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# Amazon Simple Storage Service

## Getting Started Guide



## **Amazon Simple Storage Service: Getting Started Guide**

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## Table of Contents

Getting started .....	1
Setting up Amazon S3 .....	2
Sign up for AWS .....	2
Create an IAM user .....	2
Sign in as an IAM user .....	3
Creating a bucket .....	5
Uploading an object to a bucket .....	6
Accessing an object .....	7
Copying an object to a folder .....	8
Deleting objects and buckets .....	9
Emptying your bucket .....	9
Deleting an object .....	9
Deleting your bucket .....	10
Where do I go from here? .....	11
Common use scenarios .....	11
Considerations going forward .....	11
AWS Account and Security Credentials .....	12
Security .....	12
AWS integration .....	12
Pricing .....	12
Advanced Amazon S3 features .....	12
Development resources .....	13
Reference resources .....	13
About this guide .....	14

# Getting started with Amazon Simple Storage Service

Amazon Simple Storage Service (Amazon S3) is storage for the internet. You can use Amazon S3 to store and retrieve any amount of data at any time, from anywhere on the web. You can accomplish these tasks using the AWS Management Console, which is a simple and intuitive web interface.

Amazon S3 stores data as objects within buckets. An object is a file and any optional metadata that describes the file. To store a file in Amazon S3, you upload it to a bucket. When you upload a file as an object, you can set permissions on the object and any metadata.

Buckets are containers for objects. You can have one or more buckets. You can control access for each bucket, deciding who can create, delete, and list objects in it. You can also choose the geographical Region where Amazon S3 will store the bucket and its contents and view access logs for the bucket and its objects.

This guide introduces you to Amazon S3 and explains how to use the AWS Management Console to complete the following tasks:

- [Setting up Amazon S3 \(p. 2\)](#)
- [Creating a bucket \(p. 5\)](#)
- [Uploading an object to a bucket \(p. 6\)](#)
- [Accessing an object \(p. 7\)](#)
- [Copying an object to a folder \(p. 8\)](#)
- [Deleting objects and buckets \(p. 9\)](#)

For information about Amazon S3 features, pricing, and frequently asked questions, see the [Amazon S3 product page](#).

# Setting up Amazon S3

When you sign up for AWS, your AWS account is automatically signed up for all services in AWS, including Amazon S3. You are charged only for the services that you use.

With Amazon S3, you pay only for what you use. For more information about Amazon S3 features and pricing, see [Amazon S3](#). If you are a new Amazon S3 customer, you can get started with Amazon S3 for free. For more information, see [AWS Free Tier](#).

To get started with Amazon S3, follow these steps:

## Topics

- [Sign up for AWS](#) (p. 2)
- [Create an IAM user](#) (p. 2)
- [Sign in as an IAM user](#) (p. 3)

## Sign up for AWS

If you do not have an AWS account, complete the following steps to create one.

### To sign up for an AWS account

1. Open <https://portal.aws.amazon.com/billing/signup>.
2. Follow the online instructions.

Part of the sign-up procedure involves receiving a phone call and entering a verification code on the phone keypad.

AWS sends you a confirmation email after the sign-up process is complete. At any time, you can view your current account activity and manage your account by going to <https://aws.amazon.com/> and choosing **My Account**.

## Create an IAM user

When you first create an Amazon Web Services (AWS) account, you begin with a single sign-in identity. That identity has complete access to all AWS services and resources in the account. This identity is called the AWS account *root user*. When you sign in, enter the email address and password that you used to create the account.

### Important

We strongly recommend that you do not use the root user for your everyday tasks, even the administrative ones. Instead, adhere to the [best practice of using the root user only to create your first IAM user](#). Then securely lock away the root user credentials and use them to perform only a few account and service management tasks. To view the tasks that require you to sign in as the root user, see [AWS Tasks That Require Root User](#).

If you signed up for AWS but have not created an IAM user for yourself, follow these steps.

### To create an administrator user for yourself and add the user to an administrators group (console)

1. Sign in to the [IAM console](#) as the account owner by choosing **Root user** and entering your AWS account email address. On the next page, enter your password.

#### Note

We strongly recommend that you adhere to the best practice of using the **Administrator** IAM user below and securely lock away the root user credentials. Sign in as the root user only to perform a few [account and service management tasks](#).

2. In the navigation pane, choose **Users** and then choose **Add user**.
3. For **User name**, enter **Administrator**.
4. Select the check box next to **AWS Management Console access**. Then select **Custom password**, and then enter your new password in the text box.
5. (Optional) By default, AWS requires the new user to create a new password when first signing in. You can clear the check box next to **User must create a new password at next sign-in** to allow the new user to reset their password after they sign in.
6. Choose **Next: Permissions**.
7. Under **Set permissions**, choose **Add user to group**.
8. Choose **Create group**.
9. In the **Create group** dialog box, for **Group name** enter **Administrators**.
10. Choose **Filter policies**, and then select **AWS managed -job function** to filter the table contents.
11. In the policy list, select the check box for **AdministratorAccess**. Then choose **Create group**.

#### Note

You must activate IAM user and role access to Billing before you can use the **AdministratorAccess** permissions to access the AWS Billing and Cost Management console. To do this, follow the instructions in [step 1 of the tutorial about delegating access to the billing console](#).

12. Back in the list of groups, select the check box for your new group. Choose **Refresh** if necessary to see the group in the list.
13. Choose **Next: Tags**.
14. (Optional) Add metadata to the user by attaching tags as key-value pairs. For more information about using tags in IAM, see [Tagging IAM Entities](#) in the *IAM User Guide*.
15. Choose **Next: Review** to see the list of group memberships to be added to the new user. When you are ready to proceed, choose **Create user**.

You can use this same process to create more groups and users and to give your users access to your AWS account resources. To learn about using policies that restrict user permissions to specific AWS resources, see [Access Management](#) and [Example Policies](#).

## Sign in as an IAM user

After you create an IAM user, you can sign in to AWS with your IAM user name and password.

Before you sign in as an IAM user, you can verify the sign-in link for IAM users in the IAM console. On the IAM Dashboard, under **IAM users sign-in link**, you can see the sign-in link for your AWS account. The URL for your sign-in link contains your AWS account ID without dashes (-).

If you don't want the URL for your sign-in link to contain your AWS account ID, you can create an account alias. For more information, see [Creating, Deleting, and Listing and AWS Account Alias](#) in the *IAM User Guide*.

### To sign in as an AWS user

1. Sign out of the AWS Management Console.
2. Enter your sign-in link.

Your sign-in link includes your AWS account ID (without dashes) or your AWS account alias:

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

3. Enter the IAM user name and password that you just created.

When you're signed in, the navigation bar displays "*your\_user\_name @ your\_aws\_account\_id*".

# Creating a bucket

Now that you've signed up for AWS you're ready to create a bucket using the AWS Management Console. Every object in Amazon S3 is stored in a bucket. Before you can store data in Amazon S3, you must create a bucket.

## Note

You are not charged for creating a bucket. You are charged only for storing objects in the bucket and for transferring objects in and out of the bucket. The charges that you incur through following the examples in this guide are minimal (less than \$1). For more information about storage charges, see [Amazon S3 pricing](#).

To create a bucket using the AWS Command Line Interface, see [create-bucket](#) in the *AWS CLI Command Reference*.

## To create a bucket

1. Sign in to the AWS Management Console and open the Amazon S3 console at <https://console.aws.amazon.com/s3/>.
2. Choose **Create bucket**.

The **Create bucket** page opens.

3. In **Bucket name**, enter a DNS-compliant name for your bucket.

The bucket name must:

- Be unique across all of Amazon S3.
- Be between 3 and 63 characters long.
- Not contain uppercase characters.
- Start with a lowercase letter or number.

After you create the bucket, you can't change its name. For information about naming buckets, see [Rules for Bucket Naming](#) in the *Amazon Simple Storage Service Developer Guide*.

## Important

Avoid including sensitive information, such as account numbers, in the bucket name. The bucket name is visible in the URLs that point to the objects in the bucket.

4. In **Region**, choose the AWS Region where you want the bucket to reside.

Choose a Region close to you to minimize latency and costs and address regulatory requirements. Objects stored in a Region never leave that Region unless you explicitly transfer them to another Region. For a list of Amazon S3 AWS Regions, see [AWS Service Endpoints](#) in the *Amazon Web Services General Reference*.

5. In **Bucket settings for Block Public Access**, keep the values set to the defaults.

By default Amazon S3 blocks all public access to your buckets. We recommend that you leave all Block Public Access settings enabled. For more information about blocking public access, see [Using Amazon S3 Block Public Access](#) in the *Amazon Simple Storage Service Developer Guide*.

6. Choose **Create bucket**.

You've created a bucket in Amazon S3.

To add an object to your bucket, see [Uploading an object to a bucket \(p. 6\)](#).



# Uploading an object to a bucket

Now that you've created a bucket, you're ready to upload an object to it. An object can be any kind of file: a text file, a photo, a video, and so on.

## To upload an object to a bucket

1. In the **Bucket** list, choose the name of the bucket that you want to upload your object to.
2. On the **Overview** tab for your bucket, choose **Upload** or **Get Started**.
3. To choose the file to upload, in the **Upload** dialog box, choose **Add files**.
4. Choose a file to upload, and then choose **Open**.
5. Choose **Upload**.

You've successfully uploaded an object to your bucket.

To view your object, see [Accessing an object \(p. 7\)](#).

# Accessing an object

Now that you've uploaded an object to a bucket, you can view information about your object and download the object to your local computer.

## To download an object from a bucket

1. In the **Buckets** list, choose the name of the bucket that you created.
2. In the **Name** list, choose the name of the object that you uploaded.

For your selected object, the object overview panel opens.

3. On the **Overview** tab, review information about your object.
4. To view the object in your browser, choose **Open**.
5. To download the object to your computer, choose **Download**.

You've successfully downloaded your object.

To copy and paste your object within Amazon S3, see [Copying an object to a folder \(p. 8\)](#).

# Copying an object to a folder

You've already added an object to a bucket and downloaded the object. Now, you can copy the object. You can copy an object to a location within a bucket or to a location in another bucket. In this tutorial, you create a folder and copy your object to it.

## To copy an object to a folder

1. In the **Buckets** list, choose your bucket name.
2. Choose **Create folder**.
3. Configure your folder:
  - a. Enter a folder name (for example, `favorite-pics`).
  - b. For the folder encryption setting, choose **None**.
  - c. Choose **Save**.
4. Select the check box beside the object that you want to copy.
5. Choose **Actions**, and choose **Copy**.
6. Choose the destination bucket name.
7. Choose your folder, and choose **Choose**.
8. Under **Review**, confirm the copy details, and choose **Copy**.

Amazon S3 copies your object to the destination folder.

9. To view your copied object in the destination folder, on the **Overview** tab, choose the folder name.  
In the folder, you see the copied object.

To delete an object and a bucket in Amazon S3, see [Deleting objects and buckets \(p. 9\)](#).

# Deleting objects and buckets

When you no longer need an object or a bucket, we recommend that you delete them to prevent further charges. If you completed this getting started walkthrough as a learning exercise and do not plan to use your bucket or objects, we recommend that you delete your bucket so that charges no longer accrue. Before you delete your bucket, you must empty the bucket or delete the objects in the bucket. After you delete your objects and bucket, they are no longer available.

If you want to continue to use the same bucket name, we recommend that you delete the objects or empty the bucket but do not delete the bucket. After you delete a bucket, the name becomes available to reuse. However, another account might create a bucket with the same name before you have a chance to reuse it.

## Topics

- [Emptying your bucket \(p. 9\)](#)
- [Deleting an object \(p. 9\)](#)
- [Deleting your bucket \(p. 10\)](#)

## Emptying your bucket

If you plan to delete your bucket, you must first empty your bucket, which deletes all the objects in the bucket.

### To empty a bucket

1. In the **Buckets** list, select the bucket that you want to empty, and then choose **Empty**.
2. To confirm that you want to empty the bucket and delete all the objects in it, in **Empty bucket**, enter the name of the bucket.

#### Important

Emptying the bucket cannot be undone. Objects added to the bucket while the empty bucket action is in progress will be deleted.

3. To empty the bucket and delete all the objects in it, and choose **Empty**.

An **Empty bucket: Status** page opens that you can use to review a summary of failed and successful object deletions.

4. To return to your bucket list, choose **Exit**.

## Deleting an object

If you want to choose which objects you delete without emptying all the objects from your bucket, you can delete an object.

1. In the **Buckets** list, choose the name of the bucket that you want to delete an object from.
2. In the **Name** list, select the check box for the object that you want to delete.
3. Choose **Actions**, and then choose **Delete**.
4. In the **Delete objects** dialog box, verify the name of the object, and choose **Delete**.

## Deleting your bucket

After you empty your bucket or delete all the objects from your bucket, you can delete your bucket.

1. To delete a bucket, in the **Buckets** list, select the bucket.
2. Choose **Delete**.
3. To confirm deletion, in **Delete bucket**, enter the name of the bucket.

**Important**

Deleting a bucket cannot be undone. Bucket names are unique. If you delete your bucket, another AWS user can use the name. If you want to continue to use the same bucket name, don't delete your bucket. Instead, empty and keep the bucket.

4. To delete your bucket, choose **Delete bucket**.

For more information about using Amazon S3, see [Where do I go from here? \(p. 11\)](#)

# Where do I go from here?

In the preceding examples, you learned how to perform some basic Amazon S3 tasks. For more in-depth information, see one of the following Amazon S3 guides:

- The [Amazon Simple Storage Service Console User Guide](#) to learn more about using the Amazon S3 console.
- The [Amazon Simple Storage Service Developer Guide](#) to find detailed information about Amazon S3 features and code examples to support those features.
- The [Amazon Simple Storage Service API Reference](#) to find details about the Amazon S3 REST API.

The following topics explain various ways in which you can gain a deeper understanding of Amazon S3 so that you can implement it in your applications.

## Topics

- [Common use scenarios](#) (p. 11)
- [Considerations going forward](#) (p. 11)
- [Advanced Amazon S3 features](#) (p. 12)
- [Development resources](#) (p. 13)
- [Reference resources](#) (p. 13)

## Common use scenarios

The AWS Solutions site lists many of the ways you can use Amazon S3. The following list summarizes some of those ways.

- **Backup and storage** – Provide data backup and storage services for others.
- **Application hosting** – Provide services that deploy, install, and manage web applications.
- **Media hosting** – Build a redundant, scalable, and highly available infrastructure that hosts video, photo, or music uploads and downloads.
- **Software delivery** – Host your software applications that customers can download.

For more information, see [AWS Solutions](#).

## Considerations going forward

This section introduces you to topics you should consider before launching your own Amazon S3 product.

## Topics

- [AWS Account and Security Credentials](#) (p. 12)
- [Security](#) (p. 12)
- [AWS integration](#) (p. 12)
- [Pricing](#) (p. 12)

## AWS Account and Security Credentials

When you signed up for the service, you created an AWS account using an email address and password. Those are your AWS account root user credentials. As a best practice, you should not use your root user credentials to access AWS. Nor should you give your credentials to anyone else. Instead, create individual users for those who need access to your AWS account. First, create an AWS Identity and Access Management (IAM) administrator user for yourself and use it for your daily work. For details, see [Creating Your First IAM Admin User and Group](#) in the *IAM User Guide*. Then create additional IAM users for other people. For details, see [Creating Your First IAM Delegated User and Group](#) in the *IAM User Guide*.

If you're an account owner or administrator and want to know more about IAM, see the product description at <https://aws.amazon.com/iam> or the technical documentation in the [IAM User Guide](#).

## Security

Amazon S3 provides authentication mechanisms to secure data stored in Amazon S3 against unauthorized access. Unless you specify otherwise, only the AWS account owner can access data uploaded to Amazon S3. For more information about how to manage access to buckets and objects, go to [Identity and Access Management in Amazon S3](#) in the *Amazon Simple Storage Service Developer Guide*.

You can also encrypt your data before uploading it to Amazon S3.

## AWS integration

You can use Amazon S3 alone or in concert with one or more other Amazon products. The following are the most common products used with Amazon S3:

- [Amazon EC2](#)
- [Amazon EMR](#)
- [Amazon SQS](#)
- [Amazon CloudFront](#)

## Pricing

Learn the pricing structure for storing and transferring data on Amazon S3. For more information, see [Amazon S3 pricing](#).

## Advanced Amazon S3 features

The examples in this guide show how to accomplish the basic tasks of creating a bucket, uploading and downloading data to and from it, and moving and deleting the data. The following table summarizes some of the most common advanced functionality offered by Amazon S3. Note that some advanced functionality is not available in the AWS Management Console and requires that you use the Amazon S3 API. All advanced functionality and how to use it is described in the [Amazon Simple Storage Service Developer Guide](#).

Link	Functionality
<a href="#">Requester Pays Buckets</a>	Learn how to configure a bucket so that a customer pays for the downloads they make.

Link	Functionality
<a href="#">Using BitTorrent With Amazon S3</a>	Use BitTorrent, which is an open, peer-to-peer protocol for distributing files.
<a href="#">Versioning</a>	Learn about Amazon S3 versioning capabilities.
<a href="#">Hosting Static Websites</a>	Learn how to host a static website on Amazon S3.
<a href="#">Object Lifecycle Management</a>	Learn how to manage the lifecycle of objects in your bucket. Lifecycle management includes expiring objects and archiving objects (transitioning objects to the S3 S3 Glacier storage class).

## Development resources

To help you build applications using the language of your choice, we provide the following resources:

- **Sample Code and Libraries** – The AWS Developer Center has sample code and libraries written especially for Amazon S3.

You can use these code samples as a means of understanding how to implement the Amazon S3 API. For more information, see the [AWS Developer Center](#).

- **Tutorials** – Our Resource Center offers more Amazon S3 tutorials.

These tutorials provide a hands-on approach for learning Amazon S3 functionality. For more information, see [Articles & Tutorials](#).

- **Customer Forum** – We recommend that you review the Amazon S3 forum to get an idea of what other users are doing and to benefit from the questions they ask.

The forum can help you understand what you can and can't do with Amazon S3. The forum also serves as a place for you to ask questions that other users or AWS representatives might answer. You can use the forum to report issues with the service or the API. For more information, see [Discussion Forums](#).

## Reference resources

The following list shows additional resources that you can use to further your understanding of Amazon S3.

- The [Amazon Simple Storage Service Console User Guide](#) describes all of the AWS Management Console functions related to Amazon S3.
- The [Amazon Simple Storage Service Developer Guide](#) provides a detailed discussion of the service.

It includes an architectural overview, detailed concept descriptions, and procedures for using the API.

- The [Amazon Simple Storage Service API Reference](#) provides a detailed discussion of the actions and parameters in Amazon S3.
- The Service Health Dashboard shows you the status of the Amazon S3 web service.

The dashboard shows you whether Amazon S3 (and all other AWS products) are functioning properly. For more information, see the [Service Health Dashboard](#).



# About this guide

This is the *Amazon Simple Storage Service Getting Started Guide*.

Amazon Simple Storage Service is frequently referred to within this guide as "Amazon S3." All copyrights and legal protections still apply.