape Town) | af-south-1 | application-autoscaling.af-south-1.amazonaws.com | HTTP and HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|-----------------|--|
| Asia Pacific (Hong Kong) | ap-east-1 | application-autoscaling.ap-east-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | application-autoscaling.ap-southeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | application-autoscaling.ap-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | application-autoscaling.ap-northeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | application-autoscaling.ap-northeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | application-autoscaling.ap-southeast-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | application-autoscaling.ap-southeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | application-autoscaling.ap-northeast-1.amazonaws.com | HTTP and HTTPS | |
| Canada (Central) | ca-central-1 | application-autoscaling.ca-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Frankfurt) | eu-central-1 | application-autoscaling.eu-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Ireland) | eu-west-1 | application-autoscaling.eu-west-1.amazonaws.com | HTTP and HTTPS | |
| Europe (London) | eu-west-2 | application-autoscaling.eu-west-2.amazonaws.com | HTTP and HTTPS | |
| Europe (Milan) | eu-south-1 | application-autoscaling.eu-south-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Paris) | eu-west-3 | application-autoscaling.eu-west-3.amazonaws.com | HTTP and HTTPS | |
| Europe (Stockholm) | eu-north-1 | application-autoscaling.eu-north-1.amazonaws.com | HTTP and HTTPS | |
| Middle East (Bahrain) | me-south-1 | application-autoscaling.me-south-1.amazonaws.com | HTTP and HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| South America (São Paulo) | sa-east-1 | application-autoscaling.sa-east-1.amazonaws.com | HTTP and HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | application-autoscaling.us-gov-east-1.amazonaws.com | HTTP and HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | application-autoscaling.us-gov-west-1.amazonaws.com | HTTP and HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|------------------------------|------------|
| Scalable targets for Amazon Keyspaces | Each supported Region: 500 | Yes |
| Scalable targets for Amazon MSK | Each supported Region: 500 | Yes |
| Scalable targets for Comprehend | Each supported Region: 500 | Yes |
| Scalable targets for DynamoDB | Each supported Region: 5,000 | Yes |
| Scalable targets for EC2 | Each supported Region: 500 | Yes |
| Scalable targets for ECS | Each supported Region: 3,000 | Yes |
| Scalable targets for EMR | Each supported Region: 500 | Yes |
| Scalable targets for Lambda | Each supported Region: 500 | Yes |
| Scalable targets for RDS | Each supported Region: 500 | Yes |
| Scalable targets for SageMaker | Each supported Region: 500 | Yes |
| Scalable targets for custom resources | Each supported Region: 500 | Yes |
| Scaling policies per scalable target | Each supported Region: 50 | No |
| Scheduled actions per scalable target | Each supported Region: 200 | No |
| Step adjustments per step scaling policy | Each supported Region: 20 | No |

For more information, see [Application Auto Scaling Service Quotas](#) in the *Application Auto Scaling User Guide*.

AWS Application Discovery Service endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|----------------|--|----------|--|
| US East (N. Virginia) | us-east-1 | discovery.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | discovery.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | discovery.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | discovery.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | discovery.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | discovery.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | discovery.eu-west-2.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|-------------------------------|------------|
| Active agents sending data to the service | Each supported Region: 1,000 | No |
| Applications per account | Each supported Region: 1,000 | No |
| Deletions of import records per day | Each supported Region: 25,000 | No |
| Imported server records per account | Each supported Region: 25,000 | No |

| Name | Default | Adjustable |
|--|----------------------------------|------------|
| Imported servers per account | Each supported Region: 10,000 | Yes |
| Inactive agents heartbeating but not collecting data | Each supported Region: 10,000 | No |
| Servers per application | Each supported Region: 400 | No |
| Tags per server | Each supported Region: 30 | No |

AWS Application Migration Service endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|----------------------------------|----------|--|
| US East (Ohio) | us-east-2 | mgn.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | mgn.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | mgn.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | mgn.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | mgn.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | mgn.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | mgn.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | mgn.ap-northeast-3.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|----------------------------------|-----------------|--|
| Asia Pacific (Seoul) | ap-northeast-2 | mgn.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | mgn.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | mgn.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | mgn.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | mgn.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | mgn.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | mgn.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | mgn.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | mgn.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | mgn.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | mgn.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | mgn.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | mgn.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-----------------------------|---------------------------|-------------------|
| Concurrent jobs in progress | Each supported Region: 20 | No |
| Max Active Source Servers | Each supported Region: 20 | Yes |

| Name | Default | Adjustable |
|--|-------------------------------|------------|
| Max Non-Archived Source Servers | Each supported Region: 4,000 | No |
| Max Source Servers in a single Job | Each supported Region: 200 | No |
| Max Source Servers in all Jobs | Each supported Region: 200 | No |
| Max Total Source Servers Per AWS Account | Each supported Region: 50,000 | No |
| Max concurrent Jobs per Source Server | Each supported Region: 1 | No |

The following table lists additional information.

| Resource | Retention |
|--------------------|--------------------|
| Launch history | Saved for 10 years |
| Individual Job log | Saved for 185 days |

Amazon AppStream 2.0 endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|-----------------------|----------------|---|----------|
| US East (N. Virginia) | us-east-1 | appstream2.us-east-1.amazonaws.com | HTTPS |
| | | appstream2-fips.us-east-1.amazonaws.com | HTTPS |
| | | appstream2-fips.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | appstream2.us-west-2.amazonaws.com | HTTPS |
| | | appstream2-fips.us-west-2.amazonaws.com | HTTPS |
| | | appstream2-fips.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | appstream2.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | appstream2.ap-northeast-2.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|-------------------------|--|
| Asia Pacific (Singapore) | ap-southeast-1 | appstream2.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | appstream2.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | appstream2.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | appstream2.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | appstream2.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | appstream2.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | appstream2.eu-west-2.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | appstream2.us-gov-west-1.amazonaws.com appstream2-fips.us-gov-west-1.amazonaws.com appstream2-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|---------------------------|------------|
| Active fleets | Each supported Region: 10 | Yes |
| Compute-optimized 2xlarge streaming instances for fleets | Each supported Region: 0 | Yes |
| Compute-optimized 2xlarge streaming instances for image builders | Each supported Region: 0 | Yes |
| Compute-optimized 4xlarge streaming instances for fleets | Each supported Region: 0 | Yes |
| Compute-optimized 4xlarge streaming instances for image builders | Each supported Region: 0 | Yes |
| Compute-optimized 8xlarge streaming instances for fleets | Each supported Region: 0 | Yes |
| Compute-optimized 8xlarge streaming instances for image builders | Each supported Region: 0 | Yes |
| Compute-optimized large streaming instances for fleets | Each supported Region: 10 | Yes |
| Compute-optimized large streaming instances for image builders | Each supported Region: 3 | Yes |

| Name | Default | Adjustable |
|---|----------------------------|------------|
| Compute-optimized xlarge streaming instances for fleets | Each supported Region: 10 | Yes |
| Compute-optimized xlarge streaming instances for image builders | Each supported Region: 3 | Yes |
| Concurrent image copies per destination Region | Each supported Region: 2 | Yes |
| Concurrent image updates | Each supported Region: 5 | Yes |
| Fleets | Each supported Region: 10 | Yes |
| Graphics G4DN 12xlarge streaming instances for fleets | Each supported Region: 0 | Yes |
| Graphics G4DN 12xlarge streaming instances for image builders | Each supported Region: 0 | Yes |
| Graphics G4DN 16xlarge streaming instances for fleets | Each supported Region: 0 | Yes |
| Graphics G4DN 16xlarge streaming instances for image builders | Each supported Region: 0 | Yes |
| Graphics G4DN 2xlarge streaming instances for fleets | Each supported Region: 0 | Yes |
| Graphics G4DN 2xlarge streaming instances for image builders | Each supported Region: 0 | Yes |
| Graphics G4DN 4xlarge streaming instances for fleets | Each supported Region: 0 | Yes |
| Graphics G4DN 4xlarge streaming instances for image builders | Each supported Region: 0 | Yes |
| Graphics G4DN 8xlarge streaming instances for fleets | Each supported Region: 0 | Yes |
| Graphics G4DN 8xlarge streaming instances for image builders | Each supported Region: 0 | Yes |
| Graphics G4DN xlarge streaming instances for fleets | Each supported Region: 0 | Yes |
| Graphics G4DN xlarge streaming instances for image builders | Each supported Region: 0 | Yes |
| Image builders | Each supported Region: 10 | Yes |
| Image sharing limit | Each supported Region: 100 | Yes |
| Memory-optimized 2xlarge streaming instances for fleets | Each supported Region: 0 | Yes |
| Memory-optimized 2xlarge streaming instances for image builders | Each supported Region: 0 | Yes |
| Memory-optimized 4xlarge streaming instances for fleets | Each supported Region: 0 | Yes |
| Memory-optimized 4xlarge streaming instances for image builders | Each supported Region: 0 | Yes |
| Memory-optimized 8xlarge streaming instances for fleets | Each supported Region: 0 | Yes |
| Memory-optimized 8xlarge streaming instances for image builders | Each supported Region: 0 | Yes |

| Name | Default | Adjustable |
|--|---------------------------|------------|
| Memory-optimized large streaming instances for fleets | Each supported Region: 10 | Yes |
| Memory-optimized large streaming instances for image builders | Each supported Region: 3 | Yes |
| Memory-optimized xlarge streaming instances for fleets | Each supported Region: 10 | Yes |
| Memory-optimized xlarge streaming instances for image builders | Each supported Region: 3 | Yes |
| Memory-optimized z1d 12xlarge streaming instances for fleets | Each supported Region: 0 | Yes |
| Memory-optimized z1d 12xlarge streaming instances for image builders | Each supported Region: 0 | Yes |
| Memory-optimized z1d 2xlarge streaming instances for fleets | Each supported Region: 0 | Yes |
| Memory-optimized z1d 2xlarge streaming instances for image builders | Each supported Region: 0 | Yes |
| Memory-optimized z1d 3xlarge streaming instances for fleets | Each supported Region: 0 | Yes |
| Memory-optimized z1d 3xlarge streaming instances for image builders | Each supported Region: 0 | Yes |
| Memory-optimized z1d 6xlarge streaming instances for fleets | Each supported Region: 0 | Yes |
| Memory-optimized z1d 6xlarge streaming instances for image builders | Each supported Region: 0 | Yes |
| Memory-optimized z1d large streaming instances for fleets | Each supported Region: 10 | Yes |
| Memory-optimized z1d large streaming instances for image builders | Each supported Region: 3 | Yes |
| Memory-optimized z1d xlarge streaming instances for fleets | Each supported Region: 10 | Yes |
| Memory-optimized z1d xlarge streaming instances for image builders | Each supported Region: 3 | Yes |
| Private images | Each supported Region: 10 | Yes |
| Stacks | Each supported Region: 10 | Yes |
| Standard large streaming instances for fleets | Each supported Region: 50 | Yes |
| Standard large streaming instances for image builders | Each supported Region: 5 | Yes |
| Standard medium streaming instances for fleets | Each supported Region: 50 | Yes |
| Standard medium streaming instances for image builders | Each supported Region: 5 | Yes |
| Standard small streaming instances for fleets | Each supported Region: 50 | Yes |
| Standard small streaming instances for image builders | Each supported Region: 5 | Yes |

| Name | Default | Adjustable |
|------------------------|---------------------------|------------|
| Users in the user pool | Each supported Region: 50 | Yes |

*For fleets that have **Default Internet Access** enabled, the quota is 100 fleet instances. If your deployment must support more than 100 concurrent users, use a NAT gateway configuration instead.

AWS AppSync endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

AWS AppSync control plane

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|--------------------------------------|----------|
| US East (Ohio) | us-east-2 | appsync.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | appsync.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | appsync.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | appsync.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | appsync.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | appsync.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Osaka) | ap-northeast-3 | appsync.ap-northeast-3.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | appsync.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | appsync.ap-southeast-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--------------------------------------|----------|--|
| Asia Pacific (Sydney) | ap-southeast-2 | appsync.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | appsync.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | appsync.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | appsync.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | appsync.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | appsync.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | appsync.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | appsync.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | appsync.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | appsync.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | appsync.sa-east-1.amazonaws.com | HTTPS | |

AWS AppSync data plane

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|-----------|---------------------------------|----------|--|
| US East (Ohio) | us-east-2 | appsync.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | appsync.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | appsync.us-west-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--------------------------------------|-----------------|--|
| US West (Oregon) | us-west-2 | appsync.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | appsync.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | appsync.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | appsync.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | appsync.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | appsync.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | appsync.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | appsync.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | appsync.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | appsync.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | appsync.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | appsync.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | appsync.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | appsync.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | appsync.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | appsync.me-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|-----------|---------------------------------|----------|--|
| South America (São Paulo) | sa-east-1 | appsync.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|---|------------|
| API keys per API | Each supported Region: 50 | No |
| APIs per region | Each supported Region: 25 | Yes |
| Authentication providers per API | Each supported Region: 50 | No |
| Evaluated resolver template size | Each supported Region: 5 Megabytes | No |
| Functions per pipeline resolver | Each supported Region: 10 | No |
| Iterations in a foreach loop in mapping templates | Each supported Region: 1,000 | No |
| Max Batch Size | Each supported Region: 2,000 | No |
| Number of caching keys | Each supported Region: 25 | No |
| Number of custom domain names | Each supported Region: 25 | Yes |
| Rate of request tokens | Each supported Region: 2,000 per second | Yes |
| Request execution time for mutations, queries, and subscriptions | Each supported Region: 30 Seconds | No |
| Request mapping template size | Each supported Region: 64 Kilobytes | No |
| Resolvers executed in a single request | Each supported Region: 10,000 | No |
| Response mapping template size | Each supported Region: 64 Kilobytes | No |
| Schema document size | Each supported Region: 1 Megabytes | No |
| Subscription payload size | Each supported Region: 131,072 Bytes | No |
| Subscription payload size with MQTT over WebSockets | Each supported Region: 128 Kilobytes | No |

| Name | Default | Adjustable |
|--|--------------------------------------|------------|
| Subscription payload size with pure WebSockets | Each supported Region: 240 Kilobytes | No |

Rate of request tokens is the maximum number of request tokens per second in this account in the current Region. AWS AppSync allocates tokens to mutation and query requests based on the amount of resources (processing time and memory) that they consume. For more details on tokens, see [Using token counts to optimize your requests](#) in the *AWS AppSync developer guide*.

Amazon Athena endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------------|
| US East (Ohio) | us-east-2 | athena.us-east-2.amazonaws.com athena-fips.us-east-2.amazonaws.com | HTTPS HTTPS |
| US East (N. Virginia) | us-east-1 | athena.us-east-1.amazonaws.com athena-fips.us-east-1.amazonaws.com | HTTPS HTTPS |
| US West (N. California) | us-west-1 | athena.us-west-1.amazonaws.com athena-fips.us-west-1.amazonaws.com | HTTPS HTTPS |
| US West (Oregon) | us-west-2 | athena.us-west-2.amazonaws.com athena-fips.us-west-2.amazonaws.com | HTTPS HTTPS |
| Africa (Cape Town) | af-south-1 | athena.af-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | athena.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | athena.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Osaka) | ap-northeast-3 | athena.ap-northeast-3.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| Asia Pacific (Seoul) | ap-northeast-2 | athena.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | athena.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | athena.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | athena.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | athena.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | athena.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | athena.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | athena.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | athena.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | athena.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | athena.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | athena.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | athena.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | athena.us-gov-east-1.amazonaws.com athena-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | athena.us-gov-west-1.amazonaws.com athena-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

To download the latest version of the JDBC driver and its documentation, see [Using Athena with the JDBC Driver](#).

For more information about the previous versions of the JDBC driver and their documentation, see [Using the Previous Version of the JDBC Driver](#).

To download the latest and previous versions of the ODBC driver and their documentation, see [Connecting to Athena with ODBC](#).

Service quotas

| Name | Default | Adjustable |
|--------------------|---|------------|
| Active DDL queries | Each supported Region: 20 | Yes |
| Active DML queries | us-east-1: 200 us-east-2: 150 us-west-2: 150 ap-northeast-1: 150 ap-northeast-2: 100 ap-south-1: 100 ap-southeast-1: 100 ap-southeast-2: 100 eu-central-1: 150 eu-west-1: 150 eu-west-2: 100 Each of the other supported Regions: 20 | Yes |
| DDL query timeout | Each supported Region: 600 | Yes |
| DML query timeout | Each supported Region: 30 | Yes |

For more information, see [Service quotas](#) in the *Amazon Athena User Guide*.

AWS Audit Manager endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------|--|
| US East (Ohio) | us-east-2 | auditmanager.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | auditmanager.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | auditmanager.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | auditmanager.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | auditmanager.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | auditmanager.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | auditmanager.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | auditmanager.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | auditmanager.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | auditmanager.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | auditmanager.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | auditmanager.eu-west-2.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---------------------|----------------------------|------------|
| Custom controls | Each supported Region: 500 | Yes |
| Custom frameworks | Each supported Region: 100 | Yes |
| Running assessments | Each supported Region: 100 | Yes |

Amazon Augmented AI endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|----------------------------------|----------------|--|
| US East (Ohio) | us-east-2 | a2i.us-east-2.amazonaws.com | HTTP and HTTPS | |
| US East (N. Virginia) | us-east-1 | a2i.us-east-1.amazonaws.com | HTTP and HTTPS | |
| US West (Oregon) | us-west-2 | a2i.us-west-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | a2i.ap-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | a2i.ap-northeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | a2i.ap-southeast-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | a2i.ap-southeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | a2i.ap-northeast-1.amazonaws.com | HTTP and HTTPS | |
| Canada (Central) | ca-central-1 | a2i.ca-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Frankfurt) | eu-central-1 | a2i.eu-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Ireland) | eu-west-1 | a2i.eu-west-1.amazonaws.com | HTTP and HTTPS | |
| Europe (London) | eu-west-2 | a2i.eu-west-2.amazonaws.com | HTTP and HTTPS | |

Service quotas

| Resource | Default |
|---|---|
| Flow definitions | 100 |
| Worker task templates (HumanTaskUi's) | 100 |
| <i>In-flight</i> human loops per flow definition (private or vendor work team) | 5,000 Human loops are considered <i>in-flight</i> when their status is InProgress or Stopping. |
| <i>In-flight</i> human loops per flow definition (Amazon Mechanical Turk work team) | 1,000 Human loops are considered <i>in-flight</i> when their status is InProgress or Stopping. |

Amazon Aurora endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Amazon Aurora MySQL-Compatible Edition

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|------------|------------------------------|----------|--|
| US East (Ohio) | us-east-2 | rds.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | rds.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | rds.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | rds.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | rds.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | rds.ap-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|----------------------------------|-----------------|--|
| Asia Pacific (Jakarta) | ap-southeast-3 | rds.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | rds.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | rds.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | rds.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | rds.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | rds.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | rds.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | rds.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | rds.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | rds.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | rds.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | rds.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | rds.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | rds.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | rds.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | rds.sa-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|---------------------------------|-----------------|--|
| AWS GovCloud (US-East) | us-gov-east-1 | rds.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | rds.us-gov-west-1.amazonaws.com | HTTPS | |

Amazon Aurora PostgreSQL-Compatible Edition

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|----------------------------------|-----------------|--|
| US East (Ohio) | us-east-2 | rds.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | rds.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | rds.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | rds.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | rds.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | rds.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | rds.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | rds.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | rds.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | rds.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | rds.ap-southeast-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|----------------------------------|----------|--|
| Asia Pacific (Sydney) | ap-southeast-2 | rds.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | rds.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | rds.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | rds.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | rds.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | rds.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | rds.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | rds.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | rds.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | rds.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | rds.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | rds.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | rds.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--------------------------------------|---------------------------|------------|
| Authorizations per DB security group | Each supported Region: 20 | No |
| DB cluster parameter groups | Each supported Region: 50 | No |

| Name | Default | Adjustable |
|--|--|------------|
| DB clusters | Each supported Region: 40 | Yes |
| DB instances | Each supported Region: 40 | Yes |
| DB subnet groups | Each supported Region: 50 | Yes |
| Data API HTTP request body size | Each supported Region: 4 Megabytes | No |
| Data API maximum concurrent cluster-secret pairs | Each supported Region: 30 | No |
| Data API maximum concurrent requests | Each supported Region: 500 | No |
| Data API maximum result set size | Each supported Region: 1 Megabytes | No |
| Data API requests per second | Each supported Region: 1,000 per second | No |
| Event subscriptions | Each supported Region: 20 | Yes |
| IAM roles per DB cluster | Each supported Region: 5 | Yes |
| IAM roles per DB instance | Each supported Region: 5 | Yes |
| Manual DB cluster snapshots | Each supported Region: 100 | Yes |
| Manual DB instance snapshots | Each supported Region: 100 | Yes |
| Option groups | Each supported Region: 20 | Yes |
| Parameter groups | Each supported Region: 50 | Yes |
| Proxies | Each supported Region: 20 | Yes |
| Read replicas per master | Each supported Region: 5 | Yes |
| Reserved DB instances | Each supported Region: 40 | Yes |
| Rules per security group | Each supported Region: 20 | No |
| Security groups | Each supported Region: 25 | Yes |
| Security groups (VPC) | Each supported Region: 5 | No |
| Subnets per DB subnet group | Each supported Region: 20 | No |
| Tags per resource | Each supported Region: 50 | No |
| Total storage for all DB instances | Each supported Region: 100,000 Gigabytes | Yes |

AWS Auto Scaling endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#).

Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------------|--|
| US East (Ohio) | us-east-2 | autoscaling-plans.us-east-2.amazonaws.com | HTTP and HTTPS | |
| US East (N. Virginia) | us-east-1 | autoscaling-plans.us-east-1.amazonaws.com | HTTP and HTTPS | |
| US West (N. California) | us-west-1 | autoscaling-plans.us-west-1.amazonaws.com | HTTP and HTTPS | |
| US West (Oregon) | us-west-2 | autoscaling-plans.us-west-2.amazonaws.com | HTTP and HTTPS | |
| Africa (Cape Town) | af-south-1 | autoscaling-plans.af-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | autoscaling-plans.ap-east-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | autoscaling-plans.ap-southeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | autoscaling-plans.ap-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | autoscaling-plans.ap-northeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | autoscaling-plans.ap-northeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | autoscaling-plans.ap-southeast-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | autoscaling-plans.ap-southeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | autoscaling-plans.ap-northeast-1.amazonaws.com | HTTP and HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| Canada (Central) | ca-central-1 | autoscaling-plans.ca-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Frankfurt) | eu-central-1 | autoscaling-plans.eu-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Ireland) | eu-west-1 | autoscaling-plans.eu-west-1.amazonaws.com | HTTP and HTTPS | |
| Europe (London) | eu-west-2 | autoscaling-plans.eu-west-2.amazonaws.com | HTTP and HTTPS | |
| Europe (Milan) | eu-south-1 | autoscaling-plans.eu-south-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Paris) | eu-west-3 | autoscaling-plans.eu-west-3.amazonaws.com | HTTP and HTTPS | |
| Europe (Stockholm) | eu-north-1 | autoscaling-plans.eu-north-1.amazonaws.com | HTTP and HTTPS | |
| Middle East (Bahrain) | me-south-1 | autoscaling-plans.me-south-1.amazonaws.com | HTTP and HTTPS | |
| South America (São Paulo) | sa-east-1 | autoscaling-plans.sa-east-1.amazonaws.com | HTTP and HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | autoscaling-plans.us-gov-east-1.amazonaws.com | HTTP and HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | autoscaling-plans.us-gov-west-1.amazonaws.com | HTTP and HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|----------------------------|------------|
| Scaling instructions per scaling plan | Each supported Region: 500 | No |
| Scaling plans | Each supported Region: 100 | Yes |
| Target tracking configurations per scaling instruction | Each supported Region: 10 | No |

For more information, see [AWS Auto Scaling Service Quotas](#) in the [AWS Auto Scaling User Guide](#).

AWS Backup endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | backup.us-east-2.amazonaws.com backup-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | backup.us-east-1.amazonaws.com backup-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | backup.us-west-1.amazonaws.com backup-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | backup.us-west-2.amazonaws.com backup-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | backup.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | backup.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | backup.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | backup.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | backup.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | backup.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | backup.ap-southeast-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| Asia Pacific (Sydney) | ap-southeast-2 | backup.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | backup.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | backup.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | backup.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | backup.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | backup.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | backup.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | backup.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | backup.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | backup.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | backup.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | backup.us-gov-east-1.amazonaws.com backup-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | backup.us-gov-west-1.amazonaws.com backup-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--------------------------------------|----------------------------|-------------------|
| Backup plans per Region per account | Each supported Region: 100 | Yes |
| Backup vaults per Region per account | Each supported Region: 100 | Yes |

| Name | Default | Adjustable |
|--|----------------------------------|------------|
| Concurrent backup copies per supported service per account | Each supported Region: 5 | No |
| Concurrent backup jobs per resource | Each supported Region: 1 | No |
| Framework controls per Region per account | Each supported Region: 50 | Yes |
| Frameworks per Region per account | Each supported Region: 10 | Yes |
| Frameworks per report plan | Each supported Region: 1,000 | No |
| Metadata tags per backup | Each supported Region: 50 | No |
| Recovery points per backup vault | Each supported Region: 1,000,000 | Yes |
| Report plans per Region per account | Each supported Region: 20 | Yes |
| Versions per backup plan | Each supported Region: 2,000 | Yes |

If you regularly receive throttling exceptions, consider using a rate limiter.

| API name | Default calls/sec |
|--|-------------------|
| CreateBackupPlan CreateBackupSelection DeleteBackupPlan DeleteBackupSelection DeleteBackupVault DeleteBackupVaultAccessPolicy DeleteBackupVaultNotifications DescribeBackupVault ExportBackupPlanTemplate GetBackupPlanFromJSON GetBackupPlanFromTemplate PutBackupVaultNotifications StartBackupJob StartRestoreJob StopBackupJob TagResource UntagResource UpdateBackupPlan UpdateRecoveryPointLifecycle | 5 |
| DeleteRecoveryPoint DescribeProtectedResource | 10 |
| DescribeBackupJob DescribeRecoveryPoint DescribeRestoreJob GetBackupPlan GetBackupSelection GetBackupVaultAccessPolicy GetBackupVaultNotifications GetRecoveryPointRestoreMetadata GetSupportedResourceTypes | 15 |
| ListBackupJobs ListBackupPlans ListBackupPlanTemplates ListBackupPlanVersions ListBackupSelections ListBackupVaults ListProtectedResources ListRecoveryPointByResource ListRecoveryPointsByBackupVault ListRecoveryPointsByResource ListRestoreJobs ListTags | 20 |
| Sum of All API Calls | 50 |

For additional information, see [Quotas](#) in the *AWS Backup Developer Guide*.

AWS Batch endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | batch.us-east-2.amazonaws.com fips.batch.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | batch.us-east-1.amazonaws.com fips.batch.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | batch.us-west-1.amazonaws.com fips.batch.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | batch.us-west-2.amazonaws.com fips.batch.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | batch.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | batch.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | batch.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | batch.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | batch.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | batch.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | batch.ap-southeast-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|----------------|--|
| Asia Pacific (Tokyo) | ap-northeast-1 | batch.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | batch.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | batch.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | batch.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | batch.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | batch.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | batch.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | batch.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | batch.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | batch.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | batch.us-gov-east-1.amazonaws.com batch.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | batch.us-gov-west-1.amazonaws.com batch.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|---------------------------|------------|
| Compute environment limit | Each supported Region: 50 | No |
| Compute environments per job queue limit. | Each supported Region: 3 | No |
| Job dependencies limit | Each supported Region: 20 | No |
| Job payload size limit | Each supported Region: 30 | No |
| Job queue limit | Each supported Region: 50 | No |

| Name | Default | Adjustable |
|--|----------------------------------|------------|
| Maximum array size limit | Each supported Region: 10,000 | No |
| Share identifiers per job queue limit. | Each supported Region: 500 | No |
| Submitted state jobs limit | Each supported Region: 1,000,000 | No |

For more information, see [Service Quotas in the AWS Batch User Guide](#).

AWS Billing and Cost Management endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

AWS Billing and Cost Management includes the AWS Cost Explorer API, the AWS Cost and Usage Reports API, the AWS Budgets API, and the AWS Price List API.

Service endpoints

AWS Cost Explorer

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|----------------------------|----------|--|
| US East (N. Virginia) | us-east-1 | ce.us-east-1.amazonaws.com | HTTPS | |

AWS Cost and Usage Reports

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|-----------------------------|----------|--|
| US East (N. Virginia) | us-east-1 | cur.us-east-1.amazonaws.com | HTTPS | |

AWS Budgets

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|-----------------------|-----------------|--|
| US East (Ohio) | us-east-2 | budgets.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | budgets.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | budgets.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | budgets.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | budgets.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | budgets.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | budgets.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | budgets.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | budgets.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | budgets.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | budgets.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | budgets.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | budgets.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | budgets.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | budgets.amazonaws.com | HTTPS | |

AWS Price List Service

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|---------------|--------------------------------------|-----------------|--|
| US East (N. Virginia) | us-east-1 | api.pricing.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | api.pricing.ap-south-1.amazonaws.com | HTTPS | |

Savings Plans

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|----------------------------|-----------------|--|
| US East (Ohio) | us-east-2 | savingsplans.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | savingsplans.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | savingsplans.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | savingsplans.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | savingsplans.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | savingsplans.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | savingsplans.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | savingsplans.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | savingsplans.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | savingsplans.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|----------------------------|----------|--|
| Asia Pacific (Sydney) | ap-southeast-2 | savingsplans.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | savingsplans.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | savingsplans.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | savingsplans.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | savingsplans.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | savingsplans.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | savingsplans.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | savingsplans.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | savingsplans.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | savingsplans.amazonaws.com | HTTPS | |

Service quotas

Billing and Cost Management has no increasable quotas. For more information, see [Quotas in AWS Billing and Cost Management](#).

Amazon Braket endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|-----------|--------------------------------|----------|--|
| US East (N. Virginia) | us-east-1 | braket.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | braket.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | braket.us-west-2.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | braket.eu-west-2.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|---|------------|
| Burst rate of API requests | Each supported Region: 600 | No |
| Burst rate of CancelJob requests | Each supported Region: 5 | No |
| Burst rate of CancelQuantumTask requests | Each supported Region: 20 | No |
| Burst rate of CreateJob requests | Each supported Region: 5 | No |
| Burst rate of CreateQuantumTask requests | Each supported Region: 40 | No |
| Burst rate of GetDevice requests | Each supported Region: 50 | No |
| Burst rate of GetJob requests | Each supported Region: 25 | No |
| Burst rate of GetQuantumTask requests | Each supported Region: 500 | No |
| Burst rate of SearchDevices requests | Each supported Region: 50 | No |
| Burst rate of SearchJobs requests | Each supported Region: 50 | No |
| Burst rate of SearchQuantumTasks requests | Each supported Region: 50 | No |
| Number of concurrent DM1 tasks | us-east-1: 100 us-west-2: 100 Each of the other supported Regions: 50 | No |
| Number of concurrent SV1 tasks | us-east-1: 100 us-west-2: 100 Each of the other supported Regions: 50 | No |

| Name | Default | Adjustable |
|-------------------------------------|---|------------|
| Number of concurrent TN1 tasks | eu-west-2: 5 Each of the other supported Regions: 10 | Yes |
| Number of concurrent jobs | Each supported Region: 5 | Yes |
| Rate of API requests | Each supported Region: 140 | Yes |
| Rate of CancelJob requests | Each supported Region: 2 per second | Yes |
| Rate of CancelQuantumTask requests | Each supported Region: 2 per second | Yes |
| Rate of CreateJob requests | Each supported Region: 1 per second | Yes |
| Rate of CreateQuantumTask requests | Each supported Region: 20 per second | Yes |
| Rate of GetDevice requests | Each supported Region: 5 per second | Yes |
| Rate of GetJob requests | Each supported Region: 5 per second | Yes |
| Rate of GetQuantumTask requests | Each supported Region: 100 per second | Yes |
| Rate of SearchDevices requests | Each supported Region: 5 per second | Yes |
| Rate of SearchJobs requests | Each supported Region: 5 per second | Yes |
| Rate of SearchQuantumTasks requests | Each supported Region: 5 per second | Yes |

AWS BugBust endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region name | Region | Endpoint | Protocol |
|-----------------------|-----------|---------------------------------|----------|
| US East (N. Virginia) | us-east-1 | bugbust.us-east-1.amazonaws.com | HTTPS |

Service quotas

| Resource | Default |
|-------------------------|------------------------------|
| Associated repositories | 5 per BugBust event |
| Profiling groups | 25 per BugBust event |
| Participants | 50 per BugBust event |
| Regions | 50 BugBust events per Region |

AWS Certificate Manager endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|----------------------------------|----------|
| US East (Ohio) | us-east-2 | acm.us-east-2.amazonaws.com | HTTPS |
| | | acm-fips.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | acm.us-east-1.amazonaws.com | HTTPS |
| | | acm-fips.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | acm.us-west-1.amazonaws.com | HTTPS |
| | | acm-fips.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | acm.us-west-2.amazonaws.com | HTTPS |
| | | acm-fips.us-west-2.amazonaws.com | HTTPS |
| Africa (Cape Town) | af-south-1 | acm.af-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | acm.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Jakarta) | ap-southeast-3 | acm.ap-southeast-3.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| Asia Pacific (Mumbai) | ap-south-1 | acm.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | acm.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | acm.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | acm.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | acm.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | acm.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | acm.ca-central-1.amazonaws.com acm-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | acm.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | acm.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | acm.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | acm.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | acm.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | acm.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | acm.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | acm.sa-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|--|----------------|--|
| AWS GovCloud (US-East) | us-gov-east-1 | acm.us-gov-east-1.amazonaws.com acm.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | acm.us-gov-west-1.amazonaws.com acm.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|------------------------------|------------|
| ACM certificates | Each supported Region: 2,500 | Yes |
| ACM certificates created in last 365 days | Each supported Region: 5,000 | Yes |
| Domain names per ACM certificate | Each supported Region: 10 | Yes |
| Imported certificates | Each supported Region: 2,500 | Yes |
| Imported certificates in last 365 days | Each supported Region: 5,000 | Yes |

For more information, see [Quotas](#) in the *AWS Certificate Manager User Guide*.

AWS Certificate Manager Private Certificate Authority endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|---|----------------|--|
| US East (Ohio) | us-east-2 | acm-pca.us-east-2.amazonaws.com acm-pca-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | acm-pca.us-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| | | acm-pca-fips.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | acm-pca.us-west-1.amazonaws.com | HTTPS | |
| | | acm-pca-fips.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | acm-pca.us-west-2.amazonaws.com | HTTPS | |
| | | acm-pca-fips.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | acm-pca.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | acm-pca.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | acm-pca.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | acm-pca.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | acm-pca.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | acm-pca.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | acm-pca.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | acm-pca.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | acm-pca.ca-central-1.amazonaws.com | HTTPS | |
| | | acm-pca-fips.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | acm-pca.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | acm-pca.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | acm-pca.eu-west-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|----------------|--|
| Europe (Milan) | eu-south-1 | acm-pca.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | acm-pca.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | acm-pca.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | acm-pca.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | acm-pca.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | acm-pca.us-gov-east-1.amazonaws.com acm-pca.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | acm-pca.us-gov-west-1.amazonaws.com acm-pca.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|----------------------------------|------------|
| Number of private certificate authorities (CAs) | Each supported Region: 200 | Yes |
| Number of private certificates per CA | Each supported Region: 1,000,000 | Yes |
| Number of revoked private certificates per CA | Each supported Region: 1,000,000 | No |
| Rate of CreateCertificateAuthority requests | Each supported Region: 1 | No |
| Rate of CreateCertificateAuthorityAuditReport requests | Each supported Region: 1 | No |
| Rate of CreatePermission requests | Each supported Region: 1 | No |
| Rate of DeleteCertificateAuthority requests | Each supported Region: 10 | No |
| Rate of DeletePermission requests | Each supported Region: 1 | No |
| Rate of DeletePolicy requests | Each supported Region: 5 | No |
| Rate of DescribeCertificateAuthority requests | Each supported Region: 20 | No |
| Rate of DescribeCertificateAuthorityAuditReport requests | Each supported Region: 20 | No |
| Rate of GetCertificate requests | Each supported Region: 75 | Yes |

| Name | Default | Adjustable |
|--|---------------------------|------------|
| Rate of GetCertificateAuthorityCertificate requests | Each supported Region: 20 | No |
| Rate of GetCertificateAuthorityCsr requests | Each supported Region: 10 | No |
| Rate of GetPolicy requests | Each supported Region: 5 | No |
| Rate of ImportCertificateAuthorityCertificate requests | Each supported Region: 10 | No |
| Rate of IssueCertificate requests | Each supported Region: 25 | Yes |
| Rate of ListCertificateAuthorities requests | Each supported Region: 20 | No |
| Rate of ListPermissions requests | Each supported Region: 5 | No |
| Rate of ListTags requests | Each supported Region: 20 | No |
| Rate of PutPolicy requests | Each supported Region: 5 | No |
| Rate of RestoreCertificateAuthority requests | Each supported Region: 20 | No |
| Rate of RevokeCertificate requests | Each supported Region: 20 | No |
| Rate of TagCertificateAuthority requests | Each supported Region: 10 | No |
| Rate of UntagCertificateAuthority requests | Each supported Region: 10 | No |
| Rate of UpdateCertificateAuthority requests | Each supported Region: 10 | No |

AWS Chatbot endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|-----------|----------|----------|--|
| US East (Ohio) | us-east-2 | | HTTPS | |
| US East (N. Virginia) | us-east-1 | | HTTPS | |
| US West (N. California) | us-west-1 | | HTTPS | |
| US West (Oregon) | us-west-2 | | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|-----------------|-----------------|--|
| Africa (Cape Town) | af-south-1 | | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | | HTTPS | |
| Canada (Central) | ca-central-1 | | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | | HTTPS | |
| Europe (Ireland) | eu-west-1 | | HTTPS | |
| Europe (London) | eu-west-2 | | HTTPS | |
| Europe (Milan) | eu-south-1 | | HTTPS | |
| Europe (Paris) | eu-west-3 | | HTTPS | |
| Europe (Stockholm) | eu-north-1 | | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|------------|----------|----------|--|
| Middle East (Bahrain) | me-south-1 | | HTTPS | |
| South America (São Paulo) | sa-east-1 | | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|----------------------------|------------|
| Maximum number of Chime webhook configurations per AWS account | Each supported Region: 500 | No |
| Maximum number of Slack channel configurations per AWS account | Each supported Region: 500 | No |

Amazon Chime endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Amazon Chime has a single endpoint that supports HTTPS: `service.chime.aws.amazon.com`

Service quotas

| Name | Default | Adjustable |
|---|---------------------------|------------|
| Chime SDK Meetings - BatchCreateAttendees burst limit | Each supported Region: 20 | No |
| Chime SDK Meetings - BatchCreateAttendees rate limit in transactions per second | Each supported Region: 10 | No |
| Chime SDK Meetings - CreateAttendee burst limit | Each supported Region: 20 | No |
| Chime SDK Meetings - CreateAttendee rate limit in transactions per second | Each supported Region: 10 | No |
| Chime SDK Meetings - CreateMeeting burst limit | Each supported Region: 20 | No |
| Chime SDK Meetings - CreateMeeting rate limit in transactions per second | Each supported Region: 10 | No |

| Name | Default | Adjustable |
|--|----------------------------|------------|
| Chime SDK Meetings - CreateMeetingWithAttendees burst limit | Each supported Region: 20 | No |
| Chime SDK Meetings - CreateMeetingWithAttendees rate limit in transactions per second | Each supported Region: 10 | No |
| Chime SDK Meetings - DeleteAttendee burst limit | Each supported Region: 20 | No |
| Chime SDK Meetings - DeleteAttendee rate limit in transactions per second | Each supported Region: 10 | No |
| Chime SDK Meetings - DeleteMeeting burst limit | Each supported Region: 20 | No |
| Chime SDK Meetings - DeleteMeeting rate limit in transactions per second | Each supported Region: 10 | No |
| Chime SDK Meetings - GetMeeting burst limit | Each supported Region: 20 | No |
| Chime SDK Meetings - GetMeeting rate limit in transactions per second | Each supported Region: 10 | No |
| Chime SDK Meetings - ListAttendees burst limit | Each supported Region: 20 | No |
| Chime SDK Meetings - ListAttendees rate limit in transactions per second | Each supported Region: 10 | No |
| Chime SDK Meetings - ListMeetings burst limit | Each supported Region: 20 | No |
| Chime SDK Meetings - ListMeetings rate limit in transactions per second | Each supported Region: 10 | No |
| Chime SDK Meetings - all meeting management API requests burst limit | Each supported Region: 20 | No |
| Chime SDK Meetings - all meeting management API requests rate limit in transactions per second | Each supported Region: 10 | No |
| Chime SDK Meetings - attendees per meeting | Each supported Region: 250 | No |
| Chime SDK Meetings - maximum concurrent video streams published per meeting | Each supported Region: 25 | Yes |
| Chime SDK Meetings - maximum concurrent video streams subscribed per attendee | Each supported Region: 25 | No |
| Chime SDK Meetings - replica meetings per primary meeting | Each supported Region: 4 | Yes |

The following table lists additional quotas for Amazon Chime rooms and memberships.

| Resource | Default |
|-------------------------|---------|
| Rooms per account | 1,500 |
| Rooms per profile | 1,500 |
| Memberships per room | 1,000 |
| Memberships per profile | 1,000 |

Cloud Control API endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | cloudcontrolapi.us-east-2.amazonaws.com cloudcontrolapi-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | cloudcontrolapi.us-east-1.amazonaws.com cloudcontrolapi-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | cloudcontrolapi.us-west-1.amazonaws.com cloudcontrolapi-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | cloudcontrolapi.us-west-2.amazonaws.com cloudcontrolapi-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | cloudcontrolapi.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | cloudcontrolapi.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | cloudcontrolapi.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | cloudcontrolapi.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | cloudcontrolapi.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | cloudcontrolapi.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | cloudcontrolapi.ap-southeast-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------------|--|
| Asia Pacific (Sydney) | ap-southeast-2 | cloudcontrolapi.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | cloudcontrolapi.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | cloudcontrolapi.ca-central-1.amazonaws.com cloudcontrolapi-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | cloudcontrolapi.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | cloudcontrolapi.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | cloudcontrolapi.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | cloudcontrolapi.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | cloudcontrolapi.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | cloudcontrolapi.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | cloudcontrolapi.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | cloudcontrolapi.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | cloudcontrolapi.us-gov-east-1.amazonaws.com cloudcontrolapi-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | cloudcontrolapi.us-gov-west-1.amazonaws.com cloudcontrolapi-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

AWS Cloud9 endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#).

Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|-------------------------------------|----------|--|
| US East (Ohio) | us-east-2 | cloud9.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | cloud9.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | cloud9.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | cloud9.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | cloud9.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | cloud9.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | cloud9.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | cloud9.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | cloud9.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | cloud9.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | cloud9.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | cloud9.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | cloud9.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | cloud9.eu-central-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|------------|---------------------------------|----------|--|
| Europe (Ireland) | eu-west-1 | cloud9.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | cloud9.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | cloud9.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | cloud9.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | cloud9.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | cloud9.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | cloud9.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-------------------------------------|----------------------------|---------------------|
| EC2 development environments | Each supported Region: 100 | Yes |
| EC2 development environments | Each supported Region: 200 | Yes |
| Members per development environment | Each supported Region: 8 | No |
| SSH development environments | Each supported Region: 200 | Yes |
| SSH development environments | Each supported Region: 100 | Yes |

For more information, see [Quotas](#) in the *AWS Cloud9 User Guide*.

Amazon Cloud Directory endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------|--|
| US East (Ohio) | us-east-2 | clouddirectory.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | clouddirectory.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | clouddirectory.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | clouddirectory.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | clouddirectory.ap-southeast-2.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | clouddirectory.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | clouddirectory.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | clouddirectory.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | clouddirectory.eu-west-2.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | clouddirectory.us-gov-west-1.amazonaws.com | HTTPS | |

AWS CloudFormation endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|----------------|-----------|---|----------------|--|
| US East (Ohio) | us-east-2 | cloudformation.us-east-2.amazonaws.com cloudformation-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| US East (N. Virginia) | us-east-1 | cloudformation.us-east-1.amazonaws.com cloudformation-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | cloudformation.us-west-1.amazonaws.com cloudformation-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | cloudformation.us-west-2.amazonaws.com cloudformation-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | cloudformation.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | cloudformation.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | cloudformation.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | cloudformation.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | cloudformation.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | cloudformation.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | cloudformation.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | cloudformation.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | cloudformation.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | cloudformation.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | cloudformation.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | cloudformation.eu-west-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|----------------|--|
| Europe (London) | eu-west-2 | cloudformation.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | cloudformation.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | cloudformation.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | cloudformation.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | cloudformation.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | cloudformation.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | cloudformation.us-gov-east-1.amazonaws.com cloudformation.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | cloudformation.us-gov-west-1.amazonaws.com cloudformation.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

StackSets regional support

StackSets is supported in the following Regions:

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|------------|------------------------------------|----------|--|
| US East (Ohio) | us-east-2 | stacksets.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | stacksets.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | stacksets.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | stacksets.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | stacksets.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific | ap-east-1 | stacksets.ap-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|----------|--|
| (Hong Kong) | | | | |
| Asia Pacific (Mumbai) | ap-south-1 | stacksets.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | stacksets.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | stacksets.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | stacksets.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | stacksets.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | stacksets.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | stacksets.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | stacksets.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | stacksets.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | stacksets.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | stacksets.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | stacksets.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | stacksets.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | stacksets.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | stacksets.sa-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|---------------------------------------|----------|--|
| AWS GovCloud (US-East) | us-gov-east-1 | stacksets.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | stacksets.us-gov-west-1.amazonaws.com | HTTPS | |

For more information, see [AWS CloudFormation StackSets](#) in the *AWS CloudFormation User Guide*.

Service quotas

| Name | Default | Adjustable |
|--|-------------------------------------|------------|
| Attributes per mapping in CloudFormation template | Each supported Region: 200 | No |
| Data in custom resource provider | Each supported Region: 4,096 Bytes | No |
| Declared mappings in CloudFormation template. | Each supported Region: 200 | No |
| Maximum size of a template description in a cloud formation template | Each supported Region: 1,024 Bytes | No |
| Module limit per account | Each supported Region: 100 | Yes |
| Nested modules | Each supported Region: 3 | No |
| Output count in CloudFormation template | Each supported Region: 200 | No |
| Parameters declared in CloudFormation template. | Each supported Region: 200 | No |
| Resource limit per account | Each supported Region: 50 | Yes |
| Resources declared in a CloudFormation template | Each supported Region: 500 | No |
| Size of Mapping attribute name | Each supported Region: 255 | No |
| Size of a parameter value in cloud formation template | Each supported Region: 4,096 | No |
| Size of a resource name in cloud formation template | Each supported Region: 255 | No |
| Size of a template body in S3 object for a ValidateStack request | Each supported Region: 1 Megabytes | No |
| Size of output name in CloudFormation template | Each supported Region: 255 | No |
| Size of parameter name in CloudFormation template | Each supported Region: 255 | No |
| Size of template body in CreateStack request | Each supported Region: 51,200 Bytes | No |
| Stack count | Each supported Region: 2,000 | Yes |

| Name | Default | Adjustable |
|---|------------------------------------|------------|
| Stack instance operations per administrator account | Each supported Region: 3,500 | Yes |
| Stack instances per stack set | Each supported Region: 2,000 | Yes |
| Stack sets per administrator account | Each supported Region: 100 | Yes |
| Version limit per module | Each supported Region: 100 | Yes |
| Version limit per resource | Each supported Region: 50 | Yes |
| cfn-signal wait condition data | Each supported Region: 4,096 Bytes | No |

For more information, see [AWS CloudFormation Quotas](#) in the *AWS CloudFormation User Guide*.

Amazon CloudFront endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | Amazon Route 53 Hosted Zone ID* |
|------------------------------|-----------|---|----------------|---------------------------------|
| US East (N. Virginia) Region | us-east-1 | cloudfont.amazonaws.com cloudfont-fips.amazonaws.com | HTTPS HTTPS | Z2FDTNDAQYW2 |

Service quotas

| Name | Default | Adjustable |
|---|------------------------------|------------|
| Alternate domain names (CNAMEs) per distribution | Each supported Region: 100 | Yes |
| Cache behaviors per distribution | Each supported Region: 25 | Yes |
| Cache policies per AWS account | Each supported Region: 20 | No |
| CloudFront Functions: Maximum number of distributions associated with a single function | Each supported Region: 100 | Yes |
| Concurrent executions | Each supported Region: 1,000 | Yes |

| Name | Default | Adjustable |
|--|--------------------------------------|------------|
| Connection attempts per origin | Each supported Region: 3 | No |
| Connection timeout per origin | Each supported Region: 10 Seconds | No |
| Cookies per cache policy | Each supported Region: 10 | Yes |
| Cookies per origin request policy | Each supported Region: 10 | Yes |
| Custom headers: maximum length of a header name | Each supported Region: 256 | No |
| Custom headers: maximum length of a header value | Each supported Region: 1,783 | No |
| Custom headers: maximum length of all header values and names combined | Each supported Region: 10,240 | No |
| Custom headers: maximum number of custom headers that you can configure CloudFront to add to origin requests | Each supported Region: 10 | Yes |
| Data transfer rate per distribution | Each supported Region: 150 | Yes |
| Distributions associated with a single key group | Each supported Region: 100 | Yes |
| Distributions associated with the same cache policy | Each supported Region: 100 | No |
| Distributions associated with the same origin request policy | Each supported Region: 100 | No |
| Distributions per AWS account that you can create triggers for | Each supported Region: 25 | Yes |
| File invalidation: maximum number of active wildcard invalidations allowed | Each supported Region: 15 | No |
| File invalidation: maximum number of files allowed in active invalidation requests, excluding wildcard invalidations | Each supported Region: 3,000 | No |
| Function memory size (Viewer request and response event) | Each supported Region: 128 Megabytes | No |
| Function timeout (Origin request and response event) | Each supported Region: 30 Seconds | No |
| Function timeout for a viewer request and response event | Each supported Region: 5 Seconds | No |
| Headers per cache policy | Each supported Region: 10 | Yes |
| Headers per origin request policy | Each supported Region: 10 | Yes |
| Key groups associated with a single distribution | Each supported Region: 4 | Yes |
| Key groups per AWS account | Each supported Region: 10 | Yes |
| Maximum compressed size of a Lambda function and any included libraries. (Origin request and response event) | Each supported Region: 50 Megabytes | No |
| Maximum compressed size of a Lambda function and any included libraries. (Viewer request and response event) | Each supported Region: 1 Megabytes | No |

| Name | Default | Adjustable |
|--|-------------------------------------|------------|
| Maximum file size for HTTP GET, POST, and PUT requests | Each supported Region: 20 Gigabytes | No |
| Maximum length of a URL | Each supported Region: 8,192 Bytes | No |
| Maximum length of a field to encrypt | Each supported Region: 16 Kilobytes | No |
| Maximum length of a request body when field-level encryption is configured | Each supported Region: 1 Megabytes | No |
| Maximum length of a request, including headers and query strings, but not including the body content | Each supported Region: 20,480 Bytes | No |
| Maximum number of CloudFront distributions that can be associated with a field-level encryption configuration | Each supported Region: 20 | No |
| Maximum number of characters in a whitelisted query string | Each supported Region: 128 | No |
| Maximum number of characters total for all whitelisted query strings in the same parameter | Each supported Region: 512 | No |
| Maximum number of field-level encryption configurations that can be associated with one AWS account | Each supported Region: 10 | No |
| Maximum number of field-level encryption profiles that can be associated with one AWS account | Each supported Region: 10 | No |
| Maximum number of fields in a request body when field-level encryption is configured | Each supported Region: 10 | No |
| Maximum number of fields to encrypt that can be specified in one profile | Each supported Region: 10 | No |
| Maximum number of public keys that can be added to one AWS account | Each supported Region: 10 | No |
| Maximum number of query argument profile mappings that can be included in a field-level encryption configuration | Each supported Region: 5 | No |
| Origin access identities per account | Each supported Region: 100 | Yes |
| Origin groups per distribution | Each supported Region: 10 | Yes |
| Origin request policies per AWS account | Each supported Region: 20 | No |
| Origin response timeout (idle timeout) | Each supported Region: 10 | No |
| Origins per distribution | Each supported Region: 25 | Yes |
| Public keys in a single key group | Each supported Region: 5 | Yes |
| Query strings per cache policy | Each supported Region: 10 | Yes |
| Query strings per origin request policy | Each supported Region: 10 | Yes |
| RTMP distributions per AWS account | Each supported Region: 100 | Yes |

| Name | Default | Adjustable |
|--|---|------------|
| Range of file sizes that CloudFront compresses | Each supported Region: 10,000,000 Bytes | No |
| Request body size for origin requests exposed to a Lambda@Edge function. | Each supported Region: 1 Megabytes | No |
| Request body size for origin requests when returning from a Lambda function (base64 encoding) | Each supported Region: 1.33 Megabytes | No |
| Request body size for origin requests when returning from a Lambda function (text encoding) | Each supported Region: 1 Megabytes | No |
| Request body size for viewer requests exposed to a Lambda@Edge function. | Each supported Region: 40 Kilobytes | No |
| Request body size for viewer requests when returning from a Lambda function (base64 encoding) | Each supported Region: 53.2 Kilobytes | No |
| Request body size for viewer requests when returning from a Lambda function (text encoding) | Each supported Region: 40 Kilobytes | No |
| Request timeout | Each supported Region: 30 Seconds | Yes |
| Requests per second | Each supported Region: 10,000 | Yes |
| Requests per second per distribution | Each supported Region: 250,000 | Yes |
| Response timeout per origin | Each supported Region: 60 Seconds | Yes |
| SSL certificates per AWS account when serving HTTPS requests using dedicated IP addresses | Each supported Region: 2 | Yes |
| SSL certificates that can be associated with a CloudFront web distribution | Each supported Region: 1 | No |
| Size of a response that is generated by a Lambda function, including headers and body (Origin request and response event) | Each supported Region: 1 Megabytes | No |
| Size of a response that is generated by a Lambda function, including headers and body (Viewer request and response event) | Each supported Region: 40 Kilobytes | No |
| Tags that can be added to a distribution | Each supported Region: 50 | No |
| Total length of the URI including query string in a Lambda@Edge function | Each supported Region: 8,192 | No |
| Total number of bytes in whitelisted cookie names (doesn't apply if you configure CloudFront to forward all cookies to the origin) | Each supported Region: 512 Bytes | No |
| Triggers per distribution | Each supported Region: 100 | Yes |
| Web distributions per AWS account | Each supported Region: 200 | Yes |

| Name | Default | Adjustable |
|--|---------------------------|------------|
| Whitelisted cookies per cache behavior | Each supported Region: 10 | Yes |
| Whitelisted headers per cache behavior | Each supported Region: 10 | Yes |
| Whitelisted query strings per cache behavior | Each supported Region: 10 | Yes |

For more information, see [Quotas](#) in the *Amazon CloudFront Developer Guide*.

AWS CloudHSM endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

AWS CloudHSM

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------|
| US East (Ohio) | us-east-2 | cloudhsmv2.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | cloudhsmv2.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | cloudhsmv2.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | cloudhsmv2.us-west-2.amazonaws.com | HTTPS |
| Africa (Cape Town) | af-south-1 | cloudhsmv2.af-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | cloudhsmv2.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | cloudhsmv2.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Osaka) | ap-northeast-3 | cloudhsmv2.ap-northeast-3.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| Asia Pacific (Seoul) | ap-northeast-2 | cloudhsmv2.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | cloudhsmv2.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | cloudhsmv2.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | cloudhsmv2.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | cloudhsmv2.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | cloudhsmv2.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | cloudhsmv2.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | cloudhsmv2.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | cloudhsmv2.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | cloudhsmv2.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | cloudhsmv2.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | cloudhsmv2.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | cloudhsmv2.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | cloudhsmv2.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | cloudhsmv2.us-gov-west-1.amazonaws.com | HTTPS | |

AWS CloudHSM Classic

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|--------------------------------------|----------|--|
| US East (N. Virginia) | us-east-1 | cloudhsm.us-east-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | cloudhsm.eu-west-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | cloudhsm.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

AWS CloudHSM

| Name | Default | Adjustable |
|---|------------------------------|------------|
| Clusters per AWS Region and AWS account | Each supported Region: 4 | Yes |
| HSMs per AWS Region and AWS account | Each supported Region: 6 | Yes |
| HSMs per CloudHSM cluster | Each supported Region: 28 | No |
| Keys per CloudHSM cluster | Each supported Region: 3,300 | No |
| Length of a Username | Each supported Region: 31 | No |
| Length of a password | Each supported Region: 32 | No |
| Minimum length of a password | Each supported Region: 7 | No |
| Number of concurrent clients | Each supported Region: 900 | No |
| Users per CloudHSM cluster | Each supported Region: 1,024 | No |

For more information, see [Quotas](#) in the *AWS CloudHSM User Guide*.

AWS CloudHSM Classic

| Resource | Default |
|------------------------------------|---------|
| HSM appliances | 3 |
| High-availability partition groups | 20 |

For more information, see [Quotas](#) in the *AWS CloudHSM Classic User Guide*.

AWS Cloud Map endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|-------------------------|--|
| US East (Ohio) | us-east-2 | servicediscovery.us-east-2.amazonaws.com servicediscovery-fips.us-east-2.amazonaws.com servicediscovery-fips.us-east-2.amazonaws.com | HTTPS HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | servicediscovery.us-east-1.amazonaws.com servicediscovery-fips.us-east-1.amazonaws.com servicediscovery-fips.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| US West (N. California) | us-west-1 | servicediscovery.us-west-1.amazonaws.com servicediscovery-fips.us-west-1.amazonaws.com servicediscovery-fips.us-west-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | servicediscovery.us-west-2.amazonaws.com servicediscovery-fips.us-west-2.amazonaws.com servicediscovery-fips.us-west-2.amazonaws.com | HTTPS HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | servicediscovery.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | servicediscovery.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | servicediscovery.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | servicediscovery.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | servicediscovery.ap-southeast-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|-------------------------|--|
| Asia Pacific (Sydney) | ap-southeast-2 | servicediscovery.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | servicediscovery.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | servicediscovery.ca-central-1.amazonaws.com servicediscovery-fips.ca-central-1.amazonaws.com servicediscovery-fips.ca-central-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | servicediscovery.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | servicediscovery.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | servicediscovery.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | servicediscovery.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | servicediscovery.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | servicediscovery.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | servicediscovery.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | servicediscovery.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | servicediscovery.us-gov-east-1.amazonaws.com servicediscovery-fips.us-gov-east-1.amazonaws.com servicediscovery-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | servicediscovery.us-gov-west-1.amazonaws.com servicediscovery-fips.us-gov-west-1.amazonaws.com servicediscovery-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|------------------------------|------------|
| Custom attributes per instance | Each supported Region: 30 | No |
| DiscoverInstances operation per account burst rate | Each supported Region: 2,000 | Yes |
| DiscoverInstances operation per account steady rate | Each supported Region: 1,000 | Yes |
| Instances per namespace | Each supported Region: 2,000 | Yes |
| Instances per service | Each supported Region: 1,000 | No |
| Namespaces per Region | Each supported Region: 50 | Yes |

For more information, see [AWS Cloud Map Quotas](#) in the *AWS Cloud Map Developer Guide*.

Amazon CloudSearch endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|--|----------|
| US East (N. Virginia) | us-east-1 | cloudsearch.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | cloudsearch.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | cloudsearch.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | cloudsearch.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | cloudsearch.ap-southeast-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|----------|--|
| Asia Pacific (Sydney) | ap-southeast-2 | cloudsearch.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | cloudsearch.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | cloudsearch.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | cloudsearch.eu-west-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | cloudsearch.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|------------------------|------------------------------------|------------|
| Document batch size | Each supported Region: 5 Megabytes | No |
| Document size | Each supported Region: 1 Megabytes | No |
| Domains per account | Each supported Region: 100 | No |
| Index fields | Each supported Region: 200 | Yes |
| Partition count | Each supported Region: 10 | Yes |
| Replication count | Each supported Region: 5 | Yes |
| Search document fields | Each supported Region: 200 | No |

For more information, see [Understanding Amazon CloudSearch Quotas](#) in the *Amazon CloudSearch Developer Guide*.

AWS CloudShell endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|----------------|---|----------|--|
| US East (Ohio) | us-east-2 | cloudshell.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | cloudshell.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | cloudshell.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | cloudshell.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | cloudshell.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | cloudshell.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | cloudshell.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | cloudshell.eu-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---------------------|------------------------------------|------------|
| Data retention | Each supported Region: 120 | No |
| Home directory size | Each supported Region: 1 Gigabytes | No |

AWS CloudTrail endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | cloudtrail.us-east-2.amazonaws.com cloudtrail-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | cloudtrail.us-east-1.amazonaws.com cloudtrail-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | cloudtrail.us-west-1.amazonaws.com cloudtrail-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | cloudtrail.us-west-2.amazonaws.com cloudtrail-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | cloudtrail.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | cloudtrail.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | cloudtrail.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | cloudtrail.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | cloudtrail.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | cloudtrail.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | cloudtrail.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | cloudtrail.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | cloudtrail.ap-northeast-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|-----------------|--|
| Canada (Central) | ca-central-1 | cloudtrail.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | cloudtrail.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | cloudtrail.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | cloudtrail.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | cloudtrail.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | cloudtrail.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | cloudtrail.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | cloudtrail.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | cloudtrail.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | cloudtrail.us-gov-east-1.amazonaws.com cloudtrail.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | cloudtrail.us-gov-west-1.amazonaws.com cloudtrail.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|--------------------------------------|-------------------|
| Conditions across all advanced event selectors | Each supported Region: 500 | No |
| Data resources across all event selectors in a trail | Each supported Region: 250 | No |
| Event data stores per region | Each supported Region: 5 | No |
| Event selectors | Each supported Region: 5 | No |
| Event size | Each supported Region: 256 Kilobytes | No |
| Trails per region | Each supported Region: 5 | No |

| Name | Default | Adjustable |
|--|---------------------------|------------|
| Transactions per second (TPS) for all other APIs | Each supported Region: 1 | No |
| Transactions per second (TPS) for the LookupEvents API | Each supported Region: 2 | No |
| Transactions per second (TPS) for the get, describe, and list APIs | Each supported Region: 10 | No |

For more information, see [Quotas in AWS CloudTrail](#).

Amazon CloudWatch endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|------------|---|-------------------------|--|
| US East (Ohio) | us-east-2 | monitoring.us-east-2.amazonaws.com monitoring-fips.us-east-2.amazonaws.com | HTTP and HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | monitoring.us-east-1.amazonaws.com monitoring-fips.us-east-1.amazonaws.com | HTTP and HTTPS HTTPS | |
| US West (N. California) | us-west-1 | monitoring.us-west-1.amazonaws.com monitoring-fips.us-west-1.amazonaws.com | HTTP and HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | monitoring.us-west-2.amazonaws.com monitoring-fips.us-west-2.amazonaws.com | HTTP and HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | monitoring.af-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | monitoring.ap-east-1.amazonaws.com | HTTP and HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| Asia Pacific (Jakarta) | ap-southeast-3 | monitoring.ap-southeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | monitoring.ap-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | monitoring.ap-northeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | monitoring.ap-northeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | monitoring.ap-southeast-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | monitoring.ap-southeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | monitoring.ap-northeast-1.amazonaws.com | HTTP and HTTPS | |
| Canada (Central) | ca-central-1 | monitoring.ca-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Frankfurt) | eu-central-1 | monitoring.eu-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Ireland) | eu-west-1 | monitoring.eu-west-1.amazonaws.com | HTTP and HTTPS | |
| Europe (London) | eu-west-2 | monitoring.eu-west-2.amazonaws.com | HTTP and HTTPS | |
| Europe (Milan) | eu-south-1 | monitoring.eu-south-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Paris) | eu-west-3 | monitoring.eu-west-3.amazonaws.com | HTTP and HTTPS | |
| Europe (Stockholm) | eu-north-1 | monitoring.eu-north-1.amazonaws.com | HTTP and HTTPS | |
| Middle East (Bahrain) | me-south-1 | monitoring.me-south-1.amazonaws.com | HTTP and HTTPS | |
| South America (São Paulo) | sa-east-1 | monitoring.sa-east-1.amazonaws.com | HTTP and HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|--|-------------------------|--|
| AWS GovCloud (US-East) | us-gov-east-1 | monitoring.us-gov-east-1.amazonaws.com monitoring.us-gov-east-1.amazonaws.com | HTTP and HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | monitoring.us-gov-west-1.amazonaws.com monitoring.us-gov-west-1.amazonaws.com | HTTP and HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|---|------------|
| Actions per CloudWatch alarm, per state | Each supported Region: 5 | No |
| Canary limit | us-east-1: 300 us-east-2: 300 us-west-2: 300 ap-northeast-1: 300 eu-west-1: 300 Each of the other supported Regions: 200 | Yes |
| Data retention | Each supported Region: 15 | No |
| Dimensions per metric | Each supported Region: 10 | No |
| Metric data queries per GetMetricData request | Each supported Region: 500 | No |
| MetricDatum items per PutMetricData request | Each supported Region: 20 | No |
| Metrics per dashboard | Each supported Region: 2,500 | No |
| Metrics per dashboard widget | Each supported Region: 500 | No |
| Minimum frequency | Each supported Region: 60,000 Milliseconds | No |
| Number of Contributor Insights rules | Each supported Region: 100 per 5 minutes | Yes |
| Payload size for PutMetricData requests | Each supported Region: 40 | No |
| Rate of DeleteAlarms requests | Each supported Region: 3 per second | No |
| Rate of DeleteDashboards requests | Each supported Region: 10 per second | Yes |

| Name | Default | Adjustable |
|--|---------------------------------------|------------|
| Rate of DeleteInsightRules requests | Each supported Region: 5 per second | No |
| Rate of DeleteMetricStream requests | Each supported Region: 10 per second | Yes |
| Rate of DescribeAlarmHistory requests | Each supported Region: 3 per second | No |
| Rate of DescribeAlarms requests | Each supported Region: 9 per second | Yes |
| Rate of DescribeAlarmsForMetric requests | Each supported Region: 3 per second | No |
| Rate of DescribeInsightRules requests | Each supported Region: 20 per second | No |
| Rate of DisableAlarmActions requests | Each supported Region: 3 per second | No |
| Rate of DisableInsightRules requests | Each supported Region: 1 per second | No |
| Rate of EnableAlarmActions requests | Each supported Region: 3 per second | No |
| Rate of EnableInsightRules requests | Each supported Region: 1 per second | No |
| Rate of GetDashboard requests | Each supported Region: 10 per second | Yes |
| Rate of GetInsightRuleReport requests | Each supported Region: 20 per second | Yes |
| Rate of GetMetricData datapoints for metrics older than three hours | Each supported Region: 396,000 | No |
| Rate of GetMetricData datapoints for the last three hours of metrics | Each supported Region: 180,000 | No |
| Rate of GetMetricData requests | Each supported Region: 50 per second | Yes |
| Rate of GetMetricStatistics requests | Each supported Region: 400 per second | Yes |
| Rate of GetMetricStream requests | Each supported Region: 10 per second | Yes |
| Rate of GetMetricWidgetImage requests | Each supported Region: 20 per second | Yes |
| Rate of ListDashboards requests | Each supported Region: 10 per second | Yes |
| Rate of ListMetricStreams requests | Each supported Region: 10 per second | Yes |

| Name | Default | Adjustable |
|--------------------------------------|---------------------------------------|------------|
| Rate of ListMetrics requests | Each supported Region: 25 per second | Yes |
| Rate of ListTagsForResource requests | Each supported Region: 10 per second | No |
| Rate of PutDashboard requests | Each supported Region: 10 per second | Yes |
| Rate of PutInsightRule requests | Each supported Region: 5 per second | No |
| Rate of PutMetricAlarm requests | Each supported Region: 3 per second | Yes |
| Rate of PutMetricData requests | Each supported Region: 150 per second | Yes |
| Rate of PutMetricStream requests | Each supported Region: 10 per second | Yes |
| Rate of SetAlarmState requests | Each supported Region: 3 per second | No |
| Rate of StartMetricStreams requests | Each supported Region: 10 per second | Yes |
| Rate of StopMetricStreams requests | Each supported Region: 10 per second | Yes |
| Rate of TagResource requests | Each supported Region: 1 per second | No |
| Rate of UntagResource requests | Each supported Region: 1 per second | No |

For more information, see [CloudWatch Quotas](#) in the *Amazon CloudWatch User Guide*.

Amazon CloudWatch Application Insights endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------|--|
| US East (Ohio) | us-east-2 | applicationinsights.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | applicationinsights.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | applicationinsights.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | applicationinsights.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | applicationinsights.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | applicationinsights.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | applicationinsights.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | applicationinsights.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | applicationinsights.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | applicationinsights.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | applicationinsights.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | applicationinsights.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | applicationinsights.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | applicationinsights.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | applicationinsights.eu-west-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|----------------|--|
| Europe (London) | eu-west-2 | applicationinsights.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | applicationinsights.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | applicationinsights.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | applicationinsights.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | applicationinsights.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | applicationinsights.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | applicationinsights.us-gov-east-1.amazonaws.com applicationinsights.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | applicationinsights.us-gov-west-1.amazonaws.com applicationinsights.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Resource | Default quota |
|--------------------------|--|
| API requests | All API actions are throttled to 5 TPS |
| Applications | 100 per account |
| Log Streams | 5 per resource |
| Observations per problem | 20 per dashboard 40 per <code>DescribeProblemObservations</code> action |
| Metrics | 60 per resource |
| Resources | 30 per application |

Amazon CloudWatch Events endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services

offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | events.us-east-2.amazonaws.com events-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | events.us-east-1.amazonaws.com events-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | events.us-west-1.amazonaws.com events-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | events.us-west-2.amazonaws.com events-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | events.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | events.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | events.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | events.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | events.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | events.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | events.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | events.ap-southeast-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|----------------|--|
| Asia Pacific (Tokyo) | ap-northeast-1 | events.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | events.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | events.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | events.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | events.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | events.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | events.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | events.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | events.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | events.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | events.us-gov-east-1.amazonaws.com events.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | events.us-gov-west-1.amazonaws.com events.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|---------------------------------------|------------|
| Api destinations | Each supported Region: 3,000 | Yes |
| Connections | Each supported Region: 3,000 | Yes |
| Invocations throttle limit in transactions per second | us-east-1: 18,750 us-east-2: 4,500 | Yes |

| Name | Default | Adjustable |
|---|--|------------|
| | us-west-1: 2,250 us-west-2: 18,750 af-south-1: 750 ap-northeast-1: 2,250 ap-northeast-3: 750 ap-southeast-1: 2,250 ap-southeast-2: 2,250 eu-central-1: 4,500 eu-south-1: 750 eu-west-1: 18,750 eu-west-2: 2,250 Each of the other supported Regions: 1,100 | |
| Number of rules | af-south-1: 100 eu-south-1: 100 Each of the other supported Regions: 300 | Yes |
| PutEvents throttle limit in transactions per second | us-east-1: 10,000 us-east-2: 2,400 us-west-1: 1,200 us-west-2: 10,000 af-south-1: 400 ap-northeast-1: 1,200 ap-northeast-3: 400 ap-southeast-1: 1,200 ap-southeast-2: 1,200 eu-central-1: 2,400 eu-south-1: 400 eu-west-1: 10,000 eu-west-2: 1,200 Each of the other supported Regions: 600 | Yes |

| Name | Default | Adjustable |
|---|----------------------------|------------|
| Rate of invocations per API destination | Each supported Region: 300 | Yes |
| Targets per rule | Each supported Region: 5 | No |
| Throttle limit in transactions per second | Each supported Region: 50 | Yes |

For more information, see [CloudWatch Events quotas](#) in the *Amazon CloudWatch Events User Guide*.

Amazon CloudWatch Logs endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------------|
| US East (Ohio) | us-east-2 | logs.us-east-2.amazonaws.com logs-fips.us-east-2.amazonaws.com | HTTPS HTTPS |
| US East (N. Virginia) | us-east-1 | logs.us-east-1.amazonaws.com logs-fips.us-east-1.amazonaws.com | HTTPS HTTPS |
| US West (N. California) | us-west-1 | logs.us-west-1.amazonaws.com logs-fips.us-west-1.amazonaws.com | HTTPS HTTPS |
| US West (Oregon) | us-west-2 | logs.us-west-2.amazonaws.com logs-fips.us-west-2.amazonaws.com | HTTPS HTTPS |
| Africa (Cape Town) | af-south-1 | logs.af-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | logs.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Jakarta) | ap-southeast-3 | logs.ap-southeast-3.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | logs.ap-south-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|-----------------|--|
| Asia Pacific (Osaka) | ap-northeast-3 | logs.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | logs.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | logs.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | logs.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | logs.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | logs.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | logs.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | logs.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | logs.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | logs.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | logs.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | logs.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | logs.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | logs.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | logs.us-gov-east-1.amazonaws.com logs.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | logs.us-gov-west-1.amazonaws.com logs.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|--------------------------------------|------------|
| Active export task | Each supported Region: 1 | No |
| AssociateKmsKey throttle limit in transactions per second | Each supported Region: 5 per second | No |
| Batch size | Each supported Region: 1 Megabytes | No |
| CancelExportTask throttle limit in transactions per second | Each supported Region: 5 per second | No |
| CreateExportTask throttle limit in transactions per second | Each supported Region: 5 per second | No |
| CreateLogGroup throttle limit in transactions per second | Each supported Region: 5 per second | Yes |
| CreateLogStream throttle limit in transactions per second | Each supported Region: 50 per second | Yes |
| Data archiving | Each supported Region: 5 Gigabytes | No |
| DeleteDestination throttle limit in transactions per second | Each supported Region: 5 per second | No |
| DeleteLogGroup throttle limit in transactions per second | Each supported Region: 5 per second | Yes |
| DeleteLogStream throttle limit in transactions per second | Each supported Region: 5 per second | No |
| DeleteMetricFilter throttle limit in transactions per second | Each supported Region: 5 per second | No |
| DeleteRetentionPolicy throttle limit in transactions per second | Each supported Region: 5 per second | No |
| DeleteSubscriptionFilter throttle limit in transactions per second | Each supported Region: 5 per second | No |
| DescribeDestinations throttle limit in transactions per second | Each supported Region: 5 per second | No |
| DescribeExportTasks throttle limit in transactions per second | Each supported Region: 5 per second | No |
| DescribeLogGroups throttle limit in transactions per second | Each supported Region: 5 per second | Yes |
| DescribeLogStreams throttle limit in transactions per second | Each supported Region: 5 per second | Yes |
| DescribeMetricFilters throttle limit in transactions per second | Each supported Region: 5 per second | No |

| Name | Default | Adjustable |
|---|---|------------|
| DescribeSubscriptionFilters throttle limit in transactions per second | Each supported Region: 5 per second | No |
| Event size | Each supported Region: 256 Kilobytes | No |
| FilterLogEvents throttle limit in transactions per second | Each supported Region: 5 per second | No |
| GetLogEvents throttle limit in transactions per second | Each supported Region: 10 per second | No |
| GetQueryResults throttle limit in transactions per second | Each supported Region: 5 | No |
| ListTagsLogGroup throttle limit in transactions per second | Each supported Region: 5 per second | No |
| Log groups | Each supported Region: 1,000,000 | Yes |
| Metrics filters per log group | Each supported Region: 100 | No |
| PutDestination throttle limit in transactions per second | Each supported Region: 5 per second | No |
| PutDestinationPolicy throttle limit in transactions per second | Each supported Region: 5 per second | No |
| PutLogEvents throttle limit in transactions per second | us-east-1: 1,500 per second us-west-2: 1,500 per second eu-north-1: 1,500 per second eu-south-1: 1,500 per second eu-west-1: 1,500 per second eu-west-3: 1,500 per second Each of the other supported Regions: 800 per second | Yes |
| PutMetricFilter throttle limit in transactions per second | Each supported Region: 5 per second | No |
| PutRetentionPolicy throttle limit in transactions per second | Each supported Region: 5 per second | No |
| PutSubscriptionFilter throttle limit in transactions per second | Each supported Region: 5 per second | No |
| StartQuery throttle limit in transactions per second | Each supported Region: 5 | No |
| Subscription filters per log group | Each supported Region: 2 | No |
| TagLogGroup throttle limit in transactions per second | Each supported Region: 5 per second | No |

| Name | Default | Adjustable |
|--|-------------------------------------|------------|
| TestMetricFilter throttle limit in transactions per second | Each supported Region: 5 per second | No |
| UntagLogGroup throttle limit in transactions per second | Each supported Region: 5 per second | No |

For more information, see [CloudWatch Logs quotas](#) in the *Amazon CloudWatch Logs User Guide*.

Amazon CloudWatch Synthetics endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------|
| US East (Ohio) | us-east-2 | synthetics.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | synthetics.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | synthetics.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | synthetics.us-west-2.amazonaws.com | HTTPS |
| Africa (Cape Town) | af-south-1 | synthetics.af-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | synthetics.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Jakarta) | ap-southeast-3 | synthetics.ap-southeast-3.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | synthetics.ap-south-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------|--|
| Asia Pacific (Osaka) | ap-northeast-3 | synthetics.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | synthetics.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | synthetics.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | synthetics.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | synthetics.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | synthetics.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | synthetics.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | synthetics.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | synthetics.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | synthetics.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | synthetics.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | synthetics.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | synthetics.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | synthetics.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | synthetics.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | synthetics.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Resource | Default |
|----------|---|
| Canaries | 100 per Region per account in the following Regions: US East (N. Virginia), US East (Ohio), US West (Oregon), Europe (Ireland), and Asia Pacific (Tokyo). 20 per Region per account in all other Regions. You can request a quota increase . |

For more information, see [CloudWatch Quotas](#) in the *Amazon CloudWatch User Guide*.

AWS CodeArtifact endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------|
| US East (Ohio) | us-east-2 | codeartifact.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | codeartifact.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | codeartifact.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | codeartifact.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | codeartifact.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | codeartifact.ap-southeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | codeartifact.ap-northeast-1.amazonaws.com | HTTPS |
| Europe (Frankfurt) | eu-central-1 | codeartifact.eu-central-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|--------------------|------------|---------------------------------------|----------|--|
| Europe (Ireland) | eu-west-1 | codeartifact.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | codeartifact.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | codeartifact.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | codeartifact.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | codeartifact.eu-north-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|------------------------------------|------------|
| Asset file size maximum | Each supported Region: 1 Gigabytes | Yes |
| Assets per package version maximum | Each supported Region: 100 | No |
| CopyPackageVersions maximum requests per second | Each supported Region: 5 | Yes |
| Direct upstream repository maximum | Each supported Region: 10 | No |
| Domains per AWS account maximum | Each supported Region: 10 | Yes |
| GetAuthorizationToken maximum requests per second | Each supported Region: 40 | Yes |
| GetPackageVersionAsset maximum requests per second | Each supported Region: 50 | Yes |
| ListPackageVersionAssets maximum requests per second | Each supported Region: 20 | Yes |
| ListPackageVersions maximum requests per second | Each supported Region: 200 | Yes |
| ListPackages maximum requests per second | Each supported Region: 200 | Yes |
| Maximum read requests per second from a single AWS account | Each supported Region: 800 | Yes |
| Maximum requests per second using a single authentication token. | Each supported Region: 800 | No |
| Maximum write requests per second from a single AWS account | Each supported Region: 100 | Yes |
| Repositories per domain maximum | Each supported Region: 1,000 | Yes |
| Requests without authentication token per IP address maximum | Each supported Region: 600 | No |

| Name | Default | Adjustable |
|------------------------------------|---------------------------|------------|
| Upstream repository search maximum | Each supported Region: 25 | No |

AWS CodeBuild endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | codebuild.us-east-2.amazonaws.com codebuild-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | codebuild.us-east-1.amazonaws.com codebuild-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | codebuild.us-west-1.amazonaws.com codebuild-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | codebuild.us-west-2.amazonaws.com codebuild-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | codebuild.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | codebuild.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | codebuild.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | codebuild.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | codebuild.ap-northeast-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------------|--|
| Asia Pacific (Singapore) | ap-southeast-1 | codebuild.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | codebuild.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | codebuild.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | codebuild.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | codebuild.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | codebuild.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | codebuild.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | codebuild.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | codebuild.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | codebuild.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | codebuild.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | codebuild.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | codebuild.us-gov-east-1.amazonaws.com codebuild-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | codebuild.us-gov-west-1.amazonaws.com codebuild-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|------------------------------|------------|
| Associated tags per project | Each supported Region: 50 | No |
| Build projects | Each supported Region: 5,000 | Yes |
| Build timeout in minutes | Each supported Region: 480 | No |
| Concurrent request for information about builds | Each supported Region: 100 | No |
| Concurrent requests for information on build projects | Each supported Region: 100 | No |
| Concurrently running builds | Each supported Region: 60 | Yes |
| Minimum period for build timeout in minutes | Each supported Region: 5 | No |
| Security groups under VPC configuration | Each supported Region: 5 | No |
| Subnets under VPC configuration | Each supported Region: 16 | No |

For more information, see [Quotas for CodeBuild](#) in the *AWS CodeBuild User Guide*.

AWS CodeCommit endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|-----------|--|-------------------------|--|
| US East (Ohio) | us-east-2 | codecommit.us-east-2.amazonaws.com codecommit-fips.us-east-2.amazonaws.com codecommit-fips.us-east-2.amazonaws.com | HTTPS HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | codecommit.us-east-1.amazonaws.com codecommit-fips.us-east-1.amazonaws.com codecommit-fips.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| US West (N. California) | us-west-1 | codecommit.us-west-1.amazonaws.com codecommit-fips.us-west-1.amazonaws.com codecommit-fips.us-west-1.amazonaws.com | HTTPS HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-------------------------|--|
| US West (Oregon) | us-west-2 | codecommit.us-west-2.amazonaws.com codecommit-fips.us-west-2.amazonaws.com codecommit-fips.us-west-2.amazonaws.com | HTTPS HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | codecommit.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | codecommit.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | codecommit.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | codecommit.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | codecommit.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | codecommit.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | codecommit.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | codecommit.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | codecommit.ca-central-1.amazonaws.com codecommit-fips.ca-central-1.amazonaws.com codecommit-fips.ca-central-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | codecommit.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | codecommit.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | codecommit.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | codecommit.eu-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------|--|
| Europe (Paris) | eu-west-3 | codecommit.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | codecommit.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | codecommit.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | codecommit.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | codecommit.us-gov-east-1.amazonaws.com | HTTPS | |
| | | codecommit-fips.us-gov-east-1.amazonaws.com | HTTPS | |
| | | codecommit-fips.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | codecommit.us-gov-west-1.amazonaws.com | HTTPS | |
| | | codecommit-fips.us-gov-west-1.amazonaws.com | HTTPS | |
| | | codecommit-fips.us-gov-west-1.amazonaws.com | HTTPS | |

For information about Git connection endpoints, including SSH and HTTPS information, see [Regions and Git Connection Endpoints for CodeCommit](#).

Service quotas

| Name | Default | Adjustable |
|----------------------|------------------------------|---------------------|
| Allowed repositories | Each supported Region: 1,000 | Yes |

For more information, see [Quotas in CodeCommit](#) in the *AWS CodeCommit User Guide*.

AWS CodeDeploy endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | codedeploy.us-east-2.amazonaws.com codedeploy-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | codedeploy.us-east-1.amazonaws.com codedeploy-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | codedeploy.us-west-1.amazonaws.com codedeploy-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | codedeploy.us-west-2.amazonaws.com codedeploy-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | codedeploy.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | codedeploy.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | codedeploy.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | codedeploy.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | codedeploy.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | codedeploy.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | codedeploy.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | codedeploy.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | codedeploy.ap-northeast-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|-----------------|--|
| Canada (Central) | ca-central-1 | codedeploy.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | codedeploy.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | codedeploy.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | codedeploy.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | codedeploy.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | codedeploy.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | codedeploy.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | codedeploy.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | codedeploy.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | codedeploy.us-gov-east-1.amazonaws.com codedeploy-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | codedeploy.us-gov-west-1.amazonaws.com codedeploy-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|------------------------------|-------------------|
| AWS Lambda deployment run in hours | Each supported Region: 50 | No |
| Applications associated per account per region | Each supported Region: 1,000 | Yes |
| Auto Scaling groups in a deployment group | Each supported Region: 10 | No |
| Concurrent deployments per account | Each supported Region: 1,000 | Yes |
| Concurrent deployments per deployment group | Each supported Region: 1 | No |
| Custom deployment configurations per account | Each supported Region: 50 | No |

| Name | Default | Adjustable |
|---|--|------------|
| Deployment groups associated with a single application | Each supported Region: 1,000 | Yes |
| EC2/On-Premises blue/green deployment run in hours | Each supported Region: 109 | No |
| EC2/On-Premises in-place deployment run in hours | Each supported Region: 8 | No |
| Event notification triggers in a deployment group | Each supported Region: 10 | Yes |
| GitHub connection tokens per account | Each supported Region: 25 | No |
| Hours between the completion of a deployment and the termination of the original instances during an EC2/On-Premises blue/green deployment | Each supported Region: 48 | No |
| Hours between the deployment of a revision and when traffic shifts to the replacement instances during an EC2/On-Premises blue/green deployment | Each supported Region: 48 | No |
| Instances count per deployment | us-east-1: 2,000 Each of the other supported Regions: 1,000 | Yes |
| Minutes a blue/green deployment can wait after a successful deployment before terminating instances from the original deployment | Each supported Region: 2,800 | No |
| Minutes between the first and last traffic shift during an AWS Lambda canary or linear deployment | Each supported Region: 2,880 | No |
| Minutes until a deployment fails if a lifecycle event doesn't start | Each supported Region: 5 | No |
| Number of deployment groups that can be associated with an Amazon ECS service | Each supported Region: 1 | No |
| Number of instances that can be passed to the BatchGetOnPremisesInstances API action | Each supported Region: 100 | No |
| Number of instances used by concurrent deployments that are in progress per account | us-east-1: 3,000 Each of the other supported Regions: 1,000 | Yes |
| Number of listeners for a traffic route during an Amazon ECS deployment | Each supported Region: 1 | No |
| Seconds until a deployment lifecycle event fails if not completed | Each supported Region: 3,600 Seconds | No |
| Size of deployment group name | Each supported Region: 100 | No |
| Size of tag key | Each supported Region: 128 | No |
| Size of tag value | Each supported Region: 256 | No |
| Tags in a deployment group | Each supported Region: 10 | No |

| Name | Default | Adjustable |
|--|---------------------------|------------|
| Traffic that can be shifted in one increment during an AWS Lambda deployment | Each supported Region: 99 | No |

For more information, see [Quotas in CodeDeploy](#) in the *AWS CodeDeploy User Guide*.

Amazon CodeGuru Profiler endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------|--|
| US East (Ohio) | us-east-2 | codeguru-profiler.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | codeguru-profiler.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | codeguru-profiler.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | codeguru-profiler.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | codeguru-profiler.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | codeguru-profiler.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | codeguru-profiler.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | codeguru-profiler.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | codeguru-profiler.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | codeguru-profiler.eu-north-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|---------------------------|------------|
| Number of profiling groups per account and region. | Each supported Region: 50 | No |

Amazon CodeGuru Reviewer endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------|--|
| US East (Ohio) | us-east-2 | codeguru-reviewer.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | codeguru-reviewer.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | codeguru-reviewer.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | codeguru-reviewer.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | codeguru-reviewer.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | codeguru-reviewer.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | codeguru-reviewer.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | codeguru-reviewer.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | codeguru-reviewer.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | codeguru-reviewer.eu-north-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|----------------------|---------------------------------|------------|
| Allowed Code Reviews | Each supported Region: 5,000 | Yes |

AWS CodePipeline endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | codepipeline.us-east-2.amazonaws.com codepipeline-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | codepipeline.us-east-1.amazonaws.com codepipeline-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | codepipeline.us-west-1.amazonaws.com codepipeline-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | codepipeline.us-west-2.amazonaws.com codepipeline-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | codepipeline.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | codepipeline.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | codepipeline.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | codepipeline.ap-southeast-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------------|--|
| Asia Pacific (Sydney) | ap-southeast-2 | codepipeline.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | codepipeline.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | codepipeline.ca-central-1.amazonaws.com codepipeline-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | codepipeline.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | codepipeline.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | codepipeline.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | codepipeline.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | codepipeline.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | codepipeline.eu-north-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | codepipeline.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | codepipeline.us-gov-west-1.amazonaws.com codepipeline-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|---------------------------|------------|
| AWS CloudFormation action timeout | Each supported Region: 3 | Yes |
| AWS CodeBuild action timeout | Each supported Region: 8 | Yes |
| AWS CodeDeploy ECS (Blue/Green) action timeout | Each supported Region: 5 | Yes |
| AWS CodeDeploy action timeout | Each supported Region: 5 | Yes |
| AWS Lambda action timeout | Each supported Region: 1 | Yes |
| Action configuration key length | Each supported Region: 50 | No |

| Name | Default | Adjustable |
|---|--------------------------------------|------------|
| Action configuration value length | Each supported Region: 1,000 | No |
| Action timeout | Each supported Region: 1 | Yes |
| Amazon S3 deployment action timeout | Each supported Region: 20 | Yes |
| Approval action timeout | Each supported Region: 7 | No |
| Minimum actions | Each supported Region: 1 | No |
| Minimum stages per pipeline | Each supported Region: 2 | No |
| Total AWS CodeCommit or GitHub source artifact size | Each supported Region: 1 Gigabytes | No |
| Total Amazon S3 source artifact size | Each supported Region: 3 Gigabytes | No |
| Total JSON object size for Parameter Overrides | Each supported Region: 1 Kilobytes | No |
| Total actions per pipeline | Each supported Region: 500 | No |
| Total actions per stage | Each supported Region: 50 | No |
| Total custom actions | Each supported Region: 50 | Yes |
| Total image definitions JSON file size | Each supported Region: 100 Kilobytes | No |
| Total input artifact size for AWS CloudFormation deployments | Each supported Region: 256 Megabytes | No |
| Total parallel actions per stage | Each supported Region: 50 | No |
| Total period for execution history | Each supported Region: 12 | No |
| Total pipelines | Each supported Region: 1,000 | Yes |
| Total pipelines with change detection set to periodically checking for source changes | Each supported Region: 300 | No |
| Total sequential actions per stage | Each supported Region: 50 | No |
| Total source artifact size for Amazon EBS deployments | Each supported Region: 512 Megabytes | No |
| Total stages per pipeline | Each supported Region: 50 | No |
| Total webhooks | Each supported Region: 300 | Yes |

For more information, see [Quotas in CodePipeline](#) in the *AWS CodePipeline User Guide*.

AWS CodeStar endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

AWS CodeStar

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---------------------------------------|----------|--|
| US East (Ohio) | us-east-2 | codestar.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | codestar.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | codestar.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | codestar.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | codestar.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | codestar.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | codestar.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | codestar.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | codestar.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | codestar.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | codestar.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | codestar.eu-west-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------|------------|-----------------------------------|----------|--|
| Europe (Stockholm) | eu-north-1 | codestar.eu-north-1.amazonaws.com | HTTPS | |

AWS CodeStar Notifications endpoints and quotas

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------|--|
| US East (Ohio) | us-east-2 | codestar-notifications.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | codestar-notifications.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | codestar-notifications.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | codestar-notifications.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | codestar-notifications.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | codestar-notifications.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | codestar-notifications.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | codestar-notifications.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | codestar-notifications.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | codestar-notifications.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | codestar-notifications.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | codestar-notifications.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | codestar-notifications.eu-west-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|------------|---|----------|--|
| Europe (London) | eu-west-2 | codestar-notifications.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | codestar-notifications.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | codestar-notifications.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | codestar-notifications.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | codestar-notifications.sa-east-1.amazonaws.com | HTTPS | |

Amazon Cognito Identity endpoints and quotas

Amazon Cognito Identity includes Amazon Cognito user pools and Amazon Cognito identity pools (federated identities).

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Amazon Cognito User Pools

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|-----------|---|----------------|--|
| US East (Ohio) | us-east-2 | cognito-idp.us-east-2.amazonaws.com cognito-idp-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | cognito-idp.us-east-1.amazonaws.com cognito-idp-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | cognito-idp.us-west-1.amazonaws.com cognito-idp-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | cognito-idp.us-west-2.amazonaws.com cognito-idp-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------------|--|
| Asia Pacific (Mumbai) | ap-south-1 | cognito-idp.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | cognito-idp.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | cognito-idp.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | cognito-idp.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | cognito-idp.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | cognito-idp.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | cognito-idp.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | cognito-idp.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | cognito-idp.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | cognito-idp.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | cognito-idp.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | cognito-idp.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | cognito-idp.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | cognito-idp.us-gov-west-1.amazonaws.com cognito-idp-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Amazon Cognito Identity Pools

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | cognito-identity.us-east-2.amazonaws.com cognito-identity-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | cognito-identity.us-east-1.amazonaws.com cognito-identity-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | cognito-identity.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | cognito-identity.us-west-2.amazonaws.com cognito-identity-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | cognito-identity.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | cognito-identity.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | cognito-identity.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | cognito-identity.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | cognito-identity.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | cognito-identity.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | cognito-identity.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | cognito-identity.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | cognito-identity.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | cognito-identity.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | cognito-identity.eu-north-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| Middle East (Bahrain) | me-south-1 | cognito-identity.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | cognito-identity.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | cognito-identity.us-gov-west-1.amazonaws.com cognito-identity-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

Amazon Cognito User Pools

| Name | Default | Adjustable |
|---|---------------------------------------|------------|
| Apps per user pool | Each supported Region: 1,000 | Yes |
| Custom domains per account | Each supported Region: 4 | No |
| Groups per user | Each supported Region: 100 | No |
| Groups per user pool | Each supported Region: 10,000 | No |
| Identity providers per user pool | Each supported Region: 300 | Yes |
| Rate of ClientAuthentication requests per account | Each supported Region: 150 per second | No |
| Rate of UserAccountRecovery requests | Each supported Region: 30 per second | No |
| Rate of UserAuthentication requests | Each supported Region: 120 per second | Yes |
| Rate of UserCreation requests | Each supported Region: 50 per second | Yes |
| Rate of UserFederation requests | Each supported Region: 25 per second | Yes |
| Rate of UserList requests | Each supported Region: 30 per second | No |
| Rate of UserPoolClientRead requests per account | Each supported Region: 15 per second | No |

| Name | Default | Adjustable |
|---|---------------------------------------|------------|
| Rate of UserPoolClientRead requests per user pool | Each supported Region: 5 per second | No |
| Rate of UserPoolClientUpdate requests per account | Each supported Region: 15 per second | No |
| Rate of UserPoolClientUpdate requests per user pool | Each supported Region: 5 per second | No |
| Rate of UserPoolRead requests | Each supported Region: 15 per second | No |
| Rate of UserPoolResourceRead requests per account | Each supported Region: 20 per second | No |
| Rate of UserPoolResourceRead requests per user pool | Each supported Region: 5 per second | No |
| Rate of UserPoolResourceUpdate requests per account | Each supported Region: 15 per second | No |
| Rate of UserPoolResourceUpdate requests per user pool | Each supported Region: 5 per second | No |
| Rate of UserPoolUpdate requests | Each supported Region: 15 per second | No |
| Rate of UserRead requests | Each supported Region: 120 per second | Yes |
| Rate of UserResourceRead requests | Each supported Region: 50 per second | Yes |
| Rate of UserResourceUpdate requests | Each supported Region: 25 per second | No |
| Rate of UserToken requests | Each supported Region: 120 per second | Yes |
| Rate of UserUpdate requests | Each supported Region: 25 per second | No |
| Resource servers per user pool | Each supported Region: 25 | Yes |
| Scopes per resource server | Each supported Region: 100 | No |
| User import jobs per user pool | Each supported Region: 1,000 | Yes |
| User pools per account | Each supported Region: 1,000 | Yes |

For more information, see [Quotas in Amazon Cognito](#) in the *Amazon Cognito Developer Guide*.

Amazon Cognito Federated Identities

| Name | Default | Adjustable |
|---------------------------------------|------------------------------------|------------|
| Identity pool name size | Each supported Region: 128 Bytes | No |
| Identity pools per account | Each supported Region: 1,000 | Yes |
| List API call results | Each supported Region: 60 | No |
| Login provider name size | Each supported Region: 2,048 Bytes | No |
| Role-based access control rules | Each supported Region: 25 | No |
| User pool providers per identity pool | Each supported Region: 50 | Yes |

For more information, see [Quotas in Amazon Cognito](#) in the *Amazon Cognito Developer Guide*.

Amazon Cognito Sync endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------|
| US East (Ohio) | us-east-2 | cognito-sync.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | cognito-sync.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | cognito-sync.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | cognito-sync.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | cognito-sync.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | cognito-sync.ap-southeast-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|----------------|---|----------|--|
| Asia Pacific (Sydney) | ap-southeast-2 | cognito-sync.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | cognito-sync.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | cognito-sync.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | cognito-sync.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | cognito-sync.eu-west-2.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|------------------------|------------------------------------|------------|
| Bulk publish wait time | Each supported Region: 24 | No |
| Dataset name size | Each supported Region: 128 Bytes | No |
| Dataset size | Each supported Region: 1 Megabytes | Yes |
| Datasets per identity | Each supported Region: 20 | Yes |
| Records per dataset | Each supported Region: 1,024 | Yes |

For more information, see [Quotas in Amazon Cognito](#) in the *Amazon Cognito Developer Guide*.

Amazon Comprehend endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | comprehend.us-east-2.amazonaws.com comprehend-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | comprehend.us-east-1.amazonaws.com comprehend-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | comprehend.us-west-2.amazonaws.com comprehend-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | comprehend.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | comprehend.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | comprehend.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | comprehend.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | comprehend.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | comprehend.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | comprehend.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | comprehend.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | comprehend.eu-west-2.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | comprehend.us-gov-west-1.amazonaws.com comprehend-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|---------------------------|------------|
| BatchDetectDominantLanguage throttle limit in transaction per second | Each supported Region: 10 | Yes |
| BatchDetectEntities throttle limit in transaction per second | Each supported Region: 10 | Yes |
| BatchDetectKeyPhrases throttle limit in transaction per second | Each supported Region: 10 | Yes |
| BatchDetectSentiment throttle limit in transaction per second | Each supported Region: 10 | Yes |
| BatchDetectSyntax throttle limit in transaction per second | Each supported Region: 10 | Yes |
| CreateDocumentClassifier throttle limit in transaction per second | Each supported Region: 1 | No |
| CreateEntityRecognizer throttle limit in transaction per second | Each supported Region: 1 | No |
| DeleteDocumentClassifier throttle limit in transaction per second | Each supported Region: 1 | No |
| DeleteEntityRecognizer throttle limit in transaction per second | Each supported Region: 1 | No |
| DescribeDocumentClassificationJob throttle limit in transaction per second | Each supported Region: 10 | No |
| DescribeDocumentClassifier throttle limit in transaction per second | Each supported Region: 10 | No |
| DescribeDominantLanguageDetectionJob throttle limit in transaction per second | Each supported Region: 10 | No |
| DescribeEntitiesDetectionJob throttle limit in transaction per second | Each supported Region: 10 | No |
| DescribeEntityRecognizer throttle limit in transaction per second | Each supported Region: 10 | No |
| DescribeKeyPhrasesDetectionJob throttle limit in transaction per second | Each supported Region: 10 | No |
| DescribeSentimentDetectionJob throttle limit in transaction per second | Each supported Region: 10 | No |
| DescribeTopicsDetectionJob throttle limit in transaction per second | Each supported Region: 10 | No |
| DetectDominantLanguage max active jobs | Each supported Region: 10 | No |
| DetectDominantLanguage throttle limit in transaction per second | Each supported Region: 40 | Yes |
| DetectEntities max active jobs | Each supported Region: 10 | No |

| Name | Default | Adjustable |
|--|----------------------------|------------|
| DetectEntities throttle limit in transaction per second | Each supported Region: 20 | Yes |
| DetectKeyPhrases max active jobs | Each supported Region: 10 | No |
| DetectKeyPhrases throttle limit in transaction per second | Each supported Region: 20 | Yes |
| DetectSentiment max active jobs | Each supported Region: 10 | No |
| DetectSentiment throttle limit in transaction per second | Each supported Region: 25 | Yes |
| DetectSyntax throttle limit in transaction per second | Each supported Region: 20 | Yes |
| DocumentClassification max active jobs | Each supported Region: 10 | No |
| DocumentClassifier max active jobs | Each supported Region: 10 | No |
| Endpoints max active endpoints | Each supported Region: 10 | Yes |
| Endpoints max inference units per account | Each supported Region: 100 | Yes |
| Endpoints max inference units per endpoint | Each supported Region: 10 | Yes |
| EntityRecognizer max active jobs | Each supported Region: 10 | No |
| ListDocumentClassificationJobs throttle limit in transaction per second | Each supported Region: 10 | No |
| ListDocumentClassifiers throttle limit in transaction per second | Each supported Region: 10 | No |
| ListDominantLanguageDetectionJobs throttle limit in transaction per second | Each supported Region: 10 | No |
| ListEntitiesDetectionJobs throttle limit in transaction per second | Each supported Region: 10 | No |
| ListEntityRecognizers throttle limit in transaction per second | Each supported Region: 10 | No |
| ListKeyPhrasesDetectionJobs throttle limit in transaction per second | Each supported Region: 10 | No |
| ListSentimentDetectionJobs throttle limit in transaction per second | Each supported Region: 10 | No |
| ListTagsForResource throttle limit in transaction per second | Each supported Region: 10 | No |
| ListTopicsDetectionJobs throttle limit in transaction per second | Each supported Region: 10 | No |
| StartDocumentClassificationJob throttle limit in transaction per second | Each supported Region: 1 | No |
| StartDominantLanguageDetectionJob throttle limit in transaction per second | Each supported Region: 1 | No |
| StartEntitiesDetectionJob throttle limit in transaction per second | Each supported Region: 1 | No |
| StartKeyPhrasesDetectionJob throttle limit in transaction per second | Each supported Region: 1 | No |

| Name | Default | Adjustable |
|---|---------------------------|------------|
| StartSentimentDetectionJob throttle limit in transaction per second | Each supported Region: 1 | No |
| StartTopicsDetectionJob throttle limit in transaction per second | Each supported Region: 1 | No |
| StopDominantLanguageDetectionJob throttle limit in transaction per second | Each supported Region: 1 | No |
| StopEntitiesDetectionJob throttle limit in transaction per second | Each supported Region: 1 | No |
| StopKeyPhrasesDetectionJob throttle limit in transaction per second | Each supported Region: 1 | No |
| StopSentimentDetectionJob throttle limit in transaction per second | Each supported Region: 1 | No |
| StopTrainingDocumentClassifier throttle limit in transaction per second | Each supported Region: 1 | No |
| StopTrainingEntityRecognizer throttle limit in transaction per second | Each supported Region: 1 | No |
| TagResource throttle limit in transaction per second | Each supported Region: 1 | No |
| TopicsDetection max active jobs | Each supported Region: 10 | No |
| UntagResource throttle limit in transaction per second | Each supported Region: 1 | No |

For more information, see [Guidelines and Quotas](#) in the *Amazon Comprehend Developer Guide*.

Amazon Comprehend Medical endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|---|----------------|--|
| US East (Ohio) | us-east-2 | comprehendmedical.us-east-2.amazonaws.com comprehendmedical-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | comprehendmedical.us-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|----------------|---|----------------|--|
| | | comprehendmedical-fips.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | comprehendmedical.us-west-2.amazonaws.com comprehendmedical-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | comprehendmedical.ap-southeast-2.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | comprehendmedical.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | comprehendmedical.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | comprehendmedical.eu-west-2.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | comprehendmedical.us-gov-west-1.amazonaws.com comprehendmedical-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|--|------------|
| Characters per second (CPS) for the DetectEntities operation | Each supported Region: 40,000 | Yes |
| Characters per second (CPS) for the DetectEntities-v2 operation | Each supported Region: 40,000 | Yes |
| Characters per second (CPS) for the DetectPHI operation | Each supported Region: 40,000 | Yes |
| Characters per second (CPS) for the InferICD10CM operation | Each supported Region: 40,000 | Yes |
| Characters per second (CPS) for the InferRxNorm operation | Each supported Region: 40,000 | Yes |
| Maximum document size (UTF-8 characters) for the DetectEntities operation | Each supported Region: 20,000 Bytes | No |
| Maximum document size (UTF-8 characters) for the DetectEntities-v2 operation | Each supported Region: 20,000 Bytes | No |
| Maximum document size (UTF-8 characters) for the DetectPHI operation | Each supported Region: 20,000 Bytes | No |

| Name | Default | Adjustable |
|--|-------------------------------------|------------|
| Maximum document size (UTF-8 characters) for the InferICD10CM operation | Each supported Region: 10,000 Bytes | No |
| Maximum document size (UTF-8 characters) for the InferRxNorm operation | Each supported Region: 10,000 Bytes | No |
| Maximum individual file size for batch jobs | Each supported Region: 40 Kilobytes | No |
| Maximum number of files for batch jobs | Each supported Region: 5,000,000 | No |
| Maximum size (in GB) of text analysis batch jobs (all files) | Each supported Region: 10 Gigabytes | No |
| Maximum size of ontology linking batch analysis jobs (all files) | Each supported Region: 5 Gigabytes | No |
| Minimum size of batch jobs (all files) | Each supported Region: 1 Bytes | No |
| Transactions per second (TPS) for the DescribeEntitiesDetectionV2Job operation | Each supported Region: 10 | Yes |
| Transactions per second (TPS) for the InferICD10CMIInferenceJob operation | Each supported Region: 10 | Yes |
| Transactions per second (TPS) for the DescribePHIDetectionJob operation | Each supported Region: 10 | Yes |
| Transactions per second (TPS) for the DescribeRxNormInferenceJob operation | Each supported Region: 10 | Yes |
| Transactions per second (TPS) for the DetectEntities operation | Each supported Region: 100 | No |
| Transactions per second (TPS) for the DetectEntities-v2 operation | Each supported Region: 100 | No |
| Transactions per second (TPS) for the DetectPHI operation | Each supported Region: 100 | No |
| Transactions per second (TPS) for the InferICD10CM operation | Each supported Region: 100 | No |
| Transactions per second (TPS) for the InferRxNorm operation | Each supported Region: 100 | No |
| Transactions per second (TPS) for the ListEntitiesDetectionV2Jobs operation | Each supported Region: 10 | Yes |
| Transactions per second (TPS) for the ListICD10CMIInferenceJobs operation | Each supported Region: 10 | Yes |
| Transactions per second (TPS) for the ListPHIDetectionJobs operation | Each supported Region: 10 | Yes |
| Transactions per second (TPS) for the ListRxNormInferenceJobs operation | Each supported Region: 10 | Yes |

| Name | Default | Adjustable |
|---|--------------------------|------------|
| Transactions per second (TPS) for the StartEntitiesDetectionV2Job operation | Each supported Region: 5 | Yes |
| Transactions per second (TPS) for the StartICD10CMInferenceJob operation | Each supported Region: 5 | Yes |
| Transactions per second (TPS) for the StartPHIDetectionJob operation | Each supported Region: 5 | Yes |
| Transactions per second (TPS) for the StartRxNormInferenceJob operation | Each supported Region: 5 | Yes |
| Transactions per second (TPS) for the StopEntitiesDetectionV2Job operation | Each supported Region: 5 | Yes |
| Transactions per second (TPS) for the StopICD10CMInferenceJob operation | Each supported Region: 5 | Yes |
| Transactions per second (TPS) for the StopPHIDetectionJob operation | Each supported Region: 5 | Yes |
| Transactions per second (TPS) for the StopRxNormInferenceJob operation | Each supported Region: 5 | Yes |

AWS Compute Optimizer endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|-------------------------|------------|--|----------|
| US East (Ohio) | us-east-2 | compute-optimizer.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | compute-optimizer.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | compute-optimizer.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | compute-optimizer.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | compute-optimizer.ap-south-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|----------|--|
| Asia Pacific (Seoul) | ap-northeast-2 | compute-optimizer.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | compute-optimizer.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | compute-optimizer.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | compute-optimizer.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | compute-optimizer.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | compute-optimizer.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | compute-optimizer.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | compute-optimizer.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | compute-optimizer.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | compute-optimizer.eu-north-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | compute-optimizer.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|--------------------------|------------|
| The number of API calls per second per account | Each supported Region: 5 | No |

AWS Config endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#).

Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | config.us-east-2.amazonaws.com config-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | config.us-east-1.amazonaws.com config-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | config.us-west-1.amazonaws.com config-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | config.us-west-2.amazonaws.com config-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | config.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | config.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | config.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | config.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | config.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | config.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | config.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | config.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | config.ap-northeast-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|----------------|--|
| Canada (Central) | ca-central-1 | config.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | config.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | config.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | config.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | config.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | config.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | config.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | config.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | config.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | config.us-gov-east-1.amazonaws.com config.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | config.us-gov-west-1.amazonaws.com config.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Resource | Default | Notes |
|---|---------|-----------------------------------|
| Number of AWS Config rules per Region in your account | 400 | You can request a quota increase. |
| Maximum Number of Configuration Aggregators | 50 | You can request a quota increase. |

Amazon Connect endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services

offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------------|--|
| US East (N. Virginia) | us-east-1 | connect.us-east-1.amazonaws.com connect-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | connect.us-west-2.amazonaws.com connect-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | connect.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | connect.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | connect.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | connect.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | connect.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | connect.eu-central-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | connect.eu-west-2.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | connect.us-gov-west-1.amazonaws.com connect.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Amazon Connect Contact Lens endpoints

The Amazon Connect Contact Lens Service has the following endpoints.

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|--------------------------------------|----------|--|
| US East (N. Virginia) | us-east-1 | contact-lens.us-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|----------------|---|-----------------|--|
| US West (Oregon) | us-west-2 | contact-lens.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | contact-lens.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | contact-lens.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | contact-lens.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | contact-lens.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | contact-lens.eu-central-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | contact-lens.eu-west-2.amazonaws.com | HTTPS | |

Amazon Connect Participant Service endpoints

The Amazon Connect Participant Service has the following endpoints.

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|-----------------|
| US East (N. Virginia) | us-east-1 | participant.connect.us-east-1.amazonaws.com participant.connect-fips.us-east-1.amazonaws.com | HTTPS HTTPS |
| US West (Oregon) | us-west-2 | participant.connect.us-west-2.amazonaws.com participant.connect-fips.us-west-2.amazonaws.com | HTTPS HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | participant.connect.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | participant.connect.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | participant.connect.ap-southeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | participant.connect.ap-northeast-1.amazonaws.com | HTTPS |
| Canada (Central) | ca-central-1 | participant.connect.ca-central-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol |
|------------------------|---------------|--|-----------------|
| Europe (Frankfurt) | eu-central-1 | participant.connect.eu-central-1.amazonaws.com | HTTPS |
| Europe (London) | eu-west-2 | participant.connect.eu-west-2.amazonaws.com | HTTPS |
| AWS GovCloud (US-West) | us-gov-west-1 | participant.connect.us-gov-west-1.amazonaws.com participant.connect.us-gov-west-1.amazonaws.com | HTTPS HTTPS |

Amazon Connect Customer Profiles endpoints

The Amazon Connect Customer Profiles Service has the following endpoints.

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|--------------------------------------|-----------------|
| US East (N. Virginia) | us-east-1 | profile.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | profile.us-west-2.amazonaws.com | HTTPS |
| Africa (Cape Town) | af-south-1 | profile.af-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | profile.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | profile.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | profile.ap-southeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | profile.ap-northeast-1.amazonaws.com | HTTPS |
| Canada (Central) | ca-central-1 | profile.ca-central-1.amazonaws.com | HTTPS |
| Europe (Frankfurt) | eu-central-1 | profile.eu-central-1.amazonaws.com | HTTPS |
| Europe (London) | eu-west-2 | profile.eu-west-2.amazonaws.com | HTTPS |

AppIntegrations Service endpoints

The AppIntegrations Service has the following endpoints.

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------|--|
| US East (N. Virginia) | us-east-1 | app-integrations.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | app-integrations.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | app-integrations.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | app-integrations.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | app-integrations.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | app-integrations.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | app-integrations.eu-central-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | app-integrations.eu-west-2.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|------------------------------|------------|
| AWS Lambda functions per instance | Each supported Region: 50 | Yes |
| Agent status per instance | Each supported Region: 50 | No |
| Amazon Connect instance count | Each supported Region: 2 | Yes |
| Amazon Lex V2 bot aliases per instance | Each supported Region: 100 | Yes |
| Amazon Lex bots per instance | Each supported Region: 70 | Yes |
| Concurrent active calls per instance | Each supported Region: 10 | Yes |
| Concurrent active chats per instance | Each supported Region: 100 | Yes |
| Concurrent active tasks per instance | Each supported Region: 2,500 | Yes |
| Contact flows per instance | Each supported Region: 100 | Yes |

| Name | Default | Adjustable |
|--|-------------------------------------|------------|
| Hours of operation per instance | Each supported Region: 100 | Yes |
| Phone numbers per instance | Each supported Region: 5 | Yes |
| Prompts per instance | Each supported Region: 500 | Yes |
| Queues per instance | Each supported Region: 50 | Yes |
| Queues per routing profile per instance | Each supported Region: 50 | Yes |
| Quick connects per instance | Each supported Region: 100 | Yes |
| Rate of AssociateQueueQuickConnects API requests | Each supported Region: 2 per second | Yes |
| Rate of AssociateRoutingProfileQueues API requests | Each supported Region: 2 per second | Yes |
| Rate of CreateQueue API requests | Each supported Region: 2 per second | Yes |
| Rate of CreateQuickConnect API requests | Each supported Region: 2 per second | Yes |
| Rate of CreateRoutingProfile API requests | Each supported Region: 2 per second | Yes |
| Rate of CreateUser API requests | Each supported Region: 2 per second | Yes |
| Rate of CreateUserHierarchyGroup API requests | Each supported Region: 2 per second | Yes |
| Rate of DeleteQuickConnect API requests | Each supported Region: 2 per second | Yes |
| Rate of DeleteUser API requests | Each supported Region: 2 per second | Yes |
| Rate of DeleteUserHierarchyGroup API requests | Each supported Region: 2 per second | Yes |
| Rate of DescribeHoursOfOperation API requests | Each supported Region: 2 per second | Yes |
| Rate of DescribeQueue API requests | Each supported Region: 2 per second | Yes |
| Rate of DescribeQuickConnect API requests | Each supported Region: 2 per second | Yes |
| Rate of DescribeRoutingProfile API requests | Each supported Region: 2 per second | Yes |
| Rate of DescribeUser API requests | Each supported Region: 2 per second | Yes |
| Rate of DescribeUserHierarchyGroup API requests | Each supported Region: 2 per second | Yes |

| Name | Default | Adjustable |
|---|-------------------------------------|------------|
| Rate of DescribeUserHierarchyStructure API requests | Each supported Region: 2 per second | Yes |
| Rate of DisassociateQueueQuickConnects API requests | Each supported Region: 2 per second | Yes |
| Rate of DisassociateRoutingProfileQueues API requests | Each supported Region: 2 per second | Yes |
| Rate of GetContactAttributes API requests | Each supported Region: 2 per second | Yes |
| Rate of GetCurrentMetricData API requests | Each supported Region: 5 per second | Yes |
| Rate of GetFederationToken API requests | Each supported Region: 2 per second | Yes |
| Rate of GetMetricData API requests | Each supported Region: 5 per second | Yes |
| Rate of ListContactFlows API requests | Each supported Region: 2 per second | Yes |
| Rate of ListHoursOfOperations API requests | Each supported Region: 2 per second | Yes |
| Rate of ListPhoneNumbers API requests | Each supported Region: 2 per second | Yes |
| Rate of ListQueueQuickConnects API requests | Each supported Region: 2 per second | Yes |
| Rate of ListQueues API requests | Each supported Region: 2 per second | Yes |
| Rate of ListQuickConnects API requests | Each supported Region: 2 per second | Yes |
| Rate of ListRoutingProfileQueues API requests | Each supported Region: 2 per second | Yes |
| Rate of ListRoutingProfiles API requests | Each supported Region: 2 per second | Yes |
| Rate of ListSecurityProfiles API requests | Each supported Region: 2 per second | Yes |
| Rate of ListTagsForResource API requests | Each supported Region: 2 per second | Yes |
| Rate of ListUserHierarchyGroups API requests | Each supported Region: 2 per second | Yes |
| Rate of ListUsers API requests | Each supported Region: 2 per second | Yes |
| Rate of StartOutboundVoiceContact API requests | Each supported Region: 2 per second | Yes |

| Name | Default | Adjustable |
|---|-------------------------------------|------------|
| Rate of StopContact API requests | Each supported Region: 2 per second | Yes |
| Rate of TagResource API requests | Each supported Region: 2 per second | Yes |
| Rate of UntagResource API requests | Each supported Region: 2 per second | Yes |
| Rate of UpdateContactAttributes API requests | Each supported Region: 2 per second | Yes |
| Rate of UpdateQueueHoursOfOperation API requests | Each supported Region: 2 per second | Yes |
| Rate of UpdateQueueMaxContacts API requests | Each supported Region: 2 per second | Yes |
| Rate of UpdateQueueName API requests | Each supported Region: 2 per second | Yes |
| Rate of UpdateQueueOutboundCallerConfig API requests | Each supported Region: 2 per second | Yes |
| Rate of UpdateQueueStatus API requests | Each supported Region: 2 per second | Yes |
| Rate of UpdateQuickConnectConfig API requests | Each supported Region: 2 per second | Yes |
| Rate of UpdateQuickConnectName API requests | Each supported Region: 2 per second | Yes |
| Rate of UpdateRoutingProfileConcurrency API requests | Each supported Region: 2 per second | Yes |
| Rate of UpdateRoutingProfileDefaultOutboundQueue API requests | Each supported Region: 2 per second | Yes |
| Rate of UpdateRoutingProfileName API requests | Each supported Region: 2 per second | Yes |
| Rate of UpdateRoutingProfileQueues API requests | Each supported Region: 2 per second | Yes |
| Rate of UpdateUserHierarchy API requests | Each supported Region: 2 per second | Yes |
| Rate of UpdateUserHierarchyGroupName API requests | Each supported Region: 2 per second | Yes |
| Rate of UpdateUserIdentityInfo API requests | Each supported Region: 2 per second | Yes |
| Rate of UpdateUserPhoneConfig API requests | Each supported Region: 2 per second | Yes |
| Rate of UpdateUserRoutingProfile API requests | Each supported Region: 2 per second | Yes |

| Name | Default | Adjustable |
|---|-------------------------------------|------------|
| Rate of UpdateUserSecurityProfiles API requests | Each supported Region: 2 per second | Yes |
| Reports per instance | Each supported Region: 500 | Yes |
| Routing profiles per instance | Each supported Region: 100 | Yes |
| Scheduled reports per instance | Each supported Region: 50 | Yes |
| Security profiles per instance | Each supported Region: 100 | Yes |
| User hierarchy groups per instance | Each supported Region: 500 | Yes |
| Users per instance | Each supported Region: 500 | Yes |

Amazon Connect Customer Profiles service quotas

The Amazon Connect Customer Profiles Service has the following quotas.

| Name | Default | Adjustable |
|---|---|------------|
| Amazon Connect Customer Profiles domain count | Each supported Region: 100 | Yes |
| Keys per object type | Each supported Region: 10 | Yes |
| Maximum expiration in days | Each supported Region: 1,098 | Yes |
| Maximum number of integrations | Each supported Region: 50 | Yes |
| Maximum size of all objects for a profile | Each supported Region: 51,200 Kilobytes | Yes |
| Object and profile maximum size | Each supported Region: 250 Kilobytes | No |
| Object types per domain | Each supported Region: 100 | Yes |
| Objects per profile | Each supported Region: 1,000 | Yes |

For more information, see [Amazon Connect Service Quotas](#) in the *Amazon Connect Administrator Guide*.

AWS Data Exchange endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------|--|
| US East (Ohio) | us-east-2 | dataexchange.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | dataexchange.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | dataexchange.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | dataexchange.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | dataexchange.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | dataexchange.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | dataexchange.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | dataexchange.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | dataexchange.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | dataexchange.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | dataexchange.eu-west-2.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|----------------------------|------------|
| Amazon API Gateway API assets per revision | Each supported Region: 20 | Yes |
| Amazon Redshift datashare assets per import job from Redshift | Each supported Region: 10 | No |
| Amazon Redshift datashare assets per revision | Each supported Region: 20 | Yes |
| Asset per export job from Amazon S3 | Each supported Region: 100 | No |

| Name | Default | Adjustable |
|--|-------------------------------------|------------|
| Asset size in GB | Each supported Region: 10 Gigabytes | No |
| Assets per import job from Amazon S3 | Each supported Region: 100 | No |
| Assets per revision | Each supported Region: 10,000 | Yes |
| Auto export event actions per data set | Each supported Region: 5 | Yes |
| Concurrent in progress jobs to export assets to Amazon S3 | Each supported Region: 10 | No |
| Concurrent in progress jobs to export assets to a signed URL | Each supported Region: 10 | No |
| Concurrent in progress jobs to export revisions to Amazon S3 | Each supported Region: 5 | No |
| Concurrent in progress jobs to import assets from Amazon API Gateway | Each supported Region: 10 | No |
| Concurrent in progress jobs to import assets from Amazon Redshift datashares | Each supported Region: 10 | No |
| Concurrent in progress jobs to import assets from Amazon S3 | Each supported Region: 10 | No |
| Concurrent in progress jobs to import assets from a signed URL | Each supported Region: 10 | No |
| Data sets per account | Each supported Region: 3,000 | Yes |
| Event actions per account | Each supported Region: 50 | Yes |
| Products per data set | Each supported Region: 100 | Yes |
| Revisions per Amazon API Gateway API data set | Each supported Region: 20 | Yes |
| Revisions per Amazon Redshift datashare data set | Each supported Region: 20 | Yes |
| Revisions per addRevisions change set | Each supported Region: 5 | No |
| Revisions per data set | Each supported Region: 10,000 | Yes |

For more information, see [AWS Data Exchange quotas](#) in the *AWS Data Exchange User Guide*.

Amazon Data Lifecycle Manager endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|----------------------------------|----------|--|
| US East (Ohio) | us-east-2 | dlm.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | dlm.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | dlm.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | dlm.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | dlm.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | dlm.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | dlm.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | dlm.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | dlm.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | dlm.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | dlm.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | dlm.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | dlm.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | dlm.ca-central-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---------------------------------|----------|--|
| Europe (Frankfurt) | eu-central-1 | dlm.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | dlm.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | dlm.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | dlm.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | dlm.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | dlm.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | dlm.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | dlm.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | dlm.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | dlm.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|----------------------------------|----------------------------|------------|
| Policies per Region | Each supported Region: 100 | Yes |
| Target accounts per sharing rule | Each supported Region: 50 | Yes |

AWS Data Pipeline endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|----------------|---|----------|--|
| US East (N. Virginia) | us-east-1 | datapipeline.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | datapipeline.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | datapipeline.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | datapipeline.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | datapipeline.eu-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|--|------------|
| Minimum delay between retry attempts in minutes | Each supported Region: 2 | No |
| Minimum scheduling interval in minutes | Each supported Region: 15 | No |
| Number of EC2 instances per Ec2Resource object | Each supported Region: 1 | No |
| Number of UTF8 bytes per field | Each supported Region: 10,240 | No |
| Number of UTF8 bytes per field name or identifier | Each supported Region: 256 | No |
| Number of UTF8 bytes per object | Each supported Region: 15,360 | No |
| Number of active instances per object | Each supported Region: 5 | Yes |
| Number of fields per object | Each supported Region: 50 | No |
| Number of objects per pipeline | Each supported Region: 100 | Yes |
| Number of pipelines you can create | Each supported Region: 100 | Yes |
| Number of roll-ups into a single object | Each supported Region: 32 | No |
| Rate of creation of an instance from an object | Each supported Region: 1 per 5 minutes | No |
| Retries of a pipeline activity per task | Each supported Region: 5 | No |

For more information, see [AWS Data Pipeline Quotas](#) in the *AWS Data Pipeline Developer Guide*.

AWS DataSync endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | datasync.us-east-2.amazonaws.com datasync-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | datasync.us-east-1.amazonaws.com datasync-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | datasync.us-west-1.amazonaws.com datasync-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | datasync.us-west-2.amazonaws.com datasync-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | datasync.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | datasync.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | datasync.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | datasync.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | datasync.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | datasync.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | datasync.ap-southeast-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------------|--|
| Asia Pacific (Tokyo) | ap-northeast-1 | datasync.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | datasync.ca-central-1.amazonaws.com datasync-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | datasync.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | datasync.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | datasync.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | datasync.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | datasync.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | datasync.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | datasync.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | datasync.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | datasync.us-gov-east-1.amazonaws.com datasync-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | datasync.us-gov-west-1.amazonaws.com datasync-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---------------------|---|------------|
| Files per task | Each supported Region: 25,000,000 | Yes |
| Tasks | Each supported Region: 100 | Yes |
| Throughput per task | Each supported Region: 10 Gigabits per second | Yes |

AWS Database Migration Service endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-------------------------|--|
| US East (Ohio) | us-east-2 | dms.us-east-2.amazonaws.com dms-fips.us-east-2.amazonaws.com dms-fips.us-east-2.amazonaws.com | HTTPS HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | dms.us-east-1.amazonaws.com dms-fips.us-east-1.amazonaws.com dms-fips.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| US West (N. California) | us-west-1 | dms.us-west-1.amazonaws.com dms-fips.us-west-1.amazonaws.com dms-fips.us-west-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | dms.us-west-2.amazonaws.com dms-fips.us-west-2.amazonaws.com dms-fips.us-west-2.amazonaws.com | HTTPS HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | dms.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | dms.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | dms.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | dms.ap-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|----------------------------------|----------|--|
| Asia Pacific (Osaka) | ap-northeast-3 | dms.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | dms.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | dms.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | dms.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | dms.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | dms.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | dms.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | dms.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | dms.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | dms.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | dms.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | dms.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | dms.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | dms.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | dms.us-gov-east-1.amazonaws.com | HTTPS | |
| | | dms.us-gov-east-1.amazonaws.com | HTTPS | |
| | | dms.us-gov-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|---------------------------------|----------|--|
| AWS GovCloud (US-West) | us-gov-west-1 | dms.us-gov-west-1.amazonaws.com | HTTPS | |
| | | dms.us-gov-west-1.amazonaws.com | HTTPS | |
| | | dms.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--------------------------|---|------------|
| Certificate count | Each supported Region: 100 | Yes |
| Endpoint count | Each supported Region: 1,000 | Yes |
| Endpoints per instance | Each supported Region: 100 | Yes |
| Event subscriptions | Each supported Region: 60 | Yes |
| Replication instances | Each supported Region: 60 | Yes |
| Subnet groups | Each supported Region: 60 | Yes |
| Subnets per subnet group | Each supported Region: 60 | Yes |
| Task count | Each supported Region: 600 | Yes |
| Total storage | Each supported Region: 30,000 Gigabytes | Yes |

AWS DeepLens endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|----------------|---------------------------------------|----------|--|
| US East (N. Virginia) | us-east-1 | deeplens.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | deeplens.ap-northeast-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------|--------------|-------------------------------------|----------|--|
| Europe (Frankfurt) | eu-central-1 | deeplens.eu-central-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|----------------------|----------------------------|------------|
| Devices per account | Each supported Region: 200 | Yes |
| Models per account | Each supported Region: 200 | Yes |
| Projects per account | Each supported Region: 200 | Yes |
| Versions per project | Each supported Region: 100 | No |

AWS DeepRacer endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|-----------------------------------|----------|--|
| US East (N. Virginia) | us-east-1 | deepracer.us-east-1.amazonaws.com | | |

Service quotas

| Name | Default | Adjustable |
|-----------------|---------------------------|------------|
| Cars | Each supported Region: 20 | Yes |
| Evaluation jobs | Each supported Region: 3 | Yes |
| Training jobs | Each supported Region: 4 | Yes |

Amazon Detective endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services

offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | api.detective.us-east-2.amazonaws.com api.detective-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | api.detective.us-east-1.amazonaws.com api.detective-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | api.detective.us-west-1.amazonaws.com api.detective-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | api.detective.us-west-2.amazonaws.com api.detective-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | api.detective.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | api.detective.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | api.detective.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | api.detective.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | api.detective.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | api.detective.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | api.detective.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | api.detective.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | api.detective.eu-central-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| Europe (Ireland) | eu-west-1 | api.detective.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | api.detective.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | api.detective.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | api.detective.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | api.detective.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | api.detective.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | api.detective.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | api.detective.us-gov-east-1.amazonaws.com api.detective-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | api.detective.us-gov-west-1.amazonaws.com api.detective-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Amazon DevOps Guru endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#).

Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|---|----------------|--|
| US East (Ohio) | us-east-2 | devops-guru.us-east-2.amazonaws.com devops-guru-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | devops-guru.us-east-1.amazonaws.com devops-guru-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US West (Oregon) | us-west-2 | devops-guru.us-west-2.amazonaws.com devops-guru-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | devops-guru.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | devops-guru.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | devops-guru.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | devops-guru.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | devops-guru.eu-west-1.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | devops-guru.eu-north-1.amazonaws.com | HTTPS | |

Service quotas

| Resource | Quota |
|---|-------|
| Maximum number of Amazon Simple Notification Service topics you can specify at once | 2 |
| Maximum number of AWS CloudFormation stacks you can specify | 1000 |

For more information, see [Quotas](#) in the *Amazon DevOps Guru User Guide*.

AWS Device Farm endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|------------------|-----------|------------------------------------|----------|--|
| US West (Oregon) | us-west-2 | devicefarm.us-west-2.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|------------------------------------|------------|
| Concurrency for automation tests on metered devices | Each supported Region: 5 | Yes |
| Concurrency for remote access on metered devices | Each supported Region: 2 | Yes |
| Remote access session length in minutes | Each supported Region: 150 | No |
| Test run timeout per device in minutes | Each supported Region: 150 | No |
| Uploaded file size | Each supported Region: 4 Gigabytes | No |

AWS Direct Connect endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|-----------|---|----------------|--|
| US East (Ohio) | us-east-2 | directconnect.us-east-2.amazonaws.com directconnect-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | directconnect.us-east-1.amazonaws.com directconnect-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | directconnect.us-west-1.amazonaws.com directconnect-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | directconnect.us-west-2.amazonaws.com directconnect-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|-----------------|--|
| Africa (Cape Town) | af-south-1 | directconnect.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | directconnect.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | directconnect.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | directconnect.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | directconnect.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | directconnect.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | directconnect.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | directconnect.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | directconnect.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | directconnect.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | directconnect.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | directconnect.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | directconnect.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | directconnect.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | directconnect.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | directconnect.eu-north-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|----------------|--|
| Middle East (Bahrain) | me-south-1 | directconnect.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | directconnect.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | directconnect.us-gov-east-1.amazonaws.com directconnect.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | directconnect.us-gov-west-1.amazonaws.com directconnect.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|----------------------------|------------|
| Active AWS Direct Connect dedicated connections per location | Each supported Region: 10 | No |
| Dedicated connections, or interconnects per link aggregation group (LAG) | Each supported Region: 4 | No |
| Global maximum number of AWS Direct Connect gateways | Each supported Region: 200 | Yes |
| Link aggregation groups (LAGs) per AWS Region | Each supported Region: 10 | No |
| Number of prefixes per AWS transit Gateway from AWS to on-premises on a transit virtual interface | Each supported Region: 20 | No |
| Private or public virtual interfaces per AWS Direct Connect dedicated connection | Each supported Region: 50 | No |
| Transit gateways per AWS Direct Connect gateway | Each supported Region: 3 | No |
| Virtual interfaces per AWS Direct Connect gateway | Each supported Region: 30 | Yes |
| Virtual private gateways per AWS Direct Connect gateway | Each supported Region: 10 | No |

For more information, see [AWS Direct Connect Quotas](#) in the *AWS Direct Connect User Guide*.

AWS Directory Service endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#).

Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| US East (Ohio) | us-east-2 | ds.us-east-2.amazonaws.com ds-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | ds.us-east-1.amazonaws.com ds-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | ds.us-west-1.amazonaws.com ds-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | ds.us-west-2.amazonaws.com ds-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | ds.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | ds.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | ds.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | ds.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | ds.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | ds.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | ds.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | ds.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | ds.ca-central-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|-----------------|--|
| | | ds-fips.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | ds.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | ds.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | ds.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | ds.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | ds.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | ds.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | ds.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | ds.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | ds.us-gov-east-1.amazonaws.com ds-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | ds.us-gov-west-1.amazonaws.com ds-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

For a list of supported endpoints by directory type, see [Region availability for AWS Directory Service](#).

Service quotas

| Name | Default | Adjustable |
|---|---------------------------|-------------------|
| AD Connector directories | Each supported Region: 10 | Yes |
| AWS Managed Microsoft AD directories | Each supported Region: 20 | Yes |
| AWS Managed Microsoft AD domain controllers | Each supported Region: 20 | Yes |
| AWS Managed Microsoft AD manual snapshots | Each supported Region: 5 | No |

For more information, see the following:

- [AD Connector quotas](#)

- AWS Managed Microsoft AD quotas
- Simple AD quotas

Amazon DocumentDB endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|----------------------------------|----------------|--|
| US East (Ohio) | us-east-2 | rds.us-east-2.amazonaws.com | HTTP and HTTPS | |
| US East (N. Virginia) | us-east-1 | rds.us-east-1.amazonaws.com | HTTP and HTTPS | |
| US West (Oregon) | us-west-2 | rds.us-west-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | rds.ap-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | rds.ap-northeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | rds.ap-southeast-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | rds.ap-southeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | rds.ap-northeast-1.amazonaws.com | HTTP and HTTPS | |
| Canada (Central) | ca-central-1 | rds.ca-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Frankfurt) | eu-central-1 | rds.eu-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Ireland) | eu-west-1 | rds.eu-west-1.amazonaws.com | HTTP and HTTPS | |
| Europe (London) | eu-west-2 | rds.eu-west-2.amazonaws.com | HTTP and HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---------------------------------|----------------|--|
| Europe (Milan) | eu-south-1 | rds.eu-south-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Paris) | eu-west-3 | rds.eu-west-3.amazonaws.com | HTTP and HTTPS | |
| South America (São Paulo) | sa-east-1 | rds.sa-east-1.amazonaws.com | HTTP and HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | rds.us-gov-west-1.amazonaws.com | HTTP and HTTPS | |

For information on finding and connecting to your cluster or instance endpoints, see [Working with Amazon DocumentDB Endpoints](#) in the *Amazon DocumentDB Developer Guide*.

Service quotas

| Name | Default | Adjustable |
|----------------------------------|----------------------------|------------|
| Cluster parameter groups | Each supported Region: 50 | No |
| Clusters | Each supported Region: 40 | Yes |
| Event subscriptions | Each supported Region: 20 | Yes |
| Instances | Each supported Region: 40 | Yes |
| Manual cluster snapshots | Each supported Region: 100 | Yes |
| Read replicas per cluster | Each supported Region: 15 | Yes |
| Subnet groups | Each supported Region: 50 | Yes |
| Subnets per subnet group | Each supported Region: 20 | No |
| Tags per resource | Each supported Region: 50 | No |
| VPC security groups per instance | Each supported Region: 5 | No |

For more information, see [Amazon DocumentDB Service Quotas](#) in the *Amazon DocumentDB Developer Guide*.

Amazon DynamoDB endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#).

Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

For more information about this topic specific to DynamoDB, see [Quotas in Amazon DynamoDB](#).

Service endpoints

DynamoDB

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-------------------------|--|
| US East (Ohio) | us-east-2 | dynamodb.us-east-2.amazonaws.com dynamodb-fips.us-east-2.amazonaws.com | HTTP and HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | dynamodb.us-east-1.amazonaws.com dynamodb-fips.us-east-1.amazonaws.com | HTTP and HTTPS HTTPS | |
| US West (N. California) | us-west-1 | dynamodb.us-west-1.amazonaws.com dynamodb-fips.us-west-1.amazonaws.com | HTTP and HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | dynamodb.us-west-2.amazonaws.com dynamodb-fips.us-west-2.amazonaws.com | HTTP and HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | dynamodb.af-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | dynamodb.ap-east-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | dynamodb.ap-southeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | dynamodb.ap-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | dynamodb.ap-northeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | dynamodb.ap-northeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | dynamodb.ap-southeast-1.amazonaws.com | HTTP and HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-------------------------|--|
| Asia Pacific (Sydney) | ap-southeast-2 | dynamodb.ap-southeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | dynamodb.ap-northeast-1.amazonaws.com | HTTP and HTTPS | |
| Canada (Central) | ca-central-1 | dynamodb.ca-central-1.amazonaws.com dynamodb-fips.ca-central-1.amazonaws.com | HTTP and HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | dynamodb.eu-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Ireland) | eu-west-1 | dynamodb.eu-west-1.amazonaws.com | HTTP and HTTPS | |
| Europe (London) | eu-west-2 | dynamodb.eu-west-2.amazonaws.com | HTTP and HTTPS | |
| Europe (Milan) | eu-south-1 | dynamodb.eu-south-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Paris) | eu-west-3 | dynamodb.eu-west-3.amazonaws.com | HTTP and HTTPS | |
| Europe (Stockholm) | eu-north-1 | dynamodb.eu-north-1.amazonaws.com | HTTP and HTTPS | |
| Middle East (Bahrain) | me-south-1 | dynamodb.me-south-1.amazonaws.com | HTTP and HTTPS | |
| South America (São Paulo) | sa-east-1 | dynamodb.sa-east-1.amazonaws.com | HTTP and HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | dynamodb.us-gov-east-1.amazonaws.com dynamodb.us-gov-east-1.amazonaws.com | HTTP and HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | dynamodb.us-gov-west-1.amazonaws.com dynamodb.us-gov-west-1.amazonaws.com | HTTP and HTTPS HTTPS | |

DynamoDB Accelerator (DAX)

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|----------------------------------|----------------|--|
| US East (Ohio) | us-east-2 | dax.us-east-2.amazonaws.com | HTTP and HTTPS | |
| US East (N. Virginia) | us-east-1 | dax.us-east-1.amazonaws.com | HTTP and HTTPS | |
| US West (N. California) | us-west-1 | dax.us-west-1.amazonaws.com | HTTP and HTTPS | |
| US West (Oregon) | us-west-2 | dax.us-west-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | dax.ap-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | dax.ap-southeast-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | dax.ap-southeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | dax.ap-northeast-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Frankfurt) | eu-central-1 | dax.eu-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Ireland) | eu-west-1 | dax.eu-west-1.amazonaws.com | HTTP and HTTPS | |
| Europe (London) | eu-west-2 | dax.eu-west-2.amazonaws.com | HTTP and HTTPS | |
| Europe (Paris) | eu-west-3 | dax.eu-west-3.amazonaws.com | HTTP and HTTPS | |
| South America (São Paulo) | sa-east-1 | dax.sa-east-1.amazonaws.com | HTTP and HTTPS | |

Amazon DynamoDB Streams

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | streams.dynamodb.us-east-2.amazonaws.com | HTTP and HTTPS | |
| US East (N. Virginia) | us-east-1 | streams.dynamodb.us-east-1.amazonaws.com | HTTP and HTTPS | |
| US West (N. California) | us-west-1 | streams.dynamodb.us-west-1.amazonaws.com | HTTP and HTTPS | |
| US West (Oregon) | us-west-2 | streams.dynamodb.us-west-2.amazonaws.com | HTTP and HTTPS | |
| Africa (Cape Town) | af-south-1 | streams.dynamodb.af-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | streams.dynamodb.ap-east-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | streams.dynamodb.ap-southeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | streams.dynamodb.ap-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | streams.dynamodb.ap-northeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | streams.dynamodb.ap-northeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | streams.dynamodb.ap-southeast-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | streams.dynamodb.ap-southeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | streams.dynamodb.ap-northeast-1.amazonaws.com | HTTP and HTTPS | |
| Canada (Central) | ca-central-1 | streams.dynamodb.ca-central-1.amazonaws.com | HTTP and HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|-------------------------|--|
| Europe (Frankfurt) | eu-central-1 | streams.dynamodb.eu-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Ireland) | eu-west-1 | streams.dynamodb.eu-west-1.amazonaws.com | HTTP and HTTPS | |
| Europe (London) | eu-west-2 | streams.dynamodb.eu-west-2.amazonaws.com | HTTP and HTTPS | |
| Europe (Milan) | eu-south-1 | streams.dynamodb.eu-south-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Paris) | eu-west-3 | streams.dynamodb.eu-west-3.amazonaws.com | HTTP and HTTPS | |
| Europe (Stockholm) | eu-north-1 | streams.dynamodb.eu-north-1.amazonaws.com | HTTP and HTTPS | |
| Middle East (Bahrain) | me-south-1 | streams.dynamodb.me-south-1.amazonaws.com | HTTP and HTTPS | |
| South America (São Paulo) | sa-east-1 | streams.dynamodb.sa-east-1.amazonaws.com | HTTP and HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | streams.dynamodb.us-gov-east-1.amazonaws.com streams.dynamodb.us-gov-east-1.amazonaws.com | HTTP and HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | streams.dynamodb.us-gov-west-1.amazonaws.com streams.dynamodb.us-gov-west-1.amazonaws.com | HTTP and HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|-------------------------------|------------|
| Account-level read throughput limit (Provisioned mode) | Each supported Region: 80,000 | Yes |
| Account-level write throughput limit (Provisioned mode) | Each supported Region: 80,000 | Yes |
| Concurrent control plane operations | Each supported Region: 500 | Yes |
| Global Secondary Indexes per table | Each supported Region: 20 | Yes |
| Provisioned capacity decreases per day | Each supported Region: 27 | Yes |

| Name | Default | Adjustable |
|--|--|------------|
| Table-level read throughput limit | Each supported Region: 40,000 | Yes |
| Table-level write throughput limit | Each supported Region: 40,000 | Yes |
| Tables per region | Each supported Region: 2,500 | Yes |
| Write throughput limit for DynamoDB Streams (Provisioned mode) | af-south-1: 10,000 ap-east-1: 10,000 ap-northeast-3: 10,000 ap-south-1: 10,000 ca-central-1: 10,000 eu-north-1: 10,000 eu-south-1: 10,000 eu-west-2: 10,000 eu-west-3: 10,000 me-south-1: 10,000 Each of the other supported Regions: 40,000 | Yes |

DAX has the following quotas.

| Name | Default | Adjustable |
|--------------------------|---------------------------|------------|
| Nodes per cluster | Each supported Region: 11 | No |
| Parameter groups | Each supported Region: 20 | No |
| Subnet groups | Each supported Region: 50 | No |
| Subnets per subnet group | Each supported Region: 20 | No |
| Total number of nodes | Each supported Region: 50 | Yes |

AWS Elastic Beanstalk endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Elastic Beanstalk

| Region Name | Region | Endpoint | Protocol | Route 53 Hosted Zone ID | |
|--------------------------|----------------|---|----------------|-------------------------|--|
| US East (Ohio) | us-east-2 | elasticbeanstalk.us-east-2.amazonaws.com elasticbeanstalk-fips.us-east-2.amazonaws.com | HTTPS HTTPS | Z14LCN19Q5QHIC | |
| US East (N. Virginia) | us-east-1 | elasticbeanstalk.us-east-1.amazonaws.com elasticbeanstalk-fips.us-east-1.amazonaws.com | HTTPS HTTPS | Z117KPS5GTRQ2G | |
| US West (N. California) | us-west-1 | elasticbeanstalk.us-west-1.amazonaws.com elasticbeanstalk-fips.us-west-1.amazonaws.com | HTTPS HTTPS | Z1LQECGX5PH1X | |
| US West (Oregon) | us-west-2 | elasticbeanstalk.us-west-2.amazonaws.com elasticbeanstalk-fips.us-west-2.amazonaws.com | HTTPS HTTPS | Z38NKT9BP95V3O | |
| Africa (Cape Town) | af-south-1 | elasticbeanstalk.af-south-1.amazonaws.com | HTTPS | Z1EI3BVKMKK4AM | |
| Asia Pacific (Hong Kong) | ap-east-1 | elasticbeanstalk.ap-east-1.amazonaws.com | HTTPS | ZPWYUBWRU171A | |
| Asia Pacific (Mumbai) | ap-south-1 | elasticbeanstalk.ap-south-1.amazonaws.com | HTTPS | Z18NTBI3Y7N9TZ | |
| Asia Pacific (Osaka) | ap-northeast-3 | elasticbeanstalk.ap-northeast-3.amazonaws.com | HTTPS | ZNE5GEY1TIAGY | |
| Asia Pacific (Seoul) | ap-northeast-2 | elasticbeanstalk.ap-northeast-2.amazonaws.com | HTTPS | Z3JE5OI70TWKCP | |
| Asia Pacific (Singapore) | ap-southeast-1 | elasticbeanstalk.ap-southeast-1.amazonaws.com | HTTPS | Z16FZ9L249IFLT | |
| Asia Pacific (Sydney) | ap-southeast-2 | elasticbeanstalk.ap-southeast-2.amazonaws.com | HTTPS | Z2PCDNR3VC2G1N | |

| Region Name | Region | Endpoint | Protocol | Route 53 Hosted Zone ID | |
|---------------------------|----------------|--|--------------------|--------------------------------|--|
| Asia Pacific (Tokyo) | ap-northeast-1 | elasticbeanstalk.ap-northeast-1.amazonaws.com | HTTPS | Z1R25G3KIG2GBW | |
| Canada (Central) | ca-central-1 | elasticbeanstalk.ca-central-1.amazonaws.com | HTTPS | ZJFCZL7SSZB5I | |
| Europe (Frankfurt) | eu-central-1 | elasticbeanstalk.eu-central-1.amazonaws.com | HTTPS | Z1FRNW7UH4DEZJ | |
| Europe (Ireland) | eu-west-1 | elasticbeanstalk.eu-west-1.amazonaws.com | HTTPS | Z2NYPWQ7DFZAZH | |
| Europe (London) | eu-west-2 | elasticbeanstalk.eu-west-2.amazonaws.com | HTTPS | Z1GKAAAUGATPF1 | |
| Europe (Milan) | eu-south-1 | elasticbeanstalk.eu-south-1.amazonaws.com | HTTPS | Z10VDYYOA2JFKM | |
| Europe (Paris) | eu-west-3 | elasticbeanstalk.eu-west-3.amazonaws.com | HTTPS | Z5WN6GAYWG5OB | |
| Europe (Stockholm) | eu-north-1 | elasticbeanstalk.eu-north-1.amazonaws.com | HTTPS | Z23GO28BZ5AETM | |
| Middle East (Bahrain) | me-south-1 | elasticbeanstalk.me-south-1.amazonaws.com | HTTPS | Z2BBTEKR2I36N2 | |
| South America (São Paulo) | sa-east-1 | elasticbeanstalk.sa-east-1.amazonaws.com | HTTPS | Z10X7K2B4QSOFV | |
| AWS GovCloud (US-East) | us-gov-east-1 | elasticbeanstalk.us-gov-east-1.amazonaws.com elasticbeanstalk.us-gov-east-1.amazonaws.com | HTTPS HTTPS | Z35TSARG0EJ4VU | |
| AWS GovCloud (US-West) | us-gov-west-1 | elasticbeanstalk.us-gov-west-1.amazonaws.com elasticbeanstalk.us-gov-west-1.amazonaws.com | HTTPS HTTPS | Z4KAURWC4UUUG | |

Elastic Beanstalk Health Service

| Region Name | Region | Endpoint | Protocol | |
|--------------------|---------------|---|-----------------|--|
| US East (Ohio) | us-east-2 | elasticbeanstalk-health.us-east-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|-----------------|--|
| US East (N. Virginia) | us-east-1 | elasticbeanstalk-health.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | elasticbeanstalk-health.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | elasticbeanstalk-health.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | elasticbeanstalk-health.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | elasticbeanstalk-health.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | elasticbeanstalk-health.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | elasticbeanstalk-health.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | elasticbeanstalk-health.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | elasticbeanstalk-health.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | elasticbeanstalk-health.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | elasticbeanstalk-health.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | elasticbeanstalk-health.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | elasticbeanstalk-health.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | elasticbeanstalk-health.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | elasticbeanstalk-health.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | elasticbeanstalk-health.eu-north-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------|--|
| Middle East (Bahrain) | me-south-1 | elasticbeanstalk-health.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | elasticbeanstalk-health.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | elasticbeanstalk-health.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | elasticbeanstalk-health.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--------------------------|------------------------------|------------|
| Application versions | Each supported Region: 1,000 | Yes |
| Applications | Each supported Region: 75 | Yes |
| Configuration templates | Each supported Region: 2,000 | Yes |
| Custom platform versions | Each supported Region: 50 | Yes |
| Environments | Each supported Region: 200 | Yes |

Amazon Elastic Block Store endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Topics

- [Endpoints for Amazon EBS in Amazon EC2 \(p. 200\)](#)
- [Endpoints for the EBS direct APIs \(p. 201\)](#)

Endpoints for Amazon EBS in Amazon EC2

Use the Amazon EBS endpoints in Amazon Elastic Compute Cloud (Amazon EC2) to manage EBS volumes, snapshots, and encryption. For more information, see [Amazon EBS actions](#) in the *Amazon EC2 API Reference*.

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|----------------------------------|----------|--|
| US East (Ohio) | us-east-2 | ec2.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | ec2.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | ec2.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | ec2.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | ec2.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | ec2.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | ec2.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | ec2.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | ec2.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | ec2.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | ec2.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | ec2.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | ec2.ap-northeast-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---------------------------------|-----------------|--|
| Canada (Central) | ca-central-1 | ec2.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | ec2.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | ec2.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | ec2.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | ec2.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | ec2.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | ec2.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | ec2.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | ec2.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | ec2.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | ec2.us-gov-west-1.amazonaws.com | HTTPS | |

Endpoints for the EBS direct APIs

Use the EBS direct APIs endpoints to directly read the data on your Amazon EBS snapshots, and identify the difference between two snapshots. For more information, see [Use EBS direct APIs to access the contents of an Amazon EBS snapshot](#) in the *Amazon Elastic Compute Cloud User Guide*.

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|---------------|---|-----------------|--|
| US East (Ohio) | us-east-2 | ebs.us-east-2.amazonaws.com ebs-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | ebs.us-east-1.amazonaws.com ebs-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| US West (N. California) | us-west-1 | ebs.us-west-1.amazonaws.com ebs-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | ebs.us-west-2.amazonaws.com ebs-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | ebs.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | ebs.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | ebs.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | ebs.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | ebs.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | ebs.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | ebs.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | ebs.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | ebs.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | ebs.ca-central-1.amazonaws.com ebs-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | ebs.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | ebs.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | ebs.eu-west-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---------------------------------|----------|--|
| Europe (Milan) | eu-south-1 | ebs.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | ebs.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | ebs.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | ebs.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | ebs.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | ebs.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | ebs.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|--------------------------------------|------------|
| Archived snapshots per volume | Each supported Region: 25 | Yes |
| CompleteSnapshot requests per account | Each supported Region: 10 per second | No |
| Concurrent snapshot copies per destination Region | Each supported Region: 20 | No |
| Concurrent snapshots per Cold HDD (sc1) volume | Each supported Region: 1 | No |
| Concurrent snapshots per General Purpose SSD (gp2) volume | Each supported Region: 5 | No |
| Concurrent snapshots per General Purpose SSD (gp3) volume | Each supported Region: 5 | No |
| Concurrent snapshots per Magnetic (standard) volume | Each supported Region: 5 | No |
| Concurrent snapshots per Provisioned IOPS SSD (io1) volume | Each supported Region: 5 | No |
| Concurrent snapshots per Provisioned IOPS SSD (io2) volume | Each supported Region: 5 | No |
| Concurrent snapshots per Throughput Optimized HDD (st1) volume | Each supported Region: 1 | No |

| Name | Default | Adjustable |
|---|--|------------|
| Fast snapshot restore | Each supported Region: 50 | Yes |
| GetSnapshotBlock requests per account | Each supported Region: 1,000 per second | Yes |
| GetSnapshotBlock requests per snapshot | Each supported Region: 1,000 per second | No |
| IOPS for Provisioned IOPS SSD (io1) volumes | Each supported Region: 300,000 | Yes |
| IOPS for Provisioned IOPS SSD (io2) volumes | Each supported Region: 100,000 | Yes |
| IOPS modifications for Provisioned IOPS SSD (io1) volumes | Each supported Region: 500,000 | Yes |
| IOPS modifications for Provisioned IOPS SSD (io2) volumes | Each supported Region: 100,000 | Yes |
| In-progress snapshot archives per account | Each supported Region: 5 | Yes |
| In-progress snapshot restores from archive per account | Each supported Region: 5 | Yes |
| ListChangedBlocks requests per account | Each supported Region: 50 per second | No |
| ListSnapshotBlocks requests per account | Each supported Region: 50 per second | No |
| Pending snapshots per account | Each supported Region: 100 | No |
| PutSnapshotBlock requests per account | Each supported Region: 1,000 per second | Yes |
| PutSnapshotBlock requests per snapshot | Each supported Region: 1,000 per second | No |
| Snapshots per Region | Each supported Region: 100,000 | Yes |
| StartSnapshot requests per account | Each supported Region: 10 per second | No |
| Storage for Cold HDD (sc1) volumes, in TiB | af-south-1: 300 ap-east-1: 300 eu-south-1: 300 me-south-1: 300 Each of the other supported Regions: 50 | Yes |

| Name | Default | Adjustable |
|--|--|------------|
| Storage for General Purpose SSD (gp2) volumes, in TiB | af-south-1: 300 ap-east-1: 300 eu-south-1: 300 me-south-1: 300 Each of the other supported Regions: 50 | Yes |
| Storage for General Purpose SSD (gp3) volumes, in TiB | af-south-1: 300 ap-east-1: 300 eu-south-1: 300 me-south-1: 300 Each of the other supported Regions: 50 | Yes |
| Storage for Magnetic (standard) volumes, in TiB | af-south-1: 300 ap-east-1: 300 eu-south-1: 300 me-south-1: 300 Each of the other supported Regions: 50 | Yes |
| Storage for Provisioned IOPS SSD (io1) volumes, in TiB | af-south-1: 300 ap-east-1: 300 eu-south-1: 300 me-south-1: 300 Each of the other supported Regions: 50 | Yes |
| Storage for Provisioned IOPS SSD (io2) volumes, in TiB | Each supported Region: 20 | Yes |
| Storage for Throughput Optimized HDD (st1) volumes, in TiB | af-south-1: 300 ap-east-1: 300 eu-south-1: 300 me-south-1: 300 Each of the other supported Regions: 50 | Yes |
| Storage modifications for Cold HDD (sc1) volumes, in TiB | Each supported Region: 500 | Yes |

| Name | Default | Adjustable |
|--|----------------------------|------------|
| Storage modifications for General Purpose SSD (gp2) volumes, in TiB | Each supported Region: 500 | Yes |
| Storage modifications for General Purpose SSD (gp3) volumes, in TiB | Each supported Region: 500 | Yes |
| Storage modifications for Magnetic (standard) volumes, in TiB | Each supported Region: 500 | Yes |
| Storage modifications for Provisioned IOPS SSD (io1) volumes, in TiB | Each supported Region: 500 | Yes |
| Storage modifications for Provisioned IOPS SSD (io2) volumes, in TiB | Each supported Region: 20 | Yes |
| Storage modifications for Throughput Optimized HDD (st1) volumes, in TiB | Each supported Region: 500 | Yes |

The quota for concurrent snapshot copies per destination Region is not adjustable using Service Quotas. However, you can request an increase for this quota by contacting AWS Support.

Recycle Bin endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Topics

- [Service endpoints \(p. 206\)](#)
- [Service quotas \(p. 207\)](#)

Service endpoints

| Region name | Region | Endpoint | Protocol |
|-------------------------|------------|-------------------------------|----------|
| US East (Ohio) | us-east-2 | rbin.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | rbin.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | rbin.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | rbin.us-west-2.amazonaws.com | HTTPS |
| Africa (Cape Town) | af-south-1 | rbin.af-south-1.amazonaws.com | HTTPS |

| Region name | Region | Endpoint | Protocol |
|---------------------------|----------------|-----------------------------------|----------|
| Asia Pacific (Hong Kong) | ap-east-1 | rbin.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | rbin.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Osaka) | ap-northeast-3 | rbin.ap-northeast-3.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | rbin.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | rbin.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | rbin.ap-southeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | rbin.ap-northeast-1.amazonaws.com | HTTPS |
| Canada (Central) | ca-central-1 | rbin.ca-central-1.amazonaws.com | HTTPS |
| Europe (Frankfurt) | eu-central-1 | rbin.eu-central-1.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | rbin.eu-west-1.amazonaws.com | HTTPS |
| Europe (London) | eu-west-2 | rbin.eu-west-2.amazonaws.com | HTTPS |
| Europe (Milan) | eu-south-1 | rbin.eu-south-1.amazonaws.com | HTTPS |
| Europe (Paris) | eu-west-3 | rbin.eu-west-3.amazonaws.com | HTTPS |
| Europe (Stockholm) | eu-north-1 | rbin.eu-north-1.amazonaws.com | HTTPS |
| Middle East (Bahrain) | me-south-1 | rbin.me-south-1.amazonaws.com | HTTPS |
| South America (São Paulo) | sa-east-1 | rbin.sa-east-1.amazonaws.com | HTTPS |

Service quotas

| Quota | Default quota | Adjustable |
|----------------------------|---------------|------------|
| Retention rules per Region | 250 | No |

| Quota | Default quota | Adjustable |
|--|---------------|------------|
| Tag key and value pairs per retention rule | 50 | No |

Amazon EC2 endpoints and quotas

Important

AWS Regions launched after **October 30, 2021** will no longer support Amazon EC2 API requests over connections that are established using TLSv1, TLSv1.1, or unencrypted HTTP.

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|------------|--|----------------------------------|--|
| US East (Ohio) | us-east-2 | ec2.us-east-2.amazonaws.com ec2-fips.us-east-2.amazonaws.com api.ec2.us-east-2.aws | HTTP and HTTPS HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | ec2.us-east-1.amazonaws.com ec2-fips.us-east-1.amazonaws.com api.ec2.us-east-1.aws | HTTP and HTTPS HTTPS HTTPS | |
| US West (N. California) | us-west-1 | ec2.us-west-1.amazonaws.com ec2-fips.us-west-1.amazonaws.com | HTTP and HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | ec2.us-west-2.amazonaws.com ec2-fips.us-west-2.amazonaws.com api.ec2.us-west-2.aws | HTTP and HTTPS HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | ec2.af-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | ec2.ap-east-1.amazonaws.com | HTTP and HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-------------------------|--|
| Asia Pacific (Jakarta) | ap-southeast-3 | ec2.ap-southeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | ec2.ap-south-1.amazonaws.com api.ec2.ap-south-1.aws | HTTP and HTTPS HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | ec2.ap-northeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | ec2.ap-northeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | ec2.ap-southeast-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | ec2.ap-southeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | ec2.ap-northeast-1.amazonaws.com | HTTP and HTTPS | |
| Canada (Central) | ca-central-1 | ec2.ca-central-1.amazonaws.com ec2-fips.ca-central-1.amazonaws.com | HTTP and HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | ec2.eu-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Ireland) | eu-west-1 | ec2.eu-west-1.amazonaws.com api.ec2.eu-west-1.aws | HTTP and HTTPS HTTPS | |
| Europe (London) | eu-west-2 | ec2.eu-west-2.amazonaws.com | HTTP and HTTPS | |
| Europe (Milan) | eu-south-1 | ec2.eu-south-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Paris) | eu-west-3 | ec2.eu-west-3.amazonaws.com | HTTP and HTTPS | |
| Europe (Stockholm) | eu-north-1 | ec2.eu-north-1.amazonaws.com | HTTP and HTTPS | |
| Middle East (Bahrain) | me-south-1 | ec2.me-south-1.amazonaws.com | HTTP and HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|-------------------------|--|
| South America (São Paulo) | sa-east-1 | ec2.sa-east-1.amazonaws.com api.ec2.sa-east-1.aws | HTTP and HTTPS HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | ec2.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | ec2.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|-------------------------------|------------|
| All DL Spot Instance Requests | Each supported Region: 0 | Yes |
| All F Spot Instance Requests | Each supported Region: 0 | Yes |
| All G and VT Spot Instance Requests | Each supported Region: 0 | Yes |
| All Inf Spot Instance Requests | Each supported Region: 0 | Yes |
| All P Spot Instance Requests | Each supported Region: 0 | Yes |
| All Standard (A, C, D, H, I, M, R, T, Z) Spot Instance Requests | Each supported Region: 5 | Yes |
| All X Spot Instance Requests | Each supported Region: 0 | Yes |
| Amazon FPGA images (AFIs) | Each supported Region: 100 | Yes |
| Attachments per VPC | Each supported Region: 5 | No |
| Attachments per transit gateway | Each supported Region: 5,000 | Yes |
| Authorization rules per Client VPN endpoint | Each supported Region: 50 | Yes |
| Client VPN endpoints per Region | Each supported Region: 5 | Yes |
| Concurrent client connections per Client VPN endpoint | Each supported Region: 20,000 | Yes |
| Concurrent operations per Client VPN endpoint | Each supported Region: 10 | No |
| Customer gateways per region | Each supported Region: 50 | Yes |
| Direct Connect gateways per transit gateway | Each supported Region: 20 | No |
| Dynamic routes advertised from CGW to VPN connection | Each supported Region: 100 | No |
| EC2-VPC Elastic IPs | Each supported Region: 5 | Yes |

| Name | Default | Adjustable |
|--|-------------------------------|------------|
| Entries in a client certificate revocation list for Client VPN endpoints | Each supported Region: 20,000 | No |
| New Reserved Instances per month | Each supported Region: 20 | Yes |
| Number of Elastic Graphics accelerators | Each supported Region: 20 | Yes |
| Peering attachments per transit gateway | Each supported Region: 50 | Yes |
| Pending peering attachments per transit gateway | Each supported Region: 10 | Yes |
| Route Tables per transit gateway | Each supported Region: 20 | Yes |
| Routes advertised from VPN connection to CGW | Each supported Region: 1,000 | No |
| Routes per Client VPN endpoint | Each supported Region: 10 | Yes |
| Routes per transit gateway | Each supported Region: 10,000 | Yes |
| Running Dedicated a1 Hosts | Each supported Region: 0 | Yes |
| Running Dedicated c4 Hosts | Each supported Region: 0 | Yes |
| Running Dedicated c5 Hosts | Each supported Region: 0 | Yes |
| Running Dedicated c5a Hosts | Each supported Region: 0 | Yes |
| Running Dedicated c5d Hosts | Each supported Region: 0 | Yes |
| Running Dedicated c5n Hosts | Each supported Region: 0 | Yes |
| Running Dedicated c6g Hosts | Each supported Region: 0 | Yes |
| Running Dedicated c6gd Hosts | Each supported Region: 0 | Yes |
| Running Dedicated c6gn Hosts | Each supported Region: 0 | Yes |
| Running Dedicated c6i Hosts | Each supported Region: 0 | Yes |
| Running Dedicated d2 Hosts | Each supported Region: 0 | Yes |
| Running Dedicated g3 Hosts | Each supported Region: 0 | Yes |
| Running Dedicated g3s Hosts | Each supported Region: 0 | Yes |
| Running Dedicated g4ad Hosts | Each supported Region: 0 | Yes |
| Running Dedicated g4dn Hosts | Each supported Region: 0 | Yes |
| Running Dedicated h1 Hosts | Each supported Region: 0 | Yes |
| Running Dedicated i2 Hosts | Each supported Region: 0 | Yes |
| Running Dedicated i3 Hosts | Each supported Region: 0 | Yes |
| Running Dedicated i3en Hosts | Each supported Region: 0 | Yes |
| Running Dedicated im4gn Hosts | Each supported Region: 0 | Yes |

| Name | Default | Adjustable |
|--------------------------------|--------------------------|------------|
| Running Dedicated inf Hosts | Each supported Region: 0 | Yes |
| Running Dedicated is4gen Hosts | Each supported Region: 0 | Yes |
| Running Dedicated m4 Hosts | Each supported Region: 0 | Yes |
| Running Dedicated m5 Hosts | Each supported Region: 0 | Yes |
| Running Dedicated m5a Hosts | Each supported Region: 0 | Yes |
| Running Dedicated m5ad Hosts | Each supported Region: 0 | Yes |
| Running Dedicated m5d Hosts | Each supported Region: 0 | Yes |
| Running Dedicated m5dn Hosts | Each supported Region: 0 | Yes |
| Running Dedicated m5n Hosts | Each supported Region: 0 | Yes |
| Running Dedicated m5zn Hosts | Each supported Region: 0 | Yes |
| Running Dedicated m6g Hosts | Each supported Region: 0 | Yes |
| Running Dedicated m6gd Hosts | Each supported Region: 0 | Yes |
| Running Dedicated m6i Hosts | Each supported Region: 0 | Yes |
| Running Dedicated mac1 Hosts | Each supported Region: 0 | Yes |
| Running Dedicated p2 Hosts | Each supported Region: 0 | Yes |
| Running Dedicated p3 Hosts | Each supported Region: 0 | Yes |
| Running Dedicated p4d Hosts | Each supported Region: 0 | Yes |
| Running Dedicated r3 Hosts | Each supported Region: 0 | Yes |
| Running Dedicated r4 Hosts | Each supported Region: 0 | Yes |
| Running Dedicated r5 Hosts | Each supported Region: 0 | Yes |
| Running Dedicated r5a Hosts | Each supported Region: 0 | Yes |
| Running Dedicated r5ad Hosts | Each supported Region: 0 | Yes |
| Running Dedicated r5b Hosts | Each supported Region: 0 | Yes |
| Running Dedicated r5d Hosts | Each supported Region: 0 | Yes |
| Running Dedicated r5dn Hosts | Each supported Region: 0 | Yes |
| Running Dedicated r5n Hosts | Each supported Region: 0 | Yes |
| Running Dedicated r6g Hosts | Each supported Region: 0 | Yes |
| Running Dedicated r6gd Hosts | Each supported Region: 0 | Yes |
| Running Dedicated r6i Hosts | Each supported Region: 0 | Yes |
| Running Dedicated t3 Hosts | Each supported Region: 0 | Yes |
| Running Dedicated u-6tb1 Hosts | Each supported Region: 0 | Yes |

| Name | Default | Adjustable |
|--|---|------------|
| Running Dedicated x1 Hosts | Each supported Region: 0 | Yes |
| Running Dedicated x1e Hosts | Each supported Region: 0 | Yes |
| Running Dedicated x2gd Hosts | Each supported Region: 0 | Yes |
| Running Dedicated x2iedn Hosts | Each supported Region: 0 | Yes |
| Running Dedicated z1d Hosts | Each supported Region: 0 | Yes |
| Running On-Demand DL instances | Each supported Region: 0 | Yes |
| Running On-Demand F instances | Each supported Region: 0 | Yes |
| Running On-Demand G and VT instances | Each supported Region: 0 | Yes |
| Running On-Demand High Memory instances | Each supported Region: 0 | Yes |
| Running On-Demand Inf instances | Each supported Region: 0 | Yes |
| Running On-Demand P instances | Each supported Region: 0 | Yes |
| Running On-Demand Standard (A, C, D, H, I, M, R, T, Z) instances | Each supported Region: 5 | Yes |
| Running On-Demand X instances | Each supported Region: 0 | Yes |
| Transit gateways per Direct Connect Gateway | Each supported Region: 3 | No |
| Transit gateways per account | Each supported Region: 5 | Yes |
| VPC Attachment Bandwidth | Each supported Region: 50 Gigabits per second | No |
| VPN connections per VGW | Each supported Region: 10 | Yes |
| VPN connections per region | Each supported Region: 50 | Yes |
| Virtual private gateways per region | Each supported Region: 5 | Yes |

The following quotas are for VM Import/Export.

| Name | Default | Adjustable |
|--|---------------------------|------------|
| Concurrent task limit for ImportImage, ImportSnapshot, and ExportImage | Each supported Region: 20 | Yes |
| Concurrent task limit for ImportInstance, ImportVolume, and CreateInstanceExportTask | Each supported Region: 5 | Yes |

For more information, see the following:

- [On-Demand Instance quotas](#)
- [Spot Instance quotas](#)
- [Reserved Instance quotas](#)

Amazon EC2 Auto Scaling endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------------|--|
| US East (Ohio) | us-east-2 | autoscaling.us-east-2.amazonaws.com | HTTP and HTTPS | |
| US East (N. Virginia) | us-east-1 | autoscaling.us-east-1.amazonaws.com | HTTP and HTTPS | |
| US West (N. California) | us-west-1 | autoscaling.us-west-1.amazonaws.com | HTTP and HTTPS | |
| US West (Oregon) | us-west-2 | autoscaling.us-west-2.amazonaws.com | HTTP and HTTPS | |
| Africa (Cape Town) | af-south-1 | autoscaling.af-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | autoscaling.ap-east-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | autoscaling.ap-southeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | autoscaling.ap-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | autoscaling.ap-northeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | autoscaling.ap-northeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | autoscaling.ap-southeast-1.amazonaws.com | HTTP and HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|----------------|--|
| Asia Pacific (Sydney) | ap-southeast-2 | autoscaling.ap-southeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | autoscaling.ap-northeast-1.amazonaws.com | HTTP and HTTPS | |
| Canada (Central) | ca-central-1 | autoscaling.ca-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Frankfurt) | eu-central-1 | autoscaling.eu-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Ireland) | eu-west-1 | autoscaling.eu-west-1.amazonaws.com | HTTP and HTTPS | |
| Europe (London) | eu-west-2 | autoscaling.eu-west-2.amazonaws.com | HTTP and HTTPS | |
| Europe (Milan) | eu-south-1 | autoscaling.eu-south-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Paris) | eu-west-3 | autoscaling.eu-west-3.amazonaws.com | HTTP and HTTPS | |
| Europe (Stockholm) | eu-north-1 | autoscaling.eu-north-1.amazonaws.com | HTTP and HTTPS | |
| Middle East (Bahrain) | me-south-1 | autoscaling.me-south-1.amazonaws.com | HTTP and HTTPS | |
| South America (São Paulo) | sa-east-1 | autoscaling.sa-east-1.amazonaws.com | HTTP and HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | autoscaling.us-gov-east-1.amazonaws.com | HTTP and HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | autoscaling.us-gov-west-1.amazonaws.com | HTTP and HTTPS | |

If you specify the general endpoint (autoscaling.amazonaws.com), Amazon EC2 Auto Scaling directs your request to the endpoint for us-east-1.

Service quotas

| Name | Default | Adjustable |
|--------------------------------|----------------------------|------------|
| Auto Scaling groups per region | Each supported Region: 200 | Yes |

| Name | Default | Adjustable |
|---|----------------------------|------------|
| Classic Load Balancers per Auto Scaling group | Each supported Region: 50 | No |
| Launch configurations per region | Each supported Region: 200 | Yes |
| Lifecycle hooks per Auto Scaling group | Each supported Region: 50 | No |
| SNS topics per Auto Scaling group | Each supported Region: 10 | No |
| Scaling policies per Auto Scaling group | Each supported Region: 50 | No |
| Scheduled actions per Auto Scaling group | Each supported Region: 125 | No |
| Step adjustments per step scaling policy | Each supported Region: 20 | No |
| Target groups per Auto Scaling group | Each supported Region: 50 | No |

For more information, see [Amazon EC2 Auto Scaling Service Quotas](#) in the *Amazon EC2 Auto Scaling User Guide*.

EC2 Image Builder endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|------------|---------------------------------------|----------|--|
| US East (Ohio) | us-east-2 | imagebuilder.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | imagebuilder.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | imagebuilder.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | imagebuilder.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | imagebuilder.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | imagebuilder.ap-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| Asia Pacific (Jakarta) | ap-southeast-3 | imagebuilder.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | imagebuilder.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | imagebuilder.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | imagebuilder.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | imagebuilder.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | imagebuilder.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | imagebuilder.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | imagebuilder.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | imagebuilder.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | imagebuilder.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | imagebuilder.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | imagebuilder.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | imagebuilder.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | imagebuilder.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | imagebuilder.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | imagebuilder.sa-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|--|----------|--|
| AWS GovCloud (US-East) | us-gov-east-1 | imagebuilder.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | imagebuilder.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|-------------------------------------|------------|
| Component parameter length | Each supported Region: 1,024 | Yes |
| Component size | Each supported Region: 64 Kilobytes | Yes |
| Components | Each supported Region: 1,000 | Yes |
| Components per image recipe | Each supported Region: 20 | No |
| Concurrent AMI copies per distribution configuration | Each supported Region: 50 | Yes |
| Concurrent builds | Each supported Region: 100 | Yes |
| Container recipes | Each supported Region: 1,000 | Yes |
| Distribution configurations | Each supported Region: 1,000 | Yes |
| Docker template size | Each supported Region: 64 Kilobytes | Yes |
| Image pipelines | Each supported Region: 75 | Yes |
| Image recipes | Each supported Region: 1,000 | Yes |
| Infrastructure configurations | Each supported Region: 1,000 | Yes |
| Launch templates modified per distribution configuration | Each supported Region: 5 | Yes |
| Parameters per component | Each supported Region: 25 | Yes |

Amazon EC2 Instance Connect endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------|--|
| US East (Ohio) | us-east-2 | ec2-instance-connect.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | ec2-instance-connect.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | ec2-instance-connect.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | ec2-instance-connect.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | ec2-instance-connect.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | ec2-instance-connect.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | ec2-instance-connect.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | ec2-instance-connect.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | ec2-instance-connect.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | ec2-instance-connect.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | ec2-instance-connect.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | ec2-instance-connect.eu-west-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|----------|--|
| Europe (London) | eu-west-2 | ec2-instance-connect.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | ec2-instance-connect.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | ec2-instance-connect.eu-north-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | ec2-instance-connect.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | ec2-instance-connect.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | ec2-instance-connect.us-gov-west-1.amazonaws.com | HTTPS | |

Amazon ECR endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

The `ecr` and `api.ecr` endpoints are used for calls to the Amazon ECR API. API actions such as `DescribeImages` and `CreateRepository` go to this endpoint. While the two endpoints function the same, the `api.ecr` endpoint is recommended and the default when using the AWS CLI or AWS SDKs. When connecting to Amazon ECR through an AWS PrivateLink VPC endpoint, you must use the `api.ecr` endpoint to make API calls. For more information, see [Amazon ECR Interface VPC Endpoints \(AWS PrivateLink\)](#) in the *Amazon Elastic Container Registry User Guide*.

For more information about FIPS endpoints, see [FIPS endpoints \(p. 743\)](#).

| Region Name | Region | Endpoint | Protocol | |
|----------------|-----------|--------------------------------------|----------|--|
| US East (Ohio) | us-east-2 | ecr.us-east-2.amazonaws.com | HTTPS | |
| | | ecr-fips.us-east-2.amazonaws.com | HTTPS | |
| | | api.ecr.us-east-2.amazonaws.com | HTTPS | |
| | | dkr.ecr-fips.us-east-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--------------------------------------|-----------------|--|
| US East (N. Virginia) | us-east-1 | ecr.us-east-1.amazonaws.com | HTTPS | |
| | | dkr.ecr-fips.us-east-1.amazonaws.com | HTTPS | |
| | | api.ecr.us-east-1.amazonaws.com | HTTPS | |
| | | ecr-fips.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | ecr.us-west-1.amazonaws.com | HTTPS | |
| | | dkr.ecr-fips.us-west-1.amazonaws.com | HTTPS | |
| | | api.ecr.us-west-1.amazonaws.com | HTTPS | |
| | | ecr-fips.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | ecr.us-west-2.amazonaws.com | HTTPS | |
| | | ecr-fips.us-west-2.amazonaws.com | HTTPS | |
| | | api.ecr.us-west-2.amazonaws.com | HTTPS | |
| | | dkr.ecr-fips.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | ecr.af-south-1.amazonaws.com | HTTPS | |
| | | api.ecr.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | ecr.ap-east-1.amazonaws.com | HTTPS | |
| | | api.ecr.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | ecr.ap-southeast-3.amazonaws.com | HTTPS | |
| | | api.ecr.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | ecr.ap-south-1.amazonaws.com | HTTPS | |
| | | api.ecr.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | ecr.ap-northeast-3.amazonaws.com | HTTPS | |
| | | api.ecr.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | ecr.ap-northeast-2.amazonaws.com | HTTPS | |
| | | api.ecr.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | ecr.ap-southeast-1.amazonaws.com | HTTPS | |
| | | api.ecr.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | ecr.ap-southeast-2.amazonaws.com | HTTPS | |
| | | api.ecr.ap-southeast-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|----------------------------------|--|
| Asia Pacific (Tokyo) | ap-northeast-1 | ecr.ap-northeast-1.amazonaws.com api.ecr.ap-northeast-1.amazonaws.com | HTTPS HTTPS | |
| Canada (Central) | ca-central-1 | ecr.ca-central-1.amazonaws.com api.ecr.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | ecr.eu-central-1.amazonaws.com api.ecr.eu-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Ireland) | eu-west-1 | ecr.eu-west-1.amazonaws.com api.ecr.eu-west-1.amazonaws.com | HTTPS HTTPS | |
| Europe (London) | eu-west-2 | ecr.eu-west-2.amazonaws.com api.ecr.eu-west-2.amazonaws.com | HTTPS HTTPS | |
| Europe (Milan) | eu-south-1 | ecr.eu-south-1.amazonaws.com api.ecr.eu-south-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Paris) | eu-west-3 | ecr.eu-west-3.amazonaws.com api.ecr.eu-west-3.amazonaws.com | HTTPS HTTPS | |
| Europe (Stockholm) | eu-north-1 | ecr.eu-north-1.amazonaws.com api.ecr.eu-north-1.amazonaws.com | HTTPS HTTPS | |
| Middle East (Bahrain) | me-south-1 | ecr.me-south-1.amazonaws.com api.ecr.me-south-1.amazonaws.com | HTTPS HTTPS | |
| South America (São Paulo) | sa-east-1 | ecr.sa-east-1.amazonaws.com api.ecr.sa-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | ecr.us-gov-east-1.amazonaws.com ecr-fips.us-gov-east-1.amazonaws.com api.ecr.us-gov-east-1.amazonaws.com dkr.ecr-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | ecr.us-gov-west-1.amazonaws.com dkr.ecr-fips.us-gov-west-1.amazonaws.com ecr-fips.us-gov-west-1.amazonaws.com api.ecr.us-gov-west-1.amazonaws.com | HTTPS HTTPS HTTPS HTTPS | |

Docker and OCI client endpoints

The Docker and OCI client endpoints are used for the Docker Registry APIs. Docker client commands such as push and pull use this endpoint.

For more information about FIPS endpoints, see [FIPS endpoints \(p. 743\)](#).

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------|
| US East (Ohio) | us-east-2 | < <i>registry-id</i> >.dkr.ecr.us-east-2.amazonaws.com < <i>registry-id</i> >.dkr.ecr-fips.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | < <i>registry-id</i> >.dkr.ecr.us-east-1.amazonaws.com < <i>registry-id</i> >.dkr.ecr-fips.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | < <i>registry-id</i> >.dkr.ecr.us-west-1.amazonaws.com < <i>registry-id</i> >.dkr.ecr-fips.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | < <i>registry-id</i> >.dkr.ecr.us-west-2.amazonaws.com < <i>registry-id</i> >.dkr.ecr-fips.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | < <i>registry-id</i> >.dkr.ecr.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | < <i>registry-id</i> >.dkr.ecr.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | < <i>registry-id</i> >.dkr.ecr.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | < <i>registry-id</i> >.dkr.ecr.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | < <i>registry-id</i> >.dkr.ecr.ap-southeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | < <i>registry-id</i> >.dkr.ecr.ap-northeast-1.amazonaws.com | HTTPS |
| Canada (Central) | ca-central-1 | < <i>registry-id</i> >.dkr.ecr.ca-central-1.amazonaws.com | HTTPS |
| China (Beijing) | cn-north-1 | < <i>registry-id</i> >.dkr.ecr.cn-north-1.amazonaws.com.cn | HTTPS |
| China (Ningxia) | cn-northwest-1 | < <i>registry-id</i> >.dkr.ecr.cn-northwest-1.amazonaws.com.cn | HTTPS |
| Europe (Frankfurt) | eu-central-1 | < <i>registry-id</i> >.dkr.ecr.eu-central-1.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | < <i>registry-id</i> >.dkr.ecr.eu-west-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol |
|---------------------------|---------------|---|----------|
| Europe (London) | eu-west-2 | <registry-id>.dkr.ecr.eu-west-2.amazonaws.com | HTTPS |
| Europe (Paris) | eu-west-3 | <registry-id>.dkr.ecr.eu-west-3.amazonaws.com | HTTPS |
| Europe (Stockholm) | eu-north-1 | <registry-id>.dkr.ecr.eu-north-1.amazonaws.com | HTTPS |
| Middle East (Bahrain) | me-south-1 | <registry-id>.dkr.ecr.me-south-1.amazonaws.com | HTTPS |
| South America (São Paulo) | sa-east-1 | <registry-id>.dkr.ecr.sa-east-1.amazonaws.com | HTTPS |
| AWS GovCloud (US-East) | us-gov-east-1 | <registry-id>.dkr.ecr.us-gov-east-1.amazonaws.com <registry-id>.dkr.ecr-fips.us-gov-east-1.amazonaws.com | HTTPS |
| AWS GovCloud (US-West) | us-gov-west-1 | <registry-id>.dkr.ecr.us-gov-west-1.amazonaws.com <registry-id>.dkr.ecr-fips.us-gov-west-1.amazonaws.com | HTTPS |

Service quotas

The following table provides the default limits for Amazon Elastic Container Registry (Amazon ECR).

| Service quota | Description | Default quota value |
|-------------------------|--|---------------------|
| Registered repositories | The maximum number of repositories that you can create per Region. | 10,000 |
| Image per repository | The maximum number of images per repository. | 10,000 |

The following table provides the default rate quotas for each of the Amazon ECR API actions involved with the image push and image pull actions.

| Amazon ECR action | API operation | Description | Default quota value |
|-------------------|--|--|---------------------|
| Authentication | Rate of GetAuthorizationToken requests | The rate of GetAuthorizationToken API requests that you can make per second, per Region. | 500 |
| Image push | Rate of BatchCheckLayerAvailability requests | The rate of BatchCheckLayerAvailability API requests that you | 1000 |

| Amazon ECR action | API operation | Description | Default quota value |
|-------------------|--------------------------------------|---|---------------------|
| | | <p>can make per second, per Region.</p> <p>When an image is pushed to a repository, each image layer is checked to verify if it has been uploaded before. If it has been uploaded, then the image layer is skipped.</p> | |
| | Rate of InitiateLayerUpload requests | <p>The rate of InitiateLayerUpload API requests that you can make per second, per Region.</p> <p>When an image is pushed, the InitiateLayerUpload API is called once per image layer that has not already been uploaded. Whether or not an image layer has been uploaded is determined by the BatchCheckLayerAvailability API action.</p> | 100 |
| | Rate of CompleteLayerUpload requests | <p>The rate of CompleteLayerUpload API requests that you can make per second, per Region.</p> <p>When an image is pushed, the CompleteLayerUpload API is called once per each new image layer to verify that the upload has completed.</p> | 100 |

| Amazon ECR action | API operation | Description | Default quota value |
|-------------------|----------------------------------|---|---------------------|
| | Rate of UploadLayerPart requests | <p>The rate of UploadLayerPart API requests that you can make per second, per Region.</p> <p>When an image is pushed, each new image layer is uploaded in parts. The maximum size of each image layer part can be 20,971,520 bytes (or about 20MB). The UploadLayerPart API is called once per each new image layer part.</p> | 500 |
| | Rate of PutImage requests | <p>The rate of PutImage API requests that you can make per second, per Region.</p> <p>When an image is pushed and all new image layers have been uploaded, the PutImage API is called once to create or update the image manifest and the tags associated with the image.</p> | 10 |
| Image pull | Rate of BatchGetImage requests | <p>The rate of BatchGetImage API requests that you can make per second, per Region.</p> <p>When an image is pulled, the BatchGetImage API is called once to retrieve the image manifest.</p> | 2,000 |

| Amazon ECR action | API operation | Description | Default quota value |
|-------------------|---|---|---------------------|
| | Rate of GetDownloadUrlForLayer requests | The rate of GetDownloadUrlForLayer API requests that you can make per second, per Region. When an image is pulled, the GetDownloadUrlForLayer API is called once per image layer that is not already cached. | 3,000 |

The following table provides other quotas for Amazon ECR and Docker images that cannot be changed.

Note

The layer part information mentioned in the following table is only applicable if you are calling the Amazon ECR API actions directly to initiate multipart uploads for image push operations. This is a rare action. We recommend that you use the Docker CLI to pull, tag, and push images.

| Service quota | Description | Quota value |
|----------------------------|---|-------------|
| Layer parts | The maximum number of layer parts. This is only applicable if you are using Amazon ECR API actions directly to initiate multipart uploads for image push operations. | 4,200 |
| Maximum layer size | The maximum size (MiB) of a layer. ** | 42,000 |
| Minimum layer part size | The minimum size (MiB) of a layer part. This is only applicable if you are using Amazon ECR API actions directly to initiate multipart uploads for image push operations. | 5 |
| Maximum layer part size | The maximum size (MiB) of a layer part. This is only applicable if you are using Amazon ECR API actions directly to initiate multipart uploads for image push operations. | 10 |
| Tags per image | The maximum number of tags per image. | 1,000 |
| Lifecycle policy length | The maximum number of characters in a lifecycle policy. | 30,720 |
| Rules per lifecycle policy | The maximum number of rules in a lifecycle policy. | 50 |

| Service quota | Description | Quota value |
|---------------------|--|-------------|
| Rate of image scans | The maximum number of image scans per image, per 24 hours. | 1 |

** The maximum layer size listed here is calculated by multiplying the maximum layer part size (10 MiB) by the maximum number of layer parts (4,200).

For more information, see [Amazon ECR Service Quotas](#) in the *Amazon Elastic Container Registry User Guide*.

Amazon ECR Public endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

The `ecr-public` and `api.ecr-public` endpoints are used for calls to the Amazon ECR Public API. API actions such as `DescribeImages` and `CreateRepository` go to this endpoint. While the two endpoints function the same, the `api.ecr-public` endpoint is recommended and the default when using the AWS CLI or AWS SDKs.

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|--|----------------|--|
| US East (N. Virginia) | us-east-1 | ecr-public.us-east-1.amazonaws.com api.ecr-public.us-east-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

For more information, see [Amazon ECR Public service quotas](#) in the *Amazon ECR Public user guide*.

Amazon ECS endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | ecs.us-east-2.amazonaws.com ecs-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | ecs.us-east-1.amazonaws.com ecs-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | ecs.us-west-1.amazonaws.com ecs-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | ecs.us-west-2.amazonaws.com ecs-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | ecs.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | ecs.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | ecs.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | ecs.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | ecs.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | ecs.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | ecs.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | ecs.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | ecs.ap-northeast-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| Canada (Central) | ca-central-1 | ecs.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | ecs.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | ecs.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | ecs.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | ecs.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | ecs.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | ecs.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | ecs.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | ecs.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | ecs.us-gov-east-1.amazonaws.com ecs-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | ecs.us-gov-west-1.amazonaws.com ecs-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

The following are Amazon ECS service quotas.

Most of these service quotas, but not all, are listed under the Amazon Elastic Container Service (Amazon ECS) namespace in the Service Quotas console. To request a quota increase, see [Requesting a quota increase](#) in the *Service Quotas User Guide*.

| Service quota | Description | Default quota value | Adjustable |
|---------------|---|---------------------|------------|
| Clusters | The maximum number of clusters in this account in the current Region. | 10,000 | Yes |

| Service quota | Description | Default quota value | Adjustable |
|--|---|---------------------|------------|
| Container instances per cluster | The maximum number of container instances per cluster. | 2,000 | Yes |
| Services per cluster | The maximum number of services per cluster. | 5,000 | Yes |
| Tasks per service | <p>The maximum number of tasks per service (the desired count).</p> <p>Note Services configured to use Amazon ECS service discovery have a limit of 1,000 tasks per service. This is due to the AWS Cloud Map service quota for the number of instances per service. For more information, see AWS Cloud Map service quotas.</p> | 5,000 | Yes |
| Tasks launched (count) per <code>run-task</code> | The maximum number of tasks that can be launched per <code>RunTask</code> API action. | 10 | No |
| Container instances per <code>start-task</code> | The maximum number of container instances specified in a <code>StartTask</code> API action. | 10 | No |
| Revisions per task definition family | The maximum number of revisions per task definition family. Deregistering a task definition revision does not exclude it from being included in this limit. | 1,000,000 | No |
| Task definition size limit | The maximum size, in KiB, of a task definition. | 32 | No |

| Service quota | Description | Default quota value | Adjustable |
|---|--|---------------------|------------|
| Task definition max containers | The maximum number of containers definitions within a task definition. | 10 | No |
| Subnets specified in an awsvpcConfiguration | The maximum number of subnets specified within an awsvpcConfiguration. | 16 | No |
| Security groups specified in an awsvpcConfiguration | The maximum number of security groups specified within an awsvpcConfiguration. | 5 | No |
| Target groups per service | The maximum number of target groups per service, if using an Application Load Balancer or a Network Load Balancer. | 5 | No |
| Classic Load Balancers per service | The maximum number of Classic Load Balancers per service. | 1 | No |
| Tags per resource | The maximum number of tags per resource. This applies to task definitions, clusters, tasks, and services. | 50 | No |
| Tasks in the PROVISIONING state per cluster | The maximum number of tasks waiting in the PROVISIONING state per cluster. This quota only applies to tasks launched using an Amazon EC2 Auto Scaling group capacity provider. | 300 | No |

For more information, see [Amazon ECS service quotas](#) in the *Amazon Elastic Container Service Developer Guide*.

AWS Fargate quotas

The following are Amazon ECS on AWS Fargate service quotas.

These service quotas are listed under the AWS Fargate namespace in the Service Quotas console. To request a quota increase, see [Requesting a quota increase](#) in the *Service Quotas User Guide*.

| Service quota | Description | Default quota value | Adjustable |
|----------------------------------|---|---------------------|------------|
| Fargate On-Demand resource count | The maximum number of Amazon ECS tasks and Amazon EKS pods running concurrently on Fargate in this account in the current Region. | 1,000 | Yes |
| Fargate Spot resource count | The maximum number of Amazon ECS tasks running concurrently on Fargate Spot in this account in the current Region. | 1,000 | Yes |

Amazon Elastic Kubernetes Service endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|------------|---|----------------|--|
| US East (Ohio) | us-east-2 | eks.us-east-2.amazonaws.com fips.eks.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | eks.us-east-1.amazonaws.com fips.eks.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | eks.us-west-1.amazonaws.com fips.eks.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | eks.us-west-2.amazonaws.com fips.eks.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | eks.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | eks.ap-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|-----------------|--|
| Asia Pacific (Mumbai) | ap-south-1 | eks.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | eks.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | eks.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | eks.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | eks.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | eks.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | eks.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | eks.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | eks.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | eks.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | eks.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | eks.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | eks.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | eks.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | eks.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | eks.us-gov-east-1.amazonaws.com eks.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|--|----------------|--|
| AWS GovCloud (US-West) | us-gov-west-1 | eks.us-gov-west-1.amazonaws.com eks.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|----------------------------|------------|
| Clusters | Each supported Region: 100 | Yes |
| Control plane security groups per cluster | Each supported Region: 4 | No |
| Fargate profiles per cluster | Each supported Region: 10 | Yes |
| Label pairs per Fargate profile selector | Each supported Region: 5 | Yes |
| Managed node groups per cluster | Each supported Region: 30 | Yes |
| Nodes per managed node group | Each supported Region: 450 | Yes |
| Public endpoint access CIDR ranges per cluster | Each supported Region: 40 | No |
| Registered clusters | Each supported Region: 10 | Yes |
| Selectors per Fargate profile | Each supported Region: 5 | Yes |

AWS Fargate service quotas

The following are Amazon EKS on AWS Fargate service quotas.

These service quotas are listed under the AWS Fargate namespace in the Service Quotas console. To request a quota increase, see [Requesting a quota increase](#) in the *Service Quotas User Guide*.

| Service quota | Description | Default quota value | Adjustable |
|----------------------------------|---|---------------------|------------|
| Fargate On-Demand resource count | The maximum number of Amazon ECS tasks and Amazon EKS pods running concurrently on Fargate in this account in the current Region. | 1,000 | Yes |

Amazon Elastic File System endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | elasticfilesystem.us-east-2.amazonaws.com elasticfilesystem-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | elasticfilesystem.us-east-1.amazonaws.com elasticfilesystem-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | elasticfilesystem.us-west-1.amazonaws.com elasticfilesystem-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | elasticfilesystem.us-west-2.amazonaws.com elasticfilesystem-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | elasticfilesystem.af-south-1.amazonaws.com elasticfilesystem-fips.af-south-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | elasticfilesystem.ap-east-1.amazonaws.com elasticfilesystem-fips.ap-east-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | elasticfilesystem.ap-southeast-3.amazonaws.com elasticfilesystem-fips.ap-southeast-3.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | elasticfilesystem.ap-south-1.amazonaws.com elasticfilesystem-fips.ap-south-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | elasticfilesystem.ap-northeast-3.amazonaws.com elasticfilesystem-fips.ap-northeast-3.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | elasticfilesystem.ap-northeast-2.amazonaws.com elasticfilesystem-fips.ap-northeast-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | elasticfilesystem.ap-southeast-1.amazonaws.com elasticfilesystem-fips.ap-southeast-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | elasticfilesystem.ap-southeast-2.amazonaws.com elasticfilesystem-fips.ap-southeast-2.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| Asia Pacific (Tokyo) | ap-northeast-1 | elasticfilesystem.ap-northeast-1.amazonaws.com elasticfilesystem-fips.ap-northeast-1.amazonaws.com | HTTPS HTTPS | |
| Canada (Central) | ca-central-1 | elasticfilesystem.ca-central-1.amazonaws.com elasticfilesystem-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | elasticfilesystem.eu-central-1.amazonaws.com elasticfilesystem-fips.eu-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Ireland) | eu-west-1 | elasticfilesystem.eu-west-1.amazonaws.com elasticfilesystem-fips.eu-west-1.amazonaws.com | HTTPS HTTPS | |
| Europe (London) | eu-west-2 | elasticfilesystem.eu-west-2.amazonaws.com elasticfilesystem-fips.eu-west-2.amazonaws.com | HTTPS HTTPS | |
| Europe (Milan) | eu-south-1 | elasticfilesystem.eu-south-1.amazonaws.com elasticfilesystem-fips.eu-south-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Paris) | eu-west-3 | elasticfilesystem.eu-west-3.amazonaws.com elasticfilesystem-fips.eu-west-3.amazonaws.com | HTTPS HTTPS | |
| Europe (Stockholm) | eu-north-1 | elasticfilesystem.eu-north-1.amazonaws.com elasticfilesystem-fips.eu-north-1.amazonaws.com | HTTPS HTTPS | |
| Middle East (Bahrain) | me-south-1 | elasticfilesystem.me-south-1.amazonaws.com elasticfilesystem-fips.me-south-1.amazonaws.com | HTTPS HTTPS | |
| South America (São Paulo) | sa-east-1 | elasticfilesystem.sa-east-1.amazonaws.com elasticfilesystem-fips.sa-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | elasticfilesystem.us-gov-east-1.amazonaws.com elasticfilesystem-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | elasticfilesystem.us-gov-west-1.amazonaws.com elasticfilesystem-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|---|------------|
| Active users per NFS client | Each supported Region: 128 | No |
| Bursting throughput | us-east-1: 3,072 Megabytes per second us-east-2: 3,072 Megabytes per second us-west-2: 3,072 Megabytes per second ap-southeast-2: 3,072 Megabytes per second eu-west-1: 3,072 Megabytes per second Each of the other supported Regions: 1,024 Megabytes per second | No |
| Directory depth | Each supported Region: 1,000 | No |
| EFS file locks | Each supported Region: 512 | No |
| File hard links | Each supported Region: 177 | No |
| File size | Each supported Region: 52,673,613,135,872 Bytes | No |
| File system name length | Each supported Region: 255 Bytes | No |
| File system symbolic link (symlink) length | Each supported Region: 4,080 Bytes | No |
| File systems per account | Each supported Region: 1,000 | Yes |
| Locks across unique file/process pairs | Each supported Region: 8,192 | No |
| Minimum wait time between Provisioned Throughput decreases | Each supported Region: 86,400 Seconds | No |
| Minimum wait time between Throughput mode changes | Each supported Region: 86,400 Seconds | No |
| Mount targets per Availability Zone | Each supported Region: 1 | No |
| Mount targets per VPC | Each supported Region: 400 | No |
| Open files per NFS client | Each supported Region: 32,768 | No |

| Name | Default | Adjustable |
|----------------------------------|--|------------|
| Provisioned throughput | Each supported Region: 1,024 Megabytes per second | No |
| Rate of file system operations | Each supported Region: 7,000 | No |
| Security groups per mount target | Each supported Region: 5 | No |
| Tags | Each supported Region: 50 | No |
| Throughput per NFS client | Each supported Region: 250 Megabytes per second | No |
| Unique file/process pairs | Each supported Region: 256 | No |
| VPCs per file system | Each supported Region: 1 | No |

For more information, see [Amazon EFS quotas](#) in the *Amazon Elastic File System User Guide*.

Amazon Elastic Inference endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|-----------------------|----------------|--|----------|
| US East (Ohio) | us-east-2 | api.elastic-inference.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | api.elastic-inference.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | api.elastic-inference.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | api.elastic-inference.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | api.elastic-inference.ap-northeast-1.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | api.elastic-inference.eu-west-1.amazonaws.com | HTTPS |

Service quotas

| Name | Default | Adjustable |
|--|--------------------------|------------|
| Number of Elastic Inference accelerators | Each supported Region: 5 | Yes |

Elastic Load Balancing endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Route 53 Hosted Zone ID (Application Load Balancers, Classic Load Balancers) | Route 53 Hosted Zone ID (Network Load Balancers) |
|-------------------------|------------|---|--|--|
| US East (Ohio) | us-east-2 | elasticloadbalancing.us-east-2.amazonaws.com elasticloadbalancing-fips.us-east-2.amazonaws.com | Z3AADJGX6KTTL2 | ZLMOA37VPKANP |
| US East (N. Virginia) | us-east-1 | elasticloadbalancing.us-east-1.amazonaws.com elasticloadbalancing-fips.us-east-1.amazonaws.com | Z35SXDOTRQ7X7K | Z26RNL4JYFTOTI |
| US West (N. California) | us-west-1 | elasticloadbalancing.us-west-1.amazonaws.com elasticloadbalancing-fips.us-west-1.amazonaws.com | Z368ELLRRE2KJ0 | Z24FKFUX50B4VW |
| US West (Oregon) | us-west-2 | elasticloadbalancing.us-west-2.amazonaws.com elasticloadbalancing-fips.us-west-2.amazonaws.com | Z1H1FL5HABSF5 | Z18D5FSROUN65G |
| Africa (Cape Town) | af-south-1 | elasticloadbalancing.af-south-1.amazonaws.com | Z268VQBMOI5EKX | Z203XCE67M25HM |

| Region Name | Region | Endpoint | Route 53 Hosted Zone ID (Application Load Balancers, Classic Load Balancers) | Route 53 Hosted Zone ID (Network Load Balancers) |
|--------------------------|----------------|--|---|---|
| Asia Pacific (Hong Kong) | ap-east-1 | elasticloadbalancing.ap-east-1.amazonaws.com | Z3DQVH9N71FHZ0 | Z12Y7K3UBGUAD1 |
| Asia Pacific (Jakarta) | ap-southeast-3 | elasticloadbalancing.ap-southeast-3.amazonaws.com | Z08888821HLRG5A9Z0UEB71771FYVNCOVWJU1G | |
| Asia Pacific (Mumbai) | ap-south-1 | elasticloadbalancing.ap-south-1.amazonaws.com | ZP97RAFLXTNZK | ZVDDRBQ08TROA |
| Asia Pacific (Osaka) | ap-northeast-3 | elasticloadbalancing.ap-northeast-3.amazonaws.com | Z5LXEXXYW11ES | Z1GWIQ4HH19I5X |
| Asia Pacific (Seoul) | ap-northeast-2 | elasticloadbalancing.ap-northeast-2.amazonaws.com | ZWKZPGTI48KDX | ZIBE1TIR4HY56 |
| Asia Pacific (Singapore) | ap-southeast-1 | elasticloadbalancing.ap-southeast-1.amazonaws.com | Z1LMS91P8CMLE5 | ZKVM4W9LS7TM |
| Asia Pacific (Sydney) | ap-southeast-2 | elasticloadbalancing.ap-southeast-2.amazonaws.com | Z1GM3OXH4ZPM65 | ZCT6FZBF4DROD |
| Asia Pacific (Tokyo) | ap-northeast-1 | elasticloadbalancing.ap-northeast-1.amazonaws.com | Z14GRHDCWA56QT | Z31USIVHYNEOWT |
| Canada (Central) | ca-central-1 | elasticloadbalancing.ca-central-1.amazonaws.com | ZQSVJUPU6J1EY | Z2EPGBW3API2WT |
| China (Beijing) | cn-north-1 | elasticloadbalancing.cn-north-1.amazonaws.com.cn | Z1GDH35T77C1KE | Z3QFB96KMJ7ED6 |
| China (Ningxia) | cn-northwest-1 | elasticloadbalancing.cn-northwest-1.amazonaws.com.cn | ZM7IZAIOVVDZF | ZQEIKTCZ8352D |
| Europe (Frankfurt) | eu-central-1 | elasticloadbalancing.eu-central-1.amazonaws.com | Z215JYRZR1TBD5 | Z3F0SRJ5LGBH90 |
| Europe (Ireland) | eu-west-1 | elasticloadbalancing.eu-west-1.amazonaws.com | Z32O12XQLNTSW2 | Z2IFOLAFXWLO4F |
| Europe (London) | eu-west-2 | elasticloadbalancing.eu-west-2.amazonaws.com | ZHURV8PSTC4K8 | ZD4D7Y8KGAS4G |
| Europe (Milan) | eu-south-1 | elasticloadbalancing.eu-south-1.amazonaws.com | Z3ULH7SSC9OV64 | Z23146JA1KNAFP |
| Europe (Paris) | eu-west-3 | elasticloadbalancing.eu-west-3.amazonaws.com | Z3Q77PNBQS71R4 | Z1CMSOP5QUZ6D5 |
| Europe (Stockholm) | eu-north-1 | elasticloadbalancing.eu-north-1.amazonaws.com | Z23TAZ6LKFMNIO | Z1UDT6IFJ4EJM |
| Middle East (Bahrain) | me-south-1 | elasticloadbalancing.me-south-1.amazonaws.com | ZS929ML54UICD | Z3QSRYVP46NYYV |

| Region Name | Region | Endpoint | Route 53 Hosted Zone ID (Application Load Balancers, Classic Load Balancers) | Route 53 Hosted Zone ID (Network Load Balancers) |
|---------------------------|---------------|--|---|---|
| South America (São Paulo) | sa-east-1 | elasticloadbalancing.sa-east-1.amazonaws.com | Z2P70J7HTTPLU | ZTK26PT1VY4CU |
| AWS GovCloud (US-East) | us-gov-east-1 | elasticloadbalancing.us-gov-east-1.amazonaws.com | Z166TLBEWO07G0 | Z1ZSMQQ6Q24QQ8 |
| AWS GovCloud (US-West) | us-gov-west-1 | elasticloadbalancing.us-gov-west-1.amazonaws.com | Z33AYJ8TM3BH4J | ZMG1MZ2THAWF1 |

Service quotas

The following quotas are for Application Load Balancers.

| Name | Default | Adjustable |
|--|----------------|-------------------|
| Application Load Balancers per Region | 50 | Yes |
| Certificates per Application Load Balancer | 25 | Yes |
| Condition Values per Rule | 5 | No |
| Condition Wildcards per Rule | 5 | No |
| Listeners per Application Load Balancer | 50 | Yes |
| Number of times a target can be registered per Application Load Balancer | 100 | Yes |
| Rules per Application Load Balancer | 100 | Yes |
| Target Groups per Action per Application Load Balancer | 5 | No |
| Target Groups per Application Load Balancer | 100 | No |
| Targets per Application Load Balancer | 1,000 | Yes |

The following quotas are for Network Load Balancers.

| Name | Default | Adjustable |
|--|----------------|-------------------|
| Certificates per Network Load Balancer | 25 | Yes |
| Listeners per Network Load Balancer | 50 | No |
| Network Load Balancer ENIs per VPC | 1,200 | Yes |
| Network Load Balancers per Region | 50 | Yes |

| Name | Default | Adjustable |
|---|---------|------------|
| Target Groups per Action per Network Load Balancer | 1 | No |
| Targets per Availability Zone per Network Load Balancer | 500 | Yes |
| Targets per Network Load Balancer | 3,000 | Yes |

The following quotas are for target groups.

| Name | Default | Adjustable |
|-------------------------------------|---------|------------|
| Target Groups per Region | 3,000 | Yes |
| Targets per Target Group per Region | 1,000 | Yes |

The following quotas are for Classic Load Balancers.

| Name | Default | Adjustable |
|--|---------|------------|
| Classic Load Balancers per Region | 20 | Yes |
| Listeners per Classic Load Balancer | 100 | Yes |
| Registered Instances per Classic Load Balancer | 1,000 | Yes |

For more information, see the following:

- [Quotas for your Application Load Balancers](#)
- [Quotas for your Network Load Balancers](#)
- [Quotas for your Classic Load Balancers](#)
- [Quotas for your Gateway Load Balancers](#)

Amazon Elastic Transcoder endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|---|----------|--|
| US East (N. Virginia) | us-east-1 | elastictranscoder.us-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------|--|
| US West (N. California) | us-west-1 | elastictranscoder.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | elastictranscoder.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | elastictranscoder.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | elastictranscoder.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | elastictranscoder.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | elastictranscoder.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | elastictranscoder.eu-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-----------------------------------|--|------------|
| Burst size of Create Job requests | Each supported Region: 100 | Yes |
| Burst size of Read Job requests | Each supported Region: 50 | Yes |
| Concurrent jobs per pipeline | us-east-1: 20 us-west-2: 20 eu-west-1: 20 Each of the other supported Regions: 12 | Yes |
| Pipelines | Each supported Region: 4 | Yes |
| Queued jobs per pipeline | Each supported Region: 1,000,000 | No |
| Rate of Create Job requests | Each supported Region: 2 | Yes |
| Rate of Read Job requests | Each supported Region: 4 | Yes |
| User-defined presets | Each supported Region: 50 | Yes |

For more information, see [Amazon Elastic Transcoder](#) quotas in the *Amazon Elastic Transcoder Developer Guide*.

AWS Elastic Disaster Recovery endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|----------------------------------|----------|--|
| US East (Ohio) | us-east-2 | drs.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | drs.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | drs.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | drs.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | drs.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | drs.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | drs.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | drs.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | drs.eu-west-2.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-----------------------------|---------------------------|------------|
| Concurrent jobs in progress | Each supported Region: 20 | No |

| Name | Default | Adjustable |
|--|----------------------------|------------|
| Max Total source servers Per AWS Account | Each supported Region: 300 | Yes |
| Max concurrent Jobs per source server | Each supported Region: 1 | No |
| Max source servers in a single Job | Each supported Region: 200 | No |
| Max source servers in all Jobs | Each supported Region: 200 | No |

Amazon ElastiCache endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|------------|---|-------------------------|--|
| US East (Ohio) | us-east-2 | elasticache.us-east-2.amazonaws.com elasticache-fips.us-east-2.amazonaws.com elasticache-fips.us-east-2.amazonaws.com | HTTPS HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | elasticache.us-east-1.amazonaws.com elasticache-fips.us-east-1.amazonaws.com elasticache-fips.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| US West (N. California) | us-west-1 | elasticache.us-west-1.amazonaws.com elasticache-fips.us-west-1.amazonaws.com elasticache-fips.us-west-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | elasticache.us-west-2.amazonaws.com elasticache-fips.us-west-2.amazonaws.com elasticache-fips.us-west-2.amazonaws.com | HTTPS HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | elasticache.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | elasticache.ap-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|-----------------|--|
| Asia Pacific (Jakarta) | ap-southeast-3 | elasticache.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | elasticache.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | elasticache.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | elasticache.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | elasticache.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | elasticache.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | elasticache.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | elasticache.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | elasticache.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | elasticache.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | elasticache.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | elasticache.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | elasticache.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | elasticache.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | elasticache.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | elasticache.sa-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|---|-------------------------|--|
| AWS GovCloud (US-East) | us-gov-east-1 | elasticache.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | elasticache.us-gov-west-1.amazonaws.com elasticache.us-gov-west-1.amazonaws.com elasticache.us-gov-west-1.amazonaws.com | HTTPS HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|----------------------------|------------|
| Nodes per Region | Each supported Region: 300 | Yes |
| Nodes per cluster (Memcached) | Each supported Region: 40 | Yes |
| Nodes per cluster per instance type (Redis cluster mode enabled) | Each supported Region: 90 | Yes |
| Nodes per shard (Redis) | Each supported Region: 6 | No |
| Parameter groups per Region | Each supported Region: 150 | Yes |
| Security groups per Region | Each supported Region: 50 | Yes |
| Shards per cluster (Redis cluster mode disabled) | Each supported Region: 1 | No |
| Subnet groups per Region | Each supported Region: 150 | Yes |
| Subnets per subnet group | Each supported Region: 20 | Yes |

Amazon MemoryDB for Redis endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|----------------|-----------|---|----------------|--|
| US East (Ohio) | us-east-2 | memory-db.us-east-2.amazonaws.com memory-db-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| US East (N. Virginia) | us-east-1 | memory-db.us-east-1.amazonaws.com memory-db-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | memory-db.us-west-1.amazonaws.com memory-db-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | memory-db.us-west-2.amazonaws.com memory-db-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | memory-db.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | memory-db.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | memory-db.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | memory-db.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | memory-db.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | memory-db.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | memory-db.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | memory-db.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | memory-db.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | memory-db.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | memory-db.eu-north-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | memory-db.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Resource | Default |
|-------------------------------------|---------|
| Nodes per Region | 300 |
| Nodes per cluster per instance type | 90 |
| Nodes per shard | 6 |
| Parameter groups per Region | 150 |
| Subnet groups per Region | 150 |
| Subnets per subnet group | 20 |

Amazon EMR endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|------------|---|----------------|--|
| US East (Ohio) | us-east-2 | elasticmapreduce.us-east-2.amazonaws.com elasticmapreduce-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | elasticmapreduce.us-east-1.amazonaws.com elasticmapreduce-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | elasticmapreduce.us-west-1.amazonaws.com elasticmapreduce-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | elasticmapreduce.us-west-2.amazonaws.com elasticmapreduce-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | elasticmapreduce.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | elasticmapreduce.ap-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| Asia Pacific (Jakarta) | ap-southeast-3 | elasticmapreduce.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | elasticmapreduce.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | elasticmapreduce.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | elasticmapreduce.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | elasticmapreduce.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | elasticmapreduce.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | elasticmapreduce.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | elasticmapreduce.ca-central-1.amazonaws.com elasticmapreduce-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | elasticmapreduce.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | elasticmapreduce.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | elasticmapreduce.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | elasticmapreduce.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | elasticmapreduce.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | elasticmapreduce.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | elasticmapreduce.me-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|----------|--|
| South America (São Paulo) | sa-east-1 | elasticmapreduce.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | elasticmapreduce.us-gov-east-1.amazonaws.com | HTTPS | |
| | | elasticmapreduce.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | elasticmapreduce.us-gov-west-1.amazonaws.com | HTTPS | |
| | | elasticmapreduce.us-gov-west-1.amazonaws.com | HTTPS | |

If you specify the general endpoint (elasticmapreduce.amazonaws.com), Amazon EMR directs your request to an endpoint in the default Region. For accounts created on or after March 8, 2013, the default Region is us-west-2; for older accounts, the default Region is us-east-1.

Service quotas

| Name | Default | Adjustable |
|---|----------------------------|------------|
| Replenishment rate of AddInstanceFleet calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of AddInstanceGroups calls | Each supported Region: 0.2 | Yes |
| Replenishment rate of AddJobFlowSteps calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of AddTags calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of CancelSteps calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of CreateSecurityConfiguration calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of DeleteSecurityConfiguration calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of DescribeCluster calls | Each supported Region: 1 | Yes |
| Replenishment rate of DescribeJobFlows calls | Each supported Region: 0.2 | Yes |
| Replenishment rate of DescribeSecurityConfiguration calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of DescribeStep calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of ListBootstrapActions calls | Each supported Region: 1 | Yes |
| Replenishment rate of ListClusters calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of ListInstanceFleets calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of ListInstanceGroups calls | Each supported Region: 1 | Yes |
| Replenishment rate of ListInstances calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of ListSecurityConfigurations calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of ListSteps calls | Each supported Region: 0.5 | Yes |

| Name | Default | Adjustable |
|--|--------------------------------------|------------|
| Replenishment rate of ModifyCluster calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of ModifyInstanceFleet calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of ModifyInstanceGroups calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of PutAutoScalingPolicy calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of RemoveAutoScalingPolicy calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of RemoveTags calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of RunJobFlow calls | Each supported Region: 0.5 | Yes |
| Replenishment rate of SetTerminationProtection calls | Each supported Region: 0.2 | Yes |
| Replenishment rate of SetVisibleToAllUsers calls | Each supported Region: 0.2 | Yes |
| Replenishment rate of TerminateJobFlows calls | Each supported Region: 0.5 | Yes |
| The maximum number of API requests that you can make per second. | Each supported Region: 25 per second | Yes |
| The maximum number of AWS SSO Groups assigned to each Amazon EMR Studio | Each supported Region: 5 | No |
| The maximum number of AWS SSO Users assigned to each Amazon EMR Studio | Each supported Region: 100 | No |
| The maximum number of AddInstanceFleet API requests that you can make per second. | Each supported Region: 5 per second | Yes |
| The maximum number of AddInstanceGroups API requests that you can make per second. | Each supported Region: 5 per second | Yes |
| The maximum number of AddJobFlowSteps API requests that you can make per second. | Each supported Region: 10 per second | Yes |
| The maximum number of AddTags API requests that you can make per second. | Each supported Region: 5 per second | Yes |
| The maximum number of Amazon EMR Studios per account | Each supported Region: 10 | No |
| The maximum number of CancelSteps API requests that you can make per second. | Each supported Region: 10 per second | Yes |
| The maximum number of CreateSecurityConfiguration API requests that you can make per second. | Each supported Region: 5 per second | Yes |
| The maximum number of DeleteSecurityConfiguration API requests that you can make per second. | Each supported Region: 5 per second | Yes |
| The maximum number of DescribeCluster API requests that you can make per second. | Each supported Region: 10 per second | Yes |
| The maximum number of DescribeJobFlows API requests that you can make per second. | Each supported Region: 20 per second | Yes |
| The maximum number of DescribeSecurityConfiguration API requests that you can make per second. | Each supported Region: 5 per second | Yes |

| Name | Default | Adjustable |
|---|--------------------------------------|------------|
| The maximum number of DescribeStep API requests that you can make per second. | Each supported Region: 10 per second | Yes |
| The maximum number of ListBootstrapActions API requests that you can make per second. | Each supported Region: 10 per second | Yes |
| The maximum number of ListClusters API requests that you can make per second. | Each supported Region: 20 per second | Yes |
| The maximum number of ListInstanceFleets API requests that you can make per second. | Each supported Region: 5 per second | Yes |
| The maximum number of ListInstanceGroups API requests that you can make per second. | Each supported Region: 10 per second | Yes |
| The maximum number of ListInstances API requests that you can make per second. | Each supported Region: 10 per second | Yes |
| The maximum number of ListSecurityConfigurations API requests that you can make per second. | Each supported Region: 5 per second | Yes |
| The maximum number of ListSteps API requests that you can make per second. | Each supported Region: 10 per second | Yes |
| The maximum number of ModifyCluster API requests that you can make per second. | Each supported Region: 10 per second | Yes |
| The maximum number of ModifyInstanceFleet API requests that you can make per second. | Each supported Region: 5 per second | Yes |
| The maximum number of ModifyInstanceGroups API requests that you can make per second. | Each supported Region: 5 per second | Yes |
| The maximum number of PutAutoScalingPolicy API requests that you can make per second. | Each supported Region: 5 per second | Yes |
| The maximum number of RemoveAutoScalingPolicy API requests that you can make per second. | Each supported Region: 5 per second | Yes |
| The maximum number of RemoveTags API requests that you can make per second. | Each supported Region: 5 per second | Yes |
| The maximum number of RunJobFlow API requests that you can make per second. | Each supported Region: 10 per second | Yes |
| The maximum number of SetTerminationProtection API requests that you can make per second. | Each supported Region: 5 per second | Yes |
| The maximum number of SetVisibleToAllUsers API requests that you can make per second. | Each supported Region: 5 per second | Yes |
| The maximum number of TerminateJobFlows API requests that you can make per second. | Each supported Region: 10 per second | Yes |
| The maximum number of active clusters can be run at the same time | Each supported Region: 500 | Yes |
| The maximum number of active instances per instance group | Each supported Region: 2,000 | Yes |

| Name | Default | Adjustable |
|---|--------------------------|------------|
| The maximum number of subnets associated with each Amazon EMR Studio | Each supported Region: 5 | No |
| The maximum rate at which your bucket replenishes for all EMR operations. | Each supported Region: 5 | Yes |

Amazon EMR throttles the following API requests for each AWS account on a per-Region basis. For more information about how throttling is applied, see [API Request Throttling](#) in the *Amazon EC2 API Reference*.

Amazon EventBridge endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | events.us-east-2.amazonaws.com events-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | events.us-east-1.amazonaws.com events-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | events.us-west-1.amazonaws.com events-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | events.us-west-2.amazonaws.com events-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | events.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | events.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | events.ap-southeast-3.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|-------------------------------------|----------|--|
| Asia Pacific (Mumbai) | ap-south-1 | events.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | events.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | events.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | events.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | events.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | events.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | events.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | events.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | events.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | events.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | events.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | events.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | events.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | events.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | events.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | events.us-gov-east-1.amazonaws.com | HTTPS | |
| | | events.us-gov-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|------------------------------------|----------|--|
| AWS GovCloud (US-West) | us-gov-west-1 | events.us-gov-west-1.amazonaws.com | HTTPS | |
| | | events.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

For more information, see [EventBridge Quotas](#) in the *Amazon EventBridge User Guide*.

Amazon EventBridge Schemas endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--------------------------------------|----------|--|
| US East (Ohio) | us-east-2 | schemas.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | schemas.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | schemas.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | schemas.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | schemas.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | schemas.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | schemas.ap-northeast-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--------------------------------------|----------|--|
| Asia Pacific (Singapore) | ap-southeast-1 | schemas.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | schemas.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | schemas.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | schemas.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | schemas.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | schemas.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | schemas.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | schemas.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | schemas.eu-north-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | schemas.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-------------------|----------------------------|------------|
| DiscoveredSchemas | Each supported Region: 200 | Yes |
| Discoverers | Each supported Region: 10 | Yes |
| Registries | Each supported Region: 10 | Yes |
| SchemaVersions | Each supported Region: 100 | Yes |
| Schemas | Each supported Region: 100 | Yes |

Amazon FinSpace endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services

offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service quotas

| Name | Default | Adjustable |
|--|-------------------------------------|------------|
| Attribute Sets | Each supported Region: 100 | Yes |
| Clusters per user | Each supported Region: 1 | No |
| Concurrent Changesets processing | Each supported Region: 10 | Yes |
| Concurrent data views processing | Each supported Region: 10 | Yes |
| Controlled Vocabularies and Categories | Each supported Region: 100 | Yes |
| Data views per dataset | Each supported Region: 3 | Yes |
| Datasets | Each supported Region: 1,500 | Yes |
| Datasets per User Group | Each supported Region: 1,500 | Yes |
| Environments | Each supported Region: 2 | Yes |
| Files per Changeset | Each supported Region: 100,000 | No |
| Maximum file size per Changeset | Each supported Region: 50 Gigabytes | No |
| Notebook storage | Each supported Region: 10 Gigabytes | No |
| User Groups | Each supported Region: 20 | Yes |
| Users | Each supported Region: 5 | Yes |

AWS Fault Injection Simulator endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|----------------------------------|----------|
| US East (Ohio) | us-east-2 | fis.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | fis.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | fis.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | fis.us-west-2.amazonaws.com | HTTPS |
| Africa (Cape Town) | af-south-1 | fis.af-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | fis.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | fis.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | fis.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | fis.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | fis.ap-southeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | fis.ap-northeast-1.amazonaws.com | HTTPS |
| Canada (Central) | ca-central-1 | fis.ca-central-1.amazonaws.com | HTTPS |
| Europe (Frankfurt) | eu-central-1 | fis.eu-central-1.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | fis.eu-west-1.amazonaws.com | HTTPS |
| Europe (London) | eu-west-2 | fis.eu-west-2.amazonaws.com | HTTPS |
| Europe (Milan) | eu-south-1 | fis.eu-south-1.amazonaws.com | HTTPS |
| Europe (Paris) | eu-west-3 | fis.eu-west-3.amazonaws.com | HTTPS |
| Europe (Stockholm) | eu-north-1 | fis.eu-north-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol |
|---------------------------|------------|------------------------------|----------|
| Middle East (Bahrain) | me-south-1 | fis.me-south-1.amazonaws.com | HTTPS |
| South America (São Paulo) | sa-east-1 | fis.sa-east-1.amazonaws.com | HTTPS |

Service quotas

| Name | Default | Adjustable |
|---|----------------------------|------------|
| Action duration in hours | Each supported Region: 12 | No |
| Actions per experiment template | Each supported Region: 20 | No |
| Active experiments | Each supported Region: 5 | No |
| Completed experiment data retention in days | Each supported Region: 120 | No |
| Experiment duration in hours | Each supported Region: 12 | No |
| Experiment templates | Each supported Region: 500 | No |
| Parallel actions per experiment | Each supported Region: 10 | No |
| Resources per experiment target | Each supported Region: 5 | No |
| Stop conditions per experiment template | Each supported Region: 5 | No |

AWS Firewall Manager endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|-----------------------|-----------|----------------------------------|----------|
| US East (Ohio) | us-east-2 | fms.us-east-2.amazonaws.com | HTTPS |
| | | fms-fips.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | fms.us-east-1.amazonaws.com | HTTPS |
| | | fms-fips.us-east-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| US West (N. California) | us-west-1 | fms.us-west-1.amazonaws.com fms-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | fms.us-west-2.amazonaws.com fms-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | fms.af-south-1.amazonaws.com fms-fips.af-south-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | fms.ap-east-1.amazonaws.com fms-fips.ap-east-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | fms.ap-south-1.amazonaws.com fms-fips.ap-south-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | fms.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | fms.ap-northeast-2.amazonaws.com fms-fips.ap-northeast-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | fms.ap-southeast-1.amazonaws.com fms-fips.ap-southeast-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | fms.ap-southeast-2.amazonaws.com fms-fips.ap-southeast-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | fms.ap-northeast-1.amazonaws.com fms-fips.ap-northeast-1.amazonaws.com | HTTPS HTTPS | |
| Canada (Central) | ca-central-1 | fms.ca-central-1.amazonaws.com fms-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | fms.eu-central-1.amazonaws.com fms-fips.eu-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Ireland) | eu-west-1 | fms.eu-west-1.amazonaws.com fms-fips.eu-west-1.amazonaws.com | HTTPS HTTPS | |
| Europe (London) | eu-west-2 | fms.eu-west-2.amazonaws.com fms-fips.eu-west-2.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| Europe (Milan) | eu-south-1 | fms.eu-south-1.amazonaws.com fms-fips.eu-south-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Paris) | eu-west-3 | fms.eu-west-3.amazonaws.com fms-fips.eu-west-3.amazonaws.com | HTTPS HTTPS | |
| Europe (Stockholm) | eu-north-1 | fms.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | fms.me-south-1.amazonaws.com fms-fips.me-south-1.amazonaws.com | HTTPS HTTPS | |
| South America (São Paulo) | sa-east-1 | fms.sa-east-1.amazonaws.com fms-fips.sa-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | fms.us-gov-east-1.amazonaws.com fms-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | fms.us-gov-west-1.amazonaws.com fms-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|----------------------------|------------|
| AWS WAF Classic rule groups per AWS WAF Classic policy | Each supported Region: 2 | No |
| Amazon VPC instances in scope of a common security group policy | Each supported Region: 100 | Yes |
| Applications per application list | Each supported Region: 50 | Yes |
| Audit security groups per security group content audit policy | Each supported Region: 1 | Yes |
| Custom managed application lists in any content audit security group policy setting | Each supported Region: 1 | Yes |
| Custom managed application lists per account | Each supported Region: 10 | Yes |
| Custom managed protocol lists in any content audit security group policy setting | Each supported Region: 1 | Yes |
| Custom managed protocol lists per account | Each supported Region: 10 | Yes |
| Explicitly included or excluded accounts per policy per Region | Each supported Region: 200 | Yes |
| Firewall Manager policies per organization per Region | Each supported Region: 20 | Yes |

| Name | Default | Adjustable |
|--|------------------------------|------------|
| IPV4 CIDRs for a Network Firewall policy | Each supported Region: 50 | No |
| Organizational units in scope per policy per Region | Each supported Region: 20 | Yes |
| Primary security groups per common security group policy | Each supported Region: 1 | Yes |
| Protocols per protocol list | Each supported Region: 5 | Yes |
| Route 53 Resolver DNS Firewall rule groups per DNS Firewall policy | Each supported Region: 2 | Yes |
| Rule groups per AWS WAF policy | Each supported Region: 50 | Yes |
| Tags to include or exclude resources per policy | Each supported Region: 8 | Yes |
| VPCs that a single Network Firewall policy can automatically remediate | Each supported Region: 1,000 | No |
| Web ACL capacity units (WCU) used in an AWS WAF policy | Each supported Region: 1,500 | Yes |

For more information, see [AWS Firewall Manager quotas](#) in the *AWS Firewall Manager Developer Guide*.

Amazon Forecast endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Amazon Forecast

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|------------|---|----------------|--|
| US East (Ohio) | us-east-2 | forecast.us-east-2.amazonaws.com forecast-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | forecast.us-east-1.amazonaws.com forecast-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | forecast.us-west-2.amazonaws.com forecast-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | forecast.ap-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---------------------------------------|-----------------|--|
| Asia Pacific (Seoul) | ap-northeast-2 | forecast.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | forecast.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | forecast.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | forecast.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | forecast.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | forecast.eu-west-1.amazonaws.com | HTTPS | |

Amazon Forecast Query

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| US East (Ohio) | us-east-2 | forecastquery.us-east-2.amazonaws.com forecastquery-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | forecastquery.us-east-1.amazonaws.com forecastquery-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | forecastquery.us-west-2.amazonaws.com forecastquery-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | forecastquery.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | forecastquery.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | forecastquery.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | forecastquery.ap-southeast-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|----------------------|----------------|--|----------|--|
| Asia Pacific (Tokyo) | ap-northeast-1 | forecastquery.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | forecastquery.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | forecastquery.eu-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|-------------------------------------|------------|
| Maximum cumulative size of all files in your Amazon S3 bucket | Each supported Region: 30 Gigabytes | Yes |
| Maximum forecast horizon | Each supported Region: 500 | No |
| Maximum number of Explainabilities | Each supported Region: 1,000 | No |
| Maximum number of Explainability exports | Each supported Region: 1,000 | No |
| Maximum number of backtest windows | Each supported Region: 5 | No |
| Maximum number of columns in a related time series dataset | Each supported Region: 25 | No |
| Maximum number of columns in a target time series dataset | Each supported Region: 13 | No |
| Maximum number of columns in an item metadata dataset | Each supported Region: 10 | No |
| Maximum number of dataset groups | Each supported Region: 500 | Yes |
| Maximum number of dataset import jobs | Each supported Region: 1,000 | Yes |
| Maximum number of datasets | Each supported Region: 1,500 | Yes |
| Maximum number of datasets in a dataset group | Each supported Region: 3 | No |
| Maximum number of files in your Amazon S3 bucket | Each supported Region: 10,000 | No |
| Maximum number of forecast export jobs | Each supported Region: 1,000 | Yes |
| Maximum number of forecasts | Each supported Region: 10 | Yes |
| Maximum number of predictor backtest export jobs | Each supported Region: 1,000 | Yes |

| Name | Default | Adjustable |
|--|---|------------|
| Maximum number of predictors | Each supported Region: 500 | Yes |
| Maximum number of rows in a dataset | ap-south-1: 1,000,000,000 Each of the other supported Regions: 3,000,000,000 | Yes |
| Maximum number of tags you can add to a resource | Each supported Region: 50 | No |
| Maximum number of time series per predictor | ap-south-1: 1,000,000 Each of the other supported Regions: 5,000,000 | Yes |
| Maximum parallel running CreateAutoPredictor tasks | Each supported Region: 3 | No |
| Maximum parallel running CreateDatasetImportJob tasks | Each supported Region: 3 | Yes |
| Maximum parallel running CreateExplainability tasks | Each supported Region: 3 | No |
| Maximum parallel running CreateExplainabilityExport tasks | Each supported Region: 3 | No |
| Maximum parallel running CreateForecast tasks | Each supported Region: 3 | Yes |
| Maximum parallel running CreateForecastExportJob tasks | Each supported Region: 3 | Yes |
| Maximum parallel running CreatePredictor tasks | Each supported Region: 3 | Yes |
| Maximum parallel running CreatePredictor tasks using AutoML | Each supported Region: 3 | Yes |
| Maximum parallel running CreatePredictorBacktestExportJob tasks | Each supported Region: 3 | Yes |
| Maximum parallel running QueryForecast API tasks | Each supported Region: 10 | No |
| Maximum parallel running Stop jobs per resource type | Each supported Region: 3 | No |
| Maximum time for which a forecast can be queried on console or QueryForecast API | Each supported Region: 30 | No |
| The maximum number of AutoPredictors | Each supported Region: 500 | No |

Amazon Fraud Detector endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------|--|
| US East (Ohio) | us-east-2 | frauddetector.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | frauddetector.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | frauddetector.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | frauddetector.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | frauddetector.ap-southeast-2.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | frauddetector.eu-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|--------------------------------------|------------|
| Concurrent training jobs per model | Each supported Region: 1 | No |
| Deployed model versions | Each supported Region: 5 | No |
| Detectors per account | Each supported Region: 100 | No |
| EntityType per account | Each supported Region: 100 | No |
| EventType per account | Each supported Region: 100 | No |
| Labels per account | Each supported Region: 100 | No |
| Models including external models per detector version | Each supported Region: 10 | No |
| Models per account | Each supported Region: 50 | No |
| Outcomes per account | Each supported Region: 5,000 | No |
| Rate of GetPrediction requests | Each supported Region: 200 | Yes |
| Rules per account | Each supported Region: 5,000 | No |
| Size of GetPrediction requests | Each supported Region: 256 Kilobytes | No |
| Total concurrent Event Type statistics update operations | Each supported Region: 1 | Yes |

| Name | Default | Adjustable |
|--------------------------------|------------------------------------|------------|
| Total concurrent training jobs | Each supported Region: 3 | No |
| Training data size | Each supported Region: 5 Gigabytes | No |
| Variables per account | Each supported Region: 5,000 | No |
| Versions per detector | Each supported Region: 100 | No |
| Versions per model | Each supported Region: 200 | No |

For more information, see [Quotas](#) in the *Amazon Fraud Detector User Guide*.

FreeRTOS endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

The following tables provide a list of Region-specific endpoints that FreeRTOS supports for Over-the-Air functionality. The FreeRTOS console is also supported in these Regions.

FreeRTOS OTA Control Plane

| Region Name | Region | Endpoint | Protocol |
|--------------------------|------------|------------------------------|----------|
| US East (Ohio) | us-east-2 | iot.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | iot.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | iot.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | iot.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | iot.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | iot.ap-south-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|----------------------------------|-----------------|--|
| Asia Pacific (Seoul) | ap-northeast-2 | iot.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | iot.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | iot.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | iot.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | iot.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | iot.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | iot.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | iot.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | iot.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | iot.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | iot.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | iot.sa-east-1.amazonaws.com | HTTPS | |

FreeRTOS OTA Data Plane

| Region Name | Region | Endpoint | Protocol |
|-------------------------|---------------|--|-----------------|
| US East (Ohio) | us-east-2 | <i>prefix</i> .iot.us-east-2.amazonaws.com | MQTT |
| US East (N. Virginia) | us-east-1 | <i>prefix</i> .iot.us-east-1.amazonaws.com | MQTT |
| US West (N. California) | us-west-1 | <i>prefix</i> .iot.us-west-1.amazonaws.com | MQTT |

| Region Name | Region | Endpoint | Protocol |
|---------------------------|----------------|--|----------|
| US West (Oregon) | us-west-2 | <i>prefix.iot.us-west-2.amazonaws.com</i> | MQTT |
| Asia Pacific (Hong Kong) | ap-east-1 | <i>prefix.iot.ap-east-1.amazonaws.com</i> | MQTT |
| Asia Pacific (Mumbai) | ap-south-1 | <i>prefix.iot.ap-south-1.amazonaws.com</i> | MQTT |
| Asia Pacific (Seoul) | ap-northeast-2 | <i>prefix.iot.ap-northeast-2.amazonaws.com</i> | MQTT |
| Asia Pacific (Singapore) | ap-southeast-1 | <i>prefix.iot.ap-southeast-1.amazonaws.com</i> | MQTT |
| Asia Pacific (Sydney) | ap-southeast-2 | <i>prefix.iot.ap-southeast-2.amazonaws.com</i> | MQTT |
| Asia Pacific (Tokyo) | ap-northeast-1 | <i>prefix.iot.ap-northeast-1.amazonaws.com</i> | MQTT |
| Canada (Central) | ca-central-1 | <i>prefix.iot.ca-central-1.amazonaws.com</i> | MQTT |
| Europe (Frankfurt) | eu-central-1 | <i>prefix.iot.eu-central-1.amazonaws.com</i> | MQTT |
| Europe (Ireland) | eu-west-1 | <i>prefix.iot.eu-west-1.amazonaws.com</i> | MQTT |
| Europe (London) | eu-west-2 | <i>prefix.iot.eu-west-2.amazonaws.com</i> | MQTT |
| Europe (Paris) | eu-west-3 | <i>prefix.iot.eu-west-3.amazonaws.com</i> | MQTT |
| Europe (Stockholm) | eu-north-1 | <i>prefix.iot.eu-north-1.amazonaws.com</i> | MQTT |
| Middle East (Bahrain) | me-south-1 | <i>prefix.iot.me-south-1.amazonaws.com</i> | MQTT |
| South America (São Paulo) | sa-east-1 | <i>prefix.iot.sa-east-1.amazonaws.com</i> | MQTT |

Service quotas

FreeRTOS OTA Resource Quotas

| Resource | Default |
|-----------|---------|
| File size | 16MB |

FreeRTOS OTA Throttling

| API | Transactions Per Second |
|-----------------|-------------------------|
| CreateOTAUpdate | 10 TPS |
| DeleteOTAUpdate | 5 TPS |
| GetOTAUpdate | 15 TPS |
| ListOTAUpdates | 15 TPS |

Amazon FSx endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|------------|---|-------------------------|
| US East (Ohio) | us-east-2 | fsx.us-east-2.amazonaws.com fsx-fips.us-east-2.amazonaws.com fsx-fips.us-east-2.amazonaws.com | HTTPS HTTPS HTTPS |
| US East (N. Virginia) | us-east-1 | fsx.us-east-1.amazonaws.com fsx-fips.us-east-1.amazonaws.com fsx-fips.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS |
| US West (N. California) | us-west-1 | fsx.us-west-1.amazonaws.com fsx-fips.us-west-1.amazonaws.com fsx-fips.us-west-1.amazonaws.com | HTTPS HTTPS HTTPS |
| US West (Oregon) | us-west-2 | fsx.us-west-2.amazonaws.com fsx-fips.us-west-2.amazonaws.com fsx-fips.us-west-2.amazonaws.com | HTTPS HTTPS HTTPS |
| Africa (Cape Town) | af-south-1 | fsx.af-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | fsx.ap-east-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|-------------------------|--|
| Asia Pacific (Mumbai) | ap-south-1 | fsx.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | fsx.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | fsx.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | fsx.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | fsx.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | fsx.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | fsx.ca-central-1.amazonaws.com fsx-fips.ca-central-1.amazonaws.com fsx-fips.ca-central-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | fsx.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | fsx.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | fsx.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | fsx.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | fsx.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | fsx.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | fsx.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | fsx.sa-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|---|-------------------------|--|
| AWS GovCloud (US-East) | us-gov-east-1 | fsx.us-gov-east-1.amazonaws.com fsx-fips.us-gov-east-1.amazonaws.com fsx-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | fsx.us-gov-west-1.amazonaws.com fsx-fips.us-gov-west-1.amazonaws.com fsx-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|--|------------|
| Lustre Persistent HDD storage capacity (per file system) | Each supported Region: 102,000 | Yes |
| Lustre Persistent_1 file systems | Each supported Region: 100 | Yes |
| Lustre Persistent_1 storage capacity | Each supported Region: 100,800 | Yes |
| Lustre Persistent_2 file systems | Each supported Region: 100 | Yes |
| Lustre Persistent_2 storage capacity | Each supported Region: 64,800 | Yes |
| Lustre Scratch file systems | Each supported Region: 100 | Yes |
| Lustre Scratch storage capacity | Each supported Region: 100,800 | Yes |
| Lustre backups | Each supported Region: 500 | Yes |
| ONTAP SSD IOPS | Each supported Region: 1,000,000 | Yes |
| ONTAP SSD storage capacity | Each supported Region: 524,288 | Yes |
| ONTAP backups | Each supported Region: 10,000 | Yes |
| ONTAP file systems | Each supported Region: 100 | Yes |
| ONTAP throughput capacity | Each supported Region: 10,240 | Yes |
| OpenZFS SSD storage capacity | us-east-1: 262,144 us-east-2: 262,144 us-west-2: 262,144 | Yes |

| Name | Default | Adjustable |
|--|---|------------|
| | Each of the other supported Regions: 65,536 | |
| OpenZFS SSD storage capacity (per file system) | Each supported Region: 524,288 | Yes |
| OpenZFS backups | Each supported Region: 10,000 | Yes |
| OpenZFS disk IOPS | Each supported Region: 160,000 | Yes |
| OpenZFS file systems | Each supported Region: 100 | Yes |
| OpenZFS throughput capacity | Each supported Region: 10,240 | Yes |
| Windows HDD storage capacity | Each supported Region: 524,288 | Yes |
| Windows SSD storage capacity | Each supported Region: 524,288 | Yes |
| Windows backups | Each supported Region: 500 | Yes |
| Windows file systems | Each supported Region: 100 | Yes |
| Windows throughput capacity | Each supported Region: 10,240 | Yes |

For more information, see the following:

- [FSx for Lustre quotas](#) in the *Amazon FSx for Lustre User Guide*
- [FSx for ONTAP quotas](#) in the *FSx for ONTAP User Guide*
- [FSx for OpenZFS quotas](#) in the *FSx for OpenZFS User Guide*
- [FSx for Windows quotas](#) in the *Amazon FSx for Windows File Server User Guide*

Amazon GameLift endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|----------------|-----------|----------------------------------|----------|--|
| US East (Ohio) | us-east-2 | gamelift.us-east-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---------------------------------------|----------|--|
| US East (N. Virginia) | us-east-1 | gamelift.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | gamelift.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | gamelift.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | gamelift.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | gamelift.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | gamelift.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | gamelift.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | gamelift.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | gamelift.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | gamelift.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | gamelift.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | gamelift.eu-west-2.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | gamelift.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--------------------|----------------------------|------------|
| Aliases per region | Each supported Region: 100 | Yes |

| Name | Default | Adjustable |
|--|--------------------------------------|------------|
| Build capacity | Each supported Region: 100 Gigabytes | No |
| Builds per region | Each supported Region: 1,000 | Yes |
| Fleets per region | Each supported Region: 20 | Yes |
| Game server groups per region | Each supported Region: 20 | Yes |
| Game servers per game server group | Each supported Region: 1,000 | Yes |
| Game session log file size | Each supported Region: 200 Megabytes | No |
| Game session queues per region | Each supported Region: 20 | Yes |
| Instances per region | Each supported Region: 20 | Yes |
| Player sessions per game session | Each supported Region: 200 | No |
| Queue destinations per game session queue | Each supported Region: 10 | Yes |
| Scripts per region | Each supported Region: 1,000 | Yes |
| Server processes per instance (GameLift SDK v2) | Each supported Region: 1 | No |
| Server processes per instance (GameLift SDK v3 and up) | Each supported Region: 50 | No |

Amazon GameSparks endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|---------------------------------------|----------|--|
| US East (N. Virginia) | us-east-1 | gamesparks.us-east-1.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | ws.gamesparks.us-east-1.amazonaws.com | WSS | |

Service quotas

| Name | Default | Adjustable |
|----------------------------------|--------------------------------------|------------|
| Cloud code script size | Each supported Region: 8,000 | No |
| Concurrent active players | Each supported Region: 100 | Yes |
| Game configuration size | Each supported Region: 1 Megabytes | No |
| Game management calls per second | Each supported Region: 2 per second | Yes |
| Games per account | Each supported Region: 10 | No |
| Runtime calls per second | Each supported Region: 10 per second | Yes |
| Snapshots per game | Each supported Region: 1,000 | No |

Amazon S3 Glacier endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|-----------|---|-------------------------|--|
| US East (Ohio) | us-east-2 | glacier.us-east-2.amazonaws.com glacier-fips.us-east-2.amazonaws.com | HTTP and HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | glacier.us-east-1.amazonaws.com glacier-fips.us-east-1.amazonaws.com | HTTP and HTTPS HTTPS | |
| US West (N. California) | us-west-1 | glacier.us-west-1.amazonaws.com glacier-fips.us-west-1.amazonaws.com | HTTP and HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | glacier.us-west-2.amazonaws.com glacier-fips.us-west-2.amazonaws.com | HTTP and HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-------------------------|--|
| Africa (Cape Town) | af-south-1 | glacier.af-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | glacier.ap-east-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | glacier.ap-southeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | glacier.ap-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | glacier.ap-northeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | glacier.ap-northeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | glacier.ap-southeast-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | glacier.ap-southeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | glacier.ap-northeast-1.amazonaws.com | HTTP and HTTPS | |
| Canada (Central) | ca-central-1 | glacier.ca-central-1.amazonaws.com glacier-fips.ca-central-1.amazonaws.com | HTTP and HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | glacier.eu-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Ireland) | eu-west-1 | glacier.eu-west-1.amazonaws.com | HTTP and HTTPS | |
| Europe (London) | eu-west-2 | glacier.eu-west-2.amazonaws.com | HTTP and HTTPS | |
| Europe (Milan) | eu-south-1 | glacier.eu-south-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Paris) | eu-west-3 | glacier.eu-west-3.amazonaws.com | HTTP and HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|-------------------------|--|
| Europe (Stockholm) | eu-north-1 | glacier.eu-north-1.amazonaws.com | HTTP and HTTPS | |
| Middle East (Bahrain) | me-south-1 | glacier.me-south-1.amazonaws.com | HTTP and HTTPS | |
| South America (São Paulo) | sa-east-1 | glacier.sa-east-1.amazonaws.com | HTTP and HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | glacier.us-gov-east-1.amazonaws.com glacier.us-gov-east-1.amazonaws.com | HTTP and HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | glacier.us-gov-west-1.amazonaws.com glacier.us-gov-west-1.amazonaws.com | HTTP and HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|------------------------------------|---|------------|
| Archive size in GB. | Each supported Region: 40,000 Gigabytes | No |
| Archive size. | Each supported Region: 4 Megabytes | No |
| Multipart parts size. | Each supported Region: 4 Gigabytes | No |
| Number of multipart parts. | Each supported Region: 10,000 | No |
| Number of random restore requests. | Each supported Region: 35 | No |
| Number of vault tags. | Each supported Region: 50 | No |
| Provisioned capacity units | Each supported Region: 2 | No |
| Vaults per account | Each supported Region: 1,000 | No |

AWS Global Accelerator endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#).

Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | Amazon Route 53 Hosted Zone ID* |
|-------------------------|-----------|---------------------------------|----------|---------------------------------|
| US West (Oregon) Region | us-west-2 | globalaccelerator.amazonaws.com | HTTPS | Z2BJ6XQ5FK7U4H |

Service quotas

| Name | Default | Adjustable |
|--|---------------------------|---------------------|
| Accelerators per AWS account | Each supported Region: 20 | Yes |
| Endpoint groups per accelerator | Each supported Region: 42 | No |
| Endpoints per endpoint group - Application Load Balancers | Each supported Region: 10 | No |
| Endpoints per endpoint group - EC2 instances | Each supported Region: 10 | Yes |
| Endpoints per endpoint group - Elastic IP addresses | Each supported Region: 10 | Yes |
| Endpoints per endpoint group - Network Load Balancers | Each supported Region: 10 | No |
| Endpoints per endpoint group - VPC subnets | Each supported Region: 10 | Yes |
| Endpoints per endpoint group - more than one endpoint type | Each supported Region: 10 | No |
| Listeners per accelerator | Each supported Region: 10 | Yes |
| Port overrides per endpoint group | Each supported Region: 10 | Yes |
| Port ranges per listener | Each supported Region: 10 | No |
| Tags per accelerator | Each supported Region: 50 | No |

AWS Glue endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | glue.us-east-2.amazonaws.com glue-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | glue.us-east-1.amazonaws.com glue-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | glue.us-west-1.amazonaws.com glue-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | glue.us-west-2.amazonaws.com glue-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | glue.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | glue.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | glue.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | glue.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | glue.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | glue.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | glue.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | glue.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | glue.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | glue.eu-central-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| Europe (Ireland) | eu-west-1 | glue.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | glue.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | glue.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | glue.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | glue.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | glue.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | glue.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | glue.us-gov-east-1.amazonaws.com glue-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | glue.us-gov-west-1.amazonaws.com glue-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|-------------------------------------|------------|
| Concurrent machine learning task runs per transform | Each supported Region: 3 | Yes |
| Label file size | Each supported Region: 10 Megabytes | Yes |
| Max concurrent job runs per account | Each supported Region: 200 | Yes |
| Max concurrent job runs per job | Each supported Region: 1,000 | Yes |
| Max connection per account | Each supported Region: 1,000 | Yes |
| Max databases per account | Each supported Region: 10,000 | Yes |
| Max databases per catalog | Each supported Region: 10,000 | Yes |

| Name | Default | Adjustable |
|---|--|------------|
| Max development endpoint per account | Each supported Region: 25 | Yes |
| Max dpus per dev endpoint | Each supported Region: 50 | Yes |
| Max functions per account | Each supported Region: 100 | Yes |
| Max functions per database | Each supported Region: 100 | Yes |
| Max jobs per account | Each supported Region: 1,000 | Yes |
| Max jobs per trigger | Each supported Region: 50 | Yes |
| Max partitions per account | Each supported Region: 20,000,000 | Yes |
| Max partitions per table | Each supported Region: 10,000,000 | Yes |
| Max security configurations per account | Each supported Region: 250 | Yes |
| Max table versions per account | Each supported Region: 1,000,000 | Yes |
| Max table versions per table | Each supported Region: 100,000 | Yes |
| Max tables per account | Each supported Region: 1,000,000 | Yes |
| Max tables per database | Each supported Region: 200,000 | Yes |
| Max task dpus per account | us-east-1: 1,000 us-east-2: 1,000 us-west-2: 1,000 ap-northeast-1: 1,000 ap-southeast-2: 1,000 eu-west-1: 1,000 Each of the other supported Regions: 500 | Yes |
| Max triggers per account | Each supported Region: 1,000 | Yes |
| Number of Schema Registries. | Each supported Region: 10 | Yes |
| Number of Schema Versions. | Each supported Region: 1,000 | Yes |
| Number of crawlers per account | Each supported Region: 1,000 | Yes |

| Name | Default | Adjustable |
|--|----------------------------|------------|
| Number of crawlers running concurrently per account | Each supported Region: 150 | Yes |
| Number of machine learning transforms | Each supported Region: 100 | Yes |
| Number of metadata key value pairs per Schema Version. | Each supported Region: 10 | No |
| Number of workflows | Each supported Region: 250 | Yes |
| Total concurrent machine learning task runs for transforms per account | Each supported Region: 30 | Yes |

For more information, see [AWS Glue](#) in the *AWS GovCloud (US) User Guide*.

Amazon Managed Grafana endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--------------------------------------|----------|--|
| US East (Ohio) | us-east-2 | grafana.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | grafana.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | grafana.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | grafana.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | grafana.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | grafana.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | grafana.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | grafana.eu-central-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------|-----------|---------------------------------|----------|--|
| Europe (Ireland) | eu-west-1 | grafana.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | grafana.eu-west-2.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|--------------------------------------|------------|
| Number of workspaces | Each supported Region: 5 | No |
| Rate of AssociateLicense requests | Each supported Region: 1 per second | No |
| Rate of CreateWorkspace requests | Each supported Region: 1 per second | No |
| Rate of DeleteWorkspace requests | Each supported Region: 1 per second | No |
| Rate of DescribeWorkspace requests | Each supported Region: 5 per second | No |
| Rate of DescribeWorkspaceAuthentication requests | Each supported Region: 1 per second | No |
| Rate of DisassociateLicense requests | Each supported Region: 1 per second | No |
| Rate of ListPermissions requests | Each supported Region: 10 per second | No |
| Rate of ListWorkspaces requests | Each supported Region: 5 per second | No |
| Rate of UpdatePermissions requests | Each supported Region: 10 per second | No |
| Rate of UpdateWorkspace requests | Each supported Region: 10 per second | No |
| Rate of UpdateWorkspaceAuthentication requests | Each supported Region: 1 per second | No |

Your account has the following quotas related to workspaces.

| Name | Default | Adjustable | Adjustable quotas |
|------------|-------------------|------------|-------------------|
| Alerts | 100 per workspace | No | Not applicable |
| Dashboards | 100 per workspace | No | Not applicable |

| Name | Default | Adjustable | Adjustable quotas |
|--------------|-------------------|------------|-------------------|
| Data sources | 100 per workspace | No | Not applicable |
| Users | 500 per workspace | No | Not applicable |

AWS Glue DataBrew endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---------------------------------------|----------|--|
| US East (Ohio) | us-east-2 | databrew.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | databrew.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | databrew.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | databrew.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | databrew.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | databrew.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | databrew.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | databrew.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | databrew.ap-southeast-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---------------------------------------|----------|--|
| Asia Pacific (Sydney) | ap-southeast-2 | databrew.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | databrew.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | databrew.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | databrew.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | databrew.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | databrew.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | databrew.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | databrew.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | databrew.eu-north-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | databrew.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | databrew.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---------------------------------|----------------------------|------------|
| Concurrent jobs per AWS account | Each supported Region: 10 | Yes |
| Datasets per AWS account | Each supported Region: 100 | Yes |
| Jobs per AWS account | Each supported Region: 100 | Yes |
| Node capacity per AWS account | Each supported Region: 300 | Yes |
| Open projects per AWS account | Each supported Region: 10 | Yes |
| Projects per AWS account | Each supported Region: 100 | Yes |
| Recipes per AWS account | Each supported Region: 100 | Yes |

| Name | Default | Adjustable |
|---------------------------|----------------------------|------------|
| Rules per ruleset | Each supported Region: 100 | Yes |
| Rulesets per AWS account | Each supported Region: 100 | Yes |
| Rulesets per dataset | Each supported Region: 10 | Yes |
| Schedules per AWS account | Each supported Region: 10 | Yes |
| Versions per recipe | Each supported Region: 100 | Yes |

AWS Ground Station endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | groundstation.us-east-2.amazonaws.com groundstation-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | groundstation.us-east-1.amazonaws.com groundstation-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | groundstation.us-west-2.amazonaws.com groundstation-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | groundstation.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | groundstation.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | groundstation.ap-southeast-2.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | groundstation.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | groundstation.eu-west-1.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | groundstation.eu-north-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|------------|--|----------|--|
| Middle East (Bahrain) | me-south-1 | groundstation.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | groundstation.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|------------------------------------|------------------------------|------------|
| Config limit | Each supported Region: 100 | Yes |
| Contact Lead Time Maximum | Each supported Region: 7 | Yes |
| Dataflow endpoint group limit | Each supported Region: 100 | Yes |
| Dataflow endpoints per group limit | Each supported Region: 20 | Yes |
| Maximum Contact Duration | Each supported Region: 20 | Yes |
| Mission profile limit | Each supported Region: 100 | Yes |
| Scheduled Contacts Limit | Each supported Region: 100 | Yes |
| Scheduled Minutes Limit | Each supported Region: 1,000 | Yes |

Amazon GuardDuty endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|---|----------------|--|
| US East (Ohio) | us-east-2 | guardduty.us-east-2.amazonaws.com | HTTPS | |
| | | guardduty-fips.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | guardduty.us-east-1.amazonaws.com guardduty-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| US West (N. California) | us-west-1 | guardduty.us-west-1.amazonaws.com guardduty-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | guardduty.us-west-2.amazonaws.com guardduty-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | guardduty.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | guardduty.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | guardduty.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | guardduty.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | guardduty.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | guardduty.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | guardduty.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | guardduty.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | guardduty.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | guardduty.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | guardduty.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | guardduty.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | guardduty.eu-west-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|----------------|--|
| Europe (Milan) | eu-south-1 | guardduty.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | guardduty.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | guardduty.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | guardduty.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | guardduty.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | guardduty.us-gov-east-1.amazonaws.com guardduty.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | guardduty.us-gov-west-1.amazonaws.com guardduty.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--------------------------|------------------------------|------------|
| Detectors | Each supported Region: 1 | No |
| Filters | Each supported Region: 100 | Yes |
| Finding retention period | Each supported Region: 90 | No |
| Member accounts | Each supported Region: 5,000 | No |
| Threat intel sets | Each supported Region: 6 | Yes |
| Trusted IP sets | Each supported Region: 1 | No |

AWS Health endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|---|----------------|--|
| US East (Ohio) | us-east-2 | health.us-east-2.amazonaws.com health-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | health.us-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | health.us-gov-west-1.amazonaws.com health-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

For more information, see [Accessing the AWS Health API](#) in the *AWS Health User Guide*.

Amazon HealthLake endpoints and quotas

Regions and endpoints for Amazon HealthLake

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|------------------------------------|----------|--|
| US East (Ohio) | us-east-2 | healthlake.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | healthlake.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | healthlake.us-west-2.amazonaws.com | HTTPS | |

Throttling and quotas for Amazon HealthLake

The following table describes throttling limits for resource management within Amazon HealthLake for each customer account. For information about limits that can be changed, see [AWS Service Limits](#). For all operations, users will receive a `ThrottlingException` error message if throttling limits are exceeded.

A maximum quota of ten Data Stores are allowed per an account. For information about requesting a quota increase, see the console support center [to create a case](#).

| Description | Limit in Transactions per second(TPS) or requests per minute |
|---|--|
| CreateFHIRDatastore and DeleteFHIRDatastore | 1 request per minute |
| DescribeFHIRDatastore | 10 TPS |

| Description | Limit in Transactions per second(TPS) or requests per minute |
|---|--|
| ListFHIRDatastores | 10 TPS |
| CreateResource, ReadResource, DeleteResource | 20 TPS |
| UpdateResource | 100 TPS |
| GetCapabilities | 10 TPS |
| SearchWithGet and SearchWithPost | 100 TPS |
| StartFHIRImportJob and StartFHIRExportJob | 1 request per minute, only 1 job permitted at a time |
| DescribeFHIRImportJob, DescribeFHIRExportJob, ListFHIRImportJob, ListFHIReExportJob | 10 TPS |
| ListFHIRImportJobs, ListFHIReExportJobs | 10 TPS |
| TagResource, UntagResource, ListTagsforResource | 10 TPS |
| Maximum characters for a medical note within the DocumentReference ResourceType (CreateResource/UpdateResource) | 40,000 characters |

The following table lists the quotas for Import jobs.

| Description | Limit |
|--------------------------|-----------|
| Maximum import job size | 50 GB |
| Maximum import file size | 50 MB |
| Maximum number of files | 10,000 |
| Supported file extension | '.ndjson' |

Amazon Honeycode endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Amazon Honeycode has a single endpoint: honeycode.us-west-2.amazonaws.com (HTTPS).

AWS Identity and Access Management endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-------------------------|--|
| US East (Ohio) | us-east-2 | iam.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | iam.amazonaws.com iam-fips.amazonaws.com iam-fips.amazonaws.com | HTTPS HTTPS HTTPS | |
| US West (N. California) | us-west-1 | iam.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | iam.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | iam.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | iam.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | iam.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | iam.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | iam.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | iam.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|-------------------------|--|
| Asia Pacific (Singapore) | ap-southeast-1 | iam.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | iam.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | iam.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | iam.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | iam.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | iam.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | iam.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | iam.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | iam.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | iam.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | iam.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | iam.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | iam.us-gov.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | iam.us-gov.amazonaws.com iam.us-gov.amazonaws.com iam.us-gov.amazonaws.com | HTTPS HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|------------------------------|------------|
| Access keys per user | Each supported Region: 2 | No |
| Customer managed policies per account | Each supported Region: 1,500 | Yes |
| Groups per account | Each supported Region: 300 | Yes |
| IAM groups per user | Each supported Region: 10 | No |
| Identity providers per IAM SAML provider object | Each supported Region: 10 | No |
| Instance profiles per account | Each supported Region: 1,000 | Yes |
| Keys per SAML provider | Each supported Region: 10 | No |
| MFA devices per user | Each supported Region: 1 | No |
| Managed policies per group | Each supported Region: 10 | No |
| Managed policies per role | Each supported Region: 10 | Yes |
| Managed policies per user | Each supported Region: 10 | Yes |
| Managed policy length | Each supported Region: 6,144 | No |
| OpenId connect providers per account | Each supported Region: 100 | No |
| Role trust policy length | Each supported Region: 2,048 | Yes |
| Roles per account | Each supported Region: 1,000 | Yes |
| SAML providers per account | Each supported Region: 100 | No |
| SSH Public keys per user | Each supported Region: 5 | No |
| Server certificates per account | Each supported Region: 20 | Yes |
| Signing certificates per user | Each supported Region: 2 | No |
| Tags per role | Each supported Region: 50 | No |
| Tags per user | Each supported Region: 50 | No |
| Users per account | Each supported Region: 5,000 | No |
| Versions per managed policy | Each supported Region: 5 | No |

For more information about IAM quotas, see [IAM and AWS STS quotas](#) in the *IAM User Guide*.

IAM Access Analyzer endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | access-analyzer.us-east-2.amazonaws.com access-analyzer-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | access-analyzer.us-east-1.amazonaws.com access-analyzer-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | access-analyzer.us-west-1.amazonaws.com access-analyzer-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | access-analyzer.us-west-2.amazonaws.com access-analyzer-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | access-analyzer.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | access-analyzer.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | access-analyzer.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | access-analyzer.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | access-analyzer.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | access-analyzer.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | access-analyzer.ap-southeast-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------------|--|
| Asia Pacific (Sydney) | ap-southeast-2 | access-analyzer.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | access-analyzer.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | access-analyzer.ca-central-1.amazonaws.com access-analyzer-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | access-analyzer.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | access-analyzer.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | access-analyzer.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | access-analyzer.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | access-analyzer.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | access-analyzer.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | access-analyzer.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | access-analyzer.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | access-analyzer.us-gov-east-1.amazonaws.com access-analyzer.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | access-analyzer.us-gov-west-1.amazonaws.com access-analyzer.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---------------------------------------|------------------------------|------------|
| Access previews per analyzer per hour | Each supported Region: 1,000 | Yes |

| Name | Default | Adjustable |
|--|--|------------|
| Analyzers with an account zone of trust | Each supported Region: 1 | No |
| Analyzers with an organization zone of trust | Each supported Region: 5 | Yes |
| Archive rules per analyzer | Each supported Region: 100 | Yes |
| CloudTrail log files processed per policy generation | Each supported Region: 100,000 | No |
| Concurrent policy generations | Each supported Region: 1 | No |
| Policy generation CloudTrail data size | Each supported Region: 25 Gigabytes | No |
| Policy generation CloudTrail time range | Each supported Region: 90 | No |
| Policy generations per day | af-south-1: 5 ap-east-1: 5 eu-south-1: 5 me-south-1: 5 Each of the other supported Regions: 50 | No |

AWS Import/Export endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Endpoint | Protocol |
|----------------------------|----------|
| importexport.amazonaws.com | HTTPS |

AWS Systems Manager Incident Manager endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Incident Manager, a feature of AWS Systems Manager, isn't supported in all Systems Manager Regions. The following shows the Regions supported by Incident Manager.

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------|--|
| US East (Ohio) | us-east-2 | ssm-incidents.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | ssm-incidents.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | ssm-incidents.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | ssm-incidents.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | ssm-incidents.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | ssm-incidents.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | ssm-incidents.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | ssm-incidents.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | ssm-incidents.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | ssm-incidents.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | ssm-incidents.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | ssm-incidents.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | ssm-incidents.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | ssm-incidents.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | ssm-incidents.eu-north-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---------------------------------------|-----------------|--|
| South America (São Paulo) | sa-east-1 | ssm-incidents.sa-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol |
|---------------------------|----------------|---|-----------------|
| US East (Ohio) | us-east-2 | ssm-contacts.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | ssm-contacts.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | ssm-contacts.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | ssm-contacts.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | ssm-contacts.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | ssm-contacts.ap-northeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | ssm-contacts.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | ssm-contacts.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | ssm-contacts.ap-southeast-2.amazonaws.com | HTTPS |
| Canada (Central) | ca-central-1 | ssm-contacts.ca-central-1.amazonaws.com | HTTPS |
| Europe (Frankfurt) | eu-central-1 | ssm-contacts.eu-central-1.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | ssm-contacts.eu-west-1.amazonaws.com | HTTPS |
| Europe (London) | eu-west-2 | ssm-contacts.eu-west-2.amazonaws.com | HTTPS |
| Europe (Paris) | eu-west-3 | ssm-contacts.eu-west-3.amazonaws.com | HTTPS |
| Europe (Stockholm) | eu-north-1 | ssm-contacts.eu-north-1.amazonaws.com | HTTPS |
| South America (São Paulo) | sa-east-1 | ssm-contacts.sa-east-1.amazonaws.com | HTTPS |

Service quotas

Incident Manager incidents

| Name | Default | Adjustable |
|--|------------------------------|------------|
| All other operations requests per second | Each supported Region: 10 | Yes |
| CreateReplicationSet requests per second | Each supported Region: 1 | Yes |
| CreateResponsePlan requests per second | Each supported Region: 5 | Yes |
| CreateTimelineEvent requests per second | Each supported Region: 5 | Yes |
| DeleteIncidentRecord requests per second | Each supported Region: 5 | Yes |
| DeleteReplicationSet requests per second | Each supported Region: 1 | Yes |
| DeleteResourcePolicy requests per second | Each supported Region: 5 | Yes |
| DeleteResponsePlan requests per second | Each supported Region: 5 | Yes |
| DeleteTimelineEvent requests per second | Each supported Region: 5 | Yes |
| Incidents per response plan per month | Each supported Region: 200 | Yes |
| PutResourcePolicy requests per second | Each supported Region: 5 | Yes |
| Regions per replication set | Each supported Region: 3 | No |
| Related items per incident | Each supported Region: 50 | Yes |
| Replication sets per account | Each supported Region: 1 | No |
| StartIncident requests per second | Each supported Region: 5 | Yes |
| TagResource requests per second | Each supported Region: 5 | Yes |
| Timeline events per incident | Each supported Region: 1,000 | Yes |
| UntagResource requests per second | Each supported Region: 5 | Yes |
| UpdateDeleteProtection requests per second | Each supported Region: 1 | Yes |
| UpdateIncidentRecord requests per second | Each supported Region: 5 | Yes |
| UpdateRelatedItems requests per second | Each supported Region: 5 | Yes |
| UpdateReplicationSet requests per second | Each supported Region: 1 | Yes |
| UpdateResponsePlan requests per second | Each supported Region: 5 | Yes |
| UpdateTimelineEvent requests per second | Each supported Region: 5 | Yes |

Incident Manager contacts

| Name | Default | Adjustable |
|--|------------------------------|------------|
| AcceptPage API throttle quota | Each supported Region: 20 | Yes |
| All other operations API throttle quota | Each supported Region: 1 | Yes |
| Contact channels per stage | Each supported Region: 10 | Yes |
| Contacts per account | Each supported Region: 1,000 | Yes |
| DescribeEngagement API throttle quota | Each supported Region: 5 | Yes |
| DescribePage API throttle quota | Each supported Region: 5 | Yes |
| Email engagement throttle quota | Each supported Region: 0.05 | No |
| ListEngagements API throttle quota | Each supported Region: 2 | Yes |
| ListPageReceipts API throttle quota | Each supported Region: 1 | Yes |
| ListPagesByContact API throttle quota | Each supported Region: 1 | Yes |
| ListPagesByEngagement API throttle quota | Each supported Region: 2 | Yes |
| SMS engagement throttle quota | Each supported Region: 0.05 | No |
| Stages per plan | Each supported Region: 5 | No |
| StartEngagement API throttle quota | Each supported Region: 20 | Yes |
| StopEngagement API throttle quota | Each supported Region: 10 | Yes |
| Voice engagement throttle quota | Each supported Region: 0.01 | No |

The unit for the API throttle quotas is requests per second.

Amazon Inspector endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|----------------|-----------|-----------------------------------|----------|--|
| US East (Ohio) | us-east-2 | inspector.us-east-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|----------------|--|----------|--|
| | | inspector-fips.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | inspector.us-east-1.amazonaws.com | HTTPS | |
| | | inspector-fips.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | inspector.us-west-1.amazonaws.com | HTTPS | |
| | | inspector-fips.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | inspector.us-west-2.amazonaws.com | HTTPS | |
| | | inspector-fips.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | inspector.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | inspector.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | inspector.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | inspector.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | inspector.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | inspector.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | inspector.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | inspector.eu-north-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | inspector.us-gov-east-1.amazonaws.com | HTTPS | |
| | | inspector-fips.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | inspector.us-gov-west-1.amazonaws.com | HTTPS | |
| | | inspector-fips.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--------------------|---------------------------|------------|
| Assessment Targets | Each supported Region: 50 | Yes |

| Name | Default | Adjustable |
|----------------------------------|-------------------------------|------------|
| Assessment Templates | Each supported Region: 500 | Yes |
| Assessment runs | Each supported Region: 50,000 | Yes |
| Instances in running assessments | Each supported Region: 500 | Yes |

For more information, see the [Amazon Inspector quotas](#) in the *Amazon Inspector User Guide*.

AWS IoT 1-Click endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#).

Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

AWS IoT 1-Click Projects API

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|----------------|---|----------|--|
| US East (Ohio) | us-east-2 | projects.iot1click.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | projects.iot1click.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | projects.iot1click.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | projects.iot1click.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | projects.iot1click.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | projects.iot1click.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | projects.iot1click.eu-west-2.amazonaws.com | HTTPS | |

For more information, see the [AWS IoT 1-Click Projects API Reference](#).

AWS IoT 1-Click Devices API

| Region Name | Region | Endpoint | Protocol | |
|------------------|-----------|---|----------|--|
| US West (Oregon) | us-west-2 | devices.iot1click.us-west-2.amazonaws.com | HTTPS | |

For more information, see the [AWS IoT 1-Click Devices API Reference](#).

Service quotas

| Name | Default | Adjustable |
|---|---------------------------|------------|
| AssociateDeviceWithPlacement API TPS | Each supported Region: 10 | No |
| CreatePlacement API TPS | Each supported Region: 10 | No |
| CreateProject API TPS | Each supported Region: 10 | No |
| DeletePlacement API TPS | Each supported Region: 10 | No |
| DeleteProject API TPS | Each supported Region: 10 | No |
| DescribePlacement API TPS | Each supported Region: 10 | No |
| DescribeProject API TPS | Each supported Region: 10 | No |
| DisassociateDeviceFromPlacement API TPS | Each supported Region: 10 | No |
| GetDevicesInPlacement API TPS | Each supported Region: 10 | No |
| ListPlacements API TPS | Each supported Region: 10 | No |
| ListProjects API TPS | Each supported Region: 10 | No |
| ListTagsForResource API TPS | Each supported Region: 10 | No |
| TagResource API TPS | Each supported Region: 10 | No |
| UntagResource API TPS | Each supported Region: 10 | No |
| UpdatePlacement API TPS | Each supported Region: 10 | No |
| UpdateProject API TPS | Each supported Region: 10 | No |

AWS IoT Analytics endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|----------------|---|----------|--|
| US East (Ohio) | us-east-2 | iotanalytics.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | iotanalytics.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | iotanalytics.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | iotanalytics.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | iotanalytics.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | iotanalytics.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | iotanalytics.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | iotanalytics.eu-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|----------------------------|------------|
| Activities per pipeline | Each supported Region: 25 | No |
| Batch size of BatchPutMessage messages | Each supported Region: 100 | No |
| Channels per account | Each supported Region: 50 | Yes |
| Concurrent container dataset runs | Each supported Region: 20 | No |
| Concurrent data set content generation | Each supported Region: 2 | No |
| Container datasets triggered per SQL data set | Each supported Region: 10 | No |
| Data sets per account | Each supported Region: 100 | Yes |
| Data stores per account | Each supported Region: 25 | Yes |
| Depth of Parquet SchemaDefinition column | Each supported Region: 100 | Yes |
| Minimum data set refresh interval | Each supported Region: 15 | Yes |
| Number of Parquet SchemaDefinition columns | Each supported Region: 100 | Yes |

| Name | Default | Adjustable |
|--|--------------------------------------|------------|
| Number of StartPipelineReprocessing requests | Each supported Region: 1,000 | Yes |
| Number of partitions in a data store | Each supported Region: 100,000 | Yes |
| Pipelines per account | Each supported Region: 100 | Yes |
| Rate of BatchPutMessage messages | Each supported Region: 100,000 | Yes |
| Rate of CreateDatasetContent requests | Each supported Region: 1 | Yes |
| Rate of RunPipelineActivity requests | Each supported Region: 1 | Yes |
| Rate of SampleChannelData requests | Each supported Region: 1 | Yes |
| Size of BatchPutMessage messages | Each supported Region: 128 Kilobytes | No |

For more information, see [AWS IoT Analytics quotas](#) in the *AWS IoT Analytics User Guide*.

AWS IoT Core endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

The following sections describe the service endpoints for AWS IoT Core.

Note

You can use these endpoints to perform the operations in the [AWS IoT API Reference](#). The endpoints in the following sections are different from the device endpoints, which provide devices an MQTT publish/subscribe interface and a subset of the API operations. For more information about the data, credential access, and job management endpoints used by devices, see [AWS IoT device endpoints](#).

For information about connecting to and using the AWS IoT endpoints, see [Connecting devices to AWS IoT](#) in the *AWS IoT Developer Guide*.

Topics

- [AWS IoT Core - control plane endpoints \(p. 310\)](#)
- [AWS IoT Core - data plane endpoints \(p. 311\)](#)
- [AWS IoT Device Management - jobs data endpoints \(p. 313\)](#)
- [AWS IoT Device Management - secure tunneling endpoints \(p. 315\)](#)
- [AWS IoT Core for LoRaWAN API endpoints \(p. 316\)](#)
- [AWS IoT FIPS endpoints \(p. 318\)](#)

AWS IoT Core - control plane endpoints

The following table contains AWS Region-specific endpoints for AWS IoT Core - control plane operations. For information about the operations supported by the AWS IoT Core - control plane endpoints, see [AWS IoT operations](#) in the [AWS IoT API Reference](#).

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | iot.us-east-2.amazonaws.com iot-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | iot.us-east-1.amazonaws.com iot-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | iot.us-west-1.amazonaws.com iot-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | iot.us-west-2.amazonaws.com iot-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | iot.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | iot.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | iot.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | iot.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | iot.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | iot.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | iot.ca-central-1.amazonaws.com iot-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | iot.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | iot.eu-west-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| Europe (London) | eu-west-2 | iot.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | iot.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | iot.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | iot.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | iot.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | iot.us-gov-east-1.amazonaws.com iot-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | iot.us-gov-west-1.amazonaws.com iot-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

AWS IoT Core - data plane endpoints

The AWS IoT Core - data plane endpoints are specific to each AWS account and AWS Region. To find the AWS IoT Core - data plane endpoint for your AWS account and AWS Region, use the [describe-endpoint](#) CLI command shown here, or the [DescribeEndpoint](#) REST API.

```
aws iot describe-endpoint --endpoint-type iot:Data-ATS
```

This command returns your data plane API endpoint in the following format:

```
account-specific-prefix.iot.aws-region.amazonaws.com
```

For information about the actions supported by the AWS IoT Core - data plane endpoints, see [AWS IoT data plane operations](#) in the [AWS IoT API Reference](#).

The following table contains generic representations of the AWS account-specific endpoints for each AWS Region that AWS IoT Core supports. In the **Endpoint** column, the **account-specific-prefix** from your Account-specific endpoint replaces data shown in the generic endpoint representation.

| Region Name | Region | Endpoint | Protocol | |
|----------------|-----------|---|----------------|--|
| US East (Ohio) | us-east-2 | data-ats.iot.us-east-2.amazonaws.com data.iot-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| US East (N. Virginia) | us-east-1 | data-ats.iot.us-east-1.amazonaws.com data.iot-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | data-ats.iot.us-west-1.amazonaws.com data.iot-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | data-ats.iot.us-west-2.amazonaws.com data.iot-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | data-ats.iot.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | data-ats.iot.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | data-ats.iot.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | data-ats.iot.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | data-ats.iot.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | data-ats.iot.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | data-ats.iot.ca-central-1.amazonaws.com data.iot-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | data-ats.iot.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | data-ats.iot.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | data-ats.iot.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | data-ats.iot.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | data-ats.iot.eu-north-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| Middle East (Bahrain) | me-south-1 | data-ats.iot.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | data-ats.iot.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | data-ats.iot.us-gov-east-1.amazonaws.com data.iot-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | data-ats.iot.us-gov-west-1.amazonaws.com data.iot-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

AWS IoT Device Management - jobs data endpoints

The AWS IoT Device Management - jobs data endpoints are specific to each AWS account and AWS Region. To find the AWS IoT Device Management - jobs data endpoint for your AWS account and AWS Region, use the [describe-endpoint](#) CLI command shown here, or the [DescribeEndpoint](#) REST API.

```
aws iot describe-endpoint --endpoint-type iot:Jobs
```

This command returns your Jobs data plane API endpoint in the following format:

account-specific-prefix.jobs.iot.*aws-region*.amazonaws.com.

For information about the actions supported by the AWS IoT Device Management - jobs data endpoints, see [AWS IoT jobs data plane operations](#) in the [AWS IoT API Reference](#).

The following table contains AWS Region-specific endpoints that AWS IoT Core supports for job data operations. In the **Endpoint** column, the *account-specific-prefix* from your account-specific endpoint replaces the *prefix* shown in the generic endpoint representation.

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|-----------|---|----------|--|
| US East (Ohio) | us-east-2 | <i>prefix</i> .jobs.iot.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | <i>prefix</i> .jobs.iot.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | <i>prefix</i> .jobs.iot.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | <i>prefix</i> .jobs.iot.us-west-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| Asia Pacific (Hong Kong) | ap-east-1 | <i>prefix</i> .jobs.iot.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | <i>prefix</i> .jobs.iot.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | <i>prefix</i> .jobs.iot.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | <i>prefix</i> .jobs.iot.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | <i>prefix</i> .jobs.iot.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | <i>prefix</i> .jobs.iot.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | <i>prefix</i> .jobs.iot.ca-central-1.amazonaws.com | HTTPS | |
| China (Beijing) | cn-north-1 | <i>prefix</i> .jobs.iot.cn-north-1.amazonaws.com.cn | HTTPS | |
| China (Ningxia) | cn-northwest-1 | <i>prefix</i> .jobs.iot.cn-northwest-1.amazonaws.com.cn | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | <i>prefix</i> .jobs.iot.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | <i>prefix</i> .jobs.iot.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | <i>prefix</i> .jobs.iot.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | <i>prefix</i> .jobs.iot.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | <i>prefix</i> .jobs.iot.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | <i>prefix</i> .jobs.iot.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | <i>prefix</i> .jobs.iot.sa-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|---|----------|--|
| AWS GovCloud (US-West) | us-gov-west-1 | <i>prefix</i> .jobs.iot.us-gov-west-1.amazonaws.com | HTTPS | |

AWS IoT Device Management - secure tunneling endpoints

The following table contains AWS Region-specific endpoints that AWS IoT Core supports for secure tunneling operations. For more information, see [AWS IoT secure tunneling operations](#) in the *AWS IoT API Reference*.

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | api.tunneling.iot.us-east-2.amazonaws.com api.tunneling.iot-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | api.tunneling.iot.us-east-1.amazonaws.com api.tunneling.iot-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | api.tunneling.iot.us-west-1.amazonaws.com api.tunneling.iot-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | api.tunneling.iot.us-west-2.amazonaws.com api.tunneling.iot-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | api.tunneling.iot.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | api.tunneling.iot.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | api.tunneling.iot.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | api.tunneling.iot.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | api.tunneling.iot.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | api.tunneling.iot.ap-northeast-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|-----------------|--|
| Canada (Central) | ca-central-1 | api.tunneling.iot.ca-central-1.amazonaws.com api.tunneling.iot-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | api.tunneling.iot.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | api.tunneling.iot.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | api.tunneling.iot.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | api.tunneling.iot.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | api.tunneling.iot.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | api.tunneling.iot.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | api.tunneling.iot.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | api.tunneling.iot.us-gov-east-1.amazonaws.com api.tunneling.iot-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | api.tunneling.iot.us-gov-west-1.amazonaws.com api.tunneling.iot-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

AWS IoT Core for LoRaWAN API endpoints

AWS IoT Core for LoRaWAN provides control plane and data plane endpoints for its API.

AWS IoT Core for LoRaWAN control plane API endpoints

The following table contains AWS Region-specific endpoints that AWS IoT Core for LoRaWAN supports for operations to manage LoRaWAN gateways and devices.

| Region Name | Region | Endpoint | Protocol |
|-----------------------|---------------|---|-----------------|
| US East (N. Virginia) | us-east-1 | api.iotwireless.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | api.iotwireless.us-west-2.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol |
|-----------------------|----------------|--|----------|
| Europe (Ireland) | eu-west-1 | api.iotwireless.eu-west-1.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | api.iotwireless.ap-northeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | api.iotwireless.ap-southeast-2.amazonaws.com | HTTPS |

AWS IoT Core for LoRaWAN data plane API endpoints

The data plane API endpoints are specific to each AWS Account and Region. To find the data plane API endpoint for your AWS Account and Region, use the [get-service-endpoint](#) CLI command shown here, or the [GetServiceEndpoint](#) REST API.

```
aws iotwireless get-service-endpoint
```

This command returns information about:

- The service type for which you want to get endpoint information about, which can be **CUPS** or **LNS**.
- The CUPS or LNS server trust certificate depending on the endpoint specified.
- Your data plane API endpoint in the following format:

```
account-specific-prefix.service.lorawan.aws-region.amazonaws.com
```

where *service* can be **cups** or **lns**.

The following table contains generic representations of the AWS Account-specific LNS endpoints for each Region that AWS IoT Core supports. In the **Endpoint** column, the *account-specific-prefix* from your Account-specific endpoint replaces *prefix* shown in the generic endpoint representation.

LNS endpoints

| Region Name | Region | Endpoint | Protocol |
|-----------------------|----------------|--|----------|
| US East (N. Virginia) | us-east-1 | <i>prefix.lns.lorawan.us-east-1.amazonaws.com</i> | WSS |
| US West (Oregon) | us-west-2 | <i>prefix.lns.lorawan.us-west-2.amazonaws.com</i> | WSS |
| Europe (Ireland) | eu-west-1 | <i>prefix.lns.lorawan.eu-west-1.amazonaws.com</i> | WSS |
| Asia Pacific (Tokyo) | ap-northeast-1 | <i>prefix.lns.lorawan.ap-northeast-1.amazonaws.com</i> | WSS |
| Asia Pacific (Sydney) | ap-southeast-2 | <i>prefix.lns.lorawan.ap-southeast-2.amazonaws.com</i> | WSS |

The following table contains generic representations of the AWS Account-specific CUPS endpoints for each Region that AWS IoT Core supports. In the **Endpoint** column, the *account-specific-prefix* from your Account-specific endpoint replaces *prefix* shown in the generic endpoint representation.

CUPS endpoints

| Region Name | Region | Endpoint | Protocol |
|-----------------------|----------------|--|----------|
| US East (N. Virginia) | us-east-1 | <i>prefix</i> .cups.lorawan.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | <i>prefix</i> .cups.lorawan.us-west-2.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | <i>prefix</i> .cups.lorawan.eu-west-1.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | <i>prefix</i> .cups.lorawan.ap-northeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | <i>prefix</i> .cups.lorawan.ap-southeast-2.amazonaws.com | HTTPS |

AWS IoT FIPS endpoints

AWS IoT provides endpoints that support the [Federal Information Processing Standard \(FIPS\) 140-2](#). Choose the appropriate FIPS compliant endpoint to access AWS IoT features in your AWS Region from [FIPS Endpoints by Service](#). For more information about the FIPs endpoints provided by AWS IoT, see [Connecting to AWS IoT FIPS endpoints](#).

Service quotas

Contents

- [AWS IoT Core rules engine limits and quotas \(p. 318\)](#)
- [AWS IoT Core API throttling limits \(p. 321\)](#)
- [AWS IoT Core for LoRaWAN limits and quotas \(p. 337\)](#)
- [AWS IoT Core Device Shadow service limits and quotas \(p. 346\)](#)
- [AWS IoT Core Fleet Provisioning limits and quotas \(p. 348\)](#)
- [AWS IoT Core message broker and protocol limits and quotas \(p. 350\)](#)
- [AWS IoT Core protocol-related limits and quotas \(p. 357\)](#)
- [AWS IoT Core credential provider limits and quotas \(p. 357\)](#)
- [AWS IoT Core security and identity limits and quotas \(p. 358\)](#)
- [MQTT-based File Delivery \(p. 361\)](#)
- [AWS IoT Core Device Advisor limits and quotas \(p. 362\)](#)

Note

The limits and quotas for these AWS IoT Device Management features: AWS IoT registry, AWS IoT Fleet Indexing, AWS IoT Jobs, AWS IoT Secure Tunneling, and Fleet Hub for AWS IoT Device Management can be found in [AWS IoT Device Management Service quotas \(p. 376\)](#).

AWS IoT Core rules engine limits and quotas

This section describes the limits and quotas of the AWS IoT Core rules engine.

AWS IoT Core rules engine

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|---|--|---------------|--------------------------------------|------------|
| Maximum number of actions per rule | The maximum number of entries in the rule's actions property. | 10 | 10 | No |
| Maximum number of rules per AWS account | The maximum number of rules that can be defined in a single AWS account. | 1000 | 1000 | Yes |
| Rule evaluations per second per AWS account | The maximum number of rules that can be evaluated per second per AWS account. This quota includes rule evaluations that result from inbound Basic Ingest messages. | 20000 | 2000 | Yes |
| Rule size | The maximum size that a rule document definition can contain, measured by number of UTF-8 encoded characters, including white spaces. | 256 Kilobytes | 256 Kilobytes | No |

*Select AWS Regions: Europe (Stockholm), Middle East (Bahrain), Europe (Paris), Asia Pacific (Hong Kong), AWS GovCloud (US-East), AWS GovCloud (US-West), US West (N. California), Canada (Central), China (Ningxia)

AWS IoT Core rules engine HTTP actions limits and quotas

AWS IoT Core HTTP action

| Limit display name | Description | Default value | Adjustable |
|--|---|---------------|------------|
| HTTP Action: Maximum length of an endpoint URL | Maximum length of an endpoint URL for topic rule HTTP Action. | 2 Kilobytes | No |

| Limit display name | Description | Default value | Adjustable |
|--|--|-------------------|------------|
| HTTP Action: Maximum number of headers per action | Maximum number of headers per HTTP action. When specifying the list of headers to include in the HTTP request, it must contain a header key and a header value. To learn more, see https://docs.aws.amazon.com/iot/latest/developerguide/https-rule-action.html . | 100 | No |
| HTTP Action: Maximum size of a header key | Maximum size of a header key for topic rule HTTP action. The header file for a HTTP request includes this header key and a header value. | 256 Bytes | No |
| HTTP Action: Maximum topic rule destinations per AWS account | Maximum number of topic rule destinations per AWS account for topic rule HTTPS action. You must confirm and enable HTTPS endpoints before the rules engine can use them. For more information, see https://docs.aws.amazon.com/iot/latest/developerguide/rule-destination.html . | 1000 | No |
| HTTP Action: Request timeout | Request timeout for topic rule HTTP action. The AWS IoT rules engine retries the HTTPS action until the total time to complete a request exceeds the timeout quota. | 3000 Milliseconds | No |

| Resource | Value | Adjustable |
|---------------------------------|-----------|------------|
| TCP ports used for HTTP actions | 443, 8443 | No |

AWS IoT Core rules engine Apache Kafka actions limits and quotas

| Resource | Limits |
|--|-----------|
| Bootstrap server ports | 9000-9100 |
| Kerberos key distribution center (KDC) | 88 |

AWS IoT Core rules engine VPC actions limits and quotas

| Resource | Quota |
|------------------------------------|--------------------------|
| Maximum number of VPC destinations | 5 per account per Region |

AWS IoT Core API throttling limits

This table describes the maximum number of transactions per second (TPS) that can be made to each of these AWS IoT Core API actions.

AWS IoT Core API rate limits

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|-----------------------------------|---|---------------|--------------------------------------|------------|
| AcceptCertificateTransfer API TPS | The maximum number of transactions per second (TPS) that can be made for the AcceptCertificateTransfer API. | 10 | 10 | Yes |
| AttachPolicy API TPS | The maximum number of transactions per second (TPS) that can be made for the AttachPolicy API. | 15 | 15 | Yes |
| AttachPrincipalPolicy API TPS | The maximum number of transactions per second (TPS) that can be made for the AttachPrincipalPolicy API. | 15 | 15 | Yes |
| CancelCertificateTransfer API TPS | The maximum number of transactions per second (TPS) | 10 | 10 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|--|---|---------------|--------------------------------------|------------|
| | that can be made for the CancelCertificateTransfer API. | | | |
| ClearDefaultAuthorizer API TPS | The maximum number of transactions per second (TPS) that can be made for the ClearDefaultAuthorizer API. | 10 | 10 | Yes |
| CreateAuthorizer API TPS | The maximum number of transactions per second (TPS) that can be made for the CreateAuthorizer API. | 10 | 10 | No |
| CreateCertificateFromCsr API TPS | The maximum number of transactions per second (TPS) that can be made for the CreateCertificateFromCsr API. | 15 | 15 | Yes |
| CreateDomainConfiguration API TPS | The maximum number of transactions per second (TPS) that can be made for the CreateDomainConfiguration API. | 1 | 1 | No |
| CreateKeysAndCertificate API TPS | The maximum number of transactions per second (TPS) that can be made for the CreateKeysAndCertificate API. | 10 | 10 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|---|---|---------------|--------------------------------------|------------|
| CreatePolicy API TPS | The maximum number of transactions per second (TPS) that can be made for the CreatePolicy API. | 10 | 10 | Yes |
| CreatePolicyVersion API TPS | The maximum number of transactions per second (TPS) that can be made for the CreatePolicyVersion API. | 10 | 10 | Yes |
| CreateProvisioningClaim API TPS | The maximum number of transactions per second (TPS) that can be made for the CreateProvisioningClaim API. | 10 | 10 | Yes |
| CreateProvisioningTemplate API TPS | The maximum number of transactions per second (TPS) that can be made for the CreateProvisioningTemplate API. | 10 | 10 | No |
| CreateProvisioningTemplateVersion API TPS | The maximum number of transactions per second (TPS) that can be made for the CreateProvisioningTemplateVersion API. | 10 | 10 | No |
| CreateRoleAlias API TPS | The maximum number of transactions per second (TPS) that can be made for the CreateRoleAlias API. | 10 | 10 | No |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|--|--|---------------|--------------------------------------|------------|
| CreateTopicRule API TPS | The maximum number of transactions per second (TPS) that can be made for the CreateTopicRule API. | 5 | 5 | No |
| CreateTopicRuleDestination API TPS | The maximum number of transactions per second (TPS) that can be made for the CreateTopicRuleDestination API. | 5 | 5 | No |
| DeleteAuthorizer API TPS | The maximum number of transactions per second (TPS) that can be made for the DeleteAuthorizer API. | 10 | 10 | No |
| DeleteCACertificate API TPS | The maximum number of transactions per second (TPS) that can be made for the DeleteCACertificate API. | 10 | 10 | Yes |
| DeleteCertificate API TPS | The maximum number of transactions per second (TPS) that can be made for the DeleteCertificate API. | 10 | 10 | Yes |
| DeleteDomainConfiguration API TPS | The maximum number of transactions per second (TPS) that can be made for the DeleteDomainConfiguration API. | 10 | 10 | No |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|---|---|---------------|--------------------------------------|------------|
| DeletePolicy API TPS | The maximum number of transactions per second (TPS) that can be made for the DeletePolicy API. | 10 | 10 | Yes |
| DeletePolicyVersion API TPS | The maximum number of transactions per second (TPS) that can be made for the DeletePolicyVersion API. | 10 | 10 | Yes |
| DeleteProvisioningTemplate API TPS | The maximum number of transactions per second (TPS) that can be made for the DeleteProvisioningTemplate API. | 10 | 10 | Yes |
| DeleteProvisioningTemplateVersion API TPS | The maximum number of transactions per second (TPS) that can be made for the DeleteProvisioningTemplateVersion API. | 10 | 10 | No |
| DeleteRegistrationCode API TPS | The maximum number of transactions per second (TPS) that can be made for the DeleteRegistrationCode API. | 10 | 10 | Yes |
| DeleteRoleAlias API TPS | The maximum number of transactions per second (TPS) that can be made for the DeleteRoleAlias API. | 10 | 10 | No |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|--|--|---------------|--------------------------------------|------------|
| DeleteTopicRule API TPS | The maximum number of transactions per second (TPS) that can be made for the DeleteTopicRule API. | 20 | 5 | No |
| DeleteTopicRuleDestination API TPS | The maximum number of transactions per second (TPS) that can be made for the DeleteTopicRuleDestination API. | 5 | 5 | No |
| DeleteV2LoggingLevel API TPS | The maximum number of transactions per second (TPS) that can be made for the DeleteV2LoggingLevel API. | 2 | 2 | No |
| DescribeAuthorizer API TPS | The maximum number of transactions per second (TPS) that can be made for the DescribeAuthorizer API. | 10 | 10 | Yes |
| DescribeCACertificate API TPS | The maximum number of transactions per second (TPS) that can be made for the DescribeCACertificate API. | 10 | 10 | Yes |
| DescribeCertificate API TPS | The maximum number of transactions per second (TPS) that can be made for the DescribeCertificate API. | 10 | 10 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|---|--|---------------|--------------------------------------|------------|
| DescribeCertificateTag API TPS | The maximum number of transactions per second (TPS) that can be made for the <code>DescribeCertificateTag</code> API. | 10 | 10 | Yes |
| DescribeDefaultAuthorizer API TPS | The maximum number of transactions per second (TPS) that can be made for the <code>DescribeDefaultAuthorizer</code> API. | 10 | 10 | Yes |
| DescribeDomainConfiguration API TPS | The maximum number of transactions per second (TPS) that can be made for the <code>DescribeDomainConfiguration</code> API. | 10 | 10 | Yes |
| DescribeEndpoint API TPS | The maximum number of transactions per second (TPS) that can be made for the <code>DescribeEndpoint</code> API. | 10 | 10 | No |
| DescribeProvisioningTemplate API TPS | The maximum number of transactions per second (TPS) that can be made for the <code>DescribeProvisioningTemplate</code> API. | 10 | 10 | Yes |
| DescribeProvisioningTemplateVersion API TPS | The maximum number of transactions per second (TPS) that can be made for the <code>DescribeProvisioningTemplateVersion</code> API. | 10 | 10 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|---|--|---------------|--------------------------------------|------------|
| DescribeRoleAlias API TPS | The maximum number of transactions per second (TPS) that can be made for the <code>DescribeRoleAlias</code> API. | 10 | 10 | Yes |
| DetachPolicy API TPS | The maximum number of transactions per second (TPS) that can be made for the <code>DetachPolicy</code> API. | 15 | 15 | Yes |
| DetachPrincipalPolicy API TPS | The maximum number of transactions per second (TPS) that can be made for the <code>DetachPrincipalPolicy</code> API. | 15 | 15 | Yes |
| DisableTopicRule API TPS | The maximum number of transactions per second (TPS) that can be made for the <code>DisableTopicRule</code> API. | 5 | 5 | No |
| EnableTopicRule API TPS | The maximum number of transactions per second (TPS) that can be made for the <code>EnableTopicRule</code> API. | 5 | 5 | No |
| GetEffectivePolicies API TPS | The maximum number of transactions per second (TPS) that can be made for the <code>GetEffectivePolicies</code> API. | 5 | 5 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|---|---|---------------|--------------------------------------|---------------------|
| GetLoggingOptions API TPS | The maximum number of transactions per second (TPS) that can be made for the GetLoggingOptions API. | 2 | 2 | No |
| GetPolicy API TPS | The maximum number of transactions per second (TPS) that can be made for the GetPolicy API. | 10 | 10 | Yes |
| GetPolicyVersion API TPS | The maximum number of transactions per second (TPS) that can be made for the GetPolicyVersion API. | 15 | 15 | Yes |
| GetRegistrationCode API TPS | The maximum number of transactions per second (TPS) that can be made for the GetRegistrationCode API. | 10 | 10 | Yes |
| GetRetainedMessages API TPS | The maximum number of transactions per second that can be made for the GetRetainedMessage API. | 500 | 50 | Yes |
| GetTopicRule API TPS | The maximum number of transactions per second (TPS) that can be made for the GetTopicRule API. | 200 | 20 | No |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|---|---|---------------|--------------------------------------|------------|
| GetTopicRuleDestination TPS API | The maximum number of transactions per second (TPS) that can be made for the GetTopicRuleDestination API. | 50 | 5 | No |
| GetV2LoggingOptions TPS API | The maximum number of transactions per second (TPS) that can be made for the GetV2LoggingOptions API. | 2 | 2 | No |
| ListAttachedPolicies TPS API | The maximum number of transactions per second (TPS) that can be made for the ListAttachedPolicies API. | 15 | 15 | Yes |
| ListAuthorizers TPS API | The maximum number of transactions per second (TPS) that can be made for the ListAuthorizers API. | 10 | 10 | Yes |
| ListCACertificates TPS API | The maximum number of transactions per second (TPS) that can be made for the ListCACertificates API. | 10 | 10 | Yes |
| ListCertificates TPS API | The maximum number of transactions per second (TPS) that can be made for the ListCertificates API. | 10 | 10 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|--|--|---------------|--------------------------------------|------------|
| ListCertificates API TPS | The maximum number of transactions per second (TPS) that can be made for the ListCertificatesByCA API. | 10 | 10 | Yes |
| ListDomainConfigurations API TPS | The maximum number of transactions per second (TPS) that can be made for the ListDomainConfigurations API. | 10 | 10 | Yes |
| ListOutgoingCertificates API TPS | The maximum number of transactions per second (TPS) that can be made for the ListOutgoingCertificates API. | 10 | 10 | Yes |
| ListPolicies API TPS | The maximum number of transactions per second (TPS) that can be made for the ListPolicies API. | 10 | 10 | Yes |
| ListPolicyPrincipals API TPS | The maximum number of transactions per second (TPS) that can be made for the ListPolicyPrincipals API. | 10 | 10 | Yes |
| ListPolicyVersions API TPS | The maximum number of transactions per second (TPS) that can be made for the ListPolicyVersions API. | 10 | 10 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|--|--|---------------|--------------------------------------|------------|
| ListPrincipalPolicies API TPS | The maximum number of transactions per second (TPS) that can be made for the ListPrincipalPolicies API. | 15 | 15 | Yes |
| ListProvisioningTemplateVersions API TPS | The maximum number of transactions per second (TPS) that can be made for the ListProvisioningTemplateVersions API. | 10 | 10 | Yes |
| ListProvisioningTemplates API TPS | The maximum number of transactions per second (TPS) that can be made for the ListProvisioningTemplates API. | 10 | 10 | Yes |
| ListRetainedMessages API TPS | The maximum number of transactions per second that can be made for the ListRetainedMessages API. | 10 | 10 | Yes |
| ListRoleAliases API TPS | The maximum number of transactions per second (TPS) that can be made for the ListRoleAliases API. | 10 | 10 | Yes |
| ListTargetsForPolicy API TPS | The maximum number of transactions per second (TPS) that can be made for the ListTargetsForPolicy API. | 10 | 10 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|--|--|---------------|--------------------------------------|------------|
| ListTopicRuleDestinations API TPS | The maximum number of transactions per second (TPS) that can be made for the ListTopicRuleDestinations API. | 1 | 1 | No |
| ListTopicRules API TPS | The maximum number of transactions per second (TPS) that can be made for the ListTopicRules API. | 1 | 1 | No |
| ListV2LoggingLevels API TPS | The maximum number of transactions per second (TPS) that can be made for the ListV2LoggingLevels API. | 2 | 2 | No |
| RegisterCACertificate API TPS | The maximum number of transactions per second (TPS) that can be made for the RegisterCACertificate API. | 10 | 10 | Yes |
| RegisterCertificate API TPS | The maximum number of transactions per second (TPS) that can be made for the RegisterCertificate API. | 10 | 10 | Yes |
| RegisterCertificateWithoutCA API TPS | The maximum number of transactions per second (TPS) that can be made for the RegisterCertificateWithoutCA API. | 10 | 10 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|---|---|---------------|--------------------------------------|------------|
| RejectCertificateTransfer API TPS | The maximum number of transactions per second (TPS) that can be made for the RejectCertificateTransfer API. | 10 | 10 | Yes |
| ReplaceTopicRule API TPS | The maximum number of transactions per second (TPS) that can be made for the ReplaceTopicRule API. | 5 | 5 | No |
| SetDefaultAuthorizer API TPS | The maximum number of transactions per second (TPS) that can be made for the SetDefaultAuthorizer API. | 10 | 10 | Yes |
| SetDefaultPolicyVersion API TPS | The maximum number of transactions per second (TPS) that can be made for the SetDefaultPolicyVersion API. | 10 | 10 | Yes |
| SetLoggingOptions API TPS | The maximum number of transactions per second (TPS) that can be made for the SetLoggingOptions API. | 2 | 2 | No |
| SetV2LoggingLevel API TPS | The maximum number of transactions per second (TPS) that can be made for the SetV2LoggingLevel API. | 2 | 2 | No |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|--|--|---------------|--------------------------------------|------------|
| SetV2LoggingOptions API TPS | The maximum number of transactions per second (TPS) that can be made for the SetV2LoggingOptions API. | 2 | 2 | No |
| TestAuthorization API TPS | The maximum number of transactions per second (TPS) that can be made for the TestAuthorization API. | 10 | 10 | No |
| TestInvokeAuthorizer API TPS | The maximum number of transactions per second (TPS) that can be made for the TestInvokeAuthorizer API. | 10 | 10 | No |
| TransferCertificate API TPS | The maximum number of transactions per second (TPS) that can be made for the TransferCertificate API. | 10 | 10 | Yes |
| UpdateAuthorizer API TPS | The maximum number of transactions per second (TPS) that can be made for the UpdateAuthorizer API. | 10 | 10 | Yes |
| UpdateCACertificate API TPS | The maximum number of transactions per second (TPS) that can be made for the UpdateCACertificate API. | 10 | 10 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|--|--|---------------|--------------------------------------|------------|
| UpdateCertificate API TPS | The maximum number of transactions per second (TPS) that can be made for the UpdateCertificate API. | 10 | 10 | Yes |
| UpdateCertificateMode API TPS | The maximum number of transactions per second (TPS) that can be made for the UpdateCertificateMode API. | 10 | 10 | Yes |
| UpdateCertificateTag API TPS | The maximum number of transactions per second (TPS) that can be made for the UpdateCertificateTag API. | 10 | 10 | Yes |
| UpdateDomainConfiguration API TPS | The maximum number of transactions per second (TPS) that can be made for the UpdateDomainConfiguration API. | 10 | 10 | Yes |
| UpdateProvisioningTemplate API TPS | The maximum number of transactions per second (TPS) that can be made for the UpdateProvisioningTemplate API. | 10 | 10 | Yes |
| UpdateRoleAlias API TPS | The maximum number of transactions per second (TPS) that can be made for the UpdateRoleAlias API. | 10 | 10 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|------------------------------------|--|---------------|--------------------------------------|------------|
| UpdateTopicRuleDestination API TPS | The maximum number of transactions per second (TPS) that can be made for the UpdateTopicRuleDestination API. | 5 | 5 | No |

***Select AWS Regions:** Europe (Stockholm), Middle East (Bahrain), Europe (Paris), Asia Pacific (Hong Kong), AWS GovCloud (US-East), AWS GovCloud (US-West), US West (N. California), Canada (Central), China (Ningxia)

AWS IoT Core for LoRaWAN limits and quotas

Device data quotas

The following service quotas apply to AWS IoT Core for LoRaWAN device data, which are transmitted between LoRaWAN devices, gateways, and AWS IoT Core for LoRaWAN.

AWS IoT Wireless devices API throttling

| Limit display name | Description | Default value | Adjustable |
|---|---|---------------|------------|
| TPS limit for AssociateWirelessDeviceWithThing | TPS limit for AssociateWirelessDeviceWithThing | 10 | Yes |
| TPS limit for CreateWirelessDevice | TPS limit for CreateWirelessDevice | 10 | Yes |
| TPS limit for DeleteWirelessDevice | TPS limit for DeleteWirelessDevice | 10 | Yes |
| TPS limit for DisassociateWirelessDeviceFromThing | TPS limit for DisassociateWirelessDeviceFromThing | 10 | Yes |
| TPS limit for GetWirelessDevice | TPS limit for GetWirelessDevice | 10 | Yes |
| TPS limit for GetWirelessDeviceStatistics | TPS limit for GetWirelessDeviceStatistics | 10 | No |

| Limit display name | Description | Default value | Adjustable |
|--|--|---------------|------------|
| TPS limit for ListWirelessDevices | TPS limit for ListWirelessDevices | 10 | Yes |
| TPS limit for SendDataToWirelessDevice | TPS limit for SendDataToWirelessDevice | 10 | Yes |
| TPS limit for TestWirelessDevice | TPS limit for TestWirelessDevice | 10 | Yes |
| TPS limit for UpdateWirelessDevice | TPS limit for UpdateWirelessDevice | 10 | Yes |

AWS IoT Core for LoRaWAN API throttling

The following tables describes the maximum number of transactions per second (TPS) that can be made to each action in the [AWS IoT Wireless API](#), which includes AWS IoT Core for LoRaWAN and Amazon Sidewalk Integration.

AWS IoT Wireless gateway API throttling

This table describes the maximum TPS for APIs used with LoRaWAN gateways. The gateways route messages between LoRaWAN devices and AWS IoT Core for LoRaWAN.

AWS IoT Wireless gateway API throttling

| Limit display name | Description | Default value | Adjustable |
|---|---|---------------|------------|
| TPS limit for AssociateWirelessGatewayWithCertificate | TPS limit for AssociateWirelessGatewayWithCertificate | 10 | No |
| TPS limit for AssociateWirelessGatewayWithThing | TPS limit for AssociateWirelessGatewayWithThing | 10 | Yes |
| TPS limit for CreateWirelessGateway | TPS limit for CreateWirelessGateway | 10 | Yes |
| TPS limit for CreateWirelessGatewayTask | TPS limit for CreateWirelessGatewayTask | 10 | No |
| TPS limit for CreateWirelessGatewayTaskDefinition | TPS limit for CreateWirelessGatewayTaskDefinition | 10 | No |

| Limit display name | Description | Default value | Adjustable |
|--|--|---------------|------------|
| TPS limit for CreateWirelessGatewayTaskDefinition | | | |
| TPS limit for DeleteWirelessGateway | TPS limit for DeleteWirelessGateway | 10 | Yes |
| TPS limit for DeleteWirelessGatewayTask | TPS limit for DeleteWirelessGatewayTask | 10 | No |
| TPS limit for DeleteWirelessGatewayTaskDefinition | TPS limit for DeleteWirelessGatewayTaskDefinition | 10 | No |
| TPS limit for DisassociateWirelessGatewayFromCertificate | TPS limit for DisassociateWirelessGatewayFromCertificate | 10 | No |
| TPS limit for DisassociateWirelessGatewayFromThing | TPS limit for DisassociateWirelessGatewayFromThing | 10 | Yes |
| TPS limit for GetWirelessGateway | TPS limit for GetWirelessGateway | 10 | Yes |
| TPS limit for GetWirelessGatewayCertificate | TPS limit for GetWirelessGatewayCertificate | 10 | No |
| TPS limit for GetWirelessGatewayFirmwareInformation | TPS limit for GetWirelessGatewayFirmwareInformation | 10 | No |
| TPS limit for GetWirelessGatewayStatistics | TPS limit for GetWirelessGatewayStatistics | 10 | No |
| TPS limit for GetWirelessGatewayTask | TPS limit for GetWirelessGatewayTask | 10 | No |
| TPS limit for GetWirelessGatewayTaskDefinition | TPS limit for GetWirelessGatewayTaskDefinition | 10 | No |

| Limit display name | Description | Default value | Adjustable |
|--|--|---------------|------------|
| TPS limit for ListWirelessGatewayTaskDefinitions | TPS limit for ListWirelessGatewayTaskDefinitions | 10 | No |
| TPS limit for ListWirelessGateways | TPS limit for ListWirelessGateways | 10 | Yes |
| TPS limit for UpdateWirelessGateway | TPS limit for UpdateWirelessGateway | 10 | Yes |

LoRaWAN devices API throttling

This table describes the maximum TPS for APIs used with LoRaWAN devices.

AWS IoT Wireless devices API throttling

| Limit display name | Description | Default value | Adjustable |
|---|---|---------------|------------|
| TPS limit for AssociateWirelessDeviceWithThing | TPS limit for AssociateWirelessDeviceWithThing | 10 | Yes |
| TPS limit for CreateWirelessDevice | TPS limit for CreateWirelessDevice | 10 | Yes |
| TPS limit for DeleteWirelessDevice | TPS limit for DeleteWirelessDevice | 10 | Yes |
| TPS limit for DisassociateWirelessDeviceFromThing | TPS limit for DisassociateWirelessDeviceFromThing | 10 | Yes |
| TPS limit for GetWirelessDevice | TPS limit for GetWirelessDevice | 10 | Yes |
| TPS limit for GetWirelessDeviceStatistics | TPS limit for GetWirelessDeviceStatistics | 10 | No |
| TPS limit for ListWirelessDevices | TPS limit for ListWirelessDevices | 10 | Yes |

| Limit display name | Description | Default value | Adjustable |
|--|--|---------------|------------|
| TPS limit for SendDataToWirelessDevice | TPS limit for SendDataToWirelessDevice | 10 | Yes |
| TPS limit for TestWirelessDevice | TPS limit for TestWirelessDevice | 10 | Yes |
| TPS limit for UpdateWirelessDevice | TPS limit for UpdateWirelessDevice | 10 | Yes |

Device Profiles and destination API throttling

This table describes device profiles and service profiles and destinations that can route messages to other AWS services.

AWS IoT Wireless device profiles and destination API throttling

| Limit display name | Description | Default value | Adjustable |
|--|------------------------------------|---------------|------------|
| TPS limit for CreateDestination | TPS limit for CreateDestination | 10 | Yes |
| TPS limit for CreateDeviceProfile | TPS limit for CreateDeviceProfile | 10 | Yes |
| TPS limit for CreateServiceProfile | TPS limit for CreateServiceProfile | 10 | Yes |
| TPS limit for DeleteDestination | TPS limit for DeleteDestination | 10 | Yes |
| TPS limit for DeleteDeviceProfile | TPS limit for DeleteDeviceProfile | 10 | Yes |
| TPS limit for DeleteServiceProfile | TPS limit for DeleteServiceProfile | 10 | Yes |
| TPS limit for GetDestination | TPS limit for GetDestination | 10 | Yes |

| Limit display name | Description | Default value | Adjustable |
|---|-----------------------------------|---------------|------------|
| TPS limit for GetDeviceProfile | TPS limit for GetDeviceProfile | 10 | Yes |
| TPS limit for GetServiceProfile | TPS limit for GetServiceProfile | 10 | Yes |
| TPS limit for ListDestinations | TPS limit for ListDestinations | 10 | Yes |
| TPS limit for ListDeviceProfiles | TPS limit for ListDeviceProfiles | 10 | Yes |
| TPS limit for ListServiceProfiles | TPS limit for ListServiceProfiles | 10 | Yes |
| TPS limit for UpdateDestination | TPS limit for UpdateDestination | 10 | Yes |

Sidewalk and logging API throttling

This table describes the maximum TPS for Amazon Sidewalk APIs and APIs that are used for log levels based on resource types.

AWS IoT Wireless Sidewalk and logging API throttling

| Limit display name | Description | Default value | Adjustable |
|---|---|---------------|------------|
| TPS limit for AssociateAwsAccountWithPartnerAccount | TPS limit for AssociateAwsAccountWithPartnerAccount | 10 | Yes |
| TPS limit for GetLogLevelByResourceTypes | TPS limit for GetLogLevelByResourceTypes | 10 | Yes |
| TPS limit for GetPartnerAccount | TPS limit for GetPartnerAccount | 10 | Yes |
| TPS limit for GetResourceLogLevel | TPS limit for GetResourceLogLevel | 10 | Yes |

| Limit display name | Description | Default value | Adjustable |
|--|--|---------------|------------|
| TPS limit for ListPartnerAccounts | TPS limit for ListPartnerAccounts | 10 | Yes |
| TPS limit for PutResourceLogLevel | TPS limit for PutResourceLogLevel | 10 | Yes |
| TPS limit for ResetAllResourceLogLevels | TPS limit for ResetAllResourceLogLevels | 10 | Yes |
| TPS limit for ResetResourceLogLevel | TPS limit for ResetResourceLogLevel | 10 | Yes |
| TPS limit for UpdateLogLevelsByResourceTypes | TPS limit for UpdateLogLevelsByResourceTypes | 10 | Yes |
| TPS limit for UpdatePartnerAccount | TPS limit for UpdatePartnerAccount | 10 | Yes |

Tagging and GetServiceEndpoint API throttling

This table describes the maximum TPS for the GetServiceEndpoint API and APIs used for tagging resources.

AWS IoT Wireless tagging and GetServiceEndpoint API throttling

| Limit display name | Description | Default value | Adjustable |
|---|-----------------------------------|---------------|------------|
| TPS limit for GetServiceEndpoint | TPS limit for GetServiceEndpoint | 10 | No |
| TPS limit for ListTagsForResource | TPS limit for ListTagsForResource | 10 | Yes |
| TPS limit for TagResource | TPS limit for TagResource | 10 | Yes |
| TPS limit for UntagResource | TPS limit for UntagResource | 10 | Yes |

Additional AWS IoT Wireless API limits

AWS IoT Wireless limits and quotas

| Limit display name | Description | Default value | Adjustable |
|---|---|---------------|------------|
| TPS limit for AssociateMulticastGroupWithFuotaTask | TPS limit for AssociateMulticastGroupWithFuotaTask | 10 | Yes |
| TPS limit for AssociateWirelessDeviceWithFuotaTask | TPS limit for AssociateWirelessDeviceWithFuotaTask | 10 | Yes |
| TPS limit for AssociateWirelessDeviceWithMulticastGroup | TPS limit for AssociateWirelessDeviceWithMulticastGroup | 10 | Yes |
| TPS limit for CancelMulticastGroupSession | TPS limit for CancelMulticastGroupSession | 10 | Yes |
| TPS limit for CreateFuotaTask | TPS limit for CreateFuotaTask | 10 | Yes |
| TPS limit for CreateMulticastGroup | TPS limit for CreateMulticastGroup | 10 | Yes |
| TPS limit for DeleteFuotaTask | TPS limit for DeleteFuotaTask | 10 | Yes |
| TPS limit for DeleteMulticastGroup | TPS limit for DeleteMulticastGroup | 10 | Yes |
| TPS limit for DeleteQueuedMessages | TPS limit for DeleteQueuedMessages | 10 | Yes |
| TPS limit for DisassociateAwsAccountFromPartnerAccount | TPS limit for DisassociateAwsAccountFromPartnerAccount | 10 | Yes |
| TPS limit for DisassociateMulticastGroupFromFuotaTask | TPS limit for DisassociateMulticastGroupFromFuotaTask | 10 | Yes |

| Limit display name | Description | Default value | Adjustable |
|--|--|---------------|------------|
| TPS limit for DisassociateWirelessDeviceFromFuotaTask | TPS limit for DisassociateWirelessDeviceFromFuotaTask | 10 | Yes |
| TPS limit for DisassociateWirelessDeviceFromMulticastGroup | TPS limit for DisassociateWirelessDeviceFromMulticastGroup | 10 | Yes |
| TPS limit for GetFuotaTask | TPS limit for GetFuotaTask | 10 | Yes |
| TPS limit for GetMulticastGroup | TPS limit for GetMulticastGroup | 10 | Yes |
| TPS limit for GetMulticastGroupSession | TPS limit for GetMulticastGroupSession | 10 | Yes |
| TPS limit for GetNetworkAnalyzerConfiguration | TPS limit for GetNetworkAnalyzerConfiguration | 10 | Yes |
| TPS limit for GetResourceEventConfiguration | TPS limit for GetResourceEventConfiguration | 10 | Yes |
| TPS limit for ListFuotaTasks | TPS limit for ListFuotaTasks | 10 | Yes |
| TPS limit for ListMulticastGroups | TPS limit for ListMulticastGroups | 10 | Yes |
| TPS limit for ListMulticastGroupsByFuotaTask | TPS limit for ListMulticastGroupsByFuotaTask | 10 | Yes |
| TPS limit for ListQueuedMessages | TPS limit for ListQueuedMessages | 10 | Yes |
| TPS limit for SendDataToMulticastGroup | TPS limit for SendDataToMulticastGroup | 10 | Yes |

| Limit display name | Description | Default value | Adjustable |
|---|---|---------------|------------|
| TPS limit for StartBulkAssociateWirelessDeviceWithMulticastGroup | TPS limit for StartBulkAssociateWirelessDeviceWithMulticastGroup | 10 | Yes |
| TPS limit for StartBulkDisassociateWirelessDeviceFromMulticastGroup | TPS limit for StartBulkDisassociateWirelessDeviceFromMulticastGroup | 10 | Yes |
| TPS limit for StartFuotaTask | TPS limit for StartFuotaTask | 10 | Yes |
| TPS limit for StartMulticastGroupSession | TPS limit for StartMulticastGroupSession | 10 | Yes |
| TPS limit for StartNetworkAnalyzerStream | TPS limit for StartNetworkAnalyzerStream | 10 | Yes |
| TPS limit for UpdateFuotaTask | TPS limit for UpdateFuotaTask | 10 | Yes |
| TPS limit for UpdateMulticastGroup | TPS limit for UpdateMulticastGroup | 10 | Yes |
| TPS limit for UpdateNetworkAnalyzerConfiguration | TPS limit for UpdateNetworkAnalyzerConfiguration | 10 | Yes |
| TPS limit for UpdateResourceEventConfiguration | TPS limit for UpdateResourceEventConfiguration | 10 | Yes |

AWS IoT Core Device Shadow service limits and quotas

AWS IoT Core Device Shadow actions

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|-----------------------------|---|---------------|--------------------------------------|------------|
| Device Shadow API requests/ | Number of device shadow API requests per second per | 4000 | 400 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|--|---|---------------|--------------------------------------|------------|
| second per account | account. This value is adjustable and subject to per-account quotas, depending on the region. | | | |
| Maximum depth of JSON device state documents | The maximum number of levels in the desired or reported section of the JSON device state document is 5. | 5 | 5 | No |
| Maximum number of in-flight, unacknowledged messages per thing | The Device Shadow service supports up to 10 in-flight unacknowledged messages per thing on a single connection. When this quota is reached, all new shadow requests are rejected with a 429 error code until the number of in-flight requests drop below the limit. | 10 | 10 | No |
| Maximum shadow name size | Maximum size of a thing shadow name, which is 64 bytes of UTF-8 encoded characters. | 64 Bytes | 64 Bytes | No |
| Maximum size of a JSON state document | Each individual shadow document must be 8KB or less in size. Metadata doesn't contribute to the document size for service quotas or pricing. | 8 Kilobytes | 8 Kilobytes | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|-------------------------------|--|---------------|--------------------------------------|------------|
| Maximum thing name size | Maximum size of a thing name, which is 128 bytes of UTF-8 encoded characters. | 128 Bytes | 128 Bytes | No |
| Requests per second per thing | The Device Shadow service supports up to 20 requests per second per thing. This quota is per thing, not per API. | 20 | 20 | No |

*Select AWS Regions: Europe (Paris), Europe (Stockholm), Asia Pacific (Hong Kong), South America (São Paulo), Canada (Central), Middle East (Bahrain), China (Ningxia), AWS GovCloud (US-East), AWS GovCloud (US-West)

The levels in the desired and reported sections of the Device Shadow's JSON state document are counted as shown here for the desired object.

```
"desired": {
    "one": {
        "two": {
            "three": {
                "four": {
                    "five": {}
                }
            }
        }
    }
}
```

Note

AWS IoT Core deletes a Device Shadow document after the creating account is deleted or upon customer request. For operational purposes, AWS IoT service backups are retained for 6 months.

AWS IoT Core Fleet Provisioning limits and quotas

Following are throttling limits for some fleet provisioning APIs per AWS account.

AWS IoT Core fleet provisioning limits and quotas

| Limit display name | Description | Default value | Adjustable |
|--|--|---------------|------------|
| Fleet Provisioning CreateCertificateFromPem MQTT API TPS | The maximum number of transactions per second (TPS) that can be made for the Fleet Provisioning CreateCertificateFromCsr MQTT API. | 100 | Yes |

| Limit display name | Description | Default value | Adjustable |
|--|--|---------------|------------|
| Fleet Provisioning CreateKeysAndCertificate MQTT API TPS | The maximum number of transactions per second (TPS) that can be made for the Fleet Provisioning CreateKeysAndCertificate MQTT API. | 10 | Yes |
| Fleet Provisioning RegisterThing MQTT API TPS | The maximum number of transactions per second (TPS) that can be made for the Fleet Provisioning RegisterThing MQTT API. | 10 | Yes |

Fleet provisioning also has these limits, which can't be changed.

| Resource | Description | Limit | |
|---|--|--------------|--|
| Versions per fleet provisioning template | The maximum number of versions that a fleet provisioning template can have. Each template version has a version ID and a creation date for devices that connect to AWS IoT using fleet provisioning. | 5 | |
| Fleet provisioning templates per customer | The maximum number of fleet provisioning templates per customer. Use fleet provisioning templates to generate certificates and private keys for your devices to securely connect to AWS IoT. | 256 | |
| Fleet provisioning template size | The maximum size of a fleet provisioning template in Kilobytes. Fleet provisioning templates allow you to generate certificates and private keys for your devices to securely connect to AWS IoT. | 10 Kilobytes | |

AWS IoT Core message broker and protocol limits and quotas

AWS IoT Core message broker limits and quotas

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|---|---|---------------|--------------------------------------|------------|
| Client ID size | Size of the client ID, which is 128 bytes of UTF-8 encoded characters. | 128 Bytes | 128 Bytes | No |
| Connect requests per second per account | The maximum number of MQTT CONNECT requests per second per account. | 500 | 100 | Yes |
| Connect requests per second per client ID | AWS IoT Core restricts MQTT CONNECT requests from the same accountId and clientId to 1 MQTT CONNECT operation per second. | 1 | 1 | No |
| Connection inactivity (keep-alive interval) | The default keep-alive interval is 1200 seconds. It is used when a client requests a keep-alive interval of zero. If a client requests an interval > 1200 seconds, the default interval is used. If a client requests a keep-alive interval < 30 seconds but > zero, the server treats the client as though it requested a keep-alive interval of 30 seconds. | 1200 Seconds | 1200 Seconds | No |
| Inbound publish requests per | Inbound publish requests counts all messages that IoT Core processes before routing | 20000 | 2000 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|---|--|---------------|--------------------------------------|------------|
| second per account | them to the clients or rules engine. Ex: A single message published on reserved topic can result in publishing 3 additional messages for shadow update, documents and delta, hence counted as 4 requests; whereas on an unreserved topic like a/b is counted as 1 request. | | | |
| Maximum concurrent client connections per account | The maximum number of concurrent connections allowed per account. | 500000 | 100000 | Yes |
| Maximum inbound unacknowledged QoS 1 publish requests | AWS IoT Core restricts the number of unacknowledged inbound publish requests per client. When this quota is reached, no new publish requests are accepted from this client until a PUBACK message is returned by the server. | 100 | 100 | No |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|--|--|---------------|--------------------------------------|------------|
| Maximum number of retained messages per account | The number of stored retained messages per account. When this limit is reached, no new retained messages are stored for this account and all retained publishes with payloads greater than 0 bytes are throttled. | 5000 | 500 | Yes |
| Maximum number of slashes in topic and topic filter | A topic in a publish or subscribe request can have no more than 7 forward slashes (/). This excludes the first 3 slashes in the mandatory segments for Basic Ingest topics (\$AWS/rules/rule-name/). | 7 | 7 | No |
| Maximum outbound unacknowledged QoS 1 publish requests | AWS IoT Core restricts the number of unacknowledged outbound publish requests per client. When this quota is reached, no new publish requests are sent to the client until the client acknowledges the publish requests. | 100 | 100 | No |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|--|--|---------------|--------------------------------------|------------|
| Maximum retry interval for delivering QoS 1 messages | AWS IoT Core retries delivery of unacknowledged quality of service 1 (QoS 1) publish requests to a client for up to one hour. If AWS IoT Core does not receive a PUBACK message from the client after one hour, it drops the publish requests. | 3600 Seconds | 3600 Seconds | No |
| Maximum subscriptions per subscribe request | A single SUBSCRIBE request has a quota of 8 subscriptions. | 8 | 8 | No |
| Message size | The payload for every publish request can be no larger than 128 KB. AWS IoT Core rejects publish and connect requests larger than this size. | 128 Kilobytes | 128 Kilobytes | No |
| Outbound publish requests per second per account | Outbound publish requests count for every message that resulted in matching a client's subscription. For example, 2 clients are subscribed to topic filter a/b. An inbound publish request on topic a/b results in a total of 2 outbound publish requests. | 20000 | 2000 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|--|--|---------------|--------------------------------------|------------|
| Persistent session expiry period | The duration for which the message broker stores an MQTT persistent session. The expiry period begins when the message broker detects the session has become disconnected. After the expiry period has elapsed, the message broker terminates the session and discards any associated queued messages. You can adjust this to a value from 1 hour to 7 days. | 3600 Seconds | 3600 Seconds | Yes |
| Publish requests per second per connection | AWS IoT Core restricts each client connection to a maximum number of inbound and outbound publish requests per second. This limit includes messages sent to offline persistent session. Publish requests that exceed that quota are discarded. | 100 | 100 | No |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|--|---|---------------|--------------------------------------|------------|
| Queued messages per second per account | AWS IoT Core restricts an account to a maximum number of queued messages per second per account. This limit applies when AWS IoT Core stores the messages sent to offline persistent sessions. | 500 | 500 | Yes |
| Retained message inbound publish requests per second per account | The maximum rate that AWS IoT Core can accept inbound publish requests of MQTT messages with the RETAIN flag set. This rate includes all inbound publish requests whether invoked by the HTTP or MQTT protocol. | 500 | 50 | Yes |
| Retained message inbound publish requests per second per topic | MQTT/HTTP publish requests with RETAIN flag set made to the same topic per second. | 1 | 1 | No |
| Subscriptions per account | AWS IoT Core restricts an account to a maximum number of subscriptions across all active connections. | 500000 | 100000 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|--|--|---------------|--------------------------------------|---------------------|
| Subscriptions per connection | AWS IoT Core supports 50 subscriptions per connection. AWS IoT Core might reject subscription requests on the same connection in excess of this amount and the connection is closed. Clients should validate the SUBACK message to ensure that their subscription requests have been successfully processed. | 50 | 50 | No |
| Subscriptions per second per account | AWS IoT Core restricts an account to a maximum number of subscriptions per second. For example, if there are 2 MQTT SUBSCRIBE requests sent within a second, each with 3 subscriptions (topic filters), AWS IoT Core counts those as 6 subscriptions. | 500 | 200 | Yes |
| Throughput per second per connection | Data received or sent over a client connection is processed at a maximum throughput rate. Data that exceeds the maximum throughput is delayed in processing. | 512 Kilobytes | 512 Kilobytes | No |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|-------------------------------|---|---------------|--------------------------------------|------------|
| Topic size | The topic passed to AWS IoT Core when sending a publish request can be no larger than 256 bytes of UTF-8 encoded characters. This excludes the first 3 mandatory segments for Basic Ingest topics (\$AWS/rules/rule-name/). | 256 Bytes | 256 Bytes | No |
| WebSocket connection duration | The WebSocket connection lifetime is 24 hours. If the lifetime is exceeded, The WebSocket connection will be closed. | 86400 Seconds | 86400 Seconds | No |

*Select AWS Regions: Europe (Stockholm), Middle East (Bahrain), Europe (Paris), Asia Pacific (Hong Kong), AWS GovCloud (US-East), AWS GovCloud (US-West), US West (N. California), Canada (Central), China (Ningxia)

AWS IoT Core protocol-related limits and quotas

These limits are now found in [the section called “AWS IoT Core message broker and protocol limits and quotas” \(p. 350\)](#).

AWS IoT Core credential provider limits and quotas

AWS IoT Core credential limits and quotas

| Limit display name | Description | Default value | Adjustable |
|-----------------------------------|---|---------------|------------|
| AssumeRoleWithCertificate API TPS | The maximum number of transactions per second (TPS) that can be made for the AssumeRoleWithCertificate API. | 100 | Yes |
| AssumeRoleWithCertificate API TPS | The maximum number of transactions per second (TPS) that can be made for the AssumeRoleWithCertificate API. | 50 | Yes |

| Limit display name | Description | Default value | Adjustable |
|---|---|---------------|------------|
| | AssumeRoleWithCertificate API. | | |
| Maximum number of AWS IoT Core role aliases | Maximum number of AWS IoT Core role aliases registered in your AWS account. AWS IoT role alias allows connected devices to authenticate to AWS IoT using X.509 certificates and obtain short-lived AWS credentials from an IAM role that is associated with the role alias. | 100 | No |

Note

Large Region limits apply to AWS Regions: US East (N. Virginia), US West (Oregon), and Europe (Ireland)

AWS IoT Core security and identity limits and quotas

AWS IoT Core security and identity limits and quotas

| Limit display name | Description | Default value | Adjustable |
|--|--|---------------|------------|
| Configurable endpoints: maximum number of domain configurations per account | Configurable endpoints: maximum number of domain configurations per account | 10 | Yes |
| Custom authentication: maximum number of authorizers per account | Custom authentication: maximum number of authorizers that can be registered to your AWS account. Authorizers have a lambda function that implements custom authentication and authorization. | 10 | No |
| Maximum number of CA certificates with the same subject field allowed per AWS account per Region | The maximum number of CA certificates with the same subject field allowed per AWS account per region. If you have more than one CA certificate with the same subject field, you must specify the | 10 | No |

| Limit display name | Description | Default value | Adjustable |
|---|--|---------------|------------|
| | CA certificate that was used to sign the device certificate being registered. | | |
| Maximum number of device certificates that can be registered per second | The maximum number of device certificates that can be registered per second. You can select up to 15 files to register. | 15 | Yes |
| Maximum number of domain configurations per account per region | Maximum number of domain configurations per AWS account per AWS Region. | 10 | Yes |
| Maximum number of fleet provisioning template versions per template | Maximum number of fleet provisioning template versions per template. Each template version has a version ID and a creation date for devices connecting to AWS IoT using fleet provisioning. | 5 | No |
| Maximum number of fleet provisioning templates per customer | Maximum number of fleet provisioning templates per customer. Use fleet provisioning templates to generate certificates and private keys for your devices to securely connect to AWS IoT. | 256 | No |
| Maximum number of named policy versions | The maximum number of named policy versions. A managed AWS IoT policy can have up to five versions. To update a policy, create a new policy version. If the policy has five versions, you must delete an existing version before creating a new one. | 5 | No |

| Limit display name | Description | Default value | Adjustable |
|---|--|---------------|------------|
| Maximum number of policies that can be attached to a certificate or Amazon Cognito identity | The maximum number of policies that can be attached to a client certificate or an Amazon Cognito identity, which is 10. Amazon Cognito identity enables you to create temporary, limited-privilege AWS credentials for use in mobile and web applications. | 10 | No |
| Maximum number of provisioning claims that can be generated per second by trusted user | The maximum number of provisioning claims that can be generated per second by a trusted user. A trusted user can be an end user or installation technician who uses a mobile app or web application to configure the device in its deployed location. | 10 | No |
| Maximum policy document size | The maximum size of the policy document, which is 2048 characters excluding white spaces. | 2048 | No |
| Maximum size of fleet provisioning template | Maximum size of fleet provisioning templates in Kilobytes. Fleet provisioning templates allow you to generate certificates and private keys for your devices to securely connect to AWS IoT. | 10 Kilobytes | No |

Additional AWS IoT Core security limits

| Resource | Description | Default | Adjustable |
|--|--|---------|------------|
| Maximum number of domain names per server certificate | When you're providing the server certificates for AWS IoT custom domain configuration, certificates can have a maximum of four domain names. | 4 | No |
| Custom authentication: minimum connection duration (value of <code>DisconnectAfterInSeconds</code>) | The Lambda function of a custom authorizer uses a <code>DisconnectAfterInSeconds</code> parameter to indicate the maximum duration (in seconds) of the connection to | 300 | No |

| Resource | Description | Default | Adjustable |
|---|--|---------|------------|
| | the AWS IoT Core gateway. The connection is terminated if it exceeds this value. | | |
| Custom authentication: maximum connection duration (value of <code>DisconnectAfterInSecs</code>) | The maximum duration (in seconds) of the connection to the AWS IoT Core gateway, defined by the value of <code>DisconnectAfterInSecs</code> . | 86,400 | No |
| Custom authentication: minimum policy refresh rate (value of <code>RefreshAfterInSecs</code>) | The Lambda function of a custom authorizer uses a <code>RefreshAfterInSeconds</code> parameter to indicate the interval (in seconds) between policy refreshes when connected to the AWS IoT Core gateway. When this interval passes, AWS IoT Core invokes the Lambda function to allow for policy refreshes. | 300 | No |
| Custom authentication: maximum policy refresh rate (value of <code>RefreshAfterInSecs</code>) | The maximum time interval between policy refreshes when connected to the AWS IoT Core gateway, defined by the value of <code>RefreshAfterInSeconds</code> . | 86,400 | No |

MQTT-based File Delivery

MQTT-based File Delivery Resource Quotas

| Resource | Description | Default | Adjustable |
|--|---|--------------|------------|
| Streams per account | The maximum number of streams per account. | 10,000* | No |
| Files per stream | The maximum number of files per stream. | 10 | No |
| File size | The maximum file size (in MB). | 24 MB | No |
| Maximum data block size | The maximum data block size. | 128 KB | No |
| Minimum data block size | The minimum data block size. | 256 bytes | No |
| Maximum block offset specified in a stream file request | The maximum block offset specified in a stream file request. | 98,304 | No |
| Maximum blocks that can be requested per stream file request | The maximum number of blocks that can be requested per stream file request. | 98,304 | No |
| Maximum block bitmap size | The maximum block bitmap size. | 12,288 bytes | No |

* For additional information, see [Using AWS IoT MQTT-based file delivery in devices](#) in the *AWS IoT Developer Guide*.

MQTT-based File Delivery Throttling

| API | Transactions Per Second |
|----------------|-------------------------|
| CreateStream | 15 TPS |
| DeleteStream | 15 TPS |
| DescribeStream | 15 TPS |
| ListStreams | 15 TPS |
| UpdateStream | 15 TPS |

AWS IoT Core Device Advisor limits and quotas

AWS IoT Core Device Advisor limits and quotas

| Limit display name | Description | Default value | Adjustable |
|--|---|---------------|------------|
| Concurrently connected devices | The maximum number of test devices that can be concurrently connected per test suite run. | 1 | No |
| Concurrently running test suites | The maximum number of suites an AWS account can run concurrently. | 1 | No |
| Connections per test endpoint | The maximum number of connections to an account-specific test endpoint. | 5 | No |
| MQTT CONNECT requests per account | The maximum number of MQTT Connect requests sent from a test device per second per account. | 5 | No |
| MQTT CONNECT requests per client ID | The maximum number of MQTT Connect requests sent from a test device per second per client ID. | 1 | No |
| Rate of CreateSuiteDefinition API requests | The maximum number of CreateSuiteDefinition API requests you can make per second. | 1 | No |
| | The maximum number of DeleteSuiteDefinition API requests you can make per second. | 10 | No |

| Limit display name | Description | Default value | Adjustable |
|--|--|---------------|------------|
| Rate of DeleteSuiteDefinition API requests | | | |
| Rate of GetSuiteDefinition API requests | The maximum number of GetSuiteDefinition API requests you can make per second. | 10 | No |
| Rate of GetSuiteRun API requests | The maximum number of GetSuiteRun API requests you can make per second. | 10 | No |
| Rate of GetSuiteRunReport API requests | The maximum number of GetSuiteRunReport API requests you can make per second. | 10 | No |
| Rate of ListSuiteDefinitions API requests | The maximum number of ListSuiteDefinitions API requests you can make per second. | 10 | No |
| Rate of ListSuiteRuns API requests | The maximum number of ListSuiteRuns API requests you can make per second. | 10 | No |
| Rate of ListTagsForResource API requests | The maximum number of ListTagsForResource API requests you can make per second. | 10 | No |
| Rate of ListTestCases API requests | The maximum number of ListTestCases API requests you can make per second. | 10 | No |
| Rate of StartSuiteRun API requests | The maximum number of StartSuiteRun API requests you can make per second. | 1 | No |
| Rate of TagResource API requests | The maximum number of TagResource API requests you can make per second. | 10 | No |

| Limit display name | Description | Default value | Adjustable |
|--|---|---------------|------------|
| Rate of UntagResource API requests | The maximum number of UntagResource API requests you can make per second. | 10 | No |
| Rate of UpdateSuiteDefinition API requests | The maximum number of UpdateSuiteDefinition API requests you can make per second. | 10 | No |
| Test case execution time | The maximum time until a test case fails if not completed. | 10800 Seconds | No |
| Test cases per test suite | The maximum number of test cases in one test suite. | 50 | No |

AWS IoT Device Defender endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|-----------|-----------------------------|----------|--|
| US East (Ohio) | us-east-2 | iot.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | iot.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | iot.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | iot.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | iot.ap-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|----------------------------------|----------|--|
| Asia Pacific (Mumbai) | ap-south-1 | iot.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | iot.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | iot.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | iot.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | iot.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | iot.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | iot.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | iot.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | iot.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | iot.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | iot.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | iot.me-south-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | iot.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | iot.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

AWS IoT Device Defender audits limits and quotas

| Limit display name | Description | Default value | Adjustable |
|---|---|---------------|------------|
| Scheduled audits | The maximum number of scheduled audits. | 5 | No |
| Simultaneous in progress on-demand audits | The maximum number of simultaneous in progress on-demand audits. | 10 | No |
| Storage duration for audit findings | The maximum time, in days, that audit findings are stored after being reported. | 90 | No |

The following service quotas apply to mitigation actions and audit mitigation action tasks:

AWS IoT Device Defender mitigation limits and quotas

| Limit display name | Description | Default value | Adjustable |
|--------------------|---|---------------|------------|
| Mitigation actions | The maximum number of mitigation actions. | 100 | No |

Audit mitigation action limits

| Resource | Limit |
|--|----------|
| Number of audit mitigation action tasks running at the same time | 10 tasks |
| Retention period for audit mitigation action tasks | 90 days |

AWS IoT Device Defender detect limits and quotas

| Limit display name | Description | Default value | Adjustable |
|--|---|---------------|------------|
| Behavior metric value elements for each security profile | The maximum number of behavior metric value elements (counts, IP addresses, ports) for each security profile. | 1000 | No |
| Behaviors for each security profile | The maximum number of behaviors for each security profile | 100 | No |

| Limit display name | Description | Default value | Adjustable |
|--|--|---------------|------------|
| Custom metrics | The maximum number of detect custom metrics. | 100 | Yes |
| Device metric minimum delay | The minimum time, in seconds, that a device must wait between sending metric reports. | 300 Seconds | Yes |
| Device metric peak reporting rate for an account | The maximum number of device-side metric reports that can be sent, per second, from all devices in an account. | 3500 | Yes |
| Metric dimensions | The maximum number of detect metric dimensions. | 10 | No |
| Security profiles for each target | The maximum number of security profiles for each target (thing group or user account). | 5 | No |
| Storage duration for detect metrics | The maximum time, in days, that detect metrics are stored after being ingested. | 14 | No |
| Storage duration for detect violations | The maximum time, in days, that detect violations are stored after being generated. | 30 | No |

ML Detect limits

| Resource | Quota | Adjustable |
|---|-----------------|------------|
| Number of Detect mitigation action tasks that can be running at the same time | 5 maximum | Yes |
| Retention period for Detect mitigation action tasks | 90 days maximum | Yes |
| Retention period for models (time after which models are expired) | 30 days maximum | No |

AWS IoT Device Management endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Topics

- [AWS IoT Core - control plane endpoints \(p. 368\)](#)
- [AWS IoT Core - data plane endpoints \(p. 370\)](#)
- [AWS IoT Device Management - jobs data endpoints \(p. 371\)](#)
- [AWS IoT Device Management - secure tunneling endpoints \(p. 373\)](#)
- [AWS IoT FIPS endpoints \(p. 376\)](#)

AWS IoT Core - control plane endpoints

The following table contains AWS Region-specific endpoints for AWS IoT Core - control plane operations. For information about the operations supported by the AWS IoT Core - control plane endpoints, see [AWS IoT operations](#) in the [AWS IoT API Reference](#).

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|------------|----------------------------------|----------|--|
| US East (Ohio) | us-east-2 | iot.us-east-2.amazonaws.com | HTTPS | |
| | | iot-fips.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | iot.us-east-1.amazonaws.com | HTTPS | |
| | | iot-fips.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | iot.us-west-1.amazonaws.com | HTTPS | |
| | | iot-fips.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | iot.us-west-2.amazonaws.com | HTTPS | |
| | | iot-fips.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | iot.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | iot.ap-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| Asia Pacific (Seoul) | ap-northeast-2 | iot.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | iot.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | iot.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | iot.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | iot.ca-central-1.amazonaws.com iot-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | iot.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | iot.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | iot.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | iot.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | iot.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | iot.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | iot.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | iot.us-gov-east-1.amazonaws.com iot-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | iot.us-gov-west-1.amazonaws.com iot-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

AWS IoT Core - data plane endpoints

The AWS IoT Core - data plane endpoints are specific to each AWS account and AWS Region. To find the AWS IoT Core - data plane endpoint for your AWS account and AWS Region, use the [describe-endpoint](#) CLI command shown here, or the [DescribeEndpoint](#) REST API.

```
aws iot describe-endpoint --endpoint-type iot:Data-ATS
```

This command returns your Data Plane API endpoint in the following format:

```
account-specific-prefix.iot.aws-region.amazonaws.com
```

For information about the actions supported by the AWS IoT Core - data plane endpoints, see [AWS IoT data plane operations](#) in the [AWS IoT API Reference](#).

The following table contains generic representations of the AWS account-specific endpoints for each AWS Region that AWS IoT Core supports. In the **Endpoint** column, the *account-specific-prefix* from your Account-specific endpoint replaces data shown in the generic endpoint representation.

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------|
| US East (Ohio) | us-east-2 | data-ats.iot.us-east-2.amazonaws.com | HTTPS |
| | | data.iot-fips.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | data-ats.iot.us-east-1.amazonaws.com | HTTPS |
| | | data.iot-fips.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | data-ats.iot.us-west-1.amazonaws.com | HTTPS |
| | | data.iot-fips.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | data-ats.iot.us-west-2.amazonaws.com | HTTPS |
| | | data.iot-fips.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | data-ats.iot.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | data-ats.iot.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | data-ats.iot.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | data-ats.iot.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | data-ats.iot.ap-southeast-2.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------|--|
| Asia Pacific (Tokyo) | ap-northeast-1 | data-ats.iot.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | data-ats.iot.ca-central-1.amazonaws.com | HTTPS | |
| | | data.iot-fips.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | data-ats.iot.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | data-ats.iot.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | data-ats.iot.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | data-ats.iot.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | data-ats.iot.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | data-ats.iot.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | data-ats.iot.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | data-ats.iot.us-gov-east-1.amazonaws.com | HTTPS | |
| | | data.iot-fips.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | data-ats.iot.us-gov-west-1.amazonaws.com | HTTPS | |
| | | data.iot-fips.us-gov-west-1.amazonaws.com | HTTPS | |

AWS IoT Device Management - jobs data endpoints

The AWS IoT Device Management - jobs data endpoints are specific to each AWS account and AWS Region. To find the AWS IoT Device Management - jobs data endpoint for your AWS account and AWS Region, use the [describe-endpoint](#) CLI command shown here, or the [DescribeEndpoint](#) REST API.

```
aws iot describe-endpoint --endpoint-type iot:Jobs
```

This command returns your Jobs data plane API endpoint in the following format:

`account-specific-prefix.jobs.iot.aws-region.amazonaws.com.`

For information about the actions supported by the AWS IoT Device Management - jobs data endpoints, see [AWS IoT jobs data plane operations](#) in the [AWS IoT API Reference](#).

The following table contains AWS Region-specific endpoints that AWS IoT Core supports for job data operations. In the **Endpoint** column, the *account-specific-prefix* from your account-specific endpoint replaces the *prefix* shown in the generic endpoint representation.

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|-----------------|
| US East (Ohio) | us-east-2 | <i>prefix</i> .jobs.iot.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | <i>prefix</i> .jobs.iot.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | <i>prefix</i> .jobs.iot.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | <i>prefix</i> .jobs.iot.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | <i>prefix</i> .jobs.iot.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | <i>prefix</i> .jobs.iot.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | <i>prefix</i> .jobs.iot.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | <i>prefix</i> .jobs.iot.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | <i>prefix</i> .jobs.iot.ap-southeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | <i>prefix</i> .jobs.iot.ap-northeast-1.amazonaws.com | HTTPS |
| Canada (Central) | ca-central-1 | <i>prefix</i> .jobs.iot.ca-central-1.amazonaws.com | HTTPS |
| China (Beijing) | cn-north-1 | <i>prefix</i> .jobs.iot.cn-north-1.amazonaws.com.cn | HTTPS |
| China (Ningxia) | cn-northwest-1 | <i>prefix</i> .jobs.iot.cn-northwest-1.amazonaws.com.cn | HTTPS |
| Europe (Frankfurt) | eu-central-1 | <i>prefix</i> .jobs.iot.eu-central-1.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | <i>prefix</i> .jobs.iot.eu-west-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------|--|
| Europe (London) | eu-west-2 | <i>prefix</i> .jobs.iot.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | <i>prefix</i> .jobs.iot.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | <i>prefix</i> .jobs.iot.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | <i>prefix</i> .jobs.iot.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | <i>prefix</i> .jobs.iot.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | <i>prefix</i> .jobs.iot.us-gov-west-1.amazonaws.com | HTTPS | |

AWS IoT Device Management - secure tunneling endpoints

AWS IoT supports additional endpoints for secure tunneling.

Secure Tunneling Management APIs Endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|------------|---|----------------|--|
| US East (Ohio) | us-east-2 | api.tunneling.iot.us-east-2.amazonaws.com api.tunneling.iot-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | api.tunneling.iot.us-east-1.amazonaws.com api.tunneling.iot-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | api.tunneling.iot.us-west-1.amazonaws.com api.tunneling.iot-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | api.tunneling.iot.us-west-2.amazonaws.com api.tunneling.iot-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | api.tunneling.iot.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | api.tunneling.iot.ap-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| Asia Pacific (Seoul) | ap-northeast-2 | api.tunneling.iot.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | api.tunneling.iot.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | api.tunneling.iot.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | api.tunneling.iot.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | api.tunneling.iot.ca-central-1.amazonaws.com api.tunneling.iot-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | api.tunneling.iot.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | api.tunneling.iot.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | api.tunneling.iot.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | api.tunneling.iot.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | api.tunneling.iot.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | api.tunneling.iot.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | api.tunneling.iot.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | api.tunneling.iot.us-gov-east-1.amazonaws.com api.tunneling.iot-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | api.tunneling.iot.us-gov-west-1.amazonaws.com api.tunneling.iot-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Secure Tunneling Device Connection Endpoints

| Region Name | Region | Endpoint | Protocol |
|---------------------------|----------------|--|-----------------|
| US East (Ohio) | us-east-2 | wss://data.tunneling.iot.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | wss://data.tunneling.iot.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | wss://data.tunneling.iot.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | wss://data.tunneling.iot.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | wss://data.tunneling.iot.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | wss://data.tunneling.iot.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | wss://data.tunneling.iot.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | wss://data.tunneling.iot.ap-southeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | wss://data.tunneling.iot.ap-northeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | wss://data.tunneling.iot.ap-east-1.amazonaws.com | HTTPS |
| Canada (Central) | ca-central-1 | wss://data.tunneling.iot.ca-central-1.amazonaws.com | HTTPS |
| China (Beijing) | cn-north-1 | wss://data.tunneling.iot.cn-north-1.amazonaws.com.cn | HTTPS |
| China (Ningxia) | cn-northwest-1 | wss://data.tunneling.iot.cn-northwest-1.amazonaws.com.cn | HTTPS |
| Europe (Frankfurt) | eu-central-1 | wss://data.tunneling.iot.eu-central-1.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | wss://data.tunneling.iot.eu-west-1.amazonaws.com | HTTPS |
| Europe (London) | eu-west-2 | wss://data.tunneling.iot.eu-west-2.amazonaws.com | HTTPS |
| Europe (Paris) | eu-west-3 | wss://data.tunneling.iot.eu-west-3.amazonaws.com | HTTPS |
| Europe (Stockholm) | eu-north-1 | wss://data.tunneling.iot.eu-north-1.amazonaws.com | HTTPS |
| South America (São Paulo) | sa-east-1 | wss://data.tunneling.iot.sa-east-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol |
|------------------------|---------------|--|----------|
| Middle East (Bahrain) | me-south-1 | wss://data.tunneling.iot.me-south-1.amazonaws.com | HTTPS |
| AWS GovCloud (US-East) | us-gov-east-1 | wss://data.tunneling.iot.us-gov-east-1.amazonaws.com | HTTPS |
| AWS GovCloud (US-West) | us-gov-west-1 | wss://data.tunneling.iot.us-gov-west-1.amazonaws.com | HTTPS |

AWS IoT FIPS endpoints

AWS IoT provides endpoints that support the [Federal Information Processing Standard \(FIPS\) 140-2](#). Choose the appropriate FIPS compliant endpoint to access AWS IoT features in your AWS Region from [FIPS Endpoints by Service](#). For more information about the FIPs endpoints provided by AWS IoT, see [Connecting to AWS IoT FIPS endpoints](#).

Service quotas

Contents

- [AWS IoT Core thing resource limits and quotas \(p. 376\)](#)
- [AWS IoT Core thing group resource limits and quotas \(p. 377\)](#)
- [AWS IoT Core bulk thing registration limits and quotas \(p. 379\)](#)
- [AWS IoT Core billing group restrictions \(p. 379\)](#)
- [AWS IoT Device Management API action limits \(p. 380\)](#)
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- [Fleet Hub for AWS IoT Device Management \(p. 394\)](#)

AWS IoT Core thing resource limits and quotas

AWS IoT Core thing limits and quotas

| Limit display name | Description | Default value | Adjustable |
|--|--|---------------|------------|
| Maximum number of thing attributes for a thing with a thing type | Maximum number of thing attributes for a thing with a thing type. Thing types are optional and make it easier to discover things. Things with a thing type can have up to 50 attributes. | 50 | Yes |
| Maximum number of thing attributes for a thing | Maximum number of thing attributes for a thing without a thing type. Things without a | 3 | No |

| Limit display name | Description | Default value | Adjustable |
|---|--|---------------|------------|
| without a thing type | thing type can have up to three attributes. | | |
| Maximum thing name size | Maximum size of a thing name, which is 128 bytes of UTF-8 encoded characters. | 128 Bytes | No |
| Number of thing types that can be associated with a thing | Number of thing types that can be associated with a thing, which can be zero or one. Thing types are optional and their use makes it easier to discover things. | 1 | No |
| Size of thing attributes per thing | The size of thing attributes per thing, which is 47 kilobytes. Thing attributes are optional name-value pairs that store information about the thing, which makes their use easier to discover things. | 47 Kilobytes | Yes |

Note

Thing types

The number of thing types that can be defined in an AWS account is not limited. Thing types allow you to store description and configuration information that is common to all things associated with the same thing type.

AWS IoT Core thing group resource limits and quotas

AWS IoT Core thing group limits and quotas

| Limit display name | Description | Default value | Adjustable |
|--|--|---------------|------------|
| Maximum depth of a thing group hierarchy | The maximum depth of a hierarchy of thing groups. When you build a hierarchy of groups, the policy attached to the parent group is inherited by its child group, and by all the things in the group and its child groups. This makes it easier to manage permissions for large number of things. | 7 | No |

| Limit display name | Description | Default value | Adjustable |
|--|--|---------------|------------|
| Maximum number of attributes associated with a thing group | Maximum number of attributes associated with a thing group. Attributes are name-value pairs you can use to store information about a group. You can add, delete, or update the attributes of a group. | 50 | No |
| Maximum number of direct child groups | The maximum number of direct child groups that a thing group can have in a thing group hierarchy. | 100 | No |
| Maximum number of dynamic groups | Maximum number of dynamic groups. | 100 | No |
| Maximum number of thing groups a thing can belong to | A thing can be added to a maximum of 10 thing groups. But you cannot add a thing to more than one group in the same hierarchy. This means that a thing cannot be added to two groups that share a common parent. | 10 | No |
| Maximum size of a thing group attribute name, in chars | Maximum size of a thing group attribute name, in chars. | 128 | No |
| Maximum size of a thing group attribute value, in chars | Maximum size of a thing group attribute value, in chars. | 800 | No |
| Maximum thing group name size | Maximum thing group name size. | 128 Bytes | No |

Note

Thing group assignment

The maximum number of things that can be assigned to a thing group is not limited.

AWS IoT Core bulk thing registration limits and quotas

AWS IoT Core bulk thing registration

| Limit display name | Description | Default value | Adjustable |
|-------------------------------|---|-----------------|------------|
| Allowed registration tasks | For any given AWS account, only one bulk registration task can run at a time. | 1 | No |
| Data retention policy | After the bulk registration task (which can be long lived) is complete, data related to bulk thing registration is permanently deleted after 30 days. | 2592000 Seconds | No |
| Maximum line length | Each line in an Amazon S3 input JSON file can't exceed 256K in length. | 256000 | No |
| Registration task termination | Any pending or incomplete bulk registration tasks are terminated after 30 days. | 2592000 Seconds | No |

For more information about the JSON file used for bulk registration, see [Amazon S3 input JSON file](#).

AWS IoT Core billing group restrictions

- A thing can belong to exactly one billing group.
- Unlike thing groups, billing groups cannot be organized into hierarchies.
- For its usage to be registered for tagging or billing purposes, a device must:
 - Be registered as a thing in AWS IoT Core.
 - Communicate with AWS IoT Core using MQTT only.
 - Authenticate with AWS IoT Core using only its thing name as the client ID.
 - Use an X.509 certificate or Amazon Cognito Identity to authenticate.

For more information, see [Managing Devices with AWS IoT, Authentication](#), and [Device Provisioning](#). You can use the [AttachThingPrincipal](#) API operation to attach a certificate or other credential to a thing.

- The maximum number of billing groups per AWS account is 20,000.

AWS IoT Device Management API action limits

AWS IoT Device Management API action limits

| Limit display name | Description | Default value | Default value in select AWS Regions | Adjustable |
|---------------------------------|---|---------------|-------------------------------------|------------|
| AddThingToBillingGroup API TPS | The maximum number of transactions per second (TPS) that can be made for the AddThingToBillingGroup API. | 60 | 60 | Yes |
| AddThingToThingGroup API TPS | The maximum number of transactions per second (TPS) that can be made for the AddThingToThingGroup API. | 100 | 60 | Yes |
| AttachThingPrincipal API TPS | The maximum number of transactions per second (TPS) that can be made for the AttachThingPrincipal API. | 100 | 50 | Yes |
| CreateBillingGroup API TPS | The maximum number of transactions per second (TPS) that can be made for the CreateBillingGroup API. | 25 | 25 | Yes |
| CreateDynamicThingGroup API TPS | The maximum number of transactions per second (TPS) that can be made for the CreateDynamicThingGroup API. | 5 | 5 | Yes |
| CreateThing API TPS | The maximum number of transactions per second (TPS) that can be made for | 100 | 50 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|---------------------------------|---|---------------|--------------------------------------|------------|
| | the CreateThing API. | | | |
| CreateThingGroup API TPS | The maximum number of transactions per second (TPS) that can be made for the CreateThingGroup API. | 25 | 25 | Yes |
| CreateThingType API TPS | The maximum number of transactions per second (TPS) that can be made for the CreateThingType API. | 15 | 15 | Yes |
| DeleteBillingGroup API TPS | The maximum number of transactions per second (TPS) that can be made for the DeleteBillingGroup API. | 15 | 15 | Yes |
| DeleteDynamicThingGroup API TPS | The maximum number of transactions per second (TPS) that can be made for the DeleteDynamicThingGroup API. | 5 | 5 | Yes |
| DeleteThing API TPS | The maximum number of transactions per second (TPS) that can be made for the DeleteThing API. | 100 | 50 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|--|--|---------------|--------------------------------------|------------|
| DeleteThingGroup API TPS | The maximum number of transactions per second (TPS) that can be made for the DeleteThingGroup API. | 15 | 15 | Yes |
| DeleteThingType API TPS | The maximum number of transactions per second (TPS) that can be made for the DeleteThingType API. | 15 | 15 | Yes |
| DeprecateThingType API TPS | The maximum number of transactions per second (TPS) that can be made for the DeprecateThingType API. | 15 | 15 | Yes |
| DescribeBillingGroup API TPS | The maximum number of transactions per second (TPS) that can be made for the DescribeBillingGroup API. | 100 | 15 | Yes |
| DescribeThing API TPS | The maximum number of transactions per second (TPS) that can be made for the DescribeThing API. | 350 | 50 | Yes |
| DescribeThingGroup API TPS | The maximum number of transactions per second (TPS) that can be made for the DescribeThingGroup API. | 100 | 100 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|--|--|---------------|--------------------------------------|------------|
| DescribeThingType API TPS | The maximum number of transactions per second (TPS) that can be made for the DescribeThingType API. | 100 | 50 | Yes |
| DetachThingPrincipal API TPS | The maximum number of transactions per second (TPS) that can be made for the DetachThingPrincipal API. | 100 | 50 | Yes |
| ListBillingGroups API TPS | The maximum number of transactions per second (TPS) that can be made for the ListBillingGroups API. | 10 | 10 | Yes |
| ListPrincipalThings API TPS | The maximum number of transactions per second (TPS) that can be made for the ListPrincipalThings API. | 10 | 10 | Yes |
| ListTagsForResource API TPS | The maximum number of transactions per second (TPS) that can be made for the ListTagsForResource API. | 10 | 10 | Yes |
| ListThingGroups API TPS | The maximum number of transactions per second (TPS) that can be made for the ListThingGroups API. | 10 | 10 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|--|--|---------------|--------------------------------------|------------|
| ListThingGroupsForThing API TPS | The maximum number of transactions per second (TPS) that can be made for the ListThingGroupsForThing API. | 100 | 50 | Yes |
| ListThingPrincipals API TPS | The maximum number of transactions per second (TPS) that can be made for the ListThingPrincipals API. | 10 | 10 | Yes |
| ListThingTypes API TPS | The maximum number of transactions per second (TPS) that can be made for the ListThingTypes API. | 10 | 10 | Yes |
| ListThings API TPS | The maximum number of transactions per second (TPS) that can be made for the ListThings API. | 10 | 10 | Yes |
| ListThingsInBillingGroup API TPS | The maximum number of transactions per second (TPS) that can be made for the ListThingsInBillingGroup API. | 25 | 25 | Yes |
| ListThingsInThingGroup API TPS | The maximum number of transactions per second (TPS) that can be made for the ListThingsInThingGroup API. | 25 | 25 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|---|---|---------------|--------------------------------------|------------|
| RegisterThing API TPS | The maximum number of transactions per second (TPS) that can be made for the RegisterThing API. | 10 | 10 | Yes |
| RemoveThingFromBillingGroup API TPS | The maximum number of transactions per second (TPS) that can be made for the RemoveThingFromBillingGroup API. | 15 | 15 | Yes |
| RemoveThingFromThingGroup API TPS | The maximum number of transactions per second (TPS) that can be made for the RemoveThingFromThingGroup API. | 100 | 50 | Yes |
| TagResource API TPS | The maximum number of transactions per second (TPS) that can be made for the TagResource API. | 10 | 10 | Yes |
| UntagResource API TPS | The maximum number of transactions per second (TPS) that can be made for the UntagResource API. | 10 | 10 | Yes |
| UpdateBillingGroup API TPS | The maximum number of transactions per second (TPS) that can be made for the UpdateBillingGroup API. | 15 | 15 | Yes |

| Limit display name | Description | Default value | Default value in select AWS Regions* | Adjustable |
|---|---|---------------|--------------------------------------|------------|
| UpdateDynamicThingGroup API TPS | The maximum number of transactions per second (TPS) that can be made for the UpdateDynamicThingGroup API. | 5 | 5 | Yes |
| UpdateThing API TPS | The maximum number of transactions per second (TPS) that can be made for the UpdateThing API. | 100 | 50 | Yes |
| UpdateThingGroup API TPS | The maximum number of transactions per second (TPS) that can be made for the UpdateThingGroup API. | 15 | 15 | Yes |

*Select AWS Regions: Europe (Stockholm), Middle East (Bahrain), Europe (Paris), Asia Pacific (Hong Kong), AWS GovCloud (US-East), AWS GovCloud (US-West), US West (N. California), Canada (Central), China (Ningxia)

AWS IoT Fleet Indexing

AWS IoT Device Management fleet indexing limits and quotas

| Limit display name | Description | Default value | Adjustable |
|---|--|---------------|------------|
| Maximum length of a custom field name | The maximum length of a custom field name. | 1024 | Yes |
| Maximum length of a query | The maximum length of a query in UTF-8 encoded characters. | 1000 | Yes |
| Maximum number of * wildcard operators per query term | The maximum number of * wildcard operators per query term. | 2 | No |

| Limit display name | Description | Default value | Adjustable |
|---|--|---------------|------------|
| Maximum number of ? wildcard operators per query term | The maximum number of ? wildcard operators per query term. | 5 | No |
| Maximum number of custom fields in AWS thing groups index | The maximum number of custom fields in AWS thing groups index. | 5 | Yes |
| Maximum number of custom fields in AWS things index | The maximum number of custom fields in AWS things index. | 5 | Yes |
| Maximum number of dynamic groups | The maximum number of dynamic groups per customer. | 100 | Yes |
| Maximum number of fleet metrics | The maximum number of fleet metrics per customer. | 100 | Yes |
| Maximum number of percentile values per fleet metric | The maximum number of values for percentile aggregation type per fleet metric. | 5 | No |
| Maximum number of query terms per fleet metric | The maximum number of query terms per fleet metric. | 3 | Yes |
| Maximum number of query terms per query | The maximum number of query terms per query. | 5 | Yes |
| Maximum number of results per search query | The maximum number of results per search query. | 500 | No |

| Limit display name | Description | Default value | Adjustable |
|---|--|---------------|------------|
| Maximum number of things in the fleet index | The maximum number of things in the fleet index. | Unlimited | No |
| Maximum period of a fleet metric | The maximum period of a fleet metric in seconds. | 86400 Seconds | No |
| Minimum period of a fleet metric | The minimum period of a fleet metric in seconds. | 60 Seconds | No |

AWS IoT Device Management fleet indexing API limits

| Limit display name | Description | Default value | Adjustable |
|----------------------------------|---|---------------|------------|
| DescribeIndex rate | The maximum number of DescribeIndex calls per second. | 10 | Yes |
| GetCardinality rate | The maximum number of GetCardinality calls per second. | 15 | Yes |
| GetIndexingConfiguration rate | The maximum number of GetIndexingConfiguration calls per second. | 20 | Yes |
| GetPercentiles rate | The maximum number of GetPercentiles calls per second. | 15 | Yes |
| GetStatistics rate | The maximum number of GetStatistics calls per second. | 15 | Yes |
| ListIndices rate | The maximum number of ListIndices calls per second. | 5 | Yes |
| SearchIndex rate | The maximum number of SearchIndex calls per second. | 15 | Yes |
| UpdateIndexingConfiguration rate | The maximum number of UpdateIndexingConfiguration calls per second. | 1 | Yes |

AWS IoT Jobs

AWS IoT Device Management jobs limits and quotas

| Limit display name | Description | Default value | Adjustable |
|--|---|---------------|------------|
| Active continuous jobs | The maximum number of active continuous jobs. | 1000 | Yes |
| Active snapshot jobs | The maximum number of active snapshot jobs. | 1000 | Yes |
| Comment length | The maximum comment length (in characters). | 2028 | No |
| CreateJobTemplate throttle limit | The throttle limit for CreateJobTemplate. | 10 | Yes |
| Data retention | The maximum number of days that job data and job execution data will be retained for inactive jobs (jobs that aren't IN_PROGRESS). | 730 | No |
| DeleteJobTemplate throttle limit | The throttle limit for DeleteJobTemplate. | 10 | Yes |
| DescribeJobExecution/ GetPendingJobExecutions throttle limit | The maximum number of total read transactions per second per account which can be caused by invoking DescribeJobExecution and/or GetPendingJobExecutions. In the control plane, DescribeJobExecution is limited to 10 TPS per invocation. | 200 | No |
| DescribeJobTemplate throttle limit | The throttle limit for DescribeJobTemplate. | 10 | Yes |
| DocumentSource length | The maximum number of characters in a job document source. | 1350 | No |

| Limit display name | Description | Default value | Adjustable |
|-------------------------------------|--|---------------|------------|
| In Progress timeout | The maximum job execution InProgress timeout value (in minutes). | 10080 | No |
| Job Targets | The maximum number of targets you can assign to a job. | 100 | No |
| Job Template description length | The maximum number of characters in a job template description. | 2028 | No |
| Job description length | The maximum number of characters in a job description. | 2028 | No |
| Job execution roll out rate | The maximum number of job executions that you can roll out per minute. | 1000 | Yes |
| JobId Length | The maximum number of characters in a Job id. | 64 | No |
| JobTemplateId Length | The maximum number of characters in a job template id. | 64 | No |
| List results per page | The maximum number of list results per page. | 250 | No |
| ListJobTemplates throttle limit | The throttle limit for ListJobTemplates. | 10 | Yes |
| Maximum number of job templates | The maximum number of job templates you can own. | 100 | Yes |
| Minimum job execution roll out rate | The minimum number of job executions that you can roll out per minute. | 1 | No |
| Minimum pre-signed URL lifetime | The minimum lifetime (in seconds) of a pre-signed URL. | 60 Seconds | No |

| Limit display name | Description | Default value | Adjustable |
|---|--|---------------|------------|
| Pre-signed URL lifetime | The maximum lifetime (in seconds) of a pre-signed URL. | 3600 Seconds | No |
| S3 job document length | The maximum length of an S3 job document that can be sent to an AWS IoT device (in Bytes). | 32768 Bytes | Yes |
| StartNextPendingJobExecution/ UpdateJobExecution throttle limit | The maximum number of total write transactions per second per account which can be caused by invoking StartNextPendingJobExecution and/or UpdatePendingJobExecution. | 200 | No |
| StatusDetail map key length | The maximum length of a StatusDetail map key (in characters). | 128 | No |
| StatusDetail map key-value pairs | The maximum number of key-value pairs you can have in a StatusDetail map. | 10 | No |
| StatusDetail map value length | The maximum length of a StatusDetail map value (in characters). | 1024 | No |
| Step Timer | The maximum job execution step timeout value (in minutes). | 10080 | No |

AWS IoT Device Management jobs API action limits

| Limit display name | Description | Default value | Adjustable |
|--|---|---------------|------------|
| AssociateTargetsWithJob throttle limit | The throttle limit for AssociateTargetsWithJob. | 10 | Yes |
| CancelJob throttle limit | The throttle limit for CancelJob. | 10 | Yes |
| CancelJobExecution throttle limit | The throttle limit for CancelJobExecution. | 10 | Yes |

| Limit display name | Description | Default value | Adjustable |
|--|---|---------------|------------|
| CreateJob throttle limit | The throttle limit for CreateJob. | 10 | No |
| DeleteJob throttle limit | The throttle limit for DeleteJob. | 10 | Yes |
| DeleteJobExecution throttle limit | The throttle limit for DeleteJobExecution. | 10 | Yes |
| DescribeJob throttle limit | The throttle limit for DescribeJob. | 10 | Yes |
| DescribeJobExecution throttle limit | The throttle limit for DescribeJobExecution. | 10 | Yes |
| GetJobDocument throttle limit | The throttle limit for GetJobDocument. | 10 | Yes |
| ListJobExecutionsForJob throttle limit | The throttle limit for ListJobExecutionsForJob. | 10 | Yes |
| ListJobExecutionsForThing throttle limit | The throttle limit for ListJobExecutionsForThing. | 10 | Yes |
| ListJobs throttle limit | The throttle limit for ListJobs. | 10 | Yes |
| UpdateJob throttle limit | The throttle limit for UpdateJob. | 10 | Yes |

[†] For definitions of data plane and control plane, see [What are the ways for accessing AWS IoT Core?](#) in the [AWS IoT Core FAQs](#)

AWS IoT Secure Tunneling

AWS IoT Device Management secure tunneling limits and quotas

| Limit display name | Description | Default value | Adjustable |
|--|--|---------------|------------|
| CloseTunnel API throttle limit | The maximum number of transactions per second per account which can be caused by invoking CloseTunnel. | 1 | Yes |
| DescribeTunnel API throttle limit | The maximum number of transactions per second per account which can be caused by invoking DescribeTunnel. | 10 | Yes |
| ListTagsForResource API throttle limit | The maximum number of transactions per second per account which can be caused by invoking ListTagsForResource. | 10 | Yes |
| ListTunnels API throttle limit | The maximum number of transactions per second per account which can be caused by invoking ListTunnels. | 10 | Yes |
| Maximum bandwidth per tunnel | The maximum bandwidth per tunnel (in kbps). | 800 | No |
| Maximum connection rate | The maximum number of transactions for connecting to a tunnel per second. | 10 | Yes |
| Maximum number of tags per resource | The maximum number of tags that can be used per resource. | 50 | No |
| Maximum tag key length | The maximum number of Unicode characters in a tag key. Each resource and tag key must be unique. | 128 | No |
| Maximum tag value length | The maximum number of Unicode characters in a tag value. Each tag key can have one value. | 256 | No |

| Limit display name | Description | Default value | Adjustable |
|--|--|---------------|---------------------|
| Maximum tunnel lifetime | The maximum tunnel lifetime (in hours), after which a tunnel will be closed after reaching. | 12 | No |
| OpenTunnel API throttle limit | The maximum number of transactions per second per account which can be caused by invoking OpenTunnel. | 1 | Yes |
| TagResource API throttle limit | The maximum number of transactions per second per account which can be caused by invoking TagResource. | 10 | Yes |
| UntagResource API throttle limit | The maximum number of transactions per second per account which can be caused by invoking UntagResource. | 10 | Yes |

Fleet Hub for AWS IoT Device Management

Fleet Hub limits and quotas

| Limit display name | Description | Default value | Adjustable |
|---|--|---------------|---------------------|
| Number of applications per Region per AWS account | The maximum number of applications per Region per AWS account. | 10 | Yes |

Fleet Hub API throttling limits

| Resource | Quota | Adjustable |
|---------------------|----------------------------|---------------------|
| Alarms | 100 per Region per account | Yes |
| CreateApplication | 10 TPS | Yes |
| DeleteApplication | 10 TPS | Yes |
| DescribeApplication | 10 TPS | Yes |
| ListApplications | 10 TPS | Yes |
| ListTagsForResource | 10 TPS | Yes |
| TagResource | 10 TPS | Yes |

| Resource | Quota | Adjustable |
|-------------------|--------|------------|
| UntagResource | 10 TPS | Yes |
| UpdateApplication | 10 TPS | Yes |

AWS IoT Events endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Control plane endpoints

The following table contains AWS Region-specific endpoints that AWS IoT Events supports for control plane operations. For more information, see [AWS IoT Events operations](#) in the *AWS IoT Events API Reference*.

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|--|----------|
| US East (Ohio) | us-east-2 | iotevents.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | iotevents.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | iotevents.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | iotevents.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | iotevents.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | iotevents.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | iotevents.ap-southeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | iotevents.ap-northeast-1.amazonaws.com | HTTPS |
| Europe (Frankfurt) | eu-central-1 | iotevents.eu-central-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|---------------------------------------|----------|--|
| Europe (Ireland) | eu-west-1 | iotevents.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | iotevents.eu-west-2.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | iotevents.us-gov-west-1.amazonaws.com | HTTPS | |

Data plane endpoints

The following table contains AWS Region-specific endpoints that AWS IoT Events supports for data plane operations. For more information, see [AWS IoT Events data operations](#) in the *AWS IoT Events API Reference*.

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------|--|
| US East (Ohio) | us-east-2 | data.iotevents.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | data.iotevents.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | data.iotevents.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | data.iotevents.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | data.iotevents.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | data.iotevents.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | data.iotevents.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | data.iotevents.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | data.iotevents.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | data.iotevents.eu-west-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|--|----------|--|
| Europe (London) | eu-west-2 | data.iotevents.eu-west-2.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | data.iotevents.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|--------------------------------------|------------|
| Detector model definition size | Each supported Region: 512 Kilobytes | No |
| Detector model versions | Each supported Region: 500 | Yes |
| Detector models | Each supported Region: 50 | Yes |
| Detector models per input | Each supported Region: 10 | No |
| Detectors per detector model | Each supported Region: 100,000 | Yes |
| Inputs | Each supported Region: 50 | Yes |
| Maximum actions per alarm model | Each supported Region: 10 | Yes |
| Maximum actions per event | Each supported Region: 10 | Yes |
| Maximum alarm model versions per alarm model | Each supported Region: 500 | Yes |
| Maximum alarm models per account | Each supported Region: 200 | Yes |
| Maximum alarm models per input | Each supported Region: 10 | No |
| Maximum alarms per alarm model | Each supported Region: 100,000 | Yes |
| Maximum events per state | Each supported Region: 20 | Yes |
| Maximum messages per alarm per second | Each supported Region: 10 | No |
| Maximum number of alarm models per property in an AWS IoT SiteWise asset model | Each supported Region: 10 | Yes |
| Maximum number of recipients per notification action in an alarm model | Each supported Region: 10 | Yes |
| Maximum total messages evaluated per second | Each supported Region: 1,000 | Yes |
| Maximum transition events per state | Each supported Region: 20 | Yes |
| Message size | Each supported Region: 1 Kilobytes | Yes |

| Name | Default | Adjustable |
|---|-----------------------------------|------------|
| Messages per detector per second | Each supported Region: 10 | No |
| Minimum timer duration | Each supported Region: 60 Seconds | Yes |
| Number of detector model analyses in RUNNING status | Each supported Region: 10 | Yes |
| State variables per detector model definition | Each supported Region: 50 | Yes |
| States per detector model | Each supported Region: 20 | Yes |
| Timers scheduled per detector | Each supported Region: 5 | Yes |
| Trigger expressions | Each supported Region: 20 | Yes |

For more information, see [AWS IoT Events quotas](#) in the *AWS IoT Events User Guide*.

AWS IoT Greengrass V1 endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Control Plane Operations

The following table contains AWS Region-specific endpoints that AWS IoT Greengrass supports for group management operations.

| Region Name | Region | Endpoint | Protocol |
|-------------------------|------------|-------------------------------------|----------|
| US East (Ohio) | us-east-2 | greengrass.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | greengrass.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | greengrass.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | greengrass.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | greengrass.ap-south-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|---|--|
| Asia Pacific (Seoul) | ap-northeast-2 | greengrass.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | greengrass.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | greengrass.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | greengrass.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | greengrass.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | greengrass.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | greengrass.eu-west-2.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | greengrass.us-gov-east-1.amazonaws.com greengrass.us-gov-east-1.amazonaws.com greengrass-ats.iot.us-gov-east-1.amazonaws.com greengrass-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS MQTT and HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | greengrass.us-gov-west-1.amazonaws.com greengrass-ats.iot.us-gov-west-1.amazonaws.com greengrass.us-gov-west-1.amazonaws.com | HTTPS MQTT and HTTPS HTTPS | |

AWS IoT Device Operations

The following table contains AWS Region-specific Amazon Trust Services (ATS) endpoints for AWS IoT device management operations, such as shadow sync. This is a data plane API.

To look up your account-specific endpoint, use the [aws iot describe-endpoint --endpoint-type iot:Data-ATS](#) command.

| Region Name | Region | Endpoint | Protocol |
|-----------------------|-----------|--|-------------|
| US East (Ohio) | us-east-2 | <i>prefix</i> -ats.iot.us-east-2.amazonaws.com | HTTPS, MQTT |
| US East (N. Virginia) | us-east-1 | <i>prefix</i> -ats.iot.us-east-1.amazonaws.com | HTTPS, MQTT |

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|--|-------------|
| US West (Oregon) | us-west-2 | <i>prefix-ats.iot.us-west-2.amazonaws.com</i> | HTTPS, MQTT |
| Asia Pacific (Mumbai) | ap-south-1 | <i>prefix-ats.iot.ap-south-1.amazonaws.com</i> | HTTPS, MQTT |
| Asia Pacific (Seoul) | ap-northeast-2 | <i>prefix-ats.iot.ap-northeast-2.amazonaws.com</i> | HTTPS, MQTT |
| Asia Pacific (Singapore) | ap-southeast-1 | <i>prefix-ats.iot.ap-southeast-1.amazonaws.com</i> | HTTPS, MQTT |
| Asia Pacific (Sydney) | ap-southeast-2 | <i>prefix-ats.iot.ap-southeast-2.amazonaws.com</i> | HTTPS, MQTT |
| Asia Pacific (Tokyo) | ap-northeast-1 | <i>prefix-ats.iot.ap-northeast-1.amazonaws.com</i> | HTTPS, MQTT |
| China (Beijing) | cn-north-1 | <i>prefix.ats.iot.cn-north-1.amazonaws.com.cn</i> | HTTPS, MQTT |
| Europe (Frankfurt) | eu-central-1 | <i>prefix-ats.iot.eu-central-1.amazonaws.com</i> | HTTPS, MQTT |
| Europe (Ireland) | eu-west-1 | <i>prefix-ats.iot.eu-west-1.amazonaws.com</i> | HTTPS, MQTT |
| Europe (London) | eu-west-2 | <i>prefix-ats.iot.eu-west-2.amazonaws.com</i> | HTTPS, MQTT |
| AWS GovCloud (US-West) | us-gov-west-1 | <i>prefix-ats.iot.us-gov-west-1.amazonaws.com</i> | HTTPS, MQTT |
| AWS GovCloud (US-East) | us-gov-east-1 | <i>prefix-ats.iot.us-gov-east-1.amazonaws.com</i> | HTTPS, MQTT |

Note

Legacy Verisign endpoints are currently supported for [some Regions \(p. 401\)](#), but we recommend that you use ATS endpoints with ATS root certificate authority (CA) certificates. For more information, see [Server Authentication](#) in the *AWS IoT Developer Guide*.

Discovery Operations

The following table contains AWS Region-specific ATS endpoints for device discovery operations using the [AWS Greengrass Discovery API](#). This is a data plane API.

| Region Name | Region | Endpoint | Protocol |
|-----------------------|-----------|---|----------|
| US East (Ohio) | us-east-2 | <i>greengrass-ats.iot.us-east-2.amazonaws.com</i> | HTTPS |
| US East (N. Virginia) | us-east-1 | <i>greengrass-ats.iot.us-east-1.amazonaws.com</i> | HTTPS |
| US West (Oregon) | us-west-2 | <i>greengrass-ats.iot.us-west-2.amazonaws.com</i> | HTTPS |

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------|
| Asia Pacific (Mumbai) | ap-south-1 | greengrass-ats.iot.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | greengrass-ats.iot.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | greengrass-ats.iot.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | greengrass-ats.iot.ap-southeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | greengrass-ats.iot.ap-northeast-1.amazonaws.com | HTTPS |
| China (Beijing) | cn-north-1 | greengrass.ats.iot.cn-north-1.amazonaws.com.cn | HTTPS |
| Europe (Frankfurt) | eu-central-1 | greengrass-ats.iot.eu-central-1.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | greengrass-ats.iot.eu-west-1.amazonaws.com | HTTPS |
| Europe (London) | eu-west-2 | greengrass-ats.iot.eu-west-2.amazonaws.com | HTTPS |
| AWS GovCloud (US-West) | us-gov-west-1 | greengrass-ats.iot.us-gov-west-1.amazonaws.com | HTTPS |
| AWS GovCloud (US-East) | us-gov-east-1 | greengrass-ats.iot.us-gov-east-1.amazonaws.com | HTTPS |

Note

Legacy Verisign endpoints are currently supported for [some Regions \(p. 401\)](#), but we recommend that you use ATS endpoints with ATS root CA certificates. For more information, see [Server authentication](#) in the *AWS IoT Developer Guide*.

Supported Legacy Endpoints

We recommend that you use the ATS endpoints in the preceding tables with ATS root CA certificates. For backward compatibility, AWS IoT Greengrass currently supports legacy Verisign endpoints in the following AWS Regions. This support is expected to end in the future. For more information, see [Server authentication](#) in the *AWS IoT Developer Guide*.

When using legacy Verisign endpoints, you must use Verisign root CA certificates.

[AWS IoT Device Operations \(Legacy Endpoints\)](#)

| Region Name | Region | Endpoint | Protocol |
|-----------------------|-----------|--|-------------|
| US East (N. Virginia) | us-east-1 | <i>prefix</i> .iot.us-east-1.amazonaws.com | HTTPS, MQTT |
| US West (Oregon) | us-west-2 | <i>prefix</i> .iot.us-west-2.amazonaws.com | HTTPS, MQTT |

| Region Name | Region | Endpoint | Protocol |
|-----------------------|----------------|--|-------------|
| Asia Pacific (Sydney) | ap-southeast-2 | <i>prefix.iot.ap-southeast-2.amazonaws.com</i> | HTTPS, MQTT |
| Asia Pacific (Tokyo) | ap-northeast-1 | <i>prefix.iot.ap-northeast-1.amazonaws.com</i> | HTTPS, MQTT |
| Europe (Frankfurt) | eu-central-1 | <i>prefix.iot.eu-central-1.amazonaws.com</i> | HTTPS, MQTT |
| Europe (Ireland) | eu-west-1 | <i>prefix.iot.eu-west-1.amazonaws.com</i> | HTTPS, MQTT |

To look up your account-specific legacy endpoint, use the [aws iot describe-endpoint --endpoint-type iot:Data](#) command.

Discovery Operations (Legacy Endpoints)

| Region Name | Region | Endpoint | Protocol |
|-----------------------|----------------|---|----------|
| US East (N. Virginia) | us-east-1 | greengrass.iot.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | greengrass.iot.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | greengrass.iot.ap-southeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | greengrass.iot.ap-northeast-1.amazonaws.com | HTTPS |
| Europe (Frankfurt) | eu-central-1 | greengrass.iot.eu-central-1.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | greengrass.iot.eu-west-1.amazonaws.com | HTTPS |

Service quotas

AWS IoT Greengrass Cloud API

| Description | Default |
|---|---------|
| Maximum number of AWS IoT devices per AWS IoT Greengrass group. | 2500 |
| Maximum number of Lambda functions per group. | 200 |
| Maximum number of resources per Lambda function. | 20 |
| Maximum number of resources per group. | 200 |

| Description | Default |
|---|---|
| Maximum number of transactions per second (TPS) on the AWS IoT Greengrass APIs. | See the section called "TPS" (p. 403) . |
| Maximum number of subscriptions per group. | 10000 |
| Maximum number of subscriptions that specify Cloud as the source per group. | 50 |
| Maximum length of a core thing name. | 124 bytes of UTF-8 encoded characters. |

TPS

The default quota for the maximum number of transactions per second on the AWS IoT Greengrass APIs depends on the API and the AWS Region where AWS IoT Greengrass is used.

For most APIs and [supported AWS Regions \(p. 398\)](#), the default quota is 30. Exceptions are noted in the following tables.

API exceptions

| API | Default |
|------------------|---------|
| CreateDeployment | 20 |

AWS Region exceptions

| AWS Region | Default |
|------------------------|---------|
| China (Beijing) | 10 |
| AWS GovCloud (US-West) | 10 |
| AWS GovCloud (US-East) | 10 |

This quota applies per AWS account. For example, in the US East (N. Virginia) Region, each account has a default quota of 30 TPS. Each API (such as `CreateGroupVersion` or `ListFunctionDefinitions`) has a quota of 30 TPS. This includes control plane and data plane operations. Requests that exceed the account or API quotas are throttled. To request account and API quota increases, including quotas for specific APIs, contact your AWS Enterprise Support representative.

AWS IoT Greengrass Core

| Description | Default |
|---|---|
| Maximum number of routing table entries that specify Cloud as the source. | 50 (matches AWS IoT subscription quota) |
| Maximum size of messages sent by an AWS IoT device. | 128 KB (matches AWS IoT message size quota) |
| Minimum message queue size in the Greengrass core router. | 256 KB |

| Description | Default |
|---|--|
| Maximum length of a topic string. | 256 bytes of UTF-8 encoded characters. |
| Maximum number of forward slashes (/) in a topic or topic filter. | 7 |
| Minimum disk space needed to run the Greengrass Core software. | 128 MB 400 MB when using OTA updates |
| Minimum RAM to run the Greengrass Core software. | 128 MB 198 MB when using stream manager |

The Greengrass Core software provides a service to detect the IP addresses of your Greengrass core devices. It sends this information to the AWS IoT Greengrass cloud service and allows AWS IoT devices to download the IP address of the Greengrass core they need to connect to.

Do not use this feature if any of the following is true:

- The IP address of a Greengrass core device changes frequently.
- The Greengrass core device is not always available to AWS IoT devices in its group.
- The Greengrass core has multiple IP addresses and an AWS IoT device is unable to reliably determine which address to use.
- Your organization's security policies don't allow you to send devices' IP addresses to the AWS Cloud.

AWS IoT Greengrass V2 endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Control Plane Operations

The following table contains AWS Region-specific endpoints that AWS IoT Greengrass V2 supports for operations to manage components, devices, and deployments.

| Region Name | Region | Endpoint | Protocol |
|-----------------------|-----------|------------------------------------|----------|
| US East (Ohio) | us-east-2 | greengrass.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | greengrass.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | greengrass.us-west-2.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------------------------------|--|
| Asia Pacific (Mumbai) | ap-south-1 | greengrass.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | greengrass.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | greengrass.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | greengrass.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | greengrass.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | greengrass.ca-central-1.amazonaws.com | HTTPS | |
| China (Beijing) | cn-north-1 | greengrass.cn-north-1.amazonaws.com.cn | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | greengrass.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | greengrass.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | greengrass.eu-west-2.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | greengrass.us-gov-west-1.amazonaws.com greengrass.us-gov-west-1.amazonaws.com greengrass-ats.iot.us-gov-west-1.amazonaws.com | HTTPS HTTPS MQTT and HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | greengrass.us-gov-east-1.amazonaws.com greengrass.us-gov-east-1.amazonaws.com greengrass-ats.iot.us-gov-east-1.amazonaws.com | HTTPS HTTPS MQTT and HTTPS | |

AWS IoT Device Operations

The following table contains AWS Region-specific Amazon Trust Services (ATS) endpoints for AWS IoT device management operations, such as shadow sync. This is a data plane API.

To look up your account-specific endpoint, use the [aws iot describe-endpoint --endpoint-type iot:Data-ATS](#) command.

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|--|-------------|
| US East (Ohio) | us-east-2 | <i>prefix-ats.iot.us-east-2.amazonaws.com</i> | HTTPS, MQTT |
| US East (N. Virginia) | us-east-1 | <i>prefix-ats.iot.us-east-1.amazonaws.com</i> | HTTPS, MQTT |
| US West (Oregon) | us-west-2 | <i>prefix-ats.iot.us-west-2.amazonaws.com</i> | HTTPS, MQTT |
| Asia Pacific (Mumbai) | ap-south-1 | <i>prefix-ats.iot.ap-south-1.amazonaws.com</i> | HTTPS, MQTT |
| Asia Pacific (Seoul) | ap-northeast-2 | <i>prefix-ats.iot.ap-northeast-2.amazonaws.com</i> | HTTPS, MQTT |
| Asia Pacific (Singapore) | ap-southeast-1 | <i>prefix-ats.iot.ap-southeast-1.amazonaws.com</i> | HTTPS, MQTT |
| Asia Pacific (Sydney) | ap-southeast-2 | <i>prefix-ats.iot.ap-southeast-2.amazonaws.com</i> | HTTPS, MQTT |
| Asia Pacific (Tokyo) | ap-northeast-1 | <i>prefix-ats.iot.ap-northeast-1.amazonaws.com</i> | HTTPS, MQTT |
| Canada (Central) | ca-central-1 | <i>prefix-ats.iot.ca-central-1.amazonaws.com</i> | HTTPS, MQTT |
| China (Beijing) | cn-north-1 | <i>prefix.ats.iot.cn-north-1.amazonaws.com.cn</i> | HTTPS, MQTT |
| Europe (Frankfurt) | eu-central-1 | <i>prefix-ats.iot.eu-central-1.amazonaws.com</i> | HTTPS, MQTT |
| Europe (Ireland) | eu-west-1 | <i>prefix-ats.iot.eu-west-1.amazonaws.com</i> | HTTPS, MQTT |
| Europe (London) | eu-west-2 | <i>prefix-ats.iot.eu-west-2.amazonaws.com</i> | HTTPS, MQTT |
| AWS GovCloud (US-West) | us-gov-west-1 | <i>prefix-ats.iot.us-gov-west-1.amazonaws.com</i> | HTTPS, MQTT |
| AWS GovCloud (US-East) | us-gov-east-1 | <i>prefix-ats.iot.us-gov-east-1.amazonaws.com</i> | HTTPS, MQTT |

Note

Legacy Verisign endpoints are currently supported for [some Regions \(p. 407\)](#), but we recommend that you use ATS endpoints with ATS root certificate authority (CA) certificates. For more information, see [Server Authentication](#) in the *AWS IoT Developer Guide*.

Date Plane Operations

The following table contains AWS Region-specific ATS endpoints for data plane API operations, such as [ResolveComponentCandidates](#).

| Region Name | Region | Endpoint | Protocol |
|----------------|-----------|--|----------|
| US East (Ohio) | us-east-2 | greengrass-ats.iot.us-east-2.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------|
| US East (N. Virginia) | us-east-1 | greengrass-ats.iot.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | greengrass-ats.iot.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | greengrass-ats.iot.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | greengrass-ats.iot.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | greengrass-ats.iot.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | greengrass-ats.iot.ap-southeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | greengrass-ats.iot.ap-northeast-1.amazonaws.com | HTTPS |
| Canada (Central) | ca-central-1 | greengrass-ats.iot.ap-northeast-1.amazonaws.com | HTTPS |
| China (Beijing) | cn-north-1 | greengrass.ats.iot.cn-north-1.amazonaws.com.cn | HTTPS |
| Europe (Frankfurt) | eu-central-1 | greengrass-ats.iot.eu-central-1.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | greengrass-ats.iot.eu-west-1.amazonaws.com | HTTPS |
| Europe (London) | eu-west-2 | greengrass-ats.iot.eu-west-2.amazonaws.com | HTTPS |
| AWS GovCloud (US-West) | us-gov-west-1 | greengrass-ats.iot.us-gov-west-1.amazonaws.com | HTTPS |
| AWS GovCloud (US-East) | us-gov-east-1 | greengrass-ats.iot.us-gov-east-1.amazonaws.com | HTTPS |

Note

Legacy Verisign endpoints are currently supported for [some Regions \(p. 407\)](#), but we recommend that you use ATS endpoints with ATS root CA certificates. For more information, see [Server authentication](#) in the *AWS IoT Developer Guide*.

Supported Legacy Endpoints

We recommend that you use the ATS endpoints in the preceding tables with ATS root CA certificates. For backward compatibility, AWS IoT Greengrass V2 currently supports legacy Verisign endpoints in the following AWS Regions. This support is expected to end in the future. For more information, see [Server authentication](#) in the *AWS IoT Developer Guide*.

When using legacy Verisign endpoints, you must use Verisign root CA certificates.

AWS IoT Device Operations (Legacy Endpoints)

| Region Name | Region | Endpoint | Protocol |
|-----------------------|----------------|--|-----------------|
| US East (N. Virginia) | us-east-1 | <i>prefix.iot.us-east-1.amazonaws.com</i> | HTTPS, MQTT |
| US West (Oregon) | us-west-2 | <i>prefix.iot.us-west-2.amazonaws.com</i> | HTTPS, MQTT |
| Asia Pacific (Sydney) | ap-southeast-2 | <i>prefix.iot.ap-southeast-2.amazonaws.com</i> | HTTPS, MQTT |
| Asia Pacific (Tokyo) | ap-northeast-1 | <i>prefix.iot.ap-northeast-1.amazonaws.com</i> | HTTPS, MQTT |
| Europe (Frankfurt) | eu-central-1 | <i>prefix.iot.eu-central-1.amazonaws.com</i> | HTTPS, MQTT |
| Europe (Ireland) | eu-west-1 | <i>prefix.iot.eu-west-1.amazonaws.com</i> | HTTPS, MQTT |

To look up your account-specific legacy endpoint, use the [aws iot describe-endpoint --endpoint-type iot:Data](#) command.

Data Plane Operations (Legacy Endpoints)

| Region Name | Region | Endpoint | Protocol |
|-----------------------|----------------|---|-----------------|
| US East (N. Virginia) | us-east-1 | greengrass.iot.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | greengrass.iot.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | greengrass.iot.ap-southeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | greengrass.iot.ap-northeast-1.amazonaws.com | HTTPS |
| Europe (Frankfurt) | eu-central-1 | greengrass.iot.eu-central-1.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | greengrass.iot.eu-west-1.amazonaws.com | HTTPS |

Service quotas

The following tables describe quotas in AWS IoT Greengrass V2. For more information about quotas and how to request quota increases, see [AWS service quotas \(p. 745\)](#).

Quotas for core devices

| Resource | Quota | Adjustable |
|--|---------------------------------------|------------|
| Maximum length of a core device thing name | 124 bytes of UTF-8 encoded characters | No |

Quotas for components

| Resource | Quota | Adjustable | Notes |
|---|---|------------|---|
| Maximum number of components | 5,000 components per Region | Yes | |
| Maximum number of component versions | 5,000 versions per component per Region | Yes | |
| Maximum size of component recipe | 8 KB | No | |
| Maximum total size of component artifacts | 2 GB | No | This quota applies to the sum of all artifacts for a component. |

Quotas for deployments

| Resource | Quota | Adjustable | Notes |
|--|-------|------------|---|
| Maximum size of deployment document for a thing deployment (without large configuration support) | 7 KB | No | The deployment document includes the component configurations, deployment configurations, and payload overhead. |
| Maximum size of deployment document for a thing group deployment (without large configuration support) | 31 KB | No | The deployment document includes the component configurations, deployment configurations, and payload overhead. |
| Maximum size of deployment document with large configuration support | 10 MB | No | The deployment document includes the component configurations, deployment configurations, and payload overhead. |

Quotas for API operations

| Resource | Quota | Adjustable | Notes |
|---|-----------------------------------|------------|---|
| Request rate for CreateComponentVersion | 1 request per second per Region | No | |
| Request rate for other API operations | 30 requests per second per Region | No | <p>This quota applies to the combination of API requests for all control plane operations.</p> <p>Exceptions</p> <ul style="list-style-type: none"> • China (Beijing) – 10 requests per second per Region • AWS GovCloud (US-West) – 10 requests per second per Region • AWS GovCloud (US-East) – 10 requests per second per Region |

AWS IoT RoboRunner endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|-----------------------|--------------|--|----------|
| US East (N. Virginia) | us-east-1 | iotroborunner.us-east-1.amazonaws.com | HTTPS |
| Europe (Frankfurt) | eu-central-1 | iotroborunner.eu-central-1.amazonaws.com | HTTPS |

Service quotas

| Name | Default | Adjustable |
|------------------|----------------------------|------------|
| Action templates | Each supported Region: 150 | Yes |
| Actions | Each supported Region: 150 | Yes |

| Name | Default | Adjustable |
|---|---------------------------|------------|
| Activities | Each supported Region: 30 | Yes |
| Destination relationships | Each supported Region: 30 | Yes |
| Destinations | Each supported Region: 15 | Yes |
| Rate of CreateAction requests | Each supported Region: 10 | No |
| Rate of CreateActionTemplate requests | Each supported Region: 10 | No |
| Rate of CreateActionTemplateDependency requests | Each supported Region: 10 | No |
| Rate of CreateActivity requests | Each supported Region: 10 | No |
| Rate of CreateActivityDependency requests | Each supported Region: 10 | No |
| Rate of CreateDestination requests | Each supported Region: 5 | No |
| Rate of CreateDestinationRelationship requests | Each supported Region: 5 | No |
| Rate of CreateSite requests | Each supported Region: 5 | No |
| Rate of CreateTask requests | Each supported Region: 10 | No |
| Rate of CreateTaskDependency requests | Each supported Region: 10 | No |
| Rate of CreateWorker requests | Each supported Region: 5 | No |
| Rate of CreateWorkerFleet requests | Each supported Region: 5 | No |
| Rate of DeleteAction requests | Each supported Region: 3 | No |
| Rate of DeleteActionTemplate requests | Each supported Region: 3 | No |
| Rate of DeleteActionTemplateDependency requests | Each supported Region: 3 | No |
| Rate of DeleteActivity requests | Each supported Region: 3 | No |
| Rate of DeleteActivityDependency requests | Each supported Region: 3 | No |
| Rate of DeleteDestination requests | Each supported Region: 3 | No |
| Rate of DeleteDestinationRelationship requests | Each supported Region: 3 | No |
| Rate of DeleteSite requests | Each supported Region: 3 | No |
| Rate of DeleteTask requests | Each supported Region: 3 | No |
| Rate of DeleteTaskDependency requests | Each supported Region: 3 | No |
| Rate of DeleteWorker requests | Each supported Region: 3 | No |
| Rate of DeleteWorkerFleet requests | Each supported Region: 3 | No |
| Rate of GetAction requests | Each supported Region: 20 | No |
| Rate of GetActionTemplate requests | Each supported Region: 20 | No |
| Rate of GetActivity requests | Each supported Region: 20 | No |
| Rate of GetDestination requests | Each supported Region: 20 | No |

| Name | Default | Adjustable |
|---|---------------------------|------------|
| Rate of GetDestinationRelationship requests | Each supported Region: 20 | No |
| Rate of GetSite requests | Each supported Region: 20 | No |
| Rate of GetTask requests | Each supported Region: 20 | No |
| Rate of GetWorker requests | Each supported Region: 20 | No |
| Rate of GetWorkerFleet requests | Each supported Region: 20 | No |
| Rate of ListActionTemplates requests | Each supported Region: 30 | No |
| Rate of ListActions requests | Each supported Region: 30 | No |
| Rate of ListActivities requests | Each supported Region: 30 | No |
| Rate of ListDestinationRelationships requests | Each supported Region: 30 | No |
| Rate of ListDestinations requests | Each supported Region: 30 | No |
| Rate of ListSites requests | Each supported Region: 30 | No |
| Rate of ListTasks requests | Each supported Region: 30 | No |
| Rate of ListWorkerFleets requests | Each supported Region: 30 | No |
| Rate of ListWorkers requests | Each supported Region: 30 | No |
| Rate of UpdateActionState requests | Each supported Region: 10 | No |
| Rate of UpdateActivity requests | Each supported Region: 10 | No |
| Rate of UpdateDestination requests | Each supported Region: 5 | No |
| Rate of UpdateSite requests | Each supported Region: 5 | No |
| Rate of UpdateTask requests | Each supported Region: 10 | No |
| Rate of UpdateWorker requests | Each supported Region: 5 | No |
| Rate of UpdateWorkerFleet requests | Each supported Region: 5 | No |
| Sites | Each supported Region: 3 | Yes |
| Tasks | Each supported Region: 30 | Yes |
| Worker fleets | Each supported Region: 9 | Yes |
| Workers | Each supported Region: 60 | Yes |

AWS IoT SiteWise endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------|--|
| US East (N. Virginia) | us-east-1 | iotsitewise.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | iotsitewise.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | iotsitewise.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | iotsitewise.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | iotsitewise.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | iotsitewise.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | iotsitewise.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | iotsitewise.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | iotsitewise.eu-west-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | iotsitewise.us-gov-west-1.amazonaws.com | HTTPS | |

For more information, see [AWS IoT SiteWise endpoints](#) in the *AWS IoT SiteWise User Guide*.

Service quotas

| Name | Default | Adjustable |
|---|----------------------------|---------------------|
| Depth of asset hierarchy tree | Each supported Region: 10 | Yes |
| Number of OPC UA sources per gateway | Each supported Region: 100 | No |
| Number of asset hierarchy definitions per asset model | Each supported Region: 20 | Yes |
| Number of asset models per Region per AWS account | Each supported Region: 100 | Yes |
| Number of asset models per hierarchy tree | Each supported Region: 50 | Yes |

| Name | Default | Adjustable |
|--|-------------------------------|------------|
| Number of assets per asset model | Each supported Region: 10,000 | Yes |
| Number of child assets per parent asset | Each supported Region: 100 | Yes |
| Number of dashboards per project | Each supported Region: 100 | Yes |
| Number of data points per second per data quality per asset property | Each supported Region: 10 | No |
| Number of days between the start date in the past and today for GetInterpolatedAssetPropertyValues | Each supported Region: 28 | Yes |
| Number of functions per property formula expression | Each supported Region: 10 | No |
| Number of gateways per Region per AWS account | Each supported Region: 100 | Yes |
| Number of metrics per dashboard visualization | Each supported Region: 5 | Yes |
| Number of parent asset models per child asset model | Each supported Region: 10 | Yes |
| Number of portals per Region per AWS account | Each supported Region: 100 | Yes |
| Number of projects per portal | Each supported Region: 100 | Yes |
| Number of properties per asset model | Each supported Region: 200 | Yes |
| Number of properties that depend on a single property | Each supported Region: 30 | No |
| Number of properties that directly depend on a single property | Each supported Region: 20 | Yes |
| Number of property variables per property formula expression | Each supported Region: 10 | No |
| Number of results per GetInterpolatedAssetPropertyValues request | Each supported Region: 10 | Yes |
| Number of root assets per project | Each supported Region: 1 | No |
| Number of visualizations per dashboard | Each supported Region: 10 | Yes |
| Rate of BatchPutAssetPropertyValue entries ingested per asset property | Each supported Region: 10 | No |
| Rate of GetInterpolatedAssetPropertyValues requests | Each supported Region: 500 | Yes |
| Rate of data points ingested | Each supported Region: 1,000 | Yes |
| Request rate for AssociateAssets | Each supported Region: 30 | Yes |
| Request rate for AssociateTimeSeriesToAssetProperty | Each supported Region: 30 | Yes |
| Request rate for BatchPutAssetPropertyValue | Each supported Region: 1,000 | Yes |
| Request rate for CreateAsset | Each supported Region: 30 | Yes |
| Request rate for CreateAssetModel | Each supported Region: 10 | Yes |

| Name | Default | Adjustable |
|--|------------------------------|------------|
| Request rate for DeleteAsset | Each supported Region: 30 | Yes |
| Request rate for DeleteAssetModel | Each supported Region: 10 | Yes |
| Request rate for DeleteTimeSeries | Each supported Region: 30 | Yes |
| Request rate for DescribeAsset | Each supported Region: 30 | Yes |
| Request rate for DescribeAssetModel | Each supported Region: 10 | Yes |
| Request rate for DescribeAssetProperty | Each supported Region: 30 | Yes |
| Request rate for DescribeDefaultEncryptionConfiguration | Each supported Region: 10 | Yes |
| Request rate for DescribeLoggingOptions | Each supported Region: 30 | Yes |
| Request rate for DescribeStorageConfiguration | Each supported Region: 10 | Yes |
| Request rate for DescribeTimeSeries | Each supported Region: 30 | Yes |
| Request rate for DisassociateAssets | Each supported Region: 30 | Yes |
| Request rate for DisassociateTimeSeriesFromAssetProperty | Each supported Region: 30 | Yes |
| Request rate for GetAssetPropertyAggregates | Each supported Region: 1,000 | Yes |
| Request rate for GetAssetPropertyValue | Each supported Region: 1,000 | Yes |
| Request rate for GetAssetPropertyValueHistory | Each supported Region: 1,000 | Yes |
| Request rate for ListAssetModels | Each supported Region: 10 | Yes |
| Request rate for ListAssetRelationships | Each supported Region: 30 | Yes |
| Request rate for ListAssets | Each supported Region: 30 | Yes |
| Request rate for ListAssociatedAssets | Each supported Region: 30 | Yes |
| Request rate for ListTagsForResource | Each supported Region: 10 | Yes |
| Request rate for ListTimeSeries | Each supported Region: 30 | Yes |
| Request rate for PutDefaultEncryptionConfiguration | Each supported Region: 10 | Yes |
| Request rate for PutLoggingOptions | Each supported Region: 30 | Yes |
| Request rate for PutStorageConfiguration | Each supported Region: 10 | Yes |
| Request rate for TagResource | Each supported Region: 10 | Yes |
| Request rate for UntagResource | Each supported Region: 10 | Yes |
| Request rate for UpdateAsset | Each supported Region: 30 | Yes |
| Request rate for UpdateAssetModel | Each supported Region: 10 | Yes |
| Request rate for UpdateAssetProperty | Each supported Region: 30 | Yes |

For more information, see [AWS IoT SiteWise quotas in the AWS IoT SiteWise User Guide](#).

AWS IoT Things Graph endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|----------------|---|----------|--|
| US East (N. Virginia) | us-east-1 | iotthingsgraph.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | iotthingsgraph.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | iotthingsgraph.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | iotthingsgraph.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | iotthingsgraph.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | iotthingsgraph.eu-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|--|---------------------|
| Flow definition size | Each supported Region: 10 Kilobytes | Yes |
| Maximum number of flows triggered | Each supported Region: 5 Count/Second | Yes |
| Maximum number of steps executed per deployment | Each supported Region: 50 Count/Second | Yes |
| TPS limit for AssociateEntityToThing | Each supported Region: 10 Count/Second | Yes |
| TPS limit for CreateDeploymentConfiguration | Each supported Region: 10 Count/Second | Yes |

| Name | Default | Adjustable |
|--|--|------------|
| TPS limit for CreateFlowTemplate | Each supported Region: 10 Count/Second | Yes |
| TPS limit for CreateSystemInstance | Each supported Region: 10 Count/Second | Yes |
| TPS limit for CreateSystemTemplate | Each supported Region: 10 Count/Second | Yes |
| TPS limit for DeleteDeploymentConfiguration | Each supported Region: 10 Count/Second | Yes |
| TPS limit for DeleteFlowTemplate | Each supported Region: 10 Count/Second | Yes |
| TPS limit for DeleteNamespace | Each supported Region: 10 Count/Second | Yes |
| TPS limit for DeleteSystemInstance | Each supported Region: 10 Count/Second | Yes |
| TPS limit for DeleteSystemTemplate | Each supported Region: 10 Count/Second | Yes |
| TPS limit for DeployConfigurationToTarget | Each supported Region: 10 Count/Second | Yes |
| TPS limit for DeploySystemInstance | Each supported Region: 10 Count/Second | Yes |
| TPS limit for DeprecateDeploymentConfiguration | Each supported Region: 10 Count/Second | Yes |
| TPS limit for DeprecateFlowTemplate | Each supported Region: 10 Count/Second | Yes |
| TPS limit for DeprecateSystemTemplate | Each supported Region: 10 Count/Second | Yes |
| TPS limit for DescribeNamespace | Each supported Region: 10 Count/Second | Yes |
| TPS limit for DissociateEntityFromThing | Each supported Region: 10 Count/Second | Yes |
| TPS limit for GetDeploymentConfiguration | Each supported Region: 10 Count/Second | Yes |
| TPS limit for GetEntities | Each supported Region: 10 Count/Second | Yes |
| TPS limit for GetFlowTemplate | Each supported Region: 10 Count/Second | Yes |
| TPS limit for GetFlowTemplateRevisions | Each supported Region: 10 Count/Second | Yes |
| TPS limit for GetNamespaceDeletionStatus | Each supported Region: 10 Count/Second | Yes |

| Name | Default | Adjustable |
|--|--|------------|
| TPS limit for GetRecentUploads | Each supported Region: 10 Count/Second | Yes |
| TPS limit for GetSystemInstance | Each supported Region: 10 Count/Second | Yes |
| TPS limit for GetSystemTemplate | Each supported Region: 10 Count/Second | Yes |
| TPS limit for GetSystemTemplateRevisions | Each supported Region: 10 Count/Second | Yes |
| TPS limit for GetUploadStatus | Each supported Region: 10 Count/Second | Yes |
| TPS limit for ListFlowExecutionMessages | Each supported Region: 10 Count/Second | Yes |
| TPS limit for ListMappingPaths | Each supported Region: 10 Count/Second | Yes |
| TPS limit for SearchDeploymentConfigurations | Each supported Region: 10 Count/Second | Yes |
| TPS limit for SearchEntities | Each supported Region: 10 Count/Second | Yes |
| TPS limit for SearchFlowExecutions | Each supported Region: 10 Count/Second | Yes |
| TPS limit for SearchFlowTemplates | Each supported Region: 10 Count/Second | Yes |
| TPS limit for SearchSystemInstance | Each supported Region: 10 Count/Second | Yes |
| TPS limit for SearchSystemTemplates | Each supported Region: 10 Count/Second | Yes |
| TPS limit for SearchThings | Each supported Region: 10 Count/Second | Yes |
| TPS limit for UndeploySystemInstance | Each supported Region: 10 Count/Second | Yes |
| TPS limit for UpdateFlowTemplate | Each supported Region: 10 Count/Second | Yes |
| TPS limit for UpdateSystemTemplate | Each supported Region: 10 Count/Second | Yes |
| TPS limit for UploadEntityDefinitions | Each supported Region: 10 Count/Second | Yes |
| TPS limit for ValidateEntityDefinitions | Each supported Region: 10 Count/Second | Yes |
| Total deployment configurations in a namespace | Each supported Region: 100 Count | Yes |

| Name | Default | Adjustable |
|---------------------------------------|------------------------------------|------------|
| Total entities in a namespace | Each supported Region: 500 Count | Yes |
| Total flow definitions in a namespace | Each supported Region: 100 Count | Yes |
| Upload request size | Each supported Region: 1 Megabytes | No |

AWS IoT TwinMaker endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------|
| US East (N. Virginia) | us-east-1 | iottwinmaker.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | iottwinmaker.us-west-2.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | iottwinmaker.eu-west-1.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | iottwinmaker.ap-southeast-1.amazonaws.com | HTTPS |

Service quotas

| Resource | Description | Quota | Adjustable |
|--|---|-------|------------|
| Workspaces in this account in the current Region | The maximum number of workspaces in this account in the current Region. | 15 | Yes |
| Component types per workspace | The maximum number of unique component types per workspace. | 150 | Yes |
| Depth of component type hierarchy | The maximum depth of the component type hierarchy tree. | 10 | Yes |

| Resource | Description | Quota | Adjustable |
|---|---|-------|------------|
| Parent component types per child component type | The maximum number of multi-inheritance parent component types or <code>extendsFrom</code> relationships one component type can have. | 10 | No |
| Properties per component type or component | The maximum number of properties that can be defined on a component type or added to any given component instance. | 200 | Yes |
| Entities per workspace | The maximum number of entities allowed per workspace. | 1000 | Yes |
| Components per entity | The maximum number of components that can be defined on one entity. | 10 | Yes |
| Depth of entity hierarchy | The maximum depth of the entity hierarchy tree. | 10 | Yes |
| Child entities per parent entity | The maximum number of direct children for one entity in the entity hierarchy tree. | 100 | Yes |
| Scenes per workspace | The maximum number of scenes within a workspace. | 100 | Yes |
| Tags per resource | The maximum number of tags that can be placed on any resource with an ARN (such as workspace, entity, component type, etc.). | 50 | No |

Amazon Interactive Video Service endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|-----------------------|----------------|----------------------------------|----------|
| US East (N. Virginia) | us-east-1 | ivs.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | ivs.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | ivs.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | ivs.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | ivs.ap-northeast-1.amazonaws.com | HTTPS |
| Europe (Frankfurt) | eu-central-1 | ivs.eu-central-1.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | ivs.eu-west-1.amazonaws.com | HTTPS |

Service quotas

| Name | Default | Adjustable |
|--|--|------------|
| Channels | Each supported Region: 5,000 | Yes |
| Concurrent streams | Each supported Region: 100 | Yes |
| Concurrent views | Each supported Region: 15,000 | Yes |
| Ingest bitrate (channel type BASIC) | Each supported Region: 1.5 Megabits per second | No |
| Ingest bitrate (channel type STANDARD) | Each supported Region: 8.5 Megabits per second | No |
| Metadata payload | Each supported Region: 1 Kilobytes | No |
| Playback authorization key pairs | Each supported Region: 3 | No |
| Playback token size | Each supported Region: 2 Kilobytes | No |
| PutMetadata rate per channel | Each supported Region: 5 per second | No |
| Recording configurations | Each supported Region: 20 | Yes |
| Stream Key | Each supported Region: 1 | No |

For more information, see [Service Quotas](#) in the *Amazon IVS User Guide*.

If there is a discrepancy, regard the *User Guide* as definitive.

Amazon Kendra endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | kendra.us-east-2.amazonaws.com kendra-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | kendra.us-east-1.amazonaws.com kendra-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | kendra.us-west-2.amazonaws.com kendra-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | kendra.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | kendra.ap-southeast-2.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | kendra.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | kendra.eu-west-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | kendra.us-gov-west-1.amazonaws.com kendra-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-----------------------------------|---------------------------|------------|
| Data sources (developer edition) | Each supported Region: 5 | No |
| Data sources (enterprise edition) | Each supported Region: 50 | Yes |
| Developer edition indexes | Each supported Region: 5 | Yes |
| Enterprise edition indexes | Each supported Region: 5 | Yes |

| Name | Default | Adjustable |
|---|-------------------------------------|------------|
| Extracted text size | Each supported Region: 5 Megabytes | Yes |
| FAQs | Each supported Region: 30 | Yes |
| File size | Each supported Region: 50 Megabytes | Yes |
| Ingestion attributes string list size | Each supported Region: 10 | Yes |
| Items in a query suggestions block list | Each supported Region: 20,000 | Yes |
| Query attributes user group list size | Each supported Region: 10 | Yes |
| Query capacity units | Each supported Region: 100 | Yes |
| Query suggestions block list file size | Each supported Region: 2 Megabytes | Yes |
| Query suggestions block lists | Each supported Region: 1 | No |
| Query suggestions returned in API | Each supported Region: 10 | Yes |
| Storage capacity units | Each supported Region: 100 | Yes |
| Synonym rules per thesaurus | Each supported Region: 10,000 | Yes |
| Synonyms per term | Each supported Region: 10 | No |
| Thesauri | Each supported Region: 1 | No |
| Thesaurus file size | Each supported Region: 5 Megabytes | Yes |

Amazon Keyspaces (for Apache Cassandra) endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|----------------|-----------|-----------------------------------|----------|--|
| US East (Ohio) | us-east-2 | cassandra.us-east-2.amazonaws.com | TLS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|-----------------|--|
| US East (N. Virginia) | us-east-1 | cassandra.us-east-1.amazonaws.com | TLS | |
| US West (N. California) | us-west-1 | cassandra.us-west-1.amazonaws.com | TLS | |
| US West (Oregon) | us-west-2 | cassandra.us-west-2.amazonaws.com | TLS | |
| Asia Pacific (Hong Kong) | ap-east-1 | cassandra.ap-east-1.amazonaws.com | TLS | |
| Asia Pacific (Mumbai) | ap-south-1 | cassandra.ap-south-1.amazonaws.com | TLS | |
| Asia Pacific (Seoul) | ap-northeast-2 | cassandra.ap-northeast-2.amazonaws.com | TLS | |
| Asia Pacific (Singapore) | ap-southeast-1 | cassandra.ap-southeast-1.amazonaws.com | TLS | |
| Asia Pacific (Sydney) | ap-southeast-2 | cassandra.ap-southeast-2.amazonaws.com | TLS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | cassandra.ap-northeast-1.amazonaws.com | TLS | |
| Canada (Central) | ca-central-1 | cassandra.ca-central-1.amazonaws.com | TLS | |
| Europe (Frankfurt) | eu-central-1 | cassandra.eu-central-1.amazonaws.com | TLS | |
| Europe (Ireland) | eu-west-1 | cassandra.eu-west-1.amazonaws.com | TLS | |
| Europe (London) | eu-west-2 | cassandra.eu-west-2.amazonaws.com | TLS | |
| Europe (Paris) | eu-west-3 | cassandra.eu-west-3.amazonaws.com | TLS | |
| Europe (Stockholm) | eu-north-1 | cassandra.eu-north-1.amazonaws.com | TLS | |
| Middle East (Bahrain) | me-south-1 | cassandra.me-south-1.amazonaws.com | TLS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|-----------|-----------------------------------|----------|--|
| South America (São Paulo) | sa-east-1 | cassandra.sa-east-1.amazonaws.com | TLS | |

For the following AWS Regions, FIPS endpoints are available.

| Region Name | Region | FIPS Endpoint | Protocol |
|-----------------------|-----------|--|----------|
| US East (N. Virginia) | us-east-1 | cassandra-fips.us-east-1.amazonaws.com | TLS |
| US West (Oregon) | us-west-2 | cassandra-fips.us-west-2.amazonaws.com | TLS |

Service quotas

| Name | Default | Adjustable |
|---|--------------------------------------|------------|
| Account-level read throughput quota (Provisioned mode) | Each supported Region: 80,000 | Yes |
| Account-level write throughput quota (Provisioned mode) | Each supported Region: 80,000 | Yes |
| Concurrent DDL operations | Each supported Region: 50 | No |
| Keyspaces per region | Each supported Region: 256 | Yes |
| Max Schema size | Each supported Region: 358,400 Bytes | No |
| Max amount of data restored using Point-in-time Recovery (PITR) | Each supported Region: 5 Terabytes | Yes |
| Max clustering key size | Each supported Region: 850 Bytes | No |
| Max concurrent table restores using Point-in-time Recovery (PITR) | Each supported Region: 4 | Yes |
| Max partition key size | Each supported Region: 2,048 Bytes | No |
| Max row size | Each supported Region: 1 Megabytes | No |
| Max static data per logical partition | Each supported Region: 1 Megabytes | No |
| Table-level read throughput quota | Each supported Region: 40,000 | Yes |

| Name | Default | Adjustable |
|------------------------------------|----------------------------------|------------|
| Table-level write throughput quota | Each supported Region: 40,000 | Yes |
| Tables per region | Each supported Region: 256 | Yes |

For more information, see [Quotas for Amazon Keyspaces \(for Apache Cassandra\)](#) in the *Amazon Keyspaces (for Apache Cassandra) Developer Guide*.

AWS Key Management Service endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|------------|--|-------------------------|--|
| US East (Ohio) | us-east-2 | kms.us-east-2.amazonaws.com kms-fips.us-east-2.amazonaws.com kms-fips.us-east-2.amazonaws.com | HTTPS HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | kms.us-east-1.amazonaws.com kms-fips.us-east-1.amazonaws.com kms-fips.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| US West (N. California) | us-west-1 | kms.us-west-1.amazonaws.com kms-fips.us-west-1.amazonaws.com kms-fips.us-west-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | kms.us-west-2.amazonaws.com kms-fips.us-west-2.amazonaws.com kms-fips.us-west-2.amazonaws.com | HTTPS HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | kms.af-south-1.amazonaws.com kms-fips.af-south-1.amazonaws.com kms-fips.af-south-1.amazonaws.com | HTTPS HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|-------------------------|--|
| Asia Pacific (Hong Kong) | ap-east-1 | kms.ap-east-1.amazonaws.com kms-fips.ap-east-1.amazonaws.com kms-fips.ap-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | kms.ap-southeast-3.amazonaws.com kms-fips.ap-southeast-3.amazonaws.com kms-fips.ap-southeast-3.amazonaws.com | HTTPS HTTPS HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | kms.ap-south-1.amazonaws.com kms-fips.ap-south-1.amazonaws.com kms-fips.ap-south-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | kms.ap-northeast-3.amazonaws.com kms-fips.ap-northeast-3.amazonaws.com kms-fips.ap-northeast-3.amazonaws.com | HTTPS HTTPS HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | kms.ap-northeast-2.amazonaws.com kms-fips.ap-northeast-2.amazonaws.com kms-fips.ap-northeast-2.amazonaws.com | HTTPS HTTPS HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | kms.ap-southeast-1.amazonaws.com kms-fips.ap-southeast-1.amazonaws.com kms-fips.ap-southeast-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | kms.ap-southeast-2.amazonaws.com kms-fips.ap-southeast-2.amazonaws.com kms-fips.ap-southeast-2.amazonaws.com | HTTPS HTTPS HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | kms.ap-northeast-1.amazonaws.com kms-fips.ap-northeast-1.amazonaws.com kms-fips.ap-northeast-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Canada (Central) | ca-central-1 | kms.ca-central-1.amazonaws.com kms-fips.ca-central-1.amazonaws.com kms-fips.ca-central-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | kms.eu-central-1.amazonaws.com kms-fips.eu-central-1.amazonaws.com kms-fips.eu-central-1.amazonaws.com | HTTPS HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|-------------------------|--|
| Europe (Ireland) | eu-west-1 | kms.eu-west-1.amazonaws.com kms-fips.eu-west-1.amazonaws.com kms-fips.eu-west-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (London) | eu-west-2 | kms.eu-west-2.amazonaws.com kms-fips.eu-west-2.amazonaws.com kms-fips.eu-west-2.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (Milan) | eu-south-1 | kms.eu-south-1.amazonaws.com kms-fips.eu-south-1.amazonaws.com kms-fips.eu-south-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (Paris) | eu-west-3 | kms.eu-west-3.amazonaws.com kms-fips.eu-west-3.amazonaws.com kms-fips.eu-west-3.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (Stockholm) | eu-north-1 | kms.eu-north-1.amazonaws.com kms-fips.eu-north-1.amazonaws.com kms-fips.eu-north-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Middle East (Bahrain) | me-south-1 | kms.me-south-1.amazonaws.com kms-fips.me-south-1.amazonaws.com kms-fips.me-south-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| South America (São Paulo) | sa-east-1 | kms.sa-east-1.amazonaws.com kms-fips.sa-east-1.amazonaws.com kms-fips.sa-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | kms.us-gov-east-1.amazonaws.com kms-fips.us-gov-east-1.amazonaws.com kms-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | kms.us-gov-west-1.amazonaws.com kms-fips.us-gov-west-1.amazonaws.com kms-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|---|------------|
| Aliases per CMK | Each supported Region: 50 | Yes |
| CancelKeyDeletion request rate | Each supported Region: 5 per second | Yes |
| ConnectCustomKeyStore request rate | Each supported Region: 5 per second | Yes |
| CreateAlias request rate | Each supported Region: 5 per second | Yes |
| CreateCustomKeyStore request rate | Each supported Region: 5 per second | Yes |
| CreateGrant request rate | Each supported Region: 50 per second | Yes |
| CreateKey request rate | Each supported Region: 5 per second | Yes |
| Cryptographic operations (ECC) request rate | Each supported Region: 300 per second | Yes |
| Cryptographic operations (RSA) request rate | Each supported Region: 500 per second | Yes |
| Cryptographic operations (symmetric) request rate | us-east-1: 50,000 per second us-east-2: 10,000 per second us-west-2: 50,000 per second ap-northeast-1: 10,000 per second ap-southeast-1: 10,000 per second ap-southeast-2: 10,000 per second eu-central-1: 10,000 per second eu-west-1: 50,000 per second eu-west-2: 10,000 per second Each of the other supported Regions: 5,500 per second | Yes |
| Customer Master Keys (CMKs) | Each supported Region: 10,000 | Yes |

| Name | Default | Adjustable |
|--|---|------------|
| DeleteAlias request rate | Each supported Region: 15 per second | Yes |
| DeleteCustomKeyStore request rate | Each supported Region: 5 per second | Yes |
| DeleteImportedKeyMaterial request rate | Each supported Region: 5 per second | Yes |
| DescribeCustomKeyStores request rate | Each supported Region: 5 per second | Yes |
| DescribeKey request rate | Each supported Region: 2,000 per second | Yes |
| DisableKey request rate | Each supported Region: 5 per second | Yes |
| DisableKeyRotation request rate | Each supported Region: 5 per second | Yes |
| DisconnectCustomKeyStore request rate | Each supported Region: 5 per second | Yes |
| EnableKey request rate | Each supported Region: 5 per second | Yes |
| EnableKeyRotation request rate | Each supported Region: 15 per second | Yes |
| GenerateDataKeyPair (ECC_NIST_P256) request rate | Each supported Region: 25 per second | Yes |
| GenerateDataKeyPair (ECC_NIST_P384) request rate | Each supported Region: 10 per second | Yes |
| GenerateDataKeyPair (ECC_NIST_P521) request rate | Each supported Region: 5 per second | Yes |
| GenerateDataKeyPair (ECC_SECG_P256K1) request rate | Each supported Region: 25 per second | Yes |
| GenerateDataKeyPair (RSA_2048) request rate | Each supported Region: 1 per second | Yes |
| GenerateDataKeyPair (RSA_3072) request rate | Each supported Region: 0.5 per second | Yes |
| GenerateDataKeyPair (RSA_4096) request rate | Each supported Region: 0.1 per second | Yes |
| GetKeyPolicy request rate | Each supported Region: 1,000 per second | Yes |
| GetKeyRotationStatus request rate | Each supported Region: 1,000 per second | Yes |
| GetParametersForImport request rate | Each supported Region: 0.25 per second | Yes |

| Name | Default | Adjustable |
|-----------------------------------|---|------------|
| GetPublicKey request rate | Each supported Region: 2,000 per second | Yes |
| Grants per CMK | Each supported Region: 50,000 | Yes |
| ImportKeyMaterial request rate | Each supported Region: 5 per second | Yes |
| Key policy document size | Each supported Region: 32,768 Bytes | Yes |
| ListAliases request rate | Each supported Region: 500 per second | Yes |
| ListGrants request rate | Each supported Region: 100 per second | Yes |
| ListKeyPolicies request rate | Each supported Region: 100 per second | Yes |
| ListKeys request rate | Each supported Region: 500 per second | Yes |
| ListResourceTags request rate | Each supported Region: 2,000 per second | Yes |
| ListRetirableGrants request rate | Each supported Region: 100 per second | Yes |
| PutKeyPolicy request rate | Each supported Region: 15 per second | Yes |
| ReplicateKey request rate | Each supported Region: 5 per second | Yes |
| RetireGrant request rate | Each supported Region: 30 per second | Yes |
| RevokeGrant request rate | Each supported Region: 30 per second | Yes |
| ScheduleKeyDeletion request rate | Each supported Region: 15 per second | Yes |
| TagResource request rate | Each supported Region: 10 per second | Yes |
| UntagResource request rate | Each supported Region: 5 per second | Yes |
| UpdateAlias request rate | Each supported Region: 5 per second | Yes |
| UpdateCustomKeyStore request rate | Each supported Region: 5 per second | Yes |
| UpdateKeyDescription request rate | Each supported Region: 5 per second | Yes |

| Name | Default | Adjustable |
|----------------------------------|-------------------------------------|------------|
| UpdatePrimaryRegion request rate | Each supported Region: 5 per second | Yes |

Amazon Kinesis Data Analytics endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------|--|
| US East (Ohio) | us-east-2 | kinesisanalytics.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | kinesisanalytics.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | kinesisanalytics.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | kinesisanalytics.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | kinesisanalytics.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | kinesisanalytics.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | kinesisanalytics.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | kinesisanalytics.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | kinesisanalytics.ap-northeast-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------|--|
| Asia Pacific (Singapore) | ap-southeast-1 | kinesisanalytics.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | kinesisanalytics.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | kinesisanalytics.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | kinesisanalytics.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | kinesisanalytics.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | kinesisanalytics.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | kinesisanalytics.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | kinesisanalytics.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | kinesisanalytics.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | kinesisanalytics.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | kinesisanalytics.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | kinesisanalytics.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | kinesisanalytics.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | kinesisanalytics.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|---------------------------|------------|
| Apache Flink Kinesis Processing Units (KPUss) | Each supported Region: 32 | Yes |
| Application count | Each supported Region: 50 | Yes |
| Input Parallelism in input streams for SQL applications | Each supported Region: 64 | No |
| Kinesis Processing Units (KPUss) | Each supported Region: 8 | Yes |
| SQL Kinesis Processing Units (KPUss) | Each supported Region: 8 | Yes |

For more information, see [Quotas](#) in the *Amazon Kinesis Data Analytics for Apache Flink Developer Guide*.

Amazon Kinesis Data Firehose endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|------------|---|----------------|--|
| US East (Ohio) | us-east-2 | firehose.us-east-2.amazonaws.com firehose-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | firehose.us-east-1.amazonaws.com firehose-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | firehose.us-west-1.amazonaws.com firehose-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | firehose.us-west-2.amazonaws.com firehose-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | firehose.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific | ap-east-1 | firehose.ap-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---------------------------------------|----------|--|
| (Hong Kong) | | | | |
| Asia Pacific (Mumbai) | ap-south-1 | firehose.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | firehose.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | firehose.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | firehose.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | firehose.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | firehose.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | firehose.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | firehose.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | firehose.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | firehose.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | firehose.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | firehose.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | firehose.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | firehose.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | firehose.sa-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|---|----------------|--|
| AWS GovCloud (US-East) | us-gov-east-1 | firehose.us-gov-east-1.amazonaws.com firehose-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | firehose.us-gov-west-1.amazonaws.com firehose-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|--|------------|
| Delivery streams | Each supported Region: 50 | Yes |
| Rate of CreateDeliveryStream requests | Each supported Region: 5 | No |
| Rate of DeleteDeliveryStream requests | Each supported Region: 5 | No |
| Rate of DescribeDeliveryStream requests | Each supported Region: 5 | No |
| Rate of ListDeliveryStream requests | Each supported Region: 5 | No |
| Rate of ListTagsForDeliveryStream requests | Each supported Region: 5 | No |
| Rate of Put requests | us-east-1: 2,000 us-west-2: 2,000 eu-west-1: 2,000 Each of the other supported Regions: 1,000 | No |
| Rate of StartDeliveryStreamEncryption requests | Each supported Region: 5 | No |
| Rate of StopDeliveryStreamEncryption requests | Each supported Region: 5 | No |
| Rate of TagDeliveryStream requests | Each supported Region: 5 | No |
| Rate of UntagDeliveryStream requests | Each supported Region: 5 | No |
| Rate of UpdateDestination requests | Each supported Region: 5 | No |
| Rate of data | us-east-1: 5 us-west-2: 5 eu-west-1: 5 Each of the other supported Regions: 1 | No |
| Rate of records | us-east-1: 500,000 us-west-2: 500,000 | No |

| Name | Default | Adjustable |
|------|--|------------|
| | eu-west-1: 500,000 Each of the other supported Regions: 100,000 | |

For more information, see [Amazon Kinesis Data Firehose Quotas](#) in the *Amazon Kinesis Data Firehose Developer Guide*.

Amazon Kinesis Data Streams endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------------|
| US East (Ohio) | us-east-2 | kinesis.us-east-2.amazonaws.com kinesis-fips.us-east-2.amazonaws.com | HTTPS HTTPS |
| US East (N. Virginia) | us-east-1 | kinesis.us-east-1.amazonaws.com kinesis-fips.us-east-1.amazonaws.com | HTTPS HTTPS |
| US West (N. California) | us-west-1 | kinesis.us-west-1.amazonaws.com kinesis-fips.us-west-1.amazonaws.com | HTTPS HTTPS |
| US West (Oregon) | us-west-2 | kinesis.us-west-2.amazonaws.com kinesis-fips.us-west-2.amazonaws.com | HTTPS HTTPS |
| Africa (Cape Town) | af-south-1 | kinesis.af-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | kinesis.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Jakarta) | ap-southeast-3 | kinesis.ap-southeast-3.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--------------------------------------|-----------------|--|
| Asia Pacific (Mumbai) | ap-south-1 | kinesis.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | kinesis.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | kinesis.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | kinesis.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | kinesis.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | kinesis.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | kinesis.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | kinesis.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | kinesis.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | kinesis.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | kinesis.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | kinesis.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | kinesis.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | kinesis.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | kinesis.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | kinesis.us-gov-east-1.amazonaws.com | HTTPS | |
| | | kinesis.us-gov-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|-------------------------------------|----------|--|
| AWS GovCloud (US-West) | us-gov-west-1 | kinesis.us-gov-west-1.amazonaws.com | HTTPS | |
| | | kinesis.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-------------------|--|------------|
| Shards per Region | us-east-1: 500 us-west-2: 500 eu-west-1: 500 Each of the other supported Regions: 200 | Yes |

For more information, see [Amazon Kinesis Data Streams Quotas](#) in the *Amazon Kinesis Data Streams Developer Guide*.

Amazon Kinesis Video Streams endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|-----------|--------------------------------------|----------|--|
| US East (Ohio) | us-east-2 | kinesisvideo.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | kinesisvideo.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | kinesisvideo.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | kinesisvideo.ap-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------|--|
| Asia Pacific (Mumbai) | ap-south-1 | kinesisvideo.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | kinesisvideo.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | kinesisvideo.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | kinesisvideo.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | kinesisvideo.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | kinesisvideo.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | kinesisvideo.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | kinesisvideo.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | kinesisvideo.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | kinesisvideo.eu-west-3.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | kinesisvideo.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|--------------------------------------|------------|
| ConnectAsMaster GO_AWAY message grace period | Each supported Region: 60 Seconds | No |
| ConnectAsMaster connection duration | Each supported Region: 3,600 Seconds | No |
| ConnectAsMaster connections per signaling channel | Each supported Region: 1 | No |
| ConnectAsMaster idle connection timeout | Each supported Region: 600 Seconds | No |

| Name | Default | Adjustable |
|---|--|------------|
| ConnectAsViewer GO_AWAY message grace period | Each supported Region: 60 Seconds | No |
| ConnectAsViewer connection duration | Each supported Region: 3,600 Seconds | No |
| ConnectAsViewer connections per signaling channel | Each supported Region: 10 | Yes |
| ConnectAsViewer idle connection timeout | Each supported Region: 600 Seconds | No |
| GetClip file size | Each supported Region: 100 Megabytes | No |
| GetClip fragments | Each supported Region: 200 | No |
| GetDASHManifestPlaylist fragments | Each supported Region: 5,000 | No |
| GetHLSMediaPlaylist fragments | Each supported Region: 5,000 | No |
| GetMedia bandwidth | Each supported Region: 200 Megabits per second | Yes |
| GetMedia concurrent connections per stream | Each supported Region: 3 | Yes |
| GetMediaForFragmentList bandwidth | Each supported Region: 200 Megabits per second | Yes |
| GetMediaForFragmentList connections per stream | Each supported Region: 5 | No |
| GetMediaForFragmentList fragments | Each supported Region: 1,000 | No |
| Number of signaling channels | us-east-1: 10,000 us-west-2: 10,000 Each of the other supported Regions: 5,000 | Yes |
| Number of video streams | us-east-1: 10,000 us-west-2: 10,000 Each of the other supported Regions: 5,000 | Yes |
| PutMedia bandwidth | Each supported Region: 100 Megabits per second | Yes |
| PutMedia concurrent connections per stream | Each supported Region: 1 | No |
| PutMedia fragment duration | Each supported Region: 10 Seconds | Yes |
| PutMedia fragment size | Each supported Region: 50 Megabytes | No |

| Name | Default | Adjustable |
|--|---------------------------------------|------------|
| PutMedia minimum fragment duration | Each supported Region: 1 Seconds | No |
| PutMedia tracks | Each supported Region: 3 | No |
| Rate of ConnectAsMasterAPI requests per signaling channel | Each supported Region: 3 per second | No |
| Rate of ConnectAsViewerAPI requests per signaling channel | Each supported Region: 3 per second | No |
| Rate of CreateSignalingChannelAPI requests | Each supported Region: 50 per second | Yes |
| Rate of CreateStreamAPI requests | Each supported Region: 50 per second | Yes |
| Rate of DeleteSignalingChannelAPI requests | Each supported Region: 50 per second | Yes |
| Rate of DeleteSignalingChannelAPI requests per signaling channel | Each supported Region: 5 per second | Yes |
| Rate of DeleteStreamAPI requests | Each supported Region: 50 per second | Yes |
| Rate of DeleteStreamAPI requests per stream | Each supported Region: 5 per second | Yes |
| Rate of DescribeSignalingChannelAPI requests | Each supported Region: 300 per second | Yes |
| Rate of DescribeSignalingChannelAPI requests per signaling channel | Each supported Region: 5 per second | Yes |
| Rate of DescribeStreamAPI requests | Each supported Region: 300 per second | Yes |
| Rate of DescribeStreamAPI requests per stream | Each supported Region: 5 per second | Yes |
| Rate of GetDASHManifestPlaylistAPI requests per session | Each supported Region: 5 per second | Yes |
| Rate of GetDASHStreamingSessionURLAPI requests per stream | Each supported Region: 25 per second | Yes |
| Rate of GetDataEndpointAPI requests | Each supported Region: 300 per second | Yes |
| Rate of GetDataEndpointAPI requests per stream | Each supported Region: 5 per second | Yes |
| Rate of GetHLSMasterPlaylistAPI requests per session | Each supported Region: 5 per second | Yes |
| Rate of GetHLSMediaPlaylistAPI requests per session | Each supported Region: 5 per second | Yes |

| Name | Default | Adjustable |
|---|---------------------------------------|------------|
| Rate of GetHLSStreamingSessionURLAPI requests per stream | Each supported Region: 25 per second | Yes |
| Rate of GetICEServerConfigAPI requests per signaling channel | Each supported Region: 5 per second | No |
| Rate of GetMP4InitFragmentAPI requests per session | Each supported Region: 5 per second | Yes |
| Rate of GetMP4MediaFragmentAPI requests per session | Each supported Region: 20 per second | Yes |
| Rate of GetMediaAPI requests per stream | Each supported Region: 5 per second | Yes |
| Rate of GetSignalingChannelEndpointAPI requests | Each supported Region: 300 per second | Yes |
| Rate of GetSignalingChannelEndpointAPI requests per signaling channel | Each supported Region: 5 per second | Yes |
| Rate of GetTSFragmentAPI requests per session | Each supported Region: 20 per second | Yes |
| Rate of ListSignalingChannelsAPI requests | Each supported Region: 50 per second | Yes |
| Rate of ListStreamsAPI requests | Each supported Region: 50 per second | Yes |
| Rate of ListTagsForResourceAPI requests | Each supported Region: 50 per second | Yes |
| Rate of ListTagsForResourceAPI requests per resource | Each supported Region: 5 per second | Yes |
| Rate of ListTagsForStreamAPI requests | Each supported Region: 50 per second | Yes |
| Rate of ListTagsForStreamAPI requests per stream | Each supported Region: 5 per second | Yes |
| Rate of PutMediaAPI requests per stream | Each supported Region: 5 per second | Yes |
| Rate of SendAlexaOfferToMasterAPI requests per signaling channel | Each supported Region: 5 per second | No |
| Rate of SendICECandidateAPI requests per websocket connection | Each supported Region: 20 per second | No |
| Rate of SendSDPAnswerAPI requests per websocket connection | Each supported Region: 5 per second | No |
| Rate of SendSDPOfferAPI requests per websocket connection | Each supported Region: 5 per second | No |
| Rate of TagResourceAPI requests | Each supported Region: 50 per second | Yes |

| Name | Default | Adjustable |
|--|--|------------|
| Rate of TagResourceAPI requests per resource | Each supported Region: 5 per second | Yes |
| Rate of TagStreamAPI requests | Each supported Region: 50 per second | Yes |
| Rate of TagStreamAPI requests per stream | Each supported Region: 5 per second | Yes |
| Rate of UntagResourceAPI requests | Each supported Region: 50 per second | Yes |
| Rate of UntagResourceAPI requests per resource | Each supported Region: 5 per second | Yes |
| Rate of UntagStreamAPI requests | Each supported Region: 50 per second | Yes |
| Rate of UntagStreamAPI requests per stream | Each supported Region: 5 per second | Yes |
| Rate of UpdateDataRetentionAPI requests | Each supported Region: 50 per second | Yes |
| Rate of UpdateDataRetentionAPI requests per stream | Each supported Region: 5 per second | Yes |
| Rate of UpdateSignalingChannelAPI requests | Each supported Region: 50 per second | Yes |
| Rate of UpdateSignalingChannelAPI requests per signaling channel | Each supported Region: 5 per second | Yes |
| Rate of UpdateStreamAPI requests | Each supported Region: 50 per second | Yes |
| Rate of UpdateStreamAPI requests per stream | Each supported Region: 5 per second | Yes |
| Rate of archived fragment media per stream | Each supported Region: 500 per second | Yes |
| Rate of archived fragment metadata per stream | Each supported Region: 10,000 per second | Yes |
| SendICECandidate message payload size | Each supported Region: 10 Kilobytes | No |
| SendSDPAnswer message payload size | Each supported Region: 10 Kilobytes | No |
| SendSDPOffer message payload size | Each supported Region: 10 Kilobytes | No |
| TURN session bandwidth | Each supported Region: 5 Megabits per second | No |
| TURN session concurrent allocations per signaling channel | Each supported Region: 50 | No |

| Name | Default | Adjustable |
|-------------------------|------------------------------------|------------|
| TURN session expiration | Each supported Region: 300 Seconds | No |

For more information, see [Kinesis Video Streams quotas](#) in the *Amazon Kinesis Video Streams Developer Guide*.

AWS Lake Formation endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------------|
| US East (Ohio) | us-east-2 | lakeformation.us-east-2.amazonaws.com lakeformation-fips.us-east-2.amazonaws.com | HTTPS HTTPS |
| US East (N. Virginia) | us-east-1 | lakeformation.us-east-1.amazonaws.com lakeformation-fips.us-east-1.amazonaws.com | HTTPS HTTPS |
| US West (N. California) | us-west-1 | lakeformation.us-west-1.amazonaws.com lakeformation-fips.us-west-1.amazonaws.com | HTTPS HTTPS |
| US West (Oregon) | us-west-2 | lakeformation.us-west-2.amazonaws.com lakeformation-fips.us-west-2.amazonaws.com | HTTPS HTTPS |
| Africa (Cape Town) | af-south-1 | lakeformation.af-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | lakeformation.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | lakeformation.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Osaka) | ap-northeast-3 | lakeformation.ap-northeast-3.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| Asia Pacific (Seoul) | ap-northeast-2 | lakeformation.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | lakeformation.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | lakeformation.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | lakeformation.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | lakeformation.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | lakeformation.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | lakeformation.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | lakeformation.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | lakeformation.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | lakeformation.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | lakeformation.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | lakeformation.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | lakeformation.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | lakeformation.us-gov-west-1.amazonaws.com lakeformation-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|-------------------------------|------------|
| Length of a path that can be registered | Each supported Region: 700 | Yes |
| Number of cross-account grants | Each supported Region: 1,600 | Yes |
| Number of data lake administrators | Each supported Region: 10 | Yes |
| Number of registered paths | Each supported Region: 10,000 | Yes |
| Number of subfolders in an Amazon S3 path | Each supported Region: 20 | Yes |

AWS Lambda endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|------------|---|-------------------------|--|
| US East (Ohio) | us-east-2 | lambda.us-east-2.amazonaws.com lambda-fips.us-east-2.amazonaws.com lambda.us-east-2.api.aws | HTTPS HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | lambda.us-east-1.amazonaws.com lambda-fips.us-east-1.amazonaws.com lambda.us-east-1.api.aws | HTTPS HTTPS HTTPS | |
| US West (N. California) | us-west-1 | lambda.us-west-1.amazonaws.com lambda-fips.us-west-1.amazonaws.com lambda.us-west-1.api.aws | HTTPS HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | lambda.us-west-2.amazonaws.com lambda-fips.us-west-2.amazonaws.com lambda.us-west-2.api.aws | HTTPS HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | lambda.af-south-1.amazonaws.com lambda.af-south-1.api.aws | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|-----------------|--|
| Asia Pacific (Hong Kong) | ap-east-1 | lambda.ap-east-1.amazonaws.com lambda.ap-east-1.api.aws | HTTPS HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | lambda.ap-southeast-3.amazonaws.com lambda.ap-southeast-3.api.aws | HTTPS HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | lambda.ap-south-1.amazonaws.com lambda.ap-south-1.api.aws | HTTPS HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | lambda.ap-northeast-3.amazonaws.com lambda.ap-northeast-3.api.aws | HTTPS HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | lambda.ap-northeast-2.amazonaws.com lambda.ap-northeast-2.api.aws | HTTPS HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | lambda.ap-southeast-1.amazonaws.com lambda.ap-southeast-1.api.aws | HTTPS HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | lambda.ap-southeast-2.amazonaws.com lambda.ap-southeast-2.api.aws | HTTPS HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | lambda.ap-northeast-1.amazonaws.com lambda.ap-northeast-1.api.aws | HTTPS HTTPS | |
| Canada (Central) | ca-central-1 | lambda.ca-central-1.amazonaws.com lambda.ca-central-1.api.aws | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | lambda.eu-central-1.amazonaws.com lambda.eu-central-1.api.aws | HTTPS HTTPS | |
| Europe (Ireland) | eu-west-1 | lambda.eu-west-1.amazonaws.com lambda.eu-west-1.api.aws | HTTPS HTTPS | |
| Europe (London) | eu-west-2 | lambda.eu-west-2.amazonaws.com lambda.eu-west-2.api.aws | HTTPS HTTPS | |
| Europe (Milan) | eu-south-1 | lambda.eu-south-1.amazonaws.com lambda.eu-south-1.api.aws | HTTPS HTTPS | |
| Europe (Paris) | eu-west-3 | lambda.eu-west-3.amazonaws.com lambda.eu-west-3.api.aws | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| Europe (Stockholm) | eu-north-1 | lambda.eu-north-1.amazonaws.com lambda.eu-north-1.api.aws | HTTPS HTTPS | |
| Middle East (Bahrain) | me-south-1 | lambda.me-south-1.amazonaws.com lambda.me-south-1.api.aws | HTTPS HTTPS | |
| South America (São Paulo) | sa-east-1 | lambda.sa-east-1.amazonaws.com lambda.sa-east-1.api.aws | HTTPS HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | lambda.us-gov-east-1.amazonaws.com lambda-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | lambda.us-gov-west-1.amazonaws.com lambda-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|--|------------|
| Asynchronous payload | Each supported Region: 256 Kilobytes | No |
| Burst concurrency | us-east-1: 3,000 us-east-2: 1,000 us-west-2: 3,000 ap-northeast-1: 1,000 eu-central-1: 1,000 eu-west-1: 3,000 Each of the other supported Regions: 500 | No |
| Concurrent executions | Each supported Region: 1,000 | Yes |
| Deployment package size (console editor) | Each supported Region: 3 Megabytes | No |
| Deployment package size (direct upload) | Each supported Region: 50 Megabytes | No |
| Deployment package size (unzipped) | Each supported Region: 250 Megabytes | No |

| Name | Default | Adjustable |
|---|---|------------|
| Elastic network interfaces per VPC | Each supported Region: 250 | Yes |
| Environment variable size | Each supported Region: 4 Kilobytes | No |
| File descriptors | Each supported Region: 1,024 | No |
| Function and layer storage | Each supported Region: 75 Gigabytes | Yes |
| Function layers | Each supported Region: 5 | No |
| Function memory maximum | Each supported Region: 10,240 Megabytes | No |
| Function memory minimum | Each supported Region: 128 Megabytes | No |
| Function resource-based policy | Each supported Region: 20 Kilobytes | No |
| Function timeout | Each supported Region: 900 | No |
| Processes and threads | Each supported Region: 1,024 | No |
| Rate of GetFunction API requests | Each supported Region: 100 | No |
| Rate of GetPolicy API requests | Each supported Region: 15 | No |
| Rate of control plane API requests (excludes invocation, GetFunction, and GetPolicy requests) | Each supported Region: 15 | No |
| Synchronous payload | Each supported Region: 6 Megabytes | No |
| Temporary storage | Each supported Region: 512 Megabytes | No |
| Test events (console editor) | Each supported Region: 10 | No |

For more information, see [Lambda quotas in the AWS Lambda Developer Guide](#).

AWS Launch Wizard endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------------|--|
| US East (Ohio) | us-east-2 | appwizard.us-east-2.amazonaws.com | HTTP and HTTPS | |
| US East (N. Virginia) | us-east-1 | appwizard.us-east-1.amazonaws.com | HTTP and HTTPS | |
| US West (N. California) | us-west-1 | appwizard.us-west-1.amazonaws.com | HTTP and HTTPS | |
| US West (Oregon) | us-west-2 | appwizard.us-west-2.amazonaws.com | HTTP and HTTPS | |
| Africa (Cape Town) | af-south-1 | appwizard.af-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | appwizard.ap-east-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | appwizard.ap-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | appwizard.ap-northeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | appwizard.ap-northeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | appwizard.ap-southeast-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | appwizard.ap-southeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | appwizard.ap-northeast-1.amazonaws.com | HTTP and HTTPS | |
| Canada (Central) | ca-central-1 | appwizard.ca-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Frankfurt) | eu-central-1 | appwizard.eu-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Ireland) | eu-west-1 | appwizard.eu-west-1.amazonaws.com | HTTP and HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---------------------------------------|----------------|--|
| Europe (London) | eu-west-2 | appwizard.eu-west-2.amazonaws.com | HTTP and HTTPS | |
| Europe (Milan) | eu-south-1 | appwizard.eu-south-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Paris) | eu-west-3 | appwizard.eu-west-3.amazonaws.com | HTTP and HTTPS | |
| Europe (Stockholm) | eu-north-1 | appwizard.eu-north-1.amazonaws.com | HTTP and HTTPS | |
| Middle East (Bahrain) | me-south-1 | appwizard.me-south-1.amazonaws.com | HTTP and HTTPS | |
| South America (São Paulo) | sa-east-1 | appwizard.sa-east-1.amazonaws.com | HTTP and HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | appwizard.us-gov-east-1.amazonaws.com | HTTP and HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | appwizard.us-gov-west-1.amazonaws.com | HTTP and HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-------------------------|----------------------------|------------|
| Active applications | Each supported Region: 25 | Yes |
| Application name length | Each supported Region: 10 | No |
| Applications | Each supported Region: 150 | Yes |
| Parallel deployments | Each supported Region: 3 | No |

Amazon Lex endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

V2 service endpoints

Model building endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------|--|
| US East (N. Virginia) | us-east-1 | models-v2-lex.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | models-v2-lex.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | models-v2-lex.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | models-v2-lex.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | models-v2-lex.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | models-v2-lex.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | models-v2-lex.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | models-v2-lex.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | models-v2-lex.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | models-v2-lex.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | models-v2-lex.eu-west-2.amazonaws.com | HTTPS | |

Runtime endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|--|----------|--|
| US East (N. Virginia) | us-east-1 | runtime-v2-lex.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | runtime-v2-lex.us-west-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------|--|
| Africa (Cape Town) | af-south-1 | runtime-v2-lex.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | runtime-v2-lex.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | runtime-v2-lex.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | runtime-v2-lex.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | runtime-v2-lex.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | runtime-v2-lex.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | runtime-v2-lex.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | runtime-v2-lex.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | runtime-v2-lex.eu-west-2.amazonaws.com | HTTPS | |

V1 service endpoints

Model building endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (N. Virginia) | us-east-1 | models.lex.us-east-1.amazonaws.com models-fips.lex.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | models.lex.us-west-2.amazonaws.com models-fips.lex.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | models.lex.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | models.lex.ap-southeast-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|----------------|---|----------------|--|
| Asia Pacific (Tokyo) | ap-northeast-1 | models.lex.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | models.lex.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | models.lex.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | models.lex.eu-west-2.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | models.lex.us-gov-west-1.amazonaws.com models-fips.lex.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Runtime endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (N. Virginia) | us-east-1 | runtime.lex.us-east-1.amazonaws.com runtime-fips.lex.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | runtime.lex.us-west-2.amazonaws.com runtime-fips.lex.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | runtime.lex.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | runtime.lex.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | runtime.lex.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | runtime.lex.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | runtime.lex.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | runtime.lex.eu-west-2.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | runtime.lex.us-gov-west-1.amazonaws.com runtime-fips.lex.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|--------------------------------|------------|
| Bot channel associations per bot alias (V2) | Each supported Region: 10 | No |
| Bots per account (V2) | Each supported Region: 100 | Yes |
| Characters per custom slot type value (V2) | Each supported Region: 500 | No |
| Characters per sample utterance (V2) | Each supported Region: 500 | No |
| Custom slot type values and synonyms per bot locale (V2) | Each supported Region: 50,000 | No |
| Custom slot types per bot locale (V2) | Each supported Region: 100 | No |
| Sample utterances per intent (V2) | Each supported Region: 1,500 | Yes |
| Sample utterances per slot (V2) | Each supported Region: 10 | Yes |
| Slots per bot locale (V2) | Each supported Region: 2,000 | No |
| Slots per intent (V2) | Each supported Region: 100 | No |
| Total characters in sample utterances per bot locale (V2) | Each supported Region: 200,000 | No |
| Values and synonyms per custom slot type (V2) | Each supported Region: 10,000 | No |
| Versions per bot (V2) | Each supported Region: 100 | No |

AWS License Manager endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|--|----------|--|
| US East (Ohio) | us-east-2 | license-manager.us-east-2.amazonaws.com | HTTPS | |
| | | license-manager-fips.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | license-manager.us-east-1.amazonaws.com | HTTPS | |
| | | license-manager-fips.us-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| US West (N. California) | us-west-1 | license-manager.us-west-1.amazonaws.com license-manager-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | license-manager.us-west-2.amazonaws.com license-manager-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | license-manager.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | license-manager.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | license-manager.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | license-manager.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | license-manager.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | license-manager.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | license-manager.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | license-manager.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | license-manager.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | license-manager.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | license-manager.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | license-manager.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | license-manager.eu-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| Europe (Paris) | eu-west-3 | license-manager.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | license-manager.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | license-manager.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | license-manager.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | license-manager.us-gov-east-1.amazonaws.com license-manager-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | license-manager.us-gov-west-1.amazonaws.com license-manager-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|------------------------------|------------|
| Extend license consumption per consumption token | Each supported Region: 1 | No |
| GetAccessTokens calls | Each supported Region: 10 | No |
| License configuration associations per resource | Each supported Region: 10 | Yes |
| License configurations | Each supported Region: 25 | Yes |
| License conversion tasks per resource per day | Each supported Region: 5 | Yes |
| Maximum number of concurrent organization grant activities | Each supported Region: 10 | No |
| Number of Report generators | Each supported Region: 25 | No |
| Number of account discovery mode updates per day | Each supported Region: 1 | No |
| Number of grants per license | Each supported Region: 2,000 | No |
| Number of licenses you can create | Each supported Region: 2,000 | No |
| Number of received licenses per product | Each supported Region: 10 | No |
| Number of tokens per account and license | Each supported Region: 10 | No |

| Name | Default | Adjustable |
|--|---------------------------|------------|
| Number of updates for a report generator per day | Each supported Region: 25 | No |
| Total number counted entitlements per checkout | Each supported Region: 5 | No |
| Total number counted entitlements per license | Each supported Region: 25 | No |
| Total number uncounted entitlements per license | Each supported Region: 25 | No |

Amazon Lightsail endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------|--|
| US East (Ohio) | us-east-2 | lightsail.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | lightsail.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | lightsail.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | lightsail.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | lightsail.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | lightsail.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | lightsail.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | lightsail.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | lightsail.ca-central-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------|--------------|--------------------------------------|----------|--|
| Europe (Frankfurt) | eu-central-1 | lightsail.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | lightsail.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | lightsail.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | lightsail.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | lightsail.eu-north-1.amazonaws.com | HTTPS | |

Service quotas

New AWS accounts might start with quotas that are lower than those described here.

| Name | Default | Adjustable |
|---|----------------------------|------------|
| Allowed cookies per cache behavior for a distribution | Each supported Region: 10 | No |
| Allowed headers per cache behavior for a distribution | Each supported Region: 10 | No |
| Allowed query strings per cache behavior for a distribution | Each supported Region: 10 | No |
| Block storage disks per instance | Each supported Region: 15 | No |
| Container service certificates | Each supported Region: 4 | No |
| Container service custom domains | Each supported Region: 4 | No |
| Container service deployment containers | Each supported Region: 10 | No |
| Container service deployment versions | Each supported Region: 50 | No |
| Container service logs storage days | Each supported Region: 4 | No |
| Container service nodes | Each supported Region: 20 | No |
| Container service stored container images | Each supported Region: 150 | No |
| Container services | Each supported Region: 100 | No |
| Custom domain names per distribution | Each supported Region: 10 | No |
| DNS zones (or domains) | Each supported Region: 3 | No |
| Data transfer rate per distribution | Each supported Region: 150 | No |
| Databases | Each supported Region: 40 | No |
| Default behaviors (default cache behavior) per distribution | Each supported Region: 1 | No |
| Directory and file overrides per distribution | Each supported Region: 25 | No |

| Name | Default | Adjustable |
|---|---|------------|
| Distributions | Each supported Region: 20 | No |
| Instances | Each supported Region: 20 | Yes |
| Load balancers | Each supported Region: 5 | No |
| Maximum active certificates | Each supported Region: 10 | No |
| Maximum block storage disk space | Each supported Region: 16,000 Gigabytes | No |
| Maximum buckets per account | Each supported Region: 20 | No |
| Maximum certificates | Each supported Region: 20 | No |
| Maximum keys per bucket | Each supported Region: 2 | No |
| Minimum block storage disk space | Each supported Region: 8 Gigabytes | No |
| Origins per distribution | Each supported Region: 1 | No |
| Parallel RDP connections using the browser-based RDP client | Each supported Region: 1 | No |
| Parallel SSH connections using the browser-based SSH client | Each supported Region: 5 | No |
| Response timeout per origin for a distribution | Each supported Region: 60 Seconds | No |
| Static IP addresses | Each supported Region: 5 | Yes |
| Tags | Each supported Region: 50 | No |
| Total attached block storage disk space | Each supported Region: 20,000 Gigabytes | No |

Amazon Location Service endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Amazon Location is available in the following AWS Regions:

| Region name | Region code |
|--------------------------|----------------|
| Asia Pacific (Tokyo) | ap-northeast-1 |
| Asia Pacific (Singapore) | ap-southeast-1 |
| Asia Pacific (Sydney) | ap-southeast-2 |

| Region name | Region code |
|-----------------------|--------------|
| Europe (Frankfurt) | eu-central-1 |
| Europe (Ireland) | eu-west-1 |
| Europe (Stockholm) | eu-north-1 |
| US East (N. Virginia) | us-east-1 |
| US East (Ohio) | us-east-2 |
| US West (Oregon) | us-west-2 |

The general syntax for an Amazon Location regional endpoint is as follows:

```
protocol://service-code.geo.region-code.amazonaws.com
```

Within this syntax, Amazon Location uses the following service codes:

| Service | Service code |
|---------------------------|--------------|
| Amazon Location Maps | maps |
| Amazon Location Places | places |
| Amazon Location Routes | routes |
| Amazon Location Geofences | geofencing |
| Amazon Location Trackers | tracking |

For example, the regional endpoint for Amazon Location Maps for US East (N. Virginia) is:
<https://maps.geo.us-east-1.amazonaws.com>.

Service quotas

| Name | Default | Adjustable |
|---|----------------------------------|------------|
| Geofence Collection resources per account | Each supported Region: 1,000 | Yes |
| Geofences per Geofence Collection | Each supported Region: 50,000 | Yes |
| Map resources per account | Each supported Region: 20 | Yes |
| Place Index resources per account | Each supported Region: 20 | Yes |
| Rate of AssociateTrackerConsumer API requests | Each supported Region: 10 | Yes |
| Rate of BatchDeleteDevicePositionHistory API requests | Each supported Region: 50 | Yes |
| Rate of BatchDeleteGeofence API requests | Each supported Region: 50 | Yes |
| Rate of BatchEvaluateGeofences API requests | Each supported Region: 50 | Yes |

| Name | Default | Adjustable |
|--|----------------------------|------------|
| Rate of BatchGetPosition API requests | Each supported Region: 50 | Yes |
| Rate of BatchPutGeofence API requests | Each supported Region: 50 | Yes |
| Rate of BatchUpdateDevicePosition API requests | Each supported Region: 50 | Yes |
| Rate of CalculateRoute API requests | Each supported Region: 10 | Yes |
| Rate of CalculateRouteMatrix API requests | Each supported Region: 5 | Yes |
| Rate of CreateGeofenceCollection API requests | Each supported Region: 10 | Yes |
| Rate of CreateMap API requests | Each supported Region: 10 | Yes |
| Rate of CreatePlaceIndex API requests | Each supported Region: 10 | Yes |
| Rate of CreateRouteCalculator API requests | Each supported Region: 10 | Yes |
| Rate of CreateTracker API requests | Each supported Region: 10 | Yes |
| Rate of DeleteGeofenceCollection API requests | Each supported Region: 10 | Yes |
| Rate of DeleteMap API requests | Each supported Region: 10 | Yes |
| Rate of DeletePlaceIndex API requests | Each supported Region: 10 | Yes |
| Rate of DeleteRouteCalculator API requests | Each supported Region: 10 | Yes |
| Rate of DeleteTracker API requests | Each supported Region: 10 | Yes |
| Rate of DescribeGeofenceCollection API requests | Each supported Region: 10 | Yes |
| Rate of DescribeMap API requests | Each supported Region: 10 | Yes |
| Rate of DescribePlaceIndex API requests | Each supported Region: 10 | Yes |
| Rate of DescribeRouteCalculator API requests | Each supported Region: 10 | Yes |
| Rate of DescribeTracker API requests | Each supported Region: 10 | Yes |
| Rate of DisassociateTrackerConsumer API requests | Each supported Region: 10 | Yes |
| Rate of GetDevicePosition API requests | Each supported Region: 50 | Yes |
| Rate of GetDevicePositionHistory API requests | Each supported Region: 50 | Yes |
| Rate of GetGeofence API requests | Each supported Region: 50 | Yes |
| Rate of GetMapGlyphs API requests | Each supported Region: 50 | Yes |
| Rate of GetMapSprites API requests | Each supported Region: 50 | Yes |
| Rate of GetMapStyleDescriptor API requests | Each supported Region: 50 | Yes |
| Rate of GetMapTile API requests | Each supported Region: 500 | Yes |
| Rate of ListDevicePositions API requests | Each supported Region: 50 | Yes |
| Rate of ListGeofenceCollections API requests | Each supported Region: 10 | Yes |
| Rate of ListGeofences API requests | Each supported Region: 50 | Yes |

| Name | Default | Adjustable |
|--|----------------------------|------------|
| Rate of ListMaps API requests | Each supported Region: 10 | Yes |
| Rate of ListPlaceIndexes API requests | Each supported Region: 10 | Yes |
| Rate of ListRouteCalculators API requests | Each supported Region: 10 | Yes |
| Rate of ListTagsForResource API requests | Each supported Region: 10 | Yes |
| Rate of ListTrackerConsumers API requests | Each supported Region: 10 | Yes |
| Rate of ListTrackers API requests | Each supported Region: 10 | Yes |
| Rate of PutGeofence API requests | Each supported Region: 50 | Yes |
| Rate of SearchPlaceIndexForPosition API requests | Each supported Region: 50 | Yes |
| Rate of SearchPlaceIndexForText API requests | Each supported Region: 50 | Yes |
| Rate of TagResource API requests | Each supported Region: 10 | Yes |
| Rate of UntagResource API requests | Each supported Region: 10 | Yes |
| Route Calculator resources per account | Each supported Region: 20 | Yes |
| Tracker consumers per tracker | Each supported Region: 5 | Yes |
| Tracker resources per account | Each supported Region: 100 | Yes |

For more information, see [Amazon Location Service Quotas](#) in the *Amazon Location Service Developer Guide*.

Amazon Lookout for Equipment endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|----------------|---|----------|--|
| US East (N. Virginia) | us-east-1 | lookoutequipment.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | lookoutequipment.ap-northeast-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------|-----------|--|----------|--|
| Europe (Ireland) | eu-west-1 | lookoutequipment.eu-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|----------------------------------|------------|
| Components per dataset | Each supported Region: 3,000 | No |
| Datasets | Each supported Region: 15 | Yes |
| Inference schedulers per model | Each supported Region: 1 | No |
| Length of component name | Each supported Region: 200 | No |
| Models | Each supported Region: 15 | Yes |
| Number of columns across components in training data (excluding timestamp) | Each supported Region: 300 | No |
| Number of columns across components per dataset (excluding timestamp) | Each supported Region: 3,000 | No |
| Number of components in training data | Each supported Region: 300 | No |
| Number of files per component (per dataset) | Each supported Region: 1,000 | No |
| Number of files per component (per inference execution) | Each supported Region: 60 | No |
| Number of rows in evaluation data (after resampling) | Each supported Region: 1,500,000 | No |
| Number of rows in inference input data, after resampling (1-hour scheduling frequency) | Each supported Region: 3,600 | No |
| Number of rows in inference input data, after resampling (10-min scheduling frequency) | Each supported Region: 600 | No |
| Number of rows in inference input data, after resampling (15-min scheduling frequency) | Each supported Region: 900 | No |
| Number of rows in inference input data, after resampling (30-min scheduling frequency) | Each supported Region: 1,800 | No |
| Number of rows in inference input data, after resampling (5-min scheduling frequency) | Each supported Region: 300 | No |
| Number of rows in training data (after resampling) | Each supported Region: 1,500,000 | No |
| Pending data ingestion jobs | Each supported Region: 5 | Yes |
| Pending models | Each supported Region: 5 | Yes |

| Name | Default | Adjustable |
|--|-------------------------------------|------------|
| Size of raw data in inference input data (1-hour scheduling frequency) | Each supported Region: 60 Megabytes | No |
| Size of raw data in inference input data (10-min scheduling frequency) | Each supported Region: 10 Megabytes | No |
| Size of raw data in inference input data (15-min scheduling frequency) | Each supported Region: 15 Megabytes | No |
| Size of raw data in inference input data (30-min scheduling frequency) | Each supported Region: 30 Megabytes | No |
| Size of raw data in inference input data (5-min scheduling frequency) | Each supported Region: 5 Megabytes | No |
| Size per dataset | Each supported Region: 50 Gigabytes | No |
| Size per file | Each supported Region: 5 Gigabytes | No |
| Timespan of training data | Each supported Region: 180 per day | No |

Amazon Lookout for Metrics endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------|
| US East (Ohio) | us-east-2 | lookoutmetrics.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | lookoutmetrics.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | lookoutmetrics.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | lookoutmetrics.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | lookoutmetrics.ap-southeast-2.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|----------------------|----------------|---|----------|--|
| Asia Pacific (Tokyo) | ap-northeast-1 | lookoutmetrics.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | lookoutmetrics.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | lookoutmetrics.eu-west-1.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | lookoutmetrics.eu-north-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|--------------------------------------|------------|
| Alerts | Each supported Region: 10 | Yes |
| Data size for historical data (backtest mode) | Each supported Region: 102,400 | No |
| Data size for historical data (continuous mode) | Each supported Region: 102,400 | No |
| Data size per interval (10m) | Each supported Region: 200 Megabytes | No |
| Data size per interval (1d) | Each supported Region: 200 Megabytes | No |
| Data size per interval (1h) | Each supported Region: 200 Megabytes | No |
| Data size per interval (5m) | Each supported Region: 200 Megabytes | No |
| Datasets per detector | Each supported Region: 1 | No |
| Datasources per dataset | Each supported Region: 1 | No |
| Detectors | Each supported Region: 10 | Yes |
| Dimensions per dataset | Each supported Region: 5 | No |
| Files in historical data | Each supported Region: 3,000 | No |
| Files per interval (10m) | Each supported Region: 5 | Yes |
| Files per interval (1d) | Each supported Region: 10 | Yes |
| Files per interval (1h) | Each supported Region: 10 | Yes |
| Files per interval (5m) | Each supported Region: 5 | Yes |

| Name | Default | Adjustable |
|--|--------------------------------|------------|
| Intervals in historical data (backtest mode) | Each supported Region: 3,000 | No |
| Intervals in historical data (continuous mode) | Each supported Region: 2,500 | No |
| Measures per dataset | Each supported Region: 5 | No |
| Records per interval (10m) | Each supported Region: 24,000 | Yes |
| Records per interval (1d) | Each supported Region: 150,000 | Yes |
| Records per interval (1h) | Each supported Region: 150,000 | Yes |
| Records per interval (5m) | Each supported Region: 15,000 | Yes |
| Throttle rate | Each supported Region: 10 | Yes |
| Throttle rate (ActivateAnomalyDetector) | Each supported Region: 1 | Yes |
| Throttle rate (BackTestAnomalyDetector) | Each supported Region: 1 | Yes |
| Throttle rate (CreateAlert) | Each supported Region: 1 | Yes |
| Throttle rate (CreateAnomalyDetector) | Each supported Region: 1 | Yes |
| Throttle rate (CreateMetricSet) | Each supported Region: 1 | Yes |
| Throttle rate (DeactivateAnomalyDetector) | Each supported Region: 1 | Yes |
| Throttle rate (DeleteAlert) | Each supported Region: 1 | Yes |
| Throttle rate (DeleteAnomalyDetector) | Each supported Region: 1 | Yes |
| Throttle rate (DescribeAlert) | Each supported Region: 2 | Yes |
| Throttle rate (DescribeAnomalyDetectionExecutions) | Each supported Region: 2 | Yes |
| Throttle rate (DescribeAnomalyDetector) | Each supported Region: 2 | Yes |
| Throttle rate (DescribeMetricSet) | Each supported Region: 2 | Yes |
| Throttle rate (GetAnomalyGroup) | Each supported Region: 2 | Yes |
| Throttle rate (GetDataQualityMetrics) | Each supported Region: 2 | Yes |
| Throttle rate (GetFeedback) | Each supported Region: 2 | Yes |
| Throttle rate (GetSampleData) | Each supported Region: 2 | Yes |
| Throttle rate (ListAlerts) | Each supported Region: 2 | Yes |
| Throttle rate (ListAnomalyDetectors) | Each supported Region: 2 | Yes |
| Throttle rate (ListAnomalyGroupRelatedMetrics) | Each supported Region: 2 | Yes |
| Throttle rate (ListAnomalyGroupSummaries) | Each supported Region: 2 | Yes |

| Name | Default | Adjustable |
|--|---------------------------------|------------|
| Throttle rate (ListAnomalyGroupTimeSeries) | Each supported Region: 2 | Yes |
| Throttle rate (ListMetricSets) | Each supported Region: 2 | Yes |
| Throttle rate (ListTagsForResource) | Each supported Region: 1 | Yes |
| Throttle rate (PutFeedback) | Each supported Region: 1 | Yes |
| Throttle rate (TagResource) | Each supported Region: 1 | Yes |
| Throttle rate (UntagResource) | Each supported Region: 1 | Yes |
| Throttle rate (UpdateAnomalyDetector) | Each supported Region: 1 | Yes |
| Throttle rate (UpdateMetricSet) | Each supported Region: 1 | Yes |
| Time series per interval (10m) | Each supported Region: 10,000 | No |
| Time series per interval (1d) | Each supported Region: 50,000 | No |
| Time series per interval (1h) | Each supported Region: 50,000 | No |
| Time series per interval (5m) | Each supported Region: 5,000 | No |
| Value length | Each supported Region: 40 Bytes | Yes |

Amazon Lookout for Vision endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|---------------------------------------|----------|--|
| US East (Ohio) | us-east-2 | lookoutvision.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | lookoutvision.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | lookoutvision.us-west-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|----------------------|----------------|--|----------|--|
| Asia Pacific (Seoul) | ap-northeast-2 | lookoutvision.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | lookoutvision.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | lookoutvision.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | lookoutvision.eu-west-1.amazonaws.com | HTTPS | |

Service quotas

| Resource | Default |
|--|--|
| Transactions per second per account for individual data plane operations: <ul style="list-style-type: none"> • DetectAnomalies | <ul style="list-style-type: none"> • Each supported Regions: 10 |
| Transactions per second per account for individual control plane operations: <ul style="list-style-type: none"> • CreateDataset • CreateModel • CreateProject • DeleteDataset • DeleteModel • DeleteProject • DescribeDataset • DescribeModel • DescribeProject • ListDatasetEntries • ListModels • ListProjects • StartModel • StopModel • UpdateDatasetEntries | Each supported Region: 5 |
| Maximum number of projects per account. | 100 |
| Maximum number of models per project. | 100 |
| Maximum number of concurrent training jobs per account. | 2 |
| Maximum number of concurrently running models per account. | 2 |

| Resource | Default |
|--|---------|
| Maximum number of concurrently running trial detections per account. | 2 |
| Maximum inference units per started model. | 5 |

For more information, see [Quotas in Amazon Lookout for Vision](#).

Amazon Macie endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------------|
| US East (Ohio) | us-east-2 | macie2.us-east-2.amazonaws.com macie2-fips.us-east-2.amazonaws.com | HTTPS HTTPS |
| US East (N. Virginia) | us-east-1 | macie2.us-east-1.amazonaws.com macie2-fips.us-east-1.amazonaws.com | HTTPS HTTPS |
| US West (N. California) | us-west-1 | macie2.us-west-1.amazonaws.com macie2-fips.us-west-1.amazonaws.com | HTTPS HTTPS |
| US West (Oregon) | us-west-2 | macie2.us-west-2.amazonaws.com macie2-fips.us-west-2.amazonaws.com | HTTPS HTTPS |
| Africa (Cape Town) | af-south-1 | macie2.af-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | macie2.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | macie2.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Osaka) | ap-northeast-3 | macie2.ap-northeast-3.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|-------------------------------------|----------|--|
| Asia Pacific (Seoul) | ap-northeast-2 | macie2.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | macie2.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | macie2.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | macie2.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | macie2.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | macie2.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | macie2.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | macie2.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | macie2.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | macie2.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | macie2.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | macie2.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | macie2.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|------------------------------------|------------|
| Data classification per month per account | Each supported Region: 5 Terabytes | Yes |

For information about additional Amazon Macie quotas, see [Amazon Macie quotas in the Amazon Macie User Guide](#).

AWS Mainframe Modernization endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|---------------------------|----------------|---------------------------------|----------|
| US East (N. Virginia) | us-east-1 | m2.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | m2.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | m2.ap-southeast-2.amazonaws.com | HTTPS |
| Europe (Frankfurt) | eu-central-1 | m2.eu-central-1.amazonaws.com | HTTPS |
| South America (São Paulo) | sa-east-1 | m2.sa-east-1.amazonaws.com | HTTPS |

Service quotas

| Name | Default | Adjustable |
|--|---------|------------|
| Number of runtime environments | 2 | No |
| Number of Amazon EC2 instances per high availability cluster | 2 | No |
| Number of applications per environment | 5 | No |
| Number of workloads for Micro Focus Enterprise Analyzer | 1 | No |
| Number of workloads for Micro Focus Enterprise Developer | 1 | No |

| Name | Default | Adjustable |
|---|--------------------------|------------|
| Number of Amazon EFS file systems per runtime environment | 1 | No |
| Number of Amazon FSx file systems per runtime environment | 1 | No |
| Instance sizes for runtime environments | M2.m5.large, M2.c5.large | No |

Amazon Machine Learning endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|---|----------|--|
| US East (N. Virginia) | us-east-1 | machinelearning.us-east-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | machinelearning.eu-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|--------------------------------------|---------------------|
| Batch prediction input records | Each supported Region: 100,000,000 | Yes |
| Batch prediction input size | Each supported Region: 1 Terabytes | Yes |
| Classes for multiclass ML models | Each supported Region: 100 | Yes |
| Job runtime | Each supported Region: 7 | No |
| ML model size | Each supported Region: 2 Gigabytes | No |
| Observation size | Each supported Region: 100 Kilobytes | Yes |
| Rate of real-time prediction requests per endpoint | Each supported Region: 200 | Yes |

| Name | Default | Adjustable |
|--|--------------------------------------|------------|
| Recipe complexity | Each supported Region: 10,000 | Yes |
| Simultaneous jobs | Each supported Region: 25 | Yes |
| Tags per object | Each supported Region: 50 | No |
| Total RAM for all real-time prediction endpoints | Each supported Region: 10 Gigabytes | Yes |
| Total rate of all real-time prediction requests | Each supported Region: 10,000 | Yes |
| Training data size | Each supported Region: 100 Gigabytes | Yes |
| Variables per data file | Each supported Region: 1,000 | Yes |

For more information, see [Amazon ML Quotas](#) in the *Amazon Machine Learning Developer Guide*.

Amazon Managed Blockchain endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------|--|
| US East (N. Virginia) | us-east-1 | managedblockchain.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | managedblockchain.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | managedblockchain.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | managedblockchain.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | managedblockchain.eu-west-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|-----------------|-----------|---|----------|--|
| Europe (London) | eu-west-2 | managedblockchain.eu-west-2.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|--------------------------|------------|
| Number of Hyperledger Fabric channels per Standard Edition network | Each supported Region: 8 | Yes |
| Number of Hyperledger Fabric channels per Starter Edition network | Each supported Region: 8 | Yes |
| Number of Standard Edition networks in which an AWS account can have a member | Each supported Region: 6 | Yes |
| Number of starter Edition networks in which an AWS account can have a member | Each supported Region: 6 | Yes |

For information about attributes of Starter Edition and Standard Edition networks, such as the number of members per network, peer nodes per member, available instance types, and more, see [Amazon Managed Blockchain Pricing](#).

AWS Management Console service endpoints

AWS Management Console has Regional endpoints that allow you to directly access the console in a given AWS Region. The general syntax of a Regional endpoint is as follows:

```
https://region-code.console.aws.amazon.com
```

For example, `https://us-west-2.console.aws.amazon.com` is the endpoint for the AWS Management Console service in the US West (Oregon) Region.

The table below lists the name, code, and endpoint of each AWS Region.

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|-------------------------|-----------|----------------------------------|----------|
| US East (Ohio) | us-east-2 | us-east-2.console.aws.amazon.com | HTTPS |
| US East (N. Virginia) | us-east-1 | us-east-1.console.aws.amazon.com | HTTPS |
| US West (N. California) | us-west-1 | us-west-1.console.aws.amazon.com | HTTPS |

| Region Name | Region | Endpoint | Protocol |
|---------------------------|----------------|---------------------------------------|-----------------|
| US West (Oregon) | us-west-2 | us-west-2.console.aws.amazon.com | HTTPS |
| Africa (Cape Town) | af-south-1 | af-south-1.console.aws.amazon.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | ap-east-1.console.aws.amazon.com | HTTPS |
| Asia Pacific (Jakarta) | ap-southeast-3 | ap-southeast-3.console.aws.amazon.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | ap-south-1.console.aws.amazon.com | HTTPS |
| Asia Pacific (Osaka) | ap-northeast-3 | ap-northeast-3.console.aws.amazon.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | ap-northeast-2.console.aws.amazon.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | ap-southeast-1.console.aws.amazon.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | ap-southeast-2.console.aws.amazon.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | ap-northeast-1.console.aws.amazon.com | HTTPS |
| Canada (Central) | ca-central-1 | ca-central-1.console.aws.amazon.com | HTTPS |
| Europe (Frankfurt) | eu-central-1 | eu-central-1.console.aws.amazon.com | HTTPS |
| Europe (Ireland) | eu-west-1 | eu-west-1.console.aws.amazon.com | HTTPS |
| Europe (London) | eu-west-2 | eu-west-2.console.aws.amazon.com | HTTPS |
| Europe (Milan) | eu-south-1 | eu-south-1.console.aws.amazon.com | HTTPS |
| Europe (Paris) | eu-west-3 | eu-west-3.console.aws.amazon.com | HTTPS |
| Europe (Stockholm) | eu-north-1 | eu-north-1.console.aws.amazon.com | HTTPS |
| Middle East (Bahrain) | me-south-1 | me-south-1.console.aws.amazon.com | HTTPS |
| South America (São Paulo) | sa-east-1 | sa-east-1.console.aws.amazon.com | HTTPS |

| Region Name | Region | Endpoint | Protocol |
|------------------------|---------------|--|----------|
| AWS GovCloud (US-East) | us-gov-east-1 | us-gov-east-1.console.amazonaws-us-gov.com | HTTPS |
| AWS GovCloud (US-West) | us-gov-west-1 | us-gov-west-1.console.amazonaws-us-gov.com | HTTPS |

Amazon Managed Workflows for Apache Airflow endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|--------------------------------------|----------|
| US East (Ohio) | us-east-2 | airflow.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | airflow.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | airflow.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | airflow.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | airflow.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | airflow.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | airflow.ap-southeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | airflow.ap-northeast-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|--------------|------------------------------------|----------|--|
| Canada (Central) | ca-central-1 | airflow.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | airflow.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | airflow.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | airflow.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | airflow.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | airflow.eu-north-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | airflow.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-------------------------------------|---------------------------|------------|
| Environments per account per Region | Each supported Region: 10 | Yes |
| Workers per environment | Each supported Region: 25 | Yes |

AWS Marketplace endpoints and quotas

AWS Marketplace is a curated digital catalog that makes it easy for customers to find, buy, deploy, and manage third-party software and services that customers need to build solutions and run their businesses.

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

The AWS Marketplace website is available globally. The AWS Marketplace console is available in the US East (N. Virginia) Region. The product vendor determines the Regions in which their products are available.

AWS Marketplace Commerce Analytics

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|---------------|--|-----------------|--|
| US East (N. Virginia) | us-east-1 | marketplacecommerceanalytics.us-east-1.amazonaws.com | HTTPS | |

AWS Marketplace Entitlement Service

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|---------------|---|-----------------|--|
| US East (N. Virginia) | us-east-1 | entitlement.marketplace.us-east-1.amazonaws.com | HTTPS | |

AWS Marketplace Metering Service

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| US East (Ohio) | us-east-2 | metering.marketplace.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | metering.marketplace.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | metering.marketplace.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | metering.marketplace.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | metering.marketplace.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | metering.marketplace.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | metering.marketplace.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | metering.marketplace.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | metering.marketplace.ap-northeast-3.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| Asia Pacific (Seoul) | ap-northeast-2 | metering.marketplace.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | metering.marketplace.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | metering.marketplace.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | metering.marketplace.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | metering.marketplace.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | metering.marketplace.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | metering.marketplace.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | metering.marketplace.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | metering.marketplace.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | metering.marketplace.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | metering.marketplace.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | metering.marketplace.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | metering.marketplace.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | metering.marketplace.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | metering.marketplace.us-gov-west-1.amazonaws.com | HTTPS | |

Amazon Mechanical Turk endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region | Endpoint | Protocol |
|---|---|----------|
| Sandbox endpoint for Amazon Mechanical Turk actions. | mturk-requester-sandbox.us-east-1.amazonaws.com | HTTPS |
| Production endpoint for Amazon Mechanical Turk actions. | mturk-requester.us-east-1.amazonaws.com | HTTPS |

Service quotas

| Name | Default | Adjustable |
|---------------|------------------------------|---------------------|
| Monthly Usage | Each supported Region: 1,000 | Yes |

Amazon Managed Streaming for Apache Kafka endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|-------------------------------|----------|--|
| US East (Ohio) | us-east-2 | kafka.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | kafka.us-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|------------------------------------|-----------------|--|
| US West (N. California) | us-west-1 | kafka.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | kafka.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | kafka.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | kafka.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | kafka.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | kafka.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | kafka.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | kafka.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | kafka.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | kafka.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | kafka.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | kafka.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | kafka.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | kafka.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | kafka.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | kafka.eu-west-3.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|-----------------------------------|----------|--|
| Europe (Stockholm) | eu-north-1 | kafka.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | kafka.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | kafka.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | kafka.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | kafka.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---------------------------------------|----------------------------|------------|
| Number of brokers per account | Each supported Region: 90 | Yes |
| Number of brokers per cluster | Each supported Region: 30 | Yes |
| Number of configurations per account | Each supported Region: 100 | Yes |
| Number of revisions per configuration | Each supported Region: 50 | Yes |

Amazon MSK Connect endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|--------------------------------------|----------|--|
| US East (Ohio) | us-east-2 | kafkaconnect.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | kafkaconnect.us-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------|--|
| US West (N. California) | us-west-1 | kafkaconnect.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | kafkaconnect.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | kafkaconnect.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | kafkaconnect.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | kafkaconnect.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | kafkaconnect.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | kafkaconnect.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | kafkaconnect.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | kafkaconnect.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | kafkaconnect.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | kafkaconnect.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | kafkaconnect.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | kafkaconnect.eu-north-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | kafkaconnect.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Dimension | Quota |
|-------------------------------|---|
| Maximum custom plugins | 100 |
| Maximum worker configurations | 100 |
| Maximum connect workers | Up to 60 connect workers. If a connector is set up to have auto scaled capacity, MSK Connect uses the maximum number of workers configured for that connector to calculate the quota for the account. |

AWS Elemental MediaConnect endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------|
| US East (Ohio) | us-east-2 | mediaconnect.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | mediaconnect.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | mediaconnect.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | mediaconnect.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | mediaconnect.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | mediaconnect.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | mediaconnect.ap-northeast-2.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------|--|
| Asia Pacific (Singapore) | ap-southeast-1 | mediaconnect.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | mediaconnect.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | mediaconnect.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | mediaconnect.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | mediaconnect.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | mediaconnect.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | mediaconnect.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | mediaconnect.eu-north-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | mediaconnect.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--------------|---------------------------|------------|
| Entitlements | Each supported Region: 50 | No |
| Flows | Each supported Region: 20 | Yes |
| Outputs | Each supported Region: 50 | No |

For more information, see [Quotas](#) in the *AWS Elemental MediaConnect User Guide*.

AWS Elemental MediaConvert endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#).

Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Use these endpoints only to request an account-specific endpoint, using the [DescribeEndpoints](#) operation. Send all your transcoding requests to the account-specific endpoint that the service returns. For more information, see [Getting Started with the API](#) in the *MediaConvert API Reference*.

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------|--|
| US East (Ohio) | us-east-2 | mediaconvert.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | mediaconvert.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | mediaconvert.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | mediaconvert.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | mediaconvert.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | mediaconvert.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | mediaconvert.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | mediaconvert.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | mediaconvert.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | mediaconvert.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | mediaconvert.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | mediaconvert.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | mediaconvert.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | mediaconvert.eu-west-3.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|----------|--|
| Europe (Stockholm) | eu-north-1 | mediaconvert.eu-north-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | mediaconvert.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | mediaconvert.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|--|------------|
| Concurrent jobs across all on-demand queues, baseline | us-east-1: 40 us-west-2: 40 eu-west-1: 40 Each of the other supported Regions: 20 | Yes |
| Concurrent jobs per on-demand queue, peak | us-east-1: 200 us-west-2: 200 eu-west-1: 200 Each of the other supported Regions: 100 | Yes |
| Custom job templates | Each supported Region: 100 | Yes |
| Custom output presets | Each supported Region: 100 | Yes |
| Queues (on-demand) per Region, per account | Each supported Region: 10 | Yes |
| Queues (reserved) per Region, per account | Each supported Region: 30 | Yes |
| Request rate for API calls in aggregate | Each supported Region: 2 | Yes |
| Request rate for API calls in aggregate, in a burst | Each supported Region: 100 | Yes |
| Request rate for DescribeEndpoints | Each supported Region: 0.01667 | Yes |
| Request rate for DescribeEndpoints, in a burst | Each supported Region: 0 | Yes |

AWS Elemental MediaLive endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

When you submit requests using the AWS CLI or SDKs, either leave the Region and endpoint unspecified, or specify us-east-1 as the Region. When you submit requests using the MediaLive API, use the us-east-1 Region to sign requests. For more information about signing MediaLive API requests, see [Signature Version 4 signing process \(p. 763\)](#).

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------|--|
| US East (Ohio) | us-east-2 | medialive.us-east-2.amazonaws.com | HTTPS | |
| | | medialive-fips.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | medialive.us-east-1.amazonaws.com | HTTPS | |
| | | medialive-fips.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | medialive.us-west-2.amazonaws.com | HTTPS | |
| | | medialive-fips.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | medialive.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | medialive.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | medialive.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | medialive.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | medialive.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | medialive.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | medialive.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | medialive.eu-west-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|------------|------------------------------------|----------|--|
| Europe (Paris) | eu-west-3 | medialive.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | medialive.eu-north-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | medialive.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-----------------------|----------------------------|------------|
| CDI Channels | Each supported Region: 2 | Yes |
| Channels | Each supported Region: 5 | Yes |
| Device Inputs | Each supported Region: 100 | Yes |
| HEVC Channels | Each supported Region: 5 | Yes |
| Input Security Groups | Each supported Region: 5 | Yes |
| Multiplexes | Each supported Region: 2 | Yes |
| Pull Inputs | Each supported Region: 100 | Yes |
| Push Inputs | Each supported Region: 5 | Yes |
| Reservations | Each supported Region: 50 | Yes |
| UHD Channels | Each supported Region: 1 | Yes |
| VPC Inputs | Each supported Region: 50 | Yes |

AWS Elemental MediaPackage endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

These are the endpoints for live content workflows.

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| US East (Ohio) | us-east-2 | mediapackage.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | mediapackage.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | mediapackage.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | mediapackage.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | mediapackage.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | mediapackage.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | mediapackage.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | mediapackage.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | mediapackage.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | mediapackage.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | mediapackage.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | mediapackage.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | mediapackage.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | mediapackage.eu-north-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | mediapackage.sa-east-1.amazonaws.com | HTTPS | |

These are the endpoints for video on demand (VOD) content workflows.

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| US East (Ohio) | us-east-2 | mediapackage-vod.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | mediapackage-vod.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | mediapackage-vod.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | mediapackage-vod.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | mediapackage-vod.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | mediapackage-vod.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | mediapackage-vod.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | mediapackage-vod.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | mediapackage-vod.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | mediapackage-vod.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | mediapackage-vod.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | mediapackage-vod.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | mediapackage-vod.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | mediapackage-vod.eu-north-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | mediapackage-vod.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|-------------------------------|------------|
| Assets per packaging group | Each supported Region: 10,000 | Yes |
| Burst rate of REST API requests (Live) | Each supported Region: 50 | No |
| Burst rate of REST API requests (VOD) | Each supported Region: 50 | No |
| Channels | Each supported Region: 30 | Yes |
| Concurrent harvest jobs | Each supported Region: 10 | Yes |
| Content retention | Each supported Region: 336 | No |
| Endpoints per channel | Each supported Region: 10 | Yes |
| Ingest streams per asset | Each supported Region: 20 | No |
| Ingest streams per channel | Each supported Region: 20 | No |
| Live manifest length | Each supported Region: 5 | Yes |
| Packaging configurations per packaging group | Each supported Region: 10 | Yes |
| Packaging groups | Each supported Region: 10 | Yes |
| Rate of REST API requests (Live) | Each supported Region: 5 | No |
| Rate of REST API requests (VOD) | Each supported Region: 5 | No |
| Rate of ingest requests per channel | Each supported Region: 50 | No |
| Rate of manifest egress requests per asset | Each supported Region: 1,000 | No |
| Rate of manifest egress requests per origin endpoint | Each supported Region: 5,000 | No |
| Rate of segment egress requests per asset | Each supported Region: 600 | No |
| Rate of segment egress requests per origin endpoint | Each supported Region: 300 | No |
| Time-shifted manifest length | Each supported Region: 24 | No |
| Tracks per ingest stream (Live) | Each supported Region: 10 | No |
| Tracks per ingest stream (VOD) | Each supported Region: 10 | No |

For more information, see [Quotas](#) in the *AWS Elemental MediaPackage User Guide*.

AWS Elemental MediaStore endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#).

Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|----------------|---|----------|--|
| US East (N. Virginia) | us-east-1 | mediastore.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | mediastore.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | mediastore.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | mediastore.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | mediastore.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | mediastore.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | mediastore.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | mediastore.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | mediastore.eu-north-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|-------------------------------------|------------|
| Containers | Each supported Region: 100 | No |
| Folder levels | Each supported Region: 10 | No |
| Object size | Each supported Region: 25 Megabytes | No |
| Rate of DeleteObject API requests | Each supported Region: 100 | Yes |
| Rate of DescribeObject API requests | Each supported Region: 1,000 | Yes |
| Rate of GetObject API requests for standard upload availability | Each supported Region: 1,000 | Yes |

| Name | Default | Adjustable |
|--|----------------------------|------------|
| Rate of GetObject API requests for streaming upload availability | Each supported Region: 25 | Yes |
| Rate of ListItems API requests | Each supported Region: 5 | Yes |
| Rate of PutObject API requests for chunked transfer encoding (also known as streaming upload availability) | Each supported Region: 10 | Yes |
| Rate of PutObject API requests for standard upload availability | Each supported Region: 100 | Yes |

For more information, see [Quotas](#) in the *AWS Elemental MediaStore User Guide*.

AWS Elemental MediaTailor endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------------|--|
| US East (N. Virginia) | us-east-1 | api.mediatailor.us-east-1.amazonaws.com | HTTP and HTTPS | |
| US West (Oregon) | us-west-2 | api.mediatailor.us-west-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | api.mediatailor.ap-southeast-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | api.mediatailor.ap-southeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | api.mediatailor.ap-northeast-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Frankfurt) | eu-central-1 | api.mediatailor.eu-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Ireland) | eu-west-1 | api.mediatailor.eu-west-1.amazonaws.com | HTTP and HTTPS | |

Service quotas

| Name | Default | Adjustable |
|------------------------------------|-------------------------------------|------------|
| Ad decision server (ADS) length | Each supported Region: 25,000 | No |
| Ad decision server (ADS) redirects | Each supported Region: 5 | No |
| Ad decision server (ADS) timeout | Each supported Region: 3 Seconds | No |
| Configurations | Each supported Region: 1,000 | No |
| Content origin length | Each supported Region: 512 | No |
| Content origin server timeout | Each supported Region: 2 Seconds | No |
| Manifest size | Each supported Region: 2 Megabytes | No |
| Session expiration | Each supported Region: 10 Megabytes | No |

For more information, see [Quotas](#) in the *AWS Elemental MediaTailor User Guide*.

AWS Migration Hub endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

The migration tools that integrate with AWS Migration Hub send migration status to the Migration Hub in the home Region you choose. For information about choosing a home Region, see [The AWS Migration Hub Home Region](#) in the *AWS Migration Hub User Guide*.

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|----------------|----------------------------------|----------|--|
| US East (N. Virginia) | us-east-1 | mgh.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | mgh.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | mgh.ap-southeast-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|----------------------|----------------|----------------------------------|----------|--|
| Asia Pacific (Tokyo) | ap-northeast-1 | mgh.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | mgh.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | mgh.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | mgh.eu-west-2.amazonaws.com | HTTPS | |

Service quotas

The quotas associated with AWS Migration Hub are the AWS Application Discovery Service quotas. For more information, see [AWS Application Discovery Service Quotas \(p. 45\)](#).

AWS Migration Hub Refactor Spaces endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|--|----------|
| US East (Ohio) | us-east-2 | refactor-spaces.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | refactor-spaces.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | refactor-spaces.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | refactor-spaces.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | refactor-spaces.ap-southeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | refactor-spaces.ap-northeast-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol |
|--------------------|--------------|--|----------|
| Europe (Frankfurt) | eu-central-1 | refactor-spaces.eu-central-1.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | refactor-spaces.eu-west-1.amazonaws.com | HTTPS |
| Europe (London) | eu-west-2 | refactor-spaces.eu-west-2.amazonaws.com | HTTPS |
| Europe (Stockholm) | eu-north-1 | refactor-spaces.eu-north-1.amazonaws.com | HTTPS |

Service quotas

| Name | Default | Adjustable |
|--------------|------------------------------|------------|
| Applications | Each supported Region: 600 | Yes |
| Environments | Each supported Region: 50 | Yes |
| Routes | Each supported Region: 1,000 | Yes |
| Services | Each supported Region: 500 | Yes |

Migration Hub Strategy Recommendations endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|-----------------------|----------------|--|----------|
| US East (N. Virginia) | us-east-1 | migrationhub-strategy.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | migrationhub-strategy.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | migrationhub-strategy.ap-southeast-2.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|----------------------|----------------|--|----------|--|
| Asia Pacific (Tokyo) | ap-northeast-1 | migrationhub-strategy.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | migrationhub-strategy.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | migrationhub-strategy.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | migrationhub-strategy.eu-west-2.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-------------------------------|----------------------------|------------|
| Active Assessment Maximum | Each supported Region: 1 | Yes |
| Active Import Maximum | Each supported Region: 5 | Yes |
| Assessment Maximum | Each supported Region: 50 | Yes |
| Maximum Server per Assessment | Each supported Region: 300 | Yes |

Amazon Monitron endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Amazon Monitron is currently supported in the following Regions:

- US East (N. Virginia): us-east-1
- Europe (Ireland): eu-west-1

Service quotas

| Name | Default | Adjustable |
|-------------------|----------------------------|------------|
| Assets per site | Each supported Region: 100 | Yes |
| Gateways per site | Each supported Region: 200 | Yes |

| Name | Default | Adjustable |
|----------------------|---------------------------|------------|
| Positions per asset | Each supported Region: 20 | Yes |
| Projects per account | Each supported Region: 10 | Yes |
| Sites per project | Each supported Region: 50 | Yes |
| Users per site | Each supported Region: 20 | Yes |

Amazon MQ endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | mq.us-east-2.amazonaws.com mq-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | mq.us-east-1.amazonaws.com mq-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | mq.us-west-1.amazonaws.com mq-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | mq.us-west-2.amazonaws.com mq-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | mq.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | mq.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | mq.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | mq.ap-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| Asia Pacific (Osaka) | ap-northeast-3 | mq.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | mq.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | mq.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | mq.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | mq.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | mq.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | mq.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | mq.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | mq.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | mq.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | mq.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | mq.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | mq.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | mq.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | mq.us-gov-east-1.amazonaws.com mq-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | mq.us-gov-west-1.amazonaws.com mq-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|--------------------------------------|------------|
| API burst limit | Each supported Region: 100 | No |
| API rate limit | Each supported Region: 15 | No |
| Destinations monitored in CloudWatch (ActiveMQ) | Each supported Region: 200 | No |
| Destinations monitored in CloudWatch (RabbitMQ) | Each supported Region: 500 | No |
| Groups per user (simple auth) | Each supported Region: 20 | No |
| Job scheduler usage limit per broker backed by Amazon EBS | Each supported Region: 50 Gigabytes | No |
| Number of brokers, per region | Each supported Region: 20 | Yes |
| Revisions per configuration | Each supported Region: 300 | No |
| Security groups per broker | Each supported Region: 5 | No |
| Storage capacity per larger broker | Each supported Region: 200 Gigabytes | No |
| Storage capacity per smaller broker | Each supported Region: 20 Gigabytes | No |
| Tags per broker | Each supported Region: 50 | No |
| Temporary storage capacity per larger broker | Each supported Region: 50 Gigabytes | No |
| Temporary storage capacity per smaller broker | Each supported Region: 5 Gigabytes | No |
| Users per broker (simple auth) | Each supported Region: 250 | No |
| Wire-level connections per larger broker | Each supported Region: 1,000 | Yes |
| Wire-level connections per smaller broker | Each supported Region: 100 | Yes |

For more information, see [Quotas in Amazon MQ](#) in the *Amazon MQ Developer Guide*.

Amazon Neptune endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|----------------------------------|----------------|--|
| US East (Ohio) | us-east-2 | rds.us-east-2.amazonaws.com | HTTP and HTTPS | |
| US East (N. Virginia) | us-east-1 | rds.us-east-1.amazonaws.com | HTTP and HTTPS | |
| US West (N. California) | us-west-1 | rds.us-west-1.amazonaws.com | HTTP and HTTPS | |
| US West (Oregon) | us-west-2 | rds.us-west-2.amazonaws.com | HTTP and HTTPS | |
| Africa (Cape Town) | af-south-1 | rds.af-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | rds.ap-east-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | rds.ap-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | rds.ap-northeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | rds.ap-southeast-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | rds.ap-southeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | rds.ap-northeast-1.amazonaws.com | HTTP and HTTPS | |
| Canada (Central) | ca-central-1 | rds.ca-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Frankfurt) | eu-central-1 | rds.eu-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Ireland) | eu-west-1 | rds.eu-west-1.amazonaws.com | HTTP and HTTPS | |
| Europe (London) | eu-west-2 | rds.eu-west-2.amazonaws.com | HTTP and HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---------------------------------|----------------|--|
| Europe (Paris) | eu-west-3 | rds.eu-west-3.amazonaws.com | HTTP and HTTPS | |
| Europe (Stockholm) | eu-north-1 | rds.eu-north-1.amazonaws.com | HTTP and HTTPS | |
| Middle East (Bahrain) | me-south-1 | rds.me-south-1.amazonaws.com | HTTP and HTTPS | |
| South America (São Paulo) | sa-east-1 | rds.sa-east-1.amazonaws.com | HTTP and HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | rds.us-gov-east-1.amazonaws.com | HTTP and HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | rds.us-gov-west-1.amazonaws.com | HTTP and HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-------------------------------------|----------------------------|------------|
| Cluster endpoints per DB cluster | Each supported Region: 5 | Yes |
| Cross-region snapshot copy requests | Each supported Region: 5 | Yes |
| DB cluster Roles | Each supported Region: 5 | Yes |
| DB cluster manuals snapshots | Each supported Region: 100 | Yes |
| DB cluster parameter groups | Each supported Region: 50 | Yes |
| DB clusters | Each supported Region: 40 | Yes |
| DB instance parameter groups | Each supported Region: 50 | Yes |
| DB instances | Each supported Region: 40 | Yes |
| DB subnet groups | Each supported Region: 50 | Yes |
| Event subscriptions | Each supported Region: 20 | Yes |
| Read replicas per cluster | Each supported Region: 15 | No |
| Reserved DB instances | Each supported Region: 40 | Yes |
| Tags per resource | Each supported Region: 50 | Yes |

For more information, see [Amazon Neptune quotas](#) in the *Amazon Neptune User Guide*.

AWS Network Firewall endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | network-firewall.us-east-2.amazonaws.com network-firewall-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | network-firewall.us-east-1.amazonaws.com network-firewall-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | network-firewall.us-west-1.amazonaws.com network-firewall-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | network-firewall.us-west-2.amazonaws.com network-firewall-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | network-firewall.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | network-firewall.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | network-firewall.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | network-firewall.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | network-firewall.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | network-firewall.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | network-firewall.ap-southeast-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|----------------|--|
| Asia Pacific (Tokyo) | ap-northeast-1 | network-firewall.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | network-firewall.ca-central-1.amazonaws.com network-firewall-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | network-firewall.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | network-firewall.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | network-firewall.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | network-firewall.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | network-firewall.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | network-firewall.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | network-firewall.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | network-firewall.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | network-firewall-fips.us-gov-east-1.amazonaws.com network-firewall-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | network-firewall-fips.us-gov-west-1.amazonaws.com network-firewall-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-------------------|---------------------------|------------|
| Firewall policies | Each supported Region: 20 | Yes |

| Name | Default | Adjustable |
|----------------------|---------------------------|------------|
| Firewalls | Each supported Region: 5 | Yes |
| Stateful rulegroups | Each supported Region: 50 | Yes |
| Stateless rulegroups | Each supported Region: 50 | Yes |

For more information, see [AWS Network Firewall quotas](#) in the *Network Firewall Developer Guide*.

Transit Gateway Network Manager endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|------------------------|---------------|--|----------|
| US West (Oregon) | us-west-2 | networkmanager.us-west-2.amazonaws.com | HTTPS |
| AWS GovCloud (US-West) | us-gov-west-1 | networkmanager.us-gov-west-1.amazonaws.com | HTTPS |

Service quotas

| Name | Default | Adjustable |
|--------------------------------------|--------------------------------------|------------|
| Attachments per core network | Each supported Region: 5,000 | Yes |
| Connect peers per connect attachment | Each supported Region: 4 | No |
| Connections per global network | Each supported Region: 500 | Yes |
| Core network attachments per VPC | Each supported Region: 5 | No |
| Core network policy size in KB | Each supported Region: 100 Kilobytes | No |
| Core networks per global network | Each supported Region: 1 | No |
| Devices per global network | Each supported Region: 200 | Yes |
| Edges per region per core network | Each supported Region: 1 | No |

| Name | Default | Adjustable |
|--|--|------------|
| Global networks per account | Each supported Region: 5 | Yes |
| Links per global network | Each supported Region: 200 | Yes |
| Policy versions per core network | Each supported Region: 10,000 | Yes |
| Retention duration in seconds for core network policies with out of date change sets | Each supported Region: 7,776,000 Seconds | Yes |
| Segments per core network | Each supported Region: 20 | Yes |
| Sites per global network | Each supported Region: 200 | Yes |

For more information, see [Network Manager quotas](#).

Amazon Nimble Studio endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|-----------------------|----------------|-------------------------------------|----------|
| US East (N. Virginia) | us-east-1 | nimble.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | nimble.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | nimble.ap-southeast-2.amazonaws.com | HTTPS |
| Canada (Central) | ca-central-1 | nimble.ca-central-1.amazonaws.com | HTTPS |
| Europe (London) | eu-west-2 | nimble.eu-west-2.amazonaws.com | HTTPS |

Service quotas

| Name | Default | Adjustable |
|---|--------------------------|------------|
| Active Directory studio components per studio | Each supported Region: 1 | No |

| Name | Default | Adjustable |
|---|---------------------------|------------|
| Custom streaming images per studio | Each supported Region: 10 | Yes |
| Launch profiles per studio | Each supported Region: 50 | Yes |
| Shared file system studio components per studio | Each supported Region: 10 | Yes |
| Streaming sessions per studio | Each supported Region: 2 | Yes |
| Studio components per studio | Each supported Region: 50 | Yes |
| Studio creation per account | Each supported Region: 1 | No |

Amazon OpenSearch Service endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|------------|--|-------------------------|--|
| US East (Ohio) | us-east-2 | es.us-east-2.amazonaws.com es-fips.us-east-2.amazonaws.com es-fips.us-east-2.amazonaws.com | HTTPS HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | es.us-east-1.amazonaws.com es-fips.us-east-1.amazonaws.com es-fips.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| US West (N. California) | us-west-1 | es.us-west-1.amazonaws.com es-fips.us-west-1.amazonaws.com es-fips.us-west-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | es.us-west-2.amazonaws.com es-fips.us-west-2.amazonaws.com es-fips.us-west-2.amazonaws.com | HTTPS HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | es.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific | ap-east-1 | es.ap-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---------------------------------|----------|--|
| (Hong Kong) | | | | |
| Asia Pacific (Jakarta) | ap-southeast-3 | es.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | es.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | es.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | es.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | es.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | es.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | es.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | es.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | es.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | es.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | es.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | es.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | es.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | es.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | es.me-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|-------------------------|--|
| South America (São Paulo) | sa-east-1 | es.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | es.us-gov-east-1.amazonaws.com es-fips.us-gov-east-1.amazonaws.com es-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | es.us-gov-west-1.amazonaws.com es-fips.us-gov-west-1.amazonaws.com es-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|----------------------------|------------|
| Dedicated master instances per domain | Each supported Region: 5 | No |
| Domains per region | Each supported Region: 100 | Yes |
| Instances per domain | Each supported Region: 40 | Yes |
| Instances per domain (T2 instance type) | Each supported Region: 10 | No |
| Warm nodes per cluster | Each supported Region: 150 | No |

For more information, see [Amazon OpenSearch Service limits](#).

AWS OpsWorks endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

AWS OpsWorks CM

You can create and manage AWS OpsWorks for Chef Automate and AWS OpsWorks for Puppet Enterprise servers in the following Regions. Resources can be managed only in the Region in which they are created. Resources that are created in one Regional endpoint are not available, nor can they be cloned to, another Regional endpoint.

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|--|-----------------|
| US East (Ohio) | us-east-2 | opsworks-cm.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | opsworks-cm.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | opsworks-cm.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | opsworks-cm.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | opsworks-cm.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | opsworks-cm.ap-southeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | opsworks-cm.ap-northeast-1.amazonaws.com | HTTPS |
| Europe (Frankfurt) | eu-central-1 | opsworks-cm.eu-central-1.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | opsworks-cm.eu-west-1.amazonaws.com | HTTPS |

AWS OpsWorks Stacks

You can create and manage AWS OpsWorks resources in all of the following Regions. The Canada (Central) Region Region is API-only; you cannot create stacks in Canada (Central) Region by using the AWS Management Console. Resources can be managed only in the Region in which they are created. Resources that are created in one Regional endpoint are not available—nor can they be cloned to—another Regional endpoint.

| Region Name | Region | Endpoint | Protocol |
|-------------------------|---------------|----------------------------------|-----------------|
| US East (Ohio) | us-east-2 | opsworks.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | opsworks.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | opsworks.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | opsworks.us-west-2.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---------------------------------------|----------|--|
| Asia Pacific (Mumbai) | ap-south-1 | opsworks.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | opsworks.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | opsworks.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | opsworks.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | opsworks.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | opsworks.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | opsworks.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | opsworks.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | opsworks.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | opsworks.eu-west-3.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | opsworks.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

The following quotas are for AWS OpsWorks CM.

| Name | Default | Adjustable |
|---|---------------------------|------------|
| Automated (scheduled) backup generations per server | Each supported Region: 10 | Yes |
| Chef Automate or Puppet Enterprise servers | Each supported Region: 5 | Yes |
| Manual backups per server | Each supported Region: 10 | Yes |

The following quotas are for AWS OpsWorks stacks.

| Name | Default | Adjustable |
|---------------------|---------------------------|------------|
| Apps per stack | Each supported Region: 40 | Yes |
| Instances per stack | Each supported Region: 40 | Yes |
| Layers per stack | Each supported Region: 40 | Yes |
| Stacks | Each supported Region: 40 | Yes |

AWS Organizations endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Because AWS Organizations is a global service, there is a single global endpoint for all of the AWS Regions in each partition.

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|------------|--|-------------------------|--|
| US East (Ohio) | us-east-2 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| US West (N. California) | us-west-1 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|-------------------------|--|
| Asia Pacific (Hong Kong) | ap-east-1 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Canada (Central) | ca-central-1 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|-------------------------|--|
| Europe (Ireland) | eu-west-1 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (London) | eu-west-2 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (Milan) | eu-south-1 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (Paris) | eu-west-3 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (Stockholm) | eu-north-1 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Middle East (Bahrain) | me-south-1 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| South America (São Paulo) | sa-east-1 | organizations.us-east-1.amazonaws.com organizations-fips.us-east-1.amazonaws.com organizations.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | organizations.us-gov-west-1.amazonaws.com organizations.us-gov-west-1.amazonaws.com organizations.us-gov-west-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | organizations.us-gov-west-1.amazonaws.com organizations.us-gov-west-1.amazonaws.com organizations.us-gov-west-1.amazonaws.com | HTTPS HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|------------------------------------|------------|
| Default maximum number of accounts | Each supported Region: 10 | Yes |
| Enable all features request expiration | Each supported Region: 90 | No |
| Handshake expiration | Each supported Region: 30 | No |
| Invitation acceptance expiration | Each supported Region: 15 | No |
| Member accounts you can concurrently create | Each supported Region: 5 | No |
| Minimum age for removal of created accounts | Each supported Region: 7 | No |
| Number of invitation attempts you can perform in a 24-hour period | Each supported Region: 20 | No |
| OU maximum nesting in a root | Each supported Region: 5 | No |
| OUs in an organization | Each supported Region: 1,000 | No |
| Policies in an organization | Each supported Region: 1,000 | No |
| Roots in an organization | Each supported Region: 1 | No |
| Service control policies per OU | Each supported Region: 5 | No |
| Service control policies per account | Each supported Region: 5 | No |
| Service control policies per root | Each supported Region: 5 | No |
| Service control policy (SCP) document size | Each supported Region: 5,120 Bytes | No |

For more information, see [Quotas for AWS Organizations](#) in the *AWS Organizations User Guide*.

AWS Outposts endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|----------------|-----------|----------------------------------|----------|--|
| US East (Ohio) | us-east-2 | outposts.us-east-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|-----------------|--|
| | | outposts-fips.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | outposts.us-east-1.amazonaws.com | HTTPS | |
| | | outposts-fips.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | outposts.us-west-1.amazonaws.com | HTTPS | |
| | | outposts-fips.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | outposts.us-west-2.amazonaws.com | HTTPS | |
| | | outposts-fips.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | outposts.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | outposts.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | outposts.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | outposts.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | outposts.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | outposts.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | outposts.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | outposts.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | outposts.ca-central-1.amazonaws.com | HTTPS | |
| | | outposts-fips.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | outposts.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | outposts.eu-west-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|-----------------|--|
| Europe (London) | eu-west-2 | outposts.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | outposts.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | outposts.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | outposts.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | outposts.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | outposts.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | outposts.us-gov-east-1.amazonaws.com outposts.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | outposts.us-gov-west-1.amazonaws.com outposts.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Amazon S3 on Outposts

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|---------------|---|-----------------|--|
| US East (Ohio) | us-east-2 | s3-outposts.us-east-2.amazonaws.com s3-outposts-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | s3-outposts.us-east-1.amazonaws.com s3-outposts-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | s3-outposts.us-west-1.amazonaws.com s3-outposts-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | s3-outposts.us-west-2.amazonaws.com s3-outposts-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | s3-outposts.af-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| Asia Pacific (Hong Kong) | ap-east-1 | s3-outposts.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | s3-outposts.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | s3-outposts.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | s3-outposts.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | s3-outposts.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | s3-outposts.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | s3-outposts.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | s3-outposts.ca-central-1.amazonaws.com s3-outposts-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | s3-outposts.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | s3-outposts.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | s3-outposts.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | s3-outposts.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | s3-outposts.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | s3-outposts.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | s3-outposts.me-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| South America (São Paulo) | sa-east-1 | s3-outposts.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | s3-outposts.us-gov-east-1.amazonaws.com s3-outposts-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | s3-outposts.us-gov-west-1.amazonaws.com s3-outposts-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-------------------|----------------------------|------------|
| Outpost sites | Each supported Region: 100 | Yes |
| Outposts per site | Each supported Region: 10 | Yes |

Amazon Personalize endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Amazon Personalize

| Region Name | Region | Endpoint | Protocol |
|-----------------------|----------------|--|----------|
| US East (N. Virginia) | us-east-1 | personalize.us-east-1.amazonaws.com | HTTPS |
| US East (Ohio) | us-east-2 | personalize.us-east-2.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | personalize.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | personalize.ap-northeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | personalize.ap-south-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|--|----------|
| Asia Pacific (Seoul) | ap-northeast-2 | personalize.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | personalize.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | personalize.ap-southeast-2.amazonaws.com | HTTPS |
| China (Beijing) | cn-north-1 | personalize.cn-north-1.amazonaws.com.cn | HTTPS |
| Canada (Central) | ca-central-1 | personalize.ca-central-1.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | personalize.eu-west-1.amazonaws.com | HTTPS |
| Europe (Frankfurt) | eu-central-1 | personalize.eu-central-1.amazonaws.com | HTTPS |

Amazon Personalize Events

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------|
| US East (N. Virginia) | us-east-1 | personalize-events.us-east-1.amazonaws.com | HTTPS |
| US East (Ohio) | us-east-2 | personalize-events.us-east-2.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | personalize-events.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | personalize-events.ap-northeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | personalize-events.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | personalize-events.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | personalize-events.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | personalize-events.ap-southeast-2.amazonaws.com | HTTPS |
| China (Beijing) | cn-north-1 | personalize-events.cn-north-1.amazonaws.com.cn | HTTPS |
| Canada (Central) | ca-central-1 | personalize-events.ca-central-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol |
|--------------------|--------------|---|----------|
| Europe (Ireland) | eu-west-1 | personalize-events.eu-west-1.amazonaws.com | HTTPS |
| Europe (Frankfurt) | eu-central-1 | personalize-events.eu-central-1.amazonaws.com | HTTPS |

Amazon Personalize Runtime

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|--|----------|
| US East (N. Virginia) | us-east-1 | personalize-runtime.us-east-1.amazonaws.com | HTTPS |
| US East (Ohio) | us-east-2 | personalize-runtime.us-east-2.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | personalize-runtime.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | personalize-runtime.ap-northeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | personalize-runtime.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | personalize-runtime.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | personalize-runtime.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | personalize-runtime.ap-southeast-2.amazonaws.com | HTTPS |
| China (Beijing) | cn-north-1 | personalize-runtime.cn-north-1.amazonaws.com.cn | HTTPS |
| Canada (Central) | ca-central-1 | personalize-runtime.ca-central-1.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | personalize-runtime.eu-west-1.amazonaws.com | HTTPS |
| Europe (Frankfurt) | eu-central-1 | personalize-runtime.eu-central-1.amazonaws.com | HTTPS |

Service quotas

| Name | Default | Adjustable |
|-----------------------|----------------------------|------------|
| Active campaigns | Each supported Region: 20 | Yes |
| Active dataset groups | Each supported Region: 500 | No |

| Name | Default | Adjustable |
|---|--------------------------------------|------------|
| Active datasets | Each supported Region: 500 | No |
| Active event trackers | Each supported Region: 500 | No |
| Active filters | Each supported Region: 10 | Yes |
| Active recommenders | Each supported Region: 5 | Yes |
| Active solutions | Each supported Region: 500 | No |
| Amount of data for HRNN recipe | Each supported Region: 100 Gigabytes | No |
| Amount of data for Personalized-Ranking recipe | Each supported Region: 100 Gigabytes | No |
| Amount of data for Popularity-Count recipe | Each supported Region: 100 Gigabytes | No |
| Amount of data for SIMS recipe | Each supported Region: 100 Gigabytes | No |
| Amount of interactions data for HRNN-coldstart recipe | Each supported Region: 100 Gigabytes | No |
| Amount of interactions data for HRNN-metadata recipe | Each supported Region: 100 Gigabytes | No |
| Amount of users and items data combined for HRNN-coldstart recipe | Each supported Region: 5 Gigabytes | No |
| Amount of users and items data combined for HRNN-metadata recipe | Each supported Region: 5 Gigabytes | No |
| Event size | Each supported Region: 10 Kilobytes | No |
| Minimum data points for model training | Each supported Region: 1,000 | No |
| Minimum unique users for model training | Each supported Region: 25 | No |
| Number of events in PutEvents call | Each supported Region: 10 | No |
| Number of interactions for model training | Each supported Region: 500,000,000 | No |
| Number of items used in model training | Each supported Region: 750,000 | No |
| Number of schemas | Each supported Region: 500 | No |
| Pending or In Progress batch inference jobs | Each supported Region: 5 | Yes |
| Pending or In Progress solution versions | Each supported Region: 20 | Yes |
| Rate of CreateCampaign requests | Each supported Region: 1 | No |
| Rate of CreateDataset requests | Each supported Region: 1 | No |

| Name | Default | Adjustable |
|--|----------------------------|------------|
| Rate of CreateDatasetGroup requests | Each supported Region: 1 | No |
| Rate of CreateDatasetImportJob requests | Each supported Region: 1 | No |
| Rate of CreateEventTracker requests | Each supported Region: 1 | No |
| Rate of CreateSchema requests | Each supported Region: 1 | No |
| Rate of CreateSolution requests | Each supported Region: 1 | No |
| Rate of CreateSolutionVersion requests | Each supported Region: 1 | No |
| Rate of DeleteCampaign requests | Each supported Region: 1 | No |
| Rate of DeleteDataset requests | Each supported Region: 1 | No |
| Rate of DeleteDatasetGroup requests | Each supported Region: 1 | No |
| Rate of DeleteDatasetImportJob requests | Each supported Region: 1 | No |
| Rate of DeleteEventTracker requests | Each supported Region: 1 | No |
| Rate of DeleteSchema requests | Each supported Region: 1 | No |
| Rate of DeleteSolution requests | Each supported Region: 1 | No |
| Rate of DescribeAlgorithm requests | Each supported Region: 1 | No |
| Rate of DescribeCampaign requests | Each supported Region: 1 | No |
| Rate of DescribeDataset requests | Each supported Region: 1 | No |
| Rate of DescribeDatasetGroup requests | Each supported Region: 1 | No |
| Rate of DescribeDatasetImportJob requests | Each supported Region: 1 | No |
| Rate of DescribeEventTracker requests | Each supported Region: 1 | No |
| Rate of DescribeFeatureTransformation requests | Each supported Region: 1 | No |
| Rate of DescribeRecipe requests | Each supported Region: 1 | No |
| Rate of DescribeSchema requests | Each supported Region: 1 | No |
| Rate of DescribeSolution requests | Each supported Region: 1 | No |
| Rate of GetPersonalizedRanking requests per campaign | Each supported Region: 500 | No |
| Rate of GetRecommendations requests per campaign | Each supported Region: 500 | No |
| Rate of GetSolutionMetrics requests | Each supported Region: 1 | No |
| Rate of ListCampaigns requests | Each supported Region: 1 | No |
| Rate of ListDatasetGroups requests | Each supported Region: 1 | No |
| Rate of ListDatasetImportJobRuns requests | Each supported Region: 1 | No |
| Rate of ListDatasetImportJobs requests | Each supported Region: 1 | No |
| Rate of ListDatasets requests | Each supported Region: 1 | No |

| Name | Default | Adjustable |
|---------------------------------------|------------------------------|------------|
| Rate of ListEventTrackers requests | Each supported Region: 1 | No |
| Rate of ListRecipes requests | Each supported Region: 1 | No |
| Rate of ListSchemas requests | Each supported Region: 1 | No |
| Rate of ListSolutionVersions requests | Each supported Region: 1 | No |
| Rate of ListSolutions requests | Each supported Region: 1 | No |
| Rate of PutEvents requests | Each supported Region: 1,000 | Yes |
| Rate of UpdateCampaign requests | Each supported Region: 1 | No |
| Rate of UpdateDataset requests | Each supported Region: 1 | No |
| Rate of transactions per account | Each supported Region: 2,500 | No |

Amazon Pinpoint endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Amazon Pinpoint includes the Amazon Pinpoint API and the Amazon Pinpoint SMS and Voice API.

Service endpoints

Amazon Pinpoint API

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---------------------------------------|----------|
| US East (N. Virginia) | us-east-1 | pinpoint.us-east-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | pinpoint.us-west-2.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | pinpoint.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | pinpoint.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | pinpoint.ap-southeast-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|----------------|---------------------------------------|----------|--|
| Asia Pacific (Sydney) | ap-southeast-2 | pinpoint.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | pinpoint.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | pinpoint.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | pinpoint.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | pinpoint.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | pinpoint.eu-west-2.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | pinpoint.us-gov-west-1.amazonaws.com | HTTPS | |

Note

You can't use the Amazon Pinpoint API to send SMS messages in the Asia Pacific (Seoul) Region.

Amazon Pinpoint SMS and Voice API

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|----------------|---|----------|--|
| US East (N. Virginia) | us-east-1 | sms-voice.pinpoint.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | sms-voice.pinpoint.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | sms-voice.pinpoint.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | sms-voice.pinpoint.ap-southeast-2.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | sms-voice.pinpoint.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | sms-voice.pinpoint.eu-west-1.amazonaws.com | HTTPS | |

Note

The Amazon Pinpoint SMS and Voice API is not available in the following Regions:

- Asia Pacific (Seoul) Region
- Asia Pacific (Singapore) Region
- Asia Pacific (Tokyo) Region
- Canada (Central) Region
- Europe (London) Region

Service quotas

| Name | Default | Adjustable |
|---|------------------------------------|------------|
| APNs sandbox message payload size per message | Each supported Region: 4 Kilobytes | No |
| Active campaigns per account | Each supported Region: 200 | Yes |
| All other operations burst quota | Each supported Region: 300 | No |
| All other operations rate quota | Each supported Region: 300 | No |
| Amazon Device Messaging (ADM) message payload size per message | Each supported Region: 6 Kilobytes | No |
| Apple Push Notification service (APNs) message payload size per message | Each supported Region: 4 Kilobytes | No |
| Attribute name length | Each supported Region: 50 | No |
| Attribute value length | Each supported Region: 100 | No |
| Baidu Cloud Push message payload size per message | Each supported Region: 4 Kilobytes | No |
| CreateCampaign operation burst quota | Each supported Region: 25 | No |
| CreateCampaign operation rate quota | Each supported Region: 25 | No |
| CreateSegment operation burst quota | Each supported Region: 25 | No |
| CreateSegment operation rate quota | Each supported Region: 25 | No |
| DeleteCampaign operation burst quota | Each supported Region: 25 | No |
| DeleteCampaign operation rate quota | Each supported Region: 25 | No |
| DeleteEndpoint operation burst quota | Each supported Region: 1,000 | No |
| DeleteEndpoint operation rate quota | Each supported Region: 1,000 | No |
| DeleteSegment operation burst quota | Each supported Region: 25 | No |
| DeleteSegment operation rate quota | Each supported Region: 25 | No |

| Name | Default | Adjustable |
|---|-------------------------------------|------------|
| Firebase Cloud Messaging (FCM) message payload size per message | Each supported Region: 4 Kilobytes | No |
| GetEndpoint operation burst quota | Each supported Region: 7,000 | No |
| GetEndpoint operation rate quota | Each supported Region: 7,000 | No |
| Import size per import job | Each supported Region: 1 | Yes |
| Invocation payload size | Each supported Region: 7 Megabytes | No |
| Maximum amount of time to wait for a Lambda function to process data | Each supported Region: 15 Seconds | No |
| Maximum length of a recommended attribute display name | Each supported Region: 25 | No |
| Maximum length of a recommended attribute name | Each supported Region: 50 | No |
| Maximum length of a recommended attribute value that's retrieved from Amazon Personalize | Each supported Region: 100 | No |
| Maximum message size, including attachments | Each supported Region: 10 Megabytes | No |
| Maximum number of active journeys per account | Each supported Region: 50 | Yes |
| Maximum number of attempts to invoke a Lambda function | Each supported Region: 3 Seconds | No |
| Maximum number of attribute keys and metric keys for each event per request | Each supported Region: 40 | No |
| Maximum number of characters in ADM-specific template parts of a push notification template | Each supported Region: 4,000 | No |
| Maximum number of characters in APN-specific template parts of a push notification template | Each supported Region: 2,000 | No |
| Maximum number of characters in Baidu-specific template parts of a push notification template | Each supported Region: 4,000 | No |
| Maximum number of characters in FCM-specific template parts of a push notification template | Each supported Region: 4,000 | No |
| Maximum number of characters in a voice template | Each supported Region: 10,000 | No |
| Maximum number of characters in an SMS template | Each supported Region: 1,600 | No |
| Maximum number of characters in an email template | Each supported Region: 500,000 | No |
| Maximum number of characters in the default template parts of a push notification template | Each supported Region: 2,000 | No |

| Name | Default | Adjustable |
|---|--|------------|
| Maximum number of characters per attribute key | Each supported Region: 50 | No |
| Maximum number of characters per attribute value | Each supported Region: 200 | No |
| Maximum number of custom attribute keys per app | Each supported Region: 500 | No |
| Maximum number of custom attribute values per attribute key | Each supported Region: 100,000 | No |
| Maximum number of custom event types per app | Each supported Region: 1,500 | No |
| Maximum number of custom metric keys per app | Each supported Region: 500 | No |
| Maximum number of dimensions that can be used to create a segment | Each supported Region: 100 | No |
| Maximum number of events in a request | Each supported Region: 100 | No |
| Maximum number of journey activities per journey | Each supported Region: 40 | Yes |
| Maximum number of message templates per account | Each supported Region: 10,000 | Yes |
| Maximum number of model configurations per account | Each supported Region: 100 | No |
| Maximum number of model configurations per message template | Each supported Region: 1 | No |
| Maximum number of push notifications that can be sent per second in a campaign | Each supported Region: 25,000 | Yes |
| Maximum number of recommendations per endpoint or user | Each supported Region: 5 | No |
| Maximum number of recommended attributes per endpoint or user | Each supported Region: 1 | No |
| Maximum number of recommended attributes per endpoint or user (AWS Lambda function) | Each supported Region: 10 | No |
| Maximum number of versions per template | Each supported Region: 5,000 | No |
| Maximum segment size per campaign | Each supported Region: 100,000,000 | No |
| Maximum segment size per journey | Each supported Region: 100,000,000 | No |
| Maximum size of a request | Each supported Region: 4 Megabytes | No |
| Maximum size of an individual event | Each supported Region: 1,000 Kilobytes | No |
| Maximum size of an invocation payload (request and response) for a Lambda function | Each supported Region: 6 Megabytes | No |

| Name | Default | Adjustable |
|--|-------------------------------------|------------|
| Maximum size per endpoint | Each supported Region: 15 Kilobytes | Yes |
| Number of Amazon Pinpoint projects | Each supported Region: 100 | No |
| Number of Amazon SNS topics for two-way SMS per account | Each supported Region: 100,000 | Yes |
| Number of EndpointBatchItem objects in an EndpointBatchRequest payload | Each supported Region: 100 | No |
| Number of SMS messages that can be sent each second (sending rate) | Each supported Region: 20 | Yes |
| Number of SMS messages that can be sent to a single recipient each second | Each supported Region: 1 | No |
| Number of attributes assigned to the Attributes parameter | Each supported Region: 250 | Yes |
| Number of attributes assigned to the Attributes, Metrics, and UserAttributes parameters collectively | Each supported Region: 250 | Yes |
| Number of attributes assigned to the Metrics parameter | Each supported Region: 250 | Yes |
| Number of attributes assigned to the UserAttributes parameter | Each supported Region: 250 | Yes |
| Number of characters in a voice message | Each supported Region: 6,000 | No |
| Number of concurrent import jobs | Each supported Region: 10 | Yes |
| Number of emails that can be sent each second (sending rate) | Each supported Region: 1 | Yes |
| Number of emails that can be sent per 24-hour period (sending quota) | Each supported Region: 200 | Yes |
| Number of endpoints with the same user ID | Each supported Region: 10 | No |
| Number of event-based campaigns | Each supported Region: 25 | Yes |
| Number of identities that you can verify | Each supported Region: 10,000 | No |
| Number of recipients per message | Each supported Region: 50 | No |
| Number of values assigned to the Attributes parameter attributes per attribute | Each supported Region: 50 | No |
| Number of values assigned to the UserAttributes parameter attributes per attribute | Each supported Region: 50 | No |
| Number of verified identities | Each supported Region: 10,000 | No |
| Number of voice configuration sets per AWS region | Each supported Region: 10,000 | No |

| Name | Default | Adjustable |
|---|------------------------------|------------|
| Number of voice messages that can be sent during a 24-hour period | Each supported Region: 20 | No |
| Number of voice messages that can be sent from a single originating phone number per second | Each supported Region: 1 | No |
| Number of voice messages that can be sent per minute | Each supported Region: 5 | No |
| Number of voice messages that can be sent to a single recipient during a 24-hour period | Each supported Region: 5 | No |
| PhoneNumberValidate operation burst quota | Each supported Region: 20 | No |
| PhoneNumberValidate operation rate quota | Each supported Region: 20 | No |
| PutEvents operation burst quota | Each supported Region: 7,000 | No |
| PutEvents operation rate quota | Each supported Region: 7,000 | No |
| SMS spending threshold | Each supported Region: 1 | Yes |
| SendMessages operation burst quota | Each supported Region: 4,000 | No |
| SendMessages operation rate quota | Each supported Region: 4,000 | No |
| SendUsersMessages operation burst quota | Each supported Region: 6,000 | No |
| SendUsersMessages operation rate quota | Each supported Region: 6,000 | No |
| UpdateCampaign operation burst quota | Each supported Region: 25 | No |
| UpdateCampaign operation rate quota | Each supported Region: 25 | No |
| UpdateEndpoint operation burst quota | Each supported Region: 5,000 | No |
| UpdateEndpoint operation rate quota | Each supported Region: 5,000 | No |
| UpdateEndpointsBatch operation burst quota | Each supported Region: 5,000 | No |
| UpdateEndpointsBatch operation rate quota | Each supported Region: 5,000 | No |
| UpdateSegment operation burst quota | Each supported Region: 25 | No |
| UpdateSegment operation rate quota | Each supported Region: 25 | No |
| Voice message length | Each supported Region: 30 | No |

For more information, see [Amazon Pinpoint quotas](#) in the *Amazon Pinpoint Developer Guide*.

Amazon Polly endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | polly.us-east-2.amazonaws.com polly-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | polly.us-east-1.amazonaws.com polly-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | polly.us-west-1.amazonaws.com polly-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | polly.us-west-2.amazonaws.com polly-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | polly.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | polly.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | polly.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | polly.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | polly.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | polly.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | polly.ap-northeast-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| Canada (Central) | ca-central-1 | polly.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | polly.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | polly.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | polly.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | polly.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | polly.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | polly.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | polly.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | polly.us-gov-west-1.amazonaws.com polly-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|--------------------------------|------------|
| Concurrent connections | Each supported Region: 90 | Yes |
| Lexicon count | Each supported Region: 100 | No |
| Lexicon size | Each supported Region: 4,000 | No |
| Rate of GetSpeechSynthesisTask and ListSpeechSynthesisTasks requests | Each supported Region: 10 | Yes |
| Rate of StartSpeechSynthesisTask (standard) requests | Each supported Region: 10 | Yes |
| Rate of SynthesizeSpeech (standard) requests | Each supported Region: 80 | Yes |
| Rate of lexicon management requests | Each supported Region: 2 | Yes |
| StartSpeechSynthesisTask billed characters count | Each supported Region: 100,000 | Yes |
| StartSpeechSynthesisTask lexicon count | Each supported Region: 5 | No |

| Name | Default | Adjustable |
|---|-----------------------------------|------------|
| StartSpeechSynthesisTask total characters limit | Each supported Region: 200,000 | Yes |
| SynthesizeSpeech billed character count | Each supported Region: 3,000 | Yes |
| SynthesizeSpeech lexicon count | Each supported Region: 5 | No |
| SynthesizeSpeech total character count | Each supported Region: 6,000 | Yes |

For more information, see [Quotas in the Amazon Polly Developer Guide](#).

Amazon Managed Service for Prometheus endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | aps.us-east-2.amazonaws.com aps-workspaces.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | aps.us-east-1.amazonaws.com aps-workspaces.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | aps.us-west-2.amazonaws.com aps-workspaces.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | aps.ap-southeast-1.amazonaws.com aps-workspaces.ap-southeast-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | aps.ap-southeast-2.amazonaws.com aps-workspaces.ap-southeast-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | aps.ap-northeast-1.amazonaws.com aps-workspaces.ap-northeast-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | aps.eu-central-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------|------------|---|----------|--|
| | | aps-workspaces.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | aps.eu-west-1.amazonaws.com | HTTPS | |
| | | aps-workspaces.eu-west-1.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | aps.eu-north-1.amazonaws.com | HTTPS | |
| | | aps-workspaces.eu-north-1.amazonaws.com | HTTPS | |

Service quotas

Amazon Managed Service for Prometheus has the following quotas for series, labels, and API requests. The **Possible error message** column shows what error message you might see if your Prometheus data exceeds a limit. If you see one of these error messages, you should request an increase to the corresponding limit.

| Resource | Default quota | Possible error message |
|---|---|--|
| Active series per workspace (metrics that have reported data in the past 2 hours) | 1,000,000. You can request a quota increase . | per-user series limit of 1000000 exceeded, please contact administrator to raise it |
| Active series per metric name | 200,000. You can request a quota increase . | per-metric series limit of 200000 exceeded, please contact administrator to raise it |
| Ingestion rate | 70,000 samples per second. You can request a quota increase . | ingestion rate limit (...) exceeded |
| Ingestion burst size | 1,000,000 samples. You can request a quota increase . | ingestion rate limit (...) exceeded |
| Labels per metric series. | 70. You can request a quota increase . | series has too many labels (...) series: '0%' |
| Query bytes for instant queries | 750MB that can be scanned by a single instant query. This quota can't be changed. | the query hit the aggregated chunks size limit |

| Resource | Default quota | Possible error message |
|---|--|--|
| | | (A <i>chunk</i> stores raw samples of series for a certain time span.) |
| Query bytes for range queries | 750MB that can be scanned per 24-hour interval in a single range query. This quota can't be changed. | the query hit the aggregated chunks size limit (A <i>chunk</i> stores raw samples of series for a certain time span.) |
| Query time range | 32 days between the start time and the end time of a PromQL query. This quota cannot be changed. | the query time range exceeds the limit (query length: xxx, limit: yyy) |
| Query samples | 12,000,000 samples that can be scanned during a single query. This quota can't be changed. | query processing would load too many samples into memory in query execution |
| Retention time for ingested data | 150 days. Data older than this is deleted from the workspace. | |
| Workspaces per Region per account | 10. You can request a quota increase . | Limit exceeded. Maximum workspaces per account. |
| Workspace management API operations, including CreateWorkspace, DeleteWorkspace, DescribeWorkspaces, ListWorkspaces, and UpdateWorkspaceAlias | 10 transactions per second (TPS), with a burst limit of 10 TPS. You can request a quota increase . | |

Rules and alert manager quotas

| Resource | Default quota |
|---------------|--|
| Active alerts | 1000. You can request a quota increase . |

| Resource | Default quota |
|---|--|
| Alert aggregation group size | 1K. You can request a quota increase . |
| Alert manager API operations, including CreateAlertManagerDefinition, DeleteAlertManagerDefinition, DescribeAlertManagerDefinition, and PutAlertManagerDefinition | 100 transactions per second (TPS). |
| Alert manager definition file size | 1 MB. This quota can't be changed. |
| Alerts per workspace, in size | 20 MB. You can request a quota increase . |
| Inhibition rules | 100. You can request a quota increase . |
| Nodes in the alert manager routing tree | 100. You can request a quota increase . |
| Rule evaluation interval | Rules are evaluated every 60 seconds. This can't be changed. |
| Rule groups in a workspace | 100. You can request a quota increase . |
| Rule groups namespaces in a workspace | 10. You can request a quota increase . |
| Rules in a rule group | 20. You can request a quota increase . |
| Rules definition file size | 1 MB. This quota can't be changed. |
| Templates in the alert manager definition file | 100. You can request a quota increase . |

Additional quotas for ingested data

Amazon Managed Service for Prometheus has additional quotas for data that's ingested into Amazon Managed Service for Prometheus workspaces.

- Metric samples older than 1 hour are refused from being ingested.
- Every sample and metadata must have a metric name.
- Maximum length accepted for label names: 1024 bytes
- Maximum length accepted for label value: 2048 bytes
- Maximum number of metadata per metric: 10
- Maximum size of ingestion or query request: 1 MB
- Maximum length accepted for metric metadata, which includes metric name, HELP, and UNIT: 1024 bytes
- Maximum number of active metrics with metadata per workspace: 20,000
- Maximum retention time for ingested metrics: 150 days. Data older than this is deleted from the workspace.

AWS Proton endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#).

Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|----------------|-------------------------------------|----------|--|
| US East (Ohio) | us-east-2 | proton.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | proton.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | proton.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | proton.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | proton.eu-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|------------------------------|---------------------|
| Environment account connections per environment account | Each supported Region: 5 | Yes |
| Environments per account | Each supported Region: 100 | Yes |
| Service instances per service | Each supported Region: 20 | Yes |
| Services per account | Each supported Region: 1,000 | Yes |
| Template versions per template | Each supported Region: 500 | Yes |
| Templates per account | Each supported Region: 100 | Yes |

For more information, see [AWS Proton quotas](#) in the *AWS Proton Administrator Guide*.

Amazon QLDB endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

QLDB control plane

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | qldb.us-east-2.amazonaws.com qldb-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | qldb.us-east-1.amazonaws.com qldb-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | qldb.us-west-2.amazonaws.com qldb-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | qldb.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | qldb.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | qldb.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | qldb.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | qldb.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | qldb.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | qldb.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | qldb.eu-west-2.amazonaws.com | HTTPS | |

QLDB transactional data plane

| Region Name | Region | Endpoint | Protocol | |
|----------------|-----------|---|----------------|--|
| US East (Ohio) | us-east-2 | session.qldb.us-east-2.amazonaws.com session.qldb-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (N. Virginia) | us-east-1 | session.qldb.us-east-1.amazonaws.com session.qldb-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | session.qldb.us-west-2.amazonaws.com session.qldb-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | session.qldb.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | session.qldb.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | session.qldb.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | session.qldb.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | session.qldb.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | session.qldb.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | session.qldb.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | session.qldb.eu-west-2.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-------------------------|--------------------------|------------|
| Ledgers | Each supported Region: 5 | Yes |
| QLDB exports per ledger | Each supported Region: 2 | Yes |
| QLDB streams per ledger | Each supported Region: 5 | Yes |

For more information, see [Quotas in Amazon QLDB](#) in the [Amazon QLDB Developer Guide](#).

Amazon QuickSight endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services

offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

QuickSight

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------|--|
| US East (Ohio) | us-east-2 | quicksight.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | quicksight.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | quicksight.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | quicksight.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | quicksight.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | quicksight.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | quicksight.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | quicksight.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | quicksight.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | quicksight.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | quicksight.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | quicksight.eu-west-2.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | quicksight.sa-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|--|----------|--|
| AWS GovCloud (US-West) | us-gov-west-1 | quicksight.us-gov-west-1.amazonaws.com | HTTPS | |

QuickSight Websites

| Region Name | Region | Endpoint |
|--------------------------|----------------|---|
| US East (Ohio) | us-east-2 | https://us-east-2.quicksight.amazonaws.com |
| US East (N. Virginia) | us-east-1 | https://us-east-1.quicksight.amazonaws.com |
| US West (Oregon) | us-west-2 | https://us-west-2.quicksight.aws.amazon.com |
| Asia Pacific (Singapore) | ap-southeast-1 | https://ap-southeast-1.quicksight.aws.amazon.com |
| Asia Pacific (Sydney) | ap-southeast-2 | https://ap-southeast-2.quicksight.aws.amazon.com |
| Asia Pacific (Tokyo) | ap-northeast-1 | https://ap-northeast-1.quicksight.aws.amazon.com |
| Europe (Frankfurt) | eu-central-1 | https://eu-central-1.quicksight.aws.amazon.com |
| Europe (Ireland) | eu-west-1 | https://eu-west-1.quicksight.aws.amazon.com |
| Europe (London) | eu-west-2 | https://eu-west-2.quicksight.aws.amazon.com |

Service quotas

| Name | Default | Adjustable |
|--|--------------------------------|------------|
| API_CREATE-INGESTION: Calls per 24 hour period from Enterprise edition | Each supported Region: 32 | No |
| API_CREATE-INGESTION: Calls per 24 hour period from Standard edition | Each supported Region: 8 | No |
| Calculated field expression length | Each supported Region: 250,000 | No |
| Custom action name length | Each supported Region: 256 | No |
| Custom actions per visual | Each supported Region: 10 | No |
| Data Prep: Fields per dataset | Each supported Region: 2,000 | No |
| Display items per sheet control | Each supported Region: 10,000 | No |
| Email aliases per group for email reports | Each supported Region: 5,000 | No |

| Name | Default | Adjustable |
|---|------------------------------------|------------|
| Maximum number of characters per specified Control values | Each supported Region: 200,000 | No |
| Query timeout for visuals | Each supported Region: 120 Seconds | No |
| The maximum amount of time to wait for a dataset preview | Each supported Region: 45 Seconds | No |
| URL action hyperlink length | Each supported Region: 2,048 | No |

AWS Resource Access Manager endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|------------|---|----------------|--|
| US East (Ohio) | us-east-2 | ram.us-east-2.amazonaws.com ram-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | ram.us-east-1.amazonaws.com ram-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | ram.us-west-1.amazonaws.com ram-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | ram.us-west-2.amazonaws.com ram-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | ram.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | ram.ap-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------------|--|
| Asia Pacific (Mumbai) | ap-south-1 | ram.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | ram.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | ram.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | ram.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | ram.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | ram.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | ram.ca-central-1.amazonaws.com ram-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | ram.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | ram.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | ram.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | ram.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | ram.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | ram.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | ram.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | ram.sa-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|--|----------------|--|
| AWS GovCloud (US-East) | us-gov-east-1 | ram.us-gov-east-1.amazonaws.com ram.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | ram.us-gov-west-1.amazonaws.com ram.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-------------------------------|------------------------------|------------|
| Number of pending invitations | Each supported Region: 20 | Yes |
| Number of resource shares | Each supported Region: 5,000 | Yes |
| Number of shared resources | Each supported Region: 5,000 | Yes |

Notes

- The quota for **Number of pending invitations** applies to only *sending* accounts who share with accounts that are *not* part of sender's AWS Organization.
- There is no quota for how many pending invitations a receiving account can have.
- Invitations are not used when sharing between accounts that are part of the same AWS Organization and [resource sharing within that AWS Organization is turned on](#).

Amazon Redshift endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Redshift API

| Region Name | Region | Endpoint | Protocol | |
|----------------|-----------|---|----------------|--|
| US East (Ohio) | us-east-2 | redshift.us-east-2.amazonaws.com redshift-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| US East (N. Virginia) | us-east-1 | redshift.us-east-1.amazonaws.com redshift-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | redshift.us-west-1.amazonaws.com redshift-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | redshift.us-west-2.amazonaws.com redshift-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | redshift.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | redshift.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | redshift.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | redshift.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | redshift.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | redshift.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | redshift.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | redshift.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | redshift.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | redshift.ca-central-1.amazonaws.com redshift-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | redshift.eu-central-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|-----------------|--|
| Europe (Ireland) | eu-west-1 | redshift.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | redshift.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | redshift.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | redshift.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | redshift.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | redshift.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | redshift.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | redshift.us-gov-east-1.amazonaws.com redshift.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | redshift.us-gov-west-1.amazonaws.com redshift.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Redshift Data API

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|---------------|--|-----------------|--|
| US East (Ohio) | us-east-2 | redshift-data.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | redshift-data.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | redshift-data.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | redshift-data.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | redshift-data.af-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|-----------------|--|
| Asia Pacific (Hong Kong) | ap-east-1 | redshift-data.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | redshift-data.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | redshift-data.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | redshift-data.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | redshift-data.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | redshift-data.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | redshift-data.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | redshift-data.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | redshift-data.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | redshift-data.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | redshift-data.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | redshift-data.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | redshift-data.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | redshift-data.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | redshift-data.me-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------|--|
| South America (São Paulo) | sa-east-1 | redshift-data.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | redshift-data.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | redshift-data.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

For information, see [Quotas and limits in Amazon Redshift](#) in the *Amazon Redshift Cluster Management Guide*.

Amazon Rekognition endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|-----------|--|----------|--|
| US East (Ohio) | us-east-2 | rekognition.us-east-2.amazonaws.com | HTTPS | |
| | | rekognition-fips.us-east-2.amazonaws.com | HTTPS | |
| | | rekognition-fips.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | rekognition.us-east-1.amazonaws.com | HTTPS | |
| | | rekognition-fips.us-east-1.amazonaws.com | HTTPS | |
| | | rekognition-fips.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | rekognition.us-west-1.amazonaws.com | HTTPS | |
| | | rekognition-fips.us-west-1.amazonaws.com | HTTPS | |
| | | rekognition-fips.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | rekognition.us-west-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-------------------------|--|
| | | rekognition-fips.us-west-2.amazonaws.com rekognition-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | rekognition.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | rekognition.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | rekognition.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | rekognition.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | rekognition.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | rekognition.ca-central-1.amazonaws.com rekognition-fips.ca-central-1.amazonaws.com rekognition-fips.ca-central-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | rekognition.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | rekognition.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | rekognition.eu-west-2.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | rekognition.us-gov-west-1.amazonaws.com rekognition-fips.us-gov-west-1.amazonaws.com rekognition-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS HTTPS | |

The following are differences for certain Amazon Rekognition features and AWS Regions.

Amazon Rekognition Video streaming API

The Amazon Rekognition Video streaming API is available in the following Regions only.

- US East (N. Virginia)
- US West (Oregon)
- Asia Pacific (Tokyo)
- Europe (Frankfurt)

- Europe (Ireland)

Amazon Rekognition Custom Labels

Amazon Rekognition Custom Labels is available in the following Regions only.

- US East (N. Virginia)
- US East (Ohio)
- US West (Oregon)
- Europe (Ireland)
- Europe (London)
- Europe (Frankfurt)
- Asia Pacific (Mumbai)
- Asia Pacific (Singapore)
- Asia Pacific (Sydney)
- Asia Pacific (Tokyo)
- Asia Pacific (Seoul)

Canada (Central) Region

The Canada (Central) Region supports the following operations only.

- [CompareFaces](#)
- [CreateCollection](#)
- [DeleteCollection](#)
- [DeleteFaces](#)
- [DescribeCollection](#)
- [DetectFaces](#)
- [IndexFaces](#)
- [ListCollections](#)
- [ListFaces](#)
- [SearchFaces](#)
- [SearchFacesByImage](#)

Note

These operations are only available through use of the AWS CLI or SDK, as the Canada (Central) Region doesn't currently provide a console experience for these operations.

Service quotas

The quotas listed on this page are defaults. You can request a quota increase for Amazon Rekognition using the AWS Support Center. To request a quota increase for a Amazon Rekognition Transactions Per Second (TPS) limit, follow the instructions at [Default quotas](#) in the *Amazon Rekognition Developer Guide*.

Quotas increases affect only the specific API operation for the Region in which you make the request. Other API operations and Regions are not affected.

| Resource | Default |
|--|--|
| Transactions per second per account for individual Amazon Rekognition Image data plane operations: <ul style="list-style-type: none"> • CompareFaces • DetectFaces • DetectLabels • DetectModerationLabels • DetectText • GetCelebrityInfo • IndexFaces • ListFaces • RecognizeCelebrities • SearchFaces • SearchFacesByImage | <ul style="list-style-type: none"> • US East (Ohio) Region – 5 • US East (N. Virginia) Region – 50 • US West (N. California) Region – 5 • US West (Oregon) Region – 50 • Asia Pacific (Mumbai) Region – 5 • Asia Pacific (Seoul) Region – 5 • Asia Pacific (Singapore) Region – 5 • Asia Pacific (Sydney) Region – 5 • Asia Pacific (Tokyo) Region – 5 • Canada (Central) – 5 (For supported operations, see Service endpoints (p. 551)). • Europe (Frankfurt) Region – 5 • Europe (Ireland) Region – 50 • Europe (London) Region – 5 • AWS GovCloud (US-West) – 5 |
| Transactions per second per account for the personal protective equipment data plane operation: <ul style="list-style-type: none"> • DetectProtectiveEquipment | In each Region that Amazon Rekognition Image supports – 5 |
| Transactions per second per account for individual Amazon Rekognition Image control plane operations: <ul style="list-style-type: none"> • CreateCollection • DeleteCollection • DeleteFaces • DescribeCollection • ListCollections | In each Region that Amazon Rekognition Image supports – 5 |
| Transactions per second per account for individual stored video start operations: <ul style="list-style-type: none"> • StartCelebrityRecognition • StartContentModeration • StartFaceDetection • StartFaceSearch • StartLabelDetection • StartPersonTracking • StartTextDetection • StartSegmentDetection | In each Region that Amazon Rekognition Video supports – 5 StartCelebrityRecognition is not available in AWS GovCloud (US). |
| Transactions per second per account for individual Amazon Rekognition Video stored video get operations: | <ul style="list-style-type: none"> • US East (Ohio) Region – 5 |

| Resource | Default |
|--|---|
| <ul style="list-style-type: none"> GetCelebrityRecognition GetContentModeration GetFaceDetection GetFaceSearch GetLabelDetection GetPersonTracking GetTextDetection GetSegmentDetection | <ul style="list-style-type: none"> US East (N. Virginia) Region – 20 US West (N. California) Region – 5 US West (Oregon) Region – 20 Asia Pacific (Mumbai) Region – 5 Asia Pacific (Seoul) Region – 5 Asia Pacific (Singapore) Region – 5 Asia Pacific (Sydney) Region – 5 Asia Pacific (Tokyo) Region – 5 Europe (Frankfurt) Region – 5 Europe (Ireland) Region – 20 Europe (London) Region – 5 AWS GovCloud (US-West) – 20 (GetCelebrityRecognition is not available in this Region.) |
| Maximum number of concurrent stored video jobs per account | 20 |
| Maximum number of streaming video stream processors per account that can simultaneously exist | In each Region that Amazon Rekognition Video supports – 10 |
| Transactions per second per account for individual streaming video operations: <ul style="list-style-type: none"> CreateStreamProcessor DeleteStreamProcessor DescribeStreamProcessor ListStreamProcessors StartStreamProcessor StopStreamProcessor | In each Region that Amazon Rekognition Video supports – 1 |
| Transactions per second per account for individual Amazon Rekognition Custom Labels control plane operations: <ul style="list-style-type: none"> CreateProject CreateProjectVersion DeleteProject DeleteProjectVersion DescribeProjects DescribeProjectVersions StartProjectVersion StopProjectVersion | In each Region that Amazon Rekognition Custom Labels supports – 5 |
| Maximum number of Amazon Rekognition Custom Labels projects per account. | 100 |

| Resource | Default |
|---|---|
| Maximum number of Amazon Rekognition Custom Labels models per project. | 100 |
| Maximum number of concurrent Amazon Rekognition Custom Labels training jobs per account. | <ul style="list-style-type: none"> All Regions except Asia Pacific (Sydney) – 2 Asia Pacific (Sydney) – 1 |
| Maximum number of concurrently running Amazon Rekognition Custom Labels models per account. | 2 |
| Maximum inference units per started model. | 5 |
| Maximum number of images per dataset. | 250,000 |

For more information, see [Guidelines and quotas in Amazon Rekognition](#) in the *Amazon Rekognition Developer Guide*.

Amazon Relational Database Service endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Amazon RDS

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|-----------|--|----------------------------------|--|
| US East (Ohio) | us-east-2 | rds.us-east-2.amazonaws.com rds-fips.us-east-2.api.aws rds.us-east-2.api.aws rds-fips.us-east-2.amazonaws.com | HTTPS HTTPS HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | rds.us-east-1.amazonaws.com rds-fips.us-east-1.api.aws rds-fips.us-east-1.amazonaws.com rds.us-east-1.api.aws | HTTPS HTTPS HTTPS HTTPS | |
| US West (N. California) | us-west-1 | rds.us-west-1.amazonaws.com rds.us-west-1.api.aws | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------------------------------|--|
| | | rds-fips.us-west-1.amazonaws.com rds-fips.us-west-1.api.aws | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | rds.us-west-2.amazonaws.com rds-fips.us-west-2.amazonaws.com rds.us-west-2.api.aws rds-fips.us-west-2.api.aws | HTTPS HTTPS HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | rds.af-south-1.amazonaws.com rds.af-south-1.api.aws | HTTPS HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | rds.ap-east-1.amazonaws.com rds.ap-east-1.api.aws | HTTPS HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | rds.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | rds.ap-south-1.amazonaws.com rds.ap-south-1.api.aws | HTTPS HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | rds.ap-northeast-3.amazonaws.com rds.ap-northeast-3.api.aws | HTTPS HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | rds.ap-northeast-2.amazonaws.com rds.ap-northeast-2.api.aws | HTTPS HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | rds.ap-southeast-1.amazonaws.com rds.ap-southeast-1.api.aws | HTTPS HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | rds.ap-southeast-2.amazonaws.com rds.ap-southeast-2.api.aws | HTTPS HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | rds.ap-northeast-1.amazonaws.com rds.ap-northeast-1.api.aws | HTTPS HTTPS | |
| Canada (Central) | ca-central-1 | rds.ca-central-1.amazonaws.com rds.ca-central-1.api.aws rds-fips.ca-central-1.api.aws rds-fips.ca-central-1.amazonaws.com | HTTPS HTTPS HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|----------------|--|
| Europe (Frankfurt) | eu-central-1 | rds.eu-central-1.amazonaws.com rds.eu-central-1.api.aws | HTTPS HTTPS | |
| Europe (Ireland) | eu-west-1 | rds.eu-west-1.amazonaws.com rds.eu-west-1.api.aws | HTTPS HTTPS | |
| Europe (London) | eu-west-2 | rds.eu-west-2.amazonaws.com rds.eu-west-2.api.aws | HTTPS HTTPS | |
| Europe (Milan) | eu-south-1 | rds.eu-south-1.amazonaws.com rds.eu-south-1.api.aws | HTTPS HTTPS | |
| Europe (Paris) | eu-west-3 | rds.eu-west-3.amazonaws.com rds.eu-west-3.api.aws | HTTPS HTTPS | |
| Europe (Stockholm) | eu-north-1 | rds.eu-north-1.amazonaws.com rds.eu-north-1.api.aws | HTTPS HTTPS | |
| Middle East (Bahrain) | me-south-1 | rds.me-south-1.amazonaws.com rds.me-south-1.api.aws | HTTPS HTTPS | |
| South America (São Paulo) | sa-east-1 | rds.sa-east-1.amazonaws.com rds.sa-east-1.api.aws | HTTPS HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | rds.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | rds.us-gov-west-1.amazonaws.com | HTTPS | |

Amazon RDS Performance Insights

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|-----------|----------------------------|----------|--|
| US East (Ohio) | us-east-2 | pi.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | pi.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | pi.us-west-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---------------------------------|-----------------|--|
| US West (Oregon) | us-west-2 | pi.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | pi.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | pi.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | pi.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | pi.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | pi.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | pi.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | pi.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | pi.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | pi.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | pi.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | pi.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | pi.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | pi.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | pi.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | pi.eu-north-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|------------|-----------------------------|----------|--|
| Middle East (Bahrain) | me-south-1 | pi.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | pi.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|---|------------|
| Authorizations per DB security group | Each supported Region: 20 | No |
| DB cluster parameter groups | Each supported Region: 50 | No |
| DB clusters | Each supported Region: 40 | Yes |
| DB instances | Each supported Region: 40 | Yes |
| DB subnet groups | Each supported Region: 50 | Yes |
| Data API HTTP request body size | Each supported Region: 4 Megabytes | No |
| Data API maximum concurrent cluster-secret pairs | Each supported Region: 30 | No |
| Data API maximum concurrent requests | Each supported Region: 500 | No |
| Data API maximum result set size | Each supported Region: 1 Megabytes | No |
| Data API requests per second | Each supported Region: 1,000 per second | No |
| Event subscriptions | Each supported Region: 20 | Yes |
| IAM roles per DB cluster | Each supported Region: 5 | Yes |
| IAM roles per DB instance | Each supported Region: 5 | Yes |
| Manual DB cluster snapshots | Each supported Region: 100 | Yes |
| Manual DB instance snapshots | Each supported Region: 100 | Yes |
| Option groups | Each supported Region: 20 | Yes |
| Parameter groups | Each supported Region: 50 | Yes |
| Proxies | Each supported Region: 20 | Yes |
| Read replicas per master | Each supported Region: 5 | Yes |
| Reserved DB instances | Each supported Region: 40 | Yes |

| Name | Default | Adjustable |
|------------------------------------|---|------------|
| Rules per security group | Each supported Region: 20 | No |
| Security groups | Each supported Region: 25 | Yes |
| Security groups (VPC) | Each supported Region: 5 | No |
| Subnets per DB subnet group | Each supported Region: 20 | No |
| Tags per resource | Each supported Region: 50 | No |
| Total storage for all DB instances | Each supported Region: 100,000 Gigabytes | Yes |

AWS Resilience Hub endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|------------|--|----------|
| US East (Ohio) | us-east-2 | resiliencehub.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | resiliencehub.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | resiliencehub.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | resiliencehub.us-west-2.amazonaws.com | HTTPS |
| Africa (Cape Town) | af-south-1 | resiliencehub.af-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | resiliencehub.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | resiliencehub.ap-south-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|----------|--|
| Asia Pacific (Seoul) | ap-northeast-2 | resiliencehub.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | resiliencehub.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | resiliencehub.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | resiliencehub.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | resiliencehub.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | resiliencehub.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | resiliencehub.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | resiliencehub.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | resiliencehub.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | resiliencehub.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | resiliencehub.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | resiliencehub.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | resiliencehub.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|---------------------------|------------|
| Number of Resiliency Policies | Each supported Region: 10 | Yes |
| Number of application components per resource | Each supported Region: 5 | No |

| Name | Default | Adjustable |
|---|-------------------------------|------------|
| Number of application components per template | Each supported Region: 65 | No |
| Number of applications | Each supported Region: 10 | Yes |
| Number of assessments per application per month | Each supported Region: 20 | Yes |
| Number of concurrent assessments per account | Each supported Region: 20 | No |
| Number of concurrent assessments per application | Each supported Region: 1 | No |
| Number of concurrent recommendation templates per account | Each supported Region: 100 | No |
| Number of concurrent recommendation templates per application | Each supported Region: 1 | No |
| Number of recommendation templates per application per month | Each supported Region: 100 | Yes |
| Number of resources per template | Each supported Region: 100 | No |
| Number of stacks to import | Each supported Region: 5 | No |
| Retention period of past assessments/recommendations in days | Each supported Region: 365 | No |
| Retention period of past recommendation templates in days | Each supported Region: 365 | No |
| Template size in bytes | Each supported Region: 51,200 | No |

AWS Resource Groups and Tagging endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

AWS Resource Groups

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|--|----------|--|
| US East (Ohio) | us-east-2 | resource-groups.us-east-2.amazonaws.com | HTTPS | |
| | | resource-groups-fips.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | resource-groups.us-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|-----------------|--|
| | | resource-groups-fips.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | resource-groups.us-west-1.amazonaws.com | HTTPS | |
| | | resource-groups-fips.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | resource-groups.us-west-2.amazonaws.com | HTTPS | |
| | | resource-groups-fips.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | resource-groups.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | resource-groups.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | resource-groups.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | resource-groups.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | resource-groups.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | resource-groups.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | resource-groups.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | resource-groups.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | resource-groups.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | resource-groups.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | resource-groups.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | resource-groups.eu-west-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|----------------|--|
| Europe (London) | eu-west-2 | resource-groups.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | resource-groups.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | resource-groups.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | resource-groups.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | resource-groups.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | resource-groups.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | resource-groups.us-gov-east-1.amazonaws.com resource-groups.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | resource-groups.us-gov-west-1.amazonaws.com resource-groups.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-----------------------------|----------------------------|------------|
| Resource groups per account | Each supported Region: 100 | Yes |

AWS Resource Groups Tagging API

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|-----------|---------------------------------|----------|--|
| US East (Ohio) | us-east-2 | tagging.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | tagging.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | tagging.us-west-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--------------------------------------|-----------------|--|
| US West (Oregon) | us-west-2 | tagging.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | tagging.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | tagging.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | tagging.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | tagging.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | tagging.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | tagging.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | tagging.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | tagging.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | tagging.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | tagging.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | tagging.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | tagging.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | tagging.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | tagging.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | tagging.eu-west-3.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|-------------------------------------|----------|--|
| Europe (Stockholm) | eu-north-1 | tagging.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | tagging.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | tagging.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | tagging.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | tagging.us-gov-west-1.amazonaws.com | HTTPS | |

AWS RoboMaker endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------|--|
| US East (Ohio) | us-east-2 | robomaker.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | robomaker.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | robomaker.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | robomaker.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | robomaker.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | robomaker.eu-central-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------|-----------|-----------------------------------|----------|--|
| Europe (Ireland) | eu-west-1 | robomaker.eu-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|--|------------|
| Batch timeout | Each supported Region: 14 | No |
| Concurrent GPU simulation jobs | Each supported Region: 1 | Yes |
| Concurrent World Export Jobs | Each supported Region: 3 | Yes |
| Concurrent World Generation Jobs | Each supported Region: 3 | Yes |
| Concurrent deployment jobs | Each supported Region: 20 | Yes |
| Concurrent simulation job batches | Each supported Region: 5 | Yes |
| Concurrent simulation jobs | us-east-1: 10 us-west-2: 10 Each of the other supported Regions: 5 | Yes |
| Fleets | Each supported Region: 20 | Yes |
| GPU Simulation Job Creation Rate Per Minute | Each supported Region: 2 | No |
| Minimum batch timeout | Each supported Region: 5 | No |
| Minimum simulation duration | Each supported Region: 5 | No |
| Robot applications | Each supported Region: 40 | Yes |
| Robots | Each supported Region: 100 | Yes |
| Robots per fleet | Each supported Region: 100 | Yes |
| Simulation Job Creation Rate Per Minute | us-east-1: 10 us-west-2: 10 Each of the other supported Regions: 5 | No |
| Simulation applications | Each supported Region: 40 | Yes |
| Simulation duration | Each supported Region: 14 | No |
| Simulation job requests per batch | Each supported Region: 20 | Yes |
| Source size | Each supported Region: 5 Gigabytes | No |

| Name | Default | Adjustable |
|-------------------------------------|---------------------------|------------|
| Versions per robot application | Each supported Region: 40 | Yes |
| Versions per simulation application | Each supported Region: 40 | Yes |
| World Templates Per Account | Each supported Region: 40 | Yes |
| Worlds Per Export Job | Each supported Region: 1 | No |
| Worlds Per Generation Job | Each supported Region: 50 | No |

Amazon Route 53 endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Hosted zones, records, health checks, DNS query logs, reusable delegation sets, traffic policies, and cost allocation tags

When you use the **AWS CLI or SDKs** to submit requests, you can either leave the Region and endpoint unspecified, or specify the applicable Region:

- Route 53 in AWS Regions other than the Beijing and Ningxia Regions: specify us-east-1 as the Region.
- Route 53 in the Beijing and Ningxia Regions: specify cn-northwest-1.

When you use the **Route 53 API** to submit requests, use the same Regions as above to sign requests. For more information about signing Route 53 API requests, see [Signature Version 4 signing process \(p. 763\)](#).

| Region Name | Region | Endpoint | Protocol |
|-------------------------|------------|-----------------------|----------|
| US East (Ohio) | us-east-2 | route53.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | route53.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | route53.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | route53.amazonaws.com | HTTPS |
| Africa (Cape Town) | af-south-1 | route53.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|-----------------------|-----------------|--|
| Asia Pacific (Hong Kong) | ap-east-1 | route53.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | route53.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | route53.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | route53.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | route53.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | route53.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | route53.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | route53.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | route53.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | route53.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | route53.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | route53.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | route53.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | route53.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | route53.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | route53.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|-----------|-----------------------|----------|--|
| South America (São Paulo) | sa-east-1 | route53.amazonaws.com | HTTPS | |

Requests for domain registration

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|--|----------|--|
| US East (N. Virginia) | us-east-1 | route53domains.us-east-1.amazonaws.com | HTTPS | |

Requests for Route 53 Resolver

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------|--|
| US East (Ohio) | us-east-2 | route53resolver.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | route53resolver.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | route53resolver.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | route53resolver.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | route53resolver.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | route53resolver.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | route53resolver.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | route53resolver.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | route53resolver.ap-northeast-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|----------|--|
| Asia Pacific (Singapore) | ap-southeast-1 | route53resolver.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | route53resolver.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | route53resolver.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | route53resolver.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | route53resolver.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | route53resolver.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | route53resolver.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | route53resolver.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | route53resolver.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | route53resolver.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | route53resolver.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | route53resolver.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | route53resolver.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | route53resolver.us-gov-west-1.amazonaws.com | HTTPS | |

Requests for Route 53 auto naming

Amazon Route 53 auto naming has been released as a separate service, AWS Cloud Map. For a list of service endpoints, see [Service endpoints \(p. 104\)](#). For AWS Cloud Map documentation, see [AWS Cloud Map Documentation](#).

Service quotas

| Name | Default | Adjustable |
|---|-------------------------------|------------|
| Amazon VPCs that you can associate with a private hosted zone | Each supported Region: 300 | Yes |
| Authorizations that let you associate VPCs with a hosted zone that was created by another account | Each supported Region: 100 | No |
| Child health checks that a calculated health check can monitor | Each supported Region: 255 | No |
| Geolocation records that have the same name and type | Each supported Region: 100 | No |
| Geoproximity records that have the same name and type | Each supported Region: 30 | No |
| Health checks | Each supported Region: 200 | Yes |
| Hosted zones | Each supported Region: 500 | Yes |
| Hosted zones that can use the same reusable delegation set | Each supported Region: 100 | Yes |
| Key signing keys per hosted zone | Each supported Region: 2 | No |
| Multivalue answer records that have the same name and type | Each supported Region: 100 | No |
| Query log configurations per hosted zone | Each supported Region: 1 | No |
| Records per hosted zone | Each supported Region: 10,000 | Yes |
| Reusable delegation sets | Each supported Region: 100 | Yes |
| Traffic flow policies | Each supported Region: 50 | Yes |
| Traffic flow policy records | Each supported Region: 5 | Yes |
| Traffic flow policy versions per traffic flow policy | Each supported Region: 1,000 | No |
| Values in a record | Each supported Region: 400 | No |
| Weighted records that have the same name and type | Each supported Region: 100 | No |

The following quotas are for Route 53 Resolver.

| Name | Default | Adjustable |
|---|------------------------------|------------|
| Associations between resolver rules and VPCs per AWS Region | Each supported Region: 2,000 | Yes |
| DNS Firewall rule group associations per VPC | Each supported Region: 5 | No |
| DNS Firewall rules groups per Region | Each supported Region: 1,000 | Yes |

| Name | Default | Adjustable |
|---|-----------------------------------|------------|
| Domain lists per account | Each supported Region: 1,000 | Yes |
| Domains in a file imported from S3 | Each supported Region: 250,000 | Yes |
| Domains per account | Each supported Region: 100,000 | Yes |
| IP addresses per resolver endpoint | Each supported Region: 6 | Yes |
| Maximum number of resolver endpoints per AWS Region | Each supported Region: 4 | Yes |
| Resolver rules per AWS Region | Each supported Region: 1,000 | Yes |
| Rules in a DNS Firewall rule group | Each supported Region: 100 | Yes |
| Target IP addresses per resolver rule | Each supported Region: 6 | No |

For more information, see [Route 53 quotas](#) in the *Amazon Route 53 Developer Guide*.

Amazon Route 53 Application Recovery Controller endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

When you use the **AWS CLI or SDKs** to submit requests with Route 53 ARC, you must specify the AWS Region as `us-west-2`.

For the **Route 53 ARC Recovery Readiness API** (for readiness checks) or **Recovery Control Configuration API**, use the following endpoints, respectively.

| Region Name | Region | Endpoint | Protocol |
|-------------------------|-----------|---|----------|
| US West (Oregon) Region | us-west-2 | route53-recovery-readiness.amazonaws.com | HTTPS |
| US West (Oregon) Region | us-west-2 | route53-recovery-control-config.amazonaws.com | HTTPS |

For the Route 53 ARC **Recovery Cluster API**, in addition to specifying the Region as `us-west-2`, you also must specify one of your five Regional cluster endpoints. The endpoint that you specify must target the Route 53 ARC cluster that hosts the routing controls that you want to get or update the state for.

Route 53 ARC creates endpoints for each cluster in the following five Regions: US East (N. Virginia) (`us-east-1`), Europe (Ireland) (`eu-west-1`), Europe (London) (`us-west-2`), Asia Pacific (Tokyo) (`ap-northeast-1`), and Asia Pacific (Sydney) (`ap-southeast-2`). It's a best practice to retry with each of the available cluster endpoints. To learn more, see [Get and update routing control states using the API](#) and [Best practices for Amazon Route 53 Application Recovery Controller](#) in the Amazon Route 53 Application Recovery Controller Developer Guide.

The following are examples of the Regional cluster endpoints in Route 53 ARC.

| Endpoint | Region |
|--|-----------------------------|
| <code>https://aaaaaaaa.route53-recovery-cluster.eu-west-1.amazonaws.com</code> | <code>eu-west-1</code> |
| <code>https://bbbbbbb.route53-recovery-cluster.ap-northeast-1.amazonaws.com</code> | <code>ap-northeast-1</code> |
| <code>https://ccccccc.route53-recovery-cluster.us-west-2.amazonaws.com</code> | <code>us-west-2</code> |
| <code>https://ddddddd.route53-recovery-cluster.us-east-1.amazonaws.com</code> | <code>us-east-1</code> |
| <code>https://eeeeeee.route53-recovery-cluster.ap-southeast-2.amazonaws.com</code> | <code>ap-southeast-2</code> |

Service quotas

For information, see [Quotas in Amazon Route 53 Application Recovery Controller](#) in the *Amazon Route 53 Application Recovery Controller Developer Guide*.

Amazon SageMaker endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

The following table provides a list of Region-specific endpoints that SageMaker supports for training and deploying models. This include creating and managing notebook instances, training jobs, model, endpoint configurations, and endpoints.

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|------------------------|---|----------|--|
| US East (Ohio) | <code>us-east-2</code> | <code>api.sagemaker.us-east-2.amazonaws.com</code> | HTTPS | |
| | | <code>api-fips.sagemaker.us-east-2.amazonaws.com</code> | HTTPS | |
| US East (N. Virginia) | <code>us-east-1</code> | <code>api.sagemaker.us-east-1.amazonaws.com</code> | HTTPS | |
| | | <code>api-fips.sagemaker.us-east-1.amazonaws.com</code> | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| US West (N. California) | us-west-1 | api.sagemaker.us-west-1.amazonaws.com api-fips.sagemaker.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | api.sagemaker.us-west-2.amazonaws.com api-fips.sagemaker.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | api.sagemaker.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | api.sagemaker.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | api.sagemaker.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | api.sagemaker.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | api.sagemaker.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | api.sagemaker.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | api.sagemaker.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | api.sagemaker.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | api.sagemaker.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | api.sagemaker.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | api.sagemaker.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | api.sagemaker.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | api.sagemaker.eu-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|-----------------|--|
| Europe (Paris) | eu-west-3 | api.sagemaker.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | api.sagemaker.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | api.sagemaker.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | api.sagemaker.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | api.sagemaker.us-gov-west-1.amazonaws.com api-fips.sagemaker.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

The following table provides a list of Region-specific endpoints that Amazon SageMaker supports for making inference requests against models hosted in SageMaker.

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|---------------|---|-----------------|--|
| US East (Ohio) | us-east-2 | runtime.sagemaker.us-east-2.amazonaws.com runtime-fips.sagemaker.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | runtime.sagemaker.us-east-1.amazonaws.com runtime-fips.sagemaker.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | runtime.sagemaker.us-west-1.amazonaws.com runtime-fips.sagemaker.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | runtime.sagemaker.us-west-2.amazonaws.com runtime-fips.sagemaker.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | runtime.sagemaker.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | runtime.sagemaker.ap-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|----------|--|
| Asia Pacific (Mumbai) | ap-south-1 | runtime.sagemaker.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | runtime.sagemaker.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | runtime.sagemaker.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | runtime.sagemaker.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | runtime.sagemaker.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | runtime.sagemaker.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | runtime.sagemaker.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | runtime.sagemaker.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | runtime.sagemaker.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | runtime.sagemaker.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | runtime.sagemaker.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | runtime.sagemaker.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | runtime.sagemaker.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | runtime.sagemaker.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | runtime.sagemaker.sa-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|--|----------------|--|
| AWS GovCloud (US-West) | us-gov-west-1 | runtime.sagemaker.us-gov-west-1.amazonaws.com runtime.sagemaker.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

Depending on your activities and resource usage over time, your SageMaker quotas might be different from the default SageMaker quotas listed in the following tables. The default quotas in this page are based on new accounts. If you encounter error messages that you've exceeded your quota, use [AWS Support](#) to request a service limit increase for SageMaker resources you want to scale up. For instructions on how to request a service limit increase, see [Supported Regions and Quotas](#) in the *Amazon SageMaker Developer Guide*. For information on Amazon EC2 instance types, see [Amazon EC2 Instance Types](#).

SageMaker Studio

| Resource | Default |
|--------------------------------------|---------|
| Total Studio Domains per AWS account | 1 |
| KernelGateway-ml.c5.large | 0 |
| KernelGateway-ml.c5.xlarge | 0 |
| KernelGateway-ml.c5.2xlarge | 0 |
| KernelGateway-ml.c5.4xlarge | 0 |
| KernelGateway-ml.c5.9xlarge | 0 |
| KernelGateway-ml.c5.12xlarge | 0 |
| KernelGateway-ml.c5.18xlarge | 0 |
| KernelGateway-ml.c5.24xlarge | 0 |
| KernelGateway-ml.g4dn.xlarge | 0 |
| KernelGateway-ml.g4dn.2xlarge | 0 |
| KernelGateway-ml.g4dn.4xlarge | 0 |
| KernelGateway-ml.g4dn.8xlarge | 0 |
| KernelGateway-ml.g4dn.12xlarge | 0 |
| KernelGateway-ml.g4dn.16xlarge | 0 |
| KernelGateway-ml.m5.large | 0 |
| KernelGateway-ml.m5.xlarge | 0 |
| KernelGateway-ml.m5.2xlarge | 0 |
| KernelGateway-ml.m5.4xlarge | 1 |

| Resource | Default |
|---|----------------|
| KernelGateway-ml.m5.8xlarge | 0 |
| KernelGateway-ml.m5.12xlarge | 0 |
| KernelGateway-ml.m5.16xlarge | 0 |
| KernelGateway-ml.m5.24xlarge | 0 |
| KernelGateway-ml.p3.2xlarge | 0 |
| KernelGateway-ml.p3.8xlarge | 0 |
| KernelGateway-ml.p3.16xlarge | 0 |
| KernelGateway-ml.t3.medium | 2 |
| KernelGateway-ml.t3.large | 0 |
| KernelGateway-ml.t3.xlarge | 0 |
| KernelGateway-ml.t3.2xlarge | 0 |
| Maximum number of UserProfiles per Domain | 2 |
| Maximum number of Running Apps per Domain | 20 |
| Maximum number of custom images per Domain | 30 |
| Maximum number of custom images per UserProfile | 5 |

SageMaker Images

| Resource | Default |
|--|----------------|
| Number of SageMaker Images | 250 |
| Number of image versions per SageMaker image | 1,000 |

SageMaker Notebooks

| Resource | Default |
|-------------------------|----------------|
| ml.t2.medium instances | 2 |
| ml.t2.large instances | 0 |
| ml.t2.xlarge instances | 0 |
| ml.t2.2xlarge instances | 0 |
| ml.t3.medium instances | 2 |
| ml.t3.large instances | 0 |
| ml.t3.xlarge instances | 0 |
| ml.t3.2xlarge instances | 0 |

| Resource | Default |
|---------------------------|---------|
| ml.m4.xlarge instances | 0 |
| ml.m4.2xlarge instances | 0 |
| ml.m4.4xlarge instances | 0 |
| ml.m4.10xlarge instances | 0 |
| ml.m4.16xlarge instances | 0 |
| ml.m5.xlarge instances | 0 |
| ml.m5.2xlarge instances | 0 |
| ml.m5.4xlarge instances | 0 |
| ml.m5.12xlarge instances | 0 |
| ml.m5.24xlarge instances | 0 |
| ml.c4.xlarge instances | 0 |
| ml.c4.2xlarge instances | 0 |
| ml.c4.4xlarge instances | 0 |
| ml.c4.8xlarge instances | 0 |
| ml.c5.xlarge instances | 0 |
| ml.c5.2xlarge instances | 0 |
| ml.c5.4xlarge instances | 0 |
| ml.c5.9xlarge instances | 0 |
| ml.c5.18xlarge instances | 0 |
| ml.c5d.xlarge instances | 0 |
| ml.c5d.2xlarge instances | 0 |
| ml.c5d.4xlarge instances | 0 |
| ml.c5d.9xlarge instances | 0 |
| ml.c5d.18xlarge instances | 0 |
| ml.p2.xlarge instances | 0 |
| ml.p2.8xlarge instances | 0 |
| ml.p2.16xlarge instances | 0 |
| ml.p3.2xlarge instances | 0 |
| ml.p3.8xlarge instances | 0 |
| ml.p3.16xlarge instances | 0 |
| ml.g4dn.xlarge instances | 2 |

| Resource | Default |
|---------------------------------------|----------------|
| ml.g4dn.2xlarge instances | 2 |
| ml.g4dn.4xlarge instances | 2 |
| ml.g4dn.8xlarge instances | 2 |
| ml.g4dn.12xlarge instances | 2 |
| ml.g4dn.16xlarge instances | 2 |
| ml.eia1.medium instances | 0 |
| ml.eia1.large instances | 0 |
| ml.eia1.xlarge instances | 0 |
| ml.eia2.medium instances | 0 |
| ml.eia2.large instances | 0 |
| ml.eia2.xlarge instances | 0 |
| Number of accelerators | 0 |
| Number of notebook instances | 4 |
| EBS volume size in GB for an instance | 102400 |

SageMaker Ground Truth

| Resource | Default |
|--------------------------------------|----------------|
| Total labeling jobs | 1 |
| Total streaming labeling jobs | 0 |
| Max dataset objects per labeling job | 10,000 |
| Number of workteams | 25 |

SageMaker Projects

| Resource | Default |
|--------------------|----------------|
| Number of projects | 500 |

SageMaker Pipelines

| Resource | Default |
|---------------------|----------------|
| Number of pipelines | 5,000 |

SageMaker Pipeline Executions

| Resource | Default |
|---|---------|
| Maximum execution time | 28 days |
| Concurrent pipeline executions per account | 200 |
| Concurrent pipeline executions per pipeline | 200 |

Parameters

| Resource | Default |
|--|--------------------|
| Parameters per pipeline | 50 |
| Parameter name length | 64 characters |
| Parameters name regular expression pattern | ([A-Za-z0-9\\-_])* |
| Parameter description length | 4,096 characters |
| Parameter enum values | 16 distinct values |

SageMaker Condition Steps

| Resource | Default |
|------------------------------|---------|
| Conditions per ConditionStep | 200 |
| Steps in If-List | 20 |
| Steps in Else-List | 20 |
| Conditions in Or-List | 200 |

Property Files

| Resource | Default |
|---------------------------------|---------|
| PropertyFiles in a pipeline | 10 |
| JsonGet functions in a pipeline | 200 |
| Size of the property file | 2 MB |

SageMaker Metadata

| Resource | Default |
|---|--------------------|
| Maximum number of metadata | 20 key-value pairs |
| Metadata key size | 128 characters |
| Metadata key regular expression pattern | ([A-Za-z0-9\\-_])* |
| Maximum metadata value size | 1024 characters |

| Resource | Default |
|---|---|
| Metadata value regular expression pattern | [\\p{M}\\\\p{L}\\\\p{S}\\\\p{S}\\\\p{N}\\\\p{P}]\\s |

SageMaker Feature Store

| Resource | Default |
|---|----------------|
| Number of feature groups | 10 |
| Concurrent feature group creation workflows | 4 |

SageMaker Processing

| Resource | Default |
|------------------|----------------|
| ml.c4.xlarge | 4 |
| ml.c4.2xlarge | 4 |
| ml.c4.4xlarge | 4 |
| ml.c4.8xlarge | 4 |
| ml.c5.xlarge | 4 |
| ml.c5.2xlarge | 4 |
| ml.c5.4xlarge | 1 |
| ml.c5.9xlarge | 1 |
| ml.c5.18xlarge | 1 |
| ml.g4dn.xlarge | 0 |
| ml.g4dn.2xlarge | 0 |
| ml.g4dn.4xlarge | 0 |
| ml.g4dn.8xlarge | 0 |
| ml.g4dn.12xlarge | 0 |
| ml.g4dn.16xlarge | 0 |
| ml.m4.xlarge | 4 |
| ml.m4.2xlarge | 4 |
| ml.m4.4xlarge | 2 |
| ml.m4.10xlarge | 1 |
| ml.m4.16xlarge | 1 |
| ml.m5.large | 4 |
| ml.m5.xlarge | 4 |

| Resource | Default |
|--|---------|
| ml.m5.2xlarge | 4 |
| ml.m5.4xlarge | 2 |
| ml.m5.12xlarge | 0 |
| ml.m5.24xlarge | 0 |
| ml.p2.xlarge | 0 |
| ml.p2.8xlarge | 0 |
| ml.p2.16xlarge | 0 |
| ml.p3.2xlarge | 0 |
| ml.p3.8xlarge | 0 |
| ml.p3.16xlarge | 0 |
| ml.r5.large | 4 |
| ml.r5.xlarge | 4 |
| ml.r5.2xlarge | 4 |
| ml.r5.4xlarge | 1 |
| ml.r5.8xlarge | 1 |
| ml.r5.12xlarge | 1 |
| ml.r5.16xlarge | 1 |
| ml.r5.24xlarge | 0 |
| ml.t3.medium | 4 |
| ml.t3.large | 4 |
| ml.t3.xlarge | 2 |
| ml.t3.2xlarge | 0 |
| Longest run time for a processing job | 5 days |
| Number of instances across a single processing job | 4 |
| Total number of instances across all processing jobs | 20 |
| Size of EBS volume for an instance | 1 TB |

Note

In case of SageMaker training, on-demand and spot instance quotas are tracked and modified separately. For example, with the default quotas, you can run up to 20 training jobs with ml.m4.xlarge on-demand instances and up to 20 training jobs with ml.m4.xlarge spot instances simultaneously.

SageMaker Training

| Resource | Default |
|----------------------------|---------|
| ml.c4.xlarge instances | 4 |
| ml.c4.2xlarge instances | 4 |
| ml.c4.4xlarge instances | 4 |
| ml.c4.8xlarge instances | 4 |
| ml.c5.xlarge instances | 4 |
| ml.c5.2xlarge instances | 4 |
| ml.c5.4xlarge instances | 1 |
| ml.c5.9xlarge instances | 1 |
| ml.c5.18xlarge instances | 0 |
| ml.c5n.xlarge instances | 0 |
| ml.c5n.2xlarge instances | 0 |
| ml.c5n.4xlarge instances | 0 |
| ml.c5n.9xlarge instances | 0 |
| ml.c5n.18xlarge instances | 0 |
| ml.g4dn.xlarge instances | 0 |
| ml.g4dn.2xlarge instances | 0 |
| ml.g4dn.4xlarge instances | 0 |
| ml.g4dn.8xlarge instances | 0 |
| ml.g4dn.12xlarge instances | 0 |
| ml.g4dn.16xlarge instances | 0 |
| ml.g5.xlarge instances | 0 |
| ml.g5.2xlarge instances | 0 |
| ml.g5.4xlarge instances | 0 |
| ml.g5.8xlarge instances | 0 |
| ml.g5.12xlarge instances | 0 |
| ml.g5.16xlarge instances | 0 |
| ml.g5.24xlarge instances | 0 |
| ml.g5.48xlarge instances | 0 |
| ml.m4.xlarge instances | 4 |
| ml.m4.2xlarge instances | 4 |

| Resource | Default |
|--|----------------|
| ml.m4.4xlarge instances | 2 |
| ml.m4.10xlarge instances | 0 |
| ml.m4.16xlarge instances | 0 |
| ml.m5.large instances | 4 |
| ml.m5.xlarge instances | 4 |
| ml.m5.2xlarge instances | 4 |
| ml.m5.4xlarge instances | 20 |
| ml.m5.12xlarge instances | 0 |
| ml.m5.24xlarge instances | 0 |
| ml.p2.xlarge instances | 0 |
| ml.p2.8xlarge instances | 0 |
| ml.p2.16xlarge instances | 0 |
| ml.p3.2xlarge instances | 0 |
| ml.p3.8xlarge instances | 0 |
| ml.p3.16xlarge instances | 0 |
| ml.p3dn.24xlarge instances | 0 |
| ml.p4d.24xlarge instances | 0 |
| The longest run time for a training job | 5 days |
| Number of instances per single training job | 4 |
| Total number of instances across training jobs | 20 |
| Size of EBS volume for an instance | 1 TB |

SageMaker Managed Spot Training

| Resource | Default |
|-------------------------|----------------|
| ml.c4.xlarge instances | 4 |
| ml.c4.2xlarge instances | 4 |
| ml.c4.4xlarge instances | 4 |
| ml.c4.8xlarge instances | 4 |
| ml.c5.xlarge instances | 4 |
| ml.c5.2xlarge instances | 4 |
| ml.c5.4xlarge instances | 1 |

| Resource | Default |
|----------------------------|---------|
| ml.c5.9xlarge instances | 1 |
| ml.c5.18xlarge instances | 0 |
| ml.c5n.xlarge instances | 0 |
| ml.c5n.2xlarge instances | 0 |
| ml.c5n.4xlarge instances | 0 |
| ml.c5n.9xlarge instances | 0 |
| ml.c5n.18xlarge instances | 0 |
| ml.g4dn.xlarge instances | 0 |
| ml.g4dn.2xlarge instances | 0 |
| ml.g4dn.4xlarge instances | 0 |
| ml.g4dn.8xlarge instances | 0 |
| ml.g4dn.12xlarge instances | 0 |
| ml.g4dn.16xlarge instances | 0 |
| ml.g5.xlarge instances | 0 |
| ml.g5.2xlarge instances | 0 |
| ml.g5.4xlarge instances | 0 |
| ml.g5.8xlarge instances | 0 |
| ml.g5.12xlarge instances | 0 |
| ml.g5.16xlarge instances | 0 |
| ml.g5.24xlarge instances | 0 |
| ml.g5.48xlarge instances | 0 |
| ml.m4.xlarge instances | 4 |
| ml.m4.2xlarge instances | 4 |
| ml.m4.4xlarge instances | 2 |
| ml.m4.10xlarge instances | 0 |
| ml.m4.16xlarge instances | 0 |
| ml.m5.large instances | 4 |
| ml.m5.xlarge instances | 4 |
| ml.m5.2xlarge instances | 4 |
| ml.m5.4xlarge instances | 2 |
| ml.m5.12xlarge instances | 0 |

| Resource | Default |
|--|---------|
| ml.m5.24xlarge instances | 0 |
| ml.p2.xlarge instances | 0 |
| ml.p2.8xlarge instances | 0 |
| ml.p2.16xlarge instances | 0 |
| ml.p3.2xlarge instances | 0 |
| ml.p3.8xlarge instances | 0 |
| ml.p3.16xlarge instances | 0 |
| ml.p3dn.24xlarge instances | 0 |
| ml.p4d.24xlarge instances | 0 |
| Number of instances across training jobs | 4 |
| Number of instances per training job | 20 |

SageMaker Autopilot

| Resource | Regions | Default limits | Can be increased up to |
|---|--|----------------|------------------------|
| Size of input dataset | All | 100 GB | Hundreds of GBs |
| Size of a single Parquet file* | All | 2 GB | Tens of GBs |
| Target dataset size for subsampling** | All | 5 GB | Hundreds of GBs |
| Number of concurrent SageMaker Autopilot jobs | us-east-1, us-east-2, us-west-2, ap-northeast-1, eu-west-1, eu-central-1 | 4 | Hundreds |
| | ap-northeast-2, ap-southeast-2, eu-west-2, ap-southeast-1 | 2 | Hundreds |
| | All other regions | 1 | Tens |

Note

*This 2 GB size limit is for a single compressed Parquet file. You can provide a Parquet dataset that includes multiple compressed Parquet files. After the files are decompressed, they may each expand to a larger size.

**SageMaker Autopilot automatically subsamples input datasets that are larger than the target dataset size while accounting for class imbalance and preserving rare class labels.

The resource quotas documented in the following sections are valid for versions of Amazon SageMaker Studio 3.22.2 and higher. For information on updating your version of SageMaker Studio, see [Update SageMaker Studio and Studio Apps](#)

You can increase these limits by contacting [AWS Support Center](#). For instructions on how to request increases, see [Update SageMaker Studio and Studio Apps](#).

SageMaker Automatic Model Hyperparameter Tuning

| Resource | Default |
|--|---------|
| Number of concurrent hyperparameter tuning jobs | 100 |
| Number of parallel training jobs per hyperparameter tuning job | 10 |
| Number of training jobs per hyperparameter tuning job | 500 |

SageMaker Experiments (Lineage Tracking / Experiment Tracking)

| Resource | Default |
|--|---------|
| Experiments | 5,000 |
| Trial components | 20,000 |
| Trial components in a single trial | 50 |
| Trials in a single experiment | 300 |
| Trials a single trial component can be associated with | 500 |
| Number of actions | 3,000 |
| Number of artifacts | 6,000 |
| Number of associations | 6,000 |
| Number of contexts | 500 |

Note

Use [AWS Support](#) to request a service limit increase in order to use an instance with a default quota of 0.

SageMaker Hosting

| Resource | Default |
|-------------------------|---------|
| ml.c4.large instances | 0 |
| ml.c4.xlarge instances | 0 |
| ml.c4.2xlarge instances | 0 |
| ml.c4.4xlarge instances | 0 |
| ml.c4.8xlarge instances | 0 |
| ml.c5.large instances | 0 |
| ml.c5.xlarge instances | 0 |
| ml.c5.2xlarge instances | 0 |
| ml.c5.4xlarge instances | 0 |
| ml.c5.9xlarge instances | 0 |

| Resource | Default |
|----------------------------|---------|
| ml.c5.12xlarge instances | 0 |
| ml.c5.18xlarge instances | 0 |
| ml.c5.24xlarge instances | 0 |
| ml.c5d.large instances | 0 |
| ml.c5d.xlarge instances | 0 |
| ml.c5d.2xlarge instances | 0 |
| ml.c5d.4xlarge instances | 0 |
| ml.c5d.9xlarge instances | 0 |
| ml.c5d.18xlarge instances | 0 |
| ml.c5n.large instances | 0 |
| ml.c5n.xlarge instances | 0 |
| ml.c5n.2xlarge instances | 0 |
| ml.c5n.4xlarge instances | 0 |
| ml.c5n.9xlarge instances | 0 |
| ml.c5n.18xlarge instances | 0 |
| ml.g4dn.xlarge instances | 0 |
| ml.g4dn.2xlarge instances | 0 |
| ml.g4dn.4xlarge instances | 0 |
| ml.g4dn.8xlarge instances | 0 |
| ml.g4dn.12xlarge instances | 0 |
| ml.g4dn.16xlarge instances | 0 |
| ml.m4.xlarge instances | 2 |
| ml.m4.2xlarge instances | 0 |
| ml.m4.4xlarge instances | 0 |
| ml.m4.10xlarge instances | 0 |
| ml.m4.16xlarge instances | 0 |
| ml.m5.large instances | 2 |
| ml.m5.xlarge instances | 0 |
| ml.m5.2xlarge instances | 0 |
| ml.m5.4xlarge instances | 0 |
| ml.m5.8xlarge instances | 0 |

| Resource | Default |
|----------------------------|---------|
| ml.m5.12xlarge instances | 0 |
| ml.m5.16xlarge instances | 0 |
| ml.m5.24xlarge instances | 0 |
| ml.m5d.large instances | 0 |
| ml.m5d.xlarge instances | 0 |
| ml.m5d.2xlarge instances | 0 |
| ml.m5d.4xlarge instances | 0 |
| ml.m5d.8xlarge instances | 0 |
| ml.m5d.12xlarge instances | 0 |
| ml.m5d.16xlarge instances | 0 |
| ml.m5d.24xlarge instances | 0 |
| ml.m5dn.large instances | 0 |
| ml.m5dn.xlarge instances | 0 |
| ml.m5dn.2xlarge instances | 0 |
| ml.m5dn.4xlarge instances | 0 |
| ml.m5dn.8xlarge instances | 0 |
| ml.m5dn.12xlarge instances | 0 |
| ml.m5dn.16xlarge instances | 0 |
| ml.m5dn.24xlarge instances | 0 |
| ml.m5n.large instances | 0 |
| ml.m5n.xlarge instances | 0 |
| ml.m5n.2xlarge instances | 0 |
| ml.m5n.4xlarge instances | 0 |
| ml.m5n.8xlarge instances | 0 |
| ml.m5n.12xlarge instances | 0 |
| ml.m5n.16xlarge instances | 0 |
| ml.m5n.24xlarge instances | 0 |
| ml.p2.xlarge instances | 0 |
| ml.p2.8xlarge instances | 0 |
| ml.p2.16xlarge instances | 0 |
| ml.p3.2xlarge instances | 0 |

| Resource | Default |
|----------------------------|---------|
| ml.p3.8xlarge instances | 0 |
| ml.p3.16xlarge instances | 0 |
| ml.r5.large instances | 0 |
| ml.r5.xlarge instances | 0 |
| ml.r5.2xlarge instances | 0 |
| ml.r5.4xlarge instances | 0 |
| ml.r5.8xlarge instances | 0 |
| ml.r5.12xlarge instances | 0 |
| ml.r5.16xlarge instances | 0 |
| ml.r5.24xlarge instances | 0 |
| ml.r5d.large instances | 0 |
| ml.r5d.xlarge instances | 0 |
| ml.r5d.2xlarge instances | 0 |
| ml.r5d.4xlarge instances | 0 |
| ml.r5d.8xlarge instances | 0 |
| ml.r5d.12xlarge instances | 0 |
| ml.r5d.16xlarge instances | 0 |
| ml.r5d.24xlarge instances | 0 |
| ml.r5dn.large instances | 0 |
| ml.r5dn.xlarge instances | 0 |
| ml.r5dn.2xlarge instances | 0 |
| ml.r5dn.4xlarge instances | 0 |
| ml.r5dn.8xlarge instances | 0 |
| ml.r5dn.12xlarge instances | 0 |
| ml.r5dn.16xlarge instances | 0 |
| ml.r5dn.24xlarge instances | 0 |
| ml.r5n.large instances | 0 |
| ml.r5n.xlarge instances | 0 |
| ml.r5n.2xlarge instances | 0 |
| ml.r5n.4xlarge instances | 0 |
| ml.r5n.8xlarge instances | 0 |

| Resource | Default |
|--|----------------|
| ml.r5n.12xlarge instances | 0 |
| ml.r5n.16xlarge instances | 0 |
| ml.r5n.24xlarge instances | 0 |
| ml.t2.medium instances | 2 |
| ml.t2.large instances | 0 |
| ml.t2.xlarge instances | 0 |
| ml.t2.2xlarge instances | 0 |
| ml.t3.medium instances | 2 |
| ml.t3.large instances | 0 |
| ml.t3.xlarge instances | 0 |
| ml.t3.2xlarge instances | 0 |
| Number of instances across endpoints | 2 |
| Number of instances per endpoint | 0 |
| Number of accelerators per endpoint | 4 |
| Total TPS for all endpoints | 10,000 |
| Maximum payload size for endpoint invocation | 6 MB |
| Inference timeout for endpoint invocation | 60 seconds |

SageMaker Batch Transform

| Resource | Default |
|--------------------------|----------------|
| ml.c4.xlarge instances | 4 |
| ml.c4.2xlarge instances | 4 |
| ml.c4.4xlarge instances | 4 |
| ml.c4.8xlarge instances | 4 |
| ml.c5.xlarge instances | 4 |
| ml.c5.2xlarge instances | 4 |
| ml.c5.4xlarge instances | 1 |
| ml.c5.9xlarge instances | 1 |
| ml.c5.18xlarge instances | 1 |
| ml.g4dn.xlarge | 0 |
| ml.g4dn.2xlarge | 0 |

| Resource | Default |
|---------------------------------------|----------------|
| ml.g4dn.4xlarge | 0 |
| ml.g4dn.8xlarge | 0 |
| ml.g4dn.12xlarge | 0 |
| ml.g4dn.16xlarge | 0 |
| ml.m4.xlarge instances | 4 |
| ml.m4.2xlarge instances | 4 |
| ml.m4.4xlarge instances | 2 |
| ml.m4.10xlarge instances | 1 |
| ml.m4.16xlarge instances | 1 |
| ml.m5.large instances | 4 |
| ml.m5.xlarge instances | 4 |
| ml.m5.2xlarge instances | 4 |
| ml.m5.4xlarge instances | 2 |
| ml.m5.12xlarge instances | 0 |
| ml.m5.24xlarge instances | 0 |
| ml.p2.xlarge instances | 0 |
| ml.p2.8xlarge instances | 0 |
| ml.p2.16xlarge instances | 0 |
| ml.p3.2xlarge instances | 0 |
| ml.p3.8xlarge instances | 0 |
| ml.p3.16xlarge instances | 0 |
| Number of instances per transform job | 4 |

SageMaker Human Task UI

| Resource | Default |
|--------------------------|----------------|
| Number of human task UIs | 100 |

SageMaker Serverless Inference

| Resource | Default |
|---|----------------|
| Maximum concurrent invocations per endpoint variant | 50 |
| Maximum number of serverless endpoint variants per Region in an account | 50 |

| Resource | Default |
|---|---------|
| Maximum concurrent invocations per Region in an account | 200 |
| Maximum memory size per endpoint variant | 6144 MB |

AWS Secrets Manager endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------------|
| US East (Ohio) | us-east-2 | secretsmanager.us-east-2.amazonaws.com secretsmanager-fips.us-east-2.amazonaws.com | HTTPS HTTPS |
| US East (N. Virginia) | us-east-1 | secretsmanager.us-east-1.amazonaws.com secretsmanager-fips.us-east-1.amazonaws.com | HTTPS HTTPS |
| US West (N. California) | us-west-1 | secretsmanager.us-west-1.amazonaws.com secretsmanager-fips.us-west-1.amazonaws.com | HTTPS HTTPS |
| US West (Oregon) | us-west-2 | secretsmanager.us-west-2.amazonaws.com secretsmanager-fips.us-west-2.amazonaws.com | HTTPS HTTPS |
| Africa (Cape Town) | af-south-1 | secretsmanager.af-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | secretsmanager.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Jakarta) | ap-southeast-3 | secretsmanager.ap-southeast-3.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | secretsmanager.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Osaka) | ap-northeast-3 | secretsmanager.ap-northeast-3.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| Asia Pacific (Seoul) | ap-northeast-2 | secretsmanager.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | secretsmanager.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | secretsmanager.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | secretsmanager.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | secretsmanager.ca-central-1.amazonaws.com secretsmanager-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | secretsmanager.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | secretsmanager.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | secretsmanager.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | secretsmanager.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | secretsmanager.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | secretsmanager.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | secretsmanager.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | secretsmanager.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | secretsmanager.us-gov-east-1.amazonaws.com secretsmanager-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | secretsmanager.us-gov-west-1.amazonaws.com secretsmanager-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|---|------------|
| Combined rate of DeleteResourcePolicy, GetResourcePolicy, PutResourcePolicy, and ValidateResourcePolicy API requests | Each supported Region: 50 per second | No |
| Combined rate of DescribeSecret and GetSecretValue API requests | Each supported Region: 5,000 per second | No |
| Combined rate of ListSecrets and ListSecretVersionIds API requests | Each supported Region: 50 per second | No |
| Combined rate of PutSecretValue, RemoveRegionsFromReplication, ReplicateSecretToRegion, StopReplicationToReplica, UpdateSecret, and UpdateSecretVersionStage API requests | Each supported Region: 50 per second | No |
| Combined rate of RestoreSecret API requests | Each supported Region: 50 per second | No |
| Combined rate of RotateSecret and CancelRotateSecret API requests | Each supported Region: 50 per second | No |
| Combined rate of TagResource and UntagResource API requests | Each supported Region: 50 per second | No |
| Rate of CreateSecret API requests | Each supported Region: 50 per second | No |
| Rate of DeleteSecret API requests | Each supported Region: 50 per second | No |
| Rate of GetRandomPassword API requests | Each supported Region: 50 per second | No |
| Resource-based policy length | Each supported Region: 20,480 | No |
| Secret value size | Each supported Region: 65,536 Bytes | No |
| Secrets | Each supported Region: 500,000 | No |
| Staging labels attached across all versions of a secret | Each supported Region: 20 | No |
| Versions per secret | Each supported Region: 100 | No |

AWS Security Hub endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#).

Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | securityhub.us-east-2.amazonaws.com securityhub-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | securityhub.us-east-1.amazonaws.com securityhub-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | securityhub.us-west-1.amazonaws.com securityhub-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | securityhub.us-west-2.amazonaws.com securityhub-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | securityhub.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | securityhub.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | securityhub.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | securityhub.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | securityhub.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | securityhub.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | securityhub.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | securityhub.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | securityhub.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | securityhub.eu-central-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| Europe (Ireland) | eu-west-1 | securityhub.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | securityhub.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | securityhub.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | securityhub.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | securityhub.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | securityhub.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | securityhub.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | securityhub.us-gov-east-1.amazonaws.com securityhub-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | securityhub.us-gov-west-1.amazonaws.com securityhub-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|------------------------------|------------|
| Number of Security Hub member accounts | Each supported Region: 5,000 | No |
| Number of Security Hub outstanding invitations | Each supported Region: 1,000 | No |
| Number of custom actions | Each supported Region: 50 | No |
| Number of custom insights | Each supported Region: 100 | No |
| Number of insight results | Each supported Region: 100 | No |
| Security Hub finding retention time | Each supported Region: 90 | No |

AWS Security Token Service endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

By default, the AWS Security Token Service (AWS STS) is available as a global service, and all STS requests go to a single endpoint at <https://sts.amazonaws.com>. AWS recommends using Regional STS endpoints to reduce latency, build in redundancy, and increase session token validity. Most Regional endpoints are active by default, but you must manually enable endpoints for some Regions, such as Asia Pacific (Hong Kong). You can deactivate STS endpoints for any Regions that are enabled by default if you do not intend to use those Regions.

For more information, see [Activating and Deactivating AWS STS in an AWS Region in the IAM User Guide](#).

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|----------------------------------|----------|
| US East (Ohio) | us-east-2 | sts.us-east-2.amazonaws.com | HTTPS |
| | | sts-fips.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | sts.us-east-1.amazonaws.com | HTTPS |
| | | sts-fips.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | sts.us-west-1.amazonaws.com | HTTPS |
| | | sts-fips.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | sts.us-west-2.amazonaws.com | HTTPS |
| | | sts-fips.us-west-2.amazonaws.com | HTTPS |
| Africa (Cape Town) | af-south-1 | sts.af-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | sts.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Jakarta) | ap-southeast-3 | sts.ap-southeast-3.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | sts.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Osaka) | ap-northeast-3 | sts.ap-northeast-3.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|----------------------------------|-----------------|--|
| Asia Pacific (Seoul) | ap-northeast-2 | sts.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | sts.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | sts.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | sts.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | sts.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | sts.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | sts.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | sts.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | sts.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | sts.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | sts.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | sts.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | sts.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | sts.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | sts.us-gov-west-1.amazonaws.com | HTTPS | |

AWS Server Migration Service endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | sms.us-east-2.amazonaws.com sms-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | sms.us-east-1.amazonaws.com sms-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | sms.us-west-1.amazonaws.com sms-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | sms.us-west-2.amazonaws.com sms-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | sms.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | sms.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | sms.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | sms.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | sms.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | sms.ap-southeast-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------------|--|
| Asia Pacific (Tokyo) | ap-northeast-1 | sms.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | sms.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | sms.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | sms.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | sms.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | sms.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | sms.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | sms.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | sms.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | sms.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | sms.us-gov-east-1.amazonaws.com sms-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | sms.us-gov-west-1.amazonaws.com sms-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|---------------------------|------------|
| Concurrent VM migrations | Each supported Region: 50 | Yes |
| Duration of service usage per VM in days | Each supported Region: 90 | Yes |

Service Quotas endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------|--|
| US East (Ohio) | us-east-2 | servicequotas.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | servicequotas.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | servicequotas.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | servicequotas.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | servicequotas.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | servicequotas.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | servicequotas.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | servicequotas.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | servicequotas.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | servicequotas.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | servicequotas.ap-southeast-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|----------------|--|
| Asia Pacific (Sydney) | ap-southeast-2 | servicequotas.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | servicequotas.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | servicequotas.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | servicequotas.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | servicequotas.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | servicequotas.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | servicequotas.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | servicequotas.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | servicequotas.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | servicequotas.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | servicequotas.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | servicequotas.us-gov-east-1.amazonaws.com servicequotas.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | servicequotas.us-gov-west-1.amazonaws.com servicequotas.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|-------------------------------------|------------|
| Active requests per quota | Each supported Region: 1 | No |
| Throttle rate for GetAWSDefaultServiceQuota | Each supported Region: 5 per second | No |

| Name | Default | Adjustable |
|---|--------------------------------------|------------|
| Throttle rate for GetRequestedServiceQuotaChange | Each supported Region: 5 per second | No |
| Throttle rate for GetServiceQuota | Each supported Region: 5 per second | No |
| Throttle rate for ListAWSDefaultServiceQuotas | Each supported Region: 10 per second | No |
| Throttle rate for ListRequestedServiceQuotaChangeHistory | Each supported Region: 5 per second | No |
| Throttle rate for ListRequestedServiceQuotaChangeHistoryByQuota | Each supported Region: 5 per second | No |
| Throttle rate for ListServiceQuotas | Each supported Region: 10 per second | No |
| Throttle rate for ListServices | Each supported Region: 10 per second | No |
| Throttle rate for ListTagsForResource | Each supported Region: 10 per second | No |
| Throttle rate for RequestServiceQuotaIncrease | Each supported Region: 3 per second | No |
| Throttle rate for TagResource | Each supported Region: 10 per second | No |
| Throttle rate for UntagResource | Each supported Region: 10 per second | No |

AWS Serverless Application Repository endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|--|----------|--|
| US East (Ohio) | us-east-2 | serverlessrepo.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | serverlessrepo.us-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| US West (N. California) | us-west-1 | serverlessrepo.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | serverlessrepo.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | serverlessrepo.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | serverlessrepo.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | serverlessrepo.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | serverlessrepo.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | serverlessrepo.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | serverlessrepo.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | serverlessrepo.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | serverlessrepo.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | serverlessrepo.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | serverlessrepo.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | serverlessrepo.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | serverlessrepo.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | serverlessrepo.me-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|----------|--|
| South America (São Paulo) | sa-east-1 | serverlessrepo.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | serverlessrepo.us-gov-east-1.amazonaws.com | HTTPS | |
| | | serverlessrepo.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | serverlessrepo.us-gov-west-1.amazonaws.com | HTTPS | |
| | | serverlessrepo.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|------------------------------------|------------|
| Application policy length | Each supported Region: 6,144 | No |
| Free Amazon S3 storage for code packages | Each supported Region: 5 Gigabytes | No |
| Public applications | Each supported Region: 100 | Yes |

For more information, see [AWS Serverless Application Repository Quotas](#) in the *AWS Serverless Application Repository Developer Guide*.

AWS Service Catalog endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [Amazon service endpoints](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [Amazon service quotas](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|---|----------|--|
| US East (Ohio) | us-east-2 | servicecatalog.us-east-2.amazonaws.com | HTTPS | |
| | | servicecatalog-fips.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | servicecatalog.us-east-1.amazonaws.com | HTTPS | |
| | | servicecatalog-fips.us-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| US West (N. California) | us-west-1 | servicecatalog.us-west-1.amazonaws.com servicecatalog-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | servicecatalog.us-west-2.amazonaws.com servicecatalog-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | servicecatalog.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | servicecatalog.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | servicecatalog.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | servicecatalog.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | servicecatalog.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | servicecatalog.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | servicecatalog.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | servicecatalog.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | servicecatalog.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | servicecatalog.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | servicecatalog.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | servicecatalog.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | servicecatalog.eu-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| Europe (Paris) | eu-west-3 | servicecatalog.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | servicecatalog.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | servicecatalog.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | servicecatalog.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | servicecatalog.us-gov-east-1.amazonaws.com servicecatalog-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | servicecatalog.us-gov-west-1.amazonaws.com servicecatalog-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|------------------------------|------------|
| Applications per region | Each supported Region: 100 | Yes |
| Attribute groups per application | Each supported Region: 100 | Yes |
| Attribute groups per region | Each supported Region: 100 | Yes |
| Delegated administrators per organization | Each supported Region: 50 | No |
| Portfolios per region | Each supported Region: 100 | Yes |
| Product versions per product | Each supported Region: 100 | Yes |
| Products per portfolio | Each supported Region: 150 | Yes |
| Products per region | Each supported Region: 350 | Yes |
| Resources per application | Each supported Region: 200 | Yes |
| Service action associations per provisioning artifact | Each supported Region: 25 | No |
| Service actions per region | Each supported Region: 200 | No |
| Shared accounts per portfolio | Each supported Region: 5,000 | No |
| TagOptions per resource | Each supported Region: 25 | No |

| Name | Default | Adjustable |
|--|----------------------------|------------|
| Tags per portfolio | Each supported Region: 20 | No |
| Tags per product | Each supported Region: 20 | No |
| Tags per provisioned product | Each supported Region: 50 | No |
| Users, groups, and roles per portfolio | Each supported Region: 100 | Yes |
| Users, groups, and roles per product | Each supported Region: 200 | Yes |
| Values per TagOption | Each supported Region: 25 | No |

For more information, see [AWS Service Catalog default service quotas](#) in the *AWS Service Catalog Administrator Guide*.

AWS Shield Advanced endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|------------|---|-------------------------|--|
| US East (Ohio) | us-east-2 | shield.us-east-1.amazonaws.com shield.us-east-1.amazonaws.com shield-fips.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | shield.us-east-1.amazonaws.com shield.us-east-1.amazonaws.com shield-fips.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| US West (N. California) | us-west-1 | shield.us-east-1.amazonaws.com shield.us-east-1.amazonaws.com shield-fips.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | shield.us-east-1.amazonaws.com shield.us-east-1.amazonaws.com shield-fips.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | shield.us-east-1.amazonaws.com shield.us-east-1.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|-------------------------------------|-----------------|--|
| | | shield-fips.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | shield.us-east-1.amazonaws.com | HTTPS | |
| | | shield.us-east-1.amazonaws.com | HTTPS | |
| | | shield-fips.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | shield.us-east-1.amazonaws.com | HTTPS | |
| | | shield.us-east-1.amazonaws.com | HTTPS | |
| | | shield-fips.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | shield.us-east-1.amazonaws.com | HTTPS | |
| | | shield.us-east-1.amazonaws.com | HTTPS | |
| | | shield-fips.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | shield.us-east-1.amazonaws.com | HTTPS | |
| | | shield.us-east-1.amazonaws.com | HTTPS | |
| | | shield-fips.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | shield.us-east-1.amazonaws.com | HTTPS | |
| | | shield.us-east-1.amazonaws.com | HTTPS | |
| | | shield-fips.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | shield.us-east-1.amazonaws.com | HTTPS | |
| | | shield.us-east-1.amazonaws.com | HTTPS | |
| | | shield-fips.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | shield.us-east-1.amazonaws.com | HTTPS | |
| | | shield.us-east-1.amazonaws.com | HTTPS | |
| | | shield-fips.us-east-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | shield.us-east-1.amazonaws.com | HTTPS | |
| | | shield.us-east-1.amazonaws.com | HTTPS | |
| | | shield-fips.us-east-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | shield.us-east-1.amazonaws.com | HTTPS | |
| | | shield.us-east-1.amazonaws.com | HTTPS | |
| | | shield-fips.us-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|-------------------------|--|
| Europe (Ireland) | eu-west-1 | shield.us-east-1.amazonaws.com shield.us-east-1.amazonaws.com shield-fips.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (London) | eu-west-2 | shield.us-east-1.amazonaws.com shield.us-east-1.amazonaws.com shield-fips.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (Milan) | eu-south-1 | shield.us-east-1.amazonaws.com shield.us-east-1.amazonaws.com shield-fips.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (Paris) | eu-west-3 | shield.us-east-1.amazonaws.com shield.us-east-1.amazonaws.com shield-fips.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (Stockholm) | eu-north-1 | shield.us-east-1.amazonaws.com shield.us-east-1.amazonaws.com shield-fips.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Middle East (Bahrain) | me-south-1 | shield.us-east-1.amazonaws.com shield.us-east-1.amazonaws.com shield-fips.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| South America (São Paulo) | sa-east-1 | shield.us-east-1.amazonaws.com shield.us-east-1.amazonaws.com shield-fips.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|------------------------------|-------------------|
| Elastic IP address protections | Each supported Region: 1,000 | Yes |
| Elastic Load Balancing load balancer protections | Each supported Region: 1,000 | Yes |

Amazon Simple Email Service endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

API Endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | email.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | email.us-east-1.amazonaws.com email-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | email.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | email.us-west-2.amazonaws.com email-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | email.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | email.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | email.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | email.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | email.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | email.ap-southeast-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------------|--|
| Asia Pacific (Tokyo) | ap-northeast-1 | email.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | email.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | email.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | email.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | email.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | email.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | email.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | email.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | email.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | email.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | email.us-gov-west-1.amazonaws.com email-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

SMTP Endpoints

Note

SMTP endpoints are not currently available in Africa (Cape Town), Europe (Milan), Middle East (Bahrain).

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|---|----------|--|
| US East (Ohio) | us-east-2 | email-smtp.us-east-2.amazonaws.com | SMTP | |
| US East (N. Virginia) | us-east-1 | email-smtp.us-east-1.amazonaws.com email-smtp-fips.us-east-1.amazonaws.com | SMTP | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| US West (N. California) | us-west-1 | email-smtp.us-west-1.amazonaws.com | SMTP | |
| US West (Oregon) | us-west-2 | email-smtp.us-west-2.amazonaws.com email-smtp-fips.us-west-2.amazonaws.com | SMTP | |
| Asia Pacific (Mumbai) | ap-south-1 | email-smtp.ap-south-1.amazonaws.com | SMTP | |
| Asia Pacific (Osaka) | ap-northeast-3 | email-smtp.ap-northeast-3.amazonaws.com | SMTP | |
| Asia Pacific (Seoul) | ap-northeast-2 | email-smtp.ap-northeast-2.amazonaws.com | SMTP | |
| Asia Pacific (Singapore) | ap-southeast-1 | email-smtp.ap-southeast-1.amazonaws.com | SMTP | |
| Asia Pacific (Sydney) | ap-southeast-2 | email-smtp.ap-southeast-2.amazonaws.com | SMTP | |
| Asia Pacific (Tokyo) | ap-northeast-1 | email-smtp.ap-northeast-1.amazonaws.com | SMTP | |
| Canada (Central) | ca-central-1 | email-smtp.ca-central-1.amazonaws.com | SMTP | |
| Europe (Frankfurt) | eu-central-1 | email-smtp.eu-central-1.amazonaws.com | SMTP | |
| Europe (Ireland) | eu-west-1 | email-smtp.eu-west-1.amazonaws.com | SMTP | |
| Europe (London) | eu-west-2 | email-smtp.eu-west-2.amazonaws.com | SMTP | |
| Europe (Paris) | eu-west-3 | email-smtp.eu-west-3.amazonaws.com | SMTP | |
| Europe (Stockholm) | eu-north-1 | email-smtp.eu-north-1.amazonaws.com | SMTP | |
| South America (São Paulo) | sa-east-1 | email-smtp.sa-east-1.amazonaws.com | SMTP | |
| AWS GovCloud (US) | us-gov-west-1 | email-smtp.us-gov-west-1.amazonaws.com email-smtp-fips.us-gov-west-1.amazonaws.com | SMTP | |

DKIM Domains

| Region Name | Region | AWS DKIM domain | | |
|----------------------|----------------|-----------------------------------|--|--|
| Africa (Cape Town) | af-south-1 | dkim.af-south-1.amazonses.com | | |
| Asia Pacific (Osaka) | ap-northeast-3 | dkim.ap-northeast-3.amazonses.com | | |
| Europe (Milan) | eu-south-1 | dkim.eu-south-1.amazonses.com | | |
| All other regions | | dkim.amazonses.com | | |

Email Receiving Endpoints

Amazon SES doesn't support email receiving in the following Regions: US East (Ohio), US West (N. California) Asia Pacific (Mumbai), Asia Pacific (Osaka), Asia Pacific (Seoul), Asia Pacific (Singapore), Asia Pacific (Sydney), Asia Pacific (Tokyo), Canada (Central), Europe (Frankfurt), Europe (London), Europe (Paris), Europe (Stockholm), Middle East (Bahrain), South America (São Paulo), and AWS GovCloud (US).

| Region Name | Region | Receiving Endpoint | | |
|-----------------------|-----------|--------------------------------------|--|--|
| US East (N. Virginia) | us-east-1 | inbound-smtp.us-east-1.amazonaws.com | | |
| US West (Oregon) | us-west-2 | inbound-smtp.us-west-2.amazonaws.com | | |
| Europe (Ireland) | eu-west-1 | inbound-smtp.eu-west-1.amazonaws.com | | |

Service quotas

| Name | Default | Adjustable |
|---------------|----------------------------|------------|
| Sending quota | Each supported Region: 200 | Yes |
| Sending rate | Each supported Region: 1 | Yes |

For more information, see [Service quotas in Amazon SES](#) in the *Amazon Simple Email Service Developer Guide*.

AWS Signer endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services

offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints with Lambda

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | signer.us-east-2.amazonaws.com signer-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | signer.us-east-1.amazonaws.com signer-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | signer.us-west-1.amazonaws.com signer-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | signer.us-west-2.amazonaws.com signer-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | signer.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | signer.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | signer.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | signer.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | signer.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | signer.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | signer.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | signer.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | signer.eu-central-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|------------|---------------------------------|----------|--|
| Europe (Ireland) | eu-west-1 | signer.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | signer.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | signer.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | signer.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | signer.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | signer.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | signer.sa-east-1.amazonaws.com | HTTPS | |

Service endpoints with IoT

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|-------------------------------------|----------|
| US East (Ohio) | us-east-2 | signer.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | signer.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | signer.us-west-1.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | signer.us-west-2.amazonaws.com | HTTPS |
| Africa (Cape Town) | af-south-1 | signer.af-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | signer.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | signer.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | signer.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | signer.ap-southeast-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol |
|---------------------------|----------------|-------------------------------------|----------|
| Asia Pacific (Sydney) | ap-southeast-2 | signer.ap-southeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | signer.ap-northeast-1.amazonaws.com | HTTPS |
| Canada (Central) | ca-central-1 | signer.ca-central-1.amazonaws.com | HTTPS |
| China (Beijing) | cn-north-1 | acm.cn-north-1.amazonaws.com.cn | HTTPS |
| China (Ningxia) | cn-northwest-1 | acm.cn-northwest-1.amazonaws.com.cn | HTTPS |
| Europe (Frankfurt) | eu-central-1 | signer.eu-central-1.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | signer.eu-west-1.amazonaws.com | HTTPS |
| Europe (London) | eu-west-2 | signer.eu-west-2.amazonaws.com | HTTPS |
| Europe (Milan) | eu-south-1 | signer.eu-south-1.amazonaws.com | HTTPS |
| Europe (Paris) | eu-west-3 | signer.eu-west-3.amazonaws.com | HTTPS |
| Europe (Stockholm) | eu-north-1 | signer.eu-north-1.amazonaws.com | HTTPS |
| Middle East (Bahrain) | me-south-1 | signer.me-south-1.amazonaws.com | HTTPS |
| South America (São Paulo) | sa-east-1 | signer.sa-east-1.amazonaws.com | HTTPS |

Service quotas

| Name | Default | Adjustable |
|---|---------------------------|------------|
| API calls per second | Each supported Region: 25 | No |
| Rate of AddProfilePermission requests | Each supported Region: 3 | Yes |
| Rate of CancelSigningProfile requests | Each supported Region: 3 | Yes |
| Rate of DescribeSigningJob requests | Each supported Region: 6 | Yes |
| Rate of GetSigningPlatform requests | Each supported Region: 3 | Yes |
| Rate of GetSigningProfile requests | Each supported Region: 3 | Yes |
| Rate of ListProfilePermissions requests | Each supported Region: 6 | Yes |

| Name | Default | Adjustable |
|--|--------------------------|------------|
| Rate of ListSigningJobs requests | Each supported Region: 6 | Yes |
| Rate of ListSigningPlatforms requests | Each supported Region: 6 | Yes |
| Rate of ListSigningProfiles requests | Each supported Region: 6 | Yes |
| Rate of ListTagsForResource requests | Each supported Region: 6 | Yes |
| Rate of PutSigningProfile requests | Each supported Region: 3 | Yes |
| Rate of RemoveProfilePermission requests | Each supported Region: 3 | Yes |
| Rate of RevokeSignature requests | Each supported Region: 3 | Yes |
| Rate of RevokeSigningProfile requests | Each supported Region: 3 | Yes |
| Rate of StartSigningJob requests | Each supported Region: 3 | Yes |
| Rate of TagResource requests | Each supported Region: 3 | Yes |
| Rate of UntagResource requests | Each supported Region: 3 | Yes |

AWS Sign-In endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|-------------------------|------------|----------------------------------|----------|
| US East (Ohio) | us-east-2 | us-east-2.signin.aws.amazon.com | HTTPS |
| US East (N. Virginia) | us-east-1 | signin.aws.amazon.com | HTTPS |
| US West (N. California) | us-west-1 | us-west-1.signin.aws.amazon.com | HTTPS |
| US West (Oregon) | us-west-2 | us-west-2.signin.aws.amazon.com | HTTPS |
| Africa (Cape Town) | af-south-1 | af-south-1.signin.aws.amazon.com | HTTPS |
| Asia Pacific | ap-east-1 | ap-east-1.signin.aws.amazon.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--------------------------------------|-----------------|--|
| (Hong Kong) | | | | |
| Asia Pacific (Jakarta) | ap-southeast-3 | ap-southeast-3.signin.aws.amazon.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | ap-south-1.signin.aws.amazon.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | ap-northeast-3.signin.aws.amazon.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | ap-northeast-2.signin.aws.amazon.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | ap-southeast-1.signin.aws.amazon.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | ap-southeast-2.signin.aws.amazon.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | ap-northeast-1.signin.aws.amazon.com | HTTPS | |
| Canada (Central) | ca-central-1 | ca-central-1.signin.aws.amazon.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | eu-central-1.signin.aws.amazon.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | eu-west-1.signin.aws.amazon.com | HTTPS | |
| Europe (London) | eu-west-2 | eu-west-2.signin.aws.amazon.com | HTTPS | |
| Europe (Milan) | eu-south-1 | eu-south-1.signin.aws.amazon.com | HTTPS | |
| Europe (Paris) | eu-west-3 | eu-west-3.signin.aws.amazon.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | eu-north-1.signin.aws.amazon.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | me-south-1.signin.aws.amazon.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------|--|
| South America (São Paulo) | sa-east-1 | sa-east-1.signin.aws.amazon.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | us-gov-east-1.signin.amazonaws-us-gov.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | signin.amazonaws-us-gov.com | HTTPS | |

Service quotas

AWS Sign-In has no increasable quotas.

Amazon Simple Notification Service endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|------------|------------------------------|----------------|--|
| US East (Ohio) | us-east-2 | sns.us-east-2.amazonaws.com | HTTP and HTTPS | |
| US East (N. Virginia) | us-east-1 | sns.us-east-1.amazonaws.com | HTTP and HTTPS | |
| US West (N. California) | us-west-1 | sns.us-west-1.amazonaws.com | HTTP and HTTPS | |
| US West (Oregon) | us-west-2 | sns.us-west-2.amazonaws.com | HTTP and HTTPS | |
| Africa (Cape Town) | af-south-1 | sns.af-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific | ap-east-1 | sns.ap-east-1.amazonaws.com | HTTP and HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|----------------------------------|----------------|--|
| (Hong Kong) | | | | |
| Asia Pacific (Jakarta) | ap-southeast-3 | sns.ap-southeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | sns.ap-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | sns.ap-northeast-3.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | sns.ap-northeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | sns.ap-southeast-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | sns.ap-southeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | sns.ap-northeast-1.amazonaws.com | HTTP and HTTPS | |
| Canada (Central) | ca-central-1 | sns.ca-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Frankfurt) | eu-central-1 | sns.eu-central-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Ireland) | eu-west-1 | sns.eu-west-1.amazonaws.com | HTTP and HTTPS | |
| Europe (London) | eu-west-2 | sns.eu-west-2.amazonaws.com | HTTP and HTTPS | |
| Europe (Milan) | eu-south-1 | sns.eu-south-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Paris) | eu-west-3 | sns.eu-west-3.amazonaws.com | HTTP and HTTPS | |
| Europe (Stockholm) | eu-north-1 | sns.eu-north-1.amazonaws.com | HTTP and HTTPS | |
| Middle East (Bahrain) | me-south-1 | sns.me-south-1.amazonaws.com | HTTP and HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---------------------------------|----------------|--|
| South America (São Paulo) | sa-east-1 | sns.sa-east-1.amazonaws.com | HTTP and HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | sns.us-gov-east-1.amazonaws.com | HTTP and HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | sns.us-gov-west-1.amazonaws.com | HTTP and HTTPS | |

FIFO topics

FIFO topics are supported in all Regions except the following:

- AWS GovCloud (US-East)
- AWS GovCloud (US-West)

Service quotas

The following quotas determine how many Amazon SNS resources you can create in your AWS account, and they determine the rate at which you can issue Amazon SNS API requests.

Amazon SNS resource

To request an increase, submit an [SNS Quota Increase case](#).

| Resource | Default |
|--|---|
| Topics | <ul style="list-style-type: none"> • Standard: 100,000 per account • FIFO: 1,000 per account |
| Subscriptions | <ul style="list-style-type: none"> • Standard: 12,500,000 per topic <p>For Kinesis Data Firehose delivery streams, 5 per topic, per subscription owner</p> <ul style="list-style-type: none"> • FIFO: 100 per topic |
| Pending subscriptions | 5,000 per account |
| Account spend threshold for SMS | 1.00 USD per account |
| Delivery rate for promotional SMS messages | 20 messages per second |
| Delivery rate for transactional SMS messages | 20 messages per second |
| Delivery rate for email messages | 10 messages per second |

| Resource | Default |
|---|---|
| Maximum number of messages in PublishBatchRequest | 10 PublishBatchRequestEntries |
| Subscription filter policies | 200 per account |

Amazon SNS API throttling

The following quotas throttle the rate at which you can issue Amazon SNS API requests.

Hard

The following quotas cannot be increased.

| API | Transactions per second |
|------------------------------------|-------------------------|
| CheckIfPhoneNumberIsOptedOut | 50 |
| CreateSMSSandboxPhoneNumber | 1 |
| DeleteSMSSandboxPhoneNumber | 1 |
| GetSMSAttributes | 20 |
| GetSMSSandboxAccountStatus | 10 |
| ListEndpointsByPlatformApplication | 30 |
| ListOriginationNumbers | 1 |
| ListPhoneNumbersOptedOut | 10 |
| ListSMSSandboxPhoneNumbers | 1 |
| ListTopics | 30 |
| ListPlatformApplications | 15 |
| ListSubscriptions | 30 |
| ListSubscriptionsByTopic | 30 |
| OptInPhoneNumber | 20 |
| SetSMSAttributes | 1 |
| Subscribe | 100 |
| Unsubscribe | 100 |
| VerifySMSSandboxPhoneNumber | 1 |

Soft

The following quotas vary by AWS Region. The messages per second quota is based on the number of messages published to an Amazon SNS region, combining `Publish` and `PublishBatch` API requests.

For example, if your regional quota is 30,000 messages per second, there are a few ways this quota can be reached:

- Using the `Publish` action at a rate of 30,000 API requests per second to publish 30,000 messages (one message per API request).
- Using the `PublishBatch` action at a rate of 3,000 API requests per second to publish 30,000 messages (10 messages per batch API request).
- Using the `Publish` action at a rate of 10,000 API requests per second to publish 10,000 messages (one message per API request) and the `PublishBatch` action at a rate of 2,000 API requests per second to publish 20,000 messages (10 messages per batch API request) for a total of 30,000 messages published per second.

Publish API throttling

| API | AWS Regions | Standard topics | FIFO topics |
|--------------------------|---------------------------------|----------------------------|--|
| Publish and PublishBatch | US East (N. Virginia) Region | 30,000 messages per second | 300 messages per second or 10 MB per second, per topic, whichever comes first. This is a hard limit and can not be increased. For cross region delivery cases, FIFO topics support 100 messages per second or 3 MB per second, whichever comes first. |
| | US West (Oregon) Region | 9,000 messages per second | |
| | Europe (Ireland) Region | | |
| | US East (Ohio) Region | 1,500 messages per second | |
| | US West (N. California) Region | | |
| | Asia Pacific (Mumbai) Region | | |
| | Asia Pacific (Seoul) Region | | |
| | Asia Pacific (Singapore) Region | | |
| | Asia Pacific (Sydney) Region | | |
| | Asia Pacific (Tokyo) Region | | |
| Publish and PublishBatch | Europe (Frankfurt) Region | | |
| | Africa (Cape Town) Region | 300 messages per second | |
| | Asia Pacific (Hong Kong) Region | | |
| | Asia Pacific (Osaka) Region | | |
| | Canada (Central) Region | | |
| | China (Beijing) Region | | |
| | China (Ningxia) Region | | |

| API | AWS Regions | Standard topics | FIFO topics |
|-----|---|-----------------|-------------|
| | Europe (London) Region Europe (Milan) Region Europe (Paris) Region Europe (Stockholm) Region Middle East (Bahrain) Region South America (São Paulo) Region | | |

Other API throttling

| APIs | AWS Regions | Transactions per second |
|----------------------------------|---|-------------------------|
| ConfirmSubscription | US East (N. Virginia) Region | 3,000 |
| CreatePlatformApplication | US West (Oregon) Region | 900 |
| CreatePlatformEndpoint | Europe (Ireland) Region | |
| CreateTopic | US East (Ohio) Region | 150 |
| DeleteEndpoint | US West (N. California) Region | |
| DeletePlatformApplication | Asia Pacific (Mumbai) Region | |
| DeleteTopic | Asia Pacific (Seoul) Region | |
| GetEndpointAttributes | Asia Pacific (Singapore) Region | |
| GetPlatformApplicationAttributes | Asia Pacific (Sydney) Region | |
| GetSubscriptionAttributes | Asia Pacific (Tokyo) Region | |
| GetTopicAttributes | Europe (Frankfurt) Region | |
| SetEndpointAttributes | Africa (Cape Town) Region | 30 |
| SetPlatformApplicationAttributes | Asia Pacific (Hong Kong) Region | |
| SetSubscriptionAttributes | Asia Pacific (Osaka) Region | |
| SetTopicAttributes | Canada (Central) Region China (Beijing) Region China (Ningxia) Region Europe (London) Region Europe (Milan) Region Europe (Paris) Region | |

| APIs | AWS Regions | Transactions per second |
|------|---|-------------------------|
| | Europe (Stockholm) Region Middle East (Bahrain) Region South America (São Paulo) Region | |

Amazon Simple Queue Service endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Amazon SQS

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|------------|--|-------------------------|--|
| US East (Ohio) | us-east-2 | sqs.us-east-2.amazonaws.com sqsfips.us-east-2.amazonaws.com | HTTP and HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | sqs.us-east-1.amazonaws.com sqsfips.us-east-1.amazonaws.com | HTTP and HTTPS HTTPS | |
| US West (N. California) | us-west-1 | sqs.us-west-1.amazonaws.com sqsfips.us-west-1.amazonaws.com | HTTP and HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | sqs.us-west-2.amazonaws.com sqsfips.us-west-2.amazonaws.com | HTTP and HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | sqs.af-south-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | sqs.ap-east-1.amazonaws.com | HTTP and HTTPS | |

| Region Name | Region | Endpoint | Protocol |
|---------------------------|----------------|----------------------------------|-----------------|
| Asia Pacific (Jakarta) | ap-southeast-3 | sqs.ap-southeast-3.amazonaws.com | HTTP and HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | sqs.ap-south-1.amazonaws.com | HTTP and HTTPS |
| Asia Pacific (Osaka) | ap-northeast-3 | sqs.ap-northeast-3.amazonaws.com | HTTP and HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | sqs.ap-northeast-2.amazonaws.com | HTTP and HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | sqs.ap-southeast-1.amazonaws.com | HTTP and HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | sqs.ap-southeast-2.amazonaws.com | HTTP and HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | sqs.ap-northeast-1.amazonaws.com | HTTP and HTTPS |
| Canada (Central) | ca-central-1 | sqs.ca-central-1.amazonaws.com | HTTP and HTTPS |
| Europe (Frankfurt) | eu-central-1 | sqs.eu-central-1.amazonaws.com | HTTP and HTTPS |
| Europe (Ireland) | eu-west-1 | sqs.eu-west-1.amazonaws.com | HTTP and HTTPS |
| Europe (London) | eu-west-2 | sqs.eu-west-2.amazonaws.com | HTTP and HTTPS |
| Europe (Milan) | eu-south-1 | sqs.eu-south-1.amazonaws.com | HTTP and HTTPS |
| Europe (Paris) | eu-west-3 | sqs.eu-west-3.amazonaws.com | HTTP and HTTPS |
| Europe (Stockholm) | eu-north-1 | sqs.eu-north-1.amazonaws.com | HTTP and HTTPS |
| Middle East (Bahrain) | me-south-1 | sqs.me-south-1.amazonaws.com | HTTP and HTTPS |
| South America (São Paulo) | sa-east-1 | sqs.sa-east-1.amazonaws.com | HTTP and HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|--|-------------------------|--|
| AWS GovCloud (US-East) | us-gov-east-1 | sqs.us-gov-east-1.amazonaws.com sqs.us-gov-east-1.amazonaws.com | HTTP and HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | sqs.us-gov-west-1.amazonaws.com sqs.us-gov-west-1.amazonaws.com | HTTP and HTTPS HTTPS | |

Legacy endpoints

If you use the AWS CLI or SDK for Python, you can use the following legacy endpoints.

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|------------------------------------|----------------|
| US East (Ohio) | us-east-2 | us-east-2.queue.amazonaws.com | HTTP and HTTPS |
| US East (N. Virginia) | us-east-1 | queue.amazonaws.com | HTTP and HTTPS |
| US West (N. California) | us-west-1 | us-west-1.queue.amazonaws.com | HTTP and HTTPS |
| US West (Oregon) | us-west-2 | us-west-2.queue.amazonaws.com | HTTP and HTTPS |
| Africa (Cape Town) | af-south-1 | af-south-1.queue.amazonaws.com | HTTP |
| Asia Pacific (Mumbai) | ap-south-1 | ap-south-1.queue.amazonaws.com | HTTP and HTTPS |
| Asia Pacific (Osaka) | ap-northeast-3 | ap-northeast-3.queue.amazonaws.com | HTTP and HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | ap-northeast-2.queue.amazonaws.com | HTTP and HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | ap-southeast-1.queue.amazonaws.com | HTTP and HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | ap-southeast-2.queue.amazonaws.com | HTTP and HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | ap-northeast-1.queue.amazonaws.com | HTTP and HTTPS |
| Canada (Central) | ca-central-1 | ca-central-1.queue.amazonaws.com | HTTP and HTTPS |
| China (Beijing) | cn-north-1 | cn-north-1.queue.amazonaws.com | HTTP and HTTPS |

| Region Name | Region | Endpoint | Protocol |
|---------------------------|----------------|------------------------------------|----------------|
| China (Ningxia) | cn-northwest-1 | cn-northwest-1.queue.amazonaws.com | HTTP and HTTPS |
| Europe (Frankfurt) | eu-central-1 | eu-central-1.queue.amazonaws.com | HTTP and HTTPS |
| Europe (Ireland) | eu-west-1 | eu-west-1.queue.amazonaws.com | HTTP and HTTPS |
| Europe (London) | eu-west-2 | eu-west-2.queue.amazonaws.com | HTTP and HTTPS |
| Europe (Paris) | eu-west-3 | eu-west-3.queue.amazonaws.com | HTTP and HTTPS |
| Europe (Stockholm) | eu-north-1 | eu-north-1.queue.amazonaws.com | HTTP and HTTPS |
| South America (São Paulo) | sa-east-1 | sa-east-1.queue.amazonaws.com | HTTP and HTTPS |

Service quotas

| Name | Default | Adjustable |
|--|--|------------|
| Actions per Queue Policy | Each supported Region: 7 | No |
| Attributes per Message | Each supported Region: 10 | No |
| Batched Message ID Length | Each supported Region: 80 | No |
| Batched Message Throughput for FIFO Queues | Each supported Region: 3,000 | Yes |
| Conditions per Queue Policy | Each supported Region: 10 | No |
| In-Flight Messages per FIFO Queue | Each supported Region: 20,000 | No |
| In-Flight Messages per Standard Queue | Each supported Region: 120,000 | No |
| Message Invisibility Period | Each supported Region: 0 Seconds | No |
| Message Retention Time | Each supported Region: 345,600 Seconds | No |
| Message Size | Each supported Region: 256 Kilobytes | No |
| Message Size in S3 Bucket | Each supported Region: 2 Gigabytes | No |
| Messages per Batch | Each supported Region: 10 | No |

| Name | Default | Adjustable |
|--|---------------------------------------|------------|
| Principals per Queue Policy | Each supported Region: 50 | No |
| Queue Delivery Delay | Each supported Region: 15 | No |
| Queue Name Length | Each supported Region: 80 | No |
| Queue Policy Size | Each supported Region: 8,192 Bytes | No |
| Statements per Queue Policy | Each supported Region: 20 | No |
| Tags per Queue | Each supported Region: 50 | No |
| UTF-8 Queue Tag Key Length | Each supported Region: 128 | No |
| UTF-8 Queue Tag Value Length | Each supported Region: 256 | No |
| Unbatched Message Throughput for FIFO Queues | Each supported Region: 300 | No |

For more information, see [Amazon SQS quotas](#) in the *Amazon Simple Queue Service Developer Guide* and the "Limits and Restrictions" section of the [Amazon SQS FAQs](#).

Amazon Simple Storage Service endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Amazon S3 endpoints

When you use the REST API to send requests to the endpoints shown in the table below, you can use the virtual-hosted style and path-style methods. For more information, see [Virtual Hosting of Buckets](#).

| Region Name | Region | Endpoint | Location Constraint | Protocol | Signature Version(s) Support |
|----------------|-----------|---|---------------------|----------------|------------------------------|
| US East (Ohio) | us-east-2 | Standard endpoints: <ul style="list-style-type: none"> s3.us-east-2.amazonaws.com s3-fips.us-east-2.amazonaws.com s3.dualstack.us-east-2.amazonaws.com** s3-fips.dualstack.us-east-2.amazonaws.com** | us-east-2 | HTTP and HTTPS | Versions 4 only |

| Region Name | Region | Endpoint | Location Constraint | Protocol | Signature Version(s) Support |
|-------------|--------|---|---------------------|----------|------------------------------|
| | | <ul style="list-style-type: none"> • <i>account-id.s3-control.us-east-2.amazonaws.com</i> • <i>account-id.s3-control-fips.us-east-2.amazonaws.com</i> • <i>account-id.s3-control.dualstack.us-east-2.amazonaws.com**</i> • <i>account-id.s3-control-fips.dualstack.us-east-2.amazonaws.com**</i> <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • <i>s3-accesspoint.us-east-2.amazonaws.com</i> • <i>s3-accesspoint-fips.us-east-2.amazonaws.com</i> • <i>s3-accesspoint.dualstack.us-east-2.amazonaws.com**</i> • <i>s3-accesspoint-fips.dualstack.us-east-2.amazonaws.com**</i> | | | |

| Region Name | Region | Endpoint | Location Constraint | Protocol | Signature Version(s) Support |
|-----------------------|-----------|---|---------------------|----------------|------------------------------|
| US East (N. Virginia) | us-east-1 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.us-east-1.amazonaws.com • s3-fips.us-east-1.amazonaws.com • s3.amazonaws.com • s3.dualstack.us-east-1.amazonaws.com** • s3-fips.dualstack.us-east-1.amazonaws.com** • <i>account-id</i>.s3-control.us-east-1.amazonaws.com • <i>account-id</i>.s3-control-fips.us-east-1.amazonaws.com • <i>account-id</i>.s3-control-dualstack.us-east-1.amazonaws.com** • <i>account-id</i>.s3-control-fips.dualstack.us-east-1.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.us-east-1.amazonaws.com • s3-accesspoint-fips.us-east-1.amazonaws.com • s3-accesspoint.dualstack.us-east-1.amazonaws.com** • s3-accesspoint-fips.dualstack.us-east-1.amazonaws.com** | us-east-1 | HTTP and HTTPS | Versions 2 and 4 |

| Region Name | Region | Endpoint | Location Constraint | Protocol | Signature Version(s) Support |
|-------------------------|-----------|---|---------------------|----------------|------------------------------|
| US West (N. California) | us-west-1 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.us-west-1.amazonaws.com • s3-fips.us-west-1.amazonaws.com • s3.dualstack.us-west-1.amazonaws.com** • s3-fips.dualstack.us-west-1.amazonaws.com** • <i>account-id</i>.s3-control.us-west-1.amazonaws.com • <i>account-id</i>.s3-control-fips.us-west-1.amazonaws.com • <i>account-id</i>.s3-control.dualstack.us-west-1.amazonaws.com** • <i>account-id</i>.s3-control-fips.dualstack.us-west-1.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.us-west-1.amazonaws.com • s3-accesspoint-fips.us-west-1.amazonaws.com • s3-accesspoint.dualstack.us-west-1.amazonaws.com** • s3-accesspoint-fips.dualstack.us-west-1.amazonaws.com** | us-west-1 | HTTP and HTTPS | Versions 2 and 4 |

| Region Name | Region | Endpoint | Location Constraint | Protocol | Signature Version(s) Support |
|------------------|-----------|---|---------------------|----------------|------------------------------|
| US West (Oregon) | us-west-2 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.us-west-2.amazonaws.com • s3-fips.us-west-2.amazonaws.com • s3.dualstack.us-west-2.amazonaws.com** • s3-fips.dualstack.us-west-2.amazonaws.com** • <i>account-id</i>.s3-control.us-west-2.amazonaws.com • <i>account-id</i>.s3-control-fips.us-west-2.amazonaws.com • <i>account-id</i>.s3-control.dualstack.us-west-2.amazonaws.com** • <i>account-id</i>.s3-control-fips.dualstack.us-west-2.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.us-west-2.amazonaws.com • s3-accesspoint-fips.us-west-2.amazonaws.com • s3-accesspoint.dualstack.us-west-2.amazonaws.com** • s3-accesspoint-fips.dualstack.us-west-2.amazonaws.com** | us-west-2 | HTTP and HTTPS | Versions 2 and 4 |

| Region Name | Region | Endpoint | Location Constraint | Protocol | Signature Version(s) Support |
|-----------------------------|------------|---|---------------------|----------------|------------------------------|
| Africa (Cape Town) | af-south-1 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.af-south-1.amazonaws.com • s3.dualstack.af-south-1.amazonaws.com** • <i>account-id</i>.s3-control.af-south-1.amazonaws.com • <i>account-id</i>.s3-control.dualstack.af-south-1.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.af-south-1.amazonaws.com • s3-accesspoint.dualstack.af-south-1.amazonaws.com** | af-south-1 | HTTP and HTTPS | Version 4 only |
| Asia Pacific (Hong Kong)*** | ap-east-1 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.ap-east-1.amazonaws.com • s3.dualstack.ap-east-1.amazonaws.com** • <i>account-id</i>.s3-control.ap-east-1.amazonaws.com • <i>account-id</i>.s3-control.dualstack.ap-east-1.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.ap-east-1.amazonaws.com • s3-accesspoint.dualstack.ap-east-1.amazonaws.com** | ap-east-1 | HTTP and HTTPS | Version 4 only |

| Region Name | Region | Endpoint | Location Constraint | Protocol | Signature Version(s) Support |
|------------------------|----------------|---|---------------------|----------------|------------------------------|
| Asia Pacific (Jakarta) | ap-southeast-3 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.ap-southeast-3.amazonaws.com • s3.dualstack.ap-southeast-3.amazonaws.com** • <i>account-id</i>.s3-control.ap-southeast-3.amazonaws.com • <i>account-id</i>.s3-control.dualstack.ap-southeast-3.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.ap-southeast-3.amazonaws.com • s3-accesspoint.dualstack.ap-southeast-3.amazonaws.com** | ap-southeast-3 | HTTP and HTTPS | Version 4 only |
| Asia Pacific (Mumbai) | ap-south-1 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.ap-south-1.amazonaws.com • s3.dualstack.ap-south-1.amazonaws.com** • <i>account-id</i>.s3-control.ap-south-1.amazonaws.com • <i>account-id</i>.s3-control.dualstack.ap-south-1.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.ap-south-1.amazonaws.com • s3-accesspoint.dualstack.ap-south-1.amazonaws.com** | ap-south-1 | HTTP and HTTPS | Version 4 only |

| Region Name | Region | Endpoint | Location Constraint | Protocol | Signature Version(s) Support |
|----------------------|----------------|---|---------------------|----------------|------------------------------|
| Asia Pacific (Osaka) | ap-northeast-3 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.ap-northeast-3.amazonaws.com • s3.dualstack.ap-northeast-3.amazonaws.com** • <i>account-id</i>.s3-control.ap-northeast-3.amazonaws.com • <i>account-id</i>.s3-control.dualstack.ap-northeast-3.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.ap-northeast-3.amazonaws.com • s3-accesspoint.dualstack.ap-northeast-3.amazonaws.com** | ap-northeast-3 | HTTP and HTTPS | Version 4 only |
| Asia Pacific (Seoul) | ap-northeast-2 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.ap-northeast-2.amazonaws.com • s3.dualstack.ap-northeast-2.amazonaws.com** • <i>account-id</i>.s3-control.ap-northeast-2.amazonaws.com • <i>account-id</i>.s3-control.dualstack.ap-northeast-2.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.ap-northeast-2.amazonaws.com • s3-accesspoint.dualstack.ap-northeast-2.amazonaws.com** | ap-northeast-2 | HTTP and HTTPS | Version 4 only |

| Region Name | Region | Endpoint | Location Constraint | Protocol | Signature Version(s) Support |
|--------------------------|----------------|---|---------------------|----------------|------------------------------|
| Asia Pacific (Singapore) | ap-southeast-1 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.ap-southeast-1.amazonaws.com • s3.dualstack.ap-southeast-1.amazonaws.com** • <i>account-id</i>.s3-control.ap-southeast-1.amazonaws.com • <i>account-id</i>.s3-control.dualstack.ap-southeast-1.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.ap-southeast-1.amazonaws.com • s3-accesspoint.ap-southeast-1.amazonaws.com** | ap-southeast-1 | HTTP and HTTPS | Versions 2 and 4 |
| Asia Pacific (Sydney) | ap-southeast-2 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.ap-southeast-2.amazonaws.com • s3.dualstack.ap-southeast-2.amazonaws.com** • <i>account-id</i>.s3-control.ap-southeast-2.amazonaws.com • <i>account-id</i>.s3-control.dualstack.ap-southeast-2.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.ap-southeast-2.amazonaws.com • s3-accesspoint.dualstack.ap-southeast-2.amazonaws.com** | ap-southeast-2 | HTTP and HTTPS | Versions 2 and 4 |

| Region Name | Region | Endpoint | Location Constraint | Protocol | Signature Version(s) Support |
|----------------------|----------------|---|---------------------|----------------|------------------------------|
| Asia Pacific (Tokyo) | ap-northeast-1 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.ap-northeast-1.amazonaws.com • s3.dualstack.ap-northeast-1.amazonaws.com** • <i>account-id</i>.s3-control.ap-northeast-1.amazonaws.com • <i>account-id</i>.s3-control.dualstack.ap-northeast-1.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.ap-northeast-1.amazonaws.com • s3-accesspoint.dualstack.ap-northeast-1.amazonaws.com** | ap-northeast-1 | HTTP and HTTPS | Versions 2 and 4 |

| Region Name | Region | Endpoint | Location Constraint | Protocol | Signature Version(s) Support |
|------------------|--------------|---|---------------------|----------------|------------------------------|
| Canada (Central) | ca-central-1 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.ca-central-1.amazonaws.com • s3-fips.ca-central-1.amazonaws.com • s3.dualstack.ca-central-1.amazonaws.com** • s3-fips.dualstack.ca-central-1.amazonaws.com** • <i>account-id</i>.s3-control.ca-central-1.amazonaws.com • <i>account-id</i>.s3-control-fips.ca-central-1.amazonaws.com • <i>account-id</i>.s3-control.dualstack.ca-central-1.amazonaws.com** • <i>account-id</i>.s3-control-fips.dualstack.ca-central-1.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.ca-central-1.amazonaws.com • s3-accesspoint-fips.ca-central-1.amazonaws.com • s3-accesspoint.dualstack.ca-central-1.amazonaws.com** • s3-accesspoint-fips.dualstack.ca-central-1.amazonaws.com** | ca-central-1 | HTTP and HTTPS | Version 4 only |

| Region Name | Region | Endpoint | Location Constraint | Protocol | Signature Version(s) Support |
|-----------------|----------------|---|---------------------|----------------|------------------------------|
| China (Beijing) | cn-north-1 | <p>Valid endpoint name for this Region:</p> <ul style="list-style-type: none"> • s3.cn-north-1.amazonaws.com.cn • s3.dualstack.cn-north-1.amazonaws.com.cn • <i>account-id</i>.s3-control.cn-north-1.amazonaws.com.cn • <i>account-id</i>.s3-control.dualstack.cn-north-1.amazonaws.com.cn <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.cn-north-1.amazonaws.com • s3-accesspoint.dualstack.cn-north-1.amazonaws.com | cn-north-1 | HTTP and HTTPS | Version 4 only |
| China (Ningxia) | cn-northwest-1 | <p>Valid endpoint name for this Region:</p> <ul style="list-style-type: none"> • s3.cn-northwest-1.amazonaws.com.cn • s3.dualstack.cn-northwest-1.amazonaws.com.cn • <i>account-id</i>.s3-control.cn-northwest-1.amazonaws.com.cn • <i>account-id</i>.s3-control.dualstack.cn-northwest-1.amazonaws.com.cn <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.cn-northwest-1.amazonaws.com • s3-accesspoint.dualstack.cn-northwest-1.amazonaws.com | cn-northwest-1 | HTTP and HTTPS | Version 4 only |

| Region Name | Region | Endpoint | Location Constraint | Protocol | Signature Version(s) Support |
|--------------------|--------------|---|---------------------|----------------|------------------------------|
| Europe (Frankfurt) | eu-central-1 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.eu-central-1.amazonaws.com • s3.dualstack.eu-central-1.amazonaws.com** • <i>account-id</i>.s3-control.eu-central-1.amazonaws.com • <i>account-id</i>.s3-control.dualstack.eu-central-1.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.eu-central-1.amazonaws.com • s3-accesspoint.dualstack.eu-central-1.amazonaws.com** | eu-central-1 | HTTP and HTTPS | Version 4 only |
| Europe (Ireland) | eu-west-1 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.eu-west-1.amazonaws.com • s3.dualstack.eu-west-1.amazonaws.com** • <i>account-id</i>.s3-control.eu-west-1.amazonaws.com • <i>account-id</i>.s3-control.dualstack.eu-west-1.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.eu-west-1.amazonaws.com • s3-accesspoint.dualstack.eu-west-1.amazonaws.com** | EU or eu-west-1 | HTTP and HTTPS | Versions 2 and 4 |

| Region Name | Region | Endpoint | Location Constraint | Protocol | Signature Version(s) Support |
|-----------------|------------|---|---------------------|----------------|------------------------------|
| Europe (London) | eu-west-2 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.eu-west-2.amazonaws.com • s3.dualstack.eu-west-2.amazonaws.com** • <i>account-id</i>.s3-control.eu-west-2.amazonaws.com • <i>account-id</i>.s3-control.dualstack.eu-west-2.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.eu-west-2.amazonaws.com • s3-accesspoint.dualstack.eu-west-2.amazonaws.com** | eu-west-2 | HTTP and HTTPS | Version 4 only |
| Europe (Milan) | eu-south-1 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.eu-south-1.amazonaws.com • s3.dualstack.eu-south-1.amazonaws.com** • <i>account-id</i>.s3-control.eu-south-1.amazonaws.com • <i>account-id</i>.s3-control.dualstack.eu-south-1.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.eu-south-1.amazonaws.com • s3-accesspoint.dualstack.eu-south-1.amazonaws.com** | eu-south-1 | HTTP and HTTPS | Version 4 only |

| Region Name | Region | Endpoint | Location Constraint | Protocol | Signature Version(s) Support |
|--------------------|------------|---|---------------------|----------------|------------------------------|
| Europe (Paris) | eu-west-3 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.eu-west-3.amazonaws.com • s3.dualstack.eu-west-3.amazonaws.com • <i>account-id</i>.s3-control.eu-west-3.amazonaws.com • <i>account-id</i>.s3-control.dualstack.eu-west-3.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.eu-west-3.amazonaws.com • s3-accesspoint.dualstack.eu-west-3.amazonaws.com** | eu-west-3 | HTTP and HTTPS | Version 4 only |
| Europe (Stockholm) | eu-north-1 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.eu-north-1.amazonaws.com • s3.dualstack.eu-north-1.amazonaws.com • <i>account-id</i>.s3-control.eu-north-1.amazonaws.com • <i>account-id</i>.s3-control.dualstack.eu-north-1.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.eu-north-1.amazonaws.com • s3-accesspoint.dualstack.eu-north-1.amazonaws.com** | eu-north-1 | HTTP and HTTPS | Version 4 only |

| Region Name | Region | Endpoint | Location Constraint | Protocol | Signature Version(s) Support |
|---------------------------|------------|---|---------------------|----------------|------------------------------|
| South America (São Paulo) | sa-east-1 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.sa-east-1.amazonaws.com • s3.dualstack.sa-east-1.amazonaws.com** • <i>account-id</i>.s3-control.sa-east-1.amazonaws.com • <i>account-id</i>.s3-control.dualstack.sa-east-1.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.sa-east-1.amazonaws.com • s3-accesspoint.dualstack.sa-east-1.amazonaws.com** | sa-east-1 | HTTP and HTTPS | Versions 2 and 4 |
| Middle East (Bahrain) | me-south-1 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.me-south-1.amazonaws.com • s3.dualstack.me-south-1.amazonaws.com** • <i>account-id</i>.s3-control.me-south-1.amazonaws.com • <i>account-id</i>.s3-control.dualstack.me-south-1.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.me-south-1.amazonaws.com • s3-accesspoint.dualstack.me-south-1.amazonaws.com** | me-south-1 | HTTP and HTTPS | Versions 4 only |

| Region Name | Region | Endpoint | Location Constraint | Protocol | Signature Version(s) Support |
|------------------------|---------------|---|---------------------|----------------|------------------------------|
| AWS GovCloud (US-East) | us-gov-east-1 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.us-gov-east-1.amazonaws.com • s3-fips.us-gov-east-1.amazonaws.com • s3.dualstack.us-gov-east-1.amazonaws.com** • s3-fips.dualstack.us-gov-east-1.amazonaws.com** • <i>account-id</i>.s3-control.us-gov-east-1.amazonaws.com • <i>account-id</i>.s3-control-fips.us-gov-east-1.amazonaws.com • <i>account-id</i>.s3-control.dualstack.us-gov-east-1.amazonaws.com** • <i>account-id</i>.s3-control-fips.dualstack.us-gov-east-1.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.us-gov-east-1.amazonaws.com • s3-accesspoint-fips.us-gov-east-1.amazonaws.com • s3-accesspoint.dualstack.us-gov-east-1.amazonaws.com** • s3-accesspoint-fips.dualstack.us-gov-east-1.amazonaws.com** | us-gov-east-1 | HTTP and HTTPS | |

| Region Name | Region | Endpoint | Location Constraint | Protocol | Signature Version(s) Support |
|------------------------|---------------|---|---------------------|----------------|------------------------------|
| AWS GovCloud (US-West) | us-gov-west-1 | <p>Standard endpoints:</p> <ul style="list-style-type: none"> • s3.us-gov-west-1.amazonaws.com • s3-fips.us-gov-west-1.amazonaws.com • s3.dualstack.us-gov-west-1.amazonaws.com** • s3-fips.dualstack.us-gov-west-1.amazonaws.com** • <i>account-id</i>.s3-control.us-gov-west-1.amazonaws.com • <i>account-id</i>.s3-control-fips.us-gov-west-1.amazonaws.com • <i>account-id</i>.s3-control.dualstack.us-gov-west-1.amazonaws.com** • <i>account-id</i>.s3-control-fips.dualstack.us-gov-west-1.amazonaws.com** <p>Amazon S3 Access Points endpoints (HTTPS only):</p> <ul style="list-style-type: none"> • s3-accesspoint.us-gov-west-1.amazonaws.com • s3-accesspoint-fips.us-gov-west-1.amazonaws.com • s3-accesspoint.dualstack.us-gov-west-1.amazonaws.com** • s3-accesspoint-fips.dualstack.us-gov-west-1.amazonaws.com** | us-gov-west-1 | HTTP and HTTPS | |

**Amazon S3 dual-stack endpoints support requests to S3 buckets over IPv6 and IPv4. For more information, see [Using Dual-Stack Endpoints](#).

***You must enable this Region before you can use it.

When using the preceding endpoints the following additional considerations apply:

- The s3-control endpoints are used with Amazon S3 account-level operations
- The s3-accesspoint endpoints are used only to make requests through Amazon S3 Access Points. For more information, see [Working with Amazon S3 Access Points](#).
- Amazon S3 renamed the US Standard Region to the US East (N. Virginia) Region to be consistent with AWS Regional naming conventions. There is no change to the endpoint, and you do not need to make any changes to your application.

- If you use a Region other than the US East (N. Virginia) endpoint to create a bucket, you must set the LocationConstraint bucket parameter to the same Region. Both the AWS SDK for Java and AWS SDK for .NET use an enumeration for setting location constraints (Region for Java, S3Region for .NET). For more information, see [PUT Bucket](#) in the *Amazon Simple Storage Service API Reference*.

Amazon S3 website endpoints

When you configure your bucket as a website, the website is available using the following Region-specific website endpoints. Note that the website endpoints are different than the REST API endpoints listed in the preceding table. For more information about hosting websites on Amazon S3, see [Hosting Websites on Amazon S3](#) in the *Amazon Simple Storage Service User Guide*. You need the hosted zone IDs when using the Amazon Route 53 API to add an alias record to your hosted zone.

Note

Amazon S3 website endpoints do not support HTTPS or Amazon S3 Access Points. If you want to use HTTPS, you can use Amazon CloudFront to serve a static website hosted on Amazon S3. For more information, see [Configuring a static website using a custom domain registered with Route 53](#) and [Improving the performance of your website using CloudFront](#) in the *Amazon S3 User Guide*.

| Region Name | Website Endpoint | Route 53 Hosted Zone ID |
|--------------------------|---|-------------------------|
| US East (Ohio) | s3-website.us-east-2.amazonaws.com | Z2O1EMRO9K5GLX |
| US East (N. Virginia) | s3-website-us-east-1.amazonaws.com | Z3AQBSTGFYJSTF |
| US West (N. California) | s3-website-us-west-1.amazonaws.com | Z2F56UZL2M1ACD |
| US West (Oregon) | s3-website-us-west-2.amazonaws.com | Z3BJ6K6RIION7M |
| Africa (Cape Town) | s3-website.af-south-1.amazonaws.com | Z83WF9RJE8B12 |
| Asia Pacific (Hong Kong) | s3-website.ap-east-1.amazonaws.com | ZNB98KWMFR0R6 |
| Asia Pacific (Mumbai) | s3-website.ap-south-1.amazonaws.com | Z11RGJOFQNVJUP |
| Asia Pacific (Osaka) | s3-website.ap-northeast-3.amazonaws.com | Z2YQB5RD63NC85 |
| Asia Pacific (Seoul) | s3-website.ap-northeast-2.amazonaws.com | Z3W03O7B5YMIYP |
| Asia Pacific (Singapore) | s3-website-ap-southeast-1.amazonaws.com | Z3O0J2DXBE1FTB |
| Asia Pacific (Sydney) | s3-website-ap-southeast-2.amazonaws.com | Z1WCIGYICN2BYD |
| Asia Pacific (Tokyo) | s3-website-ap-northeast-1.amazonaws.com | Z2M4EHUR26P7ZW |
| Canada (Central) | s3-website.ca-central-1.amazonaws.com | Z1QDH18159H29 |

| Region Name | Website Endpoint | Route 53 Hosted Zone ID |
|---------------------------|--|-------------------------|
| China (Ningxia) | s3-website.cn-northwest-1.amazonaws.com.cn | Z282HJ1KT0DH03 |
| Europe (Frankfurt) | s3-website.eu-central-1.amazonaws.com | Z21DNDUVLTQW6Q |
| Europe (Ireland) | s3-website-eu-west-1.amazonaws.com | Z1BKCTXD74EZPE |
| Europe (London) | s3-website.eu-west-2.amazonaws.com | Z3GKZC51ZF0DB4 |
| Europe (Milan) | s3-website.eu-south-1.amazonaws.com | Z30OZKI7KPW7MI |
| Europe (Paris) | s3-website.eu-west-3.amazonaws.com | Z3R1K369G5AVDG |
| Europe (Stockholm) | s3-website.eu-north-1.amazonaws.com | Z3BAZG2TWCNX0D |
| Asia Pacific (Jakarta) | s3-website.ap-southeast-3.amazonaws.com | Z01613992JD795ZI93075 |
| Middle East(Bahrain) | s3-website.me-south-1.amazonaws.com | Z1MPMWCPA7YB62 |
| South America (São Paulo) | s3-website-sa-east-1.amazonaws.com | Z7KQH4QJS55SO |
| AWS GovCloud (US-East) | s3-website.us-gov-east-1.amazonaws.com | Z2NIFVYYW2VKV1 |
| AWS GovCloud (US-West) | s3-website-us-gov-west-1.amazonaws.com | Z31GFT0UA1I2HV |

Service quotas

Amazon S3

| Name | Default | Adjustable |
|---------------------|-------------------------------------|------------|
| Access Points | Each supported Region: 1,000 | Yes |
| Bucket policy | Each supported Region: 20 Kilobytes | No |
| Bucket tags | Each supported Region: 50 | No |
| Buckets | Each supported Region: 100 | Yes |
| CRR rules | Each supported Region: 1,000 | No |
| Event notifications | Each supported Region: 100 | No |
| Lifecycle rules | Each supported Region: 1,000 | No |

| Name | Default | Adjustable |
|--|--|------------|
| Maximum part size | Each supported Region: 5 Gigabytes | No |
| Minimum part size | Each supported Region: 5 Megabytes | No |
| Multi-Region Access Point Regions | Each supported Region: 20 | No |
| Multi-Region Access Points | Each supported Region: 100 | No |
| Object size | Each supported Region: 5 Terabytes | No |
| Object size (Console upload) | Each supported Region: 160 Gigabytes | No |
| Object tags | Each supported Region: 10 | No |
| Parts | Each supported Region: 10,000 | No |
| Replication transfer rate | Each supported Region: 1 Gigabits per second | Yes |
| S3 Glacier: Number of random restore requests. | Each supported Region: 35 | No |
| S3 Glacier: Provisioned capacity units | Each supported Region: 2 | No |

Amazon S3 on Outposts

| Name | Default | Adjustable |
|---------------|----------------------------|------------|
| Access Points | Each supported Region: 10 | No |
| Buckets | Each supported Region: 100 | No |

Amazon Simple Workflow Service endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | swf.us-east-2.amazonaws.com swf-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | swf.us-east-1.amazonaws.com swf-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | swf.us-west-1.amazonaws.com swf-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | swf.us-west-2.amazonaws.com swf-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | swf.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | swf.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | swf.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | swf.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | swf.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | swf.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | swf.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | swf.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | swf.ap-northeast-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|----------------|--|
| Canada (Central) | ca-central-1 | swf.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | swf.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | swf.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | swf.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | swf.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | swf.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | swf.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | swf.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | swf.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | swf.us-gov-east-1.amazonaws.com swf.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | swf.us-gov-west-1.amazonaws.com swf.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|---|------------|
| CountClosedWorkflowExecutions throttle burst limit in transaction per second | us-west-1: 2,000 ap-northeast-1: 2,000 ap-southeast-1: 2,000 ap-southeast-2: 2,000 sa-east-1: 2,000 Each of the other supported Regions: 1,000 | Yes |

| Name | Default | Adjustable |
|--|---|------------|
| CountClosedWorkflowExecutions throttle limit in transaction per second | Each supported Region: 1 | Yes |
| CountOpenWorkflowExecutions throttle burst limit in transaction per second | us-west-1: 2,000 ap-northeast-1: 2,000 ap-southeast-1: 2,000 ap-southeast-2: 2,000 sa-east-1: 2,000 Each of the other supported Regions: 1,000 | Yes |
| CountOpenWorkflowExecutions throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |
| CountPendingActivityTasks throttle burst limit in transaction per second | us-west-1: 200 ap-northeast-1: 200 ap-southeast-1: 200 ap-southeast-2: 200 sa-east-1: 200 Each of the other supported Regions: 100 | Yes |
| CountPendingActivityTasks throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |

| Name | Default | Adjustable |
|--|---|------------|
| CountPendingDecisionTasks throttle burst limit in transaction per second | us-west-1: 200 ap-northeast-1: 200 ap-southeast-1: 200 ap-southeast-2: 200 sa-east-1: 200 Each of the other supported Regions: 100 | Yes |
| CountPendingDecisionTasks throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |
| DeprecateActivityType throttle burst limit in transaction per second | us-west-1: 200 ap-northeast-1: 200 ap-southeast-1: 200 ap-southeast-2: 200 sa-east-1: 200 Each of the other supported Regions: 100 | Yes |
| DeprecateActivityType throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |

| Name | Default | Adjustable |
|--|---|------------|
| DeprecateDomain throttle burst limit in transaction per second | us-west-1: 100 ap-northeast-1: 100 ap-southeast-1: 100 ap-southeast-2: 100 sa-east-1: 100 Each of the other supported Regions: 50 | Yes |
| DeprecateDomain throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |
| DeprecateWorkflowType throttle burst limit in transaction per second | us-west-1: 200 ap-northeast-1: 200 ap-southeast-1: 200 ap-southeast-2: 200 sa-east-1: 200 Each of the other supported Regions: 100 | Yes |
| DeprecateWorkflowType throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |

| Name | Default | Adjustable |
|---|---|------------|
| DescribeActivityType throttle burst limit in transaction per second | us-west-1: 2,000 ap-northeast-1: 2,000 ap-southeast-1: 2,000 ap-southeast-2: 2,000 sa-east-1: 2,000 Each of the other supported Regions: 1,000 | Yes |
| DescribeActivityType throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |
| DescribeDomain throttle burst limit in transaction per second | us-west-1: 200 ap-northeast-1: 200 ap-southeast-1: 200 ap-southeast-2: 200 sa-east-1: 200 Each of the other supported Regions: 100 | Yes |
| DescribeDomain throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |

| Name | Default | Adjustable |
|--|---|------------|
| DescribeWorkflowExecution throttle burst limit in transaction per second | us-west-1: 2,000 ap-northeast-1: 2,000 ap-southeast-1: 2,000 ap-southeast-2: 2,000 sa-east-1: 2,000 Each of the other supported Regions: 1,000 | Yes |
| DescribeWorkflowExecution throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |
| DescribeWorkflowType throttle burst limit in transaction per second | us-west-1: 2,000 ap-northeast-1: 2,000 ap-southeast-1: 2,000 ap-southeast-2: 2,000 sa-east-1: 2,000 Each of the other supported Regions: 1,000 | Yes |
| DescribeWorkflowType throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |
| Events in Workflow execution history | Each supported Region: 25,000 | No |

| Name | Default | Adjustable |
|--|---|------------|
| GetWorkflowExecutionHistory throttle burst limit in transaction per second | us-west-1: 2,000 ap-northeast-1: 2,000 ap-southeast-1: 2,000 ap-southeast-2: 2,000 sa-east-1: 2,000 Each of the other supported Regions: 1,000 | Yes |
| GetWorkflowExecutionHistory throttle limit in transaction per second | us-west-1: 10 ap-northeast-1: 10 ap-southeast-1: 10 ap-southeast-2: 10 sa-east-1: 10 Each of the other supported Regions: 5 | Yes |
| Input / result data size | Each supported Region: 32,768 | No |
| ListActivityTypes throttle burst limit in transaction per second | us-west-1: 200 ap-northeast-1: 200 ap-southeast-1: 200 ap-southeast-2: 200 sa-east-1: 200 Each of the other supported Regions: 100 | Yes |
| ListActivityTypes throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |

| Name | Default | Adjustable |
|---|---|------------|
| ListClosedWorkflowExecutions throttle burst limit in transaction per second | us-west-1: 200 ap-northeast-1: 200 ap-southeast-1: 200 ap-southeast-2: 200 sa-east-1: 200 Each of the other supported Regions: 100 | Yes |
| ListClosedWorkflowExecutions throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |
| ListDomains throttle burst limit in transaction per second | us-west-1: 100 ap-northeast-1: 100 ap-southeast-1: 100 ap-southeast-2: 100 sa-east-1: 100 Each of the other supported Regions: 50 | Yes |
| ListDomains throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |

| Name | Default | Adjustable |
|---|---|------------|
| ListOpenWorkflowExecutions throttle burst limit in transaction per second | us-west-1: 200 ap-northeast-1: 200 ap-southeast-1: 200 ap-southeast-2: 200 sa-east-1: 200 Each of the other supported Regions: 100 | Yes |
| ListOpenWorkflowExecutions throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |
| ListWorkflowTypes throttle burst limit in transaction per second | us-west-1: 200 ap-northeast-1: 200 ap-southeast-1: 200 ap-southeast-2: 200 sa-east-1: 200 Each of the other supported Regions: 100 | Yes |
| ListWorkflowTypes throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |
| Maximum workflow and activity types per domain | Each supported Region: 10,000 | Yes |
| Open activity tasks per workflow execution | Each supported Region: 1,000 | No |

| Name | Default | Adjustable |
|--|---|------------|
| Open child workflow executions | Each supported Region: 1,000 | No |
| Open timers per workflow execution | Each supported Region: 1,000 | No |
| Open workflow executions per domain | Each supported Region: 100,000 | Yes |
| PollForActivityTask throttle burst limit in transaction per second | us-west-1: 2,000 ap-northeast-1: 2,000 ap-southeast-1: 2,000 ap-southeast-2: 2,000 sa-east-1: 2,000 Each of the other supported Regions: 1,000 | Yes |
| PollForActivityTask throttle limit in transaction per second | us-east-1: 100 us-west-1: 20 ap-northeast-1: 20 ap-southeast-1: 20 ap-southeast-2: 20 sa-east-1: 20 Each of the other supported Regions: 10 | Yes |
| PollForDecisionTask throttle burst limit in transaction per second | us-west-1: 2,000 ap-northeast-1: 2,000 ap-southeast-1: 2,000 ap-southeast-2: 2,000 sa-east-1: 2,000 Each of the other supported Regions: 1,000 | Yes |

| Name | Default | Adjustable |
|--|---|------------|
| PollForDecisionTask throttle limit in transaction per second | us-east-1: 142 us-west-1: 24 ap-northeast-1: 24 ap-southeast-1: 24 ap-southeast-2: 24 sa-east-1: 24 Each of the other supported Regions: 12 | Yes |
| Pollers per task list | Each supported Region: 1,000 | No |
| RecordActivityTaskHeartbeat throttle burst limit in transaction per second | us-west-1: 2,000 ap-northeast-1: 2,000 ap-southeast-1: 2,000 ap-southeast-2: 2,000 sa-east-1: 2,000 Each of the other supported Regions: 1,000 | Yes |
| RecordActivityTaskHeartbeat throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |
| RegisterActivityType throttle burst limit in transaction per second | us-west-1: 200 ap-northeast-1: 200 ap-southeast-1: 200 ap-southeast-2: 200 sa-east-1: 200 Each of the other supported Regions: 100 | Yes |

| Name | Default | Adjustable |
|---|---|------------|
| RegisterActivityType throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |
| RegisterDomain throttle burst limit in transaction per second | us-west-1: 100 ap-northeast-1: 100 ap-southeast-1: 100 ap-southeast-2: 100 sa-east-1: 100 Each of the other supported Regions: 50 | Yes |
| RegisterDomain throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |
| RegisterWorkflowType throttle burst limit in transaction per second | us-west-1: 200 ap-northeast-1: 200 ap-southeast-1: 200 ap-southeast-2: 200 sa-east-1: 200 Each of the other supported Regions: 100 | Yes |

| Name | Default | Adjustable |
|---|---|------------|
| RegisterWorkflowType throttle limit in transaction per second | us-west-1: 2 ap-northeast-1: 2 ap-southeast-1: 2 ap-southeast-2: 2 sa-east-1: 2 Each of the other supported Regions: 1 | Yes |
| Registered domains | Each supported Region: 100 | Yes |
| Request size | Each supported Region: 1 Megabytes | No |
| RequestCancelExternalWorkflowExecution throttle burst limit in transaction per second | us-west-1: 200 ap-northeast-1: 200 ap-southeast-1: 200 ap-southeast-2: 200 sa-east-1: 200 Each of the other supported Regions: 100 | Yes |
| RequestCancelExternalWorkflowExecution throttle limit in transaction per second | us-west-1: 20 ap-northeast-1: 20 ap-southeast-1: 20 ap-southeast-2: 20 sa-east-1: 20 Each of the other supported Regions: 10 | Yes |
| RequestCancelWorkflowExecution throttle burst limit in transaction per second | us-west-1: 2,000 ap-northeast-1: 2,000 ap-southeast-1: 2,000 ap-southeast-2: 2,000 sa-east-1: 2,000 Each of the other supported Regions: 1,000 | Yes |

| Name | Default | Adjustable |
|---|---|------------|
| RequestCancelWorkflowExecution throttle limit in transaction per second | us-west-1: 10 ap-northeast-1: 10 ap-southeast-1: 10 ap-southeast-2: 10 sa-east-1: 10 Each of the other supported Regions: 5 | Yes |
| RespondActivityTaskCanceled throttle burst limit in transaction per second | us-west-1: 2,000 ap-northeast-1: 2,000 ap-southeast-1: 2,000 ap-southeast-2: 2,000 sa-east-1: 2,000 Each of the other supported Regions: 1,000 | Yes |
| RespondActivityTaskCanceled throttle limit in transaction per second | us-east-1: 100 us-west-1: 20 ap-northeast-1: 20 ap-southeast-1: 20 ap-southeast-2: 20 sa-east-1: 20 Each of the other supported Regions: 10 | Yes |
| RespondActivityTaskCompleted throttle burst limit in transaction per second | us-west-1: 2,000 ap-northeast-1: 2,000 ap-southeast-1: 2,000 ap-southeast-2: 2,000 sa-east-1: 2,000 Each of the other supported Regions: 1,000 | Yes |

| Name | Default | Adjustable |
|---|---|------------|
| RespondActivityTaskCompleted throttle limit in transaction per second | us-east-1: 100 us-west-1: 20 ap-northeast-1: 20 ap-southeast-1: 20 ap-southeast-2: 20 sa-east-1: 20 Each of the other supported Regions: 10 | Yes |
| RespondActivityTaskFailed throttle burst limit in transaction per second | Each supported Region: 1,000 | Yes |
| RespondActivityTaskFailed throttle limit in transaction per second | Each supported Region: 10 | Yes |
| RespondDecisionTaskCompleted throttle burst limit in transaction per second | us-west-1: 2,000 ap-northeast-1: 2,000 ap-southeast-1: 2,000 ap-southeast-2: 2,000 sa-east-1: 2,000 Each of the other supported Regions: 1,000 | Yes |
| RespondDecisionTaskCompleted throttle limit in transaction per second | us-east-1: 142 us-west-1: 24 ap-northeast-1: 24 ap-southeast-1: 24 ap-southeast-2: 24 sa-east-1: 24 Each of the other supported Regions: 12 | Yes |
| SWF task in queue in year | Each supported Region: 1 | No |

| Name | Default | Adjustable |
|--|---|------------|
| ScheduleActivityTask throttle burst limit in transaction per second | us-east-1: 500 us-west-1: 200 ap-northeast-1: 200 ap-southeast-1: 200 ap-southeast-2: 200 sa-east-1: 200 Each of the other supported Regions: 100 | Yes |
| ScheduleActivityTask throttle limit in transaction per second | us-east-1: 100 us-west-1: 20 ap-northeast-1: 20 ap-southeast-1: 20 ap-southeast-2: 20 sa-east-1: 20 Each of the other supported Regions: 10 | Yes |
| SignalExternalWorkflowExecution throttle burst limit in transaction per second | us-east-1: 500 us-west-1: 200 ap-northeast-1: 200 ap-southeast-1: 200 ap-southeast-2: 200 sa-east-1: 200 Each of the other supported Regions: 100 | Yes |
| SignalExternalWorkflowExecution throttle limit in transaction per second | us-west-1: 20 ap-northeast-1: 20 ap-southeast-1: 20 ap-southeast-2: 20 sa-east-1: 20 Each of the other supported Regions: 10 | Yes |

| Name | Default | Adjustable |
|--|---|------------|
| SignalWorkflowExecution throttle burst limit in transaction per second | us-west-1: 2,000 ap-northeast-1: 2,000 ap-southeast-1: 2,000 ap-southeast-2: 2,000 sa-east-1: 2,000 Each of the other supported Regions: 1,000 | Yes |
| SignalWorkflowExecution throttle limit in transaction per second | us-west-1: 10 ap-northeast-1: 10 ap-southeast-1: 10 ap-southeast-2: 10 sa-east-1: 10 Each of the other supported Regions: 5 | Yes |
| StartChildWorkflowExecution throttle burst limit in transaction per second | us-east-1: 500 us-west-1: 200 ap-northeast-1: 200 ap-southeast-1: 200 ap-southeast-2: 200 sa-east-1: 200 Each of the other supported Regions: 100 | Yes |
| StartChildWorkflowExecution throttle limit in transaction per second | us-west-1: 4 ap-northeast-1: 4 ap-southeast-1: 4 ap-southeast-2: 4 sa-east-1: 4 Each of the other supported Regions: 2 | Yes |

| Name | Default | Adjustable |
|---|---|------------|
| StartTimer throttle burst limit in transaction per second | us-east-1: 1,000 us-west-1: 1,000 ap-northeast-1: 1,000 ap-southeast-1: 1,000 ap-southeast-2: 1,000 sa-east-1: 1,000 Each of the other supported Regions: 500 | Yes |
| StartTimer throttle limit in transaction per second | us-east-1: 142 us-west-1: 50 ap-northeast-1: 50 ap-southeast-1: 50 ap-southeast-2: 50 sa-east-1: 50 Each of the other supported Regions: 25 | Yes |
| StartWorkflowExecution throttle burst limit in transaction per second | us-west-1: 2,000 ap-northeast-1: 2,000 ap-southeast-1: 2,000 ap-southeast-2: 2,000 sa-east-1: 2,000 Each of the other supported Regions: 1,000 | Yes |
| StartWorkflowExecution throttle limit in transaction per second | us-east-1: 25 us-west-1: 4 ap-northeast-1: 4 ap-southeast-1: 4 ap-southeast-2: 4 sa-east-1: 4 Each of the other supported Regions: 2 | Yes |
| Task execution time in year | Each supported Region: 1 | No |

| Name | Default | Adjustable |
|---|---|------------|
| TerminateWorkflowExecution throttle burst limit in transaction per second | us-west-1: 2,000 ap-northeast-1: 2,000 ap-southeast-1: 2,000 ap-southeast-2: 2,000 sa-east-1: 2,000 Each of the other supported Regions: 1,000 | Yes |
| TerminateWorkflowExecution throttle limit in transaction per second | us-west-1: 20 ap-northeast-1: 20 ap-southeast-1: 20 ap-southeast-2: 20 sa-east-1: 20 Each of the other supported Regions: 10 | Yes |
| Workflow execution idle time limit in years | Each supported Region: 1 | Yes |
| Workflow execution time in years | Each supported Region: 1 | No |
| Workflow retention time in days | Each supported Region: 90 | Yes |

For more information, see [Amazon SWF Quotas](#) in the *Amazon Simple Workflow Service Developer Guide*.

Amazon SimpleDB endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|-----------|-----------------------------|----------------|--|
| US East (N. Virginia) | us-east-1 | sdb.amazonaws.com | HTTP and HTTPS | |
| US West (N. California) | us-west-1 | sdb.us-west-1.amazonaws.com | HTTP and HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|----------------------------------|----------------|--|
| US West (Oregon) | us-west-2 | sdb.us-west-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | sdb.ap-southeast-1.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | sdb.ap-southeast-2.amazonaws.com | HTTP and HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | sdb.ap-northeast-1.amazonaws.com | HTTP and HTTPS | |
| Europe (Ireland) | eu-west-1 | sdb.eu-west-1.amazonaws.com | HTTP and HTTPS | |
| South America (São Paulo) | sa-east-1 | sdb.sa-east-1.amazonaws.com | HTTP and HTTPS | |

Service quotas

| Resource | Default |
|----------|---------|
| Domains | 250 |

For more information, see [Amazon SimpleDB Quotas](#) in the *Amazon SimpleDB Developer Guide*.

AWS Single Sign-On endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

AWS SSO

| Region Name | Region | Endpoint | Protocol | |
|----------------|-----------|-----------------------------|----------|--|
| US East (Ohio) | us-east-2 | sso.us-east-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|--|-----------------|--|
| US East (N. Virginia) | us-east-1 | sso.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | sso.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | sso.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | sso.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | sso.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | sso.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | sso.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | sso.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | sso.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | sso.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | sso.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | sso.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | sso.eu-north-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | sso.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | sso.us-gov-east-1.amazonaws.com sso.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | sso.us-gov-west-1.amazonaws.com sso.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Identity Store

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------|--|
| US East (Ohio) | us-east-2 | identitystore.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | identitystore.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | identitystore.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | identitystore.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | identitystore.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | identitystore.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | identitystore.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | identitystore.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | identitystore.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | identitystore.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | identitystore.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | identitystore.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | identitystore.eu-north-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | identitystore.us-gov-east-1.amazonaws.com | HTTPS | |
| | | identitystore.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | identitystore.us-gov-west-1.amazonaws.com | HTTPS | |
| | | identitystore.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|------------------------------------|------------|
| File size of service provider SAML certificates (in PEM format) | Each supported Region: 2 Kilobytes | No |
| Number of groups supported in AWS SSO | Each supported Region: 10,000 | No |
| Number of permission sets allowed in AWS SSO | Each supported Region: 500 | Yes |
| Number of permission sets allowed per AWS account | Each supported Region: 50 | Yes |
| Number of unique directory groups that can be assigned | Each supported Region: 2,500 | Yes |
| Number of unique groups that can be used to evaluate the permissions for a user | Each supported Region: 500 | No |
| Number of users supported in AWS SSO | Each supported Region: 50,000 | No |
| Total number of AWS accounts or applications that can be configured | Each supported Region: 500 | Yes |

For more information, see [AWS Single Sign-On quotas](#) in the *AWS Single Sign-On User Guide*.

AWS Snow Family endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Snow Family devices are available in the following AWS Regions.

| Region Name | Region | Endpoint | Protocol |
|-------------------------|-----------|---|----------|
| US East (Ohio) | us-east-2 | snowball.us-east-2.amazonaws.com snowball-fips.us-east-2.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | snowball.us-east-1.amazonaws.com snowball-fips.us-east-1.amazonaws.com | HTTPS |
| US West (N. California) | us-west-1 | snowball.us-west-1.amazonaws.com snowball-fips.us-west-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|-----------------|
| US West (Oregon) | us-west-2 | snowball.us-west-2.amazonaws.com snowball-fips.us-west-2.amazonaws.com | HTTPS |
| Africa (Cape Town) | af-south-1 | snowball.af-south-1.amazonaws.com | |
| Asia Pacific (Hong Kong) | ap-east-1 | snowball.ap-east-1.amazonaws.com | |
| Asia Pacific (Mumbai) | ap-south-1 | snowball.ap-south-1.amazonaws.com snowball-fips.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Osaka) | ap-northeast-3 | snowball.ap-northeast-3.amazonaws.com snowball-fips.ap-northeast-3.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | snowball.ap-northeast-2.amazonaws.com snowball-fips.ap-northeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Singapore) | ap-southeast-1 | snowball.ap-southeast-1.amazonaws.com snowball-fips.ap-southeast-1.amazonaws.com | HTTPS |
| Asia Pacific (Sydney) | ap-southeast-2 | snowball.ap-southeast-2.amazonaws.com snowball-fips.ap-southeast-2.amazonaws.com | HTTPS |
| Asia Pacific (Tokyo) | ap-northeast-1 | snowball.ap-northeast-1.amazonaws.com snowball-fips.ap-northeast-1.amazonaws.com | HTTPS |
| Canada (Central) | ca-central-1 | snowball.ca-central-1.amazonaws.com snowball-fips.ca-central-1.amazonaws.com | HTTPS |
| Europe (Frankfurt) | eu-central-1 | snowball.eu-central-1.amazonaws.com snowball-fips.eu-central-1.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | snowball.eu-west-1.amazonaws.com snowball-fips.eu-west-1.amazonaws.com | HTTPS |
| Europe (London) | eu-west-2 | snowball.eu-west-2.amazonaws.com snowball-fips.eu-west-2.amazonaws.com | HTTPS |
| Europe (Milan) | eu-south-1 | snowball.eu-south-1.amazonaws.com | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------|--|
| Europe (Paris) | eu-west-3 | snowball.eu-west-3.amazonaws.com snowball-fips.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | snowball.eu-north-1.amazonaws.com | | |
| South America (São Paulo) | sa-east-1 | snowball.sa-east-1.amazonaws.com snowball-fips.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | snowball.us-gov-east-1.amazonaws.com snowball-fips.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | snowball.us-gov-west-1.amazonaws.com snowball-fips.us-gov-west-1.amazonaws.com | HTTPS | |

AWS Snowcone is available only in the following AWS Regions:

- US East (N. Virginia)
- US East (Ohio)
- US West (N. California)
- US West (Oregon)
- Canada (Central)
- South America (São Paulo)
- Europe (Ireland)
- Europe (Frankfurt)
- Europe (London)
- Asia Pacific (Mumbai)
- Asia Pacific (Sydney)
- Asia Pacific (Singapore)
- Asia Pacific (Tokyo)

Service quotas

| Name | Default | Adjustable |
|-----------------------|--------------------------|------------|
| Snowball Edge devices | Each supported Region: 1 | Yes |

AWS Step Functions endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services

offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------------------------------|--|
| US East (Ohio) | us-east-2 | states.us-east-2.amazonaws.com sync-states-fips.us-east-2.amazonaws.com states-fips.us-east-2.amazonaws.com sync-states.us-east-2.amazonaws.com | HTTPS HTTPS HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | states.us-east-1.amazonaws.com sync-states-fips.us-east-1.amazonaws.com states-fips.us-east-1.amazonaws.com sync-states.us-east-1.amazonaws.com | HTTPS HTTPS HTTPS HTTPS | |
| US West (N. California) | us-west-1 | states.us-west-1.amazonaws.com sync-states-fips.us-west-1.amazonaws.com states-fips.us-west-1.amazonaws.com sync-states.us-west-1.amazonaws.com | HTTPS HTTPS HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | states.us-west-2.amazonaws.com sync-states-fips.us-west-2.amazonaws.com states-fips.us-west-2.amazonaws.com sync-states.us-west-2.amazonaws.com | HTTPS HTTPS HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | states.af-south-1.amazonaws.com sync-states.af-south-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | states.ap-east-1.amazonaws.com sync-states.ap-east-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | states.ap-southeast-3.amazonaws.com sync-states.ap-southeast-3.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | states.ap-south-1.amazonaws.com sync-states.ap-south-1.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| Asia Pacific (Osaka) | ap-northeast-3 | states.ap-northeast-3.amazonaws.com sync-states.ap-northeast-3.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | states.ap-northeast-2.amazonaws.com sync-states.ap-northeast-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | states.ap-southeast-1.amazonaws.com sync-states.ap-southeast-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | states.ap-southeast-2.amazonaws.com sync-states.ap-southeast-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | states.ap-northeast-1.amazonaws.com sync-states.ap-northeast-1.amazonaws.com | HTTPS HTTPS | |
| Canada (Central) | ca-central-1 | states.ca-central-1.amazonaws.com sync-states.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | states.eu-central-1.amazonaws.com sync-states.eu-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Ireland) | eu-west-1 | states.eu-west-1.amazonaws.com sync-states.eu-west-1.amazonaws.com | HTTPS HTTPS | |
| Europe (London) | eu-west-2 | states.eu-west-2.amazonaws.com sync-states.eu-west-2.amazonaws.com | HTTPS HTTPS | |
| Europe (Milan) | eu-south-1 | states.eu-south-1.amazonaws.com sync-states.eu-south-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Paris) | eu-west-3 | states.eu-west-3.amazonaws.com sync-states.eu-west-3.amazonaws.com | HTTPS HTTPS | |
| Europe (Stockholm) | eu-north-1 | states.eu-north-1.amazonaws.com sync-states.eu-north-1.amazonaws.com | HTTPS HTTPS | |
| Middle East (Bahrain) | me-south-1 | states.me-south-1.amazonaws.com sync-states.me-south-1.amazonaws.com | HTTPS HTTPS | |
| South America (São Paulo) | sa-east-1 | states.sa-east-1.amazonaws.com sync-states.sa-east-1.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|--|----------|--|
| AWS GovCloud (US-East) | us-gov-east-1 | states.us-gov-east-1.amazonaws.com | HTTPS | |
| | | sync-states-fips.us-gov-east-1.amazonaws.com | HTTPS | |
| | | states-fips.us-gov-east-1.amazonaws.com | HTTPS | |
| | | sync-states.us-gov-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | states.us-gov-west-1.amazonaws.com | HTTPS | |
| | | sync-states.us-gov-west-1.amazonaws.com | HTTPS | |
| | | states.us-gov-west-1.amazonaws.com | HTTPS | |
| | | sync-states.us-gov-west-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|--|------------|
| Activity pollers per ARN | Each supported Region: 1,000 | No |
| CreateActivity throttle token bucket size | Each supported Region: 100 | Yes |
| CreateActivity throttle token refill rate per second | Each supported Region: 1 | Yes |
| CreateStateMachine throttle token bucket size | Each supported Region: 100 | Yes |
| CreateStateMachine throttle token refill rate per second | Each supported Region: 1 | Yes |
| DeleteActivity throttle token bucket size | Each supported Region: 100 | Yes |
| DeleteActivity throttle token refill rate per second | Each supported Region: 1 | Yes |
| DeleteStateMachine throttle token bucket size | Each supported Region: 100 | Yes |
| DeleteStateMachine throttle token refill rate per second | Each supported Region: 1 | Yes |
| DescribeActivity throttle token bucket size | Each supported Region: 200 | Yes |
| DescribeActivity throttle token refill rate per second | Each supported Region: 1 | Yes |
| DescribeExecution throttle token bucket size | us-east-1: 300 us-west-2: 300 eu-west-1: 300 Each of the other supported Regions: 250 | Yes |
| DescribeExecution throttle token refill rate per second | us-east-1: 15 us-west-2: 15 | Yes |

| Name | Default | Adjustable |
|--|--|------------|
| | eu-west-1: 15 Each of the other supported Regions: 10 | |
| DescribeStateMachine throttle token bucket size | Each supported Region: 200 | Yes |
| DescribeStateMachine throttle token refill rate per second | Each supported Region: 20 | Yes |
| DescribeStateMachineForExecution throttle token bucket size | Each supported Region: 200 | Yes |
| DescribeStateMachineForExecution throttle token refill rate per second | Each supported Region: 1 | Yes |
| Events in execution history size | Each supported Region: 25,000 | No |
| Execution history retention time in days | Each supported Region: 90 | No |
| Execution idle time in years | Each supported Region: 1 | No |
| Execution time in years | Each supported Region: 1 | No |
| Executions displayed in Step Functions console | Each supported Region: 1,000 | No |
| GetActivityTask throttle token bucket size | us-east-1: 3,000 us-west-2: 3,000 eu-west-1: 3,000 Each of the other supported Regions: 1,500 | Yes |
| GetActivityTask throttle token refill rate per second | us-east-1: 500 us-west-2: 500 eu-west-1: 500 Each of the other supported Regions: 300 | Yes |
| GetExecutionHistory throttle token bucket size | Each supported Region: 400 | Yes |
| GetExecutionHistory throttle token refill rate per second | Each supported Region: 20 | Yes |
| Input or result data size in task state or execution | Each supported Region: 262,144 Bytes | No |
| ListActivities throttle token bucket size | Each supported Region: 100 | Yes |

| Name | Default | Adjustable |
|---|--|------------|
| ListActivities throttle token refill rate per second | us-east-1: 10 us-west-2: 10 eu-west-1: 10 Each of the other supported Regions: 5 | Yes |
| ListExecutions throttle token bucket size | us-east-1: 200 us-west-2: 200 eu-west-1: 200 Each of the other supported Regions: 100 | Yes |
| ListExecutions throttle token refill rate per second | us-east-1: 5 us-west-2: 5 eu-west-1: 5 Each of the other supported Regions: 2 | Yes |
| ListStateMachines throttle token bucket size | Each supported Region: 100 | Yes |
| ListStateMachines throttle token refill rate per second | Each supported Region: 5 | Yes |
| ListTagsForResource throttle token bucket size | Each supported Region: 100 | Yes |
| ListTagsForResource throttle token refill rate per second | Each supported Region: 1 | Yes |
| Open executions | Each supported Region: 1,000,000 | Yes |
| Registered activities | Each supported Region: 10,000 | Yes |
| Registered state machines | Each supported Region: 10,000 | Yes |
| Resource name length | Each supported Region: 80 | No |
| SendTaskFailure throttle token bucket size | us-east-1: 3,000 us-west-2: 3,000 eu-west-1: 3,000 Each of the other supported Regions: 1,500 | Yes |

| Name | Default | Adjustable |
|---|--|------------|
| SendTaskFailure throttle token refill rate per second | us-east-1: 500 us-west-2: 500 eu-west-1: 500 Each of the other supported Regions: 300 | Yes |
| SendTaskHeartbeat throttle token bucket size | us-east-1: 3,000 us-west-2: 3,000 eu-west-1: 3,000 Each of the other supported Regions: 1,500 | Yes |
| SendTaskHeartbeat throttle token refill rate per second | us-east-1: 500 us-west-2: 500 eu-west-1: 500 Each of the other supported Regions: 300 | Yes |
| SendTaskSuccess throttle token bucket size | us-east-1: 3,000 us-west-2: 3,000 eu-west-1: 3,000 Each of the other supported Regions: 1,500 | Yes |
| SendTaskSuccess throttle token refill rate per second | us-east-1: 500 us-west-2: 500 eu-west-1: 500 Each of the other supported Regions: 300 | Yes |
| Size per API request | Each supported Region: 1 Megabytes | No |
| StartExecution throttle token bucket size | us-east-1: 1,300 us-west-2: 1,300 eu-west-1: 1,300 Each of the other supported Regions: 800 | Yes |

| Name | Default | Adjustable |
|--|--|------------|
| StartExecution throttle token refill rate per second | us-east-1: 300 us-west-2: 300 eu-west-1: 300 Each of the other supported Regions: 150 | Yes |
| StateTransition throttle token bucket size | us-east-1: 5,000 us-west-2: 5,000 eu-west-1: 5,000 Each of the other supported Regions: 800 | Yes |
| StateTransition throttle token refill rate per second | us-east-1: 1,500 us-west-2: 1,500 eu-west-1: 1,500 Each of the other supported Regions: 500 | Yes |
| Step Functions task in queue in year | Each supported Region: 1 | No |
| StopExecution throttle token bucket size | us-east-1: 1,000 us-west-2: 1,000 eu-west-1: 1,000 Each of the other supported Regions: 500 | Yes |
| StopExecution throttle token refill rate per second | us-east-1: 200 us-west-2: 200 eu-west-1: 200 Each of the other supported Regions: 25 | Yes |
| TagResource throttle token bucket size | Each supported Region: 200 | Yes |
| TagResource throttle token refill rate per second | Each supported Region: 1 | Yes |
| Task execution time in year | Each supported Region: 1 | No |
| UntagResource throttle token bucket size | Each supported Region: 200 | Yes |
| UntagResource throttle token refill rate per second | Each supported Region: 1 | Yes |
| UpdateStateMachine throttle token bucket size | Each supported Region: 100 | Yes |
| UpdateStateMachine throttle token refill rate per second | Each supported Region: 1 | No |

For more information, see [Quotas](#) in the *AWS Step Functions Developer Guide*.

AWS Storage Gateway endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Storage Gateway

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------|--|
| US East (Ohio) | us-east-2 | storagegateway.us-east-2.amazonaws.com | HTTPS | |
| | | storagegateway-fips.us-east-2.amazonaws.com | HTTPS | |
| | | storagegateway-fips.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | storagegateway.us-east-1.amazonaws.com | HTTPS | |
| | | storagegateway-fips.us-east-1.amazonaws.com | HTTPS | |
| | | storagegateway-fips.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | storagegateway.us-west-1.amazonaws.com | HTTPS | |
| | | storagegateway-fips.us-west-1.amazonaws.com | HTTPS | |
| | | storagegateway-fips.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | storagegateway.us-west-2.amazonaws.com | HTTPS | |
| | | storagegateway-fips.us-west-2.amazonaws.com | HTTPS | |
| | | storagegateway-fips.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | storagegateway.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | storagegateway.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | storagegateway.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | storagegateway.ap-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-------------------------|--|
| Asia Pacific (Osaka) | ap-northeast-3 | storagegateway.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | storagegateway.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | storagegateway.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | storagegateway.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | storagegateway.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | storagegateway.ca-central-1.amazonaws.com storagegateway-fips.ca-central-1.amazonaws.com storagegateway-fips.ca-central-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | storagegateway.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | storagegateway.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | storagegateway.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | storagegateway.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | storagegateway.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | storagegateway.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | storagegateway.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | storagegateway.sa-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|--|-------------------------|--|
| AWS GovCloud (US-East) | us-gov-east-1 | storagegateway.us-gov-east-1.amazonaws.com storagegateway-fips.us-gov-east-1.amazonaws.com storagegateway-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | storagegateway.us-gov-west-1.amazonaws.com storagegateway-fips.us-gov-west-1.amazonaws.com storagegateway-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS HTTPS | |

For AWS Regions that the hardware appliance is supported in, see [Storage Gateway hardware appliance regions \(p. 690\)](#).

Storage Gateway hardware appliance regions

The Storage Gateway hardware appliance is available for shipping worldwide where it is legally allowed and permitted for exporting by the US government.

Storage Gateway hardware appliance is supported in the following AWS Regions.

- US East (Ohio)
- US East (N. Virginia)
- US West (N. California)
- US West (Oregon)
- Asia Pacific (Mumbai)
- Asia Pacific (Seoul)
- Asia Pacific (Singapore)
- Asia Pacific (Sydney)
- Asia Pacific (Tokyo)
- Canada (Central)
- Europe (Frankfurt)
- Europe (Ireland)
- Europe (London)
- Europe (Paris)
- Europe (Stockholm)
- South America (São Paulo)

Service quotas

| Name | Default | Adjustable |
|--|---------------------------|------------|
| Cached volume gateway Cache Maximum in TiB | Each supported Region: 16 | No |

| Name | Default | Adjustable |
|--|------------------------------------|------------|
| Cached volume gateway Cache Minimum in GiB | Each supported Region: 150 | No |
| Cached volume gateway Upload Buffer Maximum in TiB | Each supported Region: 2 | No |
| Cached volume gateway Upload Buffer Minimum in GiB | Each supported Region: 150 | No |
| Cached volume size in TiB | Each supported Region: 32 | No |
| Cached volumes per gateway | Each supported Region: 32 | No |
| File gateway Cache Maximum in TiB | Each supported Region: 16 | No |
| File gateway Cache Minimum in GiB | Each supported Region: 150 | No |
| File shares per S3 bucket | Each supported Region: 1 | No |
| File shares per gateway | Each supported Region: 10 | No |
| File size | Each supported Region: 5 Terabytes | No |
| Max size of a virtual tape in TiB | Each supported Region: 2.5 | No |
| Max virtual tapes in a VTL | Each supported Region: 1,500 | No |
| Minimum size of a virtual tape in GiB | Each supported Region: 100 | No |
| Path length | Each supported Region: 1,024 Bytes | No |
| Size of all cached volumes per gateway in TiB | Each supported Region: 1,024 | No |
| Size of all stored volumes per gateway in TiB | Each supported Region: 512 | No |
| Stored volume gateway Upload Buffer Maximum in TiB | Each supported Region: 2 | No |
| Stored volume gateway Upload Buffer Minimum in GiB | Each supported Region: 150 | No |
| Stored volume size in TiB | Each supported Region: 16 | No |
| Stored volumes per gateway | Each supported Region: 32 | No |
| Tape gateway Cache Maximum in TiB | Each supported Region: 16 | No |
| Tape gateway Cache Minimum in GiB | Each supported Region: 150 | No |
| Tape gateway Upload Buffer Maximum in TiB | Each supported Region: 2 | No |
| Tape gateway Upload Buffer Minimum in GiB | Each supported Region: 150 | No |
| Total size of tapes in a virtual tape library in PiB | Each supported Region: 1 | No |

For more information, see [Storage Gateway quotas](#) in the *AWS Storage Gateway User Guide*.

Amazon Sumerian endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---------------------------------------|----------|--|
| US East (Ohio) | us-east-2 | sumerian.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | sumerian.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | sumerian.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | sumerian.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | sumerian.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | sumerian.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | sumerian.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | sumerian.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | sumerian.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | sumerian.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | sumerian.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | sumerian.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | sumerian.eu-west-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|------------|-----------------------------------|----------|--|
| Europe (Paris) | eu-west-3 | sumerian.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | sumerian.eu-north-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | sumerian.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-------------------|--------------------------------------|------------|
| Model file size | Each supported Region: 50 Megabytes | No |
| Projects | Each supported Region: 1,000 | No |
| Scenes | Each supported Region: 10,000 | No |
| Script file size | Each supported Region: 1 Megabytes | No |
| Sound file size | Each supported Region: 10 Megabytes | No |
| Texture file size | Each supported Region: 20 Megabytes | No |
| ZIP file size | Each supported Region: 200 Megabytes | No |

AWS Support endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---------------------------------|----------|--|
| US East (Ohio) | us-east-2 | support.us-east-1.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | support.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | support.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | support.us-east-1.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | support.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | support.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | support.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | support.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | support.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | support.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | support.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | support.us-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | support.us-east-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | support.us-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|--|----------------|--|
| Europe (Frankfurt) | eu-central-1 | support.us-east-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | support.us-east-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | support.us-east-1.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | support.us-east-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | support.us-east-1.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | support.us-east-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | support.us-east-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | support.us-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | support.us-gov-west-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | support.us-gov-west-1.amazonaws.com support.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|----------------------------|------------|
| AWS Support API operations | Each supported Region: 5 | No |
| AWS Trusted Advisor API operations | Each supported Region: 100 | No |
| Number of AWS Support cases that you can create | Each supported Region: 10 | No |

For more information, see the [AWS Support User Guide](#).

AWS Systems Manager endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services

offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | ssm.us-east-2.amazonaws.com ssm-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | ssm.us-east-1.amazonaws.com ssm-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | ssm.us-west-1.amazonaws.com ssm-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | ssm.us-west-2.amazonaws.com ssm-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | ssm.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | ssm.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | ssm.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | ssm.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | ssm.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | ssm.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | ssm.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | ssm.ap-southeast-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------------|--|
| Asia Pacific (Tokyo) | ap-northeast-1 | ssm.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | ssm.ca-central-1.amazonaws.com ssm-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | ssm.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | ssm.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | ssm.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | ssm.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | ssm.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | ssm.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | ssm.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | ssm.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | ssm.us-gov-east-1.amazonaws.com ssm.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | ssm.us-gov-west-1.amazonaws.com ssm.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

AWS Systems Manager Distributor is available in all commercial Regions except the China (Beijing) Region and the China (Ningxia) Region. Distributor is not available in the AWS GovCloud (US-West) Endpoints.

In addition to the `ssm.*` endpoints, your managed instances must also allow HTTPS (port 443) outbound traffic to the following endpoints. For more information, see [Reference: ec2messages, ssmmessages, and Other API Calls](#) in the *AWS Systems Manager User Guide*.

- `ec2messages.*`
- `ssmmessages.*`

For information about AWS AppConfig endpoints and quotas, see [AWS AppConfig endpoints and quotas \(p. 32\)](#).

Service quotas

| Capability | Resource | Default |
|---------------------|--|--|
| Application Manager | Maximum number of applications in Application Manager | 100 When you add an application in Application Manager, Systems Manager automatically creates a resource group to organize all of the resources for that application. The maximum number of applications is based on the underlying quota for AWS Resource Groups. |
| Application Manager | Maximum number of AWS resources you can assign to an application | For applications based on AWS CloudFormation stacks: 200 For applications based on AWS Resource Groups: Unlimited |
| Automation | Concurrently running automations | 100 Each AWS account can run 100 automations simultaneously. This includes child automations (automations that are started by another automation), and rate control automations. If you attempt to run more automations than this, Systems Manager adds the additional automations to a queue and displays a status of Pending. |
| Automation | Automation queue | 1000 If you attempt to run more automations than the concurrent automation limit, subsequent automations are added to a queue. Each AWS account can queue 1,000 automations. When an automation completes (or reaches a terminal state), |

| Capability | Resource | Default |
|------------|--|---|
| | | the first automation in the queue is started. |
| Automation | Concurrently running rate control automations | 25 Each AWS account can run 25 rate control automations simultaneously. If you attempt to run more rate control automations than the concurrent rate control automation limit, Systems Manager adds the subsequent rate control automations to a queue and displays a status of Pending. |
| Automation | Rate control automation queue | 1000 If you attempt to run more automations than the concurrent rate control automation limit, subsequent automations are added to a queue. Each AWS account can queue 1,000 rate control automations. When an automation completes (or reaches a terminal state), the first automation in the queue is started. |
| Automation | Number of levels of nested automation | 5 A parent-level Automation runbook can start a child-level Automation runbook. This represents one level of nested automation. The child-level Automation runbook can start another Automation runbook, resulting in two levels of nested automation. This can continue up to a maximum of five (5) levels below the top-level parent Automation runbook. |
| Automation | Number of days an automation execution history is stored in the system | 30 |
| Automation | Additional automation executions that can be queued | 1,000 |

| Capability | Resource | Default |
|-------------|--|---|
| Automation | Maximum duration an automation execution can run when running in the context of a user | 12 hours If you expect an automation to run longer than 12 hours, then you must run the automation by using a service role (or assume role). |
| Automation | <code>executeScript</code> action run time | 10 minutes Each <code>executeScript</code> action can run up to a maximum duration of 10 minutes. |
| Automation | <code>executeScript</code> action maximum output | Up to 100KB. |
| Automation | <code>invokeLambdaFunction</code> action run time | 5 minutes Each <code>invokeLambdaFunction</code> action can run up to a maximum duration of five (5) minutes. |
| Automation | <code>invokeLambdaFunction</code> action maximum output | Up to 200KB. |
| Automation | Number of Automation runbook attachments | 5 Each runbook can have up to five (5) attachments. |
| Automation | Automation runbook attachment size | 256 MB Each attachment can be up to 256 MB. |
| Compliance | Maximum size of any single AWS:ComplianceItem object | 800 KB |
| Distributor | Maximum number of attachments in a Distributor package | 20 |
| Distributor | Maximum size per attachment in a Distributor package | 1 GB |
| Distributor | Maximum number of files in a Distributor package | 1000 |
| Distributor | Maximum number of Distributor packages per AWS account, per Region | 500 |
| Distributor | Maximum number of package versions per Distributor package | 25 |
| Distributor | Maximum package size in Distributor | 20 GB |

| Capability | Resource | Default |
|---------------|--|--|
| Distributor | Maximum package manifest size in Distributor | 64 KB |
| Explorer | Maximum number of resource data syncs (per AWS account per Region) | 5 |
| Fleet Manager | Maximum Remote Desktop session limit | 60 minutes |
| Fleet Manager | Maximum number of Remote Desktop sessions (per AWS account per Region) | 5 |
| Inventory | Maximum number of resource data syncs (per AWS account per Region) | 5 |
| Inventory | Inventory data collected per instance per call | 1 MB This maximum adequately supports most inventory collection scenarios. When this quota is reached, no new inventory data is collected for the instance. Inventory data previously collected is stored until the expiration. |
| Inventory | Inventory data collected per instance per day | 5 MB When this quota is reached, no new inventory data is collected for the instance. Inventory data previously collected is stored until the expiration. |
| Inventory | Custom inventory types | 20 You can add up to 20 custom inventory types. |
| Inventory | Custom inventory type size | 200 KB This is the maximum size of the type, not the inventory collected. |
| Inventory | Custom inventory type attributes | 50 This is the maximum number of attributes within the custom inventory type. |

| Capability | Resource | Default |
|---------------------|--|---|
| Inventory | Inventory data expiration | 30 days If you terminate an instance, inventory data for that instance is deleted immediately. For running instances, inventory data older than 30 days is deleted. If you need to store inventory data longer than 30 days, you can use AWS Config to record history or periodically query and upload the data to an Amazon S3 bucket. For more information, see, Recording Amazon EC2 managed instance inventory in the AWS Config Developer Guide . |
| Maintenance Windows | Maintenance windows per AWS account | 50 |
| Maintenance Windows | Tasks per maintenance window | 20 |
| Maintenance Windows | Targets per maintenance window | 100 |
| Maintenance Windows | Instance IDs per target | 50 |
| Maintenance Windows | Targets per task | 10 |
| Maintenance Windows | Concurrent executions of a single maintenance window | 1 |
| Maintenance Windows | Concurrent executions of maintenance windows | 5 |
| Maintenance Windows | Execution history retention | 30 days |

| Capability | Resource | Default |
|--|--|--|
| Managed Instances - Hybrid Environment | Total number of registered on-premises servers and virtual machines (VMs) in a hybrid environment | Standard instances: 1,000 (per account per Region) Advanced instances: Advanced instances are available on a pay-per-use basis. Advanced instances also enable you to connect to your hybrid machines by using AWS Systems Manager Session Manager. For more information about activating on-premises instances for use in your hybrid environment, see Create a Managed-Instance Activation in the AWS Systems Manager User Guide . For more information about enabling advanced instances, see Using the Advanced-Instances Tier . |
| OpsCenter | Total number of OpsItems allowed per AWS account per Region (including Open and Resolved OpsItems) | 500,000 |
| OpsCenter | Maximum number of OpsItems per AWS account per month | 10,000 |
| OpsCenter | Maximum operational data value size | 20 KB |
| OpsCenter | Maximum number of associated Automation runbooks per OpsItem | 10 |
| OpsCenter | Maximum number of Automation runbook executions stored in operational data under a single associated runbook | 10 |
| OpsCenter | Maximum number of related resources you can specify per OpsItem | 100 |
| OpsCenter | Maximum number of related OpsItems you can specify per OpsItem | 10 |
| OpsCenter | Maximum length of a deduplication string | 64 characters |
| OpsCenter | Duration before an OpsItem is automatically archived by the system (regardless of status) | 36 months |

| Capability | Resource | Default |
|-----------------|---|--|
| Parameter Store | Total number of parameters allowed (per AWS account and Region) | Standard parameters: 10,000 Advanced parameters: 100,000 For more information about advanced parameters, see About Systems Manager Advanced Parameters in the <i>AWS Systems Manager User Guide</i> . |
| Parameter Store | Max size for parameter value | Standard parameter: 4 KB Advanced parameter: 8 KB |
| Parameter Store | Max number of parameter policies per advanced parameter | 10 |
| Parameter Store | Max throughput (transactions per second) | Default throughput: 40 (Shared by the following API actions: <code>GetParameter</code> , <code>GetParameters</code> , <code>GetParametersByPath</code>) Higher throughput: 100 (<code>GetParametersByPath</code>) Higher throughput: 3000 (Shared by the following API actions: <code>GetParameter</code> and <code>GetParameters</code>) For more information about Parameter Store throughput, see Increasing Parameter Store Throughput in the <i>AWS Systems Manager User Guide</i> . |
| Parameter Store | Max history for a parameter | 100 past values |
| Patch Manager | Patch baselines per AWS account | 50 |
| Patch Manager | Patch groups per patch baseline | 25 |
| Patch Manager | Operation history retention | Most recent 150 operations |

| Capability | Resource | Default |
|-----------------|--|---|
| Run Command | Execution history retention | 30 days The history of each command is available for up to 30 days. In addition, you can store a copy of all log files in Amazon Simple Storage Service or have an audit trail of all API calls in AWS CloudTrail. |
| Session Manager | Maximum idle time before session termination | Default: 20 minutes Configurable to between 1 and 60 minutes. |
| SSM Documents | Total documents | 500 Each AWS account can create a maximum of 500 documents per Region. |
| SSM Documents | Document versions | 1000 A single SSM document can have a maximum of 1,000 versions. |
| SSM Documents | Privately shared Systems Manager document | 1000 A single Systems Manager document can be shared with a maximum of 1000 AWS accounts. |
| SSM Documents | Publicly shared Systems Manager document | 5 Each AWS account can publicly share a maximum of five documents. |
| State Manager | Concurrent State Manager associations | 2,000 Each AWS account Account can have 2,000 associations per Region at one time. |
| State Manager | State Manager association versions | 1,000 You can create a maximum of 1,000 versions of a State Manager association. |

Amazon Textract endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|----------|--|
| US East (Ohio) | us-east-2 | textract.us-east-2.amazonaws.com | HTTPS | |
| | | textract-fips.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | textract.us-east-1.amazonaws.com | HTTPS | |
| | | textract-fips.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | textract.us-west-1.amazonaws.com | HTTPS | |
| | | textract-fips.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | textract.us-west-2.amazonaws.com | HTTPS | |
| | | textract-fips.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | textract.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | textract.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | textract.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | textract.ap-southeast-2.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | textract.ca-central-1.amazonaws.com | HTTPS | |
| | | textract-fips.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | textract.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | textract.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | textract.eu-west-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|---|----------------|--|
| Europe (Paris) | eu-west-3 | textract.eu-west-3.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | textract.us-gov-east-1.amazonaws.com textract-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | textract.us-gov-west-1.amazonaws.com textract-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Resource | Default |
|---|--|
| Transactions per second per account for synchronous operations: <ul style="list-style-type: none"> • AnalyzeDocument • DetectDocumentText • AnalyzeExpense • AnalyzeID | For AnalyzeDocument: US East (N. Virginia) Region – 10 US West (Oregon) Region – 10 All other Regions that Amazon Textract supports – 1 For DetectDocumentText: US East (N. Virginia) Region – 10 US West (Oregon) Region - 10 All other Regions that Amazon Textract supports – 1 For AnalyzeExpense: US East (N.virginia) Region – 5 US West (Oregon) Region – 5 All other Regions that Amazon Textract supports – 1 For AnalyzeID: US East (N.virginia) Region – 5 US West (Oregon) Region – 5 All other Regions that Amazon Textract supports – 1 |
| Transactions per second per account for all start (asynchronous) operations: <ul style="list-style-type: none"> • StartDocumentAnalysis | For StartDocumentAnalysis Text: US East (N. Virginia) Region – 10 |

| Resource | Default |
|--|---|
| <ul style="list-style-type: none"> • StartDocumentTextDetection • StartExpenseAnalysis | US West (Oregon) Region – 10 All other Regions Amazon Textract supports – 2 For StartDocumentTextDetection: US East (N. Virginia) Region – 10 US West (Oregon) Region – 10 All other Regions that Amazon Textract supports – 1 For StartExpenseAnalysis: US East (N. Virginia) Region – 5 US West (Oregon) Region – 5 All other Regions Amazon Textract supports – 1 |
| Transactions per second per account for all get (asynchronous) operations: <ul style="list-style-type: none"> • GetDocumentAnalysis • GetDocumentTextDetection • GetExpenseAnalysis | For GetDocumentAnalysis: US East (N. Virginia) Region – 10 US West (Oregon) Region – 10 All other Regions that Amazon Textract supports – 5 For GetDocumentTextDetection: US East (N. Virginia) Region – 10 US West (Oregon) Region – 10 All other Regions that Amazon Textract supports – 5 For GetExpenseAnalysis: All Regions Amazon Textract supports – 5 |
| Maximum number of asynchronous jobs per account that can simultaneously exist | US East (N. Virginia) Region – 600 US West (Oregon) Region – 600 All other Regions that Amazon Textract supports – 100 |

For more information, see [Amazon Textract Quotas](#) in the *Amazon Textract Developer Guide*.

Amazon Timestream endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Use the following endpoints to acquire the endpoints for the write API.

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|--------------|---|----------------|--|
| US East (Ohio) | us-east-2 | ingest.timestream.us-east-2.amazonaws.com ingest.timestream-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | ingest.timestream.us-east-1.amazonaws.com ingest.timestream-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | ingest.timestream.us-west-2.amazonaws.com ingest.timestream-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | ingest.timestream.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | ingest.timestream.eu-west-1.amazonaws.com | HTTPS | |

Use the following endpoints to acquire the endpoints for the query API.

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|--------------|---|----------------|--|
| US East (Ohio) | us-east-2 | query.timestream.us-east-2.amazonaws.com query.timestream-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | query.timestream.us-east-1.amazonaws.com query.timestream-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | query.timestream.us-west-2.amazonaws.com query.timestream-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | query.timestream.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | query.timestream.eu-west-1.amazonaws.com | HTTPS | |

For more information, see [Using the API](#) in the *Amazon Timestream Developer Guide*.

Service quotas

| Name | Default | Adjustable |
|--|--------------------------------------|------------|
| Data size for query result | Each supported Region: 5 Gigabytes | No |
| Database name length | Each supported Region: 256 Bytes | No |
| Databases per account | Each supported Region: 500 | No |
| Dimension name dimension value pair size per series | Each supported Region: 2 Kilobytes | No |
| Dimension name length | Each supported Region: 60 Bytes | No |
| Dimensions per table | Each supported Region: 128 | No |
| Execution duration for queries in hours | Each supported Region: 1 | No |
| Future ingestion period in minutes | Each supported Region: 15 | No |
| Maximum count of active magnetic store partitions per database | Each supported Region: 250 | No |
| Maximum retention period for magnetic store in days | Each supported Region: 73,000 | No |
| Maximum retention period for memory store in hours | Each supported Region: 8,766 | No |
| Measure name length | Each supported Region: 256 Bytes | No |
| Measure value size per multi-measure record | Each supported Region: 2,048 Bytes | No |
| Measures per multi-measure record | Each supported Region: 256 | No |
| Measures per table | Each supported Region: 8,192 | No |
| Metadata size for query result | Each supported Region: 100 Kilobytes | No |
| Minimum retention period for magnetic store in days | Each supported Region: 1 | No |
| Minimum retention period for memory store in hours | Each supported Region: 1 | No |
| QueryString length in KiB | Each supported Region: 256 | No |
| Records per WriteRecords API request | Each supported Region: 100 | No |
| Scheduled queries per account | Each supported Region: 10,000 | No |

| Name | Default | Adjustable |
|--|----------------------------------|------------|
| Table name length | Each supported Region: 256 Bytes | No |
| Tables per account | Each supported Region: 50,000 | No |
| Throttle rate for CRUD APIs | Each supported Region: 1 | No |
| Unique measures across multi-measure records per table | Each supported Region: 1,024 | No |

For more information, see [Quotas](#) in the *Amazon Timestream Developer Guide*.

Amazon Transcribe endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

Amazon Transcribe

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|------------|---|----------------|--|
| US East (Ohio) | us-east-2 | transcribe.us-east-2.amazonaws.com fips.transcribe.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | transcribe.us-east-1.amazonaws.com fips.transcribe.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | transcribe.us-west-1.amazonaws.com fips.transcribe.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | transcribe.us-west-2.amazonaws.com fips.transcribe.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | transcribe.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | transcribe.ap-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|-----------------|--|
| Asia Pacific (Mumbai) | ap-south-1 | transcribe.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | transcribe.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | transcribe.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | transcribe.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | transcribe.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | transcribe.ca-central-1.amazonaws.com fips.transcribe.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | transcribe.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | transcribe.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | transcribe.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | transcribe.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | transcribe.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | transcribe.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | transcribe.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | transcribe.us-gov-east-1.amazonaws.com fips.transcribe.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | transcribe.us-gov-west-1.amazonaws.com fips.transcribe.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Amazon Transcribe Streaming

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------------|--|
| US East (Ohio) | us-east-2 | transcribestreaming.us-east-2.amazonaws.com transcribestreaming-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | transcribestreaming.us-east-1.amazonaws.com transcribestreaming-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | transcribestreaming.us-west-2.amazonaws.com transcribestreaming-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | transcribestreaming.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | transcribestreaming.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | transcribestreaming.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | transcribestreaming.ca-central-1.amazonaws.com transcribestreaming-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | transcribestreaming.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | transcribestreaming.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | transcribestreaming.eu-west-2.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | transcribestreaming.sa-east-1.amazonaws.com | HTTPS | |

Amazon Transcribe Medical

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------|--|
| US East (Ohio) | us-east-2 | transcribe-medical.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | transcribe-medical.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | transcribe-medical.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | transcribe-medical.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | transcribe-medical.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | transcribe-medical.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | transcribe-medical.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | transcribe-medical.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | transcribe-medical.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | transcribe-medical.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | transcribe-medical.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | transcribe-medical.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | transcribe-medical.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | transcribe-medical.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | transcribe-medical.eu-west-3.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|------------|---|----------|--|
| Middle East (Bahrain) | me-south-1 | transcribe-medical.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | transcribe-medical.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|---|------------|
| Job queue bandwidth ratio | Each supported Region: 0.9 | Yes |
| Maximum audio file length | Each supported Region: 14,400 Seconds | No |
| Maximum audio file length (Medical) | Each supported Region: 14,400 Seconds | No |
| Maximum audio file size | Each supported Region: 2 Gigabytes | No |
| Maximum audio file size (Medical) | Each supported Region: 2 Gigabytes | No |
| Maximum length of a custom vocabulary phrase | Each supported Region: 256 | No |
| Maximum number of vocabulary filters | Each supported Region: 100 | No |
| Maximum size of a custom vocabulary | Each supported Region: 50 Kilobytes | No |
| Maximum size of a vocabulary filter | Each supported Region: 50 Kilobytes | No |
| Minimum audio file duration | Each supported Region: 500 Milliseconds | No |
| Minimum audio file duration (Medical) | Each supported Region: 500 Milliseconds | No |
| Number of StartMedicalStreamTranscription Websocket requests | Each supported Region: 25 | Yes |
| Number of StartStreamTranscription Websocket requests | Each supported Region: 25 | Yes |
| Number of channels for channel identification | Each supported Region: 2 | Yes |
| Number of channels for channel identification (Medical) | Each supported Region: 2 | No |
| Number of concurrent HTTP/2 streams for streaming transcription. | Each supported Region: 25 | Yes |

| Name | Default | Adjustable |
|--|----------------------------|------------|
| Number of concurrent batch transcription jobs | Each supported Region: 250 | Yes |
| Number of concurrent medical batch transcription jobs | Each supported Region: 250 | Yes |
| Number of concurrently training custom language models | Each supported Region: 3 | Yes |
| Number of days that job records are retained | Each supported Region: 90 | No |
| Number of days that job records are retained (Medical) | Each supported Region: 90 | No |
| Number of pending medical vocabularies | Each supported Region: 10 | Yes |
| Number of pending vocabularies | Each supported Region: 10 | Yes |
| Total number of custom language models per account | Each supported Region: 10 | Yes |
| Total number of medical vocabularies per account | Each supported Region: 100 | Yes |
| Total number of vocabularies per account | Each supported Region: 100 | Yes |
| Transactions per second, CreateVocabulary operation | Each supported Region: 10 | Yes |
| Transactions per second, DeleteMedicalTranscriptionJob operation | Each supported Region: 5 | Yes |
| Transactions per second, DeleteMedicalVocabulary operation | Each supported Region: 5 | Yes |
| Transactions per second, DeleteTranscriptionJob operation | Each supported Region: 5 | Yes |
| Transactions per second, DeleteVocabulary operation | Each supported Region: 5 | Yes |
| Transactions per second, GetMedicalTranscriptionJob operation | Each supported Region: 30 | Yes |
| Transactions per second, GetMedicalVocabulary operation | Each supported Region: 20 | Yes |
| Transactions per second, GetTranscriptionJob operation | Each supported Region: 30 | Yes |
| Transactions per second, GetVocabulary operation | Each supported Region: 20 | Yes |
| Transactions per second, ListMedicalTranscriptionJobs operation | Each supported Region: 5 | Yes |
| Transactions per second, ListMedicalVocabularies operation | Each supported Region: 5 | Yes |
| Transactions per second, ListTranscriptionJobs operation | Each supported Region: 5 | Yes |
| Transactions per second, ListVocabularies operation | Each supported Region: 5 | Yes |
| Transactions per second, StartMedicalStreamTranscription operation | Each supported Region: 25 | Yes |
| Transactions per second, StartMedicalTranscriptionJob operation | Each supported Region: 25 | Yes |
| Transactions per second, StartStreamTranscription operation | Each supported Region: 25 | Yes |
| Transactions per second, StartTranscriptionJob operation | Each supported Region: 25 | Yes |
| Transactions per second, UpdateMedicalVocabulary operation | Each supported Region: 10 | Yes |

| Name | Default | Adjustable |
|---|---------------------------|------------|
| Transactions per second, UpdateVocabulary operation | Each supported Region: 10 | Yes |

For more information, see [Guidelines and quotas](#) in the *Amazon Transcribe Developer Guide*.

AWS Transfer Family endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|----------------|---|----------------|
| US East (Ohio) | us-east-2 | transfer.us-east-2.amazonaws.com transfer-fips.us-east-2.amazonaws.com | HTTPS HTTPS |
| US East (N. Virginia) | us-east-1 | transfer.us-east-1.amazonaws.com transfer-fips.us-east-1.amazonaws.com | HTTPS HTTPS |
| US West (N. California) | us-west-1 | transfer.us-west-1.amazonaws.com transfer-fips.us-west-1.amazonaws.com | HTTPS HTTPS |
| US West (Oregon) | us-west-2 | transfer.us-west-2.amazonaws.com transfer-fips.us-west-2.amazonaws.com | HTTPS HTTPS |
| Africa (Cape Town) | af-south-1 | transfer.af-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | transfer.ap-east-1.amazonaws.com | HTTPS |
| Asia Pacific (Mumbai) | ap-south-1 | transfer.ap-south-1.amazonaws.com | HTTPS |
| Asia Pacific (Osaka) | ap-northeast-3 | transfer.ap-northeast-3.amazonaws.com | HTTPS |
| Asia Pacific (Seoul) | ap-northeast-2 | transfer.ap-northeast-2.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|---|----------------|--|
| Asia Pacific (Singapore) | ap-southeast-1 | transfer.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | transfer.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | transfer.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | transfer.ca-central-1.amazonaws.com transfer-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | transfer.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | transfer.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | transfer.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | transfer.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | transfer.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | transfer.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | transfer.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | transfer.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | transfer.us-gov-east-1.amazonaws.com transfer-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | transfer.us-gov-west-1.amazonaws.com transfer-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|--------------------------------------|------------|
| Concurrent sessions per server | Each supported Region: 10,000 | No |
| File size | Each supported Region: 5 Terabytes | No |
| Idle connection timeout | Each supported Region: 1,800 Seconds | No |
| Maximum number of AD Groups for access | Each supported Region: 20 | Yes |
| Maximum number of new executions per workflow | Each supported Region: 100 | No |
| New executions refill rate per workflow per second | Each supported Region: 1 | No |
| Number of Service Managed users | Each supported Region: 10,000 | Yes |
| Number of authentication requests per user per second | Each supported Region: 2 | No |
| SSH keys per Service Managed user | Each supported Region: 50 | Yes |
| Servers per account | Each supported Region: 50 | Yes |
| VPC_ENDPOINT servers per account | Each supported Region: 10 | No |
| Workflows per account | Each supported Region: 10 | Yes |

Amazon Translate endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|-------------------------|-----------|---|----------------|
| US East (Ohio) | us-east-2 | translate.us-east-2.amazonaws.com translate-fips.us-east-2.amazonaws.com | HTTPS HTTPS |
| US East (N. Virginia) | us-east-1 | translate.us-east-1.amazonaws.com translate-fips.us-east-1.amazonaws.com | HTTPS HTTPS |
| US West (N. California) | us-west-1 | translate.us-west-1.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| US West (Oregon) | us-west-2 | translate.us-west-2.amazonaws.com translate-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | translate.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | translate.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | translate.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | translate.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | translate.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | translate.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | translate.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | translate.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | translate.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | translate.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | translate.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | translate.eu-north-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | translate.us-gov-west-1.amazonaws.com translate-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|-----------------------------------|----------------------------|------------|
| Concurrent batch translation jobs | Each supported Region: 10 | Yes |
| Custom terminology files | Each supported Region: 100 | Yes |

For more information, see [Guidelines and Quotas](#) in the *Amazon Translate Developer Guide*.

Amazon Virtual Private Cloud endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|----------------------------------|----------|--|
| US East (Ohio) | us-east-2 | ec2.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | ec2.us-east-1.amazonaws.com | HTTPS | |
| US West (N. California) | us-west-1 | ec2.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | ec2.us-west-2.amazonaws.com | HTTPS | |
| Africa (Cape Town) | af-south-1 | ec2.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | ec2.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | ec2.ap-southeast-3.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|----------------------------------|-----------------|--|
| Asia Pacific (Mumbai) | ap-south-1 | ec2.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | ec2.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | ec2.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | ec2.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | ec2.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | ec2.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | ec2.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | ec2.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | ec2.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | ec2.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | ec2.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | ec2.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | ec2.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | ec2.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | ec2.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | ec2.us-gov-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|------------------------|---------------|---------------------------------|----------|--|
| AWS GovCloud (US-West) | us-gov-west-1 | ec2.us-gov-west-1.amazonaws.com | HTTPS | |

If you specify the general endpoint (ec2.amazonaws.com), Amazon VPC directs your request to the us-east-1 endpoint.

Service quotas

| Name | Default | Adjustable |
|--|-------------------------------|------------|
| Active VPC peering connections per VPC | Each supported Region: 50 | Yes |
| Characters per VPC endpoint policy | Each supported Region: 20,480 | No |
| Egress-only internet gateways per Region | Each supported Region: 5 | Yes |
| Gateway VPC endpoints per Region | Each supported Region: 20 | Yes |
| IPv4 CIDR blocks per VPC | Each supported Region: 5 | Yes |
| IPv6 CIDR blocks per VPC | Each supported Region: 1 | No |
| Inbound or outbound rules per security group | Each supported Region: 60 | Yes |
| Interface VPC endpoints per VPC | Each supported Region: 50 | Yes |
| Internet gateways per Region | Each supported Region: 5 | Yes |
| NAT gateways per Availability Zone | Each supported Region: 5 | Yes |
| Network ACLs per VPC | Each supported Region: 200 | Yes |
| Network interfaces per Region | Each supported Region: 5,000 | Yes |
| Outstanding VPC peering connection requests | Each supported Region: 25 | Yes |
| Participant accounts per VPC | Each supported Region: 100 | Yes |
| Route tables per VPC | Each supported Region: 200 | Yes |
| Routes per route table | Each supported Region: 50 | Yes |
| Rules per network ACL | Each supported Region: 20 | Yes |
| Security groups per network interface | Each supported Region: 5 | Yes |
| Subnets per VPC | Each supported Region: 200 | Yes |
| Subnets that can be shared with an account | Each supported Region: 100 | Yes |
| VPC peering connection request expiry hours | Each supported Region: 168 | No |

| Name | Default | Adjustable |
|--------------------------------|---------------------------------|------------|
| VPC security groups per Region | Each supported Region: 2,500 | Yes |
| VPCs per Region | Each supported Region: 5 | Yes |

For more information, see the following:

- [Amazon VPC quotas](#)
- [AWS Transit Gateway quotas](#)
- [Transit Gateway Network Manager quotas](#)
- [Traffic Mirroring quotas](#)
- [VPC Reachability Analyzer quotas](#)
- [Network Access Analyzer quotas](#)
- [AWS Client VPN quotas](#)
- [Site-to-Site VPN quotas](#)

AWS WAF endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Note

This page provides information related the latest version of AWS WAF, released in November 2019. The names of the entities that you use to access AWS WAF, like endpoints and namespaces, all have the versioning information added, like v2 or v2, to distinguish from the prior version.

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-------------------------|-----------|---|----------------|--|
| US East (Ohio) | us-east-2 | wafv2.us-east-2.amazonaws.com wafv2-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | wafv2.us-east-1.amazonaws.com wafv2-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | wafv2.us-west-1.amazonaws.com wafv2-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | wafv2.us-west-2.amazonaws.com wafv2-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| Africa (Cape Town) | af-south-1 | wafv2.af-south-1.amazonaws.com wafv2-fips.af-south-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | wafv2.ap-east-1.amazonaws.com wafv2-fips.ap-east-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | wafv2.ap-south-1.amazonaws.com wafv2-fips.ap-south-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | wafv2.ap-northeast-3.amazonaws.com wafv2-fips.ap-northeast-3.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | wafv2.ap-northeast-2.amazonaws.com wafv2-fips.ap-northeast-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | wafv2.ap-southeast-1.amazonaws.com wafv2-fips.ap-southeast-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | wafv2.ap-southeast-2.amazonaws.com wafv2-fips.ap-southeast-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | wafv2.ap-northeast-1.amazonaws.com wafv2-fips.ap-northeast-1.amazonaws.com | HTTPS HTTPS | |
| Canada (Central) | ca-central-1 | wafv2.ca-central-1.amazonaws.com wafv2-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | wafv2.eu-central-1.amazonaws.com wafv2-fips.eu-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Ireland) | eu-west-1 | wafv2.eu-west-1.amazonaws.com wafv2-fips.eu-west-1.amazonaws.com | HTTPS HTTPS | |
| Europe (London) | eu-west-2 | wafv2.eu-west-2.amazonaws.com wafv2-fips.eu-west-2.amazonaws.com | HTTPS HTTPS | |
| Europe (Milan) | eu-south-1 | wafv2.eu-south-1.amazonaws.com wafv2-fips.eu-south-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Paris) | eu-west-3 | wafv2.eu-west-3.amazonaws.com wafv2-fips.eu-west-3.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| Europe (Stockholm) | eu-north-1 | wafv2.eu-north-1.amazonaws.com wafv2-fips.eu-north-1.amazonaws.com | HTTPS HTTPS | |
| Middle East (Bahrain) | me-south-1 | wafv2.me-south-1.amazonaws.com wafv2-fips.me-south-1.amazonaws.com | HTTPS HTTPS | |
| South America (São Paulo) | sa-east-1 | wafv2.sa-east-1.amazonaws.com wafv2-fips.sa-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | wafv2.us-gov-east-1.amazonaws.com wafv2-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | wafv2.us-gov-west-1.amazonaws.com wafv2-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|-------------------------------|------------|
| Maximum IP sets per account in WAF for regional | Each supported Region: 100 | No |
| Maximum number of IP addresses in an IP set in WAF for regional | Each supported Region: 10,000 | No |
| Maximum number of bytes in a string match (byte match) string in WAF for regional | Each supported Region: 200 | No |
| Maximum number of characters allowed in a regex pattern per account in WAF for regional | Each supported Region: 200 | No |
| Maximum number of log destination configs per web ACL in WAF for regional | Each supported Region: 1 | No |
| Maximum number of patterns in a regex pattern set per account in WAF for regional | Each supported Region: 10 | No |
| Maximum number of rate-based statements per web ACL in WAF for Cloudfront | Each supported Region: 10 | Yes |
| Maximum number of referenced statements per rule group or web ACL in WAF for regional | Each supported Region: 50 | No |
| Maximum number of web ACL capacity units in a rule group in WAF for regional | Each supported Region: 1,500 | Yes |
| Maximum number of web ACL capacity units in a web ACL in WAF for regional | Each supported Region: 1,500 | Yes |

| Name | Default | Adjustable |
|--|----------------------------|------------|
| Maximum regex pattern sets per account in WAF for regional | Each supported Region: 10 | No |
| Maximum rule groups per account in WAF for regional | Each supported Region: 100 | Yes |
| Maximum web ACLs per account in WAF for regional | Each supported Region: 100 | Yes |

For more information, see [AWS WAF quotas](#) in the *AWS WAF Developer Guide*.

AWS WAF Classic endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Note

This page provides information related to **AWS WAF Classic**. If you created AWS WAF resources, like rules and web ACLs, in AWS WAF prior to November 2019, and you have not migrated your web ACLs over yet, you must use AWS WAF Classic to access those resources. Otherwise, do not use this version.

For information related to the latest version of AWS WAF, see [AWS WAF endpoints and quotas \(p. 724\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|--------------------------|------------|---|-------------------------|
| US East (Ohio) | us-east-2 | waf.amazonaws.com | HTTPS |
| US East (N. Virginia) | us-east-1 | waf.amazonaws.com waf-fips.amazonaws.com waf-fips.amazonaws.com | HTTPS HTTPS HTTPS |
| US West (N. California) | us-west-1 | waf.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | waf.amazonaws.com | HTTPS |
| Africa (Cape Town) | af-south-1 | waf.amazonaws.com | HTTPS |
| Asia Pacific (Hong Kong) | ap-east-1 | waf.amazonaws.com | HTTPS |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|----------------|-------------------|----------|--|
| Asia Pacific (Mumbai) | ap-south-1 | waf.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | waf.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | waf.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | waf.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | waf.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | waf.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | waf.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | waf.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | waf.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | waf.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | waf.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | waf.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | waf.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | waf.amazonaws.com | HTTPS | |

AWS WAF Classic for Application Load Balancers and API Gateway APIs has the following endpoints:

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| US East (Ohio) | us-east-2 | waf-regional.us-east-2.amazonaws.com waf-regional-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |
| US East (N. Virginia) | us-east-1 | waf-regional.us-east-1.amazonaws.com waf-regional-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | waf-regional.us-west-1.amazonaws.com waf-regional-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | waf-regional.us-west-2.amazonaws.com waf-regional-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | waf-regional.af-south-1.amazonaws.com waf-regional-fips.af-south-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | waf-regional.ap-east-1.amazonaws.com waf-regional-fips.ap-east-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | waf-regional.ap-south-1.amazonaws.com waf-regional-fips.ap-south-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | waf-regional.ap-northeast-3.amazonaws.com waf-regional-fips.ap-northeast-3.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | waf-regional.ap-northeast-2.amazonaws.com waf-regional-fips.ap-northeast-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | waf-regional.ap-southeast-1.amazonaws.com waf-regional-fips.ap-southeast-1.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | waf-regional.ap-southeast-2.amazonaws.com waf-regional-fips.ap-southeast-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | waf-regional.ap-northeast-1.amazonaws.com waf-regional-fips.ap-northeast-1.amazonaws.com | HTTPS HTTPS | |
| Canada (Central) | ca-central-1 | waf-regional.ca-central-1.amazonaws.com waf-regional-fips.ca-central-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Frankfurt) | eu-central-1 | waf-regional.eu-central-1.amazonaws.com waf-regional-fips.eu-central-1.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| Europe (Ireland) | eu-west-1 | waf-regional.eu-west-1.amazonaws.com waf-regional-fips.eu-west-1.amazonaws.com | HTTPS HTTPS | |
| Europe (London) | eu-west-2 | waf-regional.eu-west-2.amazonaws.com waf-regional-fips.eu-west-2.amazonaws.com | HTTPS HTTPS | |
| Europe (Milan) | eu-south-1 | waf-regional.eu-south-1.amazonaws.com waf-regional-fips.eu-south-1.amazonaws.com | HTTPS HTTPS | |
| Europe (Paris) | eu-west-3 | waf-regional.eu-west-3.amazonaws.com waf-regional-fips.eu-west-3.amazonaws.com | HTTPS HTTPS | |
| Europe (Stockholm) | eu-north-1 | waf-regional.eu-north-1.amazonaws.com waf-regional-fips.eu-north-1.amazonaws.com | HTTPS HTTPS | |
| Middle East (Bahrain) | me-south-1 | waf-regional.me-south-1.amazonaws.com waf-regional-fips.me-south-1.amazonaws.com | HTTPS HTTPS | |
| South America (São Paulo) | sa-east-1 | waf-regional.sa-east-1.amazonaws.com waf-regional-fips.sa-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | waf-regional.us-gov-east-1.amazonaws.com waf-regional-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | waf-regional.us-gov-west-1.amazonaws.com waf-regional-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|--|---------------------------|------------|
| Conditions per rule | Each supported Region: 10 | No |
| Filters per SQL injection match condition | Each supported Region: 10 | No |
| Filters per cross-site scripting match condition | Each supported Region: 10 | No |
| Filters per size constraint condition | Each supported Region: 10 | No |
| Filters per string match condition | Each supported Region: 10 | No |
| GeoMatchSets | Each supported Region: 50 | No |
| HTTP header name length | Each supported Region: 40 | No |

| Name | Default | Adjustable |
|--|-------------------------------|------------|
| IP address ranges per IP set match condition | Each supported Region: 10,000 | No |
| IP addresses blocked per rate-based rule | Each supported Region: 10,000 | No |
| Locations per GeoMatchSet | Each supported Region: 50 | No |
| Logging destination configurations per web ACL | Each supported Region: 1 | No |
| Pattern sets per regex match condition | Each supported Region: 1 | No |
| Patterns per pattern set | Each supported Region: 10 | No |
| Rate of requests | Each supported Region: 10,000 | Yes |
| Rate-based rule rate | Each supported Region: 2,000 | No |
| Rate-based rules | Each supported Region: 5 | Yes |
| Regex pattern length | Each supported Region: 70 | No |
| Regex pattern sets | Each supported Region: 5 | No |
| Rules | Each supported Region: 100 | Yes |
| Rules per web ACL | Each supported Region: 10 | No |
| Search length | Each supported Region: 50 | No |
| Web ACLs | Each supported Region: 50 | Yes |

For more information, see [AWS WAF Classic quotas](#) in the *AWS WAF Developer Guide*.

AWS Well-Architected Tool endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|---|----------|--|
| US East (Ohio) | us-east-2 | wellarchitected.us-east-2.amazonaws.com | HTTPS | |
| US East (N. Virginia) | us-east-1 | wellarchitected.us-east-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|--|-----------------|--|
| US West (N. California) | us-west-1 | wellarchitected.us-west-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | wellarchitected.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | wellarchitected.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | wellarchitected.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | wellarchitected.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | wellarchitected.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | wellarchitected.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | wellarchitected.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | wellarchitected.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | wellarchitected.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | wellarchitected.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | wellarchitected.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | wellarchitected.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | wellarchitected.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | wellarchitected.me-south-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|-----------|---|----------|--|
| South America (São Paulo) | sa-east-1 | wellarchitected.sa-east-1.amazonaws.com | HTTPS | |

Service quotas

| Name | Default | Adjustable |
|----------------------------------|--------------------------------------|------------|
| Choices per question | Each supported Region: 15 | No |
| Lens size | Each supported Region: 500 Kilobytes | No |
| Lenses per account per Region | Each supported Region: 15 | No |
| Lenses per workload | Each supported Region: 20 | No |
| Milestones per workload | Each supported Region: 100 | No |
| Pillars per lens | Each supported Region: 10 | No |
| Questions per pillar | Each supported Region: 20 | No |
| Shares per lens | Each supported Region: 300 | No |
| Shares per workload | Each supported Region: 20 | No |
| Versions per lens | Each supported Region: 100 | No |
| Workloads per account per Region | Each supported Region: 1,000 | No |

Amazon WorkDocs endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|-----------------------|-----------|---|----------------|--|
| US East (N. Virginia) | us-east-1 | workdocs.us-east-1.amazonaws.com workdocs-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------------|--|
| US West (Oregon) | us-west-2 | workdocs.us-west-2.amazonaws.com workdocs-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | workdocs.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | workdocs.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | workdocs.ap-northeast-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | workdocs.eu-west-1.amazonaws.com | HTTPS | |

Amazon WorkLink endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol |
|-----------------------|-----------|----------------------------------|----------|
| US East (N. Virginia) | us-east-1 | worklink.us-east-1.amazonaws.com | HTTPS |
| US East (Ohio) | us-east-2 | worklink.us-east-2.amazonaws.com | HTTPS |
| US West (Oregon) | us-west-2 | worklink.us-west-2.amazonaws.com | HTTPS |
| Europe (Ireland) | eu-west-1 | worklink.eu-west-1.amazonaws.com | HTTPS |

Amazon WorkMail endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Service | Endpoint |
|-----------------------|-----------|-------------------------|---|
| US East (N. Virginia) | us-east-1 | Amazon WorkMail SDK | https://workmail.us-east-1.amazonaws.com |
| US East (N. Virginia) | us-east-1 | Autodiscover | autodiscover-service.mail.us-east-1.awsapps.com |
| US East (N. Virginia) | us-east-1 | Exchange Web Service | ews.mail.us-east-1.awsapps.com |
| US East (N. Virginia) | us-east-1 | Exchange Active Sync | mobile.mail.us-east-1.awsapps.com |
| US East (N. Virginia) | us-east-1 | MAPI Proxy | outlook.mail.us-east-1.awsapps.com |
| US East (N. Virginia) | us-east-1 | IMAPS | imap.mail.us-east-1.awsapps.com |
| US East (N. Virginia) | us-east-1 | SMTP via TLS (port 465) | smtp.mail.us-east-1.awsapps.com |
| US West (Oregon) | us-west-2 | Amazon WorkMail SDK | https://workmail.us-west-2.amazonaws.com |
| US West (Oregon) | us-west-2 | Autodiscover | autodiscover-service.mail.us-west-2.awsapps.com |
| US West (Oregon) | us-west-2 | Exchange Web Service | ews.mail.us-west-2.awsapps.com |
| US West (Oregon) | us-west-2 | Exchange Active Sync | mobile.mail.us-west-2.awsapps.com |
| US West (Oregon) | us-west-2 | MAPI Proxy | outlook.mail.us-west-2.awsapps.com |
| US West (Oregon) | us-west-2 | IMAPS | imap.mail.us-west-2.awsapps.com |
| US West (Oregon) | us-west-2 | SMTP via TLS (port 465) | smtp.mail.us-west-2.awsapps.com |
| Europe (Ireland) | eu-west-1 | Amazon WorkMail SDK | https://workmail.eu-west-1.amazonaws.com |
| Europe (Ireland) | eu-west-1 | Autodiscover | autodiscover-service.mail.eu-west-1.awsapps.com |
| Europe (Ireland) | eu-west-1 | Exchange Web Service | ews.mail.eu-west-1.awsapps.com |
| Europe (Ireland) | eu-west-1 | Exchange Active Sync | mobile.mail.eu-west-1.awsapps.com |
| Europe (Ireland) | eu-west-1 | MAPI Proxy | outlook.mail.eu-west-1.awsapps.com |
| Europe (Ireland) | eu-west-1 | IMAPS | imap.mail.eu-west-1.awsapps.com |
| Europe (Ireland) | eu-west-1 | SMTP via TLS (port 465) | smtp.mail.eu-west-1.awsapps.com |

Service quotas

For more information, see [Amazon WorkMail Quotas](#).

WorkSpaces endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|----------|--|
| US East (N. Virginia) | us-east-1 | workspaces.us-east-1.amazonaws.com | HTTPS | |
| | | workspaces-fips.us-east-1.amazonaws.com | HTTPS | |
| US West (Oregon) | us-west-2 | workspaces.us-west-2.amazonaws.com | HTTPS | |
| | | workspaces-fips.us-west-2.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | workspaces.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | workspaces.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | workspaces.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | workspaces.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | workspaces.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | workspaces.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | workspaces.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | workspaces.eu-west-1.amazonaws.com | HTTPS | |
| Europe (London) | eu-west-2 | workspaces.eu-west-2.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| South America (São Paulo) | sa-east-1 | workspaces.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | workspaces.us-gov-west-1.amazonaws.com workspaces-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Resource | Default | Description | Adjustable |
|------------------------|---------|--|------------|
| WorkSpaces | 1 | The maximum number of WorkSpaces in this account in the current Region. | Yes |
| Graphics WorkSpaces | 0 | The maximum number of Graphics WorkSpaces in this account in the current Region. | Yes |
| GraphicsPro WorkSpaces | 0 | The maximum number of GraphicsPro WorkSpaces in this account in the current Region. | Yes |
| Images | 40 | The maximum number of images in this account in the current Region. | Yes |
| Bundles | 50 | The maximum number of bundles in this account in the current Region. This quota applies only to custom bundles, not to public bundles. | No |
| Connection aliases | 20 | The maximum number of connection aliases in this account in the current Region. | No |
| Directories | 50 | The maximum number of directories that can be registered for use with Amazon WorkSpaces in this | No |

| Resource | Default | Description | Adjustable |
|--|---------|---|------------|
| | | account in the current Region. | |
| IP access control groups | 100 | The maximum number of IP access control groups in this account in the current Region. | No |
| Rules per IP access control group | 10 | The maximum number of rules per IP access control group in this account in the current Region. | No |
| IP access control groups per directory | 25 | The maximum number of IP access control groups per directory in this account in the current Region. | No |

The following quotas are for Amazon WorkSpaces Application Manager. For more information, see [Amazon WorkSpaces Application Manager quotas](#) in the *Amazon WAM Administration Guide*.

| Name | Default | Adjustable |
|---|--------------------------------------|------------|
| Application assignments per user | Each supported Region: 50 | Yes |
| Application size | Each supported Region: 5 Gigabytes | No |
| Total package size without storage fees | Each supported Region: 100 Gigabytes | No |
| User/WorkSpace or group assignments per application | Each supported Region: 200 | Yes |

AWS X-Ray endpoints and quotas

The following are the service endpoints and service quotas for this service. To connect programmatically to an AWS service, you use an endpoint. In addition to the standard AWS endpoints, some AWS services offer FIPS endpoints in selected Regions. For more information, see [AWS service endpoints \(p. 741\)](#). Service quotas, also referred to as limits, are the maximum number of service resources or operations for your AWS account. For more information, see [AWS service quotas \(p. 745\)](#).

Service endpoints

| Region Name | Region | Endpoint | Protocol | |
|----------------|-----------|---|----------------|--|
| US East (Ohio) | us-east-2 | xray.us-east-2.amazonaws.com xray-fips.us-east-2.amazonaws.com | HTTPS HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|--------------------------|----------------|---|-----------------|--|
| US East (N. Virginia) | us-east-1 | xray.us-east-1.amazonaws.com xray-fips.us-east-1.amazonaws.com | HTTPS HTTPS | |
| US West (N. California) | us-west-1 | xray.us-west-1.amazonaws.com xray-fips.us-west-1.amazonaws.com | HTTPS HTTPS | |
| US West (Oregon) | us-west-2 | xray.us-west-2.amazonaws.com xray-fips.us-west-2.amazonaws.com | HTTPS HTTPS | |
| Africa (Cape Town) | af-south-1 | xray.af-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Hong Kong) | ap-east-1 | xray.ap-east-1.amazonaws.com | HTTPS | |
| Asia Pacific (Jakarta) | ap-southeast-3 | xray.ap-southeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Mumbai) | ap-south-1 | xray.ap-south-1.amazonaws.com | HTTPS | |
| Asia Pacific (Osaka) | ap-northeast-3 | xray.ap-northeast-3.amazonaws.com | HTTPS | |
| Asia Pacific (Seoul) | ap-northeast-2 | xray.ap-northeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Singapore) | ap-southeast-1 | xray.ap-southeast-1.amazonaws.com | HTTPS | |
| Asia Pacific (Sydney) | ap-southeast-2 | xray.ap-southeast-2.amazonaws.com | HTTPS | |
| Asia Pacific (Tokyo) | ap-northeast-1 | xray.ap-northeast-1.amazonaws.com | HTTPS | |
| Canada (Central) | ca-central-1 | xray.ca-central-1.amazonaws.com | HTTPS | |
| Europe (Frankfurt) | eu-central-1 | xray.eu-central-1.amazonaws.com | HTTPS | |
| Europe (Ireland) | eu-west-1 | xray.eu-west-1.amazonaws.com | HTTPS | |

| Region Name | Region | Endpoint | Protocol | |
|---------------------------|---------------|---|----------------|--|
| Europe (London) | eu-west-2 | xray.eu-west-2.amazonaws.com | HTTPS | |
| Europe (Milan) | eu-south-1 | xray.eu-south-1.amazonaws.com | HTTPS | |
| Europe (Paris) | eu-west-3 | xray.eu-west-3.amazonaws.com | HTTPS | |
| Europe (Stockholm) | eu-north-1 | xray.eu-north-1.amazonaws.com | HTTPS | |
| Middle East (Bahrain) | me-south-1 | xray.me-south-1.amazonaws.com | HTTPS | |
| South America (São Paulo) | sa-east-1 | xray.sa-east-1.amazonaws.com | HTTPS | |
| AWS GovCloud (US-East) | us-gov-east-1 | xray.us-gov-east-1.amazonaws.com xray-fips.us-gov-east-1.amazonaws.com | HTTPS HTTPS | |
| AWS GovCloud (US-West) | us-gov-west-1 | xray.us-gov-west-1.amazonaws.com xray-fips.us-gov-west-1.amazonaws.com | HTTPS HTTPS | |

Service quotas

| Name | Default | Adjustable |
|---|--------------------------------------|------------|
| Custom sampling rules per region | Each supported Region: 25 | No |
| Groups in an account | Each supported Region: 25 | No |
| Indexed annotations per trace | Each supported Region: 50 | No |
| Segment document size | Each supported Region: 64 Kilobytes | No |
| Tags per custom sampling rule | Each supported Region: 50 | No |
| Tags per group | Each supported Region: 50 | No |
| Trace and service graph retention in days | Each supported Region: 30 | No |
| Trace data modification period in days | Each supported Region: 7 | No |
| Trace document size (dynamic upper limit) | Each supported Region: 500 Kilobytes | No |
| Trace document size (lower limit) | Each supported Region: 100 Kilobytes | No |

AWS resources

The following pages provide information that helps you work with AWS resources.

Contents

- [AWS service endpoints \(p. 741\)](#)
- [Managing AWS Regions \(p. 743\)](#)
- [AWS service quotas \(p. 745\)](#)
- [Tagging AWS resources \(p. 746\)](#)
- [Amazon Resource Names \(ARNs\) \(p. 750\)](#)

AWS service endpoints

To connect programmatically to an AWS service, you use an endpoint. An *endpoint* is the URL of the entry point for an AWS web service. The AWS SDKs and the AWS Command Line Interface (AWS CLI) automatically use the default endpoint for each service in an AWS Region. But you can specify an alternate endpoint for your API requests.

If a service supports Regions, the resources in each Region are independent of similar resources in other Regions. For example, you can create an Amazon EC2 instance or an Amazon SQS queue in one Region. When you do, the instance or queue is independent of instances or queues in all other Regions.

Contents

- [Regional endpoints \(p. 741\)](#)
- [View the service endpoints \(p. 742\)](#)
- [FIPS endpoints \(p. 743\)](#)
- [Learn more \(p. 743\)](#)

Regional endpoints

Most Amazon Web Services offer a Regional endpoint that you can use to make your requests. The general syntax of a Regional endpoint is as follows.

```
protocol://service-code.region-code.amazonaws.com
```

For example, `https://dynamodb.us-west-2.amazonaws.com` is the endpoint for the Amazon DynamoDB service in the US West (Oregon) Region.

The following table lists the name and code of each Region.

| Region Name | Code |
|-------------------------|-----------|
| US East (Ohio) | us-east-2 |
| US East (N. Virginia) | us-east-1 |
| US West (N. California) | us-west-1 |

| Region Name | Code |
|---------------------------|----------------|
| US West (Oregon) | us-west-2 |
| Africa (Cape Town) | af-south-1 |
| Asia Pacific (Hong Kong) | ap-east-1 |
| Asia Pacific (Jakarta) | ap-southeast-3 |
| Asia Pacific (Mumbai) | ap-south-1 |
| Asia Pacific (Osaka) | ap-northeast-3 |
| Asia Pacific (Seoul) | ap-northeast-2 |
| Asia Pacific (Singapore) | ap-southeast-1 |
| Asia Pacific (Sydney) | ap-southeast-2 |
| Asia Pacific (Tokyo) | ap-northeast-1 |
| Canada (Central) | ca-central-1 |
| China (Beijing) | cn-north-1 |
| China (Ningxia) | cn-northwest-1 |
| Europe (Frankfurt) | eu-central-1 |
| Europe (Ireland) | eu-west-1 |
| Europe (London) | eu-west-2 |
| Europe (Milan) | eu-south-1 |
| Europe (Paris) | eu-west-3 |
| Europe (Stockholm) | eu-north-1 |
| Middle East (Bahrain) | me-south-1 |
| South America (São Paulo) | sa-east-1 |

Some services, such as IAM, do not support Regions. The endpoints for these services do not include a Region. Other services, such as Amazon EC2, support Regions but let you specify an endpoint that does not include a Region, such as <https://ec2.amazonaws.com>. When you use an endpoint with no Region, AWS routes the Amazon EC2 request to US East (N. Virginia) (us-east-1), which is the default Region for API calls.

View the service endpoints

You can view the AWS service endpoints using the following options:

- Open [Service endpoints and quotas \(p. 16\)](#), search for the service name, and click the link to open the page for that service. To view the supported endpoints for all AWS services in the documentation without switching pages, view the information in the [Service Endpoints and Quotas](#) page in the PDF instead.
- To programmatically check for service availability using the SDK for Java, see [Checking for Service Availability in an AWS Region](#) in the [AWS SDK for Java Developer Guide](#).

- To programmatically view Region and service information using Systems Manager, see [Calling AWS Service, Region, and Endpoint Public Parameters](#) in the *AWS Systems Manager User Guide*. For information about how to use public parameters, see [Query for AWS Regions, Endpoints, and More Using AWS Systems Manager Parameter Store](#).
- To see the supported AWS services in each Region (without endpoints), see the [Region Table](#).

FIPS endpoints

Some AWS services offer FIPS endpoints in selected Regions. Unlike standard AWS endpoints, FIPS endpoints use a TLS software library that complies with Federal Information Processing Standard (FIPS) 140-2. These endpoints might be required by enterprises that interact with the United States government. For more information, see [Federal Information Processing Standard \(FIPS\) 140-2](#) on the AWS Compliance site.

To use a FIPS endpoint with an AWS operation, use the mechanism provided by the AWS SDK or tool to specify a custom endpoint. For example, the AWS SDKs provide an `AWS_USE_FIPS_ENDPOINT` environment variable. The AWS Command Line Interface provides the `--endpoint-url` option. The following example uses the FIPS endpoint for the US West (Oregon) Region with an operation for AWS Key Management Service (AWS KMS).

```
aws kms create-key --endpoint-url https://kms-fips.us-west-2.amazonaws.com
```

Minimum TLS version for FIPS endpoints

With FIPS endpoints, the minimum requirement is TLS 1.2. AWS revoked the ability to use TLS 1.0 and TLS 1.1 on all FIPS endpoints in all Regions as of March 31, 2021. For information about how to determine whether your applications were impacted by this change, see [this AWS Security Blog post from May 3, 2021](#).

Learn more

You can find endpoint information from the following sources:

- To learn about enabling Regions that are disabled by default, see [Managing AWS Regions \(p. 743\)](#).
- For information about the AWS services and endpoints available in the China Regions, see [China \(Beijing\) Region Endpoints](#) and [China \(Ningxia\) Region Endpoints](#).

Managing AWS Regions

An *AWS Region* is a collection of AWS resources in a geographic area. Each AWS Region is isolated and independent of the other Regions. Regions provide fault tolerance, stability, and resilience, and can also reduce latency. They enable you to create redundant resources that remain available and unaffected by a Regional outage. For a list of Region names and codes, see [this table \(p. 741\)](#).

The resources that you create in one Region do not exist in any other Region unless you explicitly use a replication feature offered by an AWS service. For example, Amazon S3 and Amazon EC2 support cross-Region replication. Some services, such as AWS Identity and Access Management (IAM), do not have Regional resources.

You can use [policy conditions](#) to control access to AWS services in an AWS Region. For a table of AWS services supported in each Region (without endpoints), see the [Region Table](#).

Regions introduced before March 20, 2019 are enabled by default. You can begin creating and managing resources in these Regions immediately. You cannot enable or disable a Region that is enabled by default.

Enabling a Region

If a Region is disabled by default, you must enable it before you can create and manage resources. The following Regions are disabled by default:

- Africa (Cape Town)
- Asia Pacific (Hong Kong)
- Asia Pacific (Jakarta)
- Europe (Milan)
- Middle East (Bahrain)

When you enable a Region, AWS performs actions to prepare your account in that Region, such as distributing your IAM resources to the Region. This process takes a few minutes for most accounts, but this can take several hours. You cannot use the Region until this process is complete.

Requirements

To enable a Region that is disabled by default, you must have permission to enable Regions. To view an example IAM policy, see [Allow enabling and disabling AWS Regions](#) in the *IAM User Guide*.

To enable a Region

1. Sign in to the AWS Management Console.
2. In the upper right corner of the console, choose your account name or number and then choose **Account**.
3. In the **AWS Regions** section, next to the name of the Region that you want to enable, choose **Enable**.
4. In the dialog box, review the informational text and choose **Enable Region**.
5. Wait until the Region is ready to use.

Disabling a Region

You cannot disable a Region that is enabled by default. If you enabled one of the following Regions, then you can disable it as needed:

- Africa (Cape Town)
- Asia Pacific (Hong Kong)
- Asia Pacific (Jakarta)
- Europe (Milan)
- Middle East (Bahrain)

After you disable a Region, the resources in this Region become unavailable based on [eventual consistency](#). However, they are not deleted.

Requirements

- To disable a Region, you must have permission to disable Regions. To view an example IAM policy, see [Allow enabling and disabling AWS Regions](#) in the *IAM User Guide*.

- Before you disable a Region, we recommend that you remove all resources from that Region. After you disable a Region, you can no longer view or manage resources in the Region from that account through the AWS Management console or AWS APIs with IAM principals. However, resources in that Region can continue to incur charges. For more information, see [Enabling and disabling Regions](#) in the *AWS Billing and Cost Management User Guide*.

To disable a Region

1. Sign in to the AWS Management Console.
2. In the upper right corner of the console, choose your account name or number and then choose **My Account**.
3. In the **AWS Regions** section, next to the name of the Region that you want to disable, choose **Disable**.
4. In the dialog box, review the informational text and choose **Disable Region**.

Describing your Regions using the AWS CLI

Use the [describe-regions](#) command to describe the Regions available for your account, whether they are enabled or disabled.

```
aws ec2 describe-regions --all-regions
```

If the Region is enabled by default, the output includes the following:

```
"OptInStatus": "opt-in-not-required"
```

If the Region is not enabled, the output includes the following:

```
"OptInStatus": "not-opted-in"
```

After an opt-in Region is enabled, the output includes the following:

```
"OptInStatus": "opted-in"
```

AWS service quotas

Your AWS account has default quotas, formerly referred to as limits, for each AWS service. Unless otherwise noted, each quota is Region-specific. You can request increases for some quotas, and other quotas cannot be increased.

Service Quotas is an AWS service that helps you manage your quotas for many AWS services, from one location. Along with looking up the quota values, you can also request a quota increase from the Service Quotas console.

AWS Support might approve, deny, or partially approve your requests.

To view service quotas

You can view service quotas using the following options:

- Open the [Service endpoints and quotas \(p. 16\)](#) page in the documentation, search for the service name, and click the link to go to the page for that service. To view the service quotas for all AWS

services in the documentation without switching pages, view the information in the [Service Endpoints and Quotas](#) page in the PDF instead.

- Open the [Service Quotas console](#). In the navigation pane, choose **AWS services** and select a service.
- Use the `list-service-quotas` and `list-aws-default-service-quotas` AWS CLI commands.

To request a quota increase

You can request a quota increase using Service Quotas and AWS Support Center. If a service is not yet available in Service Quotas, use AWS Support Center instead. Increases are not granted immediately. It might take a couple of days for your increase to become effective.

- (**Recommended**) Open the [Service Quotas console](#). In the navigation pane, choose **AWS services**. Select a service, select a quota, and follow the directions to request a quota increase. For more information, see [Requesting a Quota Increase](#) in the *Service Quotas User Guide*.
- Use the `request-service-quota-increase` AWS CLI command.
- Open the [AWS Support Center](#) page, sign in if necessary, and choose **Create case**. Choose **Service limit increase**. Complete and submit the form.

Tagging AWS resources

You can assign metadata to your AWS resources in the form of *tags*. Each tag is a label consisting of a user-defined key and value. Tags can help you manage, identify, organize, search for, and filter resources. You can create tags to categorize resources by purpose, owner, environment, or other criteria.

Each tag has two parts:

- A *tag key* (for example, `CostCenter`, `Environment`, or `Project`). Tag keys are case sensitive.
- A *tag value* (for example, `111122223333` or `Production`). Like tag keys, tag values are case sensitive.

You can use tags to categorize resources by purpose, owner, environment, or other criteria.

AWS supports tagging on all core infrastructure resources that incur charges. Most other AWS resources also support tagging. See the documentation for an individual service for information about that service's native tagging operations.

Do not add personally identifiable information (PII) or other confidential or sensitive information in tags. Tags are accessible to many AWS services, including billing. Tags are not intended to be used for private or sensitive data.

Best practices

As you create a tagging strategy for AWS resources, follow best practices:

- Do not store personally identifiable information (PII) or other confidential or sensitive information in tags.
- Use a standardized, case-sensitive format for tags, and apply it consistently across all resource types.
- Consider tag guidelines that support multiple purposes, like managing resource access control, cost tracking, automation, and organization.
- Use automated tools to help manage resource tags. [AWS Resource Groups](#) and the [Resource Groups Tagging API](#) enable programmatic control of tags, making it easier to automatically manage, search, and filter tags and resources.
- Use too many tags rather than too few tags.

- Remember that it is easy to change tags to accommodate changing business requirements, but consider the consequences of future changes. For example, changing access control tags means you must also update the policies that reference those tags and control access to your resources.
- You can automatically enforce the tagging standards that your organization chooses to adopt by creating and deploying tag policies using AWS Organizations. Tag policies let you specify tagging rules that define valid key names and the values that are valid for each key. You can choose to only monitor, giving you an opportunity to evaluate and clean up your existing tags. Once your tags are in compliance with your chosen standards, you can then turn on enforcement in the tag policies to prevent non-compliant tags from being created. For more information, see [Tag policies](#) in the *AWS Organizations User Guide*.

Tagging categories

Companies that are most effective in their use of tags typically create business-relevant tag groupings to organize their resources along technical, business, and security dimensions. Companies that use automated processes to manage their infrastructure also include additional, automation-specific tags.

| Technical tags | Tags for automation | Business tags | Security tags |
|---|---|---|--|
| <ul style="list-style-type: none"> Name – Identify individual resources Application ID – Identify resources that are related to a specific application Application Role – Describe the function of a particular resource (such as web server, message broker, database) Cluster – Identify resource farms that share a common configuration and perform a specific function for an application Environment – Distinguish between development, test, and production resources Version – Help distinguish between versions of resources or applications | <ul style="list-style-type: none"> Date/Time – Identify the date or time a resource should be started, stopped, deleted, or rotated Opt in/Opt out – Indicate whether a resource should be included in an automated activity such as starting, stopping, or resizing instances Security – Determine requirements, such as encryption or enabling of Amazon VPC flow logs; identify route tables or security groups that need extra scrutiny | <ul style="list-style-type: none"> Project – Identify projects that the resource supports Owner – Identify who is responsible for the resource Cost Center/Business Unit – Identify the cost center or business unit associated with a resource, typically for cost allocation and tracking Customer – Identify a specific client that a particular group of resources serves | <ul style="list-style-type: none"> Confidentiality – An identifier for the specific data confidentiality level a resource supports Compliance – An identifier for workloads that must adhere to specific compliance requirements |

Tag naming limits and requirements

The following basic naming and usage requirements apply to tags:

- Each resource can have a maximum of 50 user created tags.
- System created tags that begin with `aws:` are reserved for AWS use, and do not count against this limit. You can't edit or delete a tag that begins with the `aws:` prefix.
- For each resource, each tag key must be unique, and each tag key can have only one value.
- The tag key must be a minimum of 1 and a maximum of 128 Unicode characters in UTF-8.
- The tag value must be a minimum of 0 and a maximum of 256 Unicode characters in UTF-8.
- Allowed characters can vary by AWS service. For information about what characters you can use to tag resources in a particular AWS service, see its documentation. In general, the allowed characters are letters, numbers, spaces representable in UTF-8, and the following characters: `_ . : / = + - @.`
- Tag keys and values are case sensitive. As a best practice, decide on a strategy for capitalizing tags, and consistently implement that strategy across all resource types. For example, decide whether to use `Costcenter`, `costcenter`, or `CostCenter`, and use the same convention for all tags. Avoid using similar tags with inconsistent case treatment.

Common tagging strategies

Use the following tagging strategies to help identify and manage AWS resources.

Contents

- [Tags for resource organization \(p. 748\)](#)
- [Tags for cost allocation \(p. 748\)](#)
- [Tags for automation \(p. 749\)](#)
- [Tags for access control \(p. 749\)](#)

Tags for resource organization

Tags are a good way to organize AWS resources in the AWS Management Console. You can configure tags to be displayed with resources, and can search and filter by tag. With the AWS Resource Groups service, you can create groups of AWS resources based on one or more tags or portions of tags. You can also create groups based on their occurrence in an AWS CloudFormation stack. Using Resource Groups and Tag Editor, you can consolidate and view data for applications that consist of multiple services, resources, and Regions in one place.

Tags for cost allocation

AWS Cost Explorer and detailed billing reports let you break down AWS costs by tag. Typically, you use business tags such as `cost center/business unit`, `customer`, or `project` to associate AWS costs with traditional cost-allocation dimensions. But a cost allocation report can include any tag. This lets you associate costs with technical or security dimensions, such as specific applications, environments, or compliance programs. The following is an example of a partial cost allocation report.

| Total Cost | user:Owner | user:Stack | user:Cost Center | user:Application |
|------------|------------|------------|------------------|------------------|
| 0.95 | DbAdmin | Test | 80432 | Widget2 |
| 0.01 | DbAdmin | Test | 80432 | Widget2 |
| 3.84 | DbAdmin | Prod | 80432 | Widget2 |
| 6.00 | DbAdmin | Test | 78925 | Widget1 |
| 234.63 | SysEng | Prod | 78925 | Widget1 |
| 0.73 | DbAdmin | Test | 78925 | Widget1 |
| 0.00 | DbAdmin | Prod | 80432 | Portal |
| 2.47 | DbAdmin | Prod | 78925 | Portal |

For some services, you can use an AWS-generated `createdBy` tag for cost allocation purposes, to help account for resources that might otherwise go uncategorized. The `createdBy` tag is available only for supported AWS services and resources. Its value contains data associated with specific API or console events. For more information, see [AWS-Generated Cost Allocation Tags](#) in the *AWS Billing and Cost Management User Guide*.

Tags for automation

Resource or service-specific tags are often used to filter resources during automation activities. Automation tags are used to opt in or opt out of automated tasks or to identify specific versions of resources to archive, update, or delete. For example, you can run automated `start` or `stop` scripts that turn off development environments during nonbusiness hours to reduce costs. In this scenario, Amazon Elastic Compute Cloud (Amazon EC2) instance tags are a simple way to identify instances to opt out of this action. For scripts that find and delete stale, out-of-date, or rolling Amazon EBS snapshots, snapshot tags can add an extra dimension of search criteria.

Tags for access control

IAM policies support tag-based conditions, letting you constrain IAM permissions based on specific tags or tag values. For example, IAM user or role permissions can include conditions to limit EC2 API calls to specific environments (such as development, test, or production) based on their tags. The same strategy can be used to limit API calls to specific Amazon Virtual Private Cloud (Amazon VPC) networks. Support for tag-based, resource-level IAM permissions is service specific. When you use tag-based conditions for access control, be sure to define and restrict who can modify the tags. For more information about using tags to control API access to AWS resources, see [AWS services that work with IAM](#) in the *IAM User Guide*.

Tagging governance

An effective tagging strategy uses standardized tags and applies them consistently and programmatically across AWS resources. You can use both reactive and proactive approaches for governing tags in your AWS environment.

- **Reactive governance** is for finding resources that are not properly tagged using tools such as the Resource Groups Tagging API, AWS Config Rules, and custom scripts. To find resources manually, you can use Tag Editor and detailed billing reports.
- **Proactive governance** uses tools such as AWS CloudFormation, AWS Service Catalog, tag policies in AWS Organizations, or IAM resource-level permissions to ensure standardized tags are consistently applied at resource creation.

For example, you can use the `AWS CloudFormation Resource Tags` property to apply tags to resource types. In AWS Service Catalog, you can add portfolio and product tags that are combined and

applied to a product automatically when it is launched. More rigorous forms of proactive governance include automated tasks. For example, you can use the Resource Groups Tagging API to search an AWS environment's tags, or run scripts to quarantine or delete improperly tagged resources.

Learn more

This page provides general information on tagging AWS resources. For more information about tagging resources in a particular AWS service, see its documentation. The following are also good sources of information about tagging:

- For information about the AWS Resource Groups Tagging API, see the [Resource Groups Tagging API Reference Guide](#).
- For information about Tag Editor, see [Working with Tag Editor](#) in the [AWS Resource Groups User Guide](#).
- For information about using tags to control access to AWS resources, see [Control Access Using IAM Tags](#) in the [IAM User Guide](#).

Amazon Resource Names (ARNs)

Amazon Resource Names (ARNs) uniquely identify AWS resources. We require an ARN when you need to specify a resource unambiguously across all of AWS, such as in IAM policies, Amazon Relational Database Service (Amazon RDS) tags, and API calls.

The [Service Authorization Reference](#) lists the ARNs that you can use in IAM policies.

ARN format

The following are the general formats for ARNs. The specific formats depend on the resource. To use an ARN, replace the *italicized* text with the resource-specific information. Be aware that the ARNs for some resources omit the Region, the account ID, or both the Region and the account ID.

```
arn:partition:service:region:account-id:resource-id
arn:partition:service:region:account-id:resource-type/resource-id
arn:partition:service:region:account-id:resource-type:resource-id
```

partition

The partition in which the resource is located. A *partition* is a group of AWS Regions. Each AWS account is scoped to one partition.

The following are the supported partitions:

- aws - AWS Regions
- aws-cn - China Regions
- aws-us-gov - AWS GovCloud (US) Regions

service

The service namespace that identifies the AWS product. For example, s3 for Amazon S3. To find a service namespace, open the [Service Authorization Reference](#), open the page for the service, and find the phrase "service prefix" in the first sentence. For example, the following text appears in the first sentence on the page for Amazon S3:

```
(service prefix: s3)
```

region

The Region code. For example, `us-east-2` for US East (Ohio). For the list of Region codes, see [Regional endpoints \(p. 741\)](#).

account-id

The ID of the AWS account that owns the resource, without the hyphens. For example, `123456789012`.

resource-id

The resource identifier. This part of the ARN can be the name or ID of the resource or a [resource path \(p. 751\)](#). For example, `user/Bob` for an IAM user or `instance/i-1234567890abcdef0` for an EC2 instance. Some resource identifiers include a parent resource (sub-resource-type/parent-resource/sub-resource) or a qualifier such as a version (resource-type:resource-name:qualifier).

Paths in ARNs

Resource ARNs can include a path. For example, in Amazon S3, the resource identifier is an object name that can include slashes (/) to form a path. Similarly, IAM user names and group names can include paths.

Paths can include a wildcard character, namely an asterisk (*). For example, if you are writing an IAM policy, you can specify all IAM users that have the path `product_1234` using a wildcard as follows:

```
arn:aws:iam::123456789012:user/Development/product_1234/*
```

Similarly, you can specify `user/*` to mean all users or `group/*` to mean all groups, as in the following examples:

```
"Resource":"arn:aws:iam::123456789012:user/*"  
"Resource":"arn:aws:iam::123456789012:group/*"
```

The following example shows ARNs for an Amazon S3 bucket in which the resource name includes a path:

```
arn:aws:s3:::my_corporate_bucket/*  
arn:aws:s3:::my_corporate_bucket/Development/*
```

Incorrect wildcard usage

You cannot use a wildcard in the portion of the ARN that specifies the resource type, such as the term `user` in an IAM ARN. For example, the following is not allowed.

```
arn:aws:iam::123456789012:u*    <== not allowed
```

AWS IP address ranges

Amazon Web Services (AWS) publishes its current IP address ranges in JSON format. To view the current ranges, download the .json file. To maintain history, save successive versions of the .json file on your system. To determine whether there have been changes since the last time that you saved the file, check the publication time in the current file and compare it to the publication time in the last file that you saved.

Contents

- [Download \(p. 752\)](#)
- [Syntax \(p. 752\)](#)
- [Filtering the JSON file \(p. 754\)](#)
- [Implementing egress control \(p. 757\)](#)
- [AWS IP address ranges notifications \(p. 758\)](#)
- [Release notes \(p. 760\)](#)

Download

Download [ip-ranges.json](#).

If you access this file programmatically, it is your responsibility to ensure that the application downloads the file only after successfully verifying the TLS certificate presented by the server.

Syntax

The syntax of ip-ranges.json is as follows.

```
{  
    "syncToken": "0123456789",  
    "createDate": "yyyy-mm-dd hh:mm:ss",  
    "prefixes": [  
        {  
            "ip_prefix": "cidr",  
            "region": "region",  
            "network_border_group": "network_border_group",  
            "service": "subset"  
        }  
    ],  
    "ipv6_prefixes": [  
        {  
            "ipv6_prefix": "cidr",  
            "region": "region",  
            "network_border_group": "network_border_group",  
            "service": "subset"  
        }  
    ]  
}
```

syncToken

The publication time, in Unix epoch time format.

Type: String

Example: "syncToken": "1416435608"

createDate

The publication date and time, in UTC YY-MM-DD-hh-mm-ss format.

Type: String

Example: "createDate": "2014-11-19-23-29-02"

prefixes

The IP prefixes for the IPv4 address ranges.

Type: Array

ipv6_prefixes

The IP prefixes for the IPv6 address ranges.

Type: Array

ip_prefix

The public IPv4 address range, in CIDR notation. Note that AWS may advertise a prefix in more specific ranges. For example, prefix 96.127.0.0/17 in the file may be advertised as 96.127.0.0/21, 96.127.8.0/21, 96.127.32.0/19, and 96.127.64.0/18.

Type: String

Example: "ip_prefix": "198.51.100.2/24"

ipv6_prefix

The public IPv6 address range, in CIDR notation. Note that AWS may advertise a prefix in more specific ranges.

Type: String

Example: "ipv6_prefix": "2001:db8:1234::/64"

network_border_group

The name of the network border group, which is a unique set of Availability Zones or Local Zones from where AWS advertises IP addresses.

Type: String

Example: "network_border_group": "us-west-2-lax-1"

region

The AWS Region or GLOBAL for edge locations. The CLOUDFRONT and ROUTE53 ranges are GLOBAL.

Type: String

Valid values: ap-east-1 | ap-northeast-1 | ap-northeast-2 | ap-northeast-3 | ap-south-1 | ap-southeast-1 | ap-southeast-2 | ca-central-1 | cn-north-1 | cn-northwest-1 | eu-

```
central-1 | eu-north-1 | eu-west-1 | eu-west-2 | eu-west-3 | sa-east-1 | us-east-1 |
us-east-2 | us-gov-east-1 | us-gov-west-1 | us-west-1 | us-west-2 | GLOBAL
```

Example: "region": "us-east-1"

service

The subset of IP address ranges. The addresses listed for API_GATEWAY are egress only. Specify AMAZON to get all IP address ranges (meaning that every subset is also in the AMAZON subset). However, some IP address ranges are only in the AMAZON subset (meaning that they are not also available in another subset).

Type: String

```
Valid values: AMAZON | AMAZON_APPFLOW | AMAZON_CONNECT | API_GATEWAY |
CHIME_MEETINGS | CHIME_VOICECONNECTOR | CLOUD9 | CLOUDFRONT |
CLOUDFRONT_ORIGIN_FACING | CODEBUILD | DYNAMODB | EBS | EC2 | EC2_INSTANCE_CONNECT |
GLOBALACCELERATOR | KINESIS_VIDEO_STREAMS | ROUTE53 | ROUTE53_HEALTHCHECKS |
ROUTE53_HEALTHCHECKS_PUBLISHING | ROUTE53_RESOLVER | S3 | WORKSPACES_GATEWAYS
```

Example: "service": "AMAZON"

Filtering the JSON file

You can download a command line tool to help you filter the information to just what you are looking for.

Windows

The [AWS Tools for Windows PowerShell](#) includes a cmdlet, `Get-AWSPublicIpAddressRange`, to parse this JSON file. The following examples demonstrate its use. For more information, see [Querying the Public IP Address Ranges for AWS](#) and [Get-AWSPublicIpAddressRange](#).

Example 1. Get the creation date

```
PS C:\> Get-AWSPublicIpAddressRange -OutputPublicationDate
Wednesday, August 22, 2018 9:22:35 PM
```

Example 2. Get the information for a specific Region

```
PS C:\> Get-AWSPublicIpAddressRange -Region us-east-1
IpPrefix      Region      NetworkBorderGroup      Service
-----      -----      -----      -----
23.20.0.0/14  us-east-1    us-east-1      AMAZON
50.16.0.0/15  us-east-1    us-east-1      AMAZON
50.19.0.0/16  us-east-1    us-east-1      AMAZON
...
...
```

Example 3. Get all IP addresses

```
PS C:\> (Get-AWSPublicIpAddressRange).IpPrefix
23.20.0.0/14
27.0.0.0/22
43.250.192.0/24
```

```
...
2406:da00:ff00::/64
2600:1fff:6000::/40
2a01:578:3::/64
2600:9000::/28
```

Example 4. Get all IPv4 addresses

```
PS C:\> Get-AWSPublicIpAddressRange | where {$_['IpAddressFormat -eq "Ipv4"} | select
IpPrefix

IpPrefix
-----
23.20.0.0/14
27.0.0.0/22
43.250.192.0/24
...
```

Example 5. Get all IPv6 addresses

```
PS C:\> Get-AWSPublicIpAddressRange | where {$_['IpAddressFormat -eq "Ipv6"} | select
IpPrefix

IpPrefix
-----
2a05:d07c:2000::/40
2a05:d000:8000::/40
2406:dafe:2000::/40
...
```

Example 6. Get all IP addresses for a specific service

```
PS C:\> Get-AWSPublicIpAddressRange -ServiceKey CODEBUILD | select IpPrefix

IpPrefix
-----
52.47.73.72/29
13.55.255.216/29
52.15.247.208/29
...
```

Linux

The following example commands use [the jq tool](#) to parse a local copy of the JSON file.

Example 1. Get the creation date

```
$ jq .createDate < ip-ranges.json
"2016-02-18-17-22-15"
```

Example 2. Get the information for a specific Region

```
$ jq '.prefixes[] | select(.region=="us-east-1")' < ip-ranges.json
{
  "ip_prefix": "23.20.0.0/14",
```

```
    "region": "us-east-1",
    "network_border_group": "us-east-1",
    "service": "AMAZON"
},
{
    "ip_prefix": "50.16.0.0/15",
    "region": "us-east-1",
    "network_border_group": "us-east-1",
    "service": "AMAZON"
},
{
    "ip_prefix": "50.19.0.0/16",
    "region": "us-east-1",
    "network_border_group": "us-east-1",
    "service": "AMAZON"
},
...
...
```

Example 3. Get all IPv4 addresses

```
$ jq -r '.prefixes | .[].ip_prefix' < ip-ranges.json

23.20.0.0/14
27.0.0.0/22
43.250.192.0/24
...
```

Example 4. Get all IPv6 addresses

```
$ jq -r '.ipv6_prefixes | .[].ipv6_prefix' < ip-ranges.json

2a05:d07c:2000::/40
2a05:d000:8000::/40
2406:dafe:2000::/40
...
```

Example 5. Get all IPv4 addresses for a specific service

```
$ jq -r '.prefixes[] | select(.service=="CODEBUILD") | .ip_prefix' < ip-ranges.json

52.47.73.72/29
13.55.255.216/29
52.15.247.208/29
...
```

Example 6. Get all IPv4 addresses for a specific service in a specific Region

```
$ jq -r '.prefixes[] | select(.region=="us-east-1") | select(.service=="CODEBUILD")
| .ip_prefix' < ip-ranges.json

34.228.4.208/28
```

Example 7. Get information for a certain network border group

```
$ jq -r '.prefixes[] | select(.region=="us-west-2") | select(.network_border_group=="us-
west-2-lax-1") | .ip_prefix' < ip-ranges.json

70.224.192.0/18
52.95.230.0/24
```

```
15.253.0.0/16
...

```

Implementing egress control

To allow an instance to access only AWS services, create a security group with rules that allow outbound traffic to the CIDR blocks in the `AMAZON` list, minus the CIDR blocks that are also in the `EC2` list. IP addresses in the `EC2` list can be assigned to EC2 instances.

Windows PowerShell

The following PowerShell example shows you how to get the IP addresses that are in the `AMAZON` list but not the `EC2` list. Copy the script and save it in a file named `Select_address.ps1`.

```
$amazon_addresses = Get-AWSPublicIpAddressRange -ServiceKey amazon
$ec2_addresses = Get-AWSPublicIpAddressRange -ServiceKey ec2

ForEach ($address in $amazon_addresses)
{
    if( $ec2_addresses.IpPrefix -notcontains $address.IpPrefix)
    {
        ($address).IpPrefix
    }
}
```

You can run this script as follows:

```
PS C:\> .\Select_address.ps1
13.32.0.0/15
13.35.0.0/16
13.248.0.0/20
13.248.16.0/21
13.248.24.0/22
13.248.28.0/22
27.0.0.0/22
43.250.192.0/24
43.250.193.0/24
...

```

jq

The following example shows you how to get the IP addresses that are in the `AMAZON` list but not the `EC2` list, for all Regions:

```
jq -r '[.prefixes[] | select(.service=="AMAZON").ip_prefix] - [.prefixes[] |
select(.service=="EC2").ip_prefix] | .[]' < ip-ranges.json

52.94.22.0/24
52.94.17.0/24
52.95.154.0/23
52.95.212.0/22
54.239.0.240/28
54.239.54.0/23
52.119.224.0/21
...

```

The following example shows you how to filter the results to one Region:

```
jq -r '[.prefixes[] | select(.region=="us-east-1" and .service=="AMAZON").ip_prefix] -  
[.prefixes[] | select(.region=="us-east-1" and .service=="EC2").ip_prefix] | .[]' < ip-  
ranges.json
```

Python

The following python script shows you how to get the IP addresses that are in the AMAZON list but not the EC2 list. Copy the script and save it in a file named `get_ips.py`.

```
#!/usr/bin/env python  
import requests  
  
ip_ranges = requests.get('https://ip-ranges.amazonaws.com/ip-ranges.json').json()  
[ 'prefixes' ]  
amazon_ips = [ item['ip_prefix'] for item in ip_ranges if item["service"] == "AMAZON" ]  
ec2_ips = [ item['ip_prefix'] for item in ip_ranges if item["service"] == "EC2" ]  
  
amazon_ips_less_ec2=[]  
  
for ip in amazon_ips:  
    if ip not in ec2_ips:  
        amazon_ips_less_ec2.append(ip)  
  
for ip in amazon_ips_less_ec2: print(str(ip))
```

You can run this script as follows:

```
$ python ./get_ips.py  
13.32.0.0/15  
13.35.0.0/16  
13.248.0.0/20  
13.248.16.0/21  
13.248.24.0/22  
13.248.28.0/22  
27.0.0.0/22  
43.250.192.0/24  
43.250.193.0/24  
...
```

AWS IP address ranges notifications

Whenever there is a change to the AWS IP address ranges, we send notifications to subscribers of the `AmazonIpSpaceChanged` topic. The payload contains information in the following format:

```
{  
    "create-time": "yyyy-mm-ddThh:mm:ss+00:00",  
    "synctoken": "0123456789",  
    "md5": "6a45316e8bc9463c9e926d5d37836d33",  
    "url": "https://ip-ranges.amazonaws.com/ip-ranges.json"  
}
```

create-time

The creation date and time.

Notifications could be delivered out of order. Therefore, we recommend that you check the timestamps to ensure the correct order.

synctoken

The publication time, in Unix epoch time format.

md5

The cryptographic hash value of the `ip-ranges.json` file. You can use this value to check whether the downloaded file is corrupted.

url

The location of the `ip-ranges.json` file.

If you want to be notified whenever there is a change to the AWS IP address ranges, you can subscribe as follows to receive notifications using Amazon SNS.

To subscribe to AWS IP address range notifications

1. Open the Amazon SNS console at <https://console.aws.amazon.com/sns/v3/home>.
2. In the navigation bar, change the Region to **US East (N. Virginia)**, if necessary. You must select this Region because the SNS notifications that you are subscribing to were created in this Region.
3. In the navigation pane, choose **Subscriptions**.
4. Choose **Create subscription**.
5. In the **Create subscription** dialog box, do the following:
 - a. For **Topic ARN**, copy the following Amazon Resource Name (ARN):

arn:aws:sns:us-east-1:806199016981:AmazonIpSpaceChanged
 - b. For **Protocol**, choose the protocol to use (for example, **Email**).
 - c. For **Endpoint**, type the endpoint to receive the notification (for example, your email address).
 - d. Choose **Create subscription**.
6. You'll be contacted on the endpoint that you specified and asked to confirm your subscription. For example, if you specified an email address, you'll receive an email message with the subject line **AWS Notification – Subscription Confirmation**. Follow the directions to confirm your subscription.

Notifications are subject to the availability of the endpoint. Therefore, you might want to check the JSON file periodically to ensure that you've got the latest ranges. For more information about Amazon SNS reliability, see <https://aws.amazon.com/sns/faqs/#Reliability>.

If you no longer want to receive these notifications, use the following procedure to unsubscribe.

To unsubscribe from AWS IP address ranges notifications

1. Open the Amazon SNS console at <https://console.aws.amazon.com/sns/v3/home>.
2. In the navigation pane, choose **Subscriptions**.
3. Select the check box for the subscription.
4. Choose **Actions, Delete subscriptions**.
5. When prompted for confirmation, choose **Delete**.

For more information about Amazon SNS, see the [Amazon Simple Notification Service Developer Guide](#).

Release notes

The following table describes updates to the AWS IP address ranges. We also add new Region codes with each Region launch.

| Description | Release date |
|--|--------------------|
| Added the CLOUDFRONT_ORIGIN_FACING service code. | October 12, 2021 |
| Added the ROUTE53_RESOLVER service code. | June 24, 2021 |
| Added the EBS service code. | May 12, 2021 |
| Added the KINESIS_VIDEO_STREAMS service code. | November 19, 2020 |
| Added the CHIME_MEETINGS and CHIME_VOICECONNECTOR service codes. | June 19, 2020 |
| Added the AMAZON_APPFLOW service code. | June 9, 2020 |
| Add support for the network border group. | April 7, 2020 |
| Added the WORKSPACES_GATEWAYS service code. | March 30, 2020 |
| Added the ROUTE53_HEALTHCHECK_PUBLISHING service code. | January 30, 2020 |
| Added the API_GATEWAY service code. | September 26, 2019 |
| Added the EC2_INSTANCE_CONNECT service code. | June 26, 2019 |
| Added the DYNAMODB service code. | April 25, 2019 |
| Added the GLOBALACCELERATOR service code. | December 20, 2018 |
| Added the AMAZON_CONNECT service code. | June 20, 2018 |
| Added the CLOUD9 service code. | June 20, 2018 |
| Added the CODEBUILD service code. | April 19, 2018 |
| Added the S3 service code. | February 28, 2017 |
| Added support for IPv6 address ranges. | August 22, 2016 |
| Initial release | November 19, 2014 |

AWS APIs

The following pages provide information that is useful when using an AWS API.

Contents

- [Error retries and exponential backoff in AWS \(p. 761\)](#)
- [Signing AWS API requests \(p. 762\)](#)
- [AWS SDK support for Amazon S3 client-side encryption \(p. 798\)](#)

Error retries and exponential backoff in AWS

Numerous components on a network, such as DNS servers, switches, load balancers, and others can generate errors anywhere in the life of a given request. The usual technique for dealing with these error responses in a networked environment is to implement retries in the client application. This technique increases the reliability of the application and reduces operational costs for the developer.

Each AWS SDK implements automatic retry logic. The AWS SDK for Java automatically retries requests, and you can configure the retry settings using the `ClientConfiguration` class. For example, you might want to turn off the retry logic for a web page that makes a request with minimal latency and no retries. Use the `ClientConfiguration` class and provide a `maxErrorRetry` value of 0 to turn off the retries.

If you're not using an AWS SDK, you should retry original requests that receive server (5xx) or throttling errors. However, client errors (4xx) indicate that you need to revise the request to correct the problem before trying again.

In addition to simple retries, each AWS SDK implements exponential backoff algorithm for better flow control. The idea behind exponential backoff is to use progressively longer waits between retries for consecutive error responses. You should implement a maximum delay interval, as well as a maximum number of retries. The maximum delay interval and maximum number of retries are not necessarily fixed values, and should be set based on the operation being performed, as well as other local factors, such as network latency.

Most exponential backoff algorithms use jitter (randomized delay) to prevent successive collisions. Because you aren't trying to avoid such collisions in these cases, you don't need to use this random number. However, if you use concurrent clients, jitter can help your requests succeed faster. For more information, see the blog post for [Exponential Backoff and Jitter](#).

The following pseudo code shows one way to poll for status using an increasing delay.

```
Do some asynchronous operation.

retries = 0

DO
    wait for (2^retries * 100) milliseconds
    status = Get the result of the asynchronous operation.

    IF status = SUCCESS
        retry = false
    ELSE IF status = NOT_READY
        retry = true
    ELSE IF status = THROTTLED
```

```
    retry = true
ELSE
    Some other error occurred, so stop calling the API.
    retry = false
END IF

retries = retries + 1

WHILE (retry AND (retries < MAX_RETRIES))
```

Signing AWS API requests

Important

The [AWS SDKs](#), [AWS Command Line Interface \(AWS CLI\)](#), and other AWS tools sign API requests for you using the access key that you specify when you configure the tool. **When you use these tools, you don't need to learn how to sign API requests. The following documentation explains how to sign API requests, but is *only* useful if you're writing your own code to send and sign AWS API requests.** We recommend that you use the AWS SDKs or other AWS tools to send API requests, instead of writing your own code.

When you send API requests to AWS, you sign the requests so that AWS can identify who sent them. You sign requests with your AWS access key, which consists of an access key ID and secret access key. Some requests don't need to be signed, including anonymous requests to Amazon Simple Storage Service (Amazon S3) and some API operations in AWS Security Token Service (AWS STS) such as [AssumeRoleWithWebIdentity](#).

When to sign requests

When you write custom code to send API requests to AWS, you need to include code to sign the requests. You might do this for the following reasons:

- You are working with a programming language for which there is no AWS SDK.
- You want complete control over how a request is sent to AWS.

You *don't* need to sign requests when you use the AWS CLI or one of the AWS SDKs. These tools calculate the signature for you, and also manage the connection details, handle request retries, and provide error handling. In most cases, they also contain sample code, tutorials, and other resources to help you get started writing applications that interact with AWS.

Why requests are signed

The signing process helps secure requests in the following ways:

- **Verify the identity of the requester**

Signing makes sure that the request has been sent by someone with a valid access key. For more information, see [Understanding and getting your AWS credentials \(p. 3\)](#).

- **Protect data in transit**

To prevent tampering with a request while it's in transit, some of the request elements are used to calculate a hash (digest) of the request, and the resulting hash value is included as part of the request. When an AWS service receives the request, it uses the same information to calculate a hash and matches it against the hash value in your request. If the values don't match, AWS denies the request.

- **Protect against potential replay attacks**

In most cases, a request must reach AWS within five minutes of the time stamp in the request. Otherwise, AWS denies the request.

Signing requests

To sign a request, you first calculate a hash (digest) of the request. Then you use the hash value, some other information from the request, and your secret access key to calculate another hash known as the *signature*. Then you add the signature to the request in one of the following ways:

- Using the `HTTP Authorization` header.
- Adding a query string value to the request. Because the signature is part of the URL in this case, this type of URL is called a *presigned URL*.

Signature versions

AWS supports Signature Version 4 (SigV4) and Signature Version 2 (SigV2). All AWS services in all AWS Regions support SigV4, except Amazon SimpleDB which requires SigV2. The [AWS SDKs](#), including the [AWS CLI](#), automatically use SigV4 for all services that support it. If you manually sign API requests, you should do the same.

AWS is rolling out an extension to SigV4 called *Signature Version 4A (SigV4A)*. This extension enables signatures that are valid in more than one AWS Region. This is required for signing multi-Region API requests, for example with [Amazon S3 Multi-Region Access Points](#). The AWS SDKs and AWS CLI support SigV4A and use it automatically when it's needed.

Note

To use SigV4A with temporary security credentials—for example, when using IAM roles—make sure that you request the temporary credentials from a regional endpoint in AWS Security Token Service (AWS STS). Don't use the global endpoint for AWS STS (`sts.amazonaws.com`), because by default temporary credentials from the global endpoint don't work with SigV4A. You can use any of the [regional endpoints for AWS STS](#).

Signature Version 4 signing process

Important

The [AWS SDKs](#), [AWS Command Line Interface \(AWS CLI\)](#), and other AWS tools sign API requests for you using the access key that you specify when you configure the tool. **When you use these tools, you don't need to learn how to sign API requests. The following documentation explains how to sign API requests, but is only useful if you're writing your own code to send and sign AWS API requests.** We recommend that you use the AWS SDKs or other AWS tools to send API requests, instead of writing your own code.

Signature Version 4 (SigV4) is the process to add authentication information to AWS API requests sent by HTTP. For security, most requests to AWS must be signed with an access key. The access key consists of an access key ID and secret access key, which are commonly referred to as your security credentials. For details on how to obtain credentials for your account, see [Understanding and getting your AWS credentials \(p. 3\)](#).

How Signature Version 4 works

1. Create a canonical request.
2. Use the canonical request and additional metadata to create a string for signing.
3. Derive a signing key from your AWS secret access key. Then use the signing key, and the string from the previous step, to create a signature.

4. Add the resulting signature to the HTTP request in a header or as a query string parameter.

When an AWS service receives the request, it performs the same steps that you did to calculate the signature you sent in your request. AWS then compares its calculated signature to the one you sent with the request. If the signatures match, the request is processed. If the signatures don't match, the request is denied.

For more information, see the following resources:

- To get started with the signing process, see [Signing AWS requests with Signature Version 4 \(p. 766\)](#).
- For sample signed requests, see [Examples of the complete Signature Version 4 signing process \(Python\) \(p. 781\)](#).
- If you have questions about Signature Version 4, post your question in the [AWS Identity and Access Management forum](#).

Changes in Signature Version 4

Signature Version 4 is the current AWS signing protocol. It includes several changes from the previous Signature Version 2:

- To sign your message, you use a *signing key* that is derived from your secret access key rather than using the secret access key itself. For more information about deriving keys, see [Task 3: Calculate the signature for AWS Signature Version 4 \(p. 774\)](#).
- You derive your signing key from the *credential scope*, which means that you don't need to include the key itself in the request. Credential scope is represented by a slash-separated string of dimensions in the following order:
 1. Date information as an eight-digit string representing the year (YYYY), month (MM), and day (DD) of the request (for example, 20150830). For more information about handling dates, see [Handling dates in Signature Version 4 \(p. 778\)](#).
 2. Region information as a lowercase alphanumeric string. Use the Region name that is part of the service's endpoint. For services with a globally unique endpoint such as IAM, use us-east-1.
 3. Service name information as a lowercase alphanumeric string (for example, iam). Use the service name that is part of the service's endpoint. For example, the IAM endpoint is https://iam.amazonaws.com, so you use the string iam as part of the Credential parameter.
 4. A special termination string: aws4_request.
- You use the credential scope in each signing task:
 - If you add signing information to the query string, include the credential scope as part of the x-Amz-Credential parameter when you create the canonical request in [Task 1: Create a canonical request for Signature Version 4 \(p. 768\)](#).
 - You must include the credential scope as part of your string to sign in [Task 2: Create a string to sign for Signature Version 4 \(p. 773\)](#).
 - Finally, you use the date, Region, and service name components of the credential scope to derive your signing key in [Task 3: Calculate the signature for AWS Signature Version 4 \(p. 774\)](#).

Elements of an AWS Signature Version 4 request

Each HTTP/HTTPS request that uses version 4 signing must contain these elements.

- Endpoint Specification
- Action
- Required and Optional Parameters

- Date
- Authentication Parameters

Endpoint specification

This is specified as the `Host` header in HTTP/1.1 requests. This header specifies the DNS name of the computer to which you send the request, like `dynamodb.us-east-1.amazonaws.com`.

You must include the `Host` header with HTTP/1.1 requests. For HTTP/2 requests, you can use the `:authority` header or the `Host` header. Use only the `:authority` header for compliance with the HTTP/2 specification. Not all services support HTTP/2 requests, so check the service documentation for details.

The endpoint usually contains the service name and Region, both of which you must use as part of the `Credential` authentication parameter. For example, the Amazon DynamoDB endpoint for the `eu-west-1` Region is `dynamodb.eu-west-1.amazonaws.com`. If you don't specify a Region, a web service uses the default Region, `us-east-1`. If you use a service like IAM that uses a globally unique endpoint, use the default Region (`us-east-1`), as part of the `Credential` authentication parameter (described later in this topic).

For a complete list of endpoints supported by AWS, see [Regions and Endpoints](#).

Action

This element specifies the action that you want a web service to perform, such as the DynamoDB `CreateTable` action or the Amazon EC2 `DescribeInstances` action. The specified action determines the parameters used in the request. For query APIs, the action is an API name. For non-query APIs (such as RESTful APIs), see the service documentation for the appropriate actions.

Required and optional parameters

This element specifies the parameters to the request action. Each action in a web service has a set of required and optional parameters that define an API call. The API version is usually a required parameter. See the service documentation for the details of required and optional parameters.

Date

This is the date and time at which you make the request. Including the date in the request helps prevent third parties from intercepting your request and resubmitting it later. The date is specified using the ISO8601 Basic format via the `x-amz-date` header in the `YYYYMMDD 'T' HHMMSS 'Z'` format.

Authentication parameters

Each request that you send must include the following set of parameters that AWS uses to ensure the validity and authenticity of the request.

- *Algorithm*. The hash algorithm that you're using as part of the signing process. For example, if you use SHA-256 to create hashes, use the value `AWS4-HMAC-SHA256`.
- *Credential scope*. A string separated by slashes ("/") that is formed by concatenating your access key ID and your credential scope components. Credential scope includes the date in `YYYYMMDD` format, the AWS Region, the service name, and a special termination string (`aws4_request`). For example, the following string represents the `Credential` parameter for an IAM request in the `us-east-1` Region.

`AKIAIOSFODNN7EXAMPLE/20111015/us-east-1/iam/aws4_request`

Important

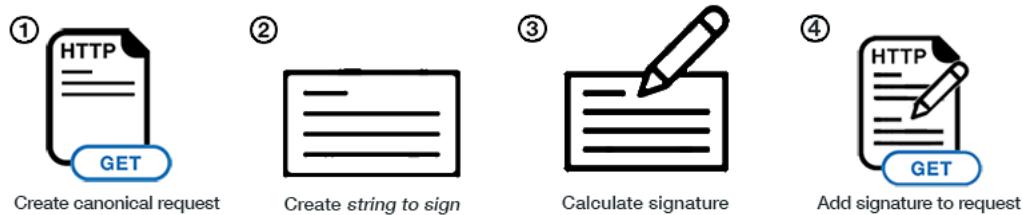
You must use lowercase characters for the Region, service name, and special termination string.

- *SignedHeaders* A list delimited by semicolons (";") of HTTP/HTTPS headers to include in the signature.
- *Signature* A hexadecimal-encoded string that represents the output of the signature operation described in [Task 3: Calculate the signature for AWS Signature Version 4 \(p. 774\)](#). You must calculate the signature using the algorithm that you specified in the Algorithm parameter.

To view sample signed requests, see [Examples of the complete Signature Version 4 signing process \(Python\) \(p. 781\)](#).

Signing AWS requests with Signature Version 4

This section explains how to create a signature and add it to an HTTP request to AWS.



Summary of signing steps

To create a signed request, complete the following:

- [Task 1: Create a canonical request for Signature Version 4 \(p. 768\)](#)

Arrange the contents of your request (host, action, headers, etc.) into a standard (*canonical*) format. The canonical request is one of the inputs used to create a string to sign.

- [Task 2: Create a string to sign for Signature Version 4 \(p. 773\)](#)

Create a *string to sign* with the canonical request and extra information such as the algorithm, request date, credential scope, and the digest (hash) of the canonical request.

- [Task 3: Calculate the signature for AWS Signature Version 4 \(p. 774\)](#)

Derive a signing key by performing a succession of keyed hash operations (HMAC operations) on the request date, Region, and service, with your AWS secret access key as the key for the initial hashing operation. After you derive the signing key, you then calculate the signature by performing a keyed hash operation on the string to sign. Use the derived signing key as the hash key for this operation.

- [Task 4: Add the signature to the HTTP request \(p. 776\)](#)

After you calculate the signature, add it to an HTTP header or to the query string of the request.

Important

The AWS SDKs handle the signature calculation process for you, so you do not have to manually complete the signing process. For more information, see [Tools for Amazon Web Services](#).

Additional resources

The following resources illustrate aspects of the signing process:

- [Examples of how to derive a signing key for Signature Version 4 \(p. 778\)](#). This page shows how to derive a signing key using Java, C#, Python, Ruby, and JavaScript.
- [Examples of the complete Signature Version 4 signing process \(Python\) \(p. 781\)](#). This set of programs in Python provide complete examples of the signing process. The examples show signing with a POST request, with a GET request that has signing information in a request header, and with a GET request that has signing information in the query string.

What signing looks like in a request

The following example shows what an HTTPS request might look like as it is sent from your client to AWS, without any signing information.

```
GET https://iam.amazonaws.com/?Action=ListUsers&Version=2010-05-08 HTTP/1.1
Content-Type: application/x-www-form-urlencoded; charset=utf-8
Host: iam.amazonaws.com
X-Amz-Date: 20150830T123600Z
```

After you complete the signing tasks, you add the authentication information to the request. You can add the authentication information in two ways:

Authorization header

You can add the authentication information to the request with an **Authorization** header. Although the HTTP header is named **Authorization**, the signing information is actually used for authentication to establish who the request came from.

The **Authorization** header includes the following information:

- Algorithm you used for signing (AWS4-HMAC-SHA256)
- Credential scope (with your access key ID)
- List of signed headers
- Calculated signature. The signature is based on your request information, and you use your AWS secret access key to produce the signature. The signature confirms your identity to AWS.

The following example shows what the preceding request might look like after you've created the signing information and added it to the request in the **Authorization** header.

Note that in the actual request, the **Authorization** header would appear as a continuous line of text. The version below has been formatted for readability.

```
GET https://iam.amazonaws.com/?Action=ListUsers&Version=2010-05-08 HTTP/1.1
Authorization: AWS4-HMAC-SHA256
Credential=AKIDEXAMPLE/20150830/us-east-1/iam/aws4_request,
SignedHeaders=content-type;host;x-amz-date,
Signature=5d672d79c15b13162d9279b0855cfba6789a8edb4c82c400e06b5924a6f2b5d7
content-type: application/x-www-form-urlencoded; charset=utf-8
host: iam.amazonaws.com
x-amz-date: 20150830T123600Z
```

Query string

As an alternative to adding authentication information with an HTTP request header, you can include it in the query string. The query string contains everything that is part of the request, including the name and parameters for the action, the date, and the authentication information.

The following example shows how you might construct a GET request with the action and authentication information in the query string.

(In the actual request, the query string would appear as a continuous line of text. The version below has been formatted with line breaks for readability.)

```
GET https://iam.amazonaws.com?Action=ListUsers&Version=2010-05-08
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIDEXAMPLE%2F20150830%2Fus-east-1%2Fiam%2Faws4_request
&X-Amz-Date=20150830T123600Z
&X-Amz-Expires=60
```

```
&X-Amz-SignedHeaders=content-type%3Bhost
&X-Amz-Signature=37ac2f4fde00b0ac9bd9eadeb459b1bbe224158d66e7ae5fcadb70b2d181d02 HTTP/1.1
content-type: application/x-www-form-urlencoded; charset=utf-8
host: iam.amazonaws.com
```

GET and POST requests in the Query API

The query API that many AWS services support lets you make requests using either HTTP GET or POST. (In the query API, you can use GET even if you're making requests that change state; that is, the query API is not inherently RESTful.) Because GET requests pass parameters on the query string, they are limited to the maximum length of a URL. If a request includes a large payload (for example, you might upload a large IAM policy or send many parameters in JSON format for a DynamoDB request), you generally use a POST request.

The signing process is the same for both types of requests.

Task 1: Create a canonical request for Signature Version 4

To begin the signing process, create a string that includes information from your request in a standardized (canonical) format. This ensures that when AWS receives the request, it can calculate the same signature that you calculated.

Follow the steps here to create a canonical version of the request. Otherwise, your version and the version calculated by AWS won't match, and the request will be denied.

The following example shows the pseudocode to create a canonical request.

Example Canonical request pseudocode

```
CanonicalRequest =
    HTTPRequestMethod + '\n' +
    CanonicalURI + '\n' +
    CanonicalQueryString + '\n' +
    CanonicalHeaders + '\n' +
    SignedHeaders + '\n' +
    HexEncode(Hash(RequestPayload))
```

In this pseudocode, Hash represents a function that produces a message digest, typically SHA-256. (Later in the process, you specify which hashing algorithm you're using.) HexEncode represents a function that returns the base-16 encoding of the digest in lowercase characters. For example, HexEncode("m") returns the value `6d` rather than `6D`. Each input byte must be represented as exactly two hexadecimal characters.

Signature Version 4 does not require that you use a particular character encoding to encode the canonical request. However, some AWS services might require a specific encoding. For more information, consult the documentation for that service.

The following examples show how to construct the canonical form of a request to IAM. The original request might look like this as it is sent from the client to AWS, except that this example does not include the signing information yet.

Example Request

```
GET https://iam.amazonaws.com/?Action>ListUsers&Version=2010-05-08 HTTP/1.1
Host: iam.amazonaws.com
Content-Type: application/x-www-form-urlencoded; charset=utf-8
X-Amz-Date: 20150830T123600Z
```

The preceding example request is a GET request (method) that makes a `ListUsers` API (action) call to AWS Identity and Access Management (host). This action takes the `Version` parameter.

To create a canonical request, concatenate the following components from each step into a single string:

1. Start with the HTTP request method (GET, PUT, POST, etc.), followed by a newline character.

Example Request method

```
GET
```

2. Add the canonical URI parameter, followed by a newline character. The canonical URI is the URI-encoded version of the absolute path component of the URI, which is everything in the URI from the HTTP host to the question mark character ("?") that begins the query string parameters (if any).

Normalize URI paths according to [RFC 3986](#). Remove redundant and relative path components. Each path segment must be URI-encoded **twice** (except for Amazon S3 which only gets URI-encoded once).

Example Canonical URI with encoding

```
/documents%2520and%2520settings/
```

Note

In exception to this, you do not normalize URI paths for requests to Amazon S3. For example, if you have a bucket with an object named my-object//example//photo.user, use that path. Normalizing the path to my-object/example/photo.user will cause the request to fail. For more information, see [Task 1: Create a Canonical Request](#) in the *Amazon Simple Storage Service API Reference*.

If the absolute path is empty, use a forward slash (/). In the example IAM request, nothing follows the host in the URI, so the absolute path is empty.

Example Canonical URI

```
/
```

3. Add the canonical query string, followed by a newline character. If the request does not include a query string, use an empty string (essentially, a blank line). The example request has the following query string.

Example Canonical query string

```
Action=ListUsers&Version=2010-05-08
```

To construct the canonical query string, complete the following steps:

- a. Sort the parameter names by character code point in ascending order. Parameters with duplicate names should be sorted by value. For example, a parameter name that begins with the uppercase letter F precedes a parameter name that begins with a lowercase letter b.
- b. URI-encode each parameter name and value according to the following rules:
 - Do not URI-encode any of the unreserved characters that [RFC 3986](#) defines: A-Z, a-z, 0-9, hyphen (-), underscore (_), period (.), and tilde (~).
 - Percent-encode all other characters with %XY, where X and Y are hexadecimal characters (0-9 and uppercase A-F). For example, the space character must be encoded as %20 (not using '+', as some encoding schemes do) and extended UTF-8 characters must be in the form %XY%ZA

- Double-encode any equals (=) characters in parameter values.
- c. Build the canonical query string by starting with the first parameter name in the sorted list.
- d. For each parameter, append the URI-encoded parameter name, followed by the equals sign character (=), followed by the URI-encoded parameter value. Use an empty string for parameters that have no value.
- e. Append the ampersand character (&) after each parameter value, except for the last value in the list.

One option for the query API is to put all request parameters in the query string. For example, you can do this for Amazon S3 to create a presigned URL. In that case, the canonical query string must include not only parameters for the request, but also the parameters used as part of the signing process—the hashing algorithm, credential scope, date, and signed headers parameters.

The following example shows a query string that includes authentication information. The example is formatted with line breaks for readability, but the canonical query string must be one continuous line of text in your code.

Example Authentication parameters in a query string

```
Action>ListUsers&
Version=2010-05-08&
X-Amz-Algorithm=AWS4-HMAC-SHA256&
X-Amz-Credential=AKIDEXAMPLE%2F20150830%2Fus-east-1%2Fiam%2Faws4_request&
X-Amz-Date=20150830T123600Z&
X-Amz-SignedHeaders=content-type%3Bhost%3Bx-amz-date
```

For more information about authentication parameters, see [Task 2: Create a string to sign for Signature Version 4 \(p. 773\)](#).

Note

You can use temporary security credentials provided by the AWS Security Token Service (AWS STS) to sign a request. The process is the same as using long-term credentials, but when you add signing information to the query string you must add an additional query parameter for the security token. The parameter name is X-Amz-Security-Token, and the parameter's value is the URI-encoded session token (the string you received from AWS STS when you obtained temporary security credentials).

For some services, you must include the X-Amz-Security-Token query parameter in the canonical (signed) query string. For other services, you add the X-Amz-Security-Token parameter at the end, after you calculate the signature. For details, see the API reference documentation for that service.

4. Add the canonical headers, followed by a newline character. The canonical headers consist of a list of all the HTTP headers that you are including with the signed request.

For HTTP/1.1 requests, you must include the host header at a minimum. Standard headers like content-type are optional. For HTTP/2 requests, you must include the :authority header instead of the host header. Different services might require other headers.

Example Canonical headers

```
content-type:application/x-www-form-urlencoded; charset=utf-8\nhost:iam.amazonaws.com\nx-amz-date:20150830T123600Z\n
```

To create the canonical headers list, convert all header names to lowercase and remove leading spaces and trailing spaces. Convert sequential spaces in the header value to a single space.

The following pseudocode describes how to construct the canonical list of headers:

```
CanonicalHeaders =
CanonicalHeadersEntry0 + CanonicalHeadersEntry1 + ... + CanonicalHeadersEntryN
CanonicalHeadersEntry =
Lowercase(HeaderName) + ':' + Trimall(HeaderValue) + '\n'
```

Lowercase represents a function that converts all characters to lowercase. The Trimall function removes excess white space before and after values, and converts sequential spaces to a single space.

Build the canonical headers list by sorting the (lowercase) headers by character code and then iterating through the header names. Construct each header according to the following rules:

- Append the lowercase header name followed by a colon.
- Append a comma-separated list of values for that header. Do not sort the values in headers that have multiple values.
- Append a new line ('\n').

The following examples compare a more complex set of headers with their canonical form:

Example Original headers

```
Host:iam.amazonaws.com\n
Content-Type:application/x-www-form-urlencoded; charset=utf-8\n
My-header1: a b c \n
X-Amz-Date:20150830T123600Z\n
My-Header2: "a b c" \n
```

Example Canonical form

```
content-type:application/x-www-form-urlencoded; charset=utf-8\n
host:iam.amazonaws.com\n
my-header1:a b c\n
my-header2:"a b c"\n
x-amz-date:20150830T123600Z\n
```

Note

Each header is followed by a newline character, meaning the complete list ends with a newline character.

In the canonical form, the following changes were made:

- The header names were converted to lowercase characters.
- The headers were sorted by character code.
- Leading and trailing spaces were removed from the my-header1 and my-header2 values.
- Sequential spaces in a b c were converted to a single space for the my-header1 and my-header2 values.

Note

You can use temporary security credentials provided by the AWS Security Token Service (AWS STS) to sign a request. The process is the same as using long-term credentials, but when you include signing information in the Authorization header you must add an

additional HTTP header for the security token. The header name is `X-Amz-Security-Token`, and the header's value is the session token (the string you received from AWS STS when you obtained temporary security credentials).

5. Add the signed headers, followed by a newline character. This value is the list of headers that you included in the canonical headers. By adding this list of headers, you tell AWS which headers in the request are part of the signing process and which ones AWS can ignore (for example, any additional headers added by a proxy) for purposes of validating the request.

For HTTP/1.1 requests, the `host` header must be included as a signed header. For HTTP/2 requests that include the `:authority` header instead of the `host` header, you must include the `:authority` header as a signed header. If you include a date or `x-amz-date` header, you must also include that header in the list of signed headers.

To create the signed headers list, convert all header names to lowercase, sort them by character code, and use a semicolon to separate the header names. The following pseudocode describes how to construct a list of signed headers. `Lowercase` represents a function that converts all characters to lowercase.

```
SignedHeaders =  
Lowercase(HeaderName0) + ';' + Lowercase(HeaderName1) + ";" + ... +  
Lowercase(HeaderNameN)
```

Build the signed headers list by iterating through the collection of header names, sorted by lowercase character code. For each header name except the last, append a semicolon (';') to the header name to separate it from the following header name.

Example Signed headers

```
content-type;host;x-amz-date\n
```

6. Use a hash (digest) function like SHA256 to create a hashed value from the payload in the body of the HTTP or HTTPS request. Signature Version 4 does not require that you use a particular character encoding to encode text in the payload. However, some AWS services might require a specific encoding. For more information, consult the documentation for that service.

Example Structure of payload

```
HashedPayload = Lowercase(HexEncode(Hash(requestPayload)))
```

When you create the string to sign, you specify the signing algorithm that you used to hash the payload. For example, if you used SHA256, you will specify AWS4-HMAC-SHA256 as the signing algorithm. The hashed payload must be represented as a lowercase hexadecimal string.

If the payload is empty, use an empty string as the input to the hash function. In the IAM example, the payload is empty.

Example Hashed payload (empty string)

```
e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
```

7. To construct the finished canonical request, combine all the components from each step as a single string. As noted, each component ends with a newline character. If you follow the canonical request pseudocode explained earlier, the resulting canonical request is shown in the following example.

Example Canonical request

```
GET
/
Action=ListUsers&Version=2010-05-08
Content-Type:application/x-www-form-urlencoded; charset=utf-8
Host:iam.amazonaws.com
x-amz-date:20150830T123600Z

Content-Type;Host;x-amz-date
e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
```

8. Create a digest (hash) of the canonical request with the same algorithm that you used to hash the payload.

Note

Signature Version 4 does not require that you use a particular character encoding to encode the canonical request before calculating the digest. However, some AWS services might require a specific encoding. For more information, consult the documentation for that service.

The hashed canonical request must be represented as a string of lowercase hexadecimal characters. The following example shows the result of using SHA-256 to hash the example canonical request.

Example Hashed canonical request

```
f536975d06c0309214f805bb90ccff089219ecd68b2577fefef23edd43b7e1a59
```

You include the hashed canonical request as part of the string to sign in [Task 2: Create a string to sign for Signature Version 4 \(p. 773\)](#).

Task 2: Create a string to sign for Signature Version 4

The *string to sign* includes meta information about your request and about the canonical request that you created in [Task 1: Create a canonical request for Signature Version 4 \(p. 768\)](#). You will use the string to sign and a derived signing key that you create later as inputs to calculate the request signature in [Task 3: Calculate the signature for AWS Signature Version 4 \(p. 774\)](#).

To create the string to sign, concatenate the algorithm, date and time, credential scope, and digest of the canonical request, as shown in the following pseudocode:

Structure of string to sign

```
StringToSign =
    Algorithm + \n +
    RequestDateTime + \n +
    CredentialScope + \n +
    HashedCanonicalRequest
```

The following example shows how to construct the string to sign with the same request from [Task 1: Create A Canonical Request \(p. 768\)](#).

Example HTTPS request

```
GET https://iam.amazonaws.com/?Action=ListUsers&Version=2010-05-08 HTTP/1.1
Host: iam.amazonaws.com
Content-Type: application/x-www-form-urlencoded; charset=utf-8
```

X-Amz-Date: 20150830T123600Z

To create the string to sign

1. Start with the algorithm designation, followed by a newline character. This value is the hashing algorithm that you use to calculate the digests in the canonical request. For SHA256, AWS4-HMAC-SHA256 is the algorithm.

AWS4-HMAC-SHA256\n

2. Append the request date value, followed by a newline character. The date is specified with ISO8601 basic format in the x-amz-date header in the format YYYYMMDD'T'HHMMSS'Z'. This value must match the value you used in any previous steps.

20150830T123600Z\n

3. Append the credential scope value, followed by a newline character. This value is a string that includes the date, the Region you are targeting, the service you are requesting, and a termination string ("aws4_request") in lowercase characters. The Region and service name strings must be UTF-8 encoded.

20150830/us-east-1/iam/aws4_request\n

- The date must be in the YYYYMMDD format. Note that the date does not include a time value.
- Verify that the Region you specify is the Region that you are sending the request to.

4. Append the hash of the canonical request that you created in [Task 1: Create a canonical request for Signature Version 4 \(p. 768\)](#). This value is not followed by a newline character. The hashed canonical request must be lowercase base-16 encoded, as defined by [Section 8 of RFC 4648](#).

f536975d06c0309214f805bb90ccff089219ecd68b2577fefef23edd43b7e1a59

The following string to sign is a request to IAM on August 30, 2015.

Example string to sign

AWS4-HMAC-SHA256
20150830T123600Z
20150830/us-east-1/iam/aws4_request
f536975d06c0309214f805bb90ccff089219ecd68b2577fefef23edd43b7e1a59

Task 3: Calculate the signature for AWS Signature Version 4

Before you calculate a signature, you derive a signing key from your AWS secret access key. Because the derived signing key is specific to the date, service, and Region, it offers a greater degree of protection. You don't just use your secret access key to sign the request. You then use the signing key and the string to sign that you created in [Task 2: Create a string to sign for Signature Version 4 \(p. 773\)](#) as the inputs to a keyed hash function. The hex-encoded result from the keyed hash function is the signature.

Signature Version 4 does not require that you use a particular character encoding to encode the string to sign. However, some AWS services might require a specific encoding. For more information, consult the documentation for that service.

To calculate a signature

- Derive your signing key. To do this, use your secret access key to create a series of hash-based message authentication codes (HMACs). This is shown in the following pseudocode, where `HMAC(key, data)` represents an HMAC-SHA256 function that returns output in binary format. The result of each hash function becomes input for the next one.

Pseudocode for deriving a signing key

```
kSecret = your secret access key
kDate = HMAC("AWS4" + kSecret, Date)
kRegion = HMAC(kDate, Region)
kService = HMAC(kRegion, Service)
kSigning = HMAC(kService, "aws4_request")
```

Note that the date used in the hashing process is in the format YYYYMMDD (for example, 20150830), and does not include the time.

Make sure you specify the HMAC parameters in the correct order for the programming language you are using. This example shows the key as the first parameter and the data (message) as the second parameter, but the function that you use might specify the key and data in a different order.

Use the digest (binary format) for the key derivation. Most languages have functions to compute either a binary format hash, commonly called a digest, or a hex-encoded hash, called a hexdigest. The key derivation requires that you use a binary-formatted digest.

The following example show the inputs to derive a signing key and the resulting output, where `kSecret = wJalrXUtnFEMI/K7MDENG+bPxRfiCYEXAMPLEKEY`.

The example uses the same parameters from the request in Task 1 and Task 2 (a request to IAM in the us-east-1 Region on August 30, 2015).

Example inputs

```
HMAC(HMAC(HMAC(HMAC("AWS4" + kSecret, "20150830"), "us-east-1"), "iam"), "aws4_request")
```

The following example shows the derived signing key that results from this sequence of HMAC hash operations. This shows the hexadecimal representation of each byte in the binary signing key.

Example signing key

```
c4afb1cc5771d871763a393e44b703571b55cc28424d1a5e86da6ed3c154a4b9
```

For more information about how to derive a signing key in different programming languages, see [Examples of how to derive a signing key for Signature Version 4 \(p. 778\)](#).

- Calculate the signature. To do this, use the signing key that you derived and the string to sign as inputs to the keyed hash function. After you calculate the signature, convert the binary value to a hexadecimal representation.

The following pseudocode shows how to calculate the signature.

```
signature = HexEncode(HMAC(derived signing key, string to sign))
```

Note

Make sure you specify the HMAC parameters in the correct order for the programming language you are using. This example shows the key as the first parameter and the data as the second parameter.

(message) as the second parameter, but the function that you use might specify the key and data in a different order.

The following example shows the resulting signature if you use the same signing key and the string to sign from Task 2:

Example signature

```
5d672d79c15b13162d9279b0855cfba6789a8edb4c82c400e06b5924a6f2b5d7
```

Task 4: Add the signature to the HTTP request

After you calculate the signature, add it to the request. You can add the signature to a request in one of two ways:

- An HTTP header named `Authorization`
- The query string

You cannot pass signing information in both the `Authorization` header and the query string.

Note

You can use temporary security credentials provided by the AWS Security Token Service (AWS STS) to sign a request. The process is the same as using long-term credentials, but requires an additional HTTP header or query string parameter for the security token. The name of the header or query string parameter is `X-Amz-Security-Token`, and the value is the session token (the string you received from AWS STS when you obtained temporary security credentials).

When you add the `X-Amz-Security-Token` parameter to the query string, some services require that you include this parameter in the canonical (signed) request. For other services, you add this parameter at the end, after you calculate the signature. For details, see the API reference documentation for that service.

Adding signing information to the authorization header

You can include signing information by adding it to an HTTP header named `Authorization`. The contents of the header are created after you calculate the signature as described in the preceding steps, so the `Authorization` header is not included in the list of signed headers. Although the header is named `Authorization`, the signing information is actually used for authentication.

The following pseudocode shows the construction of the `Authorization` header.

```
Authorization: algorithm Credential=access key ID/credential scope,
SignedHeaders=SignedHeaders, Signature=signature
```

The following example shows a finished `Authorization` header.

Note that in the actual request, the authorization header would appear as a continuous line of text. The version below has been formatted for readability.

```
Authorization: AWS4-HMAC-SHA256
Credential=AKIDEXAMPLE/20150830/us-east-1/iam/aws4_request,
SignedHeaders=content-type;host;x-amz-date,
Signature=5d672d79c15b13162d9279b0855cfba6789a8edb4c82c400e06b5924a6f2b5d7
```

Note the following:

- There is no comma between the algorithm and `Credential`. However, the `SignedHeaders` and `Signature` are separated from the preceding values with a comma.
- The `Credential` value starts with the access key ID, which is followed by a forward slash (/), which is followed by the credential scope that you calculated in [Task 2: Create a string to sign for Signature Version 4 \(p. 773\)](#). The secret access key is used to derive the signing key for the signature, but is not included in the signing information sent in the request.

Adding signing information to the Query string

You can make requests and pass all request values in the query string, including signing information. This is sometimes referred to as a *presigned URL*, because it produces a single URL with everything required in order to make a successful call to AWS. It's commonly used in Amazon S3. For more information, see [Authenticating Requests by Using Query Parameters \(AWS Signature Version 4\)](#) in the *Amazon Simple Storage Service API Reference*.

Important

If you make a request in which all parameters are included in the query string, the resulting URL represents an AWS action that is already authenticated. Therefore, treat the resulting URL with as much caution as you would treat your actual credentials. We recommend you specify a short expiration time for the request with the `X-Amz-Expires` parameter.

When you use this approach, all the query string values (except the signature) are included in the canonical query string that is part of the canonical query that you construct in [the first part of the signing process \(p. 768\)](#).

The following pseudocode shows the construction of a query string that contains all request parameters.

```
querystring = Action=action
querystring += &X-Amz-Algorithm=algorithm
querystring += &X-Amz-Credential= urlencode(access_key_ID + '/' + credential_scope)
querystring += &X-Amz-Date=date
querystring += &X-Amz-Expires=timeout_interval
querystring += &X-Amz-SignedHeaders=signed_headers
```

After the signature is calculated (which uses the other query string values as part of the calculation), you add the signature to the query string as the `X-Amz-Signature` parameter:

```
querystring += &X-Amz-Signature=signature
```

The following example shows what a request might look like when all the request parameters and the signing information are included in query string parameters.

Note that in the actual request, the authorization header would appear as a continuous line of text. The version below has been formatted for readability.

```
https://iam.amazonaws.com?Action=ListUsers&Version=2010-05-08
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIDEXAMPLE%2F20150830%2Fus-east-1%2Fiam%2Faws4_request
&X-Amz-Date=20150830T123600Z
&X-Amz-Expires=60
&X-Amz-SignedHeaders=content-type%3Bhost
&X-Amz-Signature=37ac2f4fde00b0ac9bd9eadeb459b1bbe224158d66e7ae5fcadb70b2d181d02
```

Note the following:

- For the signature calculation, query string parameters must be sorted in code point order from low to high, and their values must be URI-encoded. See the step about creating a canonical query string in [Task 1: Create a canonical request for Signature Version 4 \(p. 768\)](#).

- Set the timeout interval (`x-Amz-Expires`) to the minimal viable time for the operation you're requesting.

Handling dates in Signature Version 4

The date that you use as part of your credential scope must match the date of your request. You can include the date as part of your request in several ways. You can use a date header, an `x-amz-date` header or include `x-amz-date` as a query parameter. For example requests, see [Examples of the complete Signature Version 4 signing process \(Python\) \(p. 781\)](#).

The time stamp must be in UTC and in the following ISO 8601 format: `YYYYMMDD'T'HHMMSS'Z`. For example, `20150830T123600Z` is a valid time stamp. Do not include milliseconds in the time stamp.

AWS first checks the `x-amz-date` header or parameter for a time stamp. If AWS can't find a value for `x-amz-date`, it looks for the date header. AWS then checks the credential scope for an eight-digit string representing the year (YYYY), month (MM), and day (DD) of the request. For example, if the `x-amz-date` header value is `20111015T080000Z` and the date component of the credential scope is `20111015`, AWS allows the authentication process to proceed.

If the dates don't match, AWS rejects the request, even if the time stamp is only seconds away from the date in the credential scope. For example, AWS will reject a request that has an `x-amz-date` header value of `20151014T235959Z` and a credential scope that has the date `20151015`.

Examples of how to derive a signing key for Signature Version 4

This page shows examples in several programming languages for how to derive a signing key for Signature Version 4. The examples on this page show only how to derive a signing key, which is just one part of signing AWS requests. For examples that show the complete process, see [Examples of the complete Signature Version 4 signing process \(Python\) \(p. 781\)](#).

Important

If you are using one of the [AWS SDKs](#) (including the SDK for Java, .NET, Python, Ruby, or JavaScript), you do not have to manually perform the steps of deriving a signing key and adding authentication information to a request. The SDKs perform this work for you. You need to manually sign requests only if you are directly making HTTP or HTTPS requests.

Examples

- [Deriving a signing key using Java \(p. 778\)](#)
- [Deriving a signing key using .NET \(C#\) \(p. 779\)](#)
- [Deriving a signing key using Python \(p. 779\)](#)
- [Deriving a signing key using Ruby \(p. 779\)](#)
- [Deriving a signing key using JavaScript \(Node.js\) \(p. 779\)](#)
- [Deriving a signing key using other languages \(p. 780\)](#)
- [Common coding errors \(p. 780\)](#)

Deriving a signing key using Java

```
static byte[] HmacSHA256(String data, byte[] key) throws Exception {
    String algorithm="HmacSHA256";
    Mac mac = Mac.getInstance(algorithm);
    mac.init(new SecretKeySpec(key, algorithm));
    return mac.doFinal(data.getBytes("UTF-8"));
}

static byte[] getSignatureKey(String key, String dateStamp, String regionName, String
    serviceName) throws Exception {
```

```
byte[] kSecret = ("AWS4" + key).getBytes("UTF-8");
byte[] kDate = HmacSHA256(dateStamp, kSecret);
byte[] kRegion = HmacSHA256(regionName, kDate);
byte[] kService = HmacSHA256(serviceName, kRegion);
byte[] kSigning = HmacSHA256("aws4_request", kService);
return kSigning;
}
```

Deriving a signing key using .NET (C#)

```
static byte[] HmacSHA256(String data, byte[] key)
{
    String algorithm = "HmacSHA256";
    KeyedHashAlgorithm kha = KeyedHashAlgorithm.Create(algorithm);
    kha.Key = key;

    return kha.ComputeHash(Encoding.UTF8.GetBytes(data));
}

static byte[] getSignatureKey(String key, String dateStamp, String regionName, String
    serviceName)
{
    byte[] kSecret = Encoding.UTF8.GetBytes(("AWS4" + key).ToCharArray());
    byte[] kDate = HmacSHA256(dateStamp, kSecret);
    byte[] kRegion = HmacSHA256(regionName, kDate);
    byte[] kService = HmacSHA256(serviceName, kRegion);
    byte[] kSigning = HmacSHA256("aws4_request", kService);

    return kSigning;
}
```

Deriving a signing key using Python

```
def sign(key, msg):
    return hmac.new(key, msg.encode("utf-8"), hashlib.sha256).digest()

def getSignatureKey(key, dateStamp, regionName, serviceName):
    kDate = sign(("AWS4" + key).encode("utf-8"), dateStamp)
    kRegion = sign(kDate, regionName)
    kService = sign(kRegion, serviceName)
    kSigning = sign(kService, "aws4_request")
    return kSigning
```

Deriving a signing key using Ruby

```
def getSignatureKey key, dateStamp, regionName, serviceName
  kDate = OpenSSL::HMAC.digest('sha256', "AWS4" + key, dateStamp)
  kRegion = OpenSSL::HMAC.digest('sha256', kDate, regionName)
  kService = OpenSSL::HMAC.digest('sha256', kRegion, serviceName)
  kSigning = OpenSSL::HMAC.digest('sha256', kService, "aws4_request")

  kSigning
end
```

Deriving a signing key using JavaScript (Node.js)

The following example uses the crypto-js library. For more information, see <https://www.npmjs.com/package/crypto-js> and <https://code.google.com/archive/p/crypto-js/>.

```
var crypto = require("crypto-js");
```

```
function getSignatureKey(key, dateStamp, regionName, serviceName) {  
    var kDate = crypto.HmacSHA256(dateStamp, "AWS4" + key);  
    var kRegion = crypto.HmacSHA256(regionName, kDate);  
    var kService = crypto.HmacSHA256(serviceName, kRegion);  
    var kSigning = crypto.HmacSHA256("aws4_request", kService);  
    return kSigning;  
}
```

Deriving a signing key using other languages

If you need to implement this logic in a different programming language, we recommend testing the intermediary steps of the key derivation algorithm against the values in this section. The following example in Ruby prints the results using the `hexEncode` function after each step in the algorithm.

```
def hexEncode bindata  
    result=""  
    data=bindata.unpack( "C*" )  
    data.each {|b| result+= "%02x" % b}  
    result  
end
```

Given the following test input:

```
key = 'wJalrXUtnFEMI/K7MDENG+bPxRfiCYEXAMPLEKEY'  
dateStamp = '20120215'  
regionName = 'us-east-1'  
serviceName = 'iam'
```

Your program should generate the following values for the values in `getSignatureKey`. Note that these are hex-encoded representations of the binary data; the key itself and the intermediate values should be in binary format.

```
kSecret =  
'41575334774a616c725855746e46454d492f4b374d44454e472b62507852666943594558414d504c454b4559'  
kDate = '969fbb94feb542b71ede6f87fe4d5fa29c789342b0f407474670f0c2489e0a0d'  
kRegion = '69daa0209cd9c5ff5c8ced464a696fd4252e981430b10e3d3fd8e2f197d7a70c'  
kService = 'f72cfdf46f26bc4643f06a11eabb6c0ba18780c19a8da0c31ace671265e3c87fa'  
kSigning = 'f4780e2d9f65fa895f9c67b32ce1baf0b0d8a43505a000a1a9e090d414db404d'
```

Common coding errors

To simplify your task, avoid the following common coding errors.

Tip

Examine the HTTP request that you're sending to AWS with a tool that shows you what your raw HTTP requests look like. This can help you spot issues that aren't evident from your code.

- Don't include an extra newline character, or forget one where it's required.
- Don't format the date incorrectly in the credential scope, such as using a time stamp instead of YYYYMMDD format.
- Make sure the headers in the canonical headers and the signed headers are the same.
- Don't inadvertently swap the key and the data (message) when calculating intermediary keys. The result of the previous step's computation is the key, not the data. Check the documentation for your cryptographic primitives carefully to ensure that you place the parameters in the proper order.
- Don't forget to add the string "AWS4" in front of the key for the first step. If you implement the key derivation using a `for` loop or iterator, don't forget to special-case the first iteration so that it includes the "AWS4" string.

For more information about possible errors, see [Troubleshooting AWS Signature Version 4 errors \(p. 788\)](#).

Examples of the complete Signature Version 4 signing process (Python)

This section shows example programs written in Python that illustrate how to work with Signature Version 4 in AWS. We deliberately wrote these example programs to be simple (to use few Python-specific features) to make it easier to understand the overall process of signing AWS requests.

Note

If you are using one of the [AWS SDKs](#) (including the SDK for C++, SDK for Go, SDK for Java, AWS SDK for JavaScript, AWS SDK for .NET, SDK for PHP, SDK for Python (Boto3), or SDK for Ruby), you do not have to manually perform the steps of deriving a signing key and adding authentication information to a request. The SDKs perform this work for you. You need to manually sign requests only if you are directly making HTTP or HTTPS requests.

In order to work with these example programs, you need the following:

- Python 2.x installed on your computer, which you can get from the [Python site](#). These programs were tested using Python 2.7 and 3.6.
- The [Python requests library](#), which is used in the example script to make web requests. A convenient way to install Python packages is to use pip, which gets packages from the Python package index site. You can then install requests by running `pip install requests` at the command line.
- An access key (access key ID and secret access key) in environment variables named `AWS_ACCESS_KEY_ID` and `AWS_SECRET_ACCESS_KEY`. Alternatively, you can keep these values in a credentials file and read them from that file. As a best practice, we recommend that you do *not* embed credentials in code. For more information, see [Best Practices for Managing AWS Access Keys](#) in the [Amazon Web Services General Reference](#).

The following examples use UTF-8 to encode the canonical request and string to sign, but Signature Version 4 does not require that you use a particular character encoding. However, some AWS services might require a specific encoding. For more information, consult the documentation for that service.

Examples

- [Using GET with an authorization header \(Python\) \(p. 781\)](#)
- [Using POST \(Python\) \(p. 784\)](#)
- [Using GET with authentication information in the Query string \(Python\) \(p. 786\)](#)

Using GET with an authorization header (Python)

The following example shows how to make a request using the Amazon EC2 query API without [SDK for Python \(Boto3\)](#). The request makes a GET request and passes authentication information to AWS using the `Authorization` header.

```
# Copyright 2010-2019 Amazon.com, Inc. or its affiliates. All Rights Reserved.
#
# This file is licensed under the Apache License, Version 2.0 (the "License").
# You may not use this file except in compliance with the License. A copy of the
# License is located at
#
# http://aws.amazon.com/apache2.0/
#
# This file is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS
# OF ANY KIND, either express or implied. See the License for the specific
```

```
# language governing permissions and limitations under the License.
#
# ABOUT THIS PYTHON SAMPLE: This sample is part of the AWS General Reference
# Signing AWS API Requests top available at
# https://docs.aws.amazon.com/general/latest/gr/sigv4-signed-request-examples.html
#
#
# AWS Version 4 signing example
#
# EC2 API (DescribeRegions)
#
# See: http://docs.aws.amazon.com/general/latest/gr/sigv4_signing.html
# This version makes a GET request and passes the signature
# in the Authorization header.
import sys, os, base64, datetime, hashlib, hmac
import requests # pip install requests
#
# ***** REQUEST VALUES *****
method = 'GET'
service = 'ec2'
host = 'ec2.amazonaws.com'
region = 'us-east-1'
endpoint = 'https://ec2.amazonaws.com'
request_parameters = 'Action=DescribeRegions&Version=2013-10-15'

# Key derivation functions. See:
# http://docs.aws.amazon.com/general/latest/gr/signature-v4-examples.html#signature-v4-
examples-python
def sign(key, msg):
    return hmac.new(key, msg.encode('utf-8'), hashlib.sha256).digest()

def getSignatureKey(key, dateStamp, regionName, serviceName):
    kDate = sign(('AWS4' + key).encode('utf-8'), dateStamp)
    kRegion = sign(kDate, regionName)
    kService = sign(kRegion, serviceName)
    kSigning = sign(kService, 'aws4_request')
    return kSigning

# Read AWS access key from env. variables or configuration file. Best practice is NOT
# to embed credentials in code.
access_key = os.environ.get('AWS_ACCESS_KEY_ID')
secret_key = os.environ.get('AWS_SECRET_ACCESS_KEY')
if access_key is None or secret_key is None:
    print('No access key is available.')
    sys.exit()

# Create a date for headers and the credential string
t = datetime.datetime.utcnow()
amzdate = t.strftime('%Y%m%dT%H%M%SZ')
datestamp = t.strftime('%Y%m%d') # Date w/o time, used in credential scope

#
# ***** TASK 1: CREATE A CANONICAL REQUEST *****
# http://docs.aws.amazon.com/general/latest/gr/sigv4-create-canonical-request.html

# Step 1 is to define the verb (GET, POST, etc.)--already done.

# Step 2: Create canonical URI--the part of the URI from domain to query
# string (use '/' if no path)
canonical_uri = '/'

# Step 3: Create the canonical query string. In this example (a GET request),
# request parameters are in the query string. Query string values must
# be URL-encoded (space=%20). The parameters must be sorted by name.
# For this example, the query string is pre-formatted in the request_parameters variable.
canonical_querystring = request_parameters
```

```
# Step 4: Create the canonical headers and signed headers. Header names
# must be trimmed and lowercase, and sorted in code point order from
# low to high. Note that there is a trailing '\n'.
canonical_headers = 'host:' + host + '\n' + 'x-amz-date:' + amzdate + '\n'

# Step 5: Create the list of signed headers. This lists the headers
# in the canonical_headers list, delimited with ";" and in alpha order.
# Note: The request can include any headers; canonical_headers and
# signed_headers lists those that you want to be included in the
# hash of the request. "Host" and "x-amz-date" are always required.
signed_headers = 'host;x-amz-date'

# Step 6: Create payload hash (hash of the request body content). For GET
# requests, the payload is an empty string ("").
payload_hash = hashlib.sha256('').encode('utf-8')).hexdigest()

# Step 7: Combine elements to create canonical request
canonical_request = method + '\n' + canonical_uri + '\n' + canonical_querystring + '\n' +
canonical_headers + '\n' + signed_headers + '\n' + payload_hash

# ***** TASK 2: CREATE THE STRING TO SIGN*****
# Match the algorithm to the hashing algorithm you use, either SHA-1 or
# SHA-256 (recommended)
algorithm = 'AWS4-HMAC-SHA256'
credential_scope = datestamp + '/' + region + '/' + service + '/' + 'aws4_request'
string_to_sign = algorithm + '\n' + amzdate + '\n' + credential_scope + '\n' +
hashlib.sha256(canonical_request.encode('utf-8')).hexdigest()

# ***** TASK 3: CALCULATE THE SIGNATURE *****
# Create the signing key using the function defined above.
signing_key = getSignatureKey(secret_key, datestamp, region, service)

# Sign the string_to_sign using the signing_key
signature = hmac.new(signing_key, (string_to_sign).encode('utf-8'),
hashlib.sha256).hexdigest()

# ***** TASK 4: ADD SIGNING INFORMATION TO THE REQUEST *****
# The signing information can be either in a query string value or in
# a header named Authorization. This code shows how to use a header.
# Create authorization header and add to request headers
authorization_header = algorithm + ' ' + 'Credential=' + access_key + ' / '
credential_scope + ', ' + 'SignedHeaders=' + signed_headers + ', ' + 'Signature=' +
signature

# The request can include any headers, but MUST include "host", "x-amz-date",
# and (for this scenario) "Authorization". "host" and "x-amz-date" must
# be included in the canonical_headers and signed_headers, as noted
# earlier. Order here is not significant.
# Python note: The 'host' header is added automatically by the Python 'requests' library.
headers = {'x-amz-date':amzdate, 'Authorization':authorization_header}

# ***** SEND THE REQUEST *****
request_url = endpoint + '?' + canonical_querystring

print('\nBEGIN REQUEST'+ '='*50)
print('Request URL = ' + request_url)
r = requests.get(request_url, headers=headers)

print('\nRESPONSE'+ '='*50)
print('Response code: %d\n' % r.status_code)
print(r.text)
```

Using POST (Python)

The following example shows how to make a request using the Amazon DynamoDB query API without [SDK for Python \(Boto3\)](#). The request makes a POST request and passes values to AWS in the body of the request. Authentication information is passed using the Authorization request header.

```
# Copyright 2010-2019 Amazon.com, Inc. or its affiliates. All Rights Reserved.
#
# This file is licensed under the Apache License, Version 2.0 (the "License").
# You may not use this file except in compliance with the License. A copy of the
# License is located at
#
# http://aws.amazon.com/apache2.0/
#
# This file is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS
# OF ANY KIND, either express or implied. See the License for the specific
# language governing permissions and limitations under the License.

# AWS Version 4 signing example

# DynamoDB API (CreateTable)

# See: http://docs.aws.amazon.com/general/latest/gr/sigv4_signing.html
# This version makes a POST request and passes request parameters
# in the body (payload) of the request. Auth information is passed in
# an Authorization header.
import sys, os, base64, datetime, hashlib, hmac
import requests # pip install requests

# ***** REQUEST VALUES *****
method = 'POST'
service = 'dynamodb'
host = 'dynamodb.us-west-2.amazonaws.com'
region = 'us-west-2'
endpoint = 'https://dynamodb.us-west-2.amazonaws.com/'
# POST requests use a content type header. For DynamoDB,
# the content is JSON.
content_type = 'application/x-amz-json-1.0'
# DynamoDB requires an x-amz-target header that has this format:
#   DynamoDB_<API version>. <operationName>
amz_target = 'DynamoDB_20120810.CreateTable'

# Request parameters for CreateTable--passed in a JSON block.
request_parameters = '{'
request_parameters += '"KeySchema": [{"KeyType": "HASH", "AttributeName": "Id"}],'
request_parameters += '"TableName": "TestTable", "AttributeDefinitions": [{"AttributeName": "Id", "AttributeType": "S"}}],'
request_parameters += '"ProvisionedThroughput": {"WriteCapacityUnits": 5, "ReadCapacityUnits": 5}'
request_parameters += '}' 

# Key derivation functions. See:
# http://docs.aws.amazon.com/general/latest/gr/signature-v4-examples.html#signature-v4-examples-python
def sign(key, msg):
    return hmac.new(key, msg.encode("utf-8"), hashlib.sha256).digest()

def getSignatureKey(key, date_stamp, regionName, serviceName):
    kDate = sign(('AWS4' + key).encode('utf-8'), date_stamp)
    kRegion = sign(kDate, regionName)
    kService = sign(kRegion, serviceName)
```

```
kSigning = sign(kService, 'aws4_request')
return kSigning

# Read AWS access key from env. variables or configuration file. Best practice is NOT
# to embed credentials in code.
access_key = os.environ.get('AWS_ACCESS_KEY_ID')
secret_key = os.environ.get('AWS_SECRET_ACCESS_KEY')
if access_key is None or secret_key is None:
    print('No access key is available.')
    sys.exit()

# Create a date for headers and the credential string
t = datetime.datetime.utcnow()
amz_date = t.strftime('%Y%m%dT%H%M%SZ')
date_stamp = t.strftime('%Y%m%d') # Date w/o time, used in credential scope

# ***** TASK 1: CREATE A CANONICAL REQUEST *****
# http://docs.aws.amazon.com/general/latest/gr/sigv4-create-canonical-request.html

# Step 1 is to define the verb (GET, POST, etc.)--already done.

# Step 2: Create canonical URI--the part of the URI from domain to query
# string (use '/' if no path)
canonical_uri = '/'

## Step 3: Create the canonical query string. In this example, request
# parameters are passed in the body of the request and the query string
# is blank.
canonical_querystring = ''

# Step 4: Create the canonical headers. Header names must be trimmed
# and lowercase, and sorted in code point order from low to high.
# Note that there is a trailing '\n'.
canonical_headers = 'content-type:' + content_type + '\n' + 'host:' + host + '\n' + 'x-amz-
date:' + amz_date + '\n' + 'x-amz-target:' + amz_target + '\n'

# Step 5: Create the list of signed headers. This lists the headers
# in the canonical_headers list, delimited with ";" and in alpha order.
# Note: The request can include any headers; canonical_headers and
# signed_headers include those that you want to be included in the
# hash of the request. "Host" and "x-amz-date" are always required.
# For DynamoDB, content-type and x-amz-target are also required.
signed_headers = 'content-type;host;x-amz-date;x-amz-target'

# Step 6: Create payload hash. In this example, the payload (body of
# the request) contains the request parameters.
payload_hash = hashlib.sha256(request_parameters.encode('utf-8')).hexdigest()

# Step 7: Combine elements to create canonical request
canonical_request = method + '\n' + canonical_uri + '\n' + canonical_querystring + '\n' +
canonical_headers + '\n' + signed_headers + '\n' + payload_hash

# ***** TASK 2: CREATE THE STRING TO SIGN*****
# Match the algorithm to the hashing algorithm you use, either SHA-1 or
# SHA-256 (recommended)
algorithm = 'AWS4-HMAC-SHA256'
credential_scope = date_stamp + '/' + region + '/' + service + '/' + 'aws4_request'
string_to_sign = algorithm + '\n' + amz_date + '\n' + credential_scope + '\n' +
hashlib.sha256(canonical_request.encode('utf-8')).hexdigest()

# ***** TASK 3: CALCULATE THE SIGNATURE *****
# Create the signing key using the function defined above.
signing_key = getSignatureKey(secret_key, date_stamp, region, service)
```

```
# Sign the string_to_sign using the signing_key
signature = hmac.new(signing_key, (string_to_sign).encode('utf-8'),
hashlib.sha256).hexdigest()

# ***** TASK 4: ADD SIGNING INFORMATION TO THE REQUEST *****
# Put the signature information in a header named Authorization.
authorization_header = algorithm + ' ' + 'Credential=' + access_key + '/' +
credential_scope + ', ' + 'SignedHeaders=' + signed_headers + ', ' + 'Signature=' +
signature

# For DynamoDB, the request can include any headers, but MUST include "host", "x-amz-date",
# "x-amz-target", "content-type", and "Authorization". Except for the authorization
# header, the headers must be included in the canonical_headers and signed_headers values,
# as
# noted earlier. Order here is not significant.
# # Python note: The 'host' header is added automatically by the Python 'requests' library.
headers = {'Content-Type':content_type,
           'X-Amz-Date':amz_date,
           'X-Amz-Target':amz_target,
           'Authorization':authorization_header}

# ***** SEND THE REQUEST *****
print('\nBEGIN REQUEST++++++++++++++++++++++')
print('Request URL = ' + endpoint)

r = requests.post(endpoint, data=request_parameters, headers=headers)

print('\nRESPONSE++++++++++++++++++++++')
print('Response code: %d\n' % r.status_code)
print(r.text)
```

Using GET with authentication information in the Query string (Python)

The following example shows how to make a request using the IAM query API without [SDK for Python \(Boto3\)](#). The request makes a GET request and passes parameters and signing information using the query string.

```
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#
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#
# http://aws.amazon.com/apache2.0/
#
# This file is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS
# OF ANY KIND, either express or implied. See the License for the specific
# language governing permissions and limitations under the License.
#
# ABOUT THIS PYTHON SAMPLE: This sample is part of the AWS General Reference
# Signing AWS API Requests top available at
# https://docs.aws.amazon.com/general/latest/gr/sigv4-signed-request-examples.html
#
# AWS Version 4 signing example
#
# IAM API (CreateUser)
#
# See: http://docs.aws.amazon.com/general/latest/gr/sigv4_signing.html
```

```
# This version makes a GET request and passes request parameters
# and authorization information in the query string
import sys, os, datetime, hashlib, hmac, urllib.parse
import requests # pip install requests

# ***** REQUEST VALUES *****
method = 'GET'
service = 'iam'
host = 'iam.amazonaws.com'
region = 'us-east-1'
endpoint = 'https://iam.amazonaws.com'

# Key derivation functions. See:
# http://docs.aws.amazon.com/general/latest/gr/signature-v4-examples.html#signature-v4-
examples-python
def sign(key, msg):
    return hmac.new(key, msg.encode('utf-8'), hashlib.sha256).digest()

def getSignatureKey(key, dateStamp, regionName, serviceName):
    kDate = sign(('AWS4' + key).encode('utf-8'), dateStamp)
    kRegion = sign(kDate, regionName)
    kService = sign(kRegion, serviceName)
    kSigning = sign(kService, 'aws4_request')
    return kSigning

# Read AWS access key from env. variables or configuration file. Best practice is NOT
# to embed credentials in code.
access_key = os.environ.get('AWS_ACCESS_KEY_ID')
secret_key = os.environ.get('AWS_SECRET_ACCESS_KEY')
if access_key is None or secret_key is None:
    print('No access key is available.')
    sys.exit()

# Create a date for headers and the credential string
t = datetime.datetime.utcnow()
amz_date = t.strftime('%Y%m%dT%H%M%SZ') # Format date as YYYYMMDD'T'HHMMSS'Z'
datestamp = t.strftime('%Y%m%d') # Date w/o time, used in credential scope

# ***** TASK 1: CREATE A CANONICAL REQUEST *****
# http://docs.aws.amazon.com/general/latest/gr/sigv4-create-canonical-request.html

# Because almost all information is being passed in the query string,
# the order of these steps is slightly different than examples that
# use an authorization header.

# Step 1: Define the verb (GET, POST, etc.)--already done.

# Step 2: Create canonical URI--the part of the URI from domain to query
# string (use '/' if no path)
canonical_uri = '/'

# Step 3: Create the canonical headers and signed headers. Header names
# must be trimmed and lowercase, and sorted in code point order from
# low to high. Note trailing \n in canonical_headers.
# signed_headers is the list of headers that are being included
# as part of the signing process. For requests that use query strings,
# only "host" is included in the signed headers.
canonical_headers = 'host:' + host + '\n'
signed_headers = 'host'

# Match the algorithm to the hashing algorithm you use, either SHA-1 or
# SHA-256 (recommended)
algorithm = 'AWS4-HMAC-SHA256'
credential_scope = datestamp + '/' + region + '/' + service + '/' + 'aws4_request'
```

```
# Step 4: Create the canonical query string. In this example, request
# parameters are in the query string. Query string values must
# be URL-encoded (space=%20). The parameters must be sorted by name.
canonical_querystring = 'Action/CreateUser&UserName>NewUser&Version=2010-05-08'
canonical_querystring += '&X-Amz-Algorithm=AWS4-HMAC-SHA256'
canonical_querystring += '&X-Amz-Credential=' + urllib.parse.quote_plus(access_key + '/' +
    credential_scope)
canonical_querystring += '&X-Amz-Date=' + amz_date
canonical_querystring += '&X-Amz-Expires=30'
canonical_querystring += '&X-Amz-SignedHeaders=' + signed_headers

# Step 5: Create payload hash. For GET requests, the payload is an
# empty string ("").
payload_hash = hashlib.sha256('').encode('utf-8')).hexdigest()

# Step 6: Combine elements to create canonical request
canonical_request = method + '\n' + canonical_uri + '\n' + canonical_querystring + '\n' +
    canonical_headers + '\n' + signed_headers + '\n' + payload_hash

# ***** TASK 2: CREATE THE STRING TO SIGN*****
string_to_sign = algorithm + '\n' + amz_date + '\n' + credential_scope + '\n' +
    hashlib.sha256(canonical_request.encode('utf-8')).hexdigest()

# ***** TASK 3: CALCULATE THE SIGNATURE *****
# Create the signing key
signing_key = getSignatureKey(secret_key, datestamp, region, service)

# Sign the string_to_sign using the signing_key
signature = hmac.new(signing_key, (string_to_sign).encode("utf-8"),
    hashlib.sha256).hexdigest()

# ***** TASK 4: ADD SIGNING INFORMATION TO THE REQUEST *****
# The auth information can be either in a query string
# value or in a header named Authorization. This code shows how to put
# everything into a query string.
canonical_querystring += '&X-Amz-Signature=' + signature

# ***** SEND THE REQUEST *****
# The 'host' header is added automatically by the Python 'request' lib. But it
# must exist as a header in the request.
request_url = endpoint + "?" + canonical_querystring

print('\nBEGIN REQUEST'+ '='*50)
print('Request URL = ' + request_url)
r = requests.get(request_url)

print('\nRESPONSE'+ '='*50)
print('Response code: %d\n' % r.status_code)
print(r.text)
```

Troubleshooting AWS Signature Version 4 errors

When you develop code that implements Signature Version 4, you might receive errors from AWS products that you test against. The errors typically come from an error in the canonicalization of the request, the incorrect derivation or use of the signing key, or a validation failure of signature-specific parameters sent along with the request.

Errors

- [Troubleshooting canonicalization errors \(p. 789\)](#)
- [Troubleshooting credential scope errors \(p. 789\)](#)
- [Troubleshooting key signing errors \(p. 791\)](#)

Troubleshooting canonicalization errors

Consider the following request:

```
https://iam.amazonaws.com/?MaxItems=100
&Action=ListGroupsForUser
&UserName=Test
&Version=2010-05-08
&X-Amz-Date=20120223T063000Z
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20120223/us-east-1/iam/aws4_request
&X-Amz-SignedHeaders=host
&X-Amz-Signature=<calculated value>
```

If you incorrectly calculate the canonical request or the string to sign, the signature verification step performed by the service fails. The following example is a typical error response, which includes the canonical string and the string to sign as computed by the service. You can troubleshoot your calculation error by comparing the returned strings with the canonical string and your calculated string to sign.

```
<ErrorResponse xmlns="https://iam.amazonaws.com/doc/2010-05-08/">
<Error>
  <Type>Sender</Type>
  <Code>SignatureDoesNotMatch</Code>
  <Message>The request signature we calculated does not match the signature you provided.
Check your AWS Secret Access Key and signing method. Consult the service documentation for
details.

The canonical string for this request should have been 'GET /
Action=ListGroupsForUser&MaxItems=100&UserName=Test&Version=2010-05-08&X-Amz-
Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential
=AKIAIOSFODNN7EXAMPLE%2F20120223%2Fus-east-1%2Fiam%2Faws4_request&X-Amz-
Date=20120223T063000Z&X-Amz-SignedHeaders=host
host:iam.amazonaws.com

host
<hashed-value>

The String-to-Sign should have been
'AWS4-HMAC-SHA256
20120223T063000Z
20120223/us-east-1/iam/aws4_request
<hashed-value>
</Message>
</Error>
<RequestId>4ced6e96-5de8-11e1-aa78-a56908bdf8eb</RequestId>
</ErrorResponse>
```

Troubleshooting credential scope errors

AWS products validate credentials for proper scope; the credential parameter must specify the correct service, Region, and date. For example, the following credential references the Amazon RDS service:

```
Credential=AKIAIOSFODNN7EXAMPLE/20120224/us-east-1/rds/aws4_request
```

If you use the same credentials to submit a request to IAM, you'll receive the following error response:

```
<ErrorResponse xmlns="https://iam.amazonaws.com/doc/2010-05-08/">
<Error>
  <Type>Sender</Type>
  <Code>SignatureDoesNotMatch</Code>
  <Message>Credential should be scoped to correct service: 'iam'. </Message>
</Error>
<RequestId>aa0da9de-5f2b-11e1-a2c0-c1dc98b6c575</RequestId>
```

The credential must also specify the correct Region. For example, the following credential for an IAM request incorrectly specifies the US West (N. California) Region.

```
Credential=AKIAIOSFODNN7EXAMPLE/20120224/us-west-1/iam/aws4_request
```

If you use the credential to submit a request to IAM, which accepts only the `us-east-1` Region specification, you'll receive the following response:

```
comma-separated<ErrorResponse xmlns="https://iam.amazonaws.com/doc/2010-05-08/">
<Error>
  <Type>Sender</Type>
  <Code>SignatureDoesNotMatch</Code>
  <Message>Credential should be scoped to a valid Region, not 'us-west-1'. </Message>
</Error>
<RequestId>8e229682-5f27-11e1-88f2-4b1b00f424ae</RequestId>
</ErrorResponse>
```

You'll receive the same type of invalid Region response from AWS products that are available in multiple Regions if you submit requests to a Region that differs from the Region specified in your credential scope.

The credential must also specify the correct Region for the service and action in your request.

The date that you use as part of the credential must match the date value in the `x-amz-date` header. For example, the following `x-amz-date` header value does not match the date value used in the `Credential` parameter that follows it.

```
x-amz-date:"20120224T213559Z"
Credential=AKIAIOSFODNN7EXAMPLE/20120225/us-east-1/iam/aws4_request
```

If you use this pairing of `x-amz-date` header and credential, you'll receive the following error response:

```
<ErrorResponse xmlns="https://iam.amazonaws.com/doc/2010-05-08/">
<Error>
  <Type>Sender</Type>
  <Code>SignatureDoesNotMatch</Code>
  <Message>Date in Credential scope does not match YYYYMMDD from ISO-8601 version of date
from HTTP: '20120225' != '20120224', from '20120 224T213559Z'.</Message>
</Error>
<RequestId>9d6ddd2b-5f2f-11e1-b901-a702cd369eb8</RequestId>
</ErrorResponse>
```

An expired signature can also generate an error response. For example, the following error response was generated due to an expired signature.

```
<ErrorResponse xmlns="https://iam.amazonaws.com/doc/2010-05-08/">
<Error>
  <Type>Sender</Type>
  <Code>SignatureDoesNotMatch</Code>
```

```
<Message>Signature expired: 20120306T074514Z is now earlier than 20120306T074556Z  
(20120306T080056Z - 15 min.)</Message>  
</Error>  
<RequestId>fcc88440-5dec-11e1-b901-a702cd369eb8</RequestId>  
</ErrorResponse>
```

Troubleshooting key signing errors

Errors that are caused by an incorrect derivation of the signing key or improper use of cryptography are more difficult to troubleshoot. The error response will tell you that the signature does not match. If you verified that the canonical string and the string to sign are correct, the cause of the signature mismatch is most likely one of the two following issues:

- The secret access key does not match the access key ID that you specified in the `Credential` parameter.
- There is a problem with your key derivation code.

To check whether the secret key matches the access key ID, you can use your secret key and access key ID with a known working implementation. One way is to use one of the AWS SDKs to write a program that makes a simple request to AWS using the access key ID and secret access key that you want to use.

To check whether your key derivation code is correct, you can compare it to our example derivation code. For more information, see [Examples of how to derive a signing key for Signature Version 4 \(p. 778\)](#).

Service-specific reference for Signature Version 4

To learn more about making and signing HTTP requests in the context of specific AWS services, see the documentation for the following services:

- [Amazon API Gateway](#)
- [Amazon CloudSearch](#)
- [Amazon CloudWatch](#)
- [AWS Data Pipeline](#)
- [Amazon Elastic Compute Cloud \(Amazon EC2\)](#)
- [Amazon Elastic Transcoder](#)
- [Amazon S3 Glacier](#)
- [Amazon Mobile Analytics](#)
- [Amazon Relational Database Service \(Amazon RDS\)](#)
- [Amazon Simple Email Service \(Amazon SES\)](#)
- [Amazon Simple Queue Service \(Amazon SQS\)](#)
- [Amazon Simple Storage Service \(Amazon S3\)](#)
- [Amazon Simple Workflow Service \(Amazon SWF\)](#)
- [AWS WAF](#)

Signature Version 2 signing process

Important

The [AWS SDKs](#), [AWS Command Line Interface \(AWS CLI\)](#), and other AWS tools sign API requests for you using the access key that you specify when you configure the tool. **When you use these tools, you don't need to learn how to sign API requests. The following documentation explains how to sign API requests, but is only useful if you're writing your own code to send**

and sign AWS API requests. We recommend that you use the AWS SDKs or other AWS tools to send API requests, instead of writing your own code.
If you must write your own code to sign AWS API requests, use [Signature Version 4 \(SigV4\) \(p. 763\)](#).

Supported Regions and services

You can use Signature Version 2 to sign API requests for some AWS services in some AWS Regions. Otherwise, you must use Signature Version 4 to sign API requests.

Regions that support Signature Version 2

- US East (N. Virginia) Region
- US West (N. California) Region
- US West (Oregon) Region
- Europe (Ireland) Region
- Asia Pacific (Tokyo) Region
- Asia Pacific (Singapore) Region
- Asia Pacific (Sydney) Region
- South America (São Paulo) Region

Services that support Signature Version 2

- Amazon EC2 Auto Scaling
- AWS CloudFormation
- Amazon CloudWatch
- AWS Elastic Beanstalk
- Amazon Elastic Compute Cloud (Amazon EC2)
- Elastic Load Balancing
- Amazon EMR
- Amazon ElastiCache
- AWS Identity and Access Management (IAM)
- AWS Import/Export
- Amazon Relational Database Service (Amazon RDS)
- Amazon Simple Notification Service (Amazon SNS)
- Amazon Simple Queue Service (Amazon SQS)
- Amazon SimpleDB

Services deprecating Signature Version 2

- Amazon Simple Storage Service (Amazon S3) - [Amazon S3 Update - SigV2 Deprecation](#)
- Amazon Simple Email Service (Amazon SES)

Components of a query request for Signature Version 2

AWS requires that each HTTP or HTTPS Query request formatted for Signature Version 2 contains the following:

Endpoint

Also known as the host part of an HTTP request. This is the DNS name of the computer where you send the Query request. This is different for each AWS Region.

Action

The action you want a web service to perform. This value determines the parameters used in the request.

AWSAccessKeyId

A value distributed by AWS when you sign up for an AWS account.

SignatureMethod

The hash-based protocol used to calculate the signature. This can be either HMAC-SHA1 or HMAC-SHA256 for Signature Version 2.

SignatureVersion

The version of the AWS signature protocol.

Timestamp

The time at which you make the request. Include this in the Query request to help prevent third parties from intercepting your request.

Required and optional parameters

Each action has a set of required and optional parameters that define the API call.

Signature

The calculated value that ensures the signature is valid and has not been tampered.

The following is an example Amazon EMR Query request formatted as an HTTPS GET request.

- The endpoint, `elasticmapreduce.amazonaws.com`, is the default endpoint and maps to the Region `us-east-1`.
- The action is `DescribeJobFlows`, which requests information about one or more job flows.

Note

In the actual Query request, there are no spaces or newline characters. The request is a continuous line of text. The version below is formatted for human readability.

```
https://elasticmapreduce.amazonaws.com?  
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE  
&Action=DescribeJobFlows  
&SignatureMethod=HmacSHA256  
&SignatureVersion=2  
&Timestamp=2011-10-03T15%3A19%3A30  
&Version=2009-03-31  
&Signature=calculated value
```

How to generate a signature for a Query request

Web service requests are sent across the Internet and are vulnerable to tampering. To check that the request has not been altered, AWS calculates the signature to determine if any of the parameters or parameter values were changed en route. AWS requires a signature as part of every request.

Be sure to URI encode the request. For example, blank spaces in your request should be encoded as `%20`. Although an unencoded space is normally allowed by the HTTP protocol specification, unencoded

characters create an invalid signature in your Query request. Do *not* encode spaces as a plus sign (+) as this will cause errors.

The following topics describe the steps needed to calculate a signature using AWS Signature Version 2.

Task 1: Format the Query request

Before you can sign the Query request, format the request in a standardized (canonical) format. This is needed because the different ways to format a Query request will result in different HMAC signatures. Format the request in a canonical format before signing. This ensures your application and AWS will calculate the same signature for a request.

To create the string to sign, you concatenate the Query request components. The following example generates the string to sign for the following call to the Amazon EMR API.

```
https://elasticmapreduce.amazonaws.com?  
Action=DescribeJobFlows  
&Version=2009-03-31  
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE  
&SignatureVersion=2  
&SignatureMethod=HmacSHA256  
&Timestamp=2011-10-03T15:19:30
```

Note

In the preceding request, the last four parameters (AWSAccessKeyId through Timestamp) are called authentication parameters. They're required in every Signature Version 2 request. AWS uses them to identify who is sending the request and whether to grant the requested access.

To create the string to sign

1. Start with the request method (either GET or POST), followed by a newline character. For human readability, the newline character is represented as \n.

```
GET\n
```

2. Add the HTTP host header (endpoint) in lowercase, followed by a newline character. The port information is omitted if it is the standard port for the protocol (port 80 for HTTP and port 443 for HTTPS), but included if it is a nonstandard port.

```
elasticmapreduce.amazonaws.com\n
```

3. Add the URL-encoded version of each path segment of the URI, which is everything between the HTTP host header to the question mark character (?) that begins the query string parameters, followed by a newline character. Don't encode the forward slash (/) that delimits each path segment.

In this example, if the absolute path is empty, use a forward slash (/).

```
/\n
```

4. a. Add the query string components, as UTF-8 characters which are URL encoded (hexadecimal characters must be uppercase). You do not encode the initial question mark character (?) in the request. For more information, see [RFC 3986](#).
b. Sort the query string components by byte order. Byte ordering is case sensitive. AWS sorts these components based on the raw bytes.

For example, this is the original order for the query string components.

```
Action=DescribeJobFlows
Version=2009-03-31
AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
SignatureVersion=2
SignatureMethod=HmacSHA256
Timestamp=2011-10-03T15%3A19%3A30
```

The query string components would be reorganized as the following:

```
AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
Action=DescribeJobFlows
SignatureMethod=HmacSHA256
SignatureVersion=2
Timestamp=2011-10-03T15%3A19%3A30
Version=2009-03-31
```

- c. Separate parameter names from their values with the equal sign character (=), even if the value is empty. Separate parameter and value pairs with the ampersand character (&). Concatenate the parameters and their values to make one long string with no spaces. Spaces within a parameter value are allowed, but must be URL encoded as %20. In the concatenated string, period characters (.) are not escaped. RFC 3986 considers the period character an unreserved character, so it is not URL encoded.

Note

RFC 3986 does not specify what happens with ASCII control characters, extended UTF-8 characters, and other characters reserved by RFC 1738. Since any values may be passed into a string value, these other characters should be percent encoded as %XY where X and Y are uppercase hex characters. Extended UTF-8 characters take the form %XY%ZA... (this handles multibytes).

The following example shows the query string components, with the parameters concatenated with the ampersand character (&), and sorted by byte order.

```
AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE&Action=DescribeJobFlows&SignatureMethod=HmacSHA256&SignatureVer
```

5. To construct the finished canonical request, combine all the components from each step. As shown, each component ends with a newline character.

```
GET\n
elasticmapreduce.amazonaws.com\n
/\n
AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE&Action=DescribeJobFlows&SignatureMethod=HmacSHA256&SignatureVer
```

Task 2: Calculate the signature

After you've created the canonical string as described in [Task 1: Format the Query request \(p. 794\)](#), calculate the signature by creating a hash-based message authentication code (HMAC) that uses either the HMAC-SHA1 or HMAC-SHA256 protocols. The HMAC-SHA256 is preferred.

In this example, the signature is calculated with the following canonical string and secret key as inputs to a keyed hash function:

- Canonical query string:

```
GET\n
```

```
elasticmapreduce.amazonaws.com\n\nAWSAccessKeyId=AKIAIOSFODNN7EXAMPLE&Action=DescribeJobFlows&SignatureMethod=HmacSHA256&SignatureVersion=2&Timestamp=2010-01-25T15%3A03%3A07-07%3A00&Version=2009-04-15&Signature=wJalrXUtnFEMI/K7MDENG/bPxRfiCYEXAMPLEKEY
```

- Sample secret key:

```
wJalrXUtnFEMI/K7MDENG/bPxRfiCYEXAMPLEKEY
```

The resulting signature must be base-64 encoded.

```
i91nKc4PWAt0JJIdXwz9HxZCJDdiy6cf%2FMj6vPxyYIs%3D
```

Add the resulting value to the query request as a `Signature` parameter. When you add this parameter to the request, you must URI encode it just like any other parameter. You can use the signed request in an HTTP or HTTPS call.

```
https://elasticmapreduce.amazonaws.com?\nAWSAccessKeyId=AKIAIOSFODNN7EXAMPLE&Action=DescribeJobFlows&SignatureMethod=HmacSHA256&SignatureVersion=2&Timestamp=2010-01-25T15%3A03%3A07-07%3A00&Version=2009-04-15&Signature=wJalrXUtnFEMI/K7MDENG/bPxRfiCYEXAMPLEKEY
```

Note

You can use temporary security credentials provided by AWS Security Token Service (AWS STS) to sign a request. The process is the same as using long-term credentials, but requests require an additional parameter for the security token.

The following request uses a temporary access key ID and the `SecurityToken` parameter.

Example Example request with temporary security credentials

```
https://sdb.amazonaws.com/\n?Action=GetAttributes\n&AWSAccessKeyId=access-key-from-AWS Security Token Service\n&DomainName=MyDomain\n&ItemName=MyItem\n&SignatureVersion=2\n&SignatureMethod=HmacSHA256\n&Timestamp=2010-01-25T15%3A03%3A07-07%3A00\n&Version=2009-04-15\n&Signature=signature-calculated-using-the-temporary-access-key\n&SecurityToken=session-token
```

For more information, see the following resources:

- The [Amazon EMR Developer Guide](#) has information about Amazon EMR API calls.
- The API documentation for each service has information about requirements and specific parameters for an action.
- The AWS SDKs offer functions to generate Query request signatures. To see an example using the AWS SDK for Java, see [Using the Java SDK to sign a Query request \(p. 797\)](#).

Troubleshooting request signatures

This section describes some error codes you might see when you are initially developing code to generate the signature to sign Query requests.

SignatureDoesNotMatch signing error in a web service

The following error response is returned when a web service attempts to validate the request signature by recalculating the signature value and generates a value that does not match the signature you appended to the request. This can occur because the request was altered between the time you sent it and the time it reached a web service endpoint (which is what the signature is designed to detect) or because the signature was calculated improperly. A common cause of the following error message is not properly creating the string to sign, such as forgetting to URL-encode characters such as the colon (:) and the forward slash (/) in Amazon S3 bucket names.

```
<ErrorResponse xmlns="http://elasticmapreduce.amazonaws.com/doc/2009-03-31">
<Error>
  <Type>Sender</Type>
  <Code>SignatureDoesNotMatch</Code>
  <Message>The request signature we calculated does not match the signature you provided.
    Check your AWS Secret Access Key and signing method.
    Consult the service documentation for details.</Message>
</Error>
<RequestId>7589637b-e4b0-11e0-95d9-639f87241c66</RequestId>
</ErrorResponse>
```

IncompleteSignature signing error in a web service

The following error indicates that signature is missing information or has been improperly formed.

```
<ErrorResponse xmlns="http://elasticmapreduce.amazonaws.com/doc/2009-03-31">
<Error>
  <Type>Sender</Type>
  <Code>IncompleteSignature</Code>
  <Message>Request must contain a signature that conforms to AWS standards</Message>
</Error>
<RequestId>7146d0dd-e48e-11e0-a276-bd10ea0cbb74</RequestId>
</ErrorResponse>
```

Using the Java SDK to sign a Query request

The following example uses the `amazon.webservices.common` package of the AWS SDK for Java to generate an AWS Signature Version 2 Query request signature. To do so, it creates an RFC 2104-compliant HMAC signature. For more information about HMAC, see [HMAC: Keyed-Hashing for Message Authentication](#).

Note

Java is used as an example implementation. You can use the programming language of your choice to implement the HMAC algorithm to sign Query requests.

```
import java.security.SignatureException;
import javax.crypto.Mac;
import javax.crypto.spec.SecretKeySpec;
import com.amazonaws.util.*;

/**
 * This class defines common routines for generating
 * authentication signatures for AWS Platform requests.
 */
public class Signature {
    private static final String HMAC_SHA256_ALGORITHM = "HmacSHA256";
```

```
/**  
 * Computes RFC 2104-compliant HMAC signature.  
 * @param data  
 * The signed data.  
 * @param key  
 * The signing key.  
 * @return  
 * The Base64-encoded RFC 2104-compliant HMAC signature.  
 * @throws  
 * java.security.SignatureException when signature generation fails  
 */  
public static String calculateRFC2104HMAC(String data, String key)  
throws java.security.SignatureException  
{  
    String result;  
    try {  
  
        // Get an hmac_sha256 key from the raw key bytes.  
        SecretKeySpec signingKey = new SecretKeySpec(key.getBytes("UTF-8"),  
HMAC_SHA256_ALGORITHM);  
  
        // Get an hmac_sha256 Mac instance and initialize with the signing key.  
        Mac mac = Mac.getInstance(HMAC_SHA256_ALGORITHM);  
        mac.init(signingKey);  
  
        // Compute the hmac on input data bytes.  
        byte[] rawHmac = mac.doFinal(data.getBytes("UTF-8"));  
  
        // Base64-encode the hmac by using the utility in the SDK  
        result = BinaryUtils.toBase64(rawHmac);  
  
    } catch (Exception e) {  
        throw new SignatureException("Failed to generate HMAC : " + e.getMessage());  
    }  
    return result;  
}  
}
```

AWS SDK support for Amazon S3 client-side encryption

The following tables list the cryptographic algorithms and features that are supported by the language-specific AWS SDKs. For information about how to use the features for a particular SDK, see the developer guide for that SDK.

If you are new to cryptography, see [Cryptography Basics](#) in the *AWS Key Management Service Developer Guide* to get familiar with terms and concepts.

Note

The [AWS Encryption SDK](#) is an encryption library that is separate from the language-specific SDKs. You can use this encryption library to more easily implement encryption best practices in Amazon S3. Unlike the Amazon S3 encryption clients in the language-specific AWS SDKs, the AWS Encryption SDK is not tied to Amazon S3 and can be used to encrypt or decrypt data to be stored anywhere.

The AWS Encryption SDK and the Amazon S3 encryption clients are not compatible because they produce ciphertexts with different data formats. For more information about the AWS Encryption SDK, see the [AWS Encryption SDK Developer Guide](#).

AWS SDK features for Amazon S3 client-side encryption

To use the Amazon S3 client-side encryption feature to encrypt data before uploading to Amazon S3, you must provide a master key to the Amazon S3 encryption client. You can provide a client-side master key or use the AWS Key Management Service (AWS KMS)-managed master keys feature. The AWS KMS-managed master keys feature provides an easy way to create and manage keys that are used to encrypt data. For more information about these features, choose the links provided in the **Feature** column.

For details about how to use the features for a particular SDK, see the SDK's developer guide.

In the following table, each column indicates whether the AWS Command Line Interface or SDK for a specific language supports the features used in client-side encryption.

| Feature | Java | .NET | Ruby v2 | AWS CLI | Boto3 | PHP v3 | JavaScript | Go | C++ |
|----------------------------------|------|------|---------|---------|-------|--------|------------|-----|-----|
| Amazon S3 client-side encryption | Yes | Yes | Yes | No | No | Yes | No | Yes | Yes |
| AWS KMS-managed master keys | Yes | Yes | Yes | No | No | Yes | No | Yes | Yes |

For information about the v2 Amazon S3 encryption clients that support client-side encryption, see our blog post about [Updates to the Amazon S3 Encryption Client](#).

For more details about the *legacy v1* Amazon S3 encryption client, see the following blog posts.

- [Client-Side Data Encryption for Amazon S3 Using the AWS SDK for Java](#)
- [Client Side Data Encryption with AWS SDK for .NET and Amazon S3](#)
- [Using Client-Side Encryption for Amazon S3 in the AWS SDK for Ruby](#)
- [Using the AWS SDK for Go Encryption Client](#)
- [Amazon S3 Encryption Client Now Available for C++ Developers](#)

Amazon S3 encryption client cryptographic algorithms

The following table lists the algorithms that each language-specific AWS SDK supports for encrypting keys and data when using the Amazon S3 encryption client.

| Algorithm | Java | .NET | Ruby v2 | AWS CLI | Boto3 | PHP v3 | JavaScript | Go | C++ |
|-----------|------|------|---------|---------|-------|--------|------------|----|-----|
| Key Wrap: | Yes | Yes | Yes | No | No | No | No | No | No |

| Algorithm | Java | .NET | Ruby v2 | AWS CLI | Boto3 | PHP v3 | JavaScript | Go | C++ |
|-----------------------------|------------|------------|------------|---------|------------|--------|------------|------------|------------|
| RSA-OAEP-SHA1 | | | | | | | | | |
| Key Wrap: AES/GCM | Yes | Yes | Yes | No | No | No | No | No | Yes |
| Key Wrap: KMS +context | Yes | Yes | Yes | No | No | Yes | No | Yes | Yes |
| Key Wrap: AES/ECB | Deprecated | Deprecated | Deprecated | No | No | No | No | No | No |
| Key Wrap: AESWrap | Deprecated | Deprecated | Deprecated | No | No | No | No | No | Deprecated |
| Key Wrap: RSA | Deprecated | No | Deprecated | No | No | No | No | No | No |
| Key Wrap: KMS | Deprecated | Deprecated | Deprecated | No | Deprecated | No | Deprecated | Deprecated | Deprecated |
| Content Encryption: AES/GCM | Yes | Yes | Yes | No | No | Yes | No | Yes | Yes |
| Content Encryption: AES/CBC | Deprecated | No | Deprecated | No | No | No | Deprecated | Deprecated | Deprecated |

For more information about *authenticated* and *encryption-only* modes, see the [Amazon S3 Client-Side Authenticated Encryption](#) blog post.

Document conventions

The following are the common typographical conventions for AWS technical publications.

Inline code (for example, commands, operations, parameters, constants, XML elements, and regular expressions)

Formatting: Text in a monospace font

Example: `java -version`

Example blocks (for example, sample code and scripts)

Formatting: Text in a monospace font inside a shaded block

Example:

```
# ls -l /var/www/html/index.html
-rw-rw-r-- 1 root root 1872 Jun 21 09:33 /var/www/html/index.html
# date
Wed Jun 21 09:33:42 EDT 2006
```

Mutually exclusive options

Formatting: Text separated by vertical bars

Example: `(start | stride | edge)`

Optional parameters

Formatting: Text enclosed in square brackets

Example: `[-n, -quiet]`

Definitions

Formatting: Text in italics

Example: *Amazon Machine Image (AMI)*

Technical publications

Formatting: Text in italics

Example: *Amazon Simple Storage Service User Guide*

Elements in the user interface

Formatting: Text in bold

Example: Choose **File, Properties**.

User input (text that a user types)

Formatting: Text in a monospace font

Example: For the name, type **my-new-resource**.

Placeholder text for a required value

Formatting: Text in *italics*

Example:

```
aws ec2 register-image --image-location my-s3-bucket/image.manifest.xml
```

AWS glossary

[Numbers and symbols \(p. 803\)](#) | [A \(p. 803\)](#) | [B \(p. 820\)](#) | [C \(p. 821\)](#) | [D \(p. 826\)](#) | [E \(p. 829\)](#) | [F \(p. 832\)](#) | [G \(p. 833\)](#) | [H \(p. 834\)](#) | [I \(p. 835\)](#) | [J \(p. 837\)](#) | [K \(p. 838\)](#) | [L \(p. 838\)](#) | [M \(p. 839\)](#) | [N \(p. 842\)](#) | [O \(p. 843\)](#) | [P \(p. 844\)](#) | [Q \(p. 847\)](#) | [R \(p. 848\)](#) | [S \(p. 851\)](#) | [T \(p. 857\)](#) | [U \(p. 859\)](#) | [V \(p. 860\)](#) | [W \(p. 861\)](#) | X, Y, Z (p. 861)

Numbers and symbols

100-continue

A method that gives a client the ability to see whether a server can accept a request before actually sending it. For large PUT requests, this method can save both time and bandwidth charges.

A

[Numbers and symbols \(p. 803\)](#) | [A \(p. 803\)](#) | [B \(p. 820\)](#) | [C \(p. 821\)](#) | [D \(p. 826\)](#) | [E \(p. 829\)](#) | [F \(p. 832\)](#) | [G \(p. 833\)](#) | [H \(p. 834\)](#) | [I \(p. 835\)](#) | [J \(p. 837\)](#) | [K \(p. 838\)](#) | [L \(p. 838\)](#) | [M \(p. 839\)](#) | [N \(p. 842\)](#) | [O \(p. 843\)](#) | [P \(p. 844\)](#) | [Q \(p. 847\)](#) | [R \(p. 848\)](#) | [S \(p. 851\)](#) | [T \(p. 857\)](#) | [U \(p. 859\)](#) | [V \(p. 860\)](#) | [W \(p. 861\)](#) | X, Y, Z (p. 861)

AAD

See [additional authenticated data](#).

Access Analyzer

A feature of [AWS Identity and Access Management \(IAM\) \(p. 816\)](#) that you can use to identify the resources in your organization and accounts that are shared with an external entity. Example resources include Amazon S3 buckets or IAM roles.
See Also <https://aws.amazon.com/about-aws/whats-new/2019/12/introducing-aws-identity-and-access-management-access-analyzer/>.

access control list (ACL)

A document that defines who can access a particular [bucket \(p. 821\)](#) or object. Each [bucket \(p. 821\)](#) and object in [Amazon S3 \(p. 811\)](#) has an ACL. This document defines what each type of user can do, such as write and read permissions.

access identifiers

See [credentials](#).

access key

The combination of an [access key ID \(p. 803\)](#) (for example, AKIAIOSFODNN7EXAMPLE) and a [secret access key \(p. 852\)](#) (for example, wJalrXUtnFEMI/K7MDENG/bPxRfCYEXAMPLEKEY). You use access keys to sign API requests that you make to AWS.

access key ID

A unique identifier that's associated with a [secret access key \(p. 852\)](#); the access key ID and secret access key are used together to sign programmatic AWS requests cryptographically.

| | |
|-------------------------------|---|
| access key rotation | A method to increase security by changing the AWS access key ID. You can use this method to retire an old key at your discretion. |
| access policy language | A language for writing documents (specifically, policies (p. 845)) that specify who can access a particular AWS resource (p. 850) and under what conditions. |
| account | A formal relationship with AWS that's associated with all of the following: <ul style="list-style-type: none">• The owner email address and password• The control of resources created under its umbrella• Payment for the AWS activity related to those resources |
| | The AWS account has permission to do anything and everything with all the AWS account resources. This is in contrast to a user (p. 859) , which is an entity contained within the account. |
| account activity | A webpage showing your month-to-date AWS usage and costs. The account activity page is located at https://aws.amazon.com/account-activity/ . |
| ACL | See access control list (ACL) . |
| ACM | See the section called "ACM" . |
| ACM PCA | See the section called "ACM Private CA" . |
| ACM Private CA | See the section called "ACM Private CA" . |
| action | An API function. Also called <i>operation</i> or <i>call</i> . The activity the principal (p. 846) has permission to perform. The action is B in the statement "A has permission to do B to C where D applies." For example, Jane sends a request to Amazon SQS (p. 811) with Action=ReceiveMessage. Amazon CloudWatch (p. 805): The response initiated by the change in an alarm's state (for example, from OK to ALARM). The state change might be caused by a metric reaching the alarm threshold, or by a SetAlarmState request. Each alarm can have one or more actions assigned to each state. Actions are performed once each time the alarm changes to a state that has an action assigned. Example actions include an Amazon Simple Notification Service (p. 810) notification, running an Amazon EC2 Auto Scaling (p. 807) policy (p. 845), and an Amazon EC2 (p. 806) instance (p. 836) stop/terminate action. |
| active trusted key groups | A list that shows each of the trusted key groups (p. 859) , and the IDs of the public keys in each key group, that are active for a distribution in Amazon CloudFront. CloudFront can use the public keys in these key groups to verify the signatures of CloudFront signed URLs and signed cookies . |
| active trusted signers | See active trusted key groups (p. 804) . |
| additional authenticated data | Information that's checked for integrity but not encrypted, such as headers or other contextual metadata. |
| administrative suspension | Amazon EC2 Auto Scaling (p. 807) might suspend processes for Auto Scaling group (p. 813) that repeatedly fail to launch instances. Auto Scaling groups that most commonly experience administrative suspension have zero running instances, have been trying to launch instances for more than 24 hours, and have not succeeded in that time. |
| alarm | An item that watches a single metric over a specified time period and starts an Amazon SNS (p. 810) topic (p. 858) or an Amazon EC2 Auto Scaling (p. 807) |

[policy \(p. 845\)](#). These actions are started if the value of the metric crosses a threshold value over a predetermined number of time periods.

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| allow | One of two possible outcomes (the other is deny (p. 828)) when an IAM (p. 816) access policy (p. 845) is evaluated. When a user makes a request to AWS, AWS evaluates the request based on all permissions that apply to the user and then returns either allow or deny. |
| Amazon API Gateway | A fully managed service that developers can use to create, publish, maintain, monitor, and secure APIs at any scale. See Also https://aws.amazon.com/api-gateway/ . |
| Amazon AppStream 2.0 | A fully managed, secure service for streaming desktop applications to users without rewriting those applications. See Also https://aws.amazon.com/appstream/ . |
| Amazon Athena | An interactive query service that you can use to analyze data in Amazon S3 using ANSI SQL. Athena is serverless, so there's no infrastructure to manage. Athena scales automatically and is simple to use, so you can start analyzing your datasets within seconds. See Also https://aws.amazon.com/athena/ . |
| Amazon Aurora | A fully managed MySQL-compatible relational database engine that combines the speed and availability of commercial databases with the simplicity and cost-effectiveness of open-source databases. See Also https://aws.amazon.com/rds/aurora/ . |
| Amazon Chime | A secure, real-time, unified communications service that transforms meetings by making them more efficient and easier to conduct. See Also https://aws.amazon.com/chime/ . |
| Amazon Cloud Directory (Cloud Directory) | A service that provides a highly scalable directory store for your application's multihierarchical data. See Also https://aws.amazon.com/cloud-directory/ . |
| Amazon CloudFront | An AWS content delivery service that helps you improve the performance, reliability, and availability of your websites and applications. See Also https://aws.amazon.com/cloudfront . |
| Amazon CloudSearch | A fully managed service in the AWS Cloud that you can use to set up, manage, and scale a search solution for your website or application. |
| Amazon CloudWatch | A web service that you can use to monitor and manage various metrics, and configure alarm actions based on data from those metrics. See Also https://aws.amazon.com/cloudwatch . |
| Amazon CloudWatch Events | A web service that you can use to deliver a timely stream of system events that describe changes in AWS resources (p. 850) to AWS Lambda (p. 817) functions, streams in Amazon Kinesis Data Streams (p. 808) , Amazon Simple Notification Service (p. 810) topics, or built-in targets. See Also https://aws.amazon.com/cloudwatch . |
| Amazon CloudWatch Logs | A web service for monitoring and troubleshooting your systems and applications from your existing system, application, and custom log files. You can send your existing log files to CloudWatch Logs and monitor these logs in near-real time. See Also https://aws.amazon.com/cloudwatch . |
| Amazon Cognito | A web service that you can use to save mobile user data in the AWS Cloud without writing any backend code or managing any infrastructure. Examples of mobile |

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| | <p>user data that you can save include app preferences and game states. Amazon Cognito offers mobile identity management and data synchronization across devices.</p> <p>See Also https://aws.amazon.com/cognito/.</p> |
| Amazon Comprehend | <p>A natural language processing (NLP) service that uses machine learning to find insights and relationships in text.</p> <p>See Also https://aws.amazon.com/comprehend/.</p> |
| Amazon Comprehend Medical | <p>A HIPAA-eligible natural language processing (NLP) service that uses machine learning to extract health data from medical text.</p> <p>See Also https://aws.amazon.com/comprehend/medical/.</p> |
| Amazon Connect | <p>A service solution that offers self-service configuration and provides dynamic, personal, and natural customer engagement at any scale.</p> <p>See Also https://aws.amazon.com/connect/.</p> |
| Amazon Corretto | <p>A no-cost, multiplatform, production-ready distribution of the Open Java Development Kit (OpenJDK).</p> <p>See Also https://aws.amazon.com/corretto/.</p> |
| Amazon Detective | <p>A service that collects log data from your AWS resources to analyze and identify the root cause of security findings or suspicious activities. The Detective behavior graph provides visualizations to help you to determine the nature and extent of possible security issues and conduct an efficient investigation.</p> <p>See Also https://aws.amazon.com/detective/.</p> |
| Amazon DocumentDB (with MongoDB compatibility) | <p>A managed database service that you can use to set up, operate, and scale MongoDB-compatible databases in the cloud.</p> <p>See Also https://aws.amazon.com/documentdb/.</p> |
| Amazon DynamoDB | <p>A fully managed NoSQL database service that provides fast and predictable performance with seamless scalability.</p> <p>See Also https://aws.amazon.com/dynamodb/.</p> |
| Amazon DynamoDB Encryption Client | <p>A software library that helps you protect your table data before you send it to Amazon DynamoDB (p. 806).</p> |
| Amazon DynamoDB Storage Backend for Titan | <p>A storage backend for the Titan graph database implemented on top of Amazon DynamoDB. Titan is a scalable graph database optimized for storing and querying graphs.</p> <p>See Also https://aws.amazon.com/dynamodb/.</p> |
| Amazon DynamoDB Streams | <p>An AWS service that captures a time-ordered sequence of item-level modifications in any Amazon DynamoDB table. This service also stores this information in a log for up to 24 hours. Applications can access this log and view the data items as they appeared before and after they were modified, in near-real time.</p> <p>See Also https://aws.amazon.com/dynamodb/.</p> |
| Amazon EBS-backed AMI | <p>A type of Amazon Machine Image (AMI) (p. 809) whose instances use an Amazon EBS (p. 807) volume (p. 861) as their root device. Compare this with instances launched from instance backeds (p. 836), which use the instance store (p. 836) as the root device.</p> |
| Amazon EC2 | <p>A web service for launching and managing Linux/UNIX and Windows Server instances (p. 836) in Amazon data centers.</p> <p>See Also Amazon Elastic Compute Cloud (Amazon EC2), https://aws.amazon.com/ec2.</p> |

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| Amazon EC2 Auto Scaling | A web service that launches or terminates instances automatically based on user-defined policies (p. 845) , schedules, and health checks (p. 834) . See Also https://aws.amazon.com/ec2/autoscaling . |
| Amazon Elastic Block Store (Amazon EBS) | A service that provides block level storage volumes (p. 861) or use with EC2 instances (p. 829) . See Also https://aws.amazon.com/ebs . |
| Amazon Elastic Compute Cloud (Amazon EC2) | A web service that you can use to launch and manage Linux/UNIX and Windows Server instances (p. 836) in Amazon data centers. See Also https://aws.amazon.com/ec2 . |
| Amazon Elastic Container Registry (Amazon ECR) | A fully managed Docker container registry that you can use to store, manage, and deploy Docker container images. Amazon ECR is integrated with Amazon Elastic Container Service (Amazon ECS) (p. 807) and AWS Identity and Access Management (IAM) (p. 816) . See Also https://aws.amazon.com/ecr . |
| Amazon Elastic Container Service (Amazon ECS) | A highly scalable, fast, container (p. 824) management service that you can use to run, stop, and manage Docker containers on a cluster (p. 823) of EC2 instances. See Also https://aws.amazon.com/ecs . |
| Amazon Elastic File System (Amazon EFS) | A file storage service for EC2 (p. 806) instances (p. 836) . Amazon EFS provides an interface that you can use to create and configure file systems. Amazon EFS storage capacity grows and shrinks automatically as you add and remove files. See Also https://aws.amazon.com/efs/ . |
| Amazon Elastic Kubernetes Service (Amazon EKS) | A managed service that you can use to run Kubernetes on AWS without needing to stand up or maintain your own Kubernetes control plane. See Also https://aws.amazon.com/eks/ . |
| Amazon Elastic Transcoder | A cloud-based media transcoding service. Elastic Transcoder is a highly scalable tool for converting (or <i>transcoding</i>) media files from their source format into versions that play on devices such as smartphones, tablets, and PCs. See Also https://aws.amazon.com/elastictranscoder/ . |
| Amazon ElastiCache | A web service that simplifies deploying, operating, and scaling an in-memory cache in the cloud. The service improves the performance of web applications by providing information retrieval from fast, managed, in-memory caches, instead of relying entirely on slower disk-based databases. See Also https://aws.amazon.com/elasticsearch/ . |
| Amazon OpenSearch Service (OpenSearch Service) | An AWS managed service for deploying, operating, and scaling OpenSearch, an open-source search and analytics engine, in the AWS Cloud. Amazon OpenSearch Service (OpenSearch Service) also offers security options, high availability, data durability, and direct access to the OpenSearch API. See Also https://aws.amazon.com/elasticsearch-service . |
| Amazon EMR | A web service that you can use to process large amounts of data efficiently. Amazon EMR uses Hadoop (p. 834) processing combined with several AWS products to do such tasks as web indexing, data mining, log file analysis, machine learning, scientific simulation, and data warehousing. See Also https://aws.amazon.com/elasticmapreduce . |
| Amazon EventBridge | A serverless event bus service that you can use to connect your applications with data from a variety of sources and routes that data to targets such as AWS Lambda. You can set up routing rules to determine where to send your data to build application architectures that react in real time to all of your data sources. See Also https://aws.amazon.com/eventbridge/ . |

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| Amazon Forecast | A fully managed service that uses statistical and machine learning algorithms to produce highly accurate time-series forecasts. See Also https://aws.amazon.com/forecast/ . |
| Amazon GameLift | A managed service for deploying, operating, and scaling session-based multiplayer games. See Also https://aws.amazon.com/gamelift/ . |
| Amazon GuardDuty | A continuous security monitoring service. Amazon GuardDuty can help to identify unexpected and potentially unauthorized or malicious activity in your AWS environment. See Also https://aws.amazon.com/guardduty/ . |
| Amazon Inspector | An automated security assessment service that helps improve the security and compliance of applications deployed on AWS. Amazon Inspector automatically assesses applications for vulnerabilities or deviations from best practices. After performing an assessment, Amazon Inspector produces a detailed report with prioritized steps for remediation. See Also https://aws.amazon.com/inspector/ . |
| Amazon Kinesis | A platform for streaming data on AWS. Kinesis offers services that simplify the loading and analysis of streaming data. See Also https://aws.amazon.com/kinesis/ . |
| Amazon Kinesis Data Firehose | A fully managed service for loading streaming data into AWS. Kinesis Data Firehose can capture and automatically load streaming data into Amazon S3 (p. 811) and Amazon Redshift (p. 810) , enabling near real-time analytics with existing business intelligence tools and dashboards. Kinesis Data Firehose automatically scales to match the throughput of your data and requires no ongoing administration. It can also batch, compress, and encrypt the data before loading it. See Also https://aws.amazon.com/kinesis/firehose/ . |
| Amazon Kinesis Data Streams | A web service for building custom applications that process or analyze streaming data for specialized needs. Amazon Kinesis Data Streams can continuously capture and store terabytes of data per hour from hundreds of thousands of sources. See Also https://aws.amazon.com/kinesis/streams/ . |
| Amazon Lightsail | You can use Lightsail to launch and manage a virtual private server with AWS. Lightsail offers bundled plans that include everything you need to deploy a virtual private server, for a low monthly rate. See Also https://aws.amazon.com/lightsail/ . |
| Amazon Lookout for Equipment | A machine learning service that uses data from sensors mounted on factory equipment to detect abnormal behavior so you can take action before machine failures occur. See Also https://aws.amazon.com/lookout-for-equipment/ . |
| Amazon Lookout for Vision | A machine learning service that uses computer vision (CV) to find defects in industrial products. Amazon Lookout for Vision can identify missing components in an industrial product, damage to vehicles or structures, irregularities in production lines, and even minuscule defects in silicon wafers—or any other physical item where quality is important. See Also https://aws.amazon.com/lookout-for-vision/ . |
| Amazon Lumberyard | A cross-platform, 3D game engine for creating high-quality games. You can connect games to the compute and storage of the AWS Cloud and engage fans on Twitch. |

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| | See Also https://aws.amazon.com/lumberyard/ . |
| Amazon Machine Image (AMI) | An encrypted machine image stored in Amazon Elastic Block Store (Amazon EBS) (p. 807) or Amazon Simple Storage Service (p. 811) . AMIs function similar to a template of a computer's root drive. They contain the operating system and can also include software and layers of your application, such as database servers, middleware, and web servers. |
| Amazon Machine Learning | A cloud-based service that creates machine learning (ML) models by finding patterns in your data, and uses these models to process new data and generate predictions. See Also http://aws.amazon.com/machine-learning/ . |
| Amazon Macie | A security service that uses machine learning to automatically discover, classify, and protect sensitive data in AWS. See Also http://aws.amazon.com/macie/ . |
| Amazon Managed Blockchain | A fully managed service for creating and managing scalable blockchain networks using popular open source frameworks. See Also http://aws.amazon.com/managed-blockchain/ . |
| Amazon Managed Grafana | A fully managed and secure data visualization service that you can use to instantly query, correlate, and visualize operational metrics, logs, and traces from multiple data sources. See Also https://aws.amazon.com/grafana/ . |
| Amazon Managed Service for Prometheus | A service that provides highly available, secure, and managed monitoring for your containers. See Also https://aws.amazon.com/prometheus/ . |
| Amazon ML | See Amazon Machine Learning . |
| Amazon Mobile Analytics (Mobile Analytics) | A service for collecting, visualizing, understanding, and extracting mobile app usage data at scale. See Also https://aws.amazon.com/mobileanalytics . |
| Amazon Monitron | An end-to-end system that uses machine learning (ML) to detect abnormal behavior in industrial machinery. Use Amazon Monitron to implement predictive maintenance and reduce unplanned downtime. See Also https://aws.amazon.com/monitron/ . |
| Amazon MQ | A managed message broker service for Apache ActiveMQ that you can use to set up and operate message brokers in the cloud. See Also https://aws.amazon.com/amazon-mq/ . |
| Amazon Neptune | A managed graph database service that you can use to build and run applications that work with highly connected datasets. Neptune supports the popular graph query languages Apache TinkerPop Gremlin and W3C's SPARQL, enabling you to build queries that efficiently navigate highly connected datasets. See Also https://aws.amazon.com/neptune/ . |
| Amazon Personalize | An artificial intelligence service for creating individualized product and content recommendations. See Also https://aws.amazon.com/personalize/ . |
| Amazon Polly | A text-to-speech (TTS) service that turns text into natural-sounding human speech. Amazon Polly provides dozens of lifelike voices across a broad set of languages so that you can build speech-enabled applications that work in many different countries. |

See Also <https://aws.amazon.com/polly/>.

Amazon QuickSight

A fast, cloud-powered business analytics service that you can use to build visualizations, perform analysis, and quickly get business insights from your data. See Also <https://aws.amazon.com/quicksight/>.

Amazon Rekognition

A machine learning service that identifies objects, people, text, scenes, and activities, including inappropriate content, in either image or video files. With Amazon Rekognition Custom Labels, you can create a customized ML model that detects objects and scenes specific to your business in images.

See Also <https://aws.amazon.com/rekognition/>.

Amazon Redshift

A fully managed, petabyte-scale data warehouse service in the cloud. With Amazon Redshift, you can analyze your data using your existing business intelligence tools.

See Also <https://aws.amazon.com/redshift/>.

Amazon Relational Database Service (Amazon RDS)

A web service that makes it easier to set up, operate, and scale a relational database in the cloud. It provides cost-efficient, resizable capacity for an industry-standard relational database and manages common database administration tasks.

See Also <https://aws.amazon.com/rds>.

Amazon Resource Name (ARN)

A standardized way to refer to an AWS [resource \(p. 850\)](#) (for example, arn:aws:iam::123456789012:user/division_abc/subdivision_xyz/Bob).

Amazon Route 53

A web service that you can use to create a new DNS service or to migrate your existing DNS service to the cloud.

See Also <https://aws.amazon.com/route53>.

Amazon S3

Storage for the internet. You can use it to store and retrieve any amount of data at any time, from anywhere on the web.

See Also [Amazon Simple Storage Service \(Amazon S3\)](#), <https://aws.amazon.com/s3>.

Amazon S3-Backed AMI

See [instance store-backed AMI](#).

Amazon S3 Glacier

A secure, durable, and low-cost storage service for data archiving and long-term backup. You can reliably store large or small amounts of data for significantly less than on-premises solutions. S3 Glacier is optimized for infrequently accessed data, where a retrieval time of several hours is suitable.

See Also <https://aws.amazon.com/glacier/>.

AWS Security Hub

A service that provides a comprehensive view of the security state of your AWS resources. Security Hub collects security data from AWS accounts and services and helps you analyze your security trends to identify and prioritize the security issues across your AWS environment.

See Also <https://aws.amazon.com/security-hub/>.

Amazon Silk

A next-generation web browser that's available only on Fire OS tablets and phones. Built on a split architecture that divides processing between the client and the AWS Cloud, Amazon Silk creates a faster, more responsive mobile browsing experience.

Amazon Simple Email Service (Amazon SES)

An simple and cost-effective email solution for applications. See Also <https://aws.amazon.com/ses>.

Amazon Simple Notification Service (Amazon SNS)

A web service that applications, users, and devices can use to instantly send and receive notifications from the cloud.

See Also <https://aws.amazon.com/sns>.

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| Amazon Simple Queue Service (Amazon SQS) | Reliable and scalable hosted queues for storing messages as they travel between computers. See Also https://aws.amazon.com/sqs/ . |
| Amazon Simple Storage Service (Amazon S3) | Storage for the internet. You can use it to store and retrieve any amount of data at any time, from anywhere on the web. See Also https://aws.amazon.com/s3/ . |
| Amazon Simple Workflow Service (Amazon SWF) | A fully managed service that helps developers build, run, and scale background jobs that have parallel or sequential steps. Amazon SWF functions similar to a state tracker and task coordinator in the AWS Cloud. See Also https://aws.amazon.com/swf/ . |
| Amazon Sumerian | A set of tools for creating and running high-quality 3D, augmented reality (AR), and virtual reality (VR) applications on the web. See Also https://aws.amazon.com/sumerian/ . |
| Amazon Textract | A service that automatically extracts text and data from scanned documents. Amazon Textract goes beyond simple optical character recognition (OCR) to also identify the contents of fields in forms and information stored in tables. See Also https://aws.amazon.com/textract/ . |
| Amazon Transcribe | A machine learning service that uses automatic speech recognition (ASR) to quickly and accurately convert speech to text. See Also https://aws.amazon.com/transcribe/ . |
| Amazon Transcribe Medical | An automatic speech recognition (ASR) service for adding medical speech-to-text capabilities to voice-enabled clinical documentation applications. See Also https://aws.amazon.com/transcribe/medical/ . |
| Amazon Translate | A neural machine translation service that delivers fast, high-quality, and affordable language translation. See Also https://aws.amazon.com/translate/ . |
| Amazon Virtual Private Cloud (Amazon VPC) | A web service for provisioning a logically isolated section of the AWS Cloud virtual network that you define. You control your virtual networking environment by selecting your own IP address range, creating subnets (p. 856) and configuring route tables (p. 851) and network gateways. See Also https://aws.amazon.com/vpc . |
| Amazon VPC | See Amazon Virtual Private Cloud (Amazon VPC) . |
| Amazon Web Services (AWS) | An infrastructure web services platform in the cloud for companies of all sizes. See Also https://aws.amazon.com/what-is-cloud-computing/ . |
| Amazon WorkDocs | A managed, secure enterprise document storage and sharing service with administrative controls and feedback capabilities. See Also https://aws.amazon.com/workdocs/ . |
| Amazon WorkLink | A cloud-based service that provides secure access to internal websites and web apps from mobile devices. See Also https://aws.amazon.com/worklink/ . |
| Amazon WorkMail | A managed, secure business email and calendar service with support for existing desktop and mobile email clients. See Also https://aws.amazon.com/workmail/ . |
| Amazon WorkSpaces | A managed, secure desktop computing service for provisioning cloud-based desktops and providing users access to documents, applications, and resources (p. 850) from supported devices. |

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| | See Also https://aws.amazon.com/workspaces/ . |
| Amazon WorkSpaces Application Manager (Amazon WAM) | A web service for deploying and managing applications for WorkSpaces. Amazon WAM accelerates software deployment, upgrades, patching, and retirement by packaging Windows desktop applications into virtualized application containers. See Also https://aws.amazon.com/workspaces/applicationmanager . |
| AMI | See Amazon Machine Image (AMI) . |
| analysis scheme | Amazon CloudSearch (p. 805) : Language-specific text analysis options that are applied to a text field to control stemming and configure stopwords and synonyms. |
| application | AWS Elastic Beanstalk (p. 815) : A logical collection of components, including environments, versions, and environment configurations. An application is conceptually similar to a folder. AWS CodeDeploy (p. 814) : A name that uniquely identifies the application to be deployed. AWS CodeDeploy uses this name to ensure the correct combination of revision, deployment configuration, and deployment group are referenced during a deployment. |
| Application Auto Scaling | A web service that you can use to configure automatic scaling for AWS resources beyond Amazon EC2, such as Amazon ECS services, Amazon EMR clusters, and DynamoDB tables. See Also https://aws.amazon.com/autoscaling/ . |
| Application Billing | The location where your customers manage the Amazon DevPay products they've purchased. The web address is http://www.amazon.com/dp-applications . |
| application revision | AWS CodeDeploy (p. 814) : An archive file containing source content—such as source code, webpages, executable files, and deployment scripts—along with an application specification file (p. 812) . Revisions are stored in Amazon S3 (p. 811) buckets (p. 821) or GitHub (p. 833) repositories. For Amazon S3, a revision is uniquely identified by its Amazon S3 object key and its ETag, version, or both. For GitHub, a revision is uniquely identified by its commit ID. |
| application specification file | AWS CodeDeploy (p. 814) : A YAML-formatted file used to map the source files in an application revision to destinations on the instance. The file is also used to specify custom permissions for deployed files and specify scripts to be run on each instance at various stages of the deployment process. |
| application version | AWS Elastic Beanstalk (p. 815) : A specific, labeled iteration of an application that represents a functionally consistent set of deployable application code. A version points to an Amazon S3 (p. 811) object (a JAVA WAR file) that contains the application code. |
| AppSpec file | See application specification file . |
| ARN | See Amazon Resource Name (ARN) . |
| artifact | AWS CodePipeline (p. 814) : A copy of the files or changes that are worked on by the pipeline. |
| asymmetric encryption | Encryption (p. 830) that uses both a public key and a private key. |
| asynchronous bounce | A type of bounce (p. 821) that occurs when a receiver (p. 848) initially accepts an email message for delivery and then subsequently fails to deliver it. |
| atomic counter | DynamoDB: A method of incrementing or decrementing the value of an existing attribute without interfering with other write requests. |

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| attribute | A fundamental data element, something that doesn't need to be broken down any further. In DynamoDB, attributes are similar in many ways to fields or columns in other database systems. |
| | Amazon Machine Learning: A unique, named property within an observation in a dataset. In tabular data, such as spreadsheets or comma-separated values (.csv) files, the column headings represent the attributes, and the rows contain values for each attribute. |
| AUC | Area Under a Curve. An industry-standard metric to evaluate the quality of a binary classification machine learning model. AUC measures the ability of the model to predict a higher score for positive examples, those that are "correct," than for negative examples, those that are "incorrect." The AUC metric returns a decimal value from 0 to 1. AUC values near 1 indicate an ML model that's highly accurate. |
| Aurora | See the section called "Amazon Aurora" . |
| authenticated encryption | Encryption (p. 830) that provides confidentiality, data integrity, and authenticity assurances of the encrypted data. |
| authentication | The process of proving your identity to a system. |
| Auto Scaling group | A representation of multiple EC2 instances (p. 829) that share similar characteristics, and that are treated as a logical grouping for the purposes of instance scaling and management. |
| Availability Zone | A distinct location within a Region (p. 849) that's insulated from failures in other Availability Zones, and provides inexpensive, low-latency network connectivity to other Availability Zones in the same Region. |
| AWS | See Amazon Web Services (AWS) . |
| AWS Application Discovery Service | A web service that helps you plan to migrate to AWS by identifying IT assets in a data center—including servers, virtual machines, applications, application dependencies, and network infrastructure. See Also https://aws.amazon.com/about-aws/whats-new/2016/04/aws-application-discovery-service/ . |
| AWS AppSync | An enterprise level, fully managed GraphQL service with real-time data synchronization and offline programming features. See Also https://aws.amazon.com/appsync/ . |
| AWS Auto Scaling | A fully managed service that you can use to quickly discover the scalable AWS resources that are part of your application and configure dynamic scaling. See Also https://aws.amazon.com/autoscaling/ . |
| AWS Backup | A managed backup service that you can use to centralize and automate the backup of data across AWS services in the cloud and on premises. See Also https://aws.amazon.com/backup/ . |
| AWS Billing and Cost Management | The AWS Cloud computing model where you pay for services on demand and use as much or as little as you need. While resources (p. 850) are active under your account, you pay for the cost of allocating those resources. You also pay for any incidental usage associated with those resources, such as data transfer or allocated storage. See Also https://aws.amazon.com/billing/new-user-faqs/ . |
| AWS Blockchain Templates | A service for creating and deploying open-source blockchain frameworks on AWS, such as Ethereum and Hyperledger Fabric. See Also https://aws.amazon.com/blockchain/templates/ . |

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| AWS Certificate Manager (ACM) | A web service for provisioning, managing, and deploying Secure Sockets Layer/ Transport Layer Security (p. 858) (SSL/TLS) certificates for use with AWS services. See Also https://aws.amazon.com/certificate-manager/ . |
| AWS Certificate Manager Private Certificate Authority (ACM PCA) | A hosted private certificate authority service for issuing and revoking private digital certificates (p. 822) . See Also https://aws.amazon.com/certificate-manager/private-certificate-authority/ . |
| AWS Cloud Development Kit (CDK) | An open-source software development framework for defining your cloud infrastructure in code and provisioning it through AWS CloudFormation. See Also https://aws.amazon.com/cdk/ . |
| AWS Cloud Map | A service that you use to create and maintain a map of the backend services and resources that your applications depend on. With AWS Cloud Map, you can name and discover your AWS Cloud resources. See Also https://aws.amazon.com/cloud-map/ . |
| AWS Cloud9 | A cloud-based integrated development environment (IDE) that you use to write, run, and debug code. See Also https://aws.amazon.com/cloud9/ . |
| AWS CloudFormation | A service for writing or changing templates that create and delete related AWS resources (p. 850) together as a unit. See Also https://aws.amazon.com/cloudformation/ . |
| AWS CloudHSM | A web service that helps you meet corporate, contractual, and regulatory compliance requirements for data security by using dedicated hardware security module (HSM) appliances within the AWS Cloud. See Also https://aws.amazon.com/cloudhsm/ . |
| AWS CloudTrail | A web service that records AWS API calls for your account and delivers log files to you. The recorded information includes the identity of the API caller, the time of the API call, the source IP address of the API caller, the request parameters, and the response elements returned by the AWS service. See Also https://aws.amazon.com/cloudtrail/ . |
| AWS CodeBuild | A fully managed continuous integration service that compiles source code, runs tests, and produces software packages that are ready to deploy. See Also https://aws.amazon.com/codebuild/ . |
| AWS CodeCommit | A fully managed source control service that companies can use to host secure and highly scalable private Git repositories. See Also https://aws.amazon.com/codecommit/ . |
| AWS CodeDeploy | A service that automates code deployments to any instance, including EC2 instances (p. 829) and instances (p. 836) running on-premises. See Also https://aws.amazon.com/codedeploy/ . |
| AWS CodeDeploy agent | A software package that, when installed and configured on an instance, enables that instance to be used in CodeDeploy deployments. |
| AWS CodePipeline | A continuous delivery service for fast and reliable application updates. See Also https://aws.amazon.com/codepipeline/ . |
| AWS Command Line Interface (AWS CLI) | A unified downloadable and configurable tool for managing AWS services. Control multiple AWS services from the command line and automate them through scripts. See Also https://aws.amazon.com/cli/ . |

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| AWS Config | A fully managed service that provides an AWS resource (p. 850) inventory, configuration history, and configuration change notifications for better security and governance. You can create rules that automatically check the configuration of AWS resources that AWS Config records. See Also https://aws.amazon.com/config/ . |
| AWS Database Migration Service | A web service that can help you migrate data to and from many widely used commercial and open-source databases. See Also https://aws.amazon.com/dms . |
| AWS Data Pipeline | A web service for processing and moving data between different AWS compute and storage services, as well as on-premises data sources, at specified intervals. See Also https://aws.amazon.com/datapipeline . |
| AWS Device Farm (Device Farm) | An app testing service that allows developers to test Android, iOS, and Fire OS devices on real, physical phones and tablets that are hosted by AWS. See Also https://aws.amazon.com/device-farm . |
| AWS Direct Connect | A web service that simplifies establishing a dedicated network connection from your premises to AWS. Using AWS Direct Connect, you can establish private connectivity between AWS and your data center, office, or colocation environment. See Also https://aws.amazon.com/directconnect . |
| AWS Directory Service | A managed service for connecting your AWS resources (p. 850) to an existing on-premises Microsoft Active Directory or to set up and operate a new, standalone directory in the AWS Cloud. See Also https://aws.amazon.com/directoryservice . |
| AWS Elastic Beanstalk | A web service for deploying and managing applications in the AWS Cloud without worrying about the infrastructure that runs those applications. See Also https://aws.amazon.com/elasticbeanstalk . |
| AWS Elemental MediaConnect | A service that broadcasters and other premium video providers can reliably use to ingest live video into the AWS Cloud and distribute it to multiple destinations inside or outside the AWS Cloud. See Also https://aws.amazon.com/mediaconnect . |
| AWS Elemental MediaConvert | A file-based video conversion service that transforms media into formats required for traditional broadcast and for internet streaming to multi-screen devices. See Also https://aws.amazon.com/mediaconvert . |
| AWS Elemental MediaLive | A video service that you can use to create live outputs for broadcast and streaming delivery. See Also https://aws.amazon.com/medialive . |
| AWS Elemental MediaPackage | A just-in-time packaging and origination service that you can use to format highly secure and reliable live outputs for a variety of devices. See Also https://aws.amazon.com/mediapackage . |
| AWS Elemental MediaStore | A storage service optimized for media that provides the performance, consistency, and low latency required to deliver live and on-demand video content at scale. See Also https://aws.amazon.com/mediastore . |
| AWS Elemental MediaTailor | A video service that you can use to serve targeted ads to viewers while maintaining broadcast quality in over-the-top (OTT) video applications. See Also https://aws.amazon.com/mediatailor . |
| AWS Encryption SDK | A client-side encryption library that you can use to encrypt and decrypt data using industry standards and best practices. |

See Also <https://aws.amazon.com/blogs/security/tag/aws-encryption-sdk/>.

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| AWS Firewall Manager | A service that you use with AWS WAF to simplify your AWS WAF administration and maintenance tasks across multiple accounts and resources. With AWS Firewall Manager, you set up your firewall rules only once. The service automatically applies your rules across your accounts and resources, even as you add new resources. See Also https://aws.amazon.com/firewall-manager . |
| AWS Global Accelerator | A network layer service that you use to create accelerators that direct traffic to optimal endpoints over the AWS global network. This improves the availability and performance of your internet applications that are used by a global audience. See Also https://aws.amazon.com/global-accelerator . |
| AWS Glue | A fully managed extract, transform, and load (ETL) (p. 832) service that you can use to catalog data and load it for analytics. With AWS Glue, you can discover your data, develop scripts to transform sources into targets, and schedule and run ETL jobs in a serverless environment. See Also https://aws.amazon.com/glue . |
| AWS GovCloud (US) | An isolated AWS Region that hosts sensitive workloads in the cloud, ensuring that this work meets the US government's regulatory and compliance requirements. The AWS GovCloud (US) Region adheres to United States International Traffic in Arms Regulations (ITAR), Federal Risk and Authorization Management Program (FedRAMP) requirements, Department of Defense (DOD) Cloud Security Requirements Guide (SRG) Levels 2 and 4, and Criminal Justice Information Services (CJIS) Security Policy requirements. See Also https://aws.amazon.com/govcloud-us/ . |
| AWS Identity and Access Management (IAM) | A web service that Amazon Web Services (AWS) (p. 811) customers can use to manage users and user permissions within AWS. See Also https://aws.amazon.com/iam . |
| AWS Import/Export | A service for transferring large amounts of data between AWS and portable storage devices. See Also https://aws.amazon.com/importexport . |
| AWS IoT Core | A managed cloud platform that lets connected devices easily and securely interact with cloud applications and other devices. See Also https://aws.amazon.com/iot . |
| AWS IoT 1-Click | A service that simple devices can use to launch AWS Lambda functions. See Also https://aws.amazon.com/iot-1-click . |
| AWS IoT Analytics | A fully managed service used to run sophisticated analytics on massive volumes of IoT data. See Also https://aws.amazon.com/iot-analytics . |
| AWS IoT Device Defender | An AWS IoT security service that you can use to audit the configuration of your devices, monitor your connected devices to detect abnormal behavior, and to mitigate security risks. See Also https://aws.amazon.com/iot-device-defender . |
| AWS IoT Device Management | A service used to securely onboard, organize, monitor, and remotely manage IoT devices at scale. See Also https://aws.amazon.com/iot-device-management . |
| AWS IoT Events | A fully managed AWS IoT service that you can use to detect and respond to events from IoT sensors and applications. See Also https://aws.amazon.com/iot-events . |

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| AWS IoT Greengrass | Software that you can use to run local compute, messaging, data caching, sync, and ML inference capabilities for connected devices in a secure way. See Also https://aws.amazon.com/greengrass . |
| AWS IoT SiteWise | A managed service that you can use to collect, organize, and analyze data from industrial equipment at scale. See Also https://aws.amazon.com/iot-sitewise . |
| AWS IoT Things Graph | A service that you can use to visually connect different devices and web services to build IoT applications. See Also https://aws.amazon.com/iot-things-graph . |
| AWS Key Management Service (AWS KMS) | A managed service that simplifies the creation and control of encryption (p. 830) keys that are used to encrypt data. See Also https://aws.amazon.com/kms . |
| AWS Lambda | A web service that you can use to run code without provisioning or managing servers. You can run code for virtually any type of application or backend service with zero administration. You can set up your code to automatically start from other AWS services or call it directly from any web or mobile app. See Also https://aws.amazon.com/lambda/ . |
| AWS managed key | One type of customer master key (CMK) (p. 826) in AWS Key Management Service (AWS KMS) (p. 817) . |
| AWS managed policy | An IAM (p. 816) managed policy (p. 840) that's created and managed by AWS. |
| AWS Management Console | A graphical interface to manage compute, storage, and other cloud resources (p. 850) . See Also https://aws.amazon.com/console . |
| AWS Management Portal for vCenter | A web service for managing your AWS resources (p. 850) using VMware vCenter. You install the portal as a vCenter plugin within your existing vCenter environment. After it's installed, you can migrate VMware VMs to Amazon EC2 (p. 806) and manage AWS resources from within vCenter. See Also https://aws.amazon.com/ec2/vcenter-portal/ . |
| AWS Marketplace | A web portal where qualified partners market and sell their software to AWS customers. AWS Marketplace is an online software store that helps customers find, buy, and immediately start using the software and services that run on AWS. See Also https://aws.amazon.com/partners/aws-marketplace/ . |
| AWS Migration Hub | A service that provides a single location to track migration tasks across multiple AWS tools and partner solutions. See Also https://aws.amazon.com/migration-hub/ . |
| AWS Mobile Hub (Mobile Hub) | An integrated console for building, testing, and monitoring mobile apps. See Also https://aws.amazon.com/mobile . |
| AWS Mobile SDK | A software development kit whose libraries, code examples, and documentation help you build high-quality mobile apps for the iOS, Android, Fire OS, Unity, and Xamarin platforms. See Also https://aws.amazon.com/mobile/sdk . |
| AWS OpsWorks | A configuration management service that helps you use Chef to configure and operate groups of instances and applications. You can define the application's architecture and the specification of each component including package installation, software configuration, and resources (p. 850) such as storage. You can automate tasks based on time, load, or lifecycle events. See Also https://aws.amazon.com/opsworks/ . |

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| AWS Organizations | An account management service that you can use to consolidate multiple AWS accounts into an organization that you create and centrally manage. See Also https://aws.amazon.com/organizations/ . |
| AWS Resource Access Manager | A service that you can use to share your resources with any AWS account or organization in AWS Organizations. See Also https://aws.amazon.com/ram/ . |
| AWS ParallelCluster | An AWS supported open source cluster management tool that helps you to deploy and manage high performance computing (HPC) clusters in the AWS Cloud. |
| AWS SDK for C++ | A software development kit for that provides C++ APIs for many AWS services including Amazon S3 (p. 811) , Amazon EC2 (p. 806) , Amazon DynamoDB (p. 806) , and more. The single, downloadable package includes the AWS C++ library, code examples, and documentation. See Also https://aws.amazon.com/sdk-for-cpp/ . |
| AWS SDK for Go | A software development kit for integrating your Go application with the full suite of AWS services. See Also https://aws.amazon.com/sdk-for-go/ . |
| AWS SDK for Java | A software development kit that provides Java API operations for many AWS services including Amazon S3 (p. 811) , Amazon EC2 (p. 806) , Amazon DynamoDB (p. 806) , and more. The single, downloadable package includes the AWS Java library, code examples, and documentation. See Also https://aws.amazon.com/sdk-for-java/ . |
| AWS SDK for JavaScript in the Browser | A software development kit for accessing AWS services from JavaScript code running in the browser. Authenticate users through Facebook, Google, or Login with Amazon using web identity federation. Store application data in Amazon DynamoDB (p. 806) , and save user files to Amazon S3 (p. 811) . See Also https://docs.aws.amazon.com/sdk-for-javascript/v2/developer-guide/ . |
| AWS SDK for JavaScript in Node.js | A software development kit for accessing AWS services from JavaScript in Node.js. The SDK provides JavaScript objects for AWS services, including Amazon S3 (p. 811) , Amazon EC2 (p. 806) , Amazon DynamoDB (p. 806) , and Amazon Simple Workflow Service (Amazon SWF) (p. 811) . The single, downloadable package includes the AWS JavaScript library and documentation. See Also https://docs.aws.amazon.com/sdk-for-javascript/v2/developer-guide/ . |
| AWS SDK for .NET | A software development kit that provides .NET API operations for AWS services including Amazon S3 (p. 811) , Amazon EC2 (p. 806) , IAM (p. 816) , and more. You can download the SDK as multiple service-specific packages on NuGet. See Also https://aws.amazon.com/sdk-for-net/ . |
| AWS SDK for PHP | A software development kit and open-source PHP library for integrating your PHP application with AWS services such as Amazon S3 (p. 811) , Amazon S3 Glacier (p. 810) , and Amazon DynamoDB (p. 806) . See Also https://aws.amazon.com/sdk-for-php/ . |
| AWS SDK for Python (Boto) | A software development kit for using Python to access AWS services such as Amazon EC2 (p. 806) , Amazon EMR (p. 807) , Amazon EC2 Auto Scaling (p. 807) , Amazon Kinesis (p. 808) , or AWS Lambda (p. 817) . See Also http://boto.readthedocs.org/en/latest/ . |
| AWS SDK for Ruby | A software development kit for accessing AWS services from Ruby. The SDK provides Ruby classes for many AWS services including Amazon S3 (p. 811) , Amazon EC2 (p. 806) , Amazon DynamoDB (p. 806) and more. The single, downloadable package includes the AWS Ruby Library and documentation. |

See Also <https://aws.amazon.com/sdk-for-ruby/>.

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| AWS Secrets Manager | A service for securely encrypting, storing, and rotating credentials for databases and other services. See Also https://aws.amazon.com/secrets-manager/ . |
| AWS Security Token Service (AWS STS) | A web service for requesting temporary, limited-privilege credentials for AWS Identity and Access Management (IAM) (p. 816) users or for users that you authenticate (federated users (p. 832)). See Also https://aws.amazon.com/iam/ . |
| AWS Service Catalog | A web service that helps organizations create and manage catalogs of IT services that are approved for use on AWS. These IT services can include everything from virtual machine images, servers, software, and databases to complete multitier application architectures. See Also https://aws.amazon.com/servicecatalog/ . |
| AWS Shield | A service that helps to protect your resources—such as Amazon EC2 instances, Elastic Load Balancing load balancers, Amazon CloudFront distributions, and Route 53 hosted zones—against DDoS attacks. AWS Shield is automatically included at no extra cost beyond what you already pay for AWS WAF and your other AWS services. For added protection against DDoS attacks, AWS offers AWS Shield Advanced. See Also https://aws.amazon.com/shield/ . |
| AWS Single Sign-On | A cloud-based service that simplifies managing SSO access to AWS accounts and business applications. You can control SSO access and user permissions across all your AWS accounts in AWS Organizations. See Also https://aws.amazon.com/single-sign-on/ . |
| AWS Step Functions | A web service that coordinates the components of distributed applications as a series of steps in a visual workflow. See Also https://aws.amazon.com/step-functions/ . |
| AWS Snowball | A petabyte-scale data transport solution that uses devices that are secure to transfer large amounts of data into and out of the AWS Cloud. See Also https://aws.amazon.com/snowball/ . |
| Storage Gateway | A web service that connects an on-premises software appliance with cloud-based storage. Storage Gateway provides seamless and secure integration between an organization's on-premises IT environment and AWS storage infrastructure. See Also https://aws.amazon.com/storagegateway/ . |
| AWS Toolkit for Eclipse | An open-source plugin for the Eclipse Java integrated development environment (IDE) that makes it easier to develop, debug, and deploy Java applications using Amazon Web Services. See Also https://aws.amazon.com/eclipse/ . |
| AWS Toolkit for JetBrains | An open-source plugin for the integrated development environments (IDEs) from JetBrains that makes it easier to develop, debug, and deploy serverless applications using Amazon Web Services. See Also https://aws.amazon.com/intellij/ , https://aws.amazon.com/pycharm/ . |
| AWS Toolkit for Visual Studio | An extension for Visual Studio that helps in developing, debugging, and deploying .NET applications using Amazon Web Services. See Also https://aws.amazon.com/visualstudio/ . |
| AWS Toolkit for Visual Studio Code | An open-source plugin for the Visual Studio Code (VS Code) editor that makes it easier to develop, debug, and deploy applications using Amazon Web Services. |

See Also <https://aws.amazon.com/visualstudiocode/>.

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| AWS Tools for PowerShell | A set of PowerShell cmdlets to help developers and administrators manage their AWS services from the PowerShell scripting environment. See Also https://aws.amazon.com/powershell/ . |
| AWS Toolkit for Microsoft Azure DevOps | Provides tasks you can use in build and release definitions in VSTS to interact with AWS services. See Also https://aws.amazon.com/vsts/ . |
| AWS Trusted Advisor | A web service that inspects your AWS environment and makes recommendations for saving money, improving system availability and performance, and helping to close security gaps. See Also https://aws.amazon.com/premiumsupport/trustedadvisor/ . |
| AWS VPN CloudHub | Enables secure communication between branch offices using a simple hub-and-spoke model, with or without a VPC (p. 861) . |
| AWS WAF | A web application firewall service that controls access to content by allowing or blocking web requests based on criteria that you specify. For example, you can filter access based on the header values or the IP addresses that the requests originate from. AWS WAF helps protect web applications from common web exploits that could affect application availability, compromise security, or consume excessive resources. See Also https://aws.amazon.com/waf/ . |
| AWS X-Ray | A web service that collects data about requests that your application serves. X-Ray provides tools that you can use to view, filter, and gain insights into that data to identify issues and opportunities for optimization. See Also https://aws.amazon.com/xray/ . |

B

[Numbers and symbols \(p. 803\)](#) | [A \(p. 803\)](#) | [B \(p. 820\)](#) | [C \(p. 821\)](#) | [D \(p. 826\)](#) | [E \(p. 829\)](#) | [F \(p. 832\)](#) | [G \(p. 833\)](#) | [H \(p. 834\)](#) | [I \(p. 835\)](#) | [J \(p. 837\)](#) | [K \(p. 838\)](#) | [L \(p. 838\)](#) | [M \(p. 839\)](#) | [N \(p. 842\)](#) | [O \(p. 843\)](#) | [P \(p. 844\)](#) | [Q \(p. 847\)](#) | [R \(p. 848\)](#) | [S \(p. 851\)](#) | [T \(p. 857\)](#) | [U \(p. 859\)](#) | [V \(p. 860\)](#) | [W \(p. 861\)](#) | [X, Y, Z \(p. 861\)](#)

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| basic monitoring | Monitoring of AWS provided metrics derived at a 5-minute frequency. |
| batch | See document batch . |
| BGP ASN | Border Gateway Protocol Autonomous System Number. A unique identifier for a network, for use in BGP routing. Amazon EC2 (p. 806) supports all 2-byte ASN numbers in the range of 1 – 65335, with the exception of 7224, which is reserved. |
| batch prediction | Amazon Machine Learning: An operation that processes multiple input data observations at one time (asynchronously). Unlike real-time predictions, batch predictions aren't available until all predictions have been processed. See Also real-time predictions . |
| billing | See the section called "Billing and Cost Management" . |
| binary attribute | Amazon Machine Learning: An attribute for which one of two possible values is possible. Valid positive values are 1, y, yes, t, and true answers. Valid negative values are 0, n, no, f, and false. Amazon Machine Learning outputs 1 for positive values and 0 for negative values. See Also attribute . |

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| binary classification model | Amazon Machine Learning: A machine learning model that predicts the answer to questions where the answer can be expressed as a binary variable. For example, questions with answers of "1" or "0", "yes" or "no", "will click" or "will not click" are questions that have binary answers. The result for a binary classification model is always either a "1" (for a "true" or affirmative answers) or a "0" (for a "false" or negative answers). |
| block | A dataset. Amazon EMR (p. 807) breaks large amounts of data into subsets. Each subset is called a data block. Amazon EMR assigns an ID to each block and uses a hash table to keep track of block processing. |
| block device | A storage device that supports reading and (optionally) writing data in fixed-size blocks, sectors, or clusters. |
| block device mapping | A mapping structure for every AMI (p. 809) and instance (p. 836) that specifies the block devices attached to the instance. |
| blue/green deployment | CodeDeploy: A deployment method where the instances in a deployment group (the original environment) are replaced by a different set of instances (the replacement environment). |
| bootstrap action | A user-specified default or custom action that runs a script or an application on all nodes of a job flow before Hadoop (p. 834) starts. |
| Border Gateway Protocol Autonomous System Number | See BGP ASN . |
| bounce | A failed email delivery attempt. |
| breach | Amazon EC2 Auto Scaling (p. 807) : The condition where a user-set threshold (upper or lower boundary) is passed. If the duration of the breach is significant, as set by a breach duration parameter, it can possibly start a scaling activity (p. 851) . |
| bucket | Amazon Simple Storage Service (Amazon S3) (p. 811) : A container for stored objects. Every object is contained in a bucket. For example, if the object named photos/puppy.jpg is stored in the DOC-EXAMPLE-BUCKET bucket, then authorized users can access the object with the URL https://s3-bucket-endpoint/DOC-EXAMPLE-BUCKET/photos/puppy.jpg . |
| bucket owner | The person or organization that owns a bucket (p. 821) in Amazon S3 (p. 811) . In the same way that Amazon is the only owner of the domain name Amazon.com, only one person or organization can own a bucket. |
| bundling | A commonly used term for creating an Amazon Machine Image (AMI) (p. 809) . It specifically refers to creating instance store-backed AMIs (p. 836) . |

C

[Numbers and symbols \(p. 803\)](#) | [A \(p. 803\)](#) | [B \(p. 820\)](#) | [C \(p. 821\)](#) | [D \(p. 826\)](#) | [E \(p. 829\)](#) | [F \(p. 832\)](#) | [G \(p. 833\)](#) | [H \(p. 834\)](#) | [I \(p. 835\)](#) | [J \(p. 837\)](#) | [K \(p. 838\)](#) | [L \(p. 838\)](#) | [M \(p. 839\)](#) | [N \(p. 842\)](#) | [O \(p. 843\)](#) | [P \(p. 844\)](#) | [Q \(p. 847\)](#) | [R \(p. 848\)](#) | [S \(p. 851\)](#) | [T \(p. 857\)](#) | [U \(p. 859\)](#) | [V \(p. 860\)](#) | [W \(p. 861\)](#) | X, Y, Z (p. 861)

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| cache cluster | A logical cache distributed over multiple cache nodes (p. 822) . A cache cluster can be set up with a specific number of cache nodes. |
| cache cluster identifier | Customer-supplied identifier for the cache cluster that must be unique for that customer in an AWS Region (p. 849) . |

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| cache engine version | The version of the Memcached service that's running on the cache node. |
| cache node | A fixed-size chunk of secure, network-attached RAM. Each cache node runs an instance of the Memcached service, and has its own DNS name and port. Multiple types of cache nodes are supported, each with varying amounts of associated memory. |
| cache node type | An EC2 instance (p. 829) type used to run the cache node. |
| cache parameter group | A container for cache engine parameter values that can be applied to one or more cache clusters. |
| cache security group | A group maintained by ElasticCache that combines inbound authorizations to cache nodes for hosts belonging to Amazon EC2 (p. 806) security groups (p. 852) that are specified through the console or the API or command line tools. |
| campaign | Amazon Personalize (p. 809) : A deployed solution version (trained model) with provisioned dedicated transaction capacity for creating real-time recommendations for your application users. After you create a campaign, you use the <code>getRecommendations</code> or <code>getPersonalizedRanking</code> personalization operations to get recommendations. See Also recommendations , solution version . |
| canned access policy | A standard access control policy that you can apply to a bucket (p. 821) or object. Options include: private, public-read, public-read-write, and authenticated-read. |
| canonicalization | The process of converting data into a standard format that a service such as Amazon S3 (p. 811) can recognize. |
| capacity | The amount of available compute size at a given time. Each Auto Scaling group (p. 813) is defined with a minimum and maximum compute size. A scaling activity (p. 851) increases or decreases the capacity within the defined minimum and maximum values. |
| Cartesian product processor | A processor that calculates a Cartesian product. Also known as a <i>Cartesian data processor</i> . |
| Cartesian product | A mathematical operation that returns a product from multiple sets. |
| CDN | See content delivery network (CDN) . |
| certificate | A credential that some AWS products use to authenticate AWS accounts (p. 804) and users. Also known as an X.509 certificate (p. 861) . The certificate is paired with a private key. |
| chargeable resources | Features or services whose use incurs fees. Although some AWS products are free, others include charges. For example, in an AWS CloudFormation (p. 814) stack (p. 855) , AWS resources (p. 850) that have been created incur charges. The amount charged depends on the usage load. Use the Amazon Web Services Simple Monthly Calculator to estimate your cost prior to creating instances, stacks, or other resources. |
| CIDR block | Classless Inter-Domain Routing. An internet protocol address allocation and route aggregation methodology. See Also Classless Inter-Domain Routing on Wikipedia . |
| ciphertext | Information that has been encrypted (p. 830) , as opposed to plaintext (p. 845) , which is information that has not. |

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| ClassicLink | A feature for linking an EC2-Classic instance (p. 836) to a VPC (p. 861) , allowing your EC2-Classic instance to communicate with VPC instances using private IP addresses. See Also link to VPC, unlink from VPC . |
| classification | In machine learning, a type of problem that seeks to place (classify) a data sample into a single category or "class." Often, classification problems are modeled to choose one category (class) out of two. These are binary classification problems. Problems with more than two available categories (classes) are called "multiclass classification" problems. See Also binary classification model , multiclass classification model . |
| CLI | See AWS Command Line Interface (AWS CLI) . |
| Cloud Directory | See the section called "Cloud Directory" . |
| cloud service provider (CSP) | A company that provides subscribers with access to internet-hosted computing, storage, and software services. |
| CloudHub | See AWS VPN CloudHub . |
| cluster | A logical grouping of container instances (p. 824) that you can place tasks (p. 857) on. Amazon OpenSearch Service (OpenSearch Service) (p. 807) : A logical grouping of one or more data nodes, optional dedicated master nodes, and storage required to run Amazon OpenSearch Service (OpenSearch Service) and operate your OpenSearch Service domain. See Also data node , dedicated master node , node . |
| cluster compute instance | A type of instance (p. 836) that provides a great amount of CPU power coupled with increased networking performance, making it well suited for High Performance Compute (HPC) applications and other demanding network-bound applications. |
| cluster placement group | A logical cluster compute instance (p. 823) grouping to provide lower latency and high-bandwidth connectivity between the instances (p. 836) . |
| cluster status | Amazon OpenSearch Service (OpenSearch Service) (p. 807) : An indicator of the health of a cluster. A status can be green, yellow, or red. At the shard level, green means that all shards are allocated to nodes in a cluster, yellow means that the primary shard is allocated but the replica shards aren't, and red means that the primary and replica shards of at least one index aren't allocated. The shard status determines the index status, and the index status determines the cluster status. |
| CMK | See customer master key (CMK) . |
| CNAME | Canonical Name Record. A type of resource record (p. 850) in the Domain Name System (DNS) that specifies that the domain name is an alias of another, canonical domain name. Specifically, it's an entry in a DNS table that you can use to alias one fully qualified domain name to another. |
| Code Signing for AWS IoT | A service for signing code that you create for any IoT device that's supported by Amazon Web Services (AWS). |
| complaint | The event where a recipient (p. 848) who doesn't want to receive an email message chooses "Mark as Spam" within the email client, and the internet service provider (ISP) (p. 836) sends a notification to Amazon SES (p. 810) . |
| compound query | Amazon CloudSearch (p. 805) : A search request that specifies multiple search criteria using the Amazon CloudSearch structured search syntax. |

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| condition | <p>IAM (p. 816): Any restriction or detail about a permission. The condition is <i>D</i> in the statement "A has permission to do B to C where D applies."</p> <p>AWS WAF (p. 820): A set of attributes that AWS WAF searches for in web requests to AWS resources (p. 850) such as Amazon CloudFront (p. 805) distributions. Conditions can include values such as the IP addresses that web requests originate from or values in request headers. Based on the specified conditions, you can configure AWS WAF to allow or block web requests to AWS resources.</p> |
| conditional parameter | See mapping . |
| configuration API | <p>Amazon CloudSearch (p. 805): The API call that you use to create, configure, and manage search domains.</p> |
| configuration template | A series of key-value pairs that define parameters for various AWS products so that AWS Elastic Beanstalk (p. 815) can provision them for an environment. |
| consistency model | The method a service uses to achieve high availability. For example, it could involve replicating data across multiple servers in a data center. See Also eventual consistency . |
| console | See AWS Management Console . |
| consolidated billing | A feature of the AWS Organizations service for consolidating payment for multiple AWS accounts. You create an organization that contains your AWS accounts, and you use the management account of your organization to pay for all member accounts. You can see a combined view of AWS costs that are incurred by all accounts in your organization, and you can get detailed cost reports for individual accounts. |
| container | A container is a standard unit of software that contains application code and all relevant dependencies. |
| container definition | A container definition specifies the details that are associated with running a container (p. 824) on Amazon ECS. More specifically, a container definition specifies details such as the container image to use and how much CPU and memory the container is allocated. The container definition is included as part of an Amazon ECS task definition (p. 857) . |
| container instance | A container instance is a self-managed EC2 instance (p. 829) or an on-premises server or virtual machine (VM) that's running the Amazon Elastic Container Service (Amazon ECS) container agent and has been registered into a cluster (p. 823) . A container instance serves as the infrastructure that your Amazon ECS workloads are run on. |
| container registry | A container registry is a collection of repositories that store container images. One example is Amazon Elastic Container Registry (Amazon ECR). |
| content delivery network (CDN) | A web service that speeds up distribution of your static and dynamic web content—such as .html, .css, .js, media files, and image files—to your users by using a worldwide network of data centers. When a user requests your content, the request is routed to the data center that provides the lowest latency (time delay). If the content is already in the location with the lowest latency, the CDN delivers it immediately. If not, the CDN retrieves it from an origin that you specify (for example, a web server or an Amazon S3 bucket). With some CDNs, you can help secure your content by configuring an HTTPS connection between users and data centers, and between data centers and your origin. Amazon CloudFront is an example of a CDN. |

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| contextual metadata | <p>Amazon Personalize (p. 809): Interactions data that you collect about a user's browsing context (such as device used or location) when an event (such as a click) occurs. Contextual metadata can improve recommendation relevance for new and existing users.</p> <p>See Also Interactions dataset, event.</p> |
| continuous delivery | <p>A software development practice where code changes are automatically built, tested, and prepared for a release to production.</p> <p>See Also https://aws.amazon.com/devops/continuous-delivery/.</p> |
| continuous integration | <p>A software development practice where developers regularly merge code changes into a central repository, after which automated builds and tests are run.</p> <p>See Also https://aws.amazon.com/devops/continuous-integration/.</p> |
| cooldown period | <p>Amount of time that Amazon EC2 Auto Scaling (p. 807) doesn't allow the desired size of the Auto Scaling group (p. 813) to be changed by any other notification from an Amazon CloudWatch (p. 805) alarm (p. 804).</p> |
| core node | <p>An EC2 instance (p. 829) that runs Hadoop (p. 834) map and reduce tasks and stores data using the Hadoop Distributed File System (HDFS). Core nodes are managed by the master node (p. 840), which assigns Hadoop tasks to nodes and monitors their status. The EC2 instances you assign as core nodes are capacity that must be allotted for the entire job flow run. Because core nodes store data, you can't remove them from a job flow. However, you can add more core nodes to a running job flow.</p> <p>Core nodes run both the DataNodes and TaskTracker Hadoop daemons.</p> |
| corpus | <p>Amazon CloudSearch (p. 805): A collection of data that you want to search.</p> |
| coverage | <p>Amazon Personalize (p. 809): An evaluation metric that tells you the proportion of unique items that Amazon Personalize might recommend using your model out of the total number of unique items in Interactions and Items datasets. To make sure Amazon Personalize recommends more of your items, use a model with a higher coverage score. Recipes that feature item exploration, such as user-personalization, have higher coverage than those that don't, such as popularity-count.</p> <p>See Also metrics, Items dataset, Interactions dataset, item exploration, user-personalization recipe, popularity-count recipe.</p> |
| credential helper | <p>AWS CodeCommit (p. 814): A program that stores credentials for repositories and supplies them to Git when making connections to those repositories. The AWS CLI (p. 814) includes a credential helper that you can use with Git when connecting to CodeCommit repositories.</p> |
| credentials | <p>Also called <i>access credentials</i> or <i>security credentials</i>. In authentication and authorization, a system uses credentials to identify who is making a call and whether to allow the requested access. In AWS, these credentials are typically the access key ID (p. 803) and the secret access key (p. 852).</p> |
| cross-account access | <p>The process of permitting limited, controlled use of resources (p. 850) in one AWS account (p. 804) by a user in another AWS account. For example, in AWS CodeCommit (p. 814) and AWS CodeDeploy (p. 814) you can configure cross-account access so that a user in AWS account A can access a CodeCommit repository created by account B. Or a pipeline in AWS CodePipeline (p. 814) created by account A can use CodeDeploy resources created by account B. In IAM (p. 816) you use a role (p. 850) to delegate (p. 827) temporary access to a user (p. 859) in one account to resources in another.</p> |

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| cross-Region replication | A solution for replicating data across different AWS Regions (p. 849) , in near-real time. |
| customer gateway | A router or software application on your side of a VPN tunnel that's managed by Amazon VPC (p. 811) . The internal interfaces of the customer gateway are attached to one or more devices in your home network. The external interface is attached to the virtual private gateway (VGW) (p. 860) across the VPN tunnel. |
| customer managed policy | An IAM (p. 816) managed policy (p. 840) that you create and manage in your AWS account (p. 804) . |
| customer master key (CMK) | The fundamental resource (p. 850) that AWS Key Management Service (AWS KMS) (p. 817) manages. CMKs can be either customer managed keys or AWS managed keys. Use CMKs inside AWS KMS to encrypt (p. 830) or decrypt up to 4 kilobytes of data directly or to encrypt generated data keys, which are then used to encrypt or decrypt larger amounts of data outside of the service. |

D

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| dashboard | See service health dashboard . |
| data consistency | A concept that describes when data is written or updated successfully and all copies of the data are updated in all AWS Regions (p. 849) . However, it takes time for the data to propagate to all storage locations. To support varied application requirements, Amazon DynamoDB (p. 806) supports both eventually consistent and strongly consistent reads. See Also eventual consistency , eventually consistent read , strongly consistent read . |
| data node | Amazon OpenSearch Service (OpenSearch Service) (p. 807) : An OpenSearch instance that holds data and responds to data upload requests. See Also dedicated master node , node . |
| data schema | See schema . |
| data source | The database, file, or repository that provides information required by an application or database. For example, in AWS OpsWorks (p. 817) , valid data sources include an instance (p. 836) for a stack's MySQL layer or a stack's Amazon RDS (p. 810) service layer. In Amazon Redshift (p. 810) , valid data sources include text files in an Amazon S3 (p. 811) bucket (p. 821), in an Amazon EMR (p. 807) cluster, or on a remote host that a cluster can access through an SSH connection. See Also datasource . |
| database engine | The database software and version running on the DB instance (p. 827) . |
| database name | The name of a database hosted in a DB instance (p. 827) . A DB instance can host multiple databases, but databases hosted by the same DB instance must each have a unique name within that instance. |
| dataset | Amazon Personalize (p. 809) : A container for the data used by Amazon Personalize. There are three types of Amazon Personalize datasets: Users, Items, and Interactions. |

See Also [Interactions dataset](#), [Users dataset](#), [Items dataset](#).

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| dataset group | <p>Amazon Personalize (p. 809): A container for Amazon Personalize components, including datasets, event trackers, solutions, filters, campaigns, and batch inference jobs. A dataset group organizes your resources into independent collections, so resources from one dataset group can't influence resources in any other dataset group.</p> <p>See Also dataset, event tracker, solution, campaign.</p> |
| datasource | <p>Amazon Machine Learning (p. 809): An object that contains metadata about the input data. Amazon ML reads the input data, computes descriptive statistics on its attributes, and stores the statistics—along with a schema and other information—as part of the datasource object. Amazon ML uses datasources to train and evaluate a machine learning model and generate batch predictions.</p> <p>See Also data source.</p> |
| DB compute class | The size of the database compute platform used to run the instance. |
| DB instance | An isolated database environment running in the cloud. A DB instance can contain multiple user-created databases. |
| DB instance identifier | User-supplied identifier for the DB instance. The identifier must be unique for that user in an AWS Region (p. 849) . |
| DB parameter group | A container for database engine parameter values that apply to one or more DB instances (p. 827) . |
| DB security group | A method that controls access to the DB instance (p. 827) . By default, network access is turned off to DB instances. After inbound traffic is configured for a security group (p. 852) , the same rules apply to all DB instances associated with that group. |
| DB snapshot | A user-initiated point backup of a DB instance (p. 827) . |
| Dedicated Host | A physical server with EC2 instance (p. 829) capacity fully dedicated to a user. |
| Dedicated Instance | An instance (p. 836) that's physically isolated at the host hardware level and launched within a VPC (p. 861) . |
| dedicated master node | <p>Amazon OpenSearch Service (OpenSearch Service) (p. 807): An OpenSearch instance that performs cluster management tasks, but doesn't hold data or respond to data upload requests. Amazon OpenSearch Service (OpenSearch Service) uses dedicated master nodes to increase cluster stability.</p> <p>See Also data node, node.</p> |
| Dedicated Reserved Instance | An option that you purchase to guarantee that sufficient capacity will be available to launch Dedicated Instances (p. 827) into a VPC (p. 861) . |
| delegation | Within a single AWS account (p. 804) : Giving AWS users (p. 859) access to resources (p. 850) your AWS account. |
| | Between two AWS accounts: Setting up a trust between the account that owns the resource (the trusting account), and the account that contains the users that need to access the resource (the trusted account). |
| | <p>See Also trust policy.</p> |
| delete marker | An object with a key and version ID, but without content. Amazon S3 (p. 811) inserts delete markers automatically into versioned buckets (p. 821) when an object is deleted. |
| deliverability | The likelihood that an email message arrives at its intended destination. |

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| deliveries | The number of email messages, sent through Amazon SES (p. 810) , that were accepted by an internet service provider (ISP) (p. 836) for delivery to recipients (p. 848) over a period of time. |
| deny | The result of a policy (p. 845) statement that includes deny as the effect, so that a specific action or actions are expressly forbidden for a user, group, or role. Explicit deny take precedence over explicit allow (p. 805) . |
| deployment configuration | AWS CodeDeploy (p. 814) : A set of deployment rules and success and failure conditions used by the service during a deployment. |
| deployment group | AWS CodeDeploy (p. 814) : A set of individually tagged instances (p. 836) or EC2 instances (p. 829) in Auto Scaling groups (p. 813) , or both. |
| detailed monitoring | Monitoring of AWS provided metrics derived at a 1-minute frequency. |
| Description property | A property added to parameters, resources (p. 850) , resource properties, mappings, and outputs to help you to document AWS CloudFormation (p. 814) template elements. |
| dimension | A name-value pair (for example, InstanceType=m1.small, or EngineName=mysql), that contains additional information to identify a metric. |
| discussion forums | A place where AWS users can post technical questions and feedback to help accelerate their development efforts and to engage with the AWS community. For more information, see the Amazon Web Services Discussion Forums . |
| distribution | A link between an origin server (such as an Amazon S3 (p. 811) bucket (p. 821)) and a domain name, which CloudFront (p. 805) automatically assigns. Through this link, CloudFront identifies the object you have stored in your origin server (p. 844) . |
| DKIM | DomainKeys Identified Mail. A standard that email senders use to sign their messages. ISPs use those signatures to verify that messages are legitimate. For more information, see https://tools.ietf.org/html/rfc6376 . |
| DNS | See Domain Name System . |
| Docker image | A layered file system template that's the basis of a Docker container (p. 824) . Docker images can comprise specific operating systems or applications. |
| document | Amazon CloudSearch (p. 805) : An item that can be returned as a search result. Each document has a collection of fields that contain the data that can be searched or returned. The value of a field can be either a string or a number. Each document must have a unique ID and at least one field. |
| document batch | Amazon CloudSearch (p. 805) : A collection of add and delete document operations. You use the document service API to submit batches to update the data in your search domain. |
| document service API | Amazon CloudSearch (p. 805) : The API call that you use to submit document batches to update the data in a search domain. |
| document service endpoint | Amazon CloudSearch (p. 805) : The URL that you connect to when sending document updates to an Amazon CloudSearch domain. Each search domain has a unique document service endpoint that remains the same for the life of the domain. |
| domain | Amazon OpenSearch Service (OpenSearch Service) (p. 807) : The hardware, software, and data exposed by Amazon OpenSearch Service (OpenSearch Service) endpoints. An OpenSearch Service domain is a service wrapper around an |

OpenSearch cluster. An OpenSearch Service domain encapsulates the engine instances that process OpenSearch Service requests, the indexed data that you want to search, snapshots of the domain, access policies, and metadata.
See Also [cluster](#), [Elasticsearch](#).

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| Domain Name System | A service that routes internet traffic to websites by translating human-readable domain names (for example, <code>www.example.com</code>) into the numeric IP addresses, such as <code>192.0.2.1</code> , which computers use to connect to each other. |
| Donation button | An HTML-coded button to provide a simple and secure way for US-based, IRS-certified 501(c)(3) nonprofit organizations to solicit donations. |
| DynamoDB stream | An ordered flow of information about changes to items in an Amazon DynamoDB (p. 806) table. When you enable a stream on a table, DynamoDB captures information about every modification to data items in the table. See Also Amazon DynamoDB Streams . |

E

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| EBS | See Amazon Elastic Block Store (Amazon EBS) . |
| EC2 | See Amazon EC2 . |
| EC2 compute unit (ECU) | An AWS standard for compute CPU and memory. You can use this measure to evaluate the CPU capacity of different EC2 instance (p. 829) types. |
| EC2 instance | A compute instance (p. 836) in the Amazon EC2 (p. 806) service. Other AWS services use the term <i>EC2 instance</i> to distinguish these instances from other types of instances they support. |
| ECR | See the section called “Amazon ECR” . |
| ECS | See Amazon Elastic Container Service (Amazon ECS) . |
| edge location | A data center that an AWS service uses to perform service-specific operations. For example, CloudFront (p. 805) uses edge locations to cache copies of your content, so the content is closer to your users and can be delivered faster regardless of their location. Route 53 (p. 810) uses edge locations to speed up the response to public DNS queries. |
| EFS | See Amazon Elastic File System (Amazon EFS) . |
| Elastic | A company that provides open-source solutions—including OpenSearch, Logstash, Kibana, and Beats—that take data from any source and search, analyze, and visualize it in real time. |
| | Amazon OpenSearch Service (OpenSearch Service) is an AWS managed service for deploying, operating, and scaling OpenSearch in the AWS Cloud. See Also Amazon OpenSearch Service (OpenSearch Service) , Elasticsearch . |
| Elastic Block Store | See Amazon Elastic Block Store (Amazon EBS) . |
| Elastic IP address | A fixed (static) IP address that you have allocated in Amazon EC2 (p. 806) or Amazon VPC (p. 811) and then attached to an instance (p. 836) . Elastic IP addresses are associated with your account, not a specific instance. They are |

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| | <p><i>elastic</i> because you can easily allocate, attach, detach, and free them as your needs change. Unlike traditional static IP addresses, Elastic IP addresses allow you to mask instance or Availability Zone (p. 813) failures by rapidly remapping your public IP addresses to another instance.</p> |
| Elastic Load Balancing | <p>A web service that improves an application's availability by distributing incoming traffic between two or more EC2 instances (p. 829). See Also https://aws.amazon.com/elasticloadbalancing.</p> |
| elastic network interface | <p>An additional network interface that can be attached to an instance (p. 836). Elastic network interfaces include a primary private IP address, one or more secondary private IP addresses, an Elastic IP Address (optional), a MAC address, membership in specified security groups (p. 852), a description, and a source/destination check flag. You can create an elastic network interface, attach it to an instance, detach it from an instance, and attach it to another instance.</p> |
| Elasticsearch | <p>An open-source, real-time distributed search and analytics engine used for full-text search, structured search, and analytics. OpenSearch was developed by the Elastic company. Amazon OpenSearch Service (OpenSearch Service) is an AWS managed service for deploying, operating, and scaling OpenSearch in the AWS Cloud. See Also Amazon OpenSearch Service (OpenSearch Service), Elastic.</p> |
| EMR | <p>See Amazon EMR.</p> |
| encrypt | <p>To use a mathematical algorithm to make data unintelligible to unauthorized users (p. 859). Encryption also gives authorized users a method (such as a key or password) to convert the altered data back to its original state.</p> |
| encryption context | <p>A set of key-value pairs that contains additional information associated with AWS Key Management Service (AWS KMS) (p. 817)–encrypted information.</p> |
| endpoint | <p>A URL that identifies a host and port as the entry point for a web service. Every web service request contains an endpoint. Most AWS products provide endpoints for a Region to enable faster connectivity. Amazon ElastiCache (p. 807): The DNS name of a cache node (p. 822). Amazon RDS (p. 810): The DNS name of a DB instance (p. 827). AWS CloudFormation (p. 814): The DNS name or IP address of the server that receives an HTTP request.</p> |
| endpoint port | <p>Amazon ElastiCache (p. 807): The port number used by a cache node (p. 822). Amazon RDS (p. 810): The port number used by a DB instance (p. 827).</p> |
| envelope encryption | <p>The use of a master key and a data key to algorithmically protect data. The master key is used to encrypt and decrypt the data key and the data key is used to encrypt and decrypt the data itself.</p> |
| environment | <p>AWS Elastic Beanstalk (p. 815): A specific running instance of an application (p. 812). The application has a CNAME and includes an application version and a customizable configuration (which is inherited from the default container type). AWS CodeDeploy (p. 814): Instances in a deployment group in a blue/green deployment. At the start of a blue/green deployment, the deployment group is made up of instances in the original environment. At the end of the deployment, the deployment group is made up of instances in the replacement environment.</p> |

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| environment configuration | A collection of parameters and settings that define how an environment and its associated resources behave. |
| ephemeral store | See instance store . |
| epoch | The date from which time is measured. For most Unix environments, the epoch is January 1, 1970. |
| ETL | See extract, transform, and load (ETL) . |
| evaluation | Amazon Machine Learning: The process of measuring the predictive performance of a machine learning (ML) model. |
| | Also a machine learning object that stores the details and result of an ML model evaluation. |
| evaluation datasource | The data that Amazon Machine Learning uses to evaluate the predictive accuracy of a machine learning model. |
| event | Amazon Personalize (p. 809) : A user activity—such as a click, a purchase, or a video viewing—that you record and upload to an Amazon Personalize Interactions dataset. You record events individually in real time or record and upload events in bulk. See Also dataset , Interactions dataset . |
| event tracker | Amazon Personalize (p. 809) : Specifies a destination dataset group for event data that you record in real time. When you record events in real time, you provide the ID of the event tracker so that Amazon Personalize knows where to add the data. See Also dataset group , event . |
| eventual consistency | The method that AWS services use to achieve high availability. This involves replicating data across multiple servers in Amazon data centers. When data is written or updated and Success is returned, all copies of the data are updated. However, it takes time for the data to propagate to all storage locations. The data will eventually be consistent, but an immediate read might not show the change. Consistency is usually reached within seconds. See Also data consistency , eventually consistent read , strongly consistent read . |
| eventually consistent read | A read process that returns data from only one Region and might not show the most recent write information. However, if you repeat your read request after a short time, the response should eventually return the latest data. See Also data consistency , eventual consistency , strongly consistent read . |
| eviction | The deletion by CloudFront (p. 805) of an object from an edge location (p. 829) before its expiration time. If an object in an edge location isn't frequently requested, CloudFront might evict the object (remove the object before its expiration date) to make room for objects that are more popular. |
| exabyte (EiB) | A contraction of exa binary byte. An exabyte (EiB) is 2^{60} or 1,152,921,504,606,846,976 bytes. An exabyte (EB) is 10^{18} or 1,000,000,000,000,000 bytes. 1,024 EiB is a zebibyte (ZiB) (p. 861) . |
| expiration | For CloudFront (p. 805) caching, the time when CloudFront stops responding to user requests with an object. If you don't use headers or CloudFront distribution (p. 828) settings to specify how long you want objects to stay in an edge location (p. 829) , the objects expire after 24 hours. The next time a user requests an object that has expired, CloudFront forwards the request to the origin (p. 844) . |

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| explicit impressions | <p>Amazon Personalize (p. 809): A list of items that you manually add to an Amazon Personalize Interactions dataset to influence future recommendations. Unlike <i>implicit impressions</i>, where Amazon Personalize automatically derives the impressions data, you choose what to include in explicit impressions.</p> <p>See Also recommendations, Interactions dataset, impressions data, implicit impressions.</p> |
| explicit launch permission | An Amazon Machine Image (AMI) (p. 809) launch permission granted to a specific AWS account (p. 804) . |
| exponential backoff | A strategy that incrementally increases the wait between retry attempts in order to reduce the load on the system and increase the likelihood that repeated requests will succeed. For example, client applications might wait up to 400 milliseconds before attempting the first retry, up to 1600 milliseconds before the second, and up to 6400 milliseconds (6.4 seconds) before the third. |
| expression | <p>Amazon CloudSearch (p. 805): A numeric expression that you can use to control how search hits are sorted. You can construct Amazon CloudSearch expressions using numeric fields, other rank expressions, a document's default relevance score, and standard numeric operators and functions. When you use the <code>sort</code> option to specify an expression in a search request, the expression is evaluated for each search hit and the hits are listed according to their expression values.</p> |
| extract, transform, and load (ETL) | A process that's used to integrate data from multiple sources. Data is collected from sources (extract), converted to an appropriate format (transform), and written to a target data store (load) for purposes of analysis and querying. <p>ETL tools combine these three functions to consolidate and move data from one environment to another. AWS Glue (p. 816) is a fully managed ETL service for discovering and organizing data, transforming it, and making it available for search and analytics.</p> |

F

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| facet | <p>Amazon CloudSearch (p. 805): An index field that represents a category that you want to use to refine and filter search results.</p> |
| facet enabled | <p>Amazon CloudSearch (p. 805): An index field option that enables facet information to be calculated for the field.</p> |
| FBL | See feedback loop (FBL) . |
| feature transformation | Amazon Machine Learning: The machine learning process of constructing more predictive input representations or "features" from the raw input variables to optimize a machine learning model's ability to learn and generalize. Also known as <i>data transformation</i> or <i>feature engineering</i> . |
| federated identity management (FIM) | Allows individuals to sign in to different networks or services, using the same group or personal credentials to access data across all networks. With identity federation in AWS, external identities (federated users) are granted secure access to resources (p. 850) in an AWS account (p. 804) without having to create IAM users (p. 859) . These external identities can come from a corporate identity store (such as LDAP or Windows Active Directory) or from a third party (such as |

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| | Login with Amazon, Facebook, or Google). AWS federation also supports SAML 2.0. |
| federated user | See federated identity management (FIM) . |
| federation | See federated identity management (FIM) . |
| feedback loop (FBL) | The mechanism by which a mailbox provider (for example, an internet service provider (ISP) (p. 836)) forwards a recipient (p. 848) 's complaint (p. 823) back to the sender (p. 852) . |
| field weight | The relative importance of a text field in a search index. Field weights control how much matches in particular text fields affect a document's relevance score. |
| filter | A criterion that you specify to limit the results when you list or describe your Amazon EC2 (p. 806) resources (p. 850). |
| filter query | A way to filter search results without affecting how the results are scored and sorted. Specified with the Amazon CloudSearch (p. 805) <code>fq</code> parameter. |
| FIM | See federated identity management (FIM) . |
| Firehose | See Amazon Kinesis Data Firehose . |
| format version | See template format version . |
| forums | See discussion forums . |
| function | See intrinsic function . |
| fuzzy search | A simple search query that uses approximate string matching (fuzzy matching) to correct for typographical errors and misspellings. |

G

[Numbers and symbols \(p. 803\)](#) | [A \(p. 803\)](#) | [B \(p. 820\)](#) | [C \(p. 821\)](#) | [D \(p. 826\)](#) | [E \(p. 829\)](#) | [F \(p. 832\)](#) | [G \(p. 833\)](#) | [H \(p. 834\)](#) | [I \(p. 835\)](#) | [J \(p. 837\)](#) | [K \(p. 838\)](#) | [L \(p. 838\)](#) | [M \(p. 839\)](#) | [N \(p. 842\)](#) | [O \(p. 843\)](#) | [P \(p. 844\)](#) | [Q \(p. 847\)](#) | [R \(p. 848\)](#) | [S \(p. 851\)](#) | [T \(p. 857\)](#) | [U \(p. 859\)](#) | [V \(p. 860\)](#) | [W \(p. 861\)](#) | X, Y, Z (p. 861)

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| geospatial search | A search query that uses locations specified as a latitude and longitude to determine matches and sort the results. |
| gibibyte (GiB) | A contraction of giga binary byte, a gibibyte is 2^{30} or 1,073,741,824 bytes. A gigabyte (GB) is 10^9 or 1,000,000,000 bytes. 1,024 GiB is a tebibyte (TiB) (p. 858) . |
| GitHub | A web-based repository that uses Git for version control. |
| global secondary index | An index with a partition key and a sort key that can be different from those on the table. A global secondary index is considered global because queries on the index can span all of the data in a table, across all partitions. See Also local secondary index . |
| grant | AWS Key Management Service (AWS KMS) (p. 817) : A mechanism for giving AWS principals (p. 846) long-term permissions to use customer master keys (CMKs) (p. 826) |
| grant token | A type of identifier that allows the permissions in a grant (p. 833) to take effect immediately. |

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| ground truth | The observations used in the machine learning (ML) model training process that include the correct value for the target attribute. To train an ML model to predict house sales prices, the input observations would typically include prices of previous house sales in the area. The sale prices of these houses constitute the ground truth. |
| group | A collection of IAM (p. 816) users (p. 859) . You can use IAM groups to simplify specifying and managing permissions for multiple users. |

H

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| Numbers and symbols (p. 803) A (p. 803) B (p. 820) C (p. 821) D (p. 826) E (p. 829) F (p. 832) G (p. 833) H (p. 834) I (p. 835) J (p. 837) K (p. 838) L (p. 838) M (p. 839) N (p. 842) O (p. 843) P (p. 844) Q (p. 847) R (p. 848) S (p. 851) T (p. 857) U (p. 859) V (p. 860) W (p. 861) X, Y, Z (p. 861) | |
| Hadoop | Software that enables distributed processing for big data by using clusters and simple programming models. For more information, see http://hadoop.apache.org . |
| hard bounce | A persistent email delivery failure such as "mailbox does not exist." |
| hardware VPN | A hardware-based IPsec VPN connection over the internet. |
| health check | A system call to check on the health status of each instance in an Amazon EC2 Auto Scaling (p. 807) group. |
| high-quality email | Email that recipients find valuable and want to receive. Value means different things to different recipients and can come in such forms as offers, order confirmations, receipts, or newsletters. |
| highlights | Amazon CloudSearch (p. 805) : Excerpts returned with search results that show where the search terms appear within the text of the matching documents. |
| highlight enabled | Amazon CloudSearch (p. 805) : An index field option that enables matches within the field to be highlighted. |
| hit | A document that matches the criteria specified in a search request. Also referred to as a <i>search result</i> . |
| HMAC | Hash-based Message Authentication Code. A specific construction for calculating a message authentication code (MAC) involving a cryptographic hash function in combination with a secret key. You can use it to verify both the data integrity and the authenticity of a message at the same time. AWS calculates the HMAC using a standard, cryptographic hash algorithm, such as SHA-256. |
| hosted zone | A collection of resource record (p. 850) sets that Amazon Route 53 (p. 810) hosts. Similar to a traditional DNS zone file, a hosted zone represents a collection of records that are managed together under a single domain name. |
| HRNN | Amazon Personalize (p. 809) : A hierarchical recurrent neural network machine learning algorithm that models changes in user behavior and predicts the items that a user might interact with in personal recommendation applications. |
| HTTP-Query | See Query . |
| HVM virtualization | Hardware Virtual Machine virtualization. Allows the guest VM to run as though it's on a native hardware platform, except that it still uses paravirtual (PV) network and storage drivers for improved performance. |

See Also [PV virtualization](#).

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| IAM | See AWS Identity and Access Management (IAM) . |
| IAM group | See group . |
| IAM policy simulator | See policy simulator . |
| IAM role | See role . |
| IAM user | See user . |
| Identity and Access Management | See AWS Identity and Access Management (IAM) . |
| identity provider (IdP) | An IAM (p. 816) entity that holds metadata about external identity providers. |
| IdP | See identity provider (IdP) . |
| image | See Amazon Machine Image (AMI) . |
| import/export station | A machine that uploads or downloads your data to or from Amazon S3 (p. 811) . |
| import log | A report that contains details about how AWS Import/Export (p. 816) processed your data. |
| implicit impressions | Amazon Personalize (p. 809) : The recommendations that your application shows a user. Unlike <i>explicit impressions</i> , where you manually record each impression, Amazon Personalize automatically derives implicit impressions from your recommendation data. See Also recommendations , impressions data , explicit impressions . |
| impressions data | Amazon Personalize (p. 809) : The list of items that you presented to a user when they interacted with a particular item such as by clicking it, watching it, or purchasing it. Amazon Personalize uses impressions data to calculate the relevance of new items for a user based on how frequently users have selected or ignored the same item. See Also explicit impressions , implicit impressions . |
| in-place deployment | CodeDeploy: A deployment method where the application on each instance in the deployment group is stopped, the latest application revision is installed, and the new version of the application is started and validated. You can choose to use a load balancer so each instance is deregistered during its deployment and then restored to service after the deployment is complete. |
| index | See search index . |
| index field | A name-value pair that's included in an Amazon CloudSearch (p. 805) domain's index. An index field can contain text or numeric data, dates, or a location. |
| indexing options | Configuration settings that define an Amazon CloudSearch (p. 805) domain's index fields, how document data is mapped to those index fields, and how the index fields can be used. |

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| inline policy | An IAM (p. 816) policy (p. 845) that's embedded in a single IAM user (p. 859) , group (p. 834) , or role (p. 850) . |
| input data | Amazon Machine Learning: The observations that you provide to Amazon Machine Learning to train and evaluate a machine learning model and generate predictions. |
| instance | A copy of an Amazon Machine Image (AMI) (p. 809) running as a virtual server in the AWS Cloud. |
| instance family | A general instance type (p. 836) grouping using either storage or CPU capacity. |
| instance group | A Hadoop (p. 834) cluster contains one master instance group that contains one master node (p. 840) , a core instance group that contains one or more core node (p. 825) and an optional task node (p. 857) instance group, which can contain any number of task nodes. |
| instance profile | A container that passes IAM (p. 816) role (p. 850) information to an EC2 instance (p. 829) at launch. |
| instance store | Disk storage that's physically attached to the host computer for an EC2 instance (p. 829) , and therefore has the same lifespan as the instance. When the instance is terminated, you lose any data in the instance store. |
| instance store-backed AMI | A type of Amazon Machine Image (AMI) (p. 809) whose instances (p. 836) use an instance store (p. 836) volume (p. 861) as the root device. Compare this with instances launched from Amazon EBS (p. 807) -backed AMIs, which use an Amazon EBS volume as the root device. |
| instance type | A specification that defines the memory, CPU, storage capacity, and usage cost for an instance (p. 836) . Some instance types are for standard applications, whereas others are for CPU-intensive, memory-intensive applications. |
| Interactions dataset | Amazon Personalize (p. 809) : A container for historical and real-time data collected from interactions between users and items (called events). Interactions data can include impressions data and contextual metadata. See Also dataset , event , impressions data , contextual metadata . |
| internet gateway | Connects a network to the internet. You can route traffic for IP addresses outside your VPC (p. 861) to the internet gateway. |
| internet service provider (ISP) | A company that provides subscribers with access to the internet. Many ISPs are also mailbox providers (p. 839) . Mailbox providers are sometimes referred to as ISPs, even if they only provide mailbox services. |
| intrinsic function | A special action in a AWS CloudFormation (p. 814) template that assigns values to properties not available until runtime. These functions follow the format <code>Fn::Attribute</code> , such as <code>Fn::GetAtt</code> . Arguments for intrinsic functions can be parameters, pseudo parameters, or the output of other intrinsic functions. |
| IP address | A numerical address (for example, 192.0.2.44) that networked devices use to communicate with one another using the Internet Protocol (IP). Each EC2 instance (p. 829) is assigned two IP addresses at launch, which are directly mapped to each other through network address translation (NAT (p. 842)): a private IP address (following RFC 1918) and a public IP address. Instances launched in a VPC (p. 811) are assigned only a private IP address. Instances launched in your default VPC are assigned both a private IP address and a public IP address. |
| IP match condition | AWS WAF (p. 820) : An attribute that specifies the IP addresses or IP address ranges that web requests originate from. Based on the specified IP |

addresses, you can configure AWS WAF to allow or block web requests to AWS resources (p. 850) such as Amazon CloudFront (p. 805) distributions.

ISP

See [internet service provider \(ISP\)](#).

issuer

The person who writes a [policy \(p. 845\)](#) to grant permissions to a [resource \(p. 850\)](#). The issuer (by definition) is always the resource owner. AWS doesn't permit [Amazon SQS \(p. 811\)](#) users to create policies for resources they don't own. If John is the resource owner, AWS authenticates John's identity when he submits the policy he's written to grant permissions for that resource.

item

A group of attributes that's uniquely identifiable among all of the other items. Items in [Amazon DynamoDB \(p. 806\)](#) are similar in many ways to rows, records, or tuples in other database systems.

item exploration

[Amazon Personalize \(p. 809\)](#): The process that Amazon Personalize uses to test different item recommendations, including recommendations of new items with no or little interaction data, and learn how users respond. You configure item exploration at the campaign level for solution versions created with the user-personalization recipe.

See Also [recommendations](#), [campaign](#), [solution version](#), [user-personalization recipe](#).

item-to-item similarities (SIMS) recipe

[Amazon Personalize \(p. 809\)](#): A RELATED_ITEMS recipe that uses the data from an Interactions dataset to make recommendations for items that are similar to a specified item. The SIMS recipe calculates similarity based on the way users interact with items instead of matching item metadata, such as price or age. See Also [recipe](#), [RELATED_ITEMS recipes](#), [Interactions dataset](#).

Items dataset

[Amazon Personalize \(p. 809\)](#): A container for metadata about items, such as price, genre, or availability.

See Also [dataset](#).

J

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job flow

[Amazon EMR \(p. 807\)](#): One or more [steps \(p. 855\)](#) that specify all of the functions to be performed on the data.

job ID

A five-character, alphanumeric string that uniquely identifies an [AWS Import/Export \(p. 816\)](#) storage device in your shipment. AWS issues the job ID in response to a CREATE_JOB email command.

job prefix

An optional string that you can add to the beginning of an [AWS Import/Export \(p. 816\)](#) log file name to prevent collisions with objects of the same name.

See Also [key prefix](#).

JSON

JavaScript Object Notation. A lightweight data interchange format. For information about JSON, see <http://www.json.org/>.

junk folder

The location where email messages that various filters determine to be of lesser value are collected so that they don't arrive in the [recipient \(p. 848\)](#)'s inbox but are still accessible to the recipient. This is also referred to as a [spam \(p. 854\)](#) or bulk folder.

K

[Numbers and symbols \(p. 803\)](#) | [A \(p. 803\)](#) | [B \(p. 820\)](#) | [C \(p. 821\)](#) | [D \(p. 826\)](#) | [E \(p. 829\)](#) | [F \(p. 832\)](#) | [G \(p. 833\)](#) | [H \(p. 834\)](#) | [I \(p. 835\)](#) | [J \(p. 837\)](#) | [K \(p. 838\)](#) | [L \(p. 838\)](#) | [M \(p. 839\)](#) | [N \(p. 842\)](#) | [O \(p. 843\)](#) | [P \(p. 844\)](#) | [Q \(p. 847\)](#) | [R \(p. 848\)](#) | [S \(p. 851\)](#) | [T \(p. 857\)](#) | [U \(p. 859\)](#) | [V \(p. 860\)](#) | [W \(p. 861\)](#) | X, Y, Z (p. 861)

key A credential that identifies an [AWS account \(p. 804\)](#) or [user \(p. 859\)](#) to AWS (such as the AWS [secret access key \(p. 852\)](#)).

[Amazon Simple Storage Service \(Amazon S3\) \(p. 811\)](#), [Amazon EMR \(p. 807\)](#): The unique identifier for an object in a [bucket \(p. 821\)](#). Every object in a bucket has exactly one key. Because a bucket and key together uniquely identify each object, you can think of Amazon S3 as a basic data map between the *bucket + key*, and the object itself. You can uniquely address every object in Amazon S3 through the combination of the web service endpoint, bucket name, and key, as in this example: `http://doc.s3.amazonaws.com/2006-03-01/AmazonS3.wsdl`, where doc is the name of the bucket, and 2006-03-01/AmazonS3.wsdl is the key.

[AWS Import/Export \(p. 816\)](#): The name of an object in Amazon S3. It's a sequence of Unicode characters whose UTF-8 encoding can't exceed 1024 bytes. If a key (for example, logPrefix + import-log-JOBID) is longer than 1024 bytes, [AWS Elastic Beanstalk \(p. 815\)](#) returns an `InvalidManifestField` error.

[IAM \(p. 816\)](#): In a [policy \(p. 845\)](#), a specific characteristic that's the basis for restricting access (such as the current time or the IP address of the requester).

Tagging resources: A general [tag \(p. 857\)](#) label that acts like a category for more specific tag values. For example, you might have [EC2 instance \(p. 829\)](#) with the tag key of *Owner* and the tag value of *Jan*. You can tag an AWS [resource \(p. 850\)](#) with up to 10 key-value pairs. Not all AWS resources can be tagged.

key pair A set of security credentials that you use to prove your identity electronically. A key pair consists of a private key and a public key.

key prefix A string of characters that is a subset of an object key name, starting with the first character. The prefix can be any length, up to the maximum length of the object key name (1,024 bytes).

kibibyte (KiB) A contraction of kilo binary byte, a kibibyte is 2^{10} or 1,024 bytes. A kilobyte (KB) is 10^3 or 1,000 bytes. 1,024 KiB is a [mebibyte \(MiB\) \(p. 840\)](#).

KMS See [AWS Key Management Service \(AWS KMS\)](#).

L

[Numbers and symbols \(p. 803\)](#) | [A \(p. 803\)](#) | [B \(p. 820\)](#) | [C \(p. 821\)](#) | [D \(p. 826\)](#) | [E \(p. 829\)](#) | [F \(p. 832\)](#) | [G \(p. 833\)](#) | [H \(p. 834\)](#) | [I \(p. 835\)](#) | [J \(p. 837\)](#) | [K \(p. 838\)](#) | [L \(p. 838\)](#) | [M \(p. 839\)](#) | [N \(p. 842\)](#) | [O \(p. 843\)](#) | [P \(p. 844\)](#) | [Q \(p. 847\)](#) | [R \(p. 848\)](#) | [S \(p. 851\)](#) | [T \(p. 857\)](#) | [U \(p. 859\)](#) | [V \(p. 860\)](#) | [W \(p. 861\)](#) | X, Y, Z (p. 861)

labeled data In machine learning, data for which you already know the target or "correct" answer.

launch configuration A set of descriptive parameters used to create new [EC2 instances \(p. 829\)](#) in an [Amazon EC2 Auto Scaling \(p. 807\)](#) activity.

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| | A template that an Auto Scaling group (p. 813) uses to launch new EC2 instances. The launch configuration contains information such as the Amazon Machine Image (AMI) (p. 809) ID, the instance type, key pairs, security groups (p. 852), and block device mappings, among other configuration settings. |
| launch permission | An Amazon Machine Image (AMI) (p. 809) attribute that allows users to launch an AMI. |
| lifecycle | The lifecycle state of the EC2 instance (p. 829) contained in an Auto Scaling group (p. 813). EC2 instances progress through several states over their lifespan; these include <i>Pending</i> , <i>InService</i> , <i>Terminating</i> and <i>Terminated</i> . |
| lifecycle action | An action that can be paused by Auto Scaling, such as launching or terminating an EC2 instance. |
| lifecycle hook | A feature for pausing Auto Scaling after it launches or terminates an EC2 instance so that you can perform a custom action while the instance isn't in service. |
| link to VPC | The process of linking (or attaching) an EC2-Classic instance (p. 836) to a ClassicLink-enabled VPC (p. 861). See Also ClassicLink , unlink from VPC . |
| load balancer | A DNS name combined with a set of ports, which together provide a destination for all requests intended for your application. A load balancer can distribute traffic to multiple application instances across every Availability Zone (p. 813) within a Region (p. 849). Load balancers can span multiple Availability Zones within an AWS Region into which an Amazon EC2 (p. 806) instance was launched. But load balancers can't span multiple Regions. |
| local secondary index | An index that has the same partition key as the table, but a different sort key. A local secondary index is local in the sense that every partition of a local secondary index is scoped to a table partition that has the same partition key value. See Also local secondary index . |
| logical name | A case-sensitive unique string within an AWS CloudFormation (p. 814) template that identifies a resource (p. 850), mapping (p. 840), parameter, or output. In an AWS CloudFormation template, each parameter, resource (p. 850), property, mapping, and output must be declared with a unique logical name. You use the logical name when dereferencing these items using the <code>Ref</code> function. |

M

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| | Numbers and symbols (p. 803) A (p. 803) B (p. 820) C (p. 821) D (p. 826) E (p. 829) F (p. 832) G (p. 833) H (p. 834) I (p. 835) J (p. 837) K (p. 838) L (p. 838) M (p. 839) N (p. 842) O (p. 843) P (p. 844) Q (p. 847) R (p. 848) S (p. 851) T (p. 857) U (p. 859) V (p. 860) W (p. 861) X, Y, Z (p. 861) |
| Mail Transfer Agent (MTA) | Software that transports email messages from one computer to another by using a client-server architecture. |
| mailbox provider | An organization that provides email mailbox hosting services. Mailbox providers are sometimes referred to as internet service providers (ISPs) (p. 836), even if they only provide mailbox services. |
| mailbox simulator | A set of email addresses that you can use to test an Amazon SES (p. 810)-based email-sending application without sending messages to actual recipients. Each |

| | |
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| | <p>email address represents a specific scenario (such as a bounce or complaint) and generates a typical response that's specific to the scenario.</p> |
| main route table | The default route table (p. 851) that any new VPC (p. 861) subnet (p. 856) uses for routing. You can associate a subnet with a different route table of your choice. You can also change which route table is the main route table. |
| managed policy | A standalone IAM (p. 816) policy (p. 845) that you can attach to multiple users (p. 859) , groups (p. 834) , and roles (p. 850) s in your IAM account (p. 804) . Managed policies can either be AWS managed policies (which are created and managed by AWS) or customer managed policies (which you create and manage in your AWS account). |
| manifest | When sending a <i>create job</i> request for an import or export operation, you describe your job in a text file called a manifest. The manifest file is a YAML-formatted file that specifies how to transfer data between your storage device and the AWS Cloud. |
| manifest file | Amazon Machine Learning: The file used for describing batch predictions. The manifest file relates each input data file with its associated batch prediction results. It's stored in the Amazon S3 output location. |
| mapping | A way to add conditional parameter values to an AWS CloudFormation (p. 814) template. You specify mappings in the template's optional Mappings section and retrieve the desired value using the <code>Fn::FindInMap</code> function. |
| marker | See pagination token . |
| master node | A process running on an Amazon Machine Image (AMI) (p. 809) that keeps track of the work its core and task nodes complete. |
| maximum price | The maximum price you pay to launch one or more Spot Instances (p. 855) . If your maximum price exceeds the current Spot price (p. 855) and your restrictions are met, Amazon EC2 (p. 806) launches instances on your behalf. |
| maximum send rate | The maximum number of email messages that you can send per second using Amazon SES (p. 810) . |
| mean reciprocal rank at 25 | Amazon Personalize (p. 809) : An evaluation metric that assesses the relevance of a model's highest ranked recommendation. Amazon Personalize calculates this metric using the average accuracy of the model when ranking the most relevant recommendation out of the top 25 recommendations over all requests for recommendations. See Also metrics , recommendations . |
| mebibyte (MiB) | A contraction of mega binary byte. A mebibyte (MiB) is 2^{20} or 1,048,576 bytes. A megabyte (MB) is 10^6 or 1,000,000 bytes. 1,024 MiB is a gibibyte (GiB) (p. 833) . |
| member resources | See resource . |
| message ID | Amazon Simple Email Service (Amazon SES) (p. 810) : A unique identifier that's assigned to every email message that's sent. |
| | Amazon Simple Queue Service (Amazon SQS) (p. 811) : The identifier returned when you send a message to a queue. |
| metadata | Information about other data or objects. In Amazon Simple Storage Service (Amazon S3) (p. 811) and Amazon EMR (p. 807) metadata takes the form of |

name–value pairs that describe the object. These include default metadata such as the date last modified and standard HTTP metadata (for example, Content-Type). Users can also specify custom metadata at the time they store an object. In [Amazon EC2 \(p. 806\)](#) metadata includes data about an [EC2 instance \(p. 829\)](#) that the instance can retrieve to determine things about itself, such as the instance type or the IP address.

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| metric | An element of time-series data defined by a unique combination of exactly one namespace (p. 842) , exactly one metric name, and between zero and ten dimensions. Metrics and the statistics derived from them are the basis of Amazon CloudWatch (p. 805) . |
| metrics | Amazon Personalize (p. 809) : Evaluation data that Amazon Personalize generates when you train a model. You use metrics to evaluate the performance of the model, view the effects of modifying a solution's configuration, and compare results between solutions that use the same training data but were created with different recipes. See Also solution , recipe . |
| metric name | The primary identifier of a metric, used with a namespace (p. 842) and optional dimensions. |
| MFA | See multi-factor authentication (MFA) . |
| micro instance | A type of EC2 instance (p. 829) that's more economical to use if you have occasional bursts of high CPU activity. |
| MIME | See Multipurpose Internet Mail Extensions (MIME) . |
| ML model | In machine learning (ML), a mathematical model that generates predictions by finding patterns in data. Amazon Machine Learning supports three types of ML models: binary classification, multiclass classification, and regression. Also known as a <i>predictive model</i> . See Also binary classification model , multiclass classification model , regression model . |
| MTA | See Mail Transfer Agent (MTA) . |
| Multi-AZ deployment | A primary DB instance (p. 827) that has a synchronous standby replica in a different Availability Zone (p. 813) . The primary DB instance is synchronously replicated across Availability Zones to the standby replica. |
| multiclass classification model | A machine learning model that predicts values that belong to a limited, pre-defined set of permissible values. For example, "Is this product a book, movie, or clothing?" |
| multi-factor authentication (MFA) | An optional AWS account (p. 804) security feature. After you enable AWS MFA, you must provide a six-digit, single-use code in addition to your sign-in credentials whenever you access secure AWS webpages or the AWS Management Console (p. 817) . You get this single-use code from an authentication device that you keep in your physical possession. See Also https://aws.amazon.com/mfa/ . |
| multi-valued attribute | An attribute with more than one value. |
| multipart upload | A feature that you can use to upload a single object as a set of parts. |
| Multipurpose Internet Mail Extensions (MIME) | An internet standard that extends the email protocol to include non-ASCII text and nontext elements, such as attachments. |

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| Multitool | A cascading application that provides a simple command-line interface for managing large datasets. |
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N

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| namespace | An abstract container that provides context for the items (names, or technical terms, or words) it holds, and allows disambiguation of homonym items residing in different namespaces. |
| NAT | Network address translation. A strategy of mapping one or more IP addresses to another while data packets are in transit across a traffic routing device. This is commonly used to restrict internet communication to private instances while allowing outgoing traffic. See Also Network Address Translation and Protocol Translation , NAT gateway , NAT instance . |
| NAT gateway | A NAT (p. 842) device, managed by AWS, that performs network address translation in a private subnet (p. 856) , to secure inbound internet traffic. A NAT gateway uses both NAT and port address translation. See Also NAT instance . |
| NAT instance | A NAT (p. 842) device, configured by a user, that performs network address translation in a VPC (p. 861) public subnet (p. 856) to secure inbound internet traffic. See Also NAT gateway . |
| network ACL | An optional layer of security that acts as a firewall for controlling traffic in and out of a subnet (p. 856) . You can associate multiple subnets with a single network ACL (p. 803) , but a subnet can be associated with only one network ACL at a time. |
| Network Address Translation and Protocol Translation | (NAT (p. 842) -PT) An internet protocol standard defined in RFC 2766. See Also NAT instance , NAT gateway . |
| n-gram processor | A processor that performs n-gram transformations. See Also n-gram transformation . |
| n-gram transformation | Amazon Machine Learning: A transformation that aids in text string analysis. An n-gram transformation takes a text variable as input and outputs strings by sliding a window of size n words, where n is specified by the user, over the text, and outputting every string of words of size n and all smaller sizes. For example, specifying the n-gram transformation with window size =2 returns all the two-word combinations and all of the single words. |
| NICE Desktop Cloud Visualization | A remote visualization technology for securely connecting users to graphic-intensive 3D applications hosted on a remote, high-performance server. |
| node | Amazon OpenSearch Service (OpenSearch Service) (p. 807) : An OpenSearch instance. A node can be either a data instance or a dedicated master instance. See Also dedicated master node . |
| NoEcho | A property of AWS CloudFormation (p. 814) parameters that prevent the otherwise default reporting of names and values of a template parameter. |

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| normalized discounted cumulative gain (NCDG) at K (5/10/25) | Declaring the <code>NoEcho</code> property causes the parameter value to be masked with asterisks in the report by the <code>cfn-describe-stacks</code> command. |
| | Amazon Personalize (p. 809): An evaluation metric that tells you about the relevance of your model's highly ranked recommendations, where K is a sample size of 5, 10, or 25 recommendations. Amazon Personalize calculates this by assigning weight to recommendations based on their position in a ranked list, where each recommendation is discounted (given a lower weight) by a factor dependent on its position. The normalized discounted cumulative gain at K assumes that recommendations that are lower on a list are less relevant than recommendations higher on the list. See Also metrics , recommendations . |
| NoSQL | Nonrelational database systems that are highly available, scalable, and optimized for high performance. Instead of the relational model, NoSQL databases (for example, Amazon DynamoDB (p. 806)) use alternate models for data management, such as key-value pairs or document storage. |
| null object | A null object is one whose version ID is null. Amazon S3 (p. 811) adds a null object to a bucket (p. 821) when versioning (p. 860) for that bucket is suspended. It's possible to have only one null object for each key in a bucket. |
| number of passes | The number of times that you allow Amazon Machine Learning to use the same data records to train a machine learning model. |

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| | Numbers and symbols (p. 803) A (p. 803) B (p. 820) C (p. 821) D (p. 826) E (p. 829) F (p. 832) G (p. 833) H (p. 834) I (p. 835) J (p. 837) K (p. 838) L (p. 838) M (p. 839) N (p. 842) O (p. 843) P (p. 844) Q (p. 847) R (p. 848) S (p. 851) T (p. 857) U (p. 859) V (p. 860) W (p. 861) X, Y, Z (p. 861) |
| object | Amazon Simple Storage Service (Amazon S3) (p. 811): The fundamental entity type stored in Amazon S3. Objects consist of object data and metadata. The data portion is opaque to Amazon S3. Amazon CloudFront (p. 805): Any entity that can be served either over HTTP or a version of RTMP. |
| observation | Amazon Machine Learning: A single instance of data that Amazon Machine Learning (Amazon ML) uses to either train a machine learning model how to predict or to generate a prediction. Each row in an Amazon ML input data file is an observation. |
| On-Demand Instance | An Amazon EC2 (p. 806) pricing option that charges you for compute capacity by the hour or second (minimum of 60 seconds) with no long-term commitment. |
| operation | An API function. Also called an <i>action</i> . |
| optimistic locking | A strategy to ensure that an item that you want to update has not been modified by others before you perform the update. For Amazon DynamoDB (p. 806) , optimistic locking support is provided by the AWS SDKs. |
| organization | AWS Organizations (p. 818): An entity that you create to consolidate and manage your AWS accounts. An organization has one management account along with zero or more member accounts. |
| organizational unit | AWS Organizations (p. 818): A container for accounts within a root (p. 850) of an organization. An organizational unit (OU) can contain other OUs. |

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| origin access identity | Also called OAI. When using Amazon CloudFront (p. 805) to serve content with an Amazon S3 (p. 811) bucket (p. 821) as the origin, a virtual identity that you use to require users to access your content through CloudFront URLs instead of Amazon S3 URLs. Usually used with CloudFront private content (p. 846) . |
| origin server | The Amazon S3 (p. 811) bucket (p. 821) or custom origin containing the definitive original version of the content you deliver through CloudFront (p. 805) . |
| original environment | The instances in a deployment group at the start of an CodeDeploy blue/green deployment. |
| OSB transformation | Orthogonal sparse bigram transformation. In machine learning, a transformation that aids in text string analysis and that's an alternative to the n-gram transformation. OSB transformations are generated by sliding the window of size n words over the text, and outputting every pair of words that includes the first word in the window. See Also n-gram transformation . |
| OU | See organizational unit . |
| output location | Amazon Machine Learning: An Amazon S3 location where the results of a batch prediction are stored. |

P

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| pagination | <p>The process of responding to an API request by returning a large list of records in small separate parts. Pagination can occur in the following situations:</p> <ul style="list-style-type: none">• The client sets the maximum number of returned records to a value below the total number of records.• The service has a default maximum number of returned records that's lower than the total number of records. <p>When an API response is paginated, the service sends a subset of the large list of records and a pagination token that indicates that more records are available. The client includes this pagination token in a subsequent API request, and the service responds with the next subset of records. This continues until the service responds with a subset of records and no pagination token, indicating that all records have been sent.</p> |
| pagination token | A marker that indicates that an API response contains a subset of a larger list of records. The client can return this marker in a subsequent API request to retrieve the next subset of records until the service responds with a subset of records and no pagination token, indicating that all records have been sent. See Also pagination . |
| paid AMI | An Amazon Machine Image (AMI) (p. 809) that you sell to other Amazon EC2 (p. 806) users on AWS Marketplace (p. 817) . |
| paravirtualization | See PV virtualization . |
| part | A contiguous portion of the object's data in a multipart upload request. |

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| partition key | A simple primary key, composed of one attribute (also known as a <i>hash attribute</i>). See Also partition key , sort key . |
| PAT | Port address translation. |
| pebibyte (PiB) | A contraction of peta binary byte, a pebibyte is 2^{50} or 1,125,899,906,842,624 bytes. A petabyte (PB) is 10^{15} or 1,000,000,000,000,000 bytes. 1,024 PiB is an exbibyte (EiB) (p. 831). |
| period | See sampling period . |
| permission | A statement within a policy (p. 845) that allows or denies access to a particular resource (p. 850). You can state any permission in the following way: "A has permission to do B to C." For example, Jane (A) has permission to read messages (B) from John's Amazon SQS (p. 811) queue (C). Whenever Jane sends a request to Amazon SQS to use John's queue, the service checks to see if she has permission. It further checks to see if the request satisfies the conditions John set forth in the permission. |
| persistent storage | A data storage solution where the data remains intact until it's deleted. Options within AWS (p. 811) include: Amazon S3 (p. 811), Amazon RDS (p. 810), Amazon DynamoDB (p. 806), and other services. |
| PERSONALIZED_RANKING recipes | Amazon Personalize (p. 809): Recipes that provide item recommendations in ranked order based on the predicted interest for a user. See Also recipe , recommendations , personalized-ranking recipe , popularity-count recipe . |
| personalized-ranking recipe | Amazon Personalize (p. 809): A PERSONALIZED_RANKING recipe that ranks a collection of items that you provide based on the predicted interest level for a specific user. Use the personalized-ranking recipe to create curated lists of items or ordered search results that are personalized for a specific user. See Also recipe , PERSONALIZED_RANKING recipes . |
| physical name | A unique label that AWS CloudFormation (p. 814) assigns to each resource (p. 850) when creating a stack (p. 855). Some AWS CloudFormation commands accept the physical name as a value with the --physical-name parameter. |
| pipeline | AWS CodePipeline (p. 814): A workflow construct that defines the way software changes go through a release process. |
| plaintext | Information that has not been encrypted (p. 830), as opposed to ciphertext (p. 822). |
| policy | IAM (p. 816): A document defining permissions that apply to a user, group, or role; the permissions in turn determine what users can do in AWS. A policy typically allows (p. 805) access to specific actions, and can optionally grant that the actions are allowed for specific resources (p. 850), such as EC2 instances (p. 829) or Amazon S3 (p. 811) buckets (p. 821). Policies can also explicitly deny (p. 828) access. Amazon EC2 Auto Scaling (p. 807): An object that stores the information that's needed to launch or terminate instances for an Auto Scaling group. Running the policy causes instances to be launched or terminated. You can configure an alarm (p. 804) to invoke an Auto Scaling policy. |
| policy generator | A tool in the IAM (p. 816) AWS Management Console (p. 817) that helps you build a policy (p. 845) by selecting elements from lists of available options. |

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| policy simulator | A tool in the IAM (p. 816) AWS Management Console (p. 817) that helps you test and troubleshoot policies (p. 845) so you can see their effects in real-world scenarios. |
| policy validator | A tool in the IAM (p. 816) AWS Management Console (p. 817) that examines your existing IAM access control policies (p. 845) to ensure that they comply with the IAM policy grammar. |
| popularity-count recipe | Amazon Personalize (p. 809) : A USER_PERSONALIZATION recipe that recommends the items that have had the most interactions with unique users. See Also recipe , USER_PERSONALIZATION recipes . |
| precision at K (5/10/25) | Amazon Personalize (p. 809) : An evaluation metric that tells you how relevant your model's recommendations are based on a sample size of K (5, 10, or 25) recommendations. Amazon Personalize calculates this metric based on the number of relevant recommendations out of the top K recommendations, divided by K, where K is 5, 10, or 25. See Also metrics , recommendations . |
| prefix | See job prefix . |
| Premium Support | A one-on-one, fast-response support channel that AWS customers can subscribe to for support for AWS infrastructure services. See Also https://aws.amazon.com/premiumsupport/ . |
| presigned URL | A web address that uses query string authentication (p. 847) . |
| primary key | One or two attributes that uniquely identify each item in a Amazon DynamoDB (p. 806) table, so that no two items can have the same key. See Also partition key , sort key . |
| primary shard | See shard . |
| principal | The user (p. 859) , service, or account (p. 804) that receives permissions that are defined in a policy (p. 845) . The principal is A in the statement "A has permission to do B to C." |
| private content | When using Amazon CloudFront (p. 805) to serve content with an Amazon S3 (p. 811) bucket (p. 821) as the origin, a method of controlling access to your content by requiring users to use signed URLs. Signed URLs can restrict user access based on the current date and time, the IP addresses that the requests originate from, or both. |
| private IP address | A private numerical address (for example, 192.0.2.44) that networked devices use to communicate with one another using the Internet Protocol (IP). Each EC2 instance (p. 829) is assigned two IP addresses at launch, which are directly mapped to each other through network address translation (NAT (p. 842)): a private address (following RFC 1918) and a public address. <i>Exception:</i> Instances launched in Amazon VPC (p. 811) are assigned only a private IP address. |
| private subnet | A VPC (p. 861) subnet (p. 856) whose instances can't be reached from the internet. |
| product code | An identifier provided by AWS when you submit a product to AWS Marketplace (p. 817) . |
| properties | See resource property . |
| property rule | A JSON (p. 837) -compliant markup standard for declaring properties, mappings, and output values in an AWS CloudFormation (p. 814) template. |

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| Provisioned IOPS | A storage option that delivers fast, predictable, and consistent I/O performance. When you specify an IOPS rate while creating a DB instance, Amazon RDS (p. 810) provisions that IOPS rate for the lifetime of the DB instance. |
| pseudo parameter | A predefined setting (for example, <code>AWS : StackName</code>) that can be used in AWS CloudFormation (p. 814) templates without having to declare them. You can use pseudo parameters anywhere you can use a regular parameter. |
| public AMI | An Amazon Machine Image (AMI) (p. 809) that all AWS accounts (p. 804) have permission to launch. |
| public dataset | A large collection of public information that can be seamlessly integrated into applications that are based in the AWS Cloud. Amazon stores public datasets at no charge to the community and, similar to other AWS services, users pay only for the compute and storage they use for their own applications. These datasets currently include data from the Human Genome Project, the US Census, Wikipedia, and other sources. See Also https://aws.amazon.com/publicdatasets . |
| public IP address | A public numerical address (for example, 192.0.2.44) that networked devices use to communicate with one another using the Internet Protocol (IP). Each EC2 instance (p. 829) is assigned two IP addresses at launch, which are directly mapped to each other through Network Address Translation (NAT (p. 842)): a private address (following RFC 1918) and a public address. <i>Exception:</i> Instances launched in Amazon VPC (p. 811) are assigned only a private IP address. |
| public subnet | A subnet (p. 856) whose instances can be reached from the internet. |
| PV virtualization | Paravirtual virtualization. Allows guest VMs to run on host systems that don't have special support extensions for full hardware and CPU virtualization. Because PV guests run a modified operating system that doesn't use hardware emulation, they can't provide hardware-related features, such as enhanced networking or GPU support. See Also HVM virtualization . |

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| quartile binning transformation | Amazon Machine Learning: A process that takes two inputs, a numerical variable and a parameter called a bin number, and outputs a categorical variable. Quartile binning transformations discover non-linearity in a variable's distribution by enabling the machine learning model to learn separate importance values for parts of the numeric variable's distribution. |
| Query | A type of web service that generally uses only the GET or POST HTTP method and a query string with parameters in the URL. See Also REST . |
| query string authentication | An AWS feature that you can use to place the authentication information in the HTTP request query string instead of in the Authorization header, which provides URL-based access to objects in a bucket (p. 821) . |
| queue | A sequence of messages or jobs that are held in temporary storage awaiting transmission or processing. |

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| queue URL | A web address that uniquely identifies a queue. |
| quota | The maximum value for your resources, actions, and items in your AWS account |

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| range GET | A request that specifies a byte range of data to get for a download. If an object is large, you can break up a download into smaller units by sending multiple range GET requests that each specify a different byte range to GET. |
| raw email | A type of <i>sendmail</i> request with which you can specify the email headers and MIME types. |
| RDS | See Amazon Relational Database Service (Amazon RDS) . |
| read replica | Amazon RDS (p. 810) : An active copy of another DB instance. Any updates to the data on the source DB instance are replicated to the read replica DB instance using the built-in replication feature of MySQL 5.1. |
| real-time predictions | Amazon Machine Learning: Synchronously generated predictions for individual data observations. See Also batch prediction . |
| recipe | Amazon Personalize (p. 809) : An Amazon Personalize algorithm that's preconfigured to predict the items that a user interacts with (for USER_PERSONALIZATION recipes), or calculate items that are similar to specific items that a user has shown interest in (for RELATED_ITEMS recipes), or rank a collection of items that you provide based on the predicted interest for a specific user (for PERSONALIZED_RANKING recipes). See Also USER_PERSONALIZATION recipes , RELATED_ITEMS recipes , PERSONALIZED_RANKING recipes . |
| recommendations | Amazon Personalize (p. 809) : A list of items that Amazon Personalize predicts that a user interacts with. Depending on the Amazon Personalize recipe used, recommendations can be either a list of items (with USER_PERSONALIZATION recipes and RELATED_ITEMS recipes), or a ranking of a collection of items you provided (with PERSONALIZED_RANKING recipes). See Also recipe , campaign , solution version , USER_PERSONALIZATION recipes , RELATED_ITEMS recipes , PERSONALIZED_RANKING recipes . |
| receipt handle | Amazon SQS (p. 811) : An identifier that you get when you receive a message from the queue. This identifier is required to delete a message from the queue or when changing a message's visibility timeout. |
| receiver | The entity that consists of the network systems, software, and policies that manage email delivery for a recipient (p. 848) . |
| recipient | Amazon Simple Email Service (Amazon SES) (p. 810) : The person or entity receiving an email message. For example, a person named in the "To" field of a message. |
| Redis | A fast, open-source, in-memory key-value data structure store. Redis comes with a set of versatile in-memory data structures with which you can easily create a variety of custom applications. |

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| reference | A means of inserting a property from one AWS resource (p. 850) into another. For example, you could insert an Amazon EC2 (p. 806) security group (p. 852) property into an Amazon RDS (p. 810) resource. |
| Region | A named set of AWS resources (p. 850) that's in the same geographical area. A Region comprises at least two Availability Zones (p. 813) . |
| regression model | Amazon Machine Learning: Preformatted instructions for common data transformations that fine-tune machine learning model performance. |
| regression model | A type of machine learning model that predicts a numeric value, such as the exact purchase price of a house. |
| regularization | A machine learning (ML) parameter that you can tune to obtain higher-quality ML models. Regularization helps prevent ML models from memorizing training data examples instead of learning how to generalize the patterns it sees (called overfitting). When training data is overfitted, the ML model performs well on the training data, but doesn't perform well on the evaluation data or on new data. |
| RELATED_ITEMS recipes | Amazon Personalize (p. 809) Recipes that recommend items that are similar to a specified item, such as the item-to-item (SIMS) recipe. See Also recipe , item-to-item similarities (SIMS) recipe . |
| replacement environment | The instances in a deployment group after the CodeDeploy blue/green deployment. |
| replica shard | See shard . |
| reply path | The email address that an email reply is sent to. This is different from the return path (p. 850) . |
| representational state transfer | See REST . |
| reputation | 1. An Amazon SES (p. 810) metric, based on factors that might include bounces (p. 821) , complaints (p. 823) , and other metrics, regarding whether a customer is sending high-quality email. 2. A measure of confidence, as judged by an internet service provider (ISP) (p. 836) or other entity that an IP address that they are receiving email from isn't the source of spam (p. 854) . |
| requester | The person (or application) that sends a request to AWS to perform a specific action. When AWS receives a request, it first evaluates the requester's permissions to determine whether the requester is allowed to perform the request action (if applicable, for the requested resource (p. 850)). |
| Requester Pays | An Amazon S3 (p. 811) feature that allows a bucket owner (p. 821) to specify that anyone who requests access to objects in a particular bucket (p. 821) must pay the data transfer and request costs. |
| reservation | A collection of EC2 instances (p. 829) started as part of the same launch request. This is not to be confused with a Reserved Instance (p. 849) . |
| Reserved Instance | A pricing option for EC2 instances (p. 829) that discounts the on-demand (p. 843) usage charge for instances that meet the specified parameters. Customers pay for the entire term of the instance, regardless of how they use it. |
| Reserved Instance Marketplace | An online exchange that matches sellers who have reserved capacity that they no longer need with buyers who are looking to purchase additional capacity. reserved instances (p. 849) that you purchase from third-party sellers have less |

than a full standard term remaining and can be sold at different upfront prices. The usage or reoccurring fees remain the same as the fees set when the Reserved Instances were originally purchased. Full standard terms for Reserved Instances available from AWS run for one year or three years.

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| resource | An entity that users can work with in AWS, such as an EC2 instance (p. 829) , an Amazon DynamoDB (p. 806) table, an Amazon S3 (p. 811) bucket (p. 821), an IAM (p. 816) user, or an AWS OpsWorks (p. 817) stack (p. 855). |
| resource property | A value required when including an AWS resource (p. 850) in an AWS CloudFormation (p. 814) stack (p. 855) . Each resource can have one or more properties associated with it. For example, an <code>AWS::EC2::Instance</code> resource might have a <code>UserData</code> property. In an AWS CloudFormation template, resources must declare a properties section, even if the resource has no properties. |
| resource record | Also called <i>resource record set</i> . The fundamental information elements in the Domain Name System (DNS). See Also Domain Name System on Wikipedia . |
| REST | Representational state transfer. A simple stateless architecture that generally runs over HTTPS/TLS. REST emphasizes that resources have unique and hierarchical identifiers (URIs), are represented by common media types (such as HTML, XML, or JSON (p. 837)), and that operations on the resources are either predefined or discoverable within the media type. In practice, this generally results in a limited number of operations. See Also Query , WSDL , SOAP . |
| RESTful web service | Also known as RESTful API. A web service that follows REST (p. 850) architectural constraints. The API operations must use HTTP methods explicitly, expose hierarchical URIs, and transfer either XML, JSON (p. 837) , or both. |
| return enabled | Amazon CloudSearch (p. 805) : An index field option that enables the field's values to be returned in the search results. |
| return path | The email address that bounced email is returned to. The return path is specified in the header of the original email. This is different from the reply path (p. 849) . |
| revision | AWS CodePipeline (p. 814) : A change that's made to a source that's configured in a source action, such as a pushed commit to a GitHub (p. 833) repository or an update to a file in a versioned Amazon S3 (p. 811) bucket (p. 821). |
| role | A tool for giving temporary access to AWS resources (p. 850) in your AWS account (p. 804) . |
| rollback | A return to a previous state that follows the failure to create an object, such as AWS CloudFormation (p. 814) stack (p. 855) . All resources (p. 850) that are associated with the failure are deleted during the rollback. For AWS CloudFormation, you can override this behavior using the <code>--disable-rollback</code> option on the command line. |
| root | AWS Organizations (p. 818) : A parent container for the accounts in your organization. If you apply a service control policy (p. 853) to the root, it applies to every organizational unit (p. 843) and account in the organization. |
| root credentials | Authentication information associated with the AWS account (p. 804) owner. |
| root device volume | A volume (p. 861) that contains the image used to boot the instance (p. 836) (also known as a <i>root device</i>). If you launched the instance from an AMI (p. 809) backed by instance store (p. 836) , this is an instance store volume (p. 861) created from a template stored in Amazon S3 (p. 811) . If you launched the |

instance from an AMI backed by [Amazon EBS \(p. 807\)](#), this is an Amazon EBS volume created from an Amazon EBS snapshot.

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| route table | A set of routing rules that controls the traffic leaving any subnet (p. 856) that's associated with the route table. You can associate multiple subnets with a single route table, but a subnet can be associated with only one route table at a time. |
| row identifier | Amazon Machine Learning: An attribute in the input data that you can include in the evaluation or prediction output to make it easier to associate a prediction with an observation. |
| rule | AWS WAF (p. 820) : A set of conditions that AWS WAF searches for in web requests to AWS resources (p. 850) such as Amazon CloudFront (p. 805) distributions. You add rules to a web ACL (p. 861) , and then specify whether you want to allow or block web requests based on each rule. |

S

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| S3 | See Amazon Simple Storage Service (Amazon S3) . |
| sampling period | A defined duration of time, such as one minute, which Amazon CloudWatch (p. 805) computes a statistic (p. 855) over. |
| sandbox | A testing location where you can test the functionality of your application without affecting production, incurring charges, or purchasing products. |
| | Amazon SES (p. 810) : An environment that developers can use to test and evaluate the service. In the sandbox, you have full access to the Amazon SES API, but you can only send messages to verified email addresses and the mailbox simulator. To get out of the sandbox, you must apply for production access. Accounts in the sandbox also have lower sending limits (p. 852) than production accounts. |
| scale in | To remove EC2 instances from an Auto Scaling group (p. 813) . |
| scale out | To add EC2 instances to an Auto Scaling group (p. 813) . |
| scaling policy | A description of how Auto Scaling automatically scales an Auto Scaling group (p. 813) in response to changing demand. See Also scale in , scale out . |
| scaling activity | A process that changes the size, configuration, or makeup of an Auto Scaling group (p. 813) by launching or terminating instances. |
| scheduler | The method used for placing tasks (p. 857) on container instances (p. 824) . |
| schema | Amazon Machine Learning: The information that's needed to interpret the input data for a machine learning model, including attribute names and their assigned data types, and the names of special attributes. |
| score cut-off value | Amazon Machine Learning: A binary classification model outputs a score that ranges from 0 to 1. To decide whether an observation is classified as 1 or 0, you pick a classification threshold, or cut-off, and Amazon ML compares the score against it. Observations with scores higher than the cut-off are predicted as target equals 1, and scores lower than the cut-off are predicted as target equals 0. |

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| SCP | See service control policy . |
| search API | Amazon CloudSearch (p. 805) : The API that you use to submit search requests to a search domain (p. 852) . |
| search domain | Amazon CloudSearch (p. 805) : Encapsulates your searchable data and the search instances that handle your search requests. You typically set up a separate Amazon CloudSearch domain for each different collection of data that you want to search. |
| search domain configuration | Amazon CloudSearch (p. 805) : A domain's indexing options, analysis schemes (p. 812) , expressions (p. 832) , suggesters (p. 856) , access policies, and scaling and availability options. |
| search enabled | Amazon CloudSearch (p. 805) : An index field option that enables the field data to be searched. |
| search endpoint | Amazon CloudSearch (p. 805) : The URL that you connect to when sending search requests to a search domain. Each Amazon CloudSearch domain has a unique search endpoint that remains the same for the life of the domain. |
| search index | Amazon CloudSearch (p. 805) : A representation of your searchable data that facilitates fast and accurate data retrieval. |
| search instance | Amazon CloudSearch (p. 805) : A compute resource (p. 850) that indexes your data and processes search requests. An Amazon CloudSearch domain has one or more search instances, each with a finite amount of RAM and CPU resources. As your data volume grows, more search instances or larger search instances are deployed to contain your indexed data. When necessary, your index is automatically partitioned across multiple search instances. As your request volume or complexity increases, each search partition is automatically replicated to provide additional processing capacity. |
| search request | Amazon CloudSearch (p. 805) : A request that's sent to an Amazon CloudSearch domain's search endpoint to retrieve documents from the index that match particular search criteria. |
| search result | Amazon CloudSearch (p. 805) : A document that matches a search request. Also referred to as a <i>search hit</i> . |
| secret access key | A key that's used with the access key ID (p. 803) to cryptographically sign programmatic AWS requests. Signing a request identifies the sender and prevents the request from being altered. You can generate secret access keys for your AWS account (p. 804) , individual IAM users (p. 859) and temporary sessions. |
| security group | A named set of allowed inbound network connections for an instance. (Security groups in Amazon VPC (p. 811) also include support for outbound connections.) Each security group consists of a list of protocols, ports, and IP address ranges. A security group can apply to multiple instances, and multiple groups can regulate a single instance. |
| sender | The person or entity sending an email message. |
| Sender ID | A Microsoft controlled version of SPF (p. 855) . An email authentication and anti-spoofing system. For more information about Sender ID, see Sender ID in Wikipedia. |
| sending limits | The sending quota (p. 853) and maximum send rate (p. 840) that are associated with every Amazon SES (p. 810) account. |

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| sending quota | The maximum number of email messages that you can send using Amazon SES (p. 810) in a 24-hour period. |
| server-side encryption (SSE) | The encrypting (p. 830) of data at the server level. Amazon S3 (p. 811) supports three modes of server-side encryption: SSE-S3, where Amazon S3 manages the keys; SSE-C, where the customer manages the keys; and SSE-KMS, where AWS Key Management Service (AWS KMS) (p. 817) manages keys. |
| service control policy | AWS Organizations (p. 818) : A policy-based control that specifies the services and actions that users and roles can use in the accounts that the service control policy (SCP) affects. |
| service endpoint | See endpoint . |
| service health dashboard | A webpage showing up-to-the-minute information about AWS service availability. The dashboard is located at http://status.aws.amazon.com/ . |
| Service Quotas | A service for viewing and managing your quotas easily and at scale as your AWS workloads grow. Quotas, also referred to as limits, are the maximum number of resources that you can create in an AWS account. |
| service role | An IAM (p. 816) role (p. 850) that grants permissions to an AWS service so it can access AWS resources (p. 850) . The policies that you attach to the service role determine which AWS resources the service can access and what it can do with those resources. |
| SES | See Amazon Simple Email Service (Amazon SES) . |
| session | The period when the temporary security credentials that are provided by AWS Security Token Service (AWS STS) (p. 819) allow access to your AWS account. |
| SHA | Secure Hash Algorithm. SHA1 is an earlier version of the algorithm, which AWS has replaced with SHA256. |
| shard | Amazon OpenSearch Service (OpenSearch Service) (p. 807) : A partition of data in an index. You can split an index into multiple shards, which can include primary shards (original shards) and replica shards (copies of the primary shards). Replica shards provide failover. This means that, if a cluster node that contains a primary shard fails, a replica shard is promoted to a primary shard. Replica shards also can handle requests. |
| shared AMI | An Amazon Machine Image (AMI) (p. 809) that a developer builds and makes available for others to use. |
| shutdown action | Amazon EMR (p. 807) : A predefined bootstrap action that launches a script that runs a series of commands in parallel before terminating the job flow. |
| signature | Refers to a <i>digital signature</i> , which is a mathematical way to confirm the authenticity of a digital message. AWS uses signatures to authenticate the requests you send to our web services. For more information, to https://aws.amazon.com/security . |
| SIGNATURE file | AWS Import/Export (p. 816) : A file that you copy to the root directory of your storage device. The file contains a job ID, manifest file, and a signature. |
| Signature Version 4 | Protocol for authenticating inbound API requests to AWS services in all AWS Regions. |
| Simple Mail Transfer Protocol | See SMTP . |
| Simple Object Access Protocol | See SOAP . |

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| Simple Storage Service | See Amazon Simple Storage Service (Amazon S3) . |
| SIMS recipe | See item-to-item similarities (SIMS) recipe . |
| Single Sign-On | See AWS Single Sign-On . |
| Single-AZ DB instance | A standard (non-Multi-AZ) DB instance (p. 827) that's deployed in one Availability Zone (p. 813) , without a standby replica in another Availability Zone. See Also Multi-AZ deployment . |
| sloppy phrase search | A search for a phrase that specifies how close the terms must be to one another to be considered a match. |
| SMTP | Simple Mail Transfer Protocol. The standard that's used to exchange email messages between internet hosts for the purpose of routing and delivery. |
| snapshot | Amazon Elastic Block Store (Amazon EBS) (p. 807) : A backup of your volumes (p. 861) that's stored in Amazon S3 (p. 811) . You can use these snapshots as the starting point for new Amazon EBS volumes or to protect your data for long-term durability. See Also DB snapshot . |
| SNS | See Amazon Simple Notification Service (Amazon SNS) . |
| SOAP | Simple Object Access Protocol. An XML-based protocol that you can use to exchange information over a particular protocol (for example, HTTP or SMTP) between applications. See Also REST , WSDL . |
| soft bounce | A temporary email delivery failure such as one resulting from a full mailbox. |
| software VPN | A software appliance-based VPN connection over the internet. |
| solution | Amazon Personalize (p. 809) : The recipe, customized parameters, and trained models (solution versions) that can be used to generate recommendations. See Also recipe , solution version , recommendations . |
| solution version | Amazon Personalize (p. 809) : A trained model that you create as part of a solution in Amazon Personalize. You deploy a solution version in a campaign to generate recommendations. See Also solution , campaign , recommendations . |
| sort enabled | Amazon CloudSearch (p. 805) : An index field option that enables a field to be used to sort the search results. |
| sort key | An attribute used to sort the order of partition keys in a composite primary key (also known as a <i>range attribute</i>). See Also partition key , primary key . |
| source/destination checking | A security measure to verify that an EC2 instance (p. 829) is the origin of all traffic that it sends and the ultimate destination of all traffic that it receives. In other words, this measure verifies that the instance isn't relaying traffic. By default, source/destination checking is turned on. For instances that function as gateways, such as VPC (p. 861) NAT (p. 842) instances, source/destination checking must be disabled. |
| spam | Unsolicited bulk emails. |
| spamtrap | An email address that's set up by an anti-spam (p. 854) entity. This email address isn't for correspondence but rather for monitoring unsolicited emails. This is also called a <i>honeypot</i> . |

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| SPF | Sender Policy Framework. A standard for authenticating email. |
| Spot Instance | A type of EC2 instance (p. 829) that you can bid on to use unused Amazon EC2 (p. 806) capacity. |
| Spot price | The price for a Spot Instance (p. 855) at any given time. If your maximum price exceeds the current price and your restrictions are met, Amazon EC2 (p. 806) launches instances on your behalf. |
| SQL injection match condition | AWS WAF (p. 820) : An attribute that specifies the part of web requests (such as a header or a query string) that AWS WAF inspects for malicious SQL code. Based on the specified conditions, you can configure AWS WAF to allow or block web requests to an AWS resource (p. 850), such as an Amazon CloudFront (p. 805) distribution. |
| SQS | See Amazon Simple Queue Service (Amazon SQS) . |
| SSE | See server-side encryption (SSE) . |
| SSL | Secure Sockets Layer See Also Transport Layer Security (TLS) . |
| SSO | See AWS Single Sign-On . |
| stack | AWS CloudFormation (p. 814) : A collection of AWS resources that you create and delete as a single unit. AWS OpsWorks (p. 817) : A set of instances that you manage collectively, typically because they have a common purpose such as serving PHP applications. A stack serves as a container and handles tasks that apply to the group of instances as a whole, such as managing applications and cookbooks. |
| station | AWS CodePipeline (p. 814) : A portion of a pipeline workflow where one or more actions are performed. |
| station | A place at an AWS facility where your AWS Import/Export data is transferred on to, or off of, your storage device. |
| statistic | One of five functions of the values submitted for a given sampling period (p. 851) . These functions are Maximum, Minimum, Sum, Average, and SampleCount. |
| stem | The common root or substring shared by a set of related words. |
| stemming | The process of mapping related words to a common stem. This enables matching on variants of a word. For example, a search for "horse" could return matches for horses, horseback, and horsing, as well as horse. Amazon CloudSearch (p. 805) supports both dictionary based and algorithmic stemming. |
| step | Amazon EMR (p. 807) : A single function applied to the data in a job flow (p. 837) . The sum of all steps comprises a job flow. |
| step type | Amazon EMR (p. 807) : The type of work done in a step. There are a limited number of step types, such as moving data from Amazon S3 (p. 811) to Amazon EC2 (p. 806) or from Amazon EC2 to Amazon S3. |
| sticky session | A feature of the Elastic Load Balancing (p. 830) load balancer that binds a user's session to a specific application instance. This is so that all requests that are coming from the user during the session are sent to the same application instance. By contrast, a load balancer defaults to route each request independently to the application instance with the smallest load. |

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| stopping | The process of filtering stop words from an index or search request. |
| stopword | A word that isn't indexed and is automatically filtered out of search requests because it's either insignificant or so common that including it results in too many matches to be useful. Stopwords are language specific. |
| streaming | Amazon EMR (p. 807) : A utility that comes with Hadoop (p. 834) that you can use to develop MapReduce executables in languages other than Java. Amazon CloudFront (p. 805) : The ability to use a media file in real time—as it's transmitted in a steady stream from a server. |
| streaming distribution | A special kind of distribution (p. 828) that serves streamed media files using a Real Time Messaging Protocol (RTMP) connection. |
| Streams | See Amazon Kinesis Data Streams . |
| string-to-sign | Before you calculate an HMAC (p. 834) signature, you first assemble the required components in a canonical order. The preencrypted string is the string-to-sign. |
| string match condition | AWS WAF (p. 820) : An attribute that specifies the strings that AWS WAF searches for in a web request, such as a value in a header or a query string. Based on the specified strings, you can configure AWS WAF to allow or block web requests to an AWS resource (p. 850) , such as a CloudFront (p. 805) distribution. |
| strongly consistent read | A read process that returns a response with the most up-to-date data. This data reflects the updates from all previous write operations that were successful—regardless of the Region. See Also data consistency , eventual consistency , eventually consistent read . |
| structured query | Search criteria that are specified using the Amazon CloudSearch (p. 805) structured query language. You use the structured query language to construct compound queries that use advanced search options and combine multiple search criteria using Boolean operators. |
| STS | See AWS Security Token Service (AWS STS) . |
| subnet | A segment of the IP address range of a VPC (p. 861) that an EC2 instance (p. 829) can be attached to. You can create subnets to group instances according to security and operational needs. |
| Subscription button | An HTML-coded button that provides a simple way to charge customers a recurring fee. |
| suggester | Amazon CloudSearch (p. 805) : Specifies an index field for getting autocomplete suggestions and options that can enable fuzzy matches and control how suggestions are sorted. |
| suggestions | Documents that contain a match for the partial search string in the field that's designated by the suggester (p. 856) . Amazon CloudSearch (p. 805) suggestions include the document IDs and field values for each matching document. To be a match, the string must match the contents of the field starting from the beginning of the field. |
| supported AMI | An Amazon Machine Image (AMI) (p. 809) similar to a paid AMI (p. 844) , except that the owner charges for additional software or a service that customers use with their own AMIs. |
| SWF | See Amazon Simple Workflow Service (Amazon SWF) . |

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| symmetric encryption | Encryption (p. 830) that uses a private key only. See Also asymmetric encryption . |
| synchronous bounce | A type of bounce (p. 821) that occurs while the email servers of the sender (p. 852) and receiver (p. 848) are actively communicating. |
| synonym | A word that's the same or nearly the same as an indexed word and that likely produces the same results when specified in a search request. For example, a search for "Rocky Four" or "Rocky 4" likely returns the fourth <i>Rocky</i> movie. You can do this by designating that <code>four</code> and <code>4</code> are synonyms for <code>IV</code> . Synonyms are language specific. |

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| table | A collection of data. Similar to other database systems, DynamoDB stores data in tables. |
| tag | Metadata that you can define and assign to AWS resources (p. 850) , such as an EC2 instance (p. 829) . Not all AWS resources can be tagged. |
| tagging | Tagging resources: Applying a tag (p. 857) to an AWS resource (p. 850) . Amazon SES (p. 810) : Also called <i>labeling</i> . A way to format return path (p. 850) email addresses so that you can specify a different return path for each recipient of a message. You can use tagging to support VERP (p. 860) . For example, if Andrew manages a mailing list, he can use the return paths <code>andrew+recipient1@example.net</code> and <code>andrew+recipient2@example.net</code> so that he can determine which email bounced. |
| target attribute | Amazon Machine Learning (Amazon ML): The attribute in the input data that contains the "correct" answers. Amazon ML uses the target attribute to learn how to make predictions on new data. For example, if you were building a model for predicting the sale price of a house, the target attribute would be "target sale price in USD." |
| target revision | AWS CodeDeploy (p. 814) : The most recent version of the application revision that has been uploaded to the repository and will be deployed to the instances in a deployment group. In other words, the application revision currently targeted for deployment. This is also the revision that will be pulled for automatic deployments. |
| task | An instantiation of a task definition (p. 857) that's running on a container instance (p. 824) . |
| task definition | The blueprint for your task. Specifies the name of the task (p. 857) , revisions, container definitions (p. 824) , and volume (p. 861) information. |
| task node | An EC2 instance (p. 829) that runs Hadoop (p. 834) map and reduce tasks, but doesn't store data. Task nodes are managed by the master node (p. 840) , which assigns Hadoop tasks to nodes and monitors their status. While a job flow is running, you can increase and decrease the number of task nodes. Because they don't store data and can be added and removed from a job flow, you can use task nodes to manage the EC2 instance capacity your job flow uses, increasing capacity to handle peak loads and decreasing it later. |

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| | Task nodes only run a TaskTracker Hadoop daemon. |
| tebibyte (TiB) | A contraction of tera binary byte. A tebibyte (TiB) is 2^{40} or 1,099,511,627,776 bytes. A terabyte (TB) is 10^{12} or 1,000,000,000,000 bytes. 1,024 TiB is a pebibyte (PiB) (p. 845) . |
| template format version | The version of an AWS CloudFormation (p. 814) template design that determines the available features. If you omit the <code>AWSTemplateFormatVersion</code> section from your template, AWS CloudFormation assumes the most recent format version. |
| template validation | The process of confirming the use of JSON (p. 837) code in an AWS CloudFormation (p. 814) template. You can validate any AWS CloudFormation template using the <code>cfn-validate-template</code> command. |
| temporary security credentials | Authentication information that's provided by AWS STS (p. 819) when you call an STS API action. Includes an access key ID (p. 803) , a secret access key (p. 852) , a session (p. 853) token, and an expiration time. |
| throttling | The automatic restricting or slowing down of a process based on one or more limits. For example, Amazon Kinesis Data Streams (p. 808) throttles operations if an application (or group of applications operating on the same stream) attempts to get data from a shard at a rate faster than the shard limit. Amazon API Gateway (p. 805) uses throttling to limit the steady-state request rates for a single account. Amazon SES (p. 810) uses throttling to reject attempts to send email that exceeds the sending limits (p. 852) . |
| time-series data | Data that's provided as part of a metric. The time value is assumed to be when the value occurred. A metric is the fundamental concept for Amazon CloudWatch (p. 805) and represents a time-ordered set of data points. You publish metric data points into CloudWatch and later retrieve statistics about those data points as a time-series ordered dataset. |
| timestamp | A date/time string in the ISO 8601 format (more specifically, in the <code>YYYY-MM-DD</code> format). |
| TLS | See Transport Layer Security (TLS) . |
| tokenization | The process of splitting a stream of text into separate tokens on detectable boundaries such as white space and hyphens. |
| topic | A communication channel to send messages and subscribe to notifications. It provides an access point for publishers and subscribers to communicate with each other. |
| Traffic Mirroring | An Amazon VPC feature that you can use to copy network traffic from an elastic network interface of Amazon EC2 instances. You can then send this network traffic to out-of-band security and monitoring appliances for content inspection, threat monitoring, and troubleshooting. See Also https://aws.amazon.com/vpc/ . |
| training datasource | A datasource that contains the data that Amazon Machine Learning uses to train the machine learning model to make predictions. |
| transition | AWS CodePipeline (p. 814) : The act of a revision in a pipeline continuing from one stage to the next in a workflow. |
| Transport Layer Security (TLS) | A cryptographic protocol that provides security for communication over the internet. Its predecessor is Secure Sockets Layer (SSL). |

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| trust policy | An IAM (p. 816) policy (p. 845) that's an inherent part of an IAM role (p. 850) . The trust policy specifies which principals are allowed to use the role. |
| trusted key groups | Amazon CloudFront key groups whose public keys CloudFront can use to verify the signatures of CloudFront signed URLs and signed cookies . |
| trusted signers | See trusted key groups (p. 859) . |
| tuning | Selecting the number and type of AMIs (p. 809) to run a Hadoop (p. 834) job flow most efficiently. |
| tunnel | A route for transmission of private network traffic that uses the internet to connect nodes in the private network. The tunnel uses encryption and secure protocols such as PPTP to prevent the traffic from being intercepted as it passes through public routing nodes. |

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| unbounded | The number of potential occurrences isn't limited by a set number. This value is often used when defining a data type that's a list (for example, <code>maxOccurs="unbounded"</code>), in WSDL (p. 861) . |
| unit | Standard measurement for the values submitted to Amazon CloudWatch (p. 805) as metric data. Units include seconds, percent, bytes, bits, count, bytes/second, bits/second, count/second, and none. |
| unlink from VPC | The process of unlinking (or detaching) an EC2-Classic instance (p. 836) from a ClassicLink-enabled VPC (p. 861) . See Also ClassicLink, link to VPC . |
| usage report | An AWS record that details your usage of a particular AWS service. You can generate and download usage reports from https://aws.amazon.com/usage-reports/ . |
| user | A person or application under an account (p. 804) that makes API calls to AWS products. Each user has a unique name within the AWS account, and a set of security credentials that aren't shared with other users. These credentials are separate from the security credentials for the AWS account. Each user is associated with one and only one AWS account. |
| Users dataset | Amazon Personalize (p. 809) : A container for metadata about your users, such as age, gender, or loyalty membership. See Also dataset . |
| user-personalization recipe | Amazon Personalize (p. 809) : An HRNN-based USER_PERSONALIZATION recipe that predicts the items that a user interacts with. The user-personalization recipe can use item exploration and impressions data to generate recommendations for new items. See Also HRNN, recipe, USER_PERSONALIZATION recipes, item exploration, impressions data, recommendations . |
| USER_PERSONALIZATION recipes | Amazon Personalize (p. 809) : Recipes that are used to build a recommendation system that predicts the items that a user interacts with based on data provided in Interactions, Items, and Users datasets. |

See Also [recipe](#), [user-personalization recipe](#), [popularity-count recipe](#), [HRNN](#).

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| validation | See template validation . |
| value | Instances of attributes (p. 813) for an item, such as cells in a spreadsheet. An attribute might have multiple values. |
| | Tagging resources: A specific tag (p. 857) label that acts as a descriptor within a tag category (key). For example, you might have EC2 instance (p. 829) with the tag key of <i>Owner</i> and the tag value of <i>Jan</i> . You can tag an AWS resource (p. 850) with up to 10 key-value pairs. Not all AWS resources can be tagged. |
| Variable Envelope Return Path | See VERP . |
| verification | The process of confirming that you own an email address or a domain so that you can send email from or to it. |
| VERP | Variable Envelope Return Path. A way that email-sending applications can match bounced (p. 821) email with the undeliverable address that caused the bounce by using a different return path (p. 850) for each recipient. VERP is typically used for mailing lists. With VERP, the recipient's email address is embedded in the address of the return path, which is where bounced email is returned. This makes it possible to automate the processing of bounced email without having to open the bounce messages, which might vary in content. |
| versioning | Every object in Amazon S3 (p. 811) has a key and a version ID. Objects with the same key, but different version IDs can be stored in the same bucket (p. 821) . Versioning is enabled at the bucket layer using PUT Bucket versioning. |
| VGW | See virtual private gateway (VGW) . |
| virtualization | Allows multiple guest virtual machines (VM) to run on a host operating system. Guest VMs can run on one or more levels above the host hardware, depending on the type of virtualization. See Also PV virtualization , HVM virtualization . |
| virtual private cloud | See VPC . |
| virtual private gateway (VGW) | The Amazon side of a VPN connection (p. 861) that maintains connectivity. The internal interfaces of the virtual private gateway connect to your VPC (p. 861) through the VPN attachment. The external interfaces connect to the VPN connection, which leads to the customer gateway (p. 826) . |
| visibility timeout | The period of time that a message is invisible to the rest of your application after an application component gets it from the queue. During the visibility timeout, the component that received the message usually processes it, and then deletes it from the queue. This prevents multiple components from processing the same message. |
| VM Import/Export | A service for importing virtual machine (VM) images from your existing virtualization environment to Amazon EC2 and then exporting them back. |

See Also <https://aws.amazon.com/ec2/vm-import>.

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| volume | A fixed amount of storage on an instance (p. 836) . You can share volume data between more than one container (p. 824) and persist the data on the container instance (p. 824) when the containers are no longer running. |
| VPC | Virtual private cloud. An elastic network that's populated by infrastructure, platform, and application services that share common security and interconnection. |
| VPC endpoint | A feature that you can use to create a private connection between your VPC (p. 861) and another AWS service without requiring access over the internet, through a NAT (p. 842) instance, a VPN connection (p. 861) , or AWS Direct Connect (p. 815) . |
| VPG | See virtual private gateway (VGW) . |
| VPN CloudHub | See AWS VPN CloudHub . |
| VPN connection | Amazon Web Services (AWS) (p. 811) : The IPsec connection that's between a VPC (p. 861) and some other network, such as a corporate data center, home network, or colocation facility. |

W

[Numbers and symbols \(p. 803\)](#) | [A \(p. 803\)](#) | [B \(p. 820\)](#) | [C \(p. 821\)](#) | [D \(p. 826\)](#) | [E \(p. 829\)](#) | [F \(p. 832\)](#) | [G \(p. 833\)](#) | [H \(p. 834\)](#) | [I \(p. 835\)](#) | [J \(p. 837\)](#) | [K \(p. 838\)](#) | [L \(p. 838\)](#) | [M \(p. 839\)](#) | [N \(p. 842\)](#) | [O \(p. 843\)](#) | [P \(p. 844\)](#) | [Q \(p. 847\)](#) | [R \(p. 848\)](#) | [S \(p. 851\)](#) | [T \(p. 857\)](#) | [U \(p. 859\)](#) | [V \(p. 860\)](#) | [W \(p. 861\)](#) | X, Y, Z (p. 861)

| | |
|-----------------------------------|---|
| WAM | See Amazon WorkSpaces Application Manager (Amazon WAM) . |
| web access control list (web ACL) | AWS WAF (p. 820) : A set of rules that defines the conditions that AWS WAF searches for in web requests to an AWS resource (p. 850) , such as a Amazon CloudFront (p. 805) distribution. A web access control list (web ACL) specifies if to allow, block, or count the requests. |
| Web Services Description Language | See WSDL . |
| WSDL | Web Services Description Language. A language that's used to describe the actions that a web service can perform, along with the syntax of action requests and responses. See Also REST , SOAP . |

X, Y, Z

| | |
|-------------------|---|
| X.509 certificate | A digital document that uses the X.509 public key infrastructure (PKI) standard to verify that a public key belongs to the entity that's described in the certificate (p. 822) . |
| yobibyte (YiB) | A contraction of yotta binary byte. A yobibyte (YiB) is 2^{80} or 1,208,925,819,614,629,174,706,176 bytes. A yottabyte (YB) is 10^{24} or 1,000,000,000,000,000,000,000 bytes. |
| zebibyte (ZiB) | A contraction of zetta binary byte. A zebibyte (ZiB) is 2^{70} or 1,180,591,620,717,411,303,424 bytes. A zettabyte (ZB) is 10^{21} or 1,000,000,000,000,000,000 bytes. 1,024 ZiB is a yobibyte (YiB) (p. 861) . |

zone awareness

[Amazon OpenSearch Service \(OpenSearch Service\) \(p. 807\)](#): A configuration that distributes nodes in a cluster across two [Availability Zones \(p. 813\)](#) in the same Region. Zone awareness helps to prevent data loss and minimizes downtime if a node and data center fails. If you enable zone awareness, you must have an even number of data instances in the instance count, and you also must use the Amazon OpenSearch Service Configuration API to replicate your data for your OpenSearch cluster.