
Amazon EC2 Auto Scaling

API Reference

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Amazon EC2 Auto Scaling: API Reference

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Welcome

This is the *Amazon EC2 Auto Scaling API Reference*. Amazon EC2 Auto Scaling is designed to automatically launch or terminate EC2 instances based on user-defined scaling policies, scheduled actions, and health checks.

The documentation for each action shows the Query API request syntax, the request parameters, and the XML response.

As an alternative to the API, you can use one of the AWS SDKs, which consist of libraries and sample code for various programming languages and platforms. The SDKs provide a convenient way to create programmatic access to Amazon EC2 Auto Scaling. For example, the SDKs take care of cryptographically signing requests, managing errors, and retrying requests automatically. For information about the AWS SDKs, including how to download and install them, see the [Tools for Amazon Web Services page](#).

For more information about Amazon EC2 Auto Scaling, see the [Amazon EC2 Auto Scaling User Guide](#). For information about granting IAM users required permissions for calls to the Amazon EC2 Auto Scaling API, see [Granting IAM users required permissions for Amazon EC2 Auto Scaling resources \(p. 270\)](#).

This document was last published on October 6, 2021.

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HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `AttachInstances`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=AttachInstances
&AutoScalingGroupName=my-asg
&InstanceIds.member.1=i-12345678
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

AttachLoadBalancers

Note

To attach an Application Load Balancer, Network Load Balancer, or Gateway Load Balancer, use the [AttachLoadBalancerTargetGroups](#) (p. 11) API operation instead.

Attaches one or more Classic Load Balancers to the specified Auto Scaling group. Amazon EC2 Auto Scaling registers the running instances with these Classic Load Balancers.

To describe the load balancers for an Auto Scaling group, call the [DescribeLoadBalancers](#) (p. 75) API. To detach the load balancer from the Auto Scaling group, call the [DetachLoadBalancers](#) (p. 108) API.

For more information, see [Elastic Load Balancing and Amazon EC2 Auto Scaling](#) in the *Amazon EC2 Auto Scaling User Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

LoadBalancerNames.member.N

The names of the load balancers. You can specify up to 10 load balancers.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

ServiceLinkedRoleFailure

The service-linked role is not yet ready for use.

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `AttachLoadBalancers`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=AttachLoadBalancers
&AutoScalingGroupName=my-asg
&LoadBalancerNames.member.1=my-lb
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

AttachLoadBalancerTargetGroups

Attaches one or more target groups to the specified Auto Scaling group.

This operation is used with the following load balancer types:

- Application Load Balancer - Operates at the application layer (layer 7) and supports HTTP and HTTPS.
- Network Load Balancer - Operates at the transport layer (layer 4) and supports TCP, TLS, and UDP.
- Gateway Load Balancer - Operates at the network layer (layer 3).

To describe the target groups for an Auto Scaling group, call the [DescribeLoadBalancerTargetGroups \(p. 78\)](#) API. To detach the target group from the Auto Scaling group, call the [DetachLoadBalancerTargetGroups \(p. 110\)](#) API.

For more information, see [Elastic Load Balancing and Amazon EC2 Auto Scaling](#) in the *Amazon EC2 Auto Scaling User Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 265\)](#).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

TargetGroupARNs.member.N

The Amazon Resource Names (ARN) of the target groups. You can specify up to 10 target groups. To get the ARN of a target group, use the Elastic Load Balancing [DescribeTargetGroups](#) API operation.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 511.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

ServiceLinkedRoleFailure

The service-linked role is not yet ready for use.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

BatchDeleteScheduledAction

Deletes one or more scheduled actions for the specified Auto Scaling group.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

ScheduledActionNames.member.N

The names of the scheduled actions to delete. The maximum number allowed is 50.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

Response Elements

The following element is returned by the service.

FailedScheduledActions.member.N

The names of the scheduled actions that could not be deleted, including an error message.

Type: Array of [FailedScheduledUpdateGroupActionRequest](#) (p. 195) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

BatchPutScheduledUpdateGroupAction

Creates or updates one or more scheduled scaling actions for an Auto Scaling group.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

ScheduledUpdateGroupActions.member.N

One or more scheduled actions. The maximum number allowed is 50.

Type: Array of [ScheduledUpdateGroupActionRequest](#) (p. 254) objects

Required: Yes

Response Elements

The following element is returned by the service.

FailedScheduledUpdateGroupActions.member.N

The names of the scheduled actions that could not be created or updated, including an error message.

Type: Array of [FailedScheduledUpdateGroupActionRequest](#) (p. 195) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

AlreadyExists

You already have an Auto Scaling group or launch configuration with this name.

HTTP Status Code: 400

LimitExceeded

You have already reached a limit for your Amazon EC2 Auto Scaling resources (for example, Auto Scaling groups, launch configurations, or lifecycle hooks). For more information, see [DescribeAccountLimits](#) (p. 53).

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

CancelInstanceRefresh

Cancels an instance refresh operation in progress. Cancellation does not roll back any replacements that have already been completed, but it prevents new replacements from being started.

This operation is part of the [instance refresh feature](#) in Amazon EC2 Auto Scaling, which helps you update instances in your Auto Scaling group after you make configuration changes.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: Yes

Response Elements

The following element is returned by the service.

InstanceRefreshId

The instance refresh ID.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ActiveInstanceRefreshNotFound

The request failed because an active instance refresh for the specified Auto Scaling group was not found.

HTTP Status Code: 400

LimitExceeded

You have already reached a limit for your Amazon EC2 Auto Scaling resources (for example, Auto Scaling groups, launch configurations, or lifecycle hooks). For more information, see [DescribeAccountLimits](#) (p. 53).

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

CompleteLifecycleAction

Completes the lifecycle action for the specified token or instance with the specified result.

This step is a part of the procedure for adding a lifecycle hook to an Auto Scaling group:

1. (Optional) Create a Lambda function and a rule that allows CloudWatch Events to invoke your Lambda function when Amazon EC2 Auto Scaling launches or terminates instances.
2. (Optional) Create a notification target and an IAM role. The target can be either an Amazon SQS queue or an Amazon SNS topic. The role allows Amazon EC2 Auto Scaling to publish lifecycle notifications to the target.
3. Create the lifecycle hook. Specify whether the hook is used when the instances launch or terminate.
4. If you need more time, record the lifecycle action heartbeat to keep the instance in a pending state.
5. **If you finish before the timeout period ends, complete the lifecycle action.**

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

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 265\)](#).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: Yes

InstanceId

The ID of the instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 19.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

LifecycleActionResult

The action for the group to take. This parameter can be either CONTINUE or ABANDON.

Type: String

Required: Yes

LifecycleActionToken

A universally unique identifier (UUID) that identifies a specific lifecycle action associated with an instance. Amazon EC2 Auto Scaling sends this token to the notification target you specified when you created the lifecycle hook.

Type: String

Length Constraints: Fixed length of 36.

Required: No

LifecycleHookName

The name of the lifecycle hook.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [A-Za-z0-9\-_\./]+

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of CompleteLifecycleAction.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=CompleteLifecycleAction
&AutoScalingGroupName=my-asg
&LifecycleHookName=my-launch-hook
&LifecycleActionResult=CONTINUE
&LifecycleActionToken=bcd2f1b8-9a78-44d3-8a7a-4dd07EXAMPLE
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)

- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

CreateAutoScalingGroup

We strongly recommend using a launch template when calling this operation to ensure full functionality for Amazon EC2 Auto Scaling and Amazon EC2.

Creates an Auto Scaling group with the specified name and attributes.

If you exceed your maximum limit of Auto Scaling groups, the call fails. To query this limit, call the [DescribeAccountLimits](#) (p. 53) API. For information about updating this limit, see [Amazon EC2 Auto Scaling service quotas](#) in the *Amazon EC2 Auto Scaling User Guide*.

For introductory exercises for creating an Auto Scaling group, see [Getting started with Amazon EC2 Auto Scaling](#) and [Tutorial: Set up a scaled and load-balanced application](#) in the *Amazon EC2 Auto Scaling User Guide*. For more information, see [Auto Scaling groups](#) in the *Amazon EC2 Auto Scaling User Guide*.

Every Auto Scaling group has three size parameters (`DesiredCapacity`, `MaxSize`, and `MinSize`). Usually, you set these sizes based on a specific number of instances. However, if you configure a mixed instances policy that defines weights for the instance types, you must specify these sizes with the same units that you use for weighting instances.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group. This name must be unique per Region per account.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: Yes

AvailabilityZones.member.N

A list of Availability Zones where instances in the Auto Scaling group can be created. This parameter is optional if you specify one or more subnets for `VPCZoneIdentifier`.

Conditional: If your account supports EC2-Classic and VPC, this parameter is required to launch instances into EC2-Classic.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

CapacityRebalance

Indicates whether Capacity Rebalancing is enabled. Otherwise, Capacity Rebalancing is disabled. When you turn on Capacity Rebalancing, Amazon EC2 Auto Scaling attempts to launch a Spot Instance whenever Amazon EC2 notifies that a Spot Instance is at an elevated risk of interruption. After launching a new instance, it then terminates an old instance. For more information, see [Amazon EC2 Auto Scaling Capacity Rebalancing](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: Boolean

Required: No

Context

Reserved.

Type: String

Required: No

DefaultCooldown

The amount of time, in seconds, after a scaling activity completes before another scaling activity can start. The default value is 300. This setting applies when using simple scaling policies, but not when using other scaling policies or scheduled scaling. For more information, see [Scaling cooldowns for Amazon EC2 Auto Scaling](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: Integer

Required: No

DesiredCapacity

The desired capacity is the initial capacity of the Auto Scaling group at the time of its creation and the capacity it attempts to maintain. It can scale beyond this capacity if you configure auto scaling. This number must be greater than or equal to the minimum size of the group and less than or equal to the maximum size of the group. If you do not specify a desired capacity, the default is the minimum size of the group.

Type: Integer

Required: No

HealthCheckGracePeriod

The amount of time, in seconds, that Amazon EC2 Auto Scaling waits before checking the health status of an EC2 instance that has come into service. During this time, any health check failures for the instance are ignored. The default value is 0. For more information, see [Health check grace period](#) in the *Amazon EC2 Auto Scaling User Guide*.

Conditional: Required if you are adding an `ELB` health check.

Type: Integer

Required: No

HealthCheckType

The service to use for the health checks. The valid values are `EC2` (default) and `ELB`. If you configure an Auto Scaling group to use load balancer (ELB) health checks, it considers the instance unhealthy if it fails either the EC2 status checks or the load balancer health checks. For more information, see [Health checks for Auto Scaling instances](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: [\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

InstanceId

The ID of the instance used to base the launch configuration on. If specified, Amazon EC2 Auto Scaling uses the configuration values from the specified instance to create a new launch

configuration. To get the instance ID, use the Amazon EC2 [DescribeInstances](#) API operation. For more information, see [Creating an Auto Scaling group using an EC2 instance](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 19.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

LaunchConfigurationName

The name of the launch configuration to use to launch instances.

Conditional: You must specify either a launch template (`LaunchTemplate` or `MixedInstancesPolicy`) or a launch configuration (`LaunchConfigurationName` or `InstanceId`).

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

LaunchTemplate

Parameters used to specify the launch template and version to use to launch instances.

Conditional: You must specify either a launch template (`LaunchTemplate` or `MixedInstancesPolicy`) or a launch configuration (`LaunchConfigurationName` or `InstanceId`).

Note

The launch template that is specified must be configured for use with an Auto Scaling group. For more information, see [Creating a launch template for an Auto Scaling group](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: [LaunchTemplateSpecification](#) (p. 219) object

Required: No

LifecycleHookSpecificationList.member.N

One or more lifecycle hooks for the group, which specify actions to perform when Amazon EC2 Auto Scaling launches or terminates instances.

Type: Array of [LifecycleHookSpecification](#) (p. 223) objects

Required: No

LoadBalancerNames.member.N

A list of Classic Load Balancers associated with this Auto Scaling group. For Application Load Balancers, Network Load Balancers, and Gateway Load Balancers, specify the `TargetGroupARNs` property instead.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

MaxInstanceLifetime

The maximum amount of time, in seconds, that an instance can be in service. The default is null. If specified, the value must be either 0 or a number equal to or greater than 86,400 seconds (1 day). For more information, see [Replacing Auto Scaling instances based on maximum instance lifetime](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: Integer

Required: No

MaxSize

The maximum size of the group.

Note

With a mixed instances policy that uses instance weighting, Amazon EC2 Auto Scaling may need to go above `MaxSize` to meet your capacity requirements. In this event, Amazon EC2 Auto Scaling will never go above `MaxSize` by more than your largest instance weight (weights that define how many units each instance contributes to the desired capacity of the group).

Type: Integer

Required: Yes

MinSize

The minimum size of the group.

Type: Integer

Required: Yes

MixedInstancesPolicy

An embedded object that specifies a mixed instances policy. The required properties must be specified. If optional properties are unspecified, their default values are used.

The policy includes properties that not only define the distribution of On-Demand Instances and Spot Instances, the maximum price to pay for Spot Instances, and how the Auto Scaling group allocates instance types to fulfill On-Demand and Spot capacities, but also the properties that specify the instance configuration information—the launch template and instance types. The policy can also include a weight for each instance type and different launch templates for individual instance types. For more information, see [Auto Scaling groups with multiple instance types and purchase options](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: [MixedInstancesPolicy \(p. 231\)](#) object

Required: No

NewInstancesProtectedFromScaleIn

Indicates whether newly launched instances are protected from termination by Amazon EC2 Auto Scaling when scaling in. For more information about preventing instances from terminating on scale in, see [Instance scale-in protection](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: Boolean

Required: No

PlacementGroup

The name of an existing placement group into which to launch your instances, if any. A placement group is a logical grouping of instances within a single Availability Zone. You cannot specify multiple Availability Zones and a placement group. For more information, see [Placement Groups](#) in the *Amazon EC2 User Guide for Linux Instances*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

ServiceLinkedRoleARN

The Amazon Resource Name (ARN) of the service-linked role that the Auto Scaling group uses to call other Amazon Web Services on your behalf. By default, Amazon EC2 Auto Scaling uses a service-linked role named `AWSServiceRoleForAutoScaling`, which it creates if it does not exist. For more information, see [Service-linked roles](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

Tags.member.N

One or more tags. You can tag your Auto Scaling group and propagate the tags to the Amazon EC2 instances it launches. Tags are not propagated to Amazon EBS volumes. To add tags to Amazon EBS volumes, specify the tags in a launch template but use caution. If the launch template specifies an instance tag with a key that is also specified for the Auto Scaling group, Amazon EC2 Auto Scaling overrides the value of that instance tag with the value specified by the Auto Scaling group. For more information, see [Tagging Auto Scaling groups and instances](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: Array of [Tag](#) (p. 259) objects

Required: No

TargetGroupARNs.member.N

The Amazon Resource Names (ARN) of the target groups to associate with the Auto Scaling group. Instances are registered as targets in a target group, and traffic is routed to the target group. For more information, see [Elastic Load Balancing and Amazon EC2 Auto Scaling](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 511.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

TerminationPolicies.member.N

A policy or a list of policies that are used to select the instance to terminate. These policies are executed in the order that you list them. For more information, see [Controlling which Auto Scaling instances terminate during scale in](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

VPCZoneIdentifier

A comma-separated list of subnet IDs for a virtual private cloud (VPC) where instances in the Auto Scaling group can be created. If you specify `VPCZoneIdentifier` with `AvailabilityZones`, the subnets that you specify for this parameter must reside in those Availability Zones.

Conditional: If your account supports EC2-Classic and VPC, this parameter is required to launch instances into a VPC.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2047.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

AlreadyExists

You already have an Auto Scaling group or launch configuration with this name.

HTTP Status Code: 400

LimitExceeded

You have already reached a limit for your Amazon EC2 Auto Scaling resources (for example, Auto Scaling groups, launch configurations, or lifecycle hooks). For more information, see [DescribeAccountLimits \(p. 53\)](#).

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

ServiceLinkedRoleFailure

The service-linked role is not yet ready for use.

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `CreateAutoScalingGroup`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=CreateAutoScalingGroup
&AutoScalingGroupName=my-asg
&VPCZoneIdentifier=subnet-057fa0918fEXAMPLE%2Csubnet-610acd08EXAMPLE
&MinSize=2
&MaxSize=10
&DesiredCapacity=2
&LoadBalancerNames.member.1=my-loadbalancer
&HealthCheckType=ELB
&HealthCheckGracePeriod=120
&LaunchConfigurationName=my-lc
&MaxInstanceLifetime=2592000
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

LaunchConfigurationName

The name of the launch configuration. This name must be unique per Region per account.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

MetadataOptions

The metadata options for the instances. For more information, see [Configuring the Instance Metadata Options](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: [InstanceMetadataOptions](#) (p. 199) object

Required: No

PlacementTenancy

The tenancy of the instance. An instance with `dedicated` tenancy runs on isolated, single-tenant hardware and can only be launched into a VPC.

To launch dedicated instances into a shared tenancy VPC (a VPC with the instance placement tenancy attribute set to `default`), you must set the value of this parameter to `dedicated`.

If you specify `PlacementTenancy`, you must specify at least one subnet for `VPCZoneIdentifier` when you create your group.

For more information, see [Configuring instance tenancy with Amazon EC2 Auto Scaling](#) in the *Amazon EC2 Auto Scaling User Guide*.

Valid Values: `default` | `dedicated`

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

RamdiskId

The ID of the RAM disk to select.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

SecurityGroups.member.N

A list that contains the security groups to assign to the instances in the Auto Scaling group.

[EC2-VPC] Specify the security group IDs. For more information, see [Security Groups for Your VPC](#) in the *Amazon Virtual Private Cloud User Guide*.

[EC2-Classic] Specify either the security group names or the security group IDs. For more information, see [Amazon EC2 Security Groups](#) in the *Amazon EC2 User Guide for Linux Instances*.

Type: Array of strings

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

SpotPrice

The maximum hourly price to be paid for any Spot Instance launched to fulfill the request. Spot Instances are launched when the price you specify exceeds the current Spot price. For more information, see [Requesting Spot Instances](#) in the *Amazon EC2 Auto Scaling User Guide*.

Note

When you change your maximum price by creating a new launch configuration, running instances will continue to run as long as the maximum price for those running instances is higher than the current Spot price.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Required: No

UserData

The user data to make available to the launched EC2 instances. For more information, see [Instance metadata and user data](#) (Linux) and [Instance metadata and user data](#) (Windows). If you are using a command line tool, base64-encoding is performed for you, and you can load the text from a file. Otherwise, you must provide base64-encoded text. User data is limited to 16 KB.

Type: String

Length Constraints: Maximum length of 21847.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

AlreadyExists

You already have an Auto Scaling group or launch configuration with this name.

HTTP Status Code: 400

LimitExceeded

You have already reached a limit for your Amazon EC2 Auto Scaling resources (for example, Auto Scaling groups, launch configurations, or lifecycle hooks). For more information, see [DescribeAccountLimits \(p. 53\)](#).

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `CreateLaunchConfiguration`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=CreateLaunchConfiguration
&LaunchConfigurationName=my-lc
&ImageId=ami-12345678
&InstanceType=t2.micro
&SecurityGroups.member.1=sg-12345678
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

CreateOrUpdateTags

Creates or updates tags for the specified Auto Scaling group.

When you specify a tag with a key that already exists, the operation overwrites the previous tag definition, and you do not get an error message.

For more information, see [Tagging Auto Scaling groups and instances](#) in the *Amazon EC2 Auto Scaling User Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

Tags.member.N

One or more tags.

Type: Array of [Tag](#) (p. 259) objects

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

AlreadyExists

You already have an Auto Scaling group or launch configuration with this name.

HTTP Status Code: 400

LimitExceeded

You have already reached a limit for your Amazon EC2 Auto Scaling resources (for example, Auto Scaling groups, launch configurations, or lifecycle hooks). For more information, see [DescribeAccountLimits](#) (p. 53).

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

ResourceInUse

The operation can't be performed because the resource is in use.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of CreateOrUpdateTags.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=CreateOrUpdateTags
&Tags.member.1.ResourceId=my-asg
&Tags.member.1.ResourceType=auto-scaling-group
&Tags.member.1.Key=environment
&Tags.member.1.Value=test
&Tags.member.1.PropagateAtLaunch=true
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DeleteAutoScalingGroup

Deletes the specified Auto Scaling group.

If the group has instances or scaling activities in progress, you must specify the option to force the deletion in order for it to succeed.

If the group has policies, deleting the group deletes the policies, the underlying alarm actions, and any alarm that no longer has an associated action.

To remove instances from the Auto Scaling group before deleting it, call the [DetachInstances \(p. 105\)](#) API with the list of instances and the option to decrement the desired capacity. This ensures that Amazon EC2 Auto Scaling does not launch replacement instances.

To terminate all instances before deleting the Auto Scaling group, call the [UpdateAutoScalingGroup \(p. 164\)](#) API and set the minimum size and desired capacity of the Auto Scaling group to zero.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 265\)](#).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

ForceDelete

Specifies that the group is to be deleted along with all instances associated with the group, without waiting for all instances to be terminated. This parameter also deletes any outstanding lifecycle actions associated with the group.

Type: Boolean

Required: No

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

ResourceInUse

The operation can't be performed because the resource is in use.

HTTP Status Code: 400

ScalingActivityInProgress

The operation can't be performed because there are scaling activities in progress.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DeleteAutoScalingGroup.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DeleteAutoScalingGroup
&AutoScalingGroupName=my-asg
&ForceDelete=true
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DeleteLaunchConfiguration

Deletes the specified launch configuration.

The launch configuration must not be attached to an Auto Scaling group. When this call completes, the launch configuration is no longer available for use.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 265\)](#).

LaunchConfigurationName

The name of the launch configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

ResourceInUse

The operation can't be performed because the resource is in use.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DeleteLaunchConfiguration.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DeleteLaunchConfiguration
&LaunchConfigurationName=my-lc
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DeleteLifecycleHook

Deletes the specified lifecycle hook.

If there are any outstanding lifecycle actions, they are completed first (ABANDON for launching instances, CONTINUE for terminating instances).

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\x\n\t]*

Required: Yes

LifecycleHookName

The name of the lifecycle hook.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [A-Za-z0-9\-_\/]+

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of DeleteLifecycleHook.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DeleteLifecycleHook
```

```
&AutoScalingGroupName=my-asg  
&LifecycleHookName=my-hook  
&Version=2011-01-01  
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DeleteNotificationConfiguration

Deletes the specified notification.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

TopicARN

The Amazon Resource Name (ARN) of the Amazon Simple Notification Service (Amazon SNS) topic.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of DeleteNotificationConfiguration.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DeleteNotificationConfiguration
&AutoScalingGroupName=my-asg
&TopicARN=arn:aws:sns:us-east-1:123456789012:my-sns-topic
```

```
&Version=2011-01-01  
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DeletePolicy

Deletes the specified scaling policy.

Deleting either a step scaling policy or a simple scaling policy deletes the underlying alarm action, but does not delete the alarm, even if it no longer has an associated action.

For more information, see [Deleting a scaling policy](#) in the *Amazon EC2 Auto Scaling User Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

PolicyName

The name or Amazon Resource Name (ARN) of the policy.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

ServiceLinkedRoleFailure

The service-linked role is not yet ready for use.

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of DeletePolicy.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DeletePolicy
&AutoScalingGroupName=my-asg
&PolicyName=alb1000-target-tracking-scaling-policy
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DeleteScheduledAction

Deletes the specified scheduled action.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

ScheduledActionName

The name of the action to delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of DeleteScheduledAction.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DeleteScheduledAction
&AutoScalingGroupName=my-asg
&ScheduledActionName=my-scheduled-action
```

```
&Version=2011-01-01  
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DeleteTags

Deletes the specified tags.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

Tags.member.N

One or more tags.

Type: Array of [Tag](#) (p. 259) objects

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

ResourceInUse

The operation can't be performed because the resource is in use.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DeleteTags.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DeleteTags
&Tags.member.1.ResourceId=my-asg
&Tags.member.1.ResourceType=auto-scaling-group
&Tags.member.1.Key=environment
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)

- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DeleteWarmPool

Deletes the warm pool for the specified Auto Scaling group.

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

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 265\)](#).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

ForceDelete

Specifies that the warm pool is to be deleted along with all of its associated instances, without waiting for all instances to be terminated. This parameter also deletes any outstanding lifecycle actions associated with the warm pool instances.

Type: Boolean

Required: No

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

LimitExceeded

You have already reached a limit for your Amazon EC2 Auto Scaling resources (for example, Auto Scaling groups, launch configurations, or lifecycle hooks). For more information, see [DescribeAccountLimits \(p. 53\)](#).

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

ResourceInUse

The operation can't be performed because the resource is in use.

HTTP Status Code: 400

ScalingActivityInProgress

The operation can't be performed because there are scaling activities in progress.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribeAccountLimits

Describes the current Amazon EC2 Auto Scaling resource quotas for your account.

When you establish an AWS account, the account has initial quotas on the maximum number of Auto Scaling groups and launch configurations that you can create in a given Region. For more information, see [Amazon EC2 Auto Scaling service quotas](#) in the *Amazon EC2 Auto Scaling User Guide*.

Response Elements

The following elements are returned by the service.

MaxNumberOfAutoScalingGroups

The maximum number of groups allowed for your account. The default is 200 groups per Region.

Type: Integer

MaxNumberOfLaunchConfigurations

The maximum number of launch configurations allowed for your account. The default is 200 launch configurations per Region.

Type: Integer

NumberOfAutoScalingGroups

The current number of groups for your account.

Type: Integer

NumberOfLaunchConfigurations

The current number of launch configurations for your account.

Type: Integer

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of DescribeAccountLimits.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DescribeAccountLimits
```



```
&Version=2011-01-01  
&AUTHPARAMS
```

Sample Response

```
<DescribeAccountLimitsResponse xmlns="http://autoscaling.amazonaws.com/doc/2011-01-01/">  
  <DescribeAccountLimitsResult>  
    <NumberOfLaunchConfigurations>5</NumberOfLaunchConfigurations>  
    <MaxNumberOfLaunchConfigurations>200</MaxNumberOfLaunchConfigurations>  
    <NumberOfAutoScalingGroups>10</NumberOfAutoScalingGroups>  
    <MaxNumberOfAutoScalingGroups>200</MaxNumberOfAutoScalingGroups>  
  </DescribeAccountLimitsResult>  
  <ResponseMetadata>  
    <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>  
  </ResponseMetadata>  
</DescribeAccountLimitsResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribeAdjustmentTypes

Describes the available adjustment types for step scaling and simple scaling policies.

The following adjustment types are supported:

- `ChangeInCapacity`
- `ExactCapacity`
- `PercentChangeInCapacity`

Response Elements

The following element is returned by the service.

AdjustmentTypes.member.N

The policy adjustment types.

Type: Array of [AdjustmentType](#) (p. 175) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `DescribeAdjustmentTypes`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DescribeAdjustmentTypes
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<DescribeAdjustmentTypesResponse xmlns="http://autoscaling.amazonaws.com/doc/2011-01-01/">
  <DescribeAdjustmentTypesResult>
    <AdjustmentTypes>
      <member>
        <AdjustmentType>ChangeInCapacity</AdjustmentType>
      </member>
      <member>
```

```
        <AdjustmentType>ExactCapacity</AdjustmentType>
    </member>
    <member>
        <AdjustmentType>PercentChangeInCapacity</AdjustmentType>
    </member>
</AdjustmentTypes>
</DescribeAdjustmentTypesResult>
<ResponseMetadata>
    <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
</ResponseMetadata>
</DescribeAdjustmentTypesResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribeAutoScalingGroups

Gets information about the Auto Scaling groups in the account and Region.

This operation returns information about instances in Auto Scaling groups. To retrieve information about the instances in a warm pool, you must call the [DescribeWarmPool](#) (p. 102) API.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupNames.member.N

The names of the Auto Scaling groups. By default, you can only specify up to 50 names. You can optionally increase this limit using the `MaxRecords` parameter.

If you omit this parameter, all Auto Scaling groups are described.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

MaxRecords

The maximum number of items to return with this call. The default value is 50 and the maximum value is 100.

Type: Integer

Required: No

NextToken

The token for the next set of items to return. (You received this token from a previous call.)

Type: String

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

Response Elements

The following elements are returned by the service.

AutoScalingGroups.member.N

The groups.

Type: Array of [AutoScalingGroup](#) (p. 177) objects

NextToken

A string that indicates that the response contains more items than can be returned in a single response. To receive additional items, specify this string for the `NextToken` value when requesting the next set of items. This value is null when there are no more items to return.

Type: String

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

InvalidNextToken

The `NextToken` value is not valid.

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `DescribeAutoScalingGroups`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DescribeAutoScalingGroups
&AutoScalingGroupNames.member.1=my-asg
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<DescribeAutoScalingGroupsResponse xmlns="http://autoscaling.amazonaws.com/doc/2011-01-01/">
  <DescribeAutoScalingGroupsResult>
    <AutoScalingGroups>
      <member>
        <HealthCheckType>ELB</HealthCheckType>
        <LoadBalancerNames>
          <member>my-loadbalancer</member>
        </LoadBalancerNames>
        <Instances>
          <member>
            <LaunchConfigurationName>my-lc</LaunchConfigurationName>
            <LifecycleState>InService</LifecycleState>
            <InstanceId>i-12345678</InstanceId>
            <ProtectedFromScaleIn>false</ProtectedFromScaleIn>
            <AvailabilityZone>us-east-1c</AvailabilityZone>
          </member>
        </Instances>
        <TerminationPolicies>
          <member>Default</member>
        </TerminationPolicies>
        <DefaultCooldown>300</DefaultCooldown>
      </member>
    </AutoScalingGroups>
  </DescribeAutoScalingGroupsResult>
</DescribeAutoScalingGroupsResponse>
```

```
<AutoScalingGroupARN>arn:aws:autoscaling:us-east-1:123456789012:autoScalingGroup:12345678-1234-1234-1234-123456789012:autoScalingGroupName/my-asg</AutoScalingGroupARN>
<EnabledMetrics />
<AvailabilityZones>
  <member>us-east-1b</member>
  <member>us-east-1a</member>
</AvailabilityZones>
<Tags>
  <member>
    <ResourceId>my-asg</ResourceId>
    <PropagateAtLaunch>true</PropagateAtLaunch>
    <Value>test</Value>
    <Key>environment</Key>
    <ResourceType>auto-scaling-group</ResourceType>
  </member>
</Tags>
<LaunchConfigurationName>my-lc</LaunchConfigurationName>
<AutoScalingGroupName>my-asg</AutoScalingGroupName>
<HealthCheckGracePeriod>300</HealthCheckGracePeriod>
<NewInstancesProtectedFromScaleIn>false</NewInstancesProtectedFromScaleIn>
<SuspendedProcesses />
<CreatedTime>2015-05-06T17:47:15.107Z</CreatedTime>
<MinSize>2</MinSize>
<MaxSize>10</MaxSize>
<DesiredCapacity>2</DesiredCapacity>
<VPCZoneIdentifier>subnet-12345678,subnet-98765432</VPCZoneIdentifier>
</member>
</AutoScalingGroups>
</DescribeAutoScalingGroupsResult>
<ResponseMetadata>
  <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
</ResponseMetadata>
</DescribeAutoScalingGroupsResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribeAutoScalingInstances

Gets information about the Auto Scaling instances in the account and Region.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

InstanceIds.member.N

The IDs of the instances. If you omit this parameter, all Auto Scaling instances are described. If you specify an ID that does not exist, it is ignored with no error.

Array Members: Maximum number of 50 items.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 19.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

MaxRecords

The maximum number of items to return with this call. The default value is 50 and the maximum value is 50.

Type: Integer

Required: No

NextToken

The token for the next set of items to return. (You received this token from a previous call.)

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

Response Elements

The following elements are returned by the service.

AutoScalingInstances.member.N

The instances.

Type: Array of [AutoScalingInstanceDetails](#) (p. 182) objects

NextToken

A string that indicates that the response contains more items than can be returned in a single response. To receive additional items, specify this string for the `NextToken` value when requesting the next set of items. This value is null when there are no more items to return.

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

InvalidNextToken

The `NextToken` value is not valid.

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `DescribeAutoScalingInstances`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DescribeAutoScalingInstances
&InstanceIds.member.1=i-12345678
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<DescribeAutoScalingInstancesResponse xmlns="http://autoscaling.amazonaws.com/
doc/2011-01-01/">
  <DescribeAutoScalingInstancesResult>
    <AutoScalingInstances>
      <member>
        <LaunchConfigurationName>my-lc</LaunchConfigurationName>
        <LifecycleState>InService</LifecycleState>
        <AutoScalingGroupName>my-asg</AutoScalingGroupName>
        <InstanceId>i-12345678</InstanceId>
        <HealthStatus>HEALTHY</HealthStatus>
        <ProtectedFromScaleIn>false</ProtectedFromScaleIn>
        <AvailabilityZone>us-east-1b</AvailabilityZone>
      </member>
    </AutoScalingInstances>
  </DescribeAutoScalingInstancesResult>
  <ResponseMetadata>
    <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
  </ResponseMetadata>
</DescribeAutoScalingInstancesResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribeAutoScalingNotificationTypes

Describes the notification types that are supported by Amazon EC2 Auto Scaling.

Response Elements

The following element is returned by the service.

AutoScalingNotificationTypes.member.N

The notification types.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of DescribeAutoScalingNotificationTypes.

Sample Request

```
https://autoscaling.amazonaws.com/?
Version=2011-01-01&Action=DescribeAutoScalingNotificationTypes
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<DescribeAutoScalingNotificationTypesResponse xmlns="http://autoscaling.amazonaws.com/doc/2011-01-01/">
  <DescribeAutoScalingNotificationTypesResult>
    <AutoScalingNotificationTypes>
      <member>autoscaling:EC2_INSTANCE_LAUNCH</member>
      <member>autoscaling:EC2_INSTANCE_LAUNCH_ERROR</member>
      <member>autoscaling:EC2_INSTANCE_TERMINATE</member>
      <member>autoscaling:EC2_INSTANCE_TERMINATE_ERROR</member>
      <member>autoscaling:TEST_NOTIFICATION</member>
    </AutoScalingNotificationTypes>
  </DescribeAutoScalingNotificationTypesResult>
</DescribeAutoScalingNotificationTypesResponse>
```

```
</DescribeAutoScalingNotificationTypesResult>
<ResponseMetadata>
  <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
</ResponseMetadata>
</DescribeAutoScalingNotificationTypesResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

Required: No

NextToken

The token for the next set of items to return. (You received this token from a previous call.)

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

Response Elements

The following elements are returned by the service.

InstanceRefreshes.member.N

The instance refreshes for the specified group.

Type: Array of [InstanceRefresh](#) (p. 202) objects

NextToken

A string that indicates that the response contains more items than can be returned in a single response. To receive additional items, specify this string for the `NextToken` value when requesting the next set of items. This value is null when there are no more items to return.

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

InvalidNextToken

The `NextToken` value is not valid.

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)

- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribeLaunchConfigurations

Gets information about the launch configurations in the account and Region.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

LaunchConfigurationNames.member.N

The launch configuration names. If you omit this parameter, all launch configurations are described.

Array Members: Maximum number of 50 items.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

MaxRecords

The maximum number of items to return with this call. The default value is 50 and the maximum value is 100.

Type: Integer

Required: No

NextToken

The token for the next set of items to return. (You received this token from a previous call.)

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

Response Elements

The following elements are returned by the service.

LaunchConfigurations.member.N

The launch configurations.

Type: Array of [LaunchConfiguration](#) (p. 211) objects

NextToken

A string that indicates that the response contains more items than can be returned in a single response. To receive additional items, specify this string for the `NextToken` value when requesting the next set of items. This value is null when there are no more items to return.

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

InvalidNextToken

The NextToken value is not valid.

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of DescribeLaunchConfigurations.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DescribeLaunchConfigurations
&LaunchConfigurationNames.member.1=my-lc
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<DescribeLaunchConfigurationsResponse xmlns="http://autoscaling.amazonaws.com/
doc/2011-01-01/">
  <DescribeLaunchConfigurationsResult>
    <LaunchConfigurations>
      <member>
        <KernelId />
        <EbsOptimized>false</EbsOptimized>
        <RamdiskId />
        <UserData />
        <ImageId>ami-12345678</ImageId>
        <BlockDeviceMappings />
        <ClassicLinkVPCSecurityGroups />
        <InstanceType>t2.micro</InstanceType>
        <KeyName />
        <LaunchConfigurationARN>arn:aws:autoscaling:us-
east-1:123456789012:launchConfiguration:12345678-1234-1234-1234-123456789012:launchConfigurationName/
my-lc</LaunchConfigurationARN>
        <LaunchConfigurationName>my-lc</LaunchConfigurationName>
        <CreatedTime>2015-01-21T23:04:42.200Z</CreatedTime>
        <SecurityGroups>
          <member>sg-12345678</member>
        </SecurityGroups>
        <InstanceMonitoring>
          <Enabled>true</Enabled>

```



```
        </InstanceMonitoring>
      </member>
    </LaunchConfigurations>
  </DescribeLaunchConfigurationsResult>
  <ResponseMetadata>
    <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
  </ResponseMetadata>
</DescribeLaunchConfigurationsResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribeLifecycleHooks

Gets information about the lifecycle hooks for the specified Auto Scaling group.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

LifecycleHookNames.member.N

The names of one or more lifecycle hooks. If you omit this parameter, all lifecycle hooks are described.

Type: Array of strings

Array Members: Maximum number of 50 items.

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [A-Za-z0-9\-_\./]+

Required: No

Response Elements

The following element is returned by the service.

LifecycleHooks.member.N

The lifecycle hooks for the specified group.

Type: Array of [LifecycleHook](#) (p. 221) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of DescribeLifecycleHooks.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DescribeLifecycleHooks
&AutoScalingGroupName=my-asg
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<DescribeLifecycleHooksResponse xmlns="http://autoscaling.amazonaws.com/doc/2011-01-01/">
  <DescribeLifecycleHooksResult>
    <LifecycleHooks>
      <member>
        <AutoScalingGroupName>my-asg</AutoScalingGroupName>
        <RoleARN>arn:aws:iam::1234567890:role/my-auto-scaling-role</RoleARN>
        <LifecycleTransition>autoscaling:EC2_INSTANCE_LAUNCHING</LifecycleTransition>
        <GlobalTimeout>172800</GlobalTimeout>
        <LifecycleHookName>my-launch-hook</LifecycleHookName>
        <HeartbeatTimeout>3600</HeartbeatTimeout>
        <DefaultResult>ABANDON</DefaultResult>
        <NotificationTargetARN>arn:aws:sqs:us-east-1:123456789012:my-queue</
NotificationTargetARN>
      </member>
    </LifecycleHooks>
  </DescribeLifecycleHooksResult>
  <ResponseMetadata>
    <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
  </ResponseMetadata>
</DescribeLifecycleHooksResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribeLifecycleHookTypes

Describes the available types of lifecycle hooks.

The following hook types are supported:

- `autoscaling:EC2_INSTANCE_LAUNCHING`
- `autoscaling:EC2_INSTANCE_TERMINATING`

Response Elements

The following element is returned by the service.

LifecycleHookTypes.member.N

The lifecycle hook types.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `DescribeLifecycleHookTypes`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DescribeLifecycleHookTypes
&AutoScalingGroupName=my-asg
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<DescribeLifecycleHookTypesResponse xmlns="http://autoscaling.amazonaws.com/
doc/2011-01-01/">
  <DescribeLifecycleHookTypesResult>
```

```
<LifecycleHookTypes>
  <member>autoscaling:EC2_INSTANCE_LAUNCHING</member>
  <member>autoscaling:EC2_INSTANCE_TERMINATING</member>
</LifecycleHookTypes>
</DescribeLifecycleHookTypesResult>
<ResponseMetadata>
  <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
</ResponseMetadata>
</DescribeLifecycleHookTypesResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

Response Elements

The following elements are returned by the service.

LoadBalancers.member.N

The load balancers.

Type: Array of [LoadBalancerState](#) (p. 225) objects

NextToken

A string that indicates that the response contains more items than can be returned in a single response. To receive additional items, specify this string for the `NextToken` value when requesting the next set of items. This value is null when there are no more items to return.

Type: String

Pattern: `[\u0020-\u007F\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

InvalidNextToken

The `NextToken` value is not valid.

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `DescribeLoadBalancers`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DescribeLoadBalancers
&AutoScalingGroupName=my-asg
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<DescribeLoadBalancersResponse xmlns="http://autoscaling.amazonaws.com/doc/2011-01-01/">
  <DescribeLoadBalancersResult>
    <LoadBalancers>
      <member>
```

```
<LoadBalancerName>my-loadbalancer</LoadBalancerName>
<State>Added</State>
</member>
</LoadBalancers>
</DescribeLoadBalancersResult>
<ResponseMetadata>
  <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
</ResponseMetadata>
</DescribeLoadBalancersResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribeLoadBalancerTargetGroups

Gets information about the load balancer target groups for the specified Auto Scaling group.

To determine the availability of registered instances, use the `State` element in the response. When you attach a target group to an Auto Scaling group, the initial `State` value is `Adding`. The state transitions to `Added` after all Auto Scaling instances are registered with the target group. If Elastic Load Balancing health checks are enabled for the Auto Scaling group, the state transitions to `InService` after at least one Auto Scaling instance passes the health check. When the target group is in the `InService` state, Amazon EC2 Auto Scaling can terminate and replace any instances that are reported as unhealthy. If no registered instances pass the health checks, the target group doesn't enter the `InService` state.

Target groups also have an `InService` state if you attach them in the [CreateAutoScalingGroup](#) (p. 22) API call. If your target group state is `InService`, but it is not working properly, check the scaling activities by calling [DescribeScalingActivities](#) (p. 89) and take any corrective actions necessary.

For help with failed health checks, see [Troubleshooting Amazon EC2 Auto Scaling: Health checks](#) in the *Amazon EC2 Auto Scaling User Guide*. For more information, see [Elastic Load Balancing and Amazon EC2 Auto Scaling](#) in the *Amazon EC2 Auto Scaling User Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: Yes

MaxRecords

The maximum number of items to return with this call. The default value is 100 and the maximum value is 100.

Type: Integer

Required: No

NextToken

The token for the next set of items to return. (You received this token from a previous call.)

Type: String

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

Response Elements

The following elements are returned by the service.

LoadBalancerTargetGroups.member.N

Information about the target groups.

Type: Array of [LoadBalancerTargetGroupState](#) (p. 226) objects

NextToken

A string that indicates that the response contains more items than can be returned in a single response. To receive additional items, specify this string for the `NextToken` value when requesting the next set of items. This value is null when there are no more items to return.

Type: String

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

InvalidNextToken

The `NextToken` value is not valid.

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribeMetricCollectionTypes

Describes the available CloudWatch metrics for Amazon EC2 Auto Scaling.

The `GroupStandbyInstances` metric is not returned by default. You must explicitly request this metric when calling the [EnableMetricsCollection](#) (p. 114) API.

Response Elements

The following elements are returned by the service.

Granularities.member.N

The granularities for the metrics.

Type: Array of [MetricGranularityType](#) (p. 230) objects

Metrics.member.N

One or more metrics.

Type: Array of [MetricCollectionType](#) (p. 228) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `DescribeMetricCollectionTypes`.

Sample Request

```
https://autoscaling.amazonaws.com/?Version=2011-01-01&Action=DescribeMetricCollectionTypes
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<DescribeMetricCollectionTypesResponse xmlns="http://autoscaling.amazonaws.com/
doc/2011-01-01/">
  <DescribeMetricCollectionTypesResult>
    <Granularities>
      <member>
        <Granularity>1Minute</Granularity>
```

```
    </member>
  </Granularities>
  <Metrics>
    <member>
      <Metric>GroupMinSize</Metric>
    </member>
    <member>
      <Metric>GroupMaxSize</Metric>
    </member>
    <member>
      <Metric>GroupDesiredCapacity</Metric>
    </member>
    <member>
      <Metric>GroupInServiceInstances</Metric>
    </member>
    <member>
      <Metric>GroupPendingInstances</Metric>
    </member>
    <member>
      <Metric>GroupTerminatingInstances</Metric>
    </member>
    <member>
      <Metric>GroupStandbyInstances</Metric>
    </member>
    <member>
      <Metric>GroupTotalInstances</Metric>
    </member>
  </Metrics>
</DescribeMetricCollectionTypesResult>
<ResponseMetadata>
  <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
</ResponseMetadata>
</DescribeMetricCollectionTypesResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribeNotificationConfigurations

Gets information about the Amazon SNS notifications that are configured for one or more Auto Scaling groups.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupNames.member.N

The name of the Auto Scaling group.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

MaxRecords

The maximum number of items to return with this call. The default value is 50 and the maximum value is 100.

Type: Integer

Required: No

NextToken

The token for the next set of items to return. (You received this token from a previous call.)

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

Response Elements

The following elements are returned by the service.

NextToken

A string that indicates that the response contains more items than can be returned in a single response. To receive additional items, specify this string for the `NextToken` value when requesting the next set of items. This value is null when there are no more items to return.

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

NotificationConfigurations.member.N

The notification configurations.

Type: Array of [NotificationConfiguration](#) (p. 232) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

InvalidNextToken

The `NextToken` value is not valid.

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `DescribeNotificationConfigurations`.

Sample Request

```
https://autoscaling.amazonaws.com/?
Version=2011-01-01&Action=DescribeNotificationConfigurations
&AutoScalingGroupNames.member.1=my-asg
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<DescribeNotificationConfigurationsResponse xmlns="http://autoscaling.amazonaws.com/doc/2011-01-01/">
  <DescribeNotificationConfigurationsResult>
    <NotificationConfigurations>
      <member>
        <AutoScalingGroupName>my-asg</AutoScalingGroupName>
        <NotificationType>autoscaling:EC2_INSTANCE_LAUNCH</NotificationType>
        <TopicARN>arn:aws:sns:us-east-1:123456789012:my-sns-topic</TopicARN>
      </member>
    </NotificationConfigurations>
  </DescribeNotificationConfigurationsResult>
  <ResponseMetadata>
    <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
  </ResponseMetadata>
</DescribeNotificationConfigurationsResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)

- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribePolicies

Gets information about the scaling policies in the account and Region.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

MaxRecords

The maximum number of items to be returned with each call. The default value is 50 and the maximum value is 100.

Type: Integer

Required: No

NextToken

The token for the next set of items to return. (You received this token from a previous call.)

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

PolicyNames.member.N

The names of one or more policies. If you omit this parameter, all policies are described. If a group name is provided, the results are limited to that group. If you specify an unknown policy name, it is ignored with no error.

Array Members: Maximum number of 50 items.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

PolicyTypes.member.N

One or more policy types. The valid values are `SimpleScaling`, `StepScaling`, `TargetTrackingScaling`, and `PredictiveScaling`.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

Response Elements

The following elements are returned by the service.

NextToken

A string that indicates that the response contains more items than can be returned in a single response. To receive additional items, specify this string for the `NextToken` value when requesting the next set of items. This value is null when there are no more items to return.

Type: String

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

ScalingPolicies.member.N

The scaling policies.

Type: Array of [ScalingPolicy](#) (p. 248) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

InvalidNextToken

The `NextToken` value is not valid.

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

ServiceLinkedRoleFailure

The service-linked role is not yet ready for use.

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `DescribePolicies`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DescribePolicies
```

```
&AutoScalingGroupName=my-asg
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<DescribePoliciesResponse xmlns="http://autoscaling.amazonaws.com/doc/2011-01-01/">
  <DescribePoliciesResult>
    <ScalingPolicies>
      <member>
        <PolicyARN>arn:aws:autoscaling:us-east-1:123456789012:scalingPolicy:c322761b-3172-4d56-9a21-0ed9dEXAMPLE:autoScalingGroupName/my-asg:policyName/MyScaleInPolicy</PolicyARN>
        <AdjustmentType>ChangeInCapacity</AdjustmentType>
        <ScalingAdjustment>-1</ScalingAdjustment>
        <PolicyName>MyScaleInPolicy</PolicyName>
        <PolicyType>SimpleScaling</PolicyType>
        <AutoScalingGroupName>my-asg</AutoScalingGroupName>
        <Cooldown>60</Cooldown>
        <Alarms>
          <member>
            <AlarmName>TestQueue</AlarmName>
            <AlarmARN>arn:aws:cloudwatch:us-east-1:123456789012:alarm:TestQueue</AlarmARN>
          </member>
        </Alarms>
      </member>
      <member>
        <PolicyARN>arn:aws:autoscaling:us-east-1:123456789012:scalingPolicy:c55a5cdd-9be0-435b-b60b-a8dd3EXAMPLE:autoScalingGroupName/my-asg:policyName/MyScaleOutPolicy</PolicyARN>
        <AdjustmentType>ChangeInCapacity</AdjustmentType>
        <ScalingAdjustment>1</ScalingAdjustment>
        <PolicyName>MyScaleOutPolicy</PolicyName>
        <PolicyType>SimpleScaling</PolicyType>
        <AutoScalingGroupName>my-asg</AutoScalingGroupName>
        <Cooldown>60</Cooldown>
        <Alarms>
          <member>
            <AlarmName>TestQueue</AlarmName>
            <AlarmARN>arn:aws:cloudwatch:us-east-1:123456789012:alarm:TestQueue</AlarmARN>
          </member>
        </Alarms>
      </member>
    </ScalingPolicies>
  </DescribePoliciesResult>
  <ResponseMetadata>
    <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
  </ResponseMetadata>
</DescribePoliciesResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)

- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribeScalingActivities

Gets information about the scaling activities in the account and Region.

When scaling events occur, you see a record of the scaling activity in the scaling activities. For more information, see [Verifying a scaling activity for an Auto Scaling group](#) in the *Amazon EC2 Auto Scaling User Guide*.

If the scaling event succeeds, the value of the `StatusCode` element in the response is `Successful`. If an attempt to launch instances failed, the `StatusCode` value is `Failed` or `Cancelled` and the `StatusMessage` element in the response indicates the cause of the failure. For help interpreting the `StatusMessage`, see [Troubleshooting Amazon EC2 Auto Scaling](#) in the *Amazon EC2 Auto Scaling User Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

ActivityIds.member.N

The activity IDs of the desired scaling activities. If you omit this parameter, all activities for the past six weeks are described. If unknown activities are requested, they are ignored with no error. If you specify an Auto Scaling group, the results are limited to that group.

Array Members: Maximum number of 50 IDs.

Type: Array of strings

Pattern: [\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

IncludeDeletedGroups

Indicates whether to include scaling activity from deleted Auto Scaling groups.

Type: Boolean

Required: No

MaxRecords

The maximum number of items to return with this call. The default value is 100 and the maximum value is 100.

Type: Integer

Required: No

NextToken

The token for the next set of items to return. (You received this token from a previous call.)

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

Response Elements

The following elements are returned by the service.

Activities.member.N

The scaling activities. Activities are sorted by start time. Activities still in progress are described first.

Type: Array of [Activity](#) (p. 172) objects

NextToken

A string that indicates that the response contains more items than can be returned in a single response. To receive additional items, specify this string for the `NextToken` value when requesting the next set of items. This value is null when there are no more items to return.

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

InvalidNextToken

The `NextToken` value is not valid.

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `DescribeScalingActivities`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DescribeScalingActivities
```

```
&AutoScalingGroupName=my-asg
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<DescribeScalingActivitiesResponse xmlns="http://ec2.amazonaws.com/doc/2011-01-01/">
  <DescribeScalingActivitiesResult>
    <Activities>
      <member>
        <StatusCode>Failed</StatusCode>
        <Progress>0</Progress>
        <ActivityId>12345678-1234-1234-1234-123456789012</ActivityId>
        <StartTime>2019-04-12T17:32:07.882Z</StartTime>
        <AutoScalingGroupName>my-asg</AutoScalingGroupName>
        <AutoScalingGroupARN>arn:aws:autoscaling:us-east-1:123456789012:autoScalingGroup:12345678-1234-1234-1234-123456789012:autoScalingGroupName/my-asg</AutoScalingGroupARN>
        <Cause>At 2019-04-12T17:31:30Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 1. At 2019-04-12T17:32:07Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 1.</Cause>
        <Details>{}</Details>
        <Description>Launching a new EC2 instance. Status Reason: The image id 'ami-4edb0327' does not exist. Launching EC2 instance failed.</Description>
        <EndTime>2019-04-12T17:32:08Z</EndTime>
        <StatusMessage>The image id 'ami-4edb0327' does not exist. Launching EC2 instance failed.</StatusMessage>
      </member>
    </Activities>
  </DescribeScalingActivitiesResult>
  <ResponseMetadata>
    <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
  </ResponseMetadata>
</DescribeScalingActivitiesResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribeScalingProcessTypes

Describes the scaling process types for use with the [ResumeProcesses](#) (p. 148) and [SuspendProcesses](#) (p. 159) APIs.

Response Elements

The following element is returned by the service.

Processes.member.N

The names of the process types.

Type: Array of [ProcessType](#) (p. 245) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of DescribeScalingProcessTypes.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DescribeScalingProcessTypes
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<DescribeScalingProcessTypesResponse xmlns="http://autoscaling.amazonaws.com/doc/2011-01-01/">
  <DescribeScalingProcessTypesResult>
    <Processes>
      <member>
        <ProcessName>AZRebalance</ProcessName>
      </member>
      <member>
        <ProcessName>AddToLoadBalancer</ProcessName>
      </member>
      <member>
        <ProcessName>AlarmNotification</ProcessName>
      </member>
      <member>

```

```
<ProcessName>HealthCheck</ProcessName>
</member>
<member>
  <ProcessName>InstanceRefresh</ProcessName>
</member>
<member>
  <ProcessName>Launch</ProcessName>
</member>
<member>
  <ProcessName>ReplaceUnhealthy</ProcessName>
</member>
<member>
  <ProcessName>ScheduledActions</ProcessName>
</member>
<member>
  <ProcessName>Terminate</ProcessName>
</member>
</Processes>
</DescribeScalingProcessTypesResult>
<ResponseMetadata>
  <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
</ResponseMetadata>
</DescribeScalingProcessTypesResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribeScheduledActions

Gets information about the scheduled actions that haven't run or that have not reached their end time.

To describe the scaling activities for scheduled actions that have already run, call the [DescribeScalingActivities](#) (p. 89) API.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

EndTime

The latest scheduled start time to return. If scheduled action names are provided, this parameter is ignored.

Type: Timestamp

Required: No

MaxRecords

The maximum number of items to return with this call. The default value is 50 and the maximum value is 100.

Type: Integer

Required: No

NextToken

The token for the next set of items to return. (You received this token from a previous call.)

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

ScheduledActionNames.member.N

The names of one or more scheduled actions. If you omit this parameter, all scheduled actions are described. If you specify an unknown scheduled action, it is ignored with no error.

Array Members: Maximum number of 50 actions.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

StartTime

The earliest scheduled start time to return. If scheduled action names are provided, this parameter is ignored.

Type: Timestamp

Required: No

Response Elements

The following elements are returned by the service.

NextToken

A string that indicates that the response contains more items than can be returned in a single response. To receive additional items, specify this string for the `NextToken` value when requesting the next set of items. This value is null when there are no more items to return.

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

ScheduledUpdateGroupActions.member.N

The scheduled actions.

Type: Array of [ScheduledUpdateGroupAction](#) (p. 251) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

InvalidNextToken

The `NextToken` value is not valid.

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)

- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribeTags

Describes the specified tags.

You can use filters to limit the results. For example, you can query for the tags for a specific Auto Scaling group. You can specify multiple values for a filter. A tag must match at least one of the specified values for it to be included in the results.

You can also specify multiple filters. The result includes information for a particular tag only if it matches all the filters. If there's no match, no special message is returned.

For more information, see [Tagging Auto Scaling groups and instances](#) in the *Amazon EC2 Auto Scaling User Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

Filters.member.N

One or more filters to scope the tags to return. The maximum number of filters per filter type (for example, `auto-scaling-group`) is 1000.

Type: Array of [Filter](#) (p. 196) objects

Required: No

MaxRecords

The maximum number of items to return with this call. The default value is 50 and the maximum value is 100.

Type: Integer

Required: No

NextToken

The token for the next set of items to return. (You received this token from a previous call.)

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

Response Elements

The following elements are returned by the service.

NextToken

A string that indicates that the response contains more items than can be returned in a single response. To receive additional items, specify this string for the `NextToken` value when requesting the next set of items. This value is null when there are no more items to return.

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Tags.member.N

One or more tags.

Type: Array of [TagDescription](#) (p. 261) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

InvalidNextToken

The `NextToken` value is not valid.

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `DescribeTags`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DescribeTags
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<DescribeTagsResponse xmlns="http://autoscaling.amazonaws.com/doc/2011-01-01/">
  <DescribeTagsResult>
    <Tags>
      <member>
        <ResourceId>my-asg</ResourceId>
        <PropagateAtLaunch>true</PropagateAtLaunch>
        <Value>test</Value>
        <Key>environment</Key>
        <ResourceType>auto-scaling-group</ResourceType>
      </member>
    </Tags>
  </DescribeTagsResult>
  <ResponseMetadata>
    <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
  </ResponseMetadata>
</DescribeTagsResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribeTerminationPolicyTypes

Describes the termination policies supported by Amazon EC2 Auto Scaling.

For more information, see [Controlling which Auto Scaling instances terminate during scale in](#) in the *Amazon EC2 Auto Scaling User Guide*.

Response Elements

The following element is returned by the service.

TerminationPolicyTypes.member.N

The termination policies supported by Amazon EC2 Auto Scaling: `OldestInstance`, `OldestLaunchConfiguration`, `NewestInstance`, `ClosestToNextInstanceHour`, `Default`, `OldestLaunchTemplate`, and `AllocationStrategy`.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `DescribeTerminationPolicyTypes`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DescribeTerminationPolicyTypes
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<DescribeTerminationPolicyTypesResponse xmlns="http://autoscaling.amazonaws.com/doc/2011-01-01/">
  <DescribeTerminationPolicyTypesResult>
    <TerminationPolicyTypes>
      <member>AllocationStrategy</member>
```

```
<member>ClosestToNextInstanceHour</member>
<member>Default</member>
<member>NewestInstance</member>
<member>OldestInstance</member>
<member>OldestLaunchConfiguration</member>
<member>OldestLaunchTemplate</member>
</TerminationPolicyTypes>
</DescribeTerminationPolicyTypesResult>
<ResponseMetadata>
  <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
</ResponseMetadata>
</DescribeTerminationPolicyTypesResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribeWarmPool

Gets information about a warm pool and its instances.

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

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

MaxRecords

The maximum number of instances to return with this call. The maximum value is 50.

Type: Integer

Required: No

NextToken

The token for the next set of instances to return. (You received this token from a previous call.)

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

Response Elements

The following elements are returned by the service.

Instances.member.N

The instances that are currently in the warm pool.

Type: Array of [Instance](#) (p. 197) objects

NextToken

The token for the next set of items to return. (You received this token from a previous call.)

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

WarmPoolConfiguration

The warm pool configuration details.

Type: [WarmPoolConfiguration](#) (p. 264) object

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

InvalidNextToken

The `NextToken` value is not valid.

HTTP Status Code: 400

LimitExceeded

You have already reached a limit for your Amazon EC2 Auto Scaling resources (for example, Auto Scaling groups, launch configurations, or lifecycle hooks). For more information, see [DescribeAccountLimits](#) (p. 53).

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `DescribeWarmPool`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DescribeWarmPool
&AutoScalingGroupName=my-asg
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<DescribeWarmPoolResponse xmlns="http://autoscaling.amazonaws.com/doc/2011-01-01/">
  <DescribeWarmPoolResult>
    <WarmPoolConfiguration>
      <MinSize>0</MinSize>
      <MaxGroupPreparedCapacity>0</MaxGroupPreparedCapacity>
      <PoolState>Stopped</PoolState>
    </WarmPoolConfiguration>
    <Instances />
  </DescribeWarmPoolResult>
  <ResponseMetadata>
    <RequestId>9351b5ea-b4c0-4a88-b873-c51e4EXAMPLE</RequestId>
  </ResponseMetadata>
</DescribeWarmPoolResponse>
```

</DescribeWarmPoolResponse>

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DetachInstances

Removes one or more instances from the specified Auto Scaling group.

After the instances are detached, you can manage them independent of the Auto Scaling group.

If you do not specify the option to decrement the desired capacity, Amazon EC2 Auto Scaling launches instances to replace the ones that are detached.

If there is a Classic Load Balancer attached to the Auto Scaling group, the instances are deregistered from the load balancer. If there are target groups attached to the Auto Scaling group, the instances are deregistered from the target groups.

For more information, see [Detach EC2 instances from your Auto Scaling group](#) in the *Amazon EC2 Auto Scaling User Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

InstanceIds.member.N

The IDs of the instances. You can specify up to 20 instances.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 19.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

ShouldDecrementDesiredCapacity

Indicates whether the Auto Scaling group decrements the desired capacity value by the number of instances detached.

Type: Boolean

Required: Yes

Response Elements

The following element is returned by the service.

Activities.member.N

The activities related to detaching the instances from the Auto Scaling group.

Type: Array of [Activity](#) (p. 172) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `DetachInstances`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DetachInstances
&AutoScalingGroupName=my-asg
&InstanceIds.member.1=i-12345678
&ShouldDecrementDesiredCapacity=true
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<DetachInstancesResponse xmlns="http://autoscaling.amazonaws.com/doc/2011-01-01/">
  <DetachInstancesResult>
    <Activities>
      <member>
        <ActivityId>12345678-1234-1234-1234-123456789012</ActivityId>
        <AutoScalingGroupName>my-asg</AutoScalingGroupName>
        <Description>Detaching EC2 instance: i-12345678</Description>
        <Cause>At 2015-06-14T00:07:30Z instance i-12345678 was detached in response to a
user request, shrinking the capacity from 4 to 3.</Cause>
        <Progress>50</Progress>
        <StartTime>2015-06-14T00:07:30.280Z</StartTime>
        <Details>{"Availability Zone":"us-east-1a","SubnetID":"subnet-12345678"}</Details>
        <StatusCode>InProgress</StatusCode>
      </member>
    </Activities>
  </DetachInstancesResult>
  <ResponseMetadata>
    <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
  </ResponseMetadata>
</DetachInstancesResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)

- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DetachLoadBalancers

Detaches one or more Classic Load Balancers from the specified Auto Scaling group.

This operation detaches only Classic Load Balancers. If you have Application Load Balancers, Network Load Balancers, or Gateway Load Balancers, use the [DetachLoadBalancerTargetGroups \(p. 110\)](#) API instead.

When you detach a load balancer, it enters the `Removing` state while deregistering the instances in the group. When all instances are deregistered, then you can no longer describe the load balancer using the [DescribeLoadBalancers \(p. 75\)](#) API call. The instances remain running.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 265\)](#).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: Yes

LoadBalancerNames.member.N

The names of the load balancers. You can specify up to 10 load balancers.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `DetachLoadBalancers`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DetachLoadBalancers
&AutoScalingGroupName=my-asg
&LoadBalancerNames.member.1=my-lb
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DetachLoadBalancerTargetGroups

Detaches one or more target groups from the specified Auto Scaling group.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: Yes

TargetGroupARNs.member.N

The Amazon Resource Names (ARN) of the target groups. You can specify up to 10 target groups.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 511.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)

- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DisableMetricsCollection

Disables group metrics for the specified Auto Scaling group.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [`\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t`]*

Required: Yes

Metrics.member.N

Specifies one or more of the following metrics:

- `GroupMinSize`
- `GroupMaxSize`
- `GroupDesiredCapacity`
- `GroupInServiceInstances`
- `GroupPendingInstances`
- `GroupStandbyInstances`
- `GroupTerminatingInstances`
- `GroupTotalInstances`
- `GroupInServiceCapacity`
- `GroupPendingCapacity`
- `GroupStandbyCapacity`
- `GroupTerminatingCapacity`
- `GroupTotalCapacity`
- `WarmPoolDesiredCapacity`
- `WarmPoolWarmedCapacity`
- `WarmPoolPendingCapacity`
- `WarmPoolTerminatingCapacity`
- `WarmPoolTotalCapacity`
- `GroupAndWarmPoolDesiredCapacity`
- `GroupAndWarmPoolTotalCapacity`

If you omit this parameter, all metrics are disabled.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [`\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t`]*

Required: No

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of DisableMetricsCollection.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=DisableMetricsCollection
&AutoScalingGroupName=my-asg
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

EnableMetricsCollection

Enables group metrics for the specified Auto Scaling group. For more information, see [Monitoring CloudWatch metrics for your Auto Scaling groups and instances](#) in the *Amazon EC2 Auto Scaling User Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 265\)](#).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

Granularity

The granularity to associate with the metrics to collect. The only valid value is 1Minute.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

Metrics.member.N

Specifies which group-level metrics to start collecting. You can specify one or more of the following metrics:

- GroupMinSize
- GroupMaxSize
- GroupDesiredCapacity
- GroupInServiceInstances
- GroupPendingInstances
- GroupStandbyInstances
- GroupTerminatingInstances
- GroupTotalInstances

The instance weighting feature supports the following additional metrics:

- GroupInServiceCapacity
- GroupPendingCapacity
- GroupStandbyCapacity
- GroupTerminatingCapacity
- GroupTotalCapacity

The warm pools feature supports the following additional metrics:

- WarmPoolDesiredCapacity
- WarmPoolWarmedCapacity
- WarmPoolPendingCapacity
- WarmPoolTerminatingCapacity
- WarmPoolTotalCapacity
- GroupAndWarmPoolDesiredCapacity
- GroupAndWarmPoolTotalCapacity

If you omit this parameter, all metrics are enabled.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of EnableMetricsCollection.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=EnableMetricsCollection
&AutoScalingGroupName=my-asg
&Granularity=1Minute
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

Type: Array of [Activity](#) (p. 172) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of EnterStandby.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=EnterStandby
&AutoScalingGroupName=my-asg
&InstanceIds.member.1=i-12345678
&ShouldDecrementDesiredCapacity=true
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<EnterStandbyResponse xmlns="http://autoscaling.amazonaws.com/doc/2011-01-01/">
  <EnterStandbyResult>
    <Activities>
      <member>
        <ActivityId>12345678-1234-1234-1234-123456789012</ActivityId>
        <AutoScalingGroupName>my-asg</AutoScalingGroupName>
        <Description>Moving EC2 instance to Standby: i-12345678</Description>
        <Progress>50</Progress>
        <Cause>At 2015-06-13T22:35:50Z instance i-5b73d709 was moved to standby in response
to a user request, shrinking the capacity from 4 to 3.</Cause>
        <StartTime>2015-06-13T22:35:50.884Z</StartTime>
        <Details>{"Availability Zone":"us-east-1a","SubnetID":"subnet-12345678"}</Details>
        <StatusCode>InProgress</StatusCode>
      </member>
    </Activities>
  </EnterStandbyResult>
  <ResponseMetadata>
    <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
  </ResponseMetadata>
</EnterStandbyResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)

- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

ExecutePolicy

Executes the specified policy. This can be useful for testing the design of your scaling policy.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

BreachThreshold

The breach threshold for the alarm.

Required if the policy type is `StepScaling` and not supported otherwise.

Type: Double

Required: No

HonorCooldown

Indicates whether Amazon EC2 Auto Scaling waits for the cooldown period to complete before executing the policy.

Valid only if the policy type is `SimpleScaling`. For more information, see [Scaling cooldowns for Amazon EC2 Auto Scaling](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: Boolean

Required: No

MetricValue

The metric value to compare to `BreachThreshold`. This enables you to execute a policy of type `StepScaling` and determine which step adjustment to use. For example, if the breach threshold is 50 and you want to use a step adjustment with a lower bound of 0 and an upper bound of 10, you can set the metric value to 59.

If you specify a metric value that doesn't correspond to a step adjustment for the policy, the call returns an error.

Required if the policy type is `StepScaling` and not supported otherwise.

Type: Double

Required: No

PolicyName

The name or ARN of the policy.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

ScalingActivityInProgress

The operation can't be performed because there are scaling activities in progress.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

ExitStandby

Moves the specified instances out of the standby state.

After you put the instances back in service, the desired capacity is incremented.

For more information, see [Temporarily removing instances from your Auto Scaling group](#) in the *Amazon EC2 Auto Scaling User Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

InstanceIds.member.N

The IDs of the instances. You can specify up to 20 instances.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 19.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

Response Elements

The following element is returned by the service.

Activities.member.N

The activities related to moving instances out of Standby mode.

Type: Array of [Activity](#) (p. 172) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of ExitStandby.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=ExitStandby
&AutoScalingGroupName=my-asg
&InstanceIds.member.1=i-5b73d709
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<ExitStandbyResponse xmlns="http://autoscaling.amazonaws.com/doc/2011-01-01/">
  <ExitStandbyResult>
    <Activities>
      <member>
        <ActivityId>12345678-1234-1234-1234-123456789012</ActivityId>
        <AutoScalingGroupName>my-asg</AutoScalingGroupName>
        <Description>Moving EC2 instance out of Standby: i-12345678</Description>
        <Progress>30</Progress>
        <Cause>At 2015-06-13T22:43:53Z instance i-5b73d709 was moved out of standby in
response to a user request, increasing the capacity from 3 to 4.</Cause>
        <StartTime>2015-06-13T22:43:53.523Z</StartTime>
        <Details>{"Availability Zone":"us-east-1a","SubnetID":"subnet-12345678"}</Details>
        <StatusCode>PreInService</StatusCode>
      </member>
    </Activities>
  </ExitStandbyResult>
  <ResponseMetadata>
    <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
  </ResponseMetadata>
</ExitStandbyResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

GetPredictiveScalingForecast

Retrieves the forecast data for a predictive scaling policy.

Load forecasts are predictions of the hourly load values using historical load data from CloudWatch and an analysis of historical trends. Capacity forecasts are represented as predicted values for the minimum capacity that is needed on an hourly basis, based on the hourly load forecast.

A minimum of 24 hours of data is required to create the initial forecasts. However, having a full 14 days of historical data results in more accurate forecasts.

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

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

EndTime

The exclusive end time of the time range for the forecast data to get. The maximum time duration between the start and end time is 30 days.

Although this parameter can accept a date and time that is more than two days in the future, the availability of forecast data has limits. Amazon EC2 Auto Scaling only issues forecasts for periods of two days in advance.

Type: Timestamp

Required: Yes

PolicyName

The name of the policy.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

StartTime

The inclusive start time of the time range for the forecast data to get. At most, the date and time can be one year before the current date and time.

Type: Timestamp

Required: Yes

Response Elements

The following elements are returned by the service.

CapacityForecast

The capacity forecast.

Type: [CapacityForecast](#) (p. 187) object

LoadForecast.member.N

The load forecast.

Type: Array of [LoadForecast](#) (p. 227) objects

UpdateTime

The time the forecast was made.

Type: Timestamp

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `GetPredictiveScalingForecast`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=GetPredictiveScalingForecast
&AutoScalingGroupName=my-asg
&PolicyName=cpu40-predictive-scaling-policy
&StartTime=2021-04-29T08:00:00Z
&EndTime=2021-05-29T08:00:00Z
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)

- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

PutLifecycleHook

Creates or updates a lifecycle hook for the specified Auto Scaling group.

A lifecycle hook tells Amazon EC2 Auto Scaling to perform an action on an instance when the instance launches (before it is put into service) or as the instance terminates (before it is fully terminated).

This step is a part of the procedure for adding a lifecycle hook to an Auto Scaling group:

1. (Optional) Create a Lambda function and a rule that allows CloudWatch Events to invoke your Lambda function when Amazon EC2 Auto Scaling launches or terminates instances.
2. (Optional) Create a notification target and an IAM role. The target can be either an Amazon SQS queue or an Amazon SNS topic. The role allows Amazon EC2 Auto Scaling to publish lifecycle notifications to the target.
3. **Create the lifecycle hook. Specify whether the hook is used when the instances launch or terminate.**
4. If you need more time, record the lifecycle action heartbeat to keep the instance in a pending state using the [RecordLifecycleActionHeartbeat](#) (p. 146) API call.
5. If you finish before the timeout period ends, complete the lifecycle action using the [CompleteLifecycleAction](#) (p. 19) API call.

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

If you exceed your maximum limit of lifecycle hooks, which by default is 50 per Auto Scaling group, the call fails.

You can view the lifecycle hooks for an Auto Scaling group using the [DescribeLifecycleHooks](#) (p. 71) API call. If you are no longer using a lifecycle hook, you can delete it by calling the [DeleteLifecycleHook](#) (p. 41) API.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: Yes

DefaultResult

Defines the action the Auto Scaling group should take when the lifecycle hook timeout elapses or if an unexpected failure occurs. This parameter can be either `CONTINUE` or `ABANDON`. The default value is `ABANDON`.

Type: String

Required: No

HeartbeatTimeout

The maximum time, in seconds, that can elapse before the lifecycle hook times out. The range is from 30 to 7200 seconds. The default value is 3600 seconds (1 hour).

If the lifecycle hook times out, Amazon EC2 Auto Scaling performs the action that you specified in the `DefaultResult` parameter. You can prevent the lifecycle hook from timing out by calling the [RecordLifecycleActionHeartbeat](#) (p. 146) API.

Type: Integer

Required: No

LifecycleHookName

The name of the lifecycle hook.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[A-Za-z0-9\-_\/+]`

Required: Yes

LifecycleTransition

The instance state to which you want to attach the lifecycle hook. The valid values are:

- `autoscaling:EC2_INSTANCE_LAUNCHING`
- `autoscaling:EC2_INSTANCE_TERMINATING`

Required for new lifecycle hooks, but optional when updating existing hooks.

Type: String

Required: No

NotificationMetadata

Additional information that you want to include any time Amazon EC2 Auto Scaling sends a message to the notification target.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1023.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFF\uD800-\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

NotificationTargetARN

The ARN of the notification target that Amazon EC2 Auto Scaling uses to notify you when an instance is in the transition state for the lifecycle hook. This target can be either an SQS queue or an SNS topic.

If you specify an empty string, this overrides the current ARN.

This operation uses the JSON format when sending notifications to an Amazon SQS queue, and an email key-value pair format when sending notifications to an Amazon SNS topic.

When you specify a notification target, Amazon EC2 Auto Scaling sends it a test message. Test messages contain the following additional key-value pair: `"Event": "autoscaling:TEST_NOTIFICATION"`.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

RoleARN

The ARN of the IAM role that allows the Auto Scaling group to publish to the specified notification target, for example, an Amazon SNS topic or an Amazon SQS queue.

Required for new lifecycle hooks, but optional when updating existing hooks.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

LimitExceeded

You have already reached a limit for your Amazon EC2 Auto Scaling resources (for example, Auto Scaling groups, launch configurations, or lifecycle hooks). For more information, see [DescribeAccountLimits \(p. 53\)](#).

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of PutLifecycleHook.

Sample Request

```
http://autoscaling.amazonaws.com/?Action=PutLifecycleHook
&LifecycleHookName=my-launch-hook
&AutoScalingGroupName=my-asg
&LifecycleTransition=autoscaling:EC2_INSTANCE_LAUNCHING
&NotificationTargetARN=arn:aws:sqs:us-east-1:123456789012:my-queue
&RoleARN=arn:aws:iam::123456789012:role/my-auto-scaling-role
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

PutNotificationConfiguration

Configures an Auto Scaling group to send notifications when specified events take place. Subscribers to the specified topic can have messages delivered to an endpoint such as a web server or an email address.

This configuration overwrites any existing configuration.

For more information, see [Getting Amazon SNS notifications when your Auto Scaling group scales](#) in the *Amazon EC2 Auto Scaling User Guide*.

If you exceed your maximum limit of SNS topics, which is 10 per Auto Scaling group, the call fails.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

NotificationTypes.member.N

The type of event that causes the notification to be sent. To query the notification types supported by Amazon EC2 Auto Scaling, call the [DescribeAutoScalingNotificationTypes](#) (p. 63) API.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

TopicARN

The Amazon Resource Name (ARN) of the Amazon Simple Notification Service (Amazon SNS) topic.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

LimitExceeded

You have already reached a limit for your Amazon EC2 Auto Scaling resources (for example, Auto Scaling groups, launch configurations, or lifecycle hooks). For more information, see [DescribeAccountLimits](#) (p. 53).

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

ServiceLinkedRoleFailure

The service-linked role is not yet ready for use.

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of PutNotificationConfiguration.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=PutNotificationConfiguration
&AutoScalingGroupName=my-asg
&TopicARN=arn:aws:us-east-1:123456789012:my-sns-topic
&NotificationTypes.member.1=autoscaling:EC2_INSTANCE_LAUNCH
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

Enabled

Indicates whether the scaling policy is enabled or disabled. The default is enabled. For more information, see [Disabling a scaling policy for an Auto Scaling group](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: Boolean

Required: No

EstimatedInstanceWarmup

The estimated time, in seconds, until a newly launched instance can contribute to the CloudWatch metrics. If not provided, the default is to use the value from the default cooldown period for the Auto Scaling group.

Valid only if the policy type is `TargetTrackingScaling` or `StepScaling`.

Type: Integer

Required: No

MetricAggregationType

The aggregation type for the CloudWatch metrics. The valid values are `Minimum`, `Maximum`, and `Average`. If the aggregation type is null, the value is treated as `Average`.

Valid only if the policy type is `StepScaling`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

MinAdjustmentMagnitude

The minimum value to scale by when the adjustment type is `PercentChangeInCapacity`. For example, suppose that you create a step scaling policy to scale out an Auto Scaling group by 25 percent and you specify a `MinAdjustmentMagnitude` of 2. If the group has 4 instances and the scaling policy is performed, 25 percent of 4 is 1. However, because you specified a `MinAdjustmentMagnitude` of 2, Amazon EC2 Auto Scaling scales out the group by 2 instances.

Valid only if the policy type is `StepScaling` or `SimpleScaling`. For more information, see [Scaling adjustment types](#) in the *Amazon EC2 Auto Scaling User Guide*.

Note

Some Auto Scaling groups use instance weights. In this case, set the `MinAdjustmentMagnitude` to a value that is at least as large as your largest instance weight.

Type: Integer

Required: No

MinAdjustmentStep

This parameter has been deprecated.

Available for backward compatibility. Use `MinAdjustmentMagnitude` instead.

Type: Integer

Required: No

PolicyName

The name of the policy.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

PolicyType

One of the following policy types:

- `TargetTrackingScaling`
- `StepScaling`
- `SimpleScaling` (default)
- `PredictiveScaling`

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

PredictiveScalingConfiguration

A predictive scaling policy. Provides support for only predefined metrics.

Predictive scaling works with CPU utilization, network in/out, and the Application Load Balancer request count.

Required if the policy type is `PredictiveScaling`.

Type: [PredictiveScalingConfiguration](#) (p. 235) object

Required: No

ScalingAdjustment

The amount by which to scale, based on the specified adjustment type. A positive value adds to the current capacity while a negative number removes from the current capacity. For exact capacity, you must specify a positive value.

Required if the policy type is `SimpleScaling`. (Not used with any other policy type.)

Type: Integer

Required: No

StepAdjustments.member.N

A set of adjustments that enable you to scale based on the size of the alarm breach.

Required if the policy type is `StepScaling`. (Not used with any other policy type.)

Type: Array of [StepAdjustment](#) (p. 256) objects

Required: No

TargetTrackingConfiguration

A target tracking scaling policy. Provides support for predefined or customized metrics.

The following predefined metrics are available:

- `ASGAverageCPUUtilization`
- `ASGAverageNetworkIn`
- `ASGAverageNetworkOut`
- `ALBRequestCountPerTarget`

If you specify `ALBRequestCountPerTarget` for the metric, you must specify the `ResourceLabel` parameter with the `PredefinedMetricSpecification`.

Required if the policy type is `TargetTrackingScaling`.

Type: [TargetTrackingConfiguration](#) (p. 263) object

Required: No

Response Elements

The following elements are returned by the service.

Alarms.member.N

The CloudWatch alarms created for the target tracking scaling policy.

Type: Array of [Alarm](#) (p. 176) objects

PolicyARN

The Amazon Resource Name (ARN) of the policy.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

LimitExceeded

You have already reached a limit for your Amazon EC2 Auto Scaling resources (for example, Auto Scaling groups, launch configurations, or lifecycle hooks). For more information, see [DescribeAccountLimits](#) (p. 53).

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

ServiceLinkedRoleFailure

The service-linked role is not yet ready for use.

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of PutScalingPolicy.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=PutScalingPolicy
&AutoScalingGroupName=my-asg
&PolicyName=alb1000-target-tracking-scaling-policy
&PolicyType=TargetTrackingScaling
&TargetTrackingConfiguration.TargetValue=1000.0
&TargetTrackingConfiguration.PredefinedMetricSpecification.PredefinedMetricType=ALBRequestCountPerTarget
&TargetTrackingConfiguration.PredefinedMetricSpecification.ResourceLabel=app%2Fmy-alb
%2F778d41231b141a0f%2Ftargetgroup%2Fmy-alb-target-group%2F943f017f100becff
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<PutScalingPolicyResponse xmlns="http://autoscaling.amazonaws.com/doc/2011-01-01/">
  <PutScalingPolicyResult>
    <PolicyARN>arn:aws:autoscaling:us-east-1:123456789012:scalingPolicy:228f02c2-c665-4bfd-
    aaac-8b04080bea3c:autoScalingGroupName/my-asg:policyName/alb1000-target-tracking-scaling-
    policy</PolicyARN>
    <Alarms>
      <member>
        <AlarmName>TargetTracking-my-asg-AlarmHigh-fc0e4183-23ac-497e-9992-691c9980c38e</
        AlarmName>
        <AlarmARN>arn:aws:cloudwatch:us-east-1:123456789012:alarm:TargetTracking-my-asg-
        AlarmHigh-fc0e4183-23ac-497e-9992-691c9980c38e</AlarmARN>
      </member>
      <member>
        <AlarmName>TargetTracking-my-asg-AlarmLow-61a39305-ed0c-47af-bd9e-471a352ee1a2</
        AlarmName>
        <AlarmARN>arn:aws:cloudwatch:us-east-1:123456789012:alarm:TargetTracking-my-asg-
        AlarmLow-61a39305-ed0c-47af-bd9e-471a352ee1a2</AlarmARN>
      </member>
    </Alarms>
  </PutScalingPolicyResult>
  <ResponseMetadata>
    <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
  </ResponseMetadata>
</PutScalingPolicyResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

PutScheduledUpdateGroupAction

Creates or updates a scheduled scaling action for an Auto Scaling group.

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

You can view the scheduled actions for an Auto Scaling group using the [DescribeScheduledActions](#) (p. 94) API call. If you are no longer using a scheduled action, you can delete it by calling the [DeleteScheduledAction](#) (p. 47) API.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDFFF\x\n\t] *

Required: Yes

DesiredCapacity

The desired capacity is the initial capacity of the Auto Scaling group after the scheduled action runs and the capacity it attempts to maintain. It can scale beyond this capacity if you add more scaling conditions.

Type: Integer

Required: No

EndTime

The date and time for the recurring schedule to end, in UTC.

Type: Timestamp

Required: No

MaxSize

The maximum size of the Auto Scaling group.

Type: Integer

Required: No

MinSize

The minimum size of the Auto Scaling group.

Type: Integer

Required: No

Recurrence

The recurring schedule for this action. This format consists of five fields separated by white spaces: [Minute] [Hour] [Day_of_Month] [Month_of_Year] [Day_of_Week]. The value must be in quotes (for example, "30 0 1 1,6,12 *"). For more information about this format, see [Crontab](#).

When `StartTime` and `EndTime` are specified with `Recurrence`, they form the boundaries of when the recurring action starts and stops.

Cron expressions use Universal Coordinated Time (UTC) by default.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

ScheduledActionName

The name of this scaling action.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

StartTime

The date and time for this action to start, in YYYY-MM-DDThh:mm:ssZ format in UTC/GMT only and in quotes (for example, "2019-06-01T00:00:00Z").

If you specify `Recurrence` and `StartTime`, Amazon EC2 Auto Scaling performs the action at this time, and then performs the action based on the specified recurrence.

If you try to schedule your action in the past, Amazon EC2 Auto Scaling returns an error message.

Type: Timestamp

Required: No

Time

This parameter is no longer used.

Type: Timestamp

Required: No

TimeZone

Specifies the time zone for a cron expression. If a time zone is not provided, UTC is used by default.

Valid values are the canonical names of the IANA time zones, derived from the IANA Time Zone Database (such as `Etc/GMT+9` or `Pacific/Tahiti`). For more information, see https://en.wikipedia.org/wiki/List_of_tz_database_time_zones.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

AlreadyExists

You already have an Auto Scaling group or launch configuration with this name.

HTTP Status Code: 400

LimitExceeded

You have already reached a limit for your Amazon EC2 Auto Scaling resources (for example, Auto Scaling groups, launch configurations, or lifecycle hooks). For more information, see [DescribeAccountLimits \(p. 53\)](#).

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example 1: Schedule based on a specific date and time

This example illustrates one usage of PutScheduledUpdateGroupAction.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=PutScheduledUpdateGroupAction
&AutoScalingGroupName=my-asg
&ScheduledActionName=scale-out
&StartTime=2020-05-25T08:00:00Z
&DesiredCapacity=3
&Version=2011-01-01
&AUTHPARAMS
```

Example 2: Recurring Schedule

This example illustrates one usage of PutScheduledUpdateGroupAction.

Sample Request

```
https://autoscaling.amazonaws.com/?Action="PutScheduledUpdateGroupAction
&AutoScalingGroupName=my-asg
&ScheduledActionName=scale-out-schedule-year
&Recurrence="30 0 1 1,6,12 *"
&DesiredCapacity=3
&Version=2011-01-01
```


&AUTHPARAMS

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

PutWarmPool

Creates or updates a warm pool for the specified Auto Scaling group. A warm pool is a pool of pre-initialized EC2 instances that sits alongside the Auto Scaling group. Whenever your application needs to scale out, the Auto Scaling group can draw on the warm pool to meet its new desired capacity. For more information and example configurations, see [Warm pools for Amazon EC2 Auto Scaling](#) in the *Amazon EC2 Auto Scaling User Guide*.

This operation must be called from the Region in which the Auto Scaling group was created. This operation cannot be called on an Auto Scaling group that has a mixed instances policy or a launch template or launch configuration that requests Spot Instances.

You can view the instances in the warm pool using the [DescribeWarmPool](#) (p. 102) API call. If you are no longer using a warm pool, you can delete it by calling the [DeleteWarmPool](#) (p. 51) API.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\x\n\t] *

Required: Yes

MaxGroupPreparedCapacity

Specifies the maximum number of instances that are allowed to be in the warm pool or in any state except `Terminated` for the Auto Scaling group. This is an optional property. Specify it only if you do not want the warm pool size to be determined by the difference between the group's maximum capacity and its desired capacity.

Important

If a value for `MaxGroupPreparedCapacity` is not specified, Amazon EC2 Auto Scaling launches and maintains the difference between the group's maximum capacity and its desired capacity. If you specify a value for `MaxGroupPreparedCapacity`, Amazon EC2 Auto Scaling uses the difference between the `MaxGroupPreparedCapacity` and the desired capacity instead.

The size of the warm pool is dynamic. Only when `MaxGroupPreparedCapacity` and `MinSize` are set to the same value does the warm pool have an absolute size.

If the desired capacity of the Auto Scaling group is higher than the `MaxGroupPreparedCapacity`, the capacity of the warm pool is 0, unless you specify a value for `MinSize`. To remove a value that you previously set, include the property but specify -1 for the value.

Type: Integer

Valid Range: Minimum value of -1.

Required: No

MinSize

Specifies the minimum number of instances to maintain in the warm pool. This helps you to ensure that there is always a certain number of warmed instances available to handle traffic spikes. Defaults to 0 if not specified.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

PoolState

Sets the instance state to transition to after the lifecycle actions are complete. Default is `Stopped`.

Type: String

Valid Values: `Stopped` | `Running`

Required: No

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

LimitExceeded

You have already reached a limit for your Amazon EC2 Auto Scaling resources (for example, Auto Scaling groups, launch configurations, or lifecycle hooks). For more information, see [DescribeAccountLimits \(p. 53\)](#).

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `PutWarmPool`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=PutWarmPool
&AutoScalingGroupName=my-asg
&MinSize=30
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

RecordLifecycleActionHeartbeat

Records a heartbeat for the lifecycle action associated with the specified token or instance. This extends the timeout by the length of time defined using the [PutLifecycleHook](#) (p. 127) API call.

This step is a part of the procedure for adding a lifecycle hook to an Auto Scaling group:

1. (Optional) Create a Lambda function and a rule that allows CloudWatch Events to invoke your Lambda function when Amazon EC2 Auto Scaling launches or terminates instances.
2. (Optional) Create a notification target and an IAM role. The target can be either an Amazon SQS queue or an Amazon SNS topic. The role allows Amazon EC2 Auto Scaling to publish lifecycle notifications to the target.
3. Create the lifecycle hook. Specify whether the hook is used when the instances launch or terminate.
4. **If you need more time, record the lifecycle action heartbeat to keep the instance in a pending state.**
5. If you finish before the timeout period ends, complete the lifecycle action.

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

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

InstanceId

The ID of the instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 19.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

LifecycleActionToken

A token that uniquely identifies a specific lifecycle action associated with an instance. Amazon EC2 Auto Scaling sends this token to the notification target that you specified when you created the lifecycle hook.

Type: String

Length Constraints: Fixed length of 36.

Required: No

LifecycleHookName

The name of the lifecycle hook.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [A-Za-z0-9\-_\ /]+

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

HTTP Status Code: 500

ResourceInUse

The operation can't be performed because the resource is in use.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of `ResumeProcesses`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=ResumeProcesses
&AutoScalingGroupName=my-asg
&ScalingProcesses.member.1=AlarmNotification
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

SetDesiredCapacity

Sets the size of the specified Auto Scaling group.

If a scale-in activity occurs as a result of a new `DesiredCapacity` value that is lower than the current size of the group, the Auto Scaling group uses its termination policy to determine which instances to terminate.

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

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

DesiredCapacity

The desired capacity is the initial capacity of the Auto Scaling group after this operation completes and the capacity it attempts to maintain.

Type: Integer

Required: Yes

HonorCooldown

Indicates whether Amazon EC2 Auto Scaling waits for the cooldown period to complete before initiating a scaling activity to set your Auto Scaling group to its new capacity. By default, Amazon EC2 Auto Scaling does not honor the cooldown period during manual scaling activities.

Type: Boolean

Required: No

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

ScalingActivityInProgress

The operation can't be performed because there are scaling activities in progress.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of SetDesiredCapacity.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=SetDesiredCapacity
&AutoScalingGroupName=my-asg
&HonorCooldown=false
&DesiredCapacity=2
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

SetInstanceHealth

Sets the health status of the specified instance.

For more information, see [Health checks for Auto Scaling instances](#) in the *Amazon EC2 Auto Scaling User Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

HealthStatus

The health status of the instance. Set to `Healthy` to have the instance remain in service. Set to `Unhealthy` to have the instance be out of service. Amazon EC2 Auto Scaling terminates and replaces the unhealthy instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: Yes

InstanceId

The ID of the instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 19.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: Yes

ShouldRespectGracePeriod

If the Auto Scaling group of the specified instance has a `HealthCheckGracePeriod` specified for the group, by default, this call respects the grace period. Set this to `False`, to have the call not respect the grace period associated with the group.

For more information about the health check grace period, see [CreateAutoScalingGroup](#) (p. 22).

Type: Boolean

Required: No

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of SetInstanceHealth.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=SetInstanceHealth
&InstanceId=i-12345678
&HealthStatus=Unhealthy
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

SetInstanceProtection

Updates the instance protection settings of the specified instances. This operation cannot be called on instances in a warm pool.

For more information about preventing instances that are part of an Auto Scaling group from terminating on scale in, see [Instance scale-in protection](#) in the *Amazon EC2 Auto Scaling User Guide*.

If you exceed your maximum limit of instance IDs, which is 50 per Auto Scaling group, the call fails.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

InstanceIds.member.N

One or more instance IDs. You can specify up to 50 instances.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 19.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

ProtectedFromScaleIn

Indicates whether the instance is protected from termination by Amazon EC2 Auto Scaling when scaling in.

Type: Boolean

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

LimitExceeded

You have already reached a limit for your Amazon EC2 Auto Scaling resources (for example, Auto Scaling groups, launch configurations, or lifecycle hooks). For more information, see [DescribeAccountLimits](#) (p. 53).

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of SetInstanceProtection.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=SetInstanceProtection
&AutoScalingGroupName=my-asg
&InstanceIds.member.1=i-12345678
&ProtectedFromScaleIn=false
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

StartInstanceRefresh

Starts a new instance refresh operation. An instance refresh performs a rolling replacement of all or some instances in an Auto Scaling group. Each instance is terminated first and then replaced, which temporarily reduces the capacity available within your Auto Scaling group.

This operation is part of the [instance refresh feature](#) in Amazon EC2 Auto Scaling, which helps you update instances in your Auto Scaling group. This feature is helpful, for example, when you have a new AMI or a new user data script. You just need to create a new launch template that specifies the new AMI or user data script. Then start an instance refresh to immediately begin the process of updating instances in the group.

If the call succeeds, it creates a new instance refresh request with a unique ID that you can use to track its progress. To query its status, call the [DescribeInstanceRefreshes](#) (p. 65) API. To describe the instance refreshes that have already run, call the [DescribeInstanceRefreshes](#) (p. 65) API. To cancel an instance refresh operation in progress, use the [CancelInstanceRefresh](#) (p. 17) API.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\x\n\t] *

Required: Yes

DesiredConfiguration

The desired configuration. For example, the desired configuration can specify a new launch template or a new version of the current launch template.

Once the instance refresh succeeds, Amazon EC2 Auto Scaling updates the settings of the Auto Scaling group to reflect the new desired configuration.

Note

When you specify a new launch template or a new version of the current launch template for your desired configuration, consider enabling the `SkipMatching` property in preferences. If it's enabled, Amazon EC2 Auto Scaling skips replacing instances that already use the specified launch template and version. This can help you reduce the number of replacements that are required to apply updates.

Type: [DesiredConfiguration](#) (p. 190) object

Required: No

Preferences

Set of preferences associated with the instance refresh request. If not provided, the default values are used.

Type: [RefreshPreferences](#) (p. 246) object

Required: No

Strategy

The strategy to use for the instance refresh. The only valid value is `Rolling`.

A rolling update helps you update your instances gradually. A rolling update can fail due to failed health checks or if instances are on standby or are protected from scale in. If the rolling update process fails, any instances that are replaced are not rolled back to their previous configuration.

Type: String

Valid Values: `Rolling`

Required: No

Response Elements

The following element is returned by the service.

InstanceRefreshId

A unique ID for tracking the progress of the request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

InstanceRefreshInProgress

The request failed because an active instance refresh operation already exists for the specified Auto Scaling group.

HTTP Status Code: 400

LimitExceeded

You have already reached a limit for your Amazon EC2 Auto Scaling resources (for example, Auto Scaling groups, launch configurations, or lifecycle hooks). For more information, see [DescribeAccountLimits \(p. 53\)](#).

HTTP Status Code: 400

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

Examples

Example

This example illustrates one usage of `StartInstanceRefresh`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=StartInstanceRefresh
&AutoScalingGroupName=my-asg
&Preferences.InstanceWarmup=400
&Preferences.MinHealthyPercentage=50
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<StartInstanceRefreshResponse xmlns="http://autoscaling.amazonaws.com/doc/2011-01-01/">
  <StartInstanceRefreshResult>
    <InstanceRefreshId>ccfd3c2f-edb3-470d-af32-52cc57d201ca</InstanceRefreshId>
  </StartInstanceRefreshResult>
  <ResponseMetadata>
    <RequestId>a9bbb1dd-ba59-4753-80a2-c662036187eb</RequestId>
  </ResponseMetadata>
</StartInstanceRefreshResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

SuspendProcesses

Suspends the specified auto scaling processes, or all processes, for the specified Auto Scaling group.

If you suspend either the `Launch` or `Terminate` process types, it can prevent other process types from functioning properly. For more information, see [Suspending and resuming scaling processes](#) in the *Amazon EC2 Auto Scaling User Guide*.

To resume processes that have been suspended, call the [ResumeProcesses](#) (p. 148) API.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 265).

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: Yes

ScalingProcesses.member.N

One or more of the following processes:

- `Launch`
- `Terminate`
- `AddToLoadBalancer`
- `AlarmNotification`
- `AZRebalance`
- `HealthCheck`
- `InstanceRefresh`
- `ReplaceUnhealthy`
- `ScheduledActions`

If you omit this parameter, all processes are specified.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 267).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

ResourceInUse

The operation can't be performed because the resource is in use.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of `SuspendProcesses`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=SuspendProcesses
&AutoScalingGroupName=my-asg
&ScalingProcesses.member.1=AlarmNotification
&Version=2011-01-01
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

TerminateInstanceInAutoScalingGroup

Terminates the specified instance and optionally adjusts the desired group size. This operation cannot be called on instances in a warm pool.

This call simply makes a termination request. The instance is not terminated immediately. When an instance is terminated, the instance status changes to `terminated`. You can't connect to or start an instance after you've terminated it.

If you do not specify the option to decrement the desired capacity, Amazon EC2 Auto Scaling launches instances to replace the ones that are terminated.

By default, Amazon EC2 Auto Scaling balances instances across all Availability Zones. If you decrement the desired capacity, your Auto Scaling group can become unbalanced between Availability Zones. Amazon EC2 Auto Scaling tries to rebalance the group, and rebalancing might terminate instances in other zones. For more information, see [Rebalancing activities](#) in the *Amazon EC2 Auto Scaling User Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 265\)](#).

InstanceId

The ID of the instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 19.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

ShouldDecrementDesiredCapacity

Indicates whether terminating the instance also decrements the size of the Auto Scaling group.

Type: Boolean

Required: Yes

Response Elements

The following element is returned by the service.

Activity

A scaling activity.

Type: [Activity \(p. 172\)](#) object

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

ScalingActivityInProgress

The operation can't be performed because there are scaling activities in progress.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of `TerminateInstanceInAutoScalingGroup`.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=TerminateInstanceInAutoScalingGroup
&InstanceId=i-12345678
&ShouldDecrementDesiredCapacity=true
&Version=2011-01-01
&AUTHPARAMS
```

Sample Response

```
<TerminateInstanceInAutoScalingGroupResponse xmlns="http://autoscaling.amazonaws.com/doc/2011-01-01/">
  <TerminateInstanceInAutoScalingGroupResult>
    <Activity>
      <ActivityId>12345678-1234-1234-1234-123456789012</ActivityId>
      <Description>Terminating EC2 instance: i-12345678</Description>
      <Progress>0</Progress>
      <Cause>At 2015-06-14T00:07:30Z instance i-12345678 was taken out of service in response to a user request, shrinking the capacity from 4 to 3.</Cause>
      <StartTime>2015-06-14T00:07:30.280Z</StartTime>
      <Details>{"Availability Zone":"us-east-1a","SubnetID":"subnet-12345678"}</Details>
      <StatusCode>InProgress</StatusCode>
    </Activity>
  </TerminateInstanceInAutoScalingGroupResult>
  <ResponseMetadata>
    <RequestId>7c6e177f-f082-11e1-ac58-3714bEXAMPLE</RequestId>
  </ResponseMetadata>
</TerminateInstanceInAutoScalingGroupResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)

- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

CapacityRebalance

Enables or disables Capacity Rebalancing. For more information, see [Amazon EC2 Auto Scaling Capacity Rebalancing](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: Boolean

Required: No

Context

Reserved.

Type: String

Required: No

DefaultCooldown

The amount of time, in seconds, after a scaling activity completes before another scaling activity can start. The default value is 300. This setting applies when using simple scaling policies, but not when using other scaling policies or scheduled scaling. For more information, see [Scaling cooldowns for Amazon EC2 Auto Scaling](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: Integer

Required: No

DesiredCapacity

The desired capacity is the initial capacity of the Auto Scaling group after this operation completes and the capacity it attempts to maintain. This number must be greater than or equal to the minimum size of the group and less than or equal to the maximum size of the group.

Type: Integer

Required: No

HealthCheckGracePeriod

The amount of time, in seconds, that Amazon EC2 Auto Scaling waits before checking the health status of an EC2 instance that has come into service. The default value is 0. For more information, see [Health check grace period](#) in the *Amazon EC2 Auto Scaling User Guide*.

Conditional: Required if you are adding an `ELB` health check.

Type: Integer

Required: No

HealthCheckType

The service to use for the health checks. The valid values are `EC2` and `ELB`. If you configure an Auto Scaling group to use `ELB` health checks, it considers the instance unhealthy if it fails either the EC2 status checks or the load balancer health checks.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

LaunchConfigurationName

The name of the launch configuration. If you specify `LaunchConfigurationName` in your update request, you can't specify `LaunchTemplate` or `MixedInstancesPolicy`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

LaunchTemplate

The launch template and version to use to specify the updates. If you specify `LaunchTemplate` in your update request, you can't specify `LaunchConfigurationName` or `MixedInstancesPolicy`.

Type: [LaunchTemplateSpecification](#) (p. 219) object

Required: No

MaxInstanceLifetime

The maximum amount of time, in seconds, that an instance can be in service. The default is null. If specified, the value must be either 0 or a number equal to or greater than 86,400 seconds (1 day). To clear a previously set value, specify a new value of 0. For more information, see [Replacing Auto Scaling instances based on maximum instance lifetime](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: Integer

Required: No

MaxSize

The maximum size of the Auto Scaling group.

Note

With a mixed instances policy that uses instance weighting, Amazon EC2 Auto Scaling may need to go above `MaxSize` to meet your capacity requirements. In this event, Amazon EC2 Auto Scaling will never go above `MaxSize` by more than your largest instance weight (weights that define how many units each instance contributes to the desired capacity of the group).

Type: Integer

Required: No

MinSize

The minimum size of the Auto Scaling group.

Type: Integer

Required: No

MixedInstancesPolicy

An embedded object that specifies a mixed instances policy. When you make changes to an existing policy, all optional properties are left unchanged if not specified. For more information, see [Auto](#)

[Scaling groups with multiple instance types and purchase options](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: `MixedInstancesPolicy` (p. 231) object

Required: No

NewInstancesProtectedFromScaleIn

Indicates whether newly launched instances are protected from termination by Amazon EC2 Auto Scaling when scaling in. For more information about preventing instances from terminating on scale in, see [Instance scale-in protection](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: Boolean

Required: No

PlacementGroup

The name of an existing placement group into which to launch your instances, if any. A placement group is a logical grouping of instances within a single Availability Zone. You cannot specify multiple Availability Zones and a placement group. For more information, see [Placement Groups](#) in the *Amazon EC2 User Guide for Linux Instances*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

ServiceLinkedRoleARN

The Amazon Resource Name (ARN) of the service-linked role that the Auto Scaling group uses to call other Amazon Web Services on your behalf. For more information, see [Service-linked roles](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

TerminationPolicies.member.N

A policy or a list of policies that are used to select the instances to terminate. The policies are executed in the order that you list them. For more information, see [Controlling which Auto Scaling instances terminate during scale in](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

VPCZoneIdentifier

A comma-separated list of subnet IDs for a virtual private cloud (VPC). If you specify `VPCZoneIdentifier` with `AvailabilityZones`, the subnets that you specify for this parameter must reside in those Availability Zones.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2047.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 267\)](#).

ResourceContention

You already have a pending update to an Amazon EC2 Auto Scaling resource (for example, an Auto Scaling group, instance, or load balancer).

HTTP Status Code: 500

ScalingActivityInProgress

The operation can't be performed because there are scaling activities in progress.

HTTP Status Code: 400

ServiceLinkedRoleFailure

The service-linked role is not yet ready for use.

HTTP Status Code: 500

Examples

Example 1: Update an existing Auto Scaling group with an Elastic Load Balancing health check

This example illustrates one usage of UpdateAutoScalingGroup.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=UpdateAutoScalingGroup
&HealthCheckType=ELB
&HealthCheckGracePeriod=300
&AutoScalingGroupName=my-asg
&Version=2011-01-01
&AUTHPARAMS
```

Example 2: Update an existing Auto Scaling group with a new subnet

This example illustrates one usage of UpdateAutoScalingGroup.

Sample Request

```
https://autoscaling.amazonaws.com/?Action=UpdateAutoScalingGroup
```

```
&AutoScalingGroupName=my-asg  
&VPCZoneIdentifier=subnet-057fa0918fEXAMPLE%2Csubnet-610acd08EXAMPLE  
%2Csubnet-530fc83aEXAMPLE  
&MinSize=3  
&Version=2011-01-01  
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

Data Types

The Auto Scaling API contains several data types that various actions use. This section describes each data type in detail.

Note

The order of each element in a data type structure is not guaranteed. Applications should not assume a particular order.

The following data types are supported:

- [Activity](#) (p. 172)
- [AdjustmentType](#) (p. 175)
- [Alarm](#) (p. 176)
- [AutoScalingGroup](#) (p. 177)
- [AutoScalingInstanceDetails](#) (p. 182)
- [BlockDeviceMapping](#) (p. 185)
- [CapacityForecast](#) (p. 187)
- [CustomizedMetricSpecification](#) (p. 188)
- [DesiredConfiguration](#) (p. 190)
- [Ebs](#) (p. 191)
- [EnabledMetric](#) (p. 193)
- [FailedScheduledUpdateGroupActionRequest](#) (p. 195)
- [Filter](#) (p. 196)
- [Instance](#) (p. 197)
- [InstanceMetadataOptions](#) (p. 199)
- [InstanceMonitoring](#) (p. 201)
- [InstanceRefresh](#) (p. 202)
- [InstanceRefreshLivePoolProgress](#) (p. 205)
- [InstanceRefreshProgressDetails](#) (p. 206)
- [InstanceRefreshWarmPoolProgress](#) (p. 207)
- [InstancesDistribution](#) (p. 208)
- [LaunchConfiguration](#) (p. 211)
- [LaunchTemplate](#) (p. 216)
- [LaunchTemplateOverrides](#) (p. 217)
- [LaunchTemplateSpecification](#) (p. 219)
- [LifecycleHook](#) (p. 221)
- [LifecycleHookSpecification](#) (p. 223)
- [LoadBalancerState](#) (p. 225)
- [LoadBalancerTargetGroupState](#) (p. 226)
- [LoadForecast](#) (p. 227)
- [MetricCollectionType](#) (p. 228)
- [MetricDimension](#) (p. 229)
- [MetricGranularityType](#) (p. 230)
- [MixedInstancesPolicy](#) (p. 231)
- [NotificationConfiguration](#) (p. 232)

- [PredefinedMetricSpecification](#) (p. 233)
- [PredictiveScalingConfiguration](#) (p. 235)
- [PredictiveScalingMetricSpecification](#) (p. 237)
- [PredictiveScalingPredefinedLoadMetric](#) (p. 239)
- [PredictiveScalingPredefinedMetricPair](#) (p. 241)
- [PredictiveScalingPredefinedScalingMetric](#) (p. 243)
- [ProcessType](#) (p. 245)
- [RefreshPreferences](#) (p. 246)
- [ScalingPolicy](#) (p. 248)
- [ScheduledUpdateGroupAction](#) (p. 251)
- [ScheduledUpdateGroupActionRequest](#) (p. 254)
- [StepAdjustment](#) (p. 256)
- [SuspendedProcess](#) (p. 258)
- [Tag](#) (p. 259)
- [TagDescription](#) (p. 261)
- [TargetTrackingConfiguration](#) (p. 263)
- [WarmPoolConfiguration](#) (p. 264)

Activity

Describes scaling activity, which is a long-running process that represents a change to your Auto Scaling group, such as changing its size or replacing an instance.

Contents

ActivityId

The ID of the activity.

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

AutoScalingGroupARN

The Amazon Resource Name (ARN) of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

AutoScalingGroupState

The state of the Auto Scaling group, which is either `InService` or `Deleted`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Required: No

Cause

The reason the activity began.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1023.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

Description

A friendly, more verbose description of the activity.

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

Details

The details about the activity.

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

EndTime

The end time of the activity.

Type: Timestamp

Required: No

Progress

A value between 0 and 100 that indicates the progress of the activity.

Type: Integer

Required: No

StartTime

The start time of the activity.

Type: Timestamp

Required: Yes

StatusCode

The current status of the activity.

Type: String

Valid Values: PendingSpotBidPlacement | WaitingForSpotInstanceRequestId | WaitingForSpotInstanceId | WaitingForInstanceId | PreInService | InProgress | WaitingForELBConnectionDraining | MidLifecycleAction | WaitingForInstanceWarmup | Successful | Failed | Cancelled

Required: Yes

StatusMessage

A friendly, more verbose description of the activity status.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

AdjustmentType

Describes a policy adjustment type.

Contents

AdjustmentType

The policy adjustment type. The valid values are `ChangeInCapacity`, `ExactCapacity`, and `PercentChangeInCapacity`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

Alarm

Describes an alarm.

Contents

AlarmARN

The Amazon Resource Name (ARN) of the alarm.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

AlarmName

The name of the alarm.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

AutoScalingGroup

Describes an Auto Scaling group.

Contents

AutoScalingGroupARN

The Amazon Resource Name (ARN) of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

AvailabilityZones.member.N

One or more Availability Zones for the group.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

CapacityRebalance

Indicates whether Capacity Rebalancing is enabled.

Type: Boolean

Required: No

Context

Reserved.

Type: String

Required: No

CreatedTime

The date and time the group was created.

Type: Timestamp

Required: Yes

DefaultCooldown

The duration of the default cooldown period, in seconds.

Type: Integer

Required: Yes

DesiredCapacity

The desired size of the group.

Type: Integer

Required: Yes

EnabledMetrics.member.N

The metrics enabled for the group.

Type: Array of [EnabledMetric](#) (p. 193) objects

Required: No

HealthCheckGracePeriod

The amount of time, in seconds, that Amazon EC2 Auto Scaling waits before checking the health status of an EC2 instance that has come into service.

Type: Integer

Required: No

HealthCheckType

The service to use for the health checks. The valid values are `EC2` and `ELB`. If you configure an Auto Scaling group to use `ELB` health checks, it considers the instance unhealthy if it fails either the EC2 status checks or the load balancer health checks.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

Instances.member.N

The EC2 instances associated with the group.

Type: Array of [Instance](#) (p. 197) objects

Required: No

LaunchConfigurationName

The name of the associated launch configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

LaunchTemplate

The launch template for the group.

Type: [LaunchTemplateSpecification](#) (p. 219) object

Required: No

LoadBalancerNames.member.N

One or more load balancers associated with the group.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

MaxInstanceLifetime

The maximum amount of time, in seconds, that an instance can be in service.

Valid Range: Minimum value of 0.

Type: Integer

Required: No

MaxSize

The maximum size of the group.

Type: Integer

Required: Yes

MinSize

The minimum size of the group.

Type: Integer

Required: Yes

MixedInstancesPolicy

The mixed instances policy for the group.

Type: [MixedInstancesPolicy](#) (p. 231) object

Required: No

NewInstancesProtectedFromScaleIn

Indicates whether newly launched instances are protected from termination by Amazon EC2 Auto Scaling when scaling in.

Type: Boolean

Required: No

PlacementGroup

The name of the placement group into which to launch your instances, if any.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

PredictedCapacity

The predicted capacity of the group when it has a predictive scaling policy.

Type: Integer

Required: No

ServiceLinkedRoleARN

The Amazon Resource Name (ARN) of the service-linked role that the Auto Scaling group uses to call other Amazon Web Services on your behalf.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

Status

The current state of the group when the [DeleteAutoScalingGroup](#) (p. 37) operation is in progress.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

SuspendedProcesses.member.N

The suspended processes associated with the group.

Type: Array of [SuspendedProcess](#) (p. 258) objects

Required: No

Tags.member.N

The tags for the group.

Type: Array of [TagDescription](#) (p. 261) objects

Required: No

TargetGroupARNs.member.N

The Amazon Resource Names (ARN) of the target groups for your load balancer.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 511.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

TerminationPolicies.member.N

The termination policies for the group.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

VPCZoneIdentifier

One or more subnet IDs, if applicable, separated by commas.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2047.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

WarmPoolConfiguration

The warm pool for the group.

Type: [WarmPoolConfiguration](#) (p. 264) object

Required: No

WarmPoolSize

The current size of the warm pool.

Type: Integer

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

AutoScalingInstanceDetails

Describes an EC2 instance associated with an Auto Scaling group.

Contents

AutoScalingGroupName

The name of the Auto Scaling group for the instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

AvailabilityZone

The Availability Zone for the instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

HealthStatus

The last reported health status of this instance. "Healthy" means that the instance is healthy and should remain in service. "Unhealthy" means that the instance is unhealthy and Amazon EC2 Auto Scaling should terminate and replace it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

InstanceId

The ID of the instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 19.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

InstanceType

The instance type of the EC2 instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Required: No

The launch configuration used to launch the instance. This value is not available if you attached the instance to the Auto Scaling group.

Length Constraints: Minimum length of 1. Maximum length of 255.

Required: No

The launch template for the instance.

Type: [LaunchTemplateSpecification](#) (p. 219) object

Required: No

The lifecycle state for the instance. The `Quarantined` state is not used. For information about lifecycle states, see [Instance lifecycle](#) in the *Amazon EC2 Auto Scaling User Guide*.

Valid Values: Pending | Pending:Wait | Pending:Proceed | Quarantined | InService | Terminating | Terminating:Wait | Terminating:Proceed | Terminated | Detaching | Detached | EnteringStandby | Standby | Warmed:Pending | Warmed:Pending:Wait | Warmed:Pending:Proceed | Warmed:Terminating | Warmed:Terminating:Wait | Warmed:Terminating:Proceed | Warmed:Terminated | Warmed:Stopped | Warmed:Running

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Required: Yes

Indicates whether the instance is protected from termination by Amazon EC2 Auto Scaling when scaling in.

Type: Boolean

Required: Yes

The number of capacity units contributed by the instance based on its instance type.

Valid Range: Minimum value of 1. Maximum value of 999.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 3.

Pattern: `^[\u0031-\u0039][\u0030-\u0039]{0,2}$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

CapacityForecast

A `GetPredictiveScalingForecast` call returns the capacity forecast for a predictive scaling policy. This structure includes the data points for that capacity forecast, along with the timestamps of those data points.

Contents

Timestamps.member.N

The time stamps for the data points, in UTC format.

Type: Array of timestamps

Required: Yes

Values.member.N

The values of the data points.

Type: Array of doubles

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

CustomizedMetricSpecification

Represents a CloudWatch metric of your choosing for a target tracking scaling policy to use with Amazon EC2 Auto Scaling.

To create your customized metric specification:

- Add values for each required parameter from CloudWatch. You can use an existing metric, or a new metric that you create. To use your own metric, you must first publish the metric to CloudWatch. For more information, see [Publish Custom Metrics](#) in the *Amazon CloudWatch User Guide*.
- Choose a metric that changes proportionally with capacity. The value of the metric should increase or decrease in inverse proportion to the number of capacity units. That is, the value of the metric should decrease when capacity increases.

For more information about CloudWatch, see [Amazon CloudWatch Concepts](#).

Contents

Dimensions.member.N

The dimensions of the metric.

Conditional: If you published your metric with dimensions, you must specify the same dimensions in your scaling policy.

Type: Array of [MetricDimension](#) (p. 229) objects

Required: No

MetricName

The name of the metric.

Type: String

Required: Yes

Namespace

The namespace of the metric.

Type: String

Required: Yes

Statistic

The statistic of the metric.

Type: String

Valid Values: `Average` | `Minimum` | `Maximum` | `SampleCount` | `Sum`

Required: Yes

Unit

The unit of the metric.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

DesiredConfiguration

Describes the desired configuration for an instance refresh.

If you specify a desired configuration, you must specify either a `LaunchTemplate` or a `MixedInstancesPolicy`.

Contents

LaunchTemplate

Describes the launch template and the version of the launch template that Amazon EC2 Auto Scaling uses to launch Amazon EC2 instances. For more information about launch templates, see [Launch templates](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: [LaunchTemplateSpecification](#) (p. 219) object

Required: No

MixedInstancesPolicy

Describes a mixed instances policy. A mixed instances policy contains the instance types Amazon EC2 Auto Scaling can launch, and other information Amazon EC2 Auto Scaling can use to launch instances to help you optimize your costs. For more information, see [Auto Scaling groups with multiple instance types and purchase options](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: [MixedInstancesPolicy](#) (p. 231) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

Ebs

Describes information used to set up an Amazon EBS volume specified in a block device mapping.

Contents

DeleteOnTermination

Indicates whether the volume is deleted on instance termination. For Amazon EC2 Auto Scaling, the default value is `true`.

Type: Boolean

Required: No

Encrypted

Specifies whether the volume should be encrypted. Encrypted EBS volumes can only be attached to instances that support Amazon EBS encryption. For more information, see [Supported instance types](#). If your AMI uses encrypted volumes, you can also only launch it on supported instance types.

Note

If you are creating a volume from a snapshot, you cannot create an unencrypted volume from an encrypted snapshot. Also, you cannot specify a KMS key ID when using a launch configuration.

If you enable encryption by default, the EBS volumes that you create are always encrypted, either using the AWS managed KMS key or a customer-managed KMS key, regardless of whether the snapshot was encrypted.

For more information, see [Using AWS KMS keys to encrypt Amazon EBS volumes](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: Boolean

Required: No

Iops

The number of input/output (I/O) operations per second (IOPS) to provision for the volume. For `gp3` and `io1` volumes, this represents the number of IOPS that are provisioned for the volume. For `gp2` volumes, this represents the baseline performance of the volume and the rate at which the volume accumulates I/O credits for bursting.

The following are the supported values for each volume type:

- `gp3`: 3,000-16,000 IOPS
- `io1`: 100-64,000 IOPS

For `io1` volumes, we guarantee 64,000 IOPS only for [Instances built on the Nitro System](#). Other instance families guarantee performance up to 32,000 IOPS.

`Iops` is supported when the volume type is `gp3` or `io1` and required only when the volume type is `io1`. (Not used with `standard`, `gp2`, `st1`, or `sc1` volumes.)

Type: Integer

Valid Range: Minimum value of 100. Maximum value of 64000.

Required: No

SnapshotId

The snapshot ID of the volume to use.

You must specify either a `VolumeSize` or a `SnapshotId`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

Throughput

The throughput (MiBps) to provision for a `gp3` volume.

Type: Integer

Valid Range: Minimum value of 125. Maximum value of 1000.

Required: No

VolumeSize

The volume size, in GiBs. The following are the supported volumes sizes for each volume type:

- `gp2` and `gp3`: 1-16,384
- `io1`: 4-16,384
- `st1` and `sc1`: 125-16,384
- `standard`: 1-1,024

You must specify either a `SnapshotId` or a `VolumeSize`. If you specify both `SnapshotId` and `VolumeSize`, the volume size must be equal or greater than the size of the snapshot.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 16384.

Required: No

VolumeType

The volume type. For more information, see [Amazon EBS volume types](#) in the *Amazon EC2 User Guide for Linux Instances*.

Valid Values: `standard` | `io1` | `gp2` | `st1` | `sc1` | `gp3`

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

EnabledMetric

Describes an enabled metric.

Contents

Granularity

The granularity of the metric. The only valid value is 1Minute.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

Metric

One of the following metrics:

- GroupMinSize
- GroupMaxSize
- GroupDesiredCapacity
- GroupInServiceInstances
- GroupPendingInstances
- GroupStandbyInstances
- GroupTerminatingInstances
- GroupTotalInstances
- GroupInServiceCapacity
- GroupPendingCapacity
- GroupStandbyCapacity
- GroupTerminatingCapacity
- GroupTotalCapacity
- WarmPoolDesiredCapacity
- WarmPoolWarmedCapacity
- WarmPoolPendingCapacity
- WarmPoolTerminatingCapacity
- WarmPoolTotalCapacity
- GroupAndWarmPoolDesiredCapacity
- GroupAndWarmPoolTotalCapacity

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

FailedScheduledUpdateGroupActionRequest

Describes a scheduled action that could not be created, updated, or deleted.

Contents

ErrorCode

The error code.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

ErrorMessage

The error message accompanying the error code.

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

ScheduledActionName

The name of the scheduled action.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

Filter

Describes a filter that is used to return a more specific list of results when describing tags.

For more information, see [Tagging Auto Scaling groups and instances](#) in the *Amazon EC2 Auto Scaling User Guide*.

Contents

Name

The name of the filter. The valid values are: `auto-scaling-group`, `key`, `value`, and `propagate-at-launch`.

Type: String

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

Values.member.N

One or more filter values. Filter values are case-sensitive.

Type: Array of strings

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

Instance

Describes an EC2 instance.

Contents

AvailabilityZone

The Availability Zone in which the instance is running.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

HealthStatus

The last reported health status of the instance. "Healthy" means that the instance is healthy and should remain in service. "Unhealthy" means that the instance is unhealthy and that Amazon EC2 Auto Scaling should terminate and replace it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

InstanceId

The ID of the instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 19.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

InstanceType

The instance type of the EC2 instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

LaunchConfigurationName

The launch configuration associated with the instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

LaunchTemplate

The launch template for the instance.

Type: [LaunchTemplateSpecification](#) (p. 219) object

Required: No

LifecycleState

A description of the current lifecycle state. The `Quarantined` state is not used. For information about lifecycle states, see [Instance lifecycle](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: String

Valid Values: `Pending` | `Pending:Wait` | `Pending:Proceed` | `Quarantined` | `InService` | `Terminating` | `Terminating:Wait` | `Terminating:Proceed` | `Terminated` | `Detaching` | `Detached` | `EnteringStandby` | `Standby` | `Warmed:Pending` | `Warmed:Pending:Wait` | `Warmed:Pending:Proceed` | `Warmed:Terminating` | `Warmed:Terminating:Wait` | `Warmed:Terminating:Proceed` | `Warmed:Terminated` | `Warmed:Stopped` | `Warmed:Running`

Required: Yes

ProtectedFromScaleIn

Indicates whether the instance is protected from termination by Amazon EC2 Auto Scaling when scaling in.

Type: Boolean

Required: Yes

WeightedCapacity

The number of capacity units contributed by the instance based on its instance type.

Valid Range: Minimum value of 1. Maximum value of 999.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 3.

Pattern: `^\[\u0031-\u0039\][\u0030-\u0039]{0,2}$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

InstanceMetadataOptions

The metadata options for the instances. For more information, see [Configuring the Instance Metadata Options](#) in the *Amazon EC2 Auto Scaling User Guide*.

Contents

HttpEndpoint

This parameter enables or disables the HTTP metadata endpoint on your instances. If the parameter is not specified, the default state is `enabled`.

Note

If you specify a value of `disabled`, you will not be able to access your instance metadata.

Type: String

Valid Values: `disabled` | `enabled`

Required: No

HttpPutResponseHopLimit

The desired HTTP PUT response hop limit for instance metadata requests. The larger the number, the further instance metadata requests can travel.

Default: 1

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 64.

Required: No

HttpTokens

The state of token usage for your instance metadata requests. If the parameter is not specified in the request, the default state is `optional`.

If the state is `optional`, you can choose to retrieve instance metadata with or without a signed token header on your request. If you retrieve the IAM role credentials without a token, the version 1.0 role credentials are returned. If you retrieve the IAM role credentials using a valid signed token, the version 2.0 role credentials are returned.

If the state is `required`, you must send a signed token header with any instance metadata retrieval requests. In this state, retrieving the IAM role credentials always returns the version 2.0 credentials; the version 1.0 credentials are not available.

Type: String

Valid Values: `optional` | `required`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)

- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

InstanceMonitoring

Describes whether detailed monitoring is enabled for the Auto Scaling instances.

Contents

Enabled

If `true`, detailed monitoring is enabled. Otherwise, basic monitoring is enabled.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

InstanceRefresh

Describes an instance refresh for an Auto Scaling group.

Contents

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

DesiredConfiguration

Describes the specific update you want to deploy.

Type: [DesiredConfiguration](#) (p. 190) object

Required: No

EndTime

The date and time at which the instance refresh ended.

Type: Timestamp

Required: No

InstanceRefreshId

The instance refresh ID.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

InstancesToUpdate

The number of instances remaining to update before the instance refresh is complete.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

PercentageComplete

The percentage of the instance refresh that is complete. For each instance replacement, Amazon EC2 Auto Scaling tracks the instance's health status and warm-up time. When the instance's health status changes to healthy and the specified warm-up time passes, the instance is considered updated and is added to the percentage complete.

Valid Range: Minimum value of 0. Maximum value of 100.

Preferences

Type: [RefreshPreferences](#) (p. 246) object

ProgressDetails

Type: [InstanceRefreshProgressDetails](#) (p. 206) object

StartTime

Type: Timestamp

Status

- **Pending** - The request was created, but the operation has not started.
- **InProgress** - The operation is in progress.
- **Successful** - The operation completed successfully.
- **Failed** - The operation failed to complete. You can troubleshoot using the status reason and the scaling activities.
- **Cancelling** - An ongoing operation is being cancelled. Cancellation does not roll back any replacements that have already been completed, but it prevents new replacements from being started.
- **Cancelled** - The operation is cancelled.

Valid Values: Pending | InProgress | Successful | Failed | Cancelling | Cancelled

StatusReason

Type: String

Pattern: `[\u0020-\u0D7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

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See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

InstanceRefreshLivePoolProgress

Reports the progress of an instance refresh on instances that are in the Auto Scaling group.

Contents

InstancesToUpdate

The number of instances remaining to update.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

PercentageComplete

The percentage of instances in the Auto Scaling group that have been replaced. For each instance replacement, Amazon EC2 Auto Scaling tracks the instance's health status and warm-up time. When the instance's health status changes to healthy and the specified warm-up time passes, the instance is considered updated and is added to the percentage complete.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

InstanceRefreshProgressDetails

Reports the progress of an instance refresh on an Auto Scaling group that has a warm pool. This includes separate details for instances in the warm pool and instances in the Auto Scaling group (the live pool).

Contents

LivePoolProgress

Indicates the progress of an instance refresh on instances that are in the Auto Scaling group.

Type: [InstanceRefreshLivePoolProgress](#) (p. 205) object

Required: No

WarmPoolProgress

Indicates the progress of an instance refresh on instances that are in the warm pool.

Type: [InstanceRefreshWarmPoolProgress](#) (p. 207) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

InstanceRefreshWarmPoolProgress

Reports the progress of an instance refresh on instances that are in the warm pool.

Contents

InstancesToUpdate

The number of instances remaining to update.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

PercentageComplete

The percentage of instances in the warm pool that have been replaced. For each instance replacement, Amazon EC2 Auto Scaling tracks the instance's health status and warm-up time. When the instance's health status changes to healthy and the specified warm-up time passes, the instance is considered updated and is added to the percentage complete.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

InstancesDistribution

Describes an instances distribution for an Auto Scaling group with a [MixedInstancesPolicy](#) (p. 231).

The instances distribution specifies the distribution of On-Demand Instances and Spot Instances, the maximum price to pay for Spot Instances, and how the Auto Scaling group allocates instance types to fulfill On-Demand and Spot capacities.

When you modify `SpotAllocationStrategy`, `SpotInstancePools`, or `SpotMaxPrice` in the [UpdateAutoScalingGroup](#) (p. 164) API call, this update action does not deploy any changes across the running Amazon EC2 instances in the group. Your existing Spot Instances continue to run as long as the maximum price for those instances is higher than the current Spot price. When scale out occurs, Amazon EC2 Auto Scaling launches instances based on the new settings. When scale in occurs, Amazon EC2 Auto Scaling terminates instances according to the group's termination policies.

Contents

OnDemandAllocationStrategy

Indicates how to allocate instance types to fulfill On-Demand capacity. The only valid value is `prioritized`, which is also the default value. This strategy uses the order of instance types in the `LaunchTemplateOverrides` to define the launch priority of each instance type. The first instance type in the array is prioritized higher than the last. If all your On-Demand capacity cannot be fulfilled using your highest priority instance, then the Auto Scaling groups launches the remaining capacity using the second priority instance type, and so on.

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

OnDemandBaseCapacity

The minimum amount of the Auto Scaling group's capacity that must be fulfilled by On-Demand Instances. This base portion is provisioned first as your group scales. Defaults to 0 if not specified. If you specify weights for the instance types in the overrides, set the value of `OnDemandBaseCapacity` in terms of the number of capacity units, and not the number of instances.

Note

An update to this setting means a gradual replacement of instances to adjust the current On-Demand Instance levels. When replacing instances, Amazon EC2 Auto Scaling launches new instances before terminating the old ones.

Type: Integer

Required: No

OnDemandPercentageAboveBaseCapacity

Controls the percentages of On-Demand Instances and Spot Instances for your additional capacity beyond `OnDemandBaseCapacity`. Expressed as a number (for example, 20 specifies 20% On-Demand Instances, 80% Spot Instances). Defaults to 100 if not specified. If set to 100, only On-Demand Instances are provisioned.

Note

An update to this setting means a gradual replacement of instances to adjust the current On-Demand and Spot Instance levels for your additional capacity above the base capacity.

When replacing instances, Amazon EC2 Auto Scaling launches new instances before terminating the old ones.

Type: Integer

Required: No

SpotAllocationStrategy

Indicates how to allocate instances across Spot Instance pools.

If the allocation strategy is `lowest-price`, the Auto Scaling group launches instances using the Spot pools with the lowest price, and evenly allocates your instances across the number of Spot pools that you specify. Defaults to `lowest-price` if not specified.

If the allocation strategy is `capacity-optimized` (recommended), the Auto Scaling group launches instances using Spot pools that are optimally chosen based on the available Spot capacity. Alternatively, you can use `capacity-optimized-prioritized` and set the order of instance types in the list of launch template overrides from highest to lowest priority (from first to last in the list). Amazon EC2 Auto Scaling honors the instance type priorities on a best-effort basis but optimizes for capacity first.

Valid values: `lowest-price` | `capacity-optimized` | `capacity-optimized-prioritized`

Type: String

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

SpotInstancePools

The number of Spot Instance pools across which to allocate your Spot Instances. The Spot pools are determined from the different instance types in the overrides. Valid only when the Spot allocation strategy is `lowest-price`. Value must be in the range of 1 to 20. Defaults to 2 if not specified.

Type: Integer

Required: No

SpotMaxPrice

The maximum price per unit hour that you are willing to pay for a Spot Instance. If you leave the value at its default (empty), Amazon EC2 Auto Scaling uses the On-Demand price as the maximum Spot price. To remove a value that you previously set, include the property but specify an empty string ("") for the value.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for Ruby V3](#)

LaunchConfiguration

Describes a launch configuration.

Contents

AssociatePublicIpAddress

For Auto Scaling groups that are running in a VPC, specifies whether to assign a public IP address to the group's instances. For more information, see [Launching Auto Scaling instances in a VPC](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: Boolean

Required: No

BlockDeviceMappings.member.N

A block device mapping, which specifies the block devices for the instance. For more information, see [Block Device Mapping](#) in the *Amazon EC2 User Guide for Linux Instances*.

Type: Array of [BlockDeviceMapping](#) (p. 185) objects

Required: No

ClassicLinkVPCId

The ID of a ClassicLink-enabled VPC to link your EC2-Classic instances to. For more information, see [ClassicLink](#) in the *Amazon EC2 User Guide for Linux Instances* and [Linking EC2-Classic instances to a VPC](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

ClassicLinkVPCSecurityGroups.member.N

The IDs of one or more security groups for the VPC specified in `ClassicLinkVPCId`.

For more information, see [ClassicLink](#) in the *Amazon EC2 User Guide for Linux Instances* and [Linking EC2-Classic instances to a VPC](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

CreatedTime

The creation date and time for the launch configuration.

Type: Timestamp

Required: Yes

EbsOptimized

Specifies whether the launch configuration is optimized for EBS I/O (`true`) or not (`false`). For more information, see [Amazon EBS-Optimized Instances](#) in the *Amazon EC2 User Guide for Linux Instances*.

Type: Boolean

Required: No

IamInstanceProfile

The name or the Amazon Resource Name (ARN) of the instance profile associated with the IAM role for the instance. The instance profile contains the IAM role. For more information, see [IAM role for applications that run on Amazon EC2 instances](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

ImageId

The ID of the Amazon Machine Image (AMI) to use to launch your EC2 instances. For more information, see [Finding an AMI](#) in the *Amazon EC2 User Guide for Linux Instances*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

InstanceMonitoring

Controls whether instances in this group are launched with detailed (`true`) or basic (`false`) monitoring.

For more information, see [Configure Monitoring for Auto Scaling Instances](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: [InstanceMonitoring](#) (p. 201) object

Required: No

InstanceType

The instance type for the instances.

For information about available instance types, see [Available Instance Types](#) in the *Amazon EC2 User Guide for Linux Instances*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: Yes

KernelId

The ID of the kernel associated with the AMI.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

KeyName

The name of the key pair.

For more information, see [Amazon EC2 Key Pairs](#) in the *Amazon EC2 User Guide for Linux Instances*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

LaunchConfigurationARN

The Amazon Resource Name (ARN) of the launch configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

LaunchConfigurationName

The name of the launch configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

MetadataOptions

The metadata options for the instances. For more information, see [Configuring the Instance Metadata Options](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: [InstanceMetadataOptions](#) (p. 199) object

Required: No

PlacementTenancy

The tenancy of the instance, either `default` or `dedicated`. An instance with dedicated tenancy runs on isolated, single-tenant hardware and can only be launched into a VPC.

For more information, see [Configuring instance tenancy with Amazon EC2 Auto Scaling](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

RamdiskId

The ID of the RAM disk associated with the AMI.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

SecurityGroups.member.N

A list that contains the security groups to assign to the instances in the Auto Scaling group. For more information, see [Security Groups for Your VPC](#) in the *Amazon Virtual Private Cloud User Guide*.

Type: Array of strings

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

SpotPrice

The maximum hourly price to be paid for any Spot Instance launched to fulfill the request. Spot Instances are launched when the price you specify exceeds the current Spot price. For more information, see [Requesting Spot Instances](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Required: No

UserData

The user data to make available to the launched EC2 instances. For more information, see [Instance metadata and user data](#) (Linux) and [Instance metadata and user data](#) (Windows). If you are using a command line tool, base64-encoding is performed for you, and you can load the text from a file. Otherwise, you must provide base64-encoded text. User data is limited to 16 KB.

Type: String

Length Constraints: Maximum length of 21847.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

LaunchTemplate

Describes a launch template and overrides.

You specify these properties as part of a mixed instances policy.

When you update the launch template or overrides in the [UpdateAutoScalingGroup \(p. 164\)](#) API call, existing Amazon EC2 instances continue to run. When scale out occurs, Amazon EC2 Auto Scaling launches instances to match the new settings. When scale in occurs, Amazon EC2 Auto Scaling terminates instances according to the group's termination policies.

Contents

LaunchTemplateSpecification

The launch template to use.

Type: [LaunchTemplateSpecification \(p. 219\)](#) object

Required: No

Overrides.member.N

Any properties that you specify override the same properties in the launch template. If not provided, Amazon EC2 Auto Scaling uses the instance type specified in the launch template when it launches an instance.

Type: Array of [LaunchTemplateOverrides \(p. 217\)](#) objects

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

LaunchTemplateOverrides

Describes an override for a launch template. The maximum number of instance types that can be associated with an Auto Scaling group is 40. The maximum number of distinct launch templates you can define for an Auto Scaling group is 20. For more information about configuring overrides, see [Configuring overrides](#) in the *Amazon EC2 Auto Scaling User Guide*.

Contents

InstanceType

The instance type, such as `m3.xlarge`. You must use an instance type that is supported in your requested Region and Availability Zones. For more information, see [Instance types](#) in the *Amazon Elastic Compute Cloud User Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

LaunchTemplateSpecification

Provides the launch template to be used when launching the instance type. For example, some instance types might require a launch template with a different AMI. If not provided, Amazon EC2 Auto Scaling uses the launch template that's defined for your mixed instances policy. For more information, see [Specifying a different launch template for an instance type](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: [LaunchTemplateSpecification](#) (p. 219) object

Required: No

WeightedCapacity

The number of capacity units provided by the specified instance type in terms of virtual CPUs, memory, storage, throughput, or other relative performance characteristic. When a Spot or On-Demand Instance is provisioned, the capacity units count toward the desired capacity. Amazon EC2 Auto Scaling provisions instances until the desired capacity is totally fulfilled, even if this results in an overage. For example, if there are 2 units remaining to fulfill capacity, and Amazon EC2 Auto Scaling can only provision an instance with a `WeightedCapacity` of 5 units, the instance is provisioned, and the desired capacity is exceeded by 3 units. For more information, see [Instance weighting for Amazon EC2 Auto Scaling](#) in the *Amazon EC2 Auto Scaling User Guide*. Value must be in the range of 1 to 999.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 3.

Pattern: `^[\u0031-\u0039][\u0030-\u0039]{0,2}$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

LifecycleHook

Describes a lifecycle hook, which tells Amazon EC2 Auto Scaling that you want to perform an action whenever it launches instances or terminates instances.

Contents

AutoScalingGroupName

The name of the Auto Scaling group for the lifecycle hook.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

DefaultResult

Defines the action the Auto Scaling group should take when the lifecycle hook timeout elapses or if an unexpected failure occurs. The possible values are `CONTINUE` and `ABANDON`.

Type: String

Required: No

GlobalTimeout

The maximum time, in seconds, that an instance can remain in a `Pending:Wait` or `Terminating:Wait` state. The maximum is 172800 seconds (48 hours) or 100 times `HeartbeatTimeout`, whichever is smaller.

Type: Integer

Required: No

HeartbeatTimeout

The maximum time, in seconds, that can elapse before the lifecycle hook times out. If the lifecycle hook times out, Amazon EC2 Auto Scaling performs the action that you specified in the `DefaultResult` parameter.

Type: Integer

Required: No

LifecycleHookName

The name of the lifecycle hook.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [A-Za-z0-9\-_\./]+

Required: No

LifecycleTransition

The state of the EC2 instance to which to attach the lifecycle hook. The following are possible values:

- autoscaling:EC2_INSTANCE_LAUNCHING
- autoscaling:EC2_INSTANCE_TERMINATING

Type: String

Required: No

NotificationMetadata

Additional information that is included any time Amazon EC2 Auto Scaling sends a message to the notification target.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1023.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

NotificationTargetARN

The ARN of the target that Amazon EC2 Auto Scaling sends notifications to when an instance is in the transition state for the lifecycle hook. The notification target can be either an SQS queue or an SNS topic.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

RoleARN

The ARN of the IAM role that allows the Auto Scaling group to publish to the specified notification target.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

LifecycleHookSpecification

Describes information used to specify a lifecycle hook for an Auto Scaling group.

A lifecycle hook tells Amazon EC2 Auto Scaling to perform an action on an instance when the instance launches (before it is put into service) or as the instance terminates (before it is fully terminated).

This step is a part of the procedure for creating a lifecycle hook for an Auto Scaling group:

1. (Optional) Create a Lambda function and a rule that allows CloudWatch Events to invoke your Lambda function when Amazon EC2 Auto Scaling launches or terminates instances.
2. (Optional) Create a notification target and an IAM role. The target can be either an Amazon SQS queue or an Amazon SNS topic. The role allows Amazon EC2 Auto Scaling to publish lifecycle notifications to the target.
3. **Create the lifecycle hook. Specify whether the hook is used when the instances launch or terminate.**
4. If you need more time, record the lifecycle action heartbeat to keep the instance in a pending state.
5. If you finish before the timeout period ends, complete the lifecycle action.

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

Contents

DefaultResult

Defines the action the Auto Scaling group should take when the lifecycle hook timeout elapses or if an unexpected failure occurs. The valid values are `CONTINUE` and `ABANDON`. The default value is `ABANDON`.

Type: String

Required: No

HeartbeatTimeout

The maximum time, in seconds, that can elapse before the lifecycle hook times out.

If the lifecycle hook times out, Amazon EC2 Auto Scaling performs the action that you specified in the `DefaultResult` parameter. You can prevent the lifecycle hook from timing out by calling [RecordLifecycleActionHeartbeat](#) (p. 146).

Type: Integer

Required: No

LifecycleHookName

The name of the lifecycle hook.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[A-Za-z0-9\-_\./]+`

Required: Yes

LifecycleTransition

The state of the EC2 instance to which you want to attach the lifecycle hook. The valid values are:

- autoscaling:EC2_INSTANCE_LAUNCHING
- autoscaling:EC2_INSTANCE_TERMINATING

Type: String

Required: Yes

NotificationMetadata

Additional information that you want to include any time Amazon EC2 Auto Scaling sends a message to the notification target.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1023.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

NotificationTargetARN

The ARN of the target that Amazon EC2 Auto Scaling sends notifications to when an instance is in the transition state for the lifecycle hook. The notification target can be either an SQS queue or an SNS topic.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

RoleARN

The ARN of the IAM role that allows the Auto Scaling group to publish to the specified notification target, for example, an Amazon SNS topic or an Amazon SQS queue.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

LoadBalancerState

Describes the state of a Classic Load Balancer.

Contents

LoadBalancerName

The name of the load balancer.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

State

One of the following load balancer states:

- **Adding** - The Auto Scaling instances are being registered with the load balancer.
- **Added** - All Auto Scaling instances are registered with the load balancer.
- **InService** - At least one Auto Scaling instance passed an **ELB** health check.
- **Removing** - The Auto Scaling instances are being deregistered from the load balancer. If connection draining is enabled, Elastic Load Balancing waits for in-flight requests to complete before deregistering the instances.
- **Removed** - All Auto Scaling instances are deregistered from the load balancer.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

LoadBalancerTargetGroupState

Describes the state of a target group.

Contents

LoadBalancerTargetGroupARN

The Amazon Resource Name (ARN) of the target group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 511.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

State

The state of the target group.

- **Adding** - The Auto Scaling instances are being registered with the target group.
- **Added** - All Auto Scaling instances are registered with the target group.
- **InService** - At least one Auto Scaling instance passed an **ELB** health check.
- **Removing** - The Auto Scaling instances are being deregistered from the target group. If connection draining is enabled, Elastic Load Balancing waits for in-flight requests to complete before deregistering the instances.
- **Removed** - All Auto Scaling instances are deregistered from the target group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

LoadForecast

A `GetPredictiveScalingForecast` call returns the load forecast for a predictive scaling policy. This structure includes the data points for that load forecast, along with the timestamps of those data points and the metric specification.

Contents

MetricSpecification

The metric specification for the load forecast.

Type: [PredictiveScalingMetricSpecification](#) (p. 237) object

Required: Yes

Timestamps.member.N

The time stamps for the data points, in UTC format.

Type: Array of timestamps

Required: Yes

Values.member.N

The values of the data points.

Type: Array of doubles

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

MetricCollectionType

Describes a metric.

Contents

Metric

One of the following metrics:

- GroupMinSize
- GroupMaxSize
- GroupDesiredCapacity
- GroupInServiceInstances
- GroupPendingInstances
- GroupStandbyInstances
- GroupTerminatingInstances
- GroupTotalInstances
- GroupInServiceCapacity
- GroupPendingCapacity
- GroupStandbyCapacity
- GroupTerminatingCapacity
- GroupTotalCapacity
- WarmPoolDesiredCapacity
- WarmPoolWarmedCapacity
- WarmPoolPendingCapacity
- WarmPoolTerminatingCapacity
- WarmPoolTotalCapacity
- GroupAndWarmPoolDesiredCapacity
- GroupAndWarmPoolTotalCapacity

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

MetricDimension

Describes the dimension of a metric.

Contents

Name

The name of the dimension.

Type: String

Required: Yes

Value

The value of the dimension.

Type: String

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

MetricGranularityType

Describes a granularity of a metric.

Contents

Granularity

The granularity. The only valid value is 1Minute.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

MixedInstancesPolicy

Describes a mixed instances policy. A mixed instances policy contains the instance types Amazon EC2 Auto Scaling can launch, and other information Amazon EC2 Auto Scaling can use to launch instances to help you optimize your costs. For more information, see [Auto Scaling groups with multiple instance types and purchase options](#) in the *Amazon EC2 Auto Scaling User Guide*.

Contents

InstancesDistribution

Specifies the instances distribution. If not provided, the value for each property in `InstancesDistribution` uses a default value.

Type: [InstancesDistribution](#) (p. 208) object

Required: No

LaunchTemplate

Specifies the launch template to use and the instance types (overrides) that are used to provision EC2 instances to fulfill On-Demand and Spot capacities. Required when creating a mixed instances policy.

Type: [LaunchTemplate](#) (p. 216) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

NotificationConfiguration

Describes a notification.

Contents

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

NotificationType

One of the following event notification types:

- autoscaling:EC2_INSTANCE_LAUNCH
- autoscaling:EC2_INSTANCE_LAUNCH_ERROR
- autoscaling:EC2_INSTANCE_TERMINATE
- autoscaling:EC2_INSTANCE_TERMINATE_ERROR
- autoscaling:TEST_NOTIFICATION

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

TopicARN

The Amazon Resource Name (ARN) of the Amazon Simple Notification Service (Amazon SNS) topic.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

PredefinedMetricSpecification

Represents a predefined metric for a target tracking scaling policy to use with Amazon EC2 Auto Scaling.

Contents

PredefinedMetricType

The metric type. The following predefined metrics are available:

- `ASGAverageCPUUtilization` - Average CPU utilization of the Auto Scaling group.
- `ASGAverageNetworkIn` - Average number of bytes received on all network interfaces by the Auto Scaling group.
- `ASGAverageNetworkOut` - Average number of bytes sent out on all network interfaces by the Auto Scaling group.
- `ALBRequestCountPerTarget` - Number of requests completed per target in an Application Load Balancer target group.

Type: String

Valid Values: `ASGAverageCPUUtilization` | `ASGAverageNetworkIn` | `ASGAverageNetworkOut` | `ALBRequestCountPerTarget`

Required: Yes

ResourceLabel

A label that uniquely identifies a specific Application Load Balancer target group from which to determine the average request count served by your Auto Scaling group. You can't specify a resource label unless the target group is attached to the Auto Scaling group.

You create the resource label by appending the final portion of the load balancer ARN and the final portion of the target group ARN into a single value, separated by a forward slash (/). The format of the resource label is:

```
app/my-alb/778d41231b141a0f/targetgroup/my-alb-target-group/943f017f100becff.
```

Where:

- `app/<load-balancer-name>/<load-balancer-id>` is the final portion of the load balancer ARN
- `targetgroup/<target-group-name>/<target-group-id>` is the final portion of the target group ARN.

To find the ARN for an Application Load Balancer, use the [DescribeLoadBalancers](#) API operation. To find the ARN for the target group, use the [DescribeTargetGroups](#) API operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1023.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

PredictiveScalingConfiguration

Represents a predictive scaling policy configuration to use with Amazon EC2 Auto Scaling.

Contents

MaxCapacityBreachBehavior

Defines the behavior that should be applied if the forecast capacity approaches or exceeds the maximum capacity of the Auto Scaling group. Defaults to `HonorMaxCapacity` if not specified.

The following are possible values:

- `HonorMaxCapacity` - Amazon EC2 Auto Scaling cannot scale out capacity higher than the maximum capacity. The maximum capacity is enforced as a hard limit.
- `IncreaseMaxCapacity` - Amazon EC2 Auto Scaling can scale out capacity higher than the maximum capacity when the forecast capacity is close to or exceeds the maximum capacity. The upper limit is determined by the forecasted capacity and the value for `MaxCapacityBuffer`.

Type: String

Valid Values: `HonorMaxCapacity` | `IncreaseMaxCapacity`

Required: No

MaxCapacityBuffer

The size of the capacity buffer to use when the forecast capacity is close to or exceeds the maximum capacity. The value is specified as a percentage relative to the forecast capacity. For example, if the buffer is 10, this means a 10 percent buffer, such that if the forecast capacity is 50, and the maximum capacity is 40, then the effective maximum capacity is 55.

If set to 0, Amazon EC2 Auto Scaling may scale capacity higher than the maximum capacity to equal but not exceed forecast capacity.

Required if the `MaxCapacityBreachBehavior` property is set to `IncreaseMaxCapacity`, and cannot be used otherwise.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

MetricSpecifications.member.N

This structure includes the metrics and target utilization to use for predictive scaling.

This is an array, but we currently only support a single metric specification. That is, you can specify a target value and a single metric pair, or a target value and one scaling metric and one load metric.

Type: Array of [PredictiveScalingMetricSpecification](#) (p. 237) objects

Required: Yes

Mode

The predictive scaling mode. Defaults to `ForecastOnly` if not specified.

Type: String

Valid Values: `ForecastAndScale` | `ForecastOnly`

Required: No

SchedulingBufferTime

The amount of time, in seconds, by which the instance launch time can be advanced. For example, the forecast says to add capacity at 10:00 AM, and you choose to pre-launch instances by 5 minutes. In that case, the instances will be launched at 9:55 AM. The intention is to give resources time to be provisioned. It can take a few minutes to launch an EC2 instance. The actual amount of time required depends on several factors, such as the size of the instance and whether there are startup scripts to complete.

The value must be less than the forecast interval duration of 3600 seconds (60 minutes). Defaults to 300 seconds if not specified.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

PredictiveScalingMetricSpecification

This structure specifies the metrics and target utilization settings for a predictive scaling policy.

You must specify either a metric pair, or a load metric and a scaling metric individually. Specifying a metric pair instead of individual metrics provides a simpler way to configure metrics for a scaling policy. You choose the metric pair, and the policy automatically knows the correct sum and average statistics to use for the load metric and the scaling metric.

Example

- You create a predictive scaling policy and specify `ALBRequestCount` as the value for the metric pair and `1000.0` as the target value. For this type of metric, you must provide the metric dimension for the corresponding target group, so you also provide a resource label for the Application Load Balancer target group that is attached to your Auto Scaling group.
- The number of requests the target group receives per minute provides the load metric, and the request count averaged between the members of the target group provides the scaling metric. In CloudWatch, this refers to the `RequestCount` and `RequestCountPerTarget` metrics, respectively.
- For optimal use of predictive scaling, you adhere to the best practice of using a dynamic scaling policy to automatically scale between the minimum capacity and maximum capacity in response to real-time changes in resource utilization.
- Amazon EC2 Auto Scaling consumes data points for the load metric over the last 14 days and creates an hourly load forecast for predictive scaling. (A minimum of 24 hours of data is required.)
- After creating the load forecast, Amazon EC2 Auto Scaling determines when to reduce or increase the capacity of your Auto Scaling group in each hour of the forecast period so that the average number of requests received by each instance is as close to 1000 requests per minute as possible at all times.

Contents

PredefinedLoadMetricSpecification

The load metric specification.

Type: [PredictiveScalingPredefinedLoadMetric](#) (p. 239) object

Required: No

PredefinedMetricPairSpecification

The metric pair specification from which Amazon EC2 Auto Scaling determines the appropriate scaling metric and load metric to use.

Type: [PredictiveScalingPredefinedMetricPair](#) (p. 241) object

Required: No

PredefinedScalingMetricSpecification

The scaling metric specification.

Type: [PredictiveScalingPredefinedScalingMetric](#) (p. 243) object

Required: No

TargetValue

Specifies the target utilization.

Type: Double

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

PredictiveScalingPredefinedLoadMetric

Describes a load metric for a predictive scaling policy.

When returned in the output of `DescribePolicies`, it indicates that a predictive scaling policy uses individually specified load and scaling metrics instead of a metric pair.

Contents

PredefinedMetricType

The metric type.

Type: String

Valid Values: `ASGTotalCPUUtilization` | `ASGTotalNetworkIn` | `ASGTotalNetworkOut` | `ALBTargetGroupRequestCount`

Required: Yes

ResourceLabel

A label that uniquely identifies a specific Application Load Balancer target group from which to determine the request count served by your Auto Scaling group. You can't specify a resource label unless the target group is attached to the Auto Scaling group.

You create the resource label by appending the final portion of the load balancer ARN and the final portion of the target group ARN into a single value, separated by a forward slash (/). The format of the resource label is:

```
app/my-alb/778d41231b141a0f/targetgroup/my-alb-target-group/943f017f100becff.
```

Where:

- `app/<load-balancer-name>/<load-balancer-id>` is the final portion of the load balancer ARN
- `targetgroup/<target-group-name>/<target-group-id>` is the final portion of the target group ARN.

To find the ARN for an Application Load Balancer, use the [DescribeLoadBalancers](#) API operation. To find the ARN for the target group, use the [DescribeTargetGroups](#) API operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1023.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

PredictiveScalingPredefinedMetricPair

Represents a metric pair for a predictive scaling policy.

Contents

PredefinedMetricType

Indicates which metrics to use. There are two different types of metrics for each metric type: one is a load metric and one is a scaling metric. For example, if the metric type is `ASGCPUtilization`, the Auto Scaling group's total CPU metric is used as the load metric, and the average CPU metric is used for the scaling metric.

Type: String

Valid Values: `ASGCPUtilization` | `ASGNetworkIn` | `ASGNetworkOut` | `ALBRequestCount`

Required: Yes

ResourceLabel

A label that uniquely identifies a specific Application Load Balancer target group from which to determine the total and average request count served by your Auto Scaling group. You can't specify a resource label unless the target group is attached to the Auto Scaling group.

You create the resource label by appending the final portion of the load balancer ARN and the final portion of the target group ARN into a single value, separated by a forward slash (/). The format of the resource label is:

```
app/my-alb/778d41231b141a0f/targetgroup/my-alb-target-group/943f017f100becff.
```

Where:

- `app/<load-balancer-name>/<load-balancer-id>` is the final portion of the load balancer ARN
- `targetgroup/<target-group-name>/<target-group-id>` is the final portion of the target group ARN.

To find the ARN for an Application Load Balancer, use the [DescribeLoadBalancers](#) API operation. To find the ARN for the target group, use the [DescribeTargetGroups](#) API operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1023.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

PredictiveScalingPredefinedScalingMetric

Describes a scaling metric for a predictive scaling policy.

When returned in the output of `DescribePolicies`, it indicates that a predictive scaling policy uses individually specified load and scaling metrics instead of a metric pair.

Contents

PredefinedMetricType

The metric type.

Type: String

Valid Values: `ASGAverageCPUUtilization` | `ASGAverageNetworkIn` | `ASGAverageNetworkOut` | `ALBRequestCountPerTarget`

Required: Yes

ResourceLabel

A label that uniquely identifies a specific Application Load Balancer target group from which to determine the average request count served by your Auto Scaling group. You can't specify a resource label unless the target group is attached to the Auto Scaling group.

You create the resource label by appending the final portion of the load balancer ARN and the final portion of the target group ARN into a single value, separated by a forward slash (/). The format of the resource label is:

```
app/my-alb/778d41231b141a0f/targetgroup/my-alb-target-group/943f017f100becff.
```

Where:

- `app/<load-balancer-name>/<load-balancer-id>` is the final portion of the load balancer ARN
- `targetgroup/<target-group-name>/<target-group-id>` is the final portion of the target group ARN.

To find the ARN for an Application Load Balancer, use the [DescribeLoadBalancers](#) API operation. To find the ARN for the target group, use the [DescribeTargetGroups](#) API operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1023.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ProcessType

Describes a process type.

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

Contents

ProcessName

One of the following processes:

- `Launch`
- `Terminate`
- `AddToLoadBalancer`
- `AlarmNotification`
- `AZRebalance`
- `HealthCheck`
- `InstanceRefresh`
- `ReplaceUnhealthy`
- `ScheduledActions`

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

RefreshPreferences

Describes the preferences for an instance refresh.

Contents

CheckpointDelay

The amount of time, in seconds, to wait after a checkpoint before continuing. This property is optional, but if you specify a value for it, you must also specify a value for `CheckpointPercentages`. If you specify a value for `CheckpointPercentages` and not for `CheckpointDelay`, the `CheckpointDelay` defaults to 3600 (1 hour).

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 172800.

Required: No

CheckpointPercentages.member.N

Threshold values for each checkpoint in ascending order. Each number must be unique. To replace all instances in the Auto Scaling group, the last number in the array must be 100.

For usage examples, see [Adding checkpoints to an instance refresh](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: Array of integers

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

InstanceWarmup

The number of seconds until a newly launched instance is configured and ready to use. During this time, Amazon EC2 Auto Scaling does not immediately move on to the next replacement. The default is to use the value for the health check grace period defined for the group.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

MinHealthyPercentage

The amount of capacity in the Auto Scaling group that must remain healthy during an instance refresh to allow the operation to continue. The value is expressed as a percentage of the desired capacity of the Auto Scaling group (rounded up to the nearest integer). The default is 90.

Setting the minimum healthy percentage to 100 percent limits the rate of replacement to one instance at a time. In contrast, setting it to 0 percent has the effect of replacing all instances at the same time.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

SkipMatching

A boolean value that indicates whether skip matching is enabled. If true, then Amazon EC2 Auto Scaling skips replacing instances that match the desired configuration. If no desired configuration is specified, then it skips replacing instances that have the same configuration that is already set on the group. The default is `false`.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ScalingPolicy

Describes a scaling policy.

Contents

AdjustmentType

Specifies how the scaling adjustment is interpreted (for example, an absolute number or a percentage). The valid values are `ChangeInCapacity`, `ExactCapacity`, and `PercentChangeInCapacity`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

Alarms.member.N

The CloudWatch alarms related to the policy.

Type: Array of [Alarm](#) (p. 176) objects

Required: No

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

Cooldown

The duration of the policy's cooldown period, in seconds.

Type: Integer

Required: No

Enabled

Indicates whether the policy is enabled (`true`) or disabled (`false`).

Type: Boolean

Required: No

EstimatedInstanceWarmup

The estimated time, in seconds, until a newly launched instance can contribute to the CloudWatch metrics.

Type: Integer

Required: No

MetricAggregationType

The aggregation type for the CloudWatch metrics. The valid values are `Minimum`, `Maximum`, and `Average`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

MinAdjustmentMagnitude

The minimum value to scale by when the adjustment type is `PercentChangeInCapacity`.

Type: Integer

Required: No

MinAdjustmentStep

This member has been deprecated.

Available for backward compatibility. Use `MinAdjustmentMagnitude` instead.

Type: Integer

Required: No

PolicyARN

The Amazon Resource Name (ARN) of the policy.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

PolicyName

The name of the scaling policy.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

PolicyType

One of the following policy types:

- `TargetTrackingScaling`
- `StepScaling`
- `SimpleScaling` (default)
- `PredictiveScaling`

For more information, see [Target tracking scaling policies](#) and [Step and simple scaling policies](#) in the *Amazon EC2 Auto Scaling User Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

PredictiveScalingConfiguration

A predictive scaling policy.

Type: [PredictiveScalingConfiguration](#) (p. 235) object

Required: No

ScalingAdjustment

The amount by which to scale, based on the specified adjustment type. A positive value adds to the current capacity while a negative number removes from the current capacity.

Type: Integer

Required: No

StepAdjustments.member.N

A set of adjustments that enable you to scale based on the size of the alarm breach.

Type: Array of [StepAdjustment](#) (p. 256) objects

Required: No

TargetTrackingConfiguration

A target tracking scaling policy.

Type: [TargetTrackingConfiguration](#) (p. 263) object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ScheduledUpdateGroupAction

Describes a scheduled scaling action.

Contents

AutoScalingGroupName

The name of the Auto Scaling group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

DesiredCapacity

The desired capacity is the initial capacity of the Auto Scaling group after the scheduled action runs and the capacity it attempts to maintain.

Type: Integer

Required: No

EndTime

The date and time in UTC for the recurring schedule to end. For example, "2019-06-01T00:00:00Z".

Type: Timestamp

Required: No

MaxSize

The maximum size of the Auto Scaling group.

Type: Integer

Required: No

MinSize

The minimum size of the Auto Scaling group.

Type: Integer

Required: No

Recurrence

The recurring schedule for the action, in Unix cron syntax format.

When `StartTime` and `EndTime` are specified with `Recurrence`, they form the boundaries of when the recurring action starts and stops.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

ScheduledActionARN

The Amazon Resource Name (ARN) of the scheduled action.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

ScheduledActionName

The name of the scheduled action.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

StartTime

The date and time in UTC for this action to start. For example, "2019-06-01T00:00:00Z".

Type: Timestamp

Required: No

Time

This parameter is no longer used.

Type: Timestamp

Required: No

TimeZone

The time zone for the cron expression.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for Ruby V3](#)

ScheduledUpdateGroupActionRequest

Describes information used for one or more scheduled scaling action updates in a [BatchPutScheduledUpdateGroupAction](#) (p. 15) operation.

Contents

DesiredCapacity

The desired capacity is the initial capacity of the Auto Scaling group after the scheduled action runs and the capacity it attempts to maintain.

Type: Integer

Required: No

EndTime

The date and time for the recurring schedule to end, in UTC.

Type: Timestamp

Required: No

MaxSize

The maximum size of the Auto Scaling group.

Type: Integer

Required: No

MinSize

The minimum size of the Auto Scaling group.

Type: Integer

Required: No

Recurrence

The recurring schedule for the action, in Unix cron syntax format. This format consists of five fields separated by white spaces: [Minute] [Hour] [Day_of_Month] [Month_of_Year] [Day_of_Week]. The value must be in quotes (for example, "30 0 1 1,6,12 *"). For more information about this format, see [Crontab](#).

When `StartTime` and `EndTime` are specified with `Recurrence`, they form the boundaries of when the recurring action starts and stops.

Cron expressions use Universal Coordinated Time (UTC) by default.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDFFF\r\n\t] *

Required: No

ScheduledActionName

The name of the scaling action.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

StartTime

The date and time for the action to start, in YYYY-MM-DDThh:mm:ssZ format in UTC/GMT only and in quotes (for example, "2019-06-01T00:00:00Z").

If you specify `Recurrence` and `StartTime`, Amazon EC2 Auto Scaling performs the action at this time, and then performs the action based on the specified recurrence.

If you try to schedule the action in the past, Amazon EC2 Auto Scaling returns an error message.

Type: Timestamp

Required: No

TimeZone

Specifies the time zone for a cron expression. If a time zone is not provided, UTC is used by default.

Valid values are the canonical names of the IANA time zones, derived from the IANA Time Zone Database (such as `Etc/GMT+9` or `Pacific/Tahiti`). For more information, see https://en.wikipedia.org/wiki/List_of_tz_database_time_zones.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

StepAdjustment

Describes information used to create a step adjustment for a step scaling policy.

For the following examples, suppose that you have an alarm with a breach threshold of 50:

- To trigger the adjustment when the metric is greater than or equal to 50 and less than 60, specify a lower bound of 0 and an upper bound of 10.
- To trigger the adjustment when the metric is greater than 40 and less than or equal to 50, specify a lower bound of -10 and an upper bound of 0.

There are a few rules for the step adjustments for your step policy:

- The ranges of your step adjustments can't overlap or have a gap.
- At most, one step adjustment can have a null lower bound. If one step adjustment has a negative lower bound, then there must be a step adjustment with a null lower bound.
- At most, one step adjustment can have a null upper bound. If one step adjustment has a positive upper bound, then there must be a step adjustment with a null upper bound.
- The upper and lower bound can't be null in the same step adjustment.

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

Contents

MetricIntervalLowerBound

The lower bound for the difference between the alarm threshold and the CloudWatch metric. If the metric value is above the breach threshold, the lower bound is inclusive (the metric must be greater than or equal to the threshold plus the lower bound). Otherwise, it is exclusive (the metric must be greater than the threshold plus the lower bound). A null value indicates negative infinity.

Type: Double

Required: No

MetricIntervalUpperBound

The upper bound for the difference between the alarm threshold and the CloudWatch metric. If the metric value is above the breach threshold, the upper bound is exclusive (the metric must be less than the threshold plus the upper bound). Otherwise, it is inclusive (the metric must be less than or equal to the threshold plus the upper bound). A null value indicates positive infinity.

The upper bound must be greater than the lower bound.

Type: Double

Required: No

ScalingAdjustment

The amount by which to scale, based on the specified adjustment type. A positive value adds to the current capacity while a negative number removes from the current capacity.

Type: Integer

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

SuspendedProcess

Describes an auto scaling process that has been suspended.

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

Contents

ProcessName

The name of the suspended process.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

SuspensionReason

The reason that the process was suspended.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

Tag

Describes a tag for an Auto Scaling group.

Contents

Key

The tag key.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

PropagateAtLaunch

Determines whether the tag is added to new instances as they are launched in the group.

Type: Boolean

Required: No

ResourceId

The name of the Auto Scaling group.

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

ResourceType

The type of resource. The only supported value is `auto-scaling-group`.

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

Value

The tag value.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

TagDescription

Describes a tag for an Auto Scaling group.

Contents

Key

The tag key.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

PropagateAtLaunch

Determines whether the tag is added to new instances as they are launched in the group.

Type: Boolean

Required: No

ResourceId

The name of the group.

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

ResourceType

The type of resource. The only supported value is `auto-scaling-group`.

Type: String

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

Value

The tag value.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: [\u0020-\uD7FF\uE000-\uFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

TargetTrackingConfiguration

Represents a target tracking scaling policy configuration to use with Amazon EC2 Auto Scaling.

Contents

CustomizedMetricSpecification

A customized metric. You must specify either a predefined metric or a customized metric.

Type: [CustomizedMetricSpecification](#) (p. 188) object

Required: No

DisableScaleIn

Indicates whether scaling in by the target tracking scaling policy is disabled. If scaling in is disabled, the target tracking scaling policy doesn't remove instances from the Auto Scaling group. Otherwise, the target tracking scaling policy can remove instances from the Auto Scaling group. The default is `false`.

Type: Boolean

Required: No

PredefinedMetricSpecification

A predefined metric. You must specify either a predefined metric or a customized metric.

Type: [PredefinedMetricSpecification](#) (p. 233) object

Required: No

TargetValue

The target value for the metric.

Type: Double

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

WarmPoolConfiguration

Describes a warm pool configuration.

Contents

MaxGroupPreparedCapacity

The maximum number of instances that are allowed to be in the warm pool or in any state except `Terminated` for the Auto Scaling group.

Type: Integer

Valid Range: Minimum value of -1.

Required: No

MinSize

The minimum number of instances to maintain in the warm pool.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

PoolState

The instance state to transition to after the lifecycle actions are complete.

Type: String

Valid Values: `Stopped` | `Running`

Required: No

Status

The status of a warm pool that is marked for deletion.

Type: String

Valid Values: `PendingDelete`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

Common Parameters

The following list contains the parameters that all actions use for signing Signature Version 4 requests with a query string. Any action-specific parameters are listed in the topic for that action. For more information about Signature Version 4, see [Signature Version 4 Signing Process](#) in the *Amazon Web Services General Reference*.

Action

The action to be performed.

Type: string

Required: Yes

Version

The API version that the request is written for, expressed in the format YYYY-MM-DD.

Type: string

Required: Yes

X-Amz-Algorithm

The hash algorithm that you used to create the request signature.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Valid Values: `AWS4-HMAC-SHA256`

Required: Conditional

X-Amz-Credential

The credential scope value, which is a string that includes your access key, the date, the region you are targeting, the service you are requesting, and a termination string ("aws4_request"). The value is expressed in the following format: `access_key/YYYYMMDD/region/service/aws4_request`.

For more information, see [Task 2: Create a String to Sign for Signature Version 4](#) in the *Amazon Web Services General Reference*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

X-Amz-Date

The date that is used to create the signature. The format must be ISO 8601 basic format (YYYYMMDD'THHMMSS'Z'). For example, the following date time is a valid X-Amz-Date value: `20120325T120000Z`.

Condition: X-Amz-Date is optional for all requests; it can be used to override the date used for signing requests. If the Date header is specified in the ISO 8601 basic format, X-Amz-Date is

not required. When X-Amz-Date is used, it always overrides the value of the Date header. For more information, see [Handling Dates in Signature Version 4](#) in the *Amazon Web Services General Reference*.

Type: string

Required: Conditional

X-Amz-Security-Token

The temporary security token that was obtained through a call to AWS Security Token Service (AWS STS). For a list of services that support temporary security credentials from AWS Security Token Service, go to [AWS Services That Work with IAM](#) in the *IAM User Guide*.

Condition: If you're using temporary security credentials from the AWS Security Token Service, you must include the security token.

Type: string

Required: Conditional

X-Amz-Signature

Specifies the hex-encoded signature that was calculated from the string to sign and the derived signing key.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

X-Amz-SignedHeaders

Specifies all the HTTP headers that were included as part of the canonical request. For more information about specifying signed headers, see [Task 1: Create a Canonical Request For Signature Version 4](#) in the *Amazon Web Services General Reference*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

Common Errors

This section lists the errors common to the API actions of all AWS services. For errors specific to an API action for this service, see the topic for that API action.

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

IncompleteSignature

The request signature does not conform to AWS standards.

HTTP Status Code: 400

InternalFailure

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

InvalidAction

The action or operation requested is invalid. Verify that the action is typed correctly.

HTTP Status Code: 400

InvalidClientTokenId

The X.509 certificate or AWS access key ID provided does not exist in our records.

HTTP Status Code: 403

InvalidParameterCombination

Parameters that must not be used together were used together.

HTTP Status Code: 400

InvalidParameterValue

An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

InvalidQueryParameter

The AWS query string is malformed or does not adhere to AWS standards.

HTTP Status Code: 400

MalformedQueryString

The query string contains a syntax error.

HTTP Status Code: 404

MissingAction

The request is missing an action or a required parameter.

HTTP Status Code: 400

MissingAuthenticationToken

The request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 403

MissingParameter

A required parameter for the specified action is not supplied.

HTTP Status Code: 400

NotAuthorized

You do not have permission to perform this action.

HTTP Status Code: 400

OptInRequired

The AWS access key ID needs a subscription for the service.

HTTP Status Code: 403

RequestExpired

The request reached the service more than 15 minutes after the date stamp on the request or more than 15 minutes after the request expiration date (such as for pre-signed URLs), or the date stamp on the request is more than 15 minutes in the future.

HTTP Status Code: 400

ServiceUnavailable

The request has failed due to a temporary failure of the server.

HTTP Status Code: 503

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

ValidationError

The input fails to satisfy the constraints specified by an AWS service.

HTTP Status Code: 400

Auto Scaling SOAP API

We have deprecated the SOAP API for Amazon EC2 Auto Scaling. As of December 4, 2017, if you make a SOAP request, you will receive the following response:

```
Client.InvalidQueryParameter: SOAP is no longer supported
```

We recommend that you use the Query API for Amazon EC2 Auto Scaling, the AWS CLI, or one of the AWS SDKs. For more information, see [Accessing Amazon EC2 Auto Scaling](#) in the *Amazon EC2 Auto Scaling User Guide*.

Granting IAM users required permissions for Amazon EC2 Auto Scaling resources

By default, AWS Identity and Access Management (IAM) users don't have permission to create or modify Amazon EC2 Auto Scaling resources, or perform tasks using the Amazon EC2 Auto Scaling API. To allow IAM users to create or modify resources and perform tasks, an IAM administrator with the account must create IAM policies that grant IAM users permissions for the specific resources and API actions they will need to use, and then attach those policies to the IAM users or groups that require those permissions.

In general, to perform an Amazon EC2 Auto Scaling action, an IAM user must have only the matching action included in a policy, but doesn't need to be explicitly granted permission to manage Amazon EC2 instances. In some cases, however, an action might require that you include additional related actions in your policy. For example, if an IAM user calls `UpdateAutoScalingGroup` to update an Auto Scaling group to use a launch template (by specifying the `LaunchTemplate` parameter), the IAM user must also have permissions for the specific launch template resources and API actions they need.

When you create or edit a policy using the visual editor in the IAM console, you receive warnings and prompts to help you choose all of the required actions for your policy.

For certain API actions, you can control when users are allowed to use those actions based on conditions that have to be fulfilled, or specific resources that users are allowed to use. For example, you can grant users permission to pass an IAM role to EC2 instances, but only if the name of the role matches the one specified in a policy statement attached to the user.

For more information about the Amazon EC2 Auto Scaling actions, ARNs, and condition keys that you can use in an IAM policy statement, see [Actions, Resources, and Condition Keys for Amazon EC2 Auto Scaling](#) in the *Service Authorization Reference*.

For more information and for example policies, see [Identity and Access Management for Amazon EC2 Auto Scaling](#) in the *Amazon EC2 Auto Scaling User Guide*.