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# Application Auto Scaling

## API Reference

**API Version 2016-02-06**



## **Application Auto Scaling: API Reference**

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# Welcome

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With Application Auto Scaling, you can automatically scale your AWS resources. The experience is similar to that of [Auto Scaling](#). You can use Application Auto Scaling to accomplish the following tasks:

- Define scaling policies to automatically scale your AWS resources
- Scale your resources in response to CloudWatch alarms
- View the history of your scaling events

Application Auto Scaling can scale the following AWS resources:

- Amazon ECS services. For more information, see [Service Auto Scaling](#) in the *Amazon EC2 Container Service Developer Guide*.
- Amazon EC2 Spot fleets. For more information, see [Automatic Scaling for Spot Fleet](#) in the *Amazon EC2 User Guide*.
- Amazon EMR clusters. For more information, see [Using Automatic Scaling in Amazon EMR](#) in the *Amazon EMR Management Guide*.

For a list of supported regions, see [AWS Regions and Endpoints: Application Auto Scaling](#) in the *AWS General Reference*.

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# Actions

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The following actions are supported:

- [DeleteScalingPolicy](#) (p. 3)
- [DeregisterScalableTarget](#) (p. 6)
- [DescribeScalableTargets](#) (p. 9)
- [DescribeScalingActivities](#) (p. 13)
- [DescribeScalingPolicies](#) (p. 18)
- [PutScalingPolicy](#) (p. 23)
- [RegisterScalableTarget](#) (p. 27)

## DeleteScalingPolicy

Deletes the specified Application Auto Scaling scaling policy.

Deleting a policy deletes the underlying alarm action, but does not delete the CloudWatch alarm associated with the scaling policy, even if it no longer has an associated action.

To create a scaling policy or update an existing one, see [PutScalingPolicy \(p. 23\)](#).

## Request Syntax

```
{
  "PolicyName": "string",
  "ResourceId": "string",
  "ScalableDimension": "string",
  "ServiceNamespace": "string"
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 40\)](#).

The request accepts the following data in JSON format.

### PolicyName (p. 3)

The name of the scaling policy.

Type: String

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

Pattern: [0020-\u007F\u0000-\u00FF\u0080\uDC00-\uDBFF\uDFFF\r\n\t]\*

Required: Yes

### ResourceId (p. 3)

The identifier of the resource associated with the scalable target. This string consists of the resource type and unique identifier.

- ECS service - The resource type is `service` and the unique identifier is the cluster name and service name. Example: `service/default/sample-webapp`.
- Spot fleet request - The resource type is `spot-fleet-request` and the unique identifier is the Spot fleet request ID. Example: `spot-fleet-request/sfr-73fbd2ce-aa30-494c-8788-1cee4EXAMPLE`.
- EMR cluster - The resource type is `instancegroup` and the unique identifier is the cluster ID and instance group ID. Example: `instancegroup/j-2EEZNYKUA1NTV/ig-1791Y4E1L8YI0`.

Type: String

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

Pattern: [0020-\u007F\u0000-\u00FF\u0080\uDC00-\uDBFF\uDFFF\r\n\t]\*

Required: Yes

### ScalableDimension (p. 3)

The scalable dimension. This string consists of the service namespace, resource type, and scaling property.

- `ecs:service:DesiredCount` - The desired task count of an ECS service.
- `ec2:spot-fleet-request:TargetCapacity` - The target capacity of a Spot fleet request.
- `elasticmapreduce:instancegroup:InstanceCount` - The instance count of an EMR Instance Group.

Type: String

Valid Values: `ecs:service:DesiredCount` | `ec2:spot-fleet-request:TargetCapacity` | `elasticmapreduce:instancegroup:InstanceCount`  
Required: Yes

### ServiceNamespace (p. 3)

The namespace of the AWS service. For more information, see [AWS Service Namespaces](#) in the *Amazon Web Services General Reference*.

Type: String

Valid Values: `ecs` | `elasticmapreduce` | `ec2`

Required: Yes

## Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 42\)](#).

### ConcurrentUpdateException

Concurrent updates caused an exception, for example, if you request an update to an Application Auto Scaling resource that already has a pending update.

HTTP Status Code: 400

### InternalServiceException

The service encountered an internal error.

HTTP Status Code: 400

### ObjectNotFoundException

The specified object could not be found. For any `Put` or `Register` API operation, which depends on the existence of a scalable target, this exception is thrown if the scalable target with the specified service namespace, resource ID, and scalable dimension does not exist. For any `Delete` or `Deregister` API operation, this exception is thrown if the resource that is to be deleted or deregistered cannot be found.

HTTP Status Code: 400

### ValidationException

An exception was thrown for a validation issue. Review the available parameters for the API request.

HTTP Status Code: 400

## Example

If you plan to create requests manually, you must replace the Authorization header contents in the examples (`AUTHPARAMS`) with a signature. For more information, see [Signature Version 4 Signing Process](#) in the *AWS General Reference*. If you plan to use the [AWS CLI](#) or one of the [AWS SDKs](#), these tools sign the requests for you.

## Example

The following example deletes a scaling policy for the Amazon ECS service `web-app` running in the `default` cluster.

## Sample Request

```
POST / HTTP/1.1
Host: autoscaling.us-west-2.amazonaws.com
Accept-Encoding: identity
```



```
Content-Length: 152
X-Amz-Target: AnyScaleFrontendService.DeleteScalingPolicy
X-Amz-Date: 20160506T205712Z
User-Agent: aws-cli/1.10.23 Python/2.7.11 Darwin/15.4.0 boto/1.4.8
Content-Type: application/x-amz-json-1.1
Authorization: AUTHPARAMS

{
  "PolicyName": "web-app-cpu-lt-25",
  "ServiceNamespace": "ecs",
  "ScalableDimension": "ecs:service:DesiredCount",
  "ResourceId": "service/default/web-app"
}
```

# DeregisterScalableTarget

Deregisters a scalable target.

Deregistering a scalable target deletes the scaling policies that are associated with it.

To create a scalable target or update an existing one, see [RegisterScalableTarget \(p. 27\)](#).

## Request Syntax

```
{  
  "ResourceId": "string",  
  "ScalableDimension": "string",  
  "ServiceNamespace": "string"  
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 40\)](#).

The request accepts the following data in JSON format.

### ResourceId (p. 6)

The identifier of the resource associated with the scalable target. This string consists of the resource type and unique identifier.

- ECS service - The resource type is `service` and the unique identifier is the cluster name and service name. Example: `service/default/sample-webapp`.
- Spot fleet request - The resource type is `spot-fleet-request` and the unique identifier is the Spot fleet request ID. Example: `spot-fleet-request/sfr-73fbd2ce-aa30-494c-8788-1cee4EXAMPLE`.
- EMR cluster - The resource type is `instancegroup` and the unique identifier is the cluster ID and instance group ID. Example: `instancegroup/j-2EEZNYKUA1NTV/ig-1791Y4E1L8YI0`.

Type: String

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

Pattern: `[ \u0020-\u0021-\u0022-\u0023-\u0024-\u0025-\u0026-\u0027-\u0028-\u0029-\u002a-\u002b-\u002c-\u002d-\u002e-\u002f-\u0030-\u0031-\u0032-\u0033-\u0034-\u0035-\u0036-\u0037-\u0038-\u0039-\u003a-\u003b-\u003c-\u003d-\u003e-\u003f-\u0040-\u0041-\u0042-\u0043-\u0044-\u0045-\u0046-\u0047-\u0048-\u0049-\u004a-\u004b-\u004c-\u004d-\u004e-\u004f-\u0050-\u0051-\u0052-\u0053-\u0054-\u0055-\u0056-\u0057-\u0058-\u0059-\u005a-\u005b-\u005c-\u005d-\u005e-\u005f-\u0060-\u0061-\u0062-\u0063-\u0064-\u0065-\u0066-\u0067-\u0068-\u0069-\u006a-\u006b-\u006c-\u006d-\u006e-\u006f-\u0070-\u0071-\u0072-\u0073-\u0074-\u0075-\u0076-\u0077-\u0078-\u0079-\u007a-\u007b-\u007c-\u007d-\u007e-\u007f-\u0080-\u0081-\u0082-\u0083-\u0084-\u0085-\u0086-\u0087-\u0088-\u0089-\u008a-\u008b-\u008c-\u008d-\u008e-\u008f-\u0090-\u0091-\u0092-\u0093-\u0094-\u0095-\u0096-\u0097-\u0098-\u0099-\u009a-\u009b-\u009c-\u009d-\u009e-\u009f-\u00a0-\u00a1-\u00a2-\u00a3-\u00a4-\u00a5-\u00a6-\u00a7-\u00a8-\u00a9-\u00aa-\u00ab-\u00ac-\u00ad-\u00ae-\u00af-\u00b0-\u00b1-\u00b2-\u00b3-\u00b4-\u00b5-\u00b6-\u00b7-\u00b8-\u00b9-\u00ba-\u00bb-\u00bc-\u00bd-\u00be-\u00bf-\u00c0-\u00c1-\u00c2-\u00c3-\u00c4-\u00c5-\u00c6-\u00c7-\u00c8-\u00c9-\u00ca-\u00cb-\u00cc-\u00cd-\u00ce-\u00cf-\u00d0-\u00d1-\u00d2-\u00d3-\u00d4-\u00d5-\u00d6-\u00d7-\u00d8-\u00d9-\u00da-\u00db-\u00dc-\u00dd-\u00de-\u00df-\u00e0-\u00e1-\u00e2-\u00e3-\u00e4-\u00e5-\u00e6-\u00e7-\u00e8-\u00e9-\u00ea-\u00eb-\u00ec-\u00ed-\u00ee-\u00ef-\u00f0-\u00f1-\u00f2-\u00f3-\u00f4-\u00f5-\u00f6-\u00f7-\u00f8-\u00f9-\u00fa-\u00fb-\u00fc-\u00fd-\u00fe-\u00ff-\u0100-\u0101-\u0102-\u0103-\u0104-\u0105-\u0106-\u0107-\u0108-\u0109-\u010a-\u010b-\u010c-\u010d-\u010e-\u010f-\u0110-\u0111-\u0112-\u0113-\u0114-\u0115-\u0116-\u0117-\u0118-\u0119-\u011a-\u011b-\u011c-\u011d-\u011e-\u011f-\u0120-\u0121-\u0122-\u0123-\u0124-\u0125-\u0126-\u0127-\u0128-\u0129-\u012a-\u012b-\u012c-\u012d-\u012e-\u012f-\u0130-\u0131-\u0132-\u0133-\u0134-\u0135-\u0136-\u0137-\u0138-\u0139-\u013a-\u013b-\u013c-\u013d-\u013e-\u013f-\u0140-\u0141-\u0142-\u0143-\u0144-\u0145-\u0146-\u0147-\u0148-\u0149-\u014a-\u014b-\u014c-\u014d-\u014e-\u014f-\u0150-\u0151-\u0152-\u0153-\u0154-\u0155-\u0156-\u0157-\u0158-\u0159-\u015a-\u015b-\u015c-\u015d-\u015e-\u015f-\u0160-\u0161-\u0162-\u0163-\u0164-\u0165-\u0166-\u0167-\u0168-\u0169-\u016a-\u016b-\u016c-\u016d-\u016e-\u016f-\u0170-\u0171-\u0172-\u0173-\u0174-\u0175-\u0176-\u0177-\u0178-\u0179-\u017a-\u017b-\u017c-\u017d-\u017e-\u017f-\u0180-\u0181-\u0182-\u0183-\u0184-\u0185-\u0186-\u0187-\u0188-\u0189-\u018a-\u018b-\u018c-\u018d-\u018e-\u018f-\u0190-\u0191-\u0192-\u0193-\u0194-\u0195-\u0196-\u0197-\u0198-\u0199-\u019a-\u019b-\u019c-\u019d-\u019e-\u019f-\u01a0-\u01a1-\u01a2-\u01a3-\u01a4-\u01a5-\u01a6-\u01a7-\u01a8-\u01a9-\u01aa-\u01ab-\u01ac-\u01ad-\u01ae-\u01af-\u01b0-\u01b1-\u01b2-\u01b3-\u01b4-\u01b5-\u01b6-\u01b7-\u01b8-\u01b9-\u01ba-\u01bb-\u01bc-\u01bd-\u01be-\u01bf-\u01c0-\u01c1-\u01c2-\u01c3-\u01c4-\u01c5-\u01c6-\u01c7-\u01c8-\u01c9-\u01ca-\u01cb-\u01cc-\u01cd-\u01ce-\u01cf-\u01d0-\u01d1-\u01d2-\u01d3-\u01d4-\u01d5-\u01d6-\u01d7-\u01d8-\u01d9-\u01da-\u01db-\u01dc-\u01dd-\u01de-\u01df-\u01e0-\u01e1-\u01e2-\u01e3-\u01e4-\u01e5-\u01e6-\u01e7-\u01e8-\u01e9-\u01ea-\u01eb-\u01ec-\u01ed-\u01ee-\u01ef-\u01f0-\u01f1-\u01f2-\u01f3-\u01f4-\u01f5-\u01f6-\u01f7-\u01f8-\u01f9-\u01fa-\u01fb-\u01fc-\u01fd-\u01fe-\u01ff-\u0200-\u0201-\u0202-\u0203-\u0204-\u0205-\u0206-\u0207-\u0208-\u0209-\u020a-\u020b-\u020c-\u020d-\u020e-\u020f-\u0210-\u0211-\u0212-\u0213-\u0214-\u0215-\u0216-\u0217-\u0218-\u0219-\u021a-\u021b-\u021c-\u021d-\u021e-\u021f-\u0220-\u0221-\u0222-\u0223-\u0224-\u0225-\u0226-\u0227-\u0228-\u0229-\u022a-\u022b-\u022c-\u022d-\u022e-\u022f-\u0230-\u0231-\u0232-\u0233-\u0234-\u0235-\u0236-\u0237-\u0238-\u0239-\u023a-\u023b-\u023c-\u023d-\u023e-\u023f-\u0240-\u0241-\u0242-\u0243-\u0244-\u0245-\u0246-\u0247-\u0248-\u0249-\u024a-\u024b-\u024c-\u024d-\u024e-\u024f-\u0250-\u0251-\u0252-\u0253-\u0254-\u0255-\u0256-\u0257-\u0258-\u0259-\u025a-\u025b-\u025c-\u025d-\u025e-\u025f-\u0260-\u0261-\u0262-\u0263-\u0264-\u0265-\u0266-\u0267-\u0268-\u0269-\u026a-\u026b-\u026c-\u026d-\u026e-\u026f-\u0270-\u0271-\u0272-\u0273-\u0274-\u0275-\u0276-\u0277-\u0278-\u0279-\u027a-\u027b-\u027c-\u027d-\u027e-\u027f-\u0280-\u0281-\u0282-\u0283-\u0284-\u0285-\u0286-\u0287-\u0288-\u0289-\u028a-\u028b-\u028c-\u028d-\u028e-\u028f-\u0290-\u0291-\u0292-\u0293-\u0294-\u0295-\u0296-\u0297-\u0298-\u0299-\u029a-\u029b-\u029c-\u029d-\u029e-\u029f-\u02a0-\u02a1-\u02a2-\u02a3-\u02a4-\u02a5-\u02a6-\u02a7-\u02a8-\u02a9-\u02aa-\u02ab-\u02ac-\u02ad-\u02ae-\u02af-\u02b0-\u02b1-\u02b2-\u02b3-\u02b4-\u02b5-\u02b6-\u02b7-\u02b8-\u02b9-\u02ba-\u02bb-\u02bc-\u02bd-\u02be-\u02bf-\u02c0-\u02c1-\u02c2-\u02c3-\u02c4-\u02c5-\u02c6-\u02c7-\u02c8-\u02c9-\u02ca-\u02cb-\u02cc-\u02cd-\u02ce-\u02cf-\u02d0-\u02d1-\u02d2-\u02d3-\u02d4-\u02d5-\u02d6-\u02d7-\u02d8-\u02d9-\u02da-\u02db-\u02dc-\u02dd-\u02de-\u02df-\u02e0-\u02e1-\u02e2-\u02e3-\u02e4-\u02e5-\u02e6-\u02e7-\u02e8-\u02e9-\u02ea-\u02eb-\u02ec-\u02ed-\u02ee-\u02ef-\u02f0-\u02f1-\u02f2-\u02f3-\u02f4-\u02f5-\u02f6-\u02f7-\u02f8-\u02f9-\u02fa-\u02fb-\u02fc-\u02fd-\u02fe-\u02ff-\u0300-\u0301-\u0302-\u0303-\u0304-\u0305-\u0306-\u0307-\u0308-\u0309-\u030a-\u030b-\u030c-\u030d-\u030e-\u030f-\u0310-\u0311-\u0312-\u0313-\u0314-\u0315-\u0316-\u0317-\u0318-\u0319-\u031a-\u031b-\u031c-\u031d-\u031e-\u031f-\u0320-\u0321-\u0322-\u0323-\u0324-\u0325-\u0326-\u0327-\u0328-\u0329-\u032a-\u032b-\u032c-\u032d-\u032e-\u032f-\u0330-\u0331-\u0332-\u0333-\u0334-\u0335-\u0336-\u0337-\u0338-\u0339-\u033a-\u033b-\u033c-\u033d-\u033e-\u033f-\u0340-\u0341-\u0342-\u0343-\u0344-\u0345-\u0346-\u0347-\u0348-\u0349-\u034a-\u034b-\u034c-\u034d-\u034e-\u034f-\u0350-\u0351-\u0352-\u0353-\u0354-\u0355-\u0356-\u0357-\u0358-\u0359-\u035a-\u035b-\u035c-\u035d-\u035e-\u035f-\u0360-\u0361-\u0362-\u0363-\u0364-\u0365-\u0366-\u0367-\u0368-\u0369-\u036a-\u036b-\u036c-\u036d-\u036e-\u036f-\u0370-\u0371-\u0372-\u0373-\u0374-\u0375-\u0376-\u0377-\u0378-\u0379-\u037a-\u037b-\u037c-\u037d-\u037e-\u037f-\u0380-\u0381-\u0382-\u0383-\u0384-\u0385-\u0386-\u0387-\u0388-\u0389-\u038a-\u038b-\u038c-\u038d-\u038e-\u038f-\u0390-\u0391-\u0392-\u0393-\u0394-\u0395-\u0396-\u0397-\u0398-\u0399-\u039a-\u039b-\u039c-\u039d-\u039e-\u039f-\u03a0-\u03a1-\u03a2-\u03a3-\u03a4-\u03a5-\u03a6-\u03a7-\u03a8-\u03a9-\u03aa-\u03ab-\u03ac-\u03ad-\u03ae-\u03af-\u03b0-\u03b1-\u03b2-\u03b3-\u03b4-\u03b5-\u03b6-\u03b7-\u03b8-\u03b9-\u03ba-\u03bb-\u03bc-\u03bd-\u03be-\u03bf-\u03c0-\u03c1-\u03c2-\u03c3-\u03c4-\u03c5-\u03c6-\u03c7-\u03c8-\u03c9-\u03ca-\u03cb-\u03cc-\u03cd-\u03ce-\u03cf-\u03d0-\u03d1-\u03d2-\u03d3-\u03d4-\u03d5-\u03d6-\u03d7-\u03d8-\u03d9-\u03da-\u03db-\u03dc-\u03dd-\u03de-\u03df-\u03e0-\u03e1-\u03e2-\u03e3-\u03e4-\u03e5-\u03e6-\u03e7-\u03e8-\u03e9-\u03ea-\u03eb-\u03ec-\u03ed-\u03ee-\u03ef-\u03f0-\u03f1-\u03f2-\u03f3-\u03f4-\u03f5-\u03f6-\u03f7-\u03f8-\u03f9-\u03fa-\u03fb-\u03fc-\u03fd-\u03fe-\u03ff-\u0400-\u0401-\u0402-\u0403-\u0404-\u0405-\u0406-\u0407-\u0408-\u0409-\u040a-\u040b-\u040c-\u040d-\u040e-\u040f-\u0410-\u0411-\u0412-\u0413-\u0414-\u0415-\u0416-\u0417-\u0418-\u0419-\u041a-\u041b-\u041c-\u041d-\u041e-\u041f-\u0420-\u0421-\u0422-\u0423-\u0424-\u0425-\u0426-\u0427-\u0428-\u0429-\u042a-\u042b-\u042c-\u042d-\u042e-\u042f-\u0430-\u0431-\u0432-\u0433-\u0434-\u0435-\u0436-\u0437-\u0438-\u0439-\u043a-\u043b-\u043c-\u043d-\u043e-\u043f-\u0440-\u0441-\u0442-\u0443-\u0444-\u0445-\u0446-\u0447-\u0448-\u0449-\u044a-\u044b-\u044c-\u044d-\u044e-\u044f-\u0450-\u0451-\u0452-\u0453-\u0454-\u0455-\u0456-\u0457-\u0458-\u0459-\u045a-\u045b-\u045c-\u045d-\u045e-\u045f-\u0460-\u0461-\u0462-\u0463-\u0464-\u0465-\u0466-\u0467-\u0468-\u0469-\u046a-\u046b-\u046c-\u046d-\u046e-\u046f-\u0470-\u0471-\u0472-\u0473-\u0474-\u0475-\u0476-\u0477-\u0478-\u0479-\u047a-\u047b-\u047c-\u047d-\u047e-\u047f-\u0480-\u0481-\u0482-\u0483-\u0484-\u0485-\u0486-\u0487-\u0488-\u0489-\u048a-\u048b-\u048c-\u048d-\u048e-\u048f-\u0490-\u0491-\u0492-\u0493-\u0494-\u0495-\u0496-\u0497-\u0498-\u0499-\u049a-\u049b-\u049c-\u049d-\u049e-\u049f-\u04a0-\u04a1-\u04a2-\u04a3-\u04a4-\u04a5-\u04a6-\u04a7-\u04a8-\u04a9-\u04aa-\u04ab-\u04ac-\u04ad-\u04ae-\u04af-\u04b0-\u04b1-\u04b2-\u04b3-\u04b4-\u04b5-\u04b6-\u04b7-\u04b8-\u04b9-\u04ba-\u04bb-\u04bc-\u04bd-\u04be-\u04bf-\u04c0-\u04c1-\u04c2-\u04c3-\u04c4-\u04c5-\u04c6-\u04c7-\u04c8-\u04c9-\u04ca-\u04cb-\u04cc-\u04cd-\u04ce-\u04cf-\u04d0-\u04d1-\u04d2-\u04d3-\u04d4-\u04d5-\u04d6-\u04d7-\u04d8-\u04d9-\u04da-\u04db-\u04dc-\u04dd-\u04de-\u04df-\u04e0-\u04e1-\u04e2-\u04e3-\u04e4-\u04e5-\u04e6-\u04e7-\u04e8-\u04e9-\u04ea-\u04eb-\u04ec-\u04ed-\u04ee-\u04ef-\u04f0-\u04f1-\u04f2-\u04f3-\u04f4-\u04f5-\u04f6-\u04f7-\u04f8-\u04f9-\u04fa-\u04fb-\u04fc-\u04fd-\u04fe-\u04ff-\u0500-\u0501-\u0502-\u0503-\u0504-\u0505-\u0506-\u0507-\u0508-\u0509-\u050a-\u050b-\u050c-\u050d-\u050e-\u050f-\u0510-\u0511-\u0512-\u0513-\u0514-\u0515-\u0516-\u0517-\u0518-\u0519-\u051a-\u051b-\u051c-\u051d-\u051e-\u051f-\u0520-\u0521-\u0522-\u0523-\u0524-\u0525-\u0526-\u0527-\u0528-\u0529-\u052a-\u052b-\u052c-\u052d-\u052e-\u052f-\u0530-\u0531-\u0532-\u0533-\u0534-\u0535-\u0536-\u0537-\u0538-\u0539-\u053a-\u053b-\u053c-\u053d-\u053e-\u053f-\u0540-\u0541-\u0542-\u0543-\u0544-\u0545-\u0546-\u0547-\u0548-\u0549-\u054a-\u054b-\u054c-\u054d-\u054e-\u054f-\u0550-\u0551-\u0552-\u0553-\u0554-\u0555-\u0556-\u0557-\u0558-\u0559-\u055a-\u055b-\u055c-\u055d-\u055e-\u055f-\u0560-\u0561-\u0562-\u0563-\u0564-\u0565-\u0566-\u0567-\u0568-\u0569-\u056a-\u056b-\u056c-\u056d-\u056e-\u056f-\u0570-\u0571-\u0572-\u0573-\u0574-\u0575-\u0576-\u0577-\u0578-\u0579-\u057a-\u057b-\u057c-\u057d-\u057e-\u057f-\u0580-\u0581-\u0582-\u0583-\u0584-\u0585-\u0586-\u0587-\u0588-\u0589-\u058a-\u058b-\u058c-\u058d-\u058e-\u058f-\u0590-\u0591-\u0592-\u0593-\u0594-\u0595-\u0596-\u0597-\u0598-\u0599-\u059a-\u059b-\u059c-\u059d-\u059e-\u059f-\u05a0-\u05a1-\u05a2-\u05a3-\u05a4-\u05a5-\u05a6-\u05a7-\u05a8-\u05a9-\u05aa-\u05ab-\u05ac-\u05ad-\u05ae-\u05af-\u05b0-\u05b1-\u05b2-\u05b3-\u05b4-\u05b5-\u05b6-\u05b7-\u05b8-\u05b9-\u05ba-\u05bb-\u05bc-\u05bd-\u05be-\u05bf-\u05c0-\u05c1-\u05c2-\u05c3-\u05c4-\u05c5-\u05c6-\u05c7-\u05c8-\u05c9-\u05ca-\u05cb-\u05cc-\u05cd-\u05ce-\u05cf-\u05d0-\u05d1-\u05d2-\u05d3-\u05d4-\u05d5-\u05d6-\u05d7-\u05d8-\u05d9-\u05da-\u05db-\u05dc-\u05dd-\u05de-\u05df-\u05e0-\u05e1-\u05e2-\u05e3-\u05e4-\u05e5-\u05e6-\u05e7-\u05e8-\u05e9-\u05ea-\u05eb-\u05ec-\u05ed-\u05ee-\u05ef-\u05f0-\u05f1-\u05f2-\u05f3-\u05f4-\u05f5-\u05f6-\u05f7-\u05f8-\u05f9-\u05fa-\u05fb-\u05fc-\u05fd-\u05fe-\u05ff-\u0600-\u0601-\u0602-\u0603-\u0604-\u0605-\u0606-\u0607-\u0608-\u0609-\u060a-\u060b-\u060c-\u060d-\u060e-\u060f-\u0610-\u0611-\u0612-\u0613-\u0614-\u0615-\u0616-\u0617-\u0618-\u0619-\u061a-\u061b-\u061c-\u061d-\u061e-\u061f-\u0620-\u0621-\u0622-\u0623-\u0624-\u0625-\u0626-\u0627-\u0628-\u0629-\u062a-\u062b-\u062c-\u062d-\u062e-\u062f-\u0630-\u0631-\u0632-\u0633-\u0634-\u0635-\u0636-\u0637-\u0638-\u0639-\u063a-\u063b-\u063c-\u063d-\u063e-\u063f-\u0640-\u0641-\u0642-\u0643-\u0644-\u0645-\u0646-\u0647-\u0648-\u0649-\u064a-\u064b-\u064c-\u064d-\u064e-\u064f-\u0650-\u0651-\u0652-\u0653-\u0654-\u0655-\u0656-\u0657-\u0658-\u0659-\u065a-\u065b-\u065c-\u065d-\u065e-\u065f-\u0660-\u0661-\u0662-\u0663-\u0664-\u0665-\u0666-\u0667-\u0668-\u0669-\u066a-\u066b-\u066c-\u066d-\u066e-\u066f-\u0670-\u0671-\u0672-\u0673-\u0674-\u0675-\u0676-\u0677-\u0678-\u0679-\u067a-\u067b-\u067c-\u067d-\u067e-\u067f-\u0680-\u0681-\u0682-\u0683-\u0684-\u0685-\u0686-\u0687-\u0688-\u0689-\u068a-\u068b-\u068c-\u068d-\u068e-\u068f-\u0690-\u0691-\u0692-\u0693-\u0694-\u0695-\u0696-\u0697-\u0698-\u0699-\u069a-\u069b-\u069c-\u069d-\u069e-\u069f-\u06a0-\u06a1-\u06a2-\u06a3-\u06a4-\u06a5-\u06a6-\u06a7-\u06a8-\u06a9-\u06aa-\u06ab-\u06ac-\u06ad-\u06ae-\u06af-\u06b0-\u06b1-\u06b2-\u06b3-\u06b4-\u06b5-\u06b6-\u06b7-\u06b8-\u06b9-\u06ba-\u06bb-\u06bc-\u06bd-\u06be-\u06bf-\u06c0-\u06c1-\u06c2-\u06c3-\u06c4-\u06c5-\u06c6-\u06c7-\u06c8-\u06c9-\u06ca-\u06cb-\u06cc-\u06cd-\u06ce-\u06cf-\u06d0-\u06d1-\u06d2-\u06d3-\u06d4-\u06d5-\u06d6-\u06d7-\u06d8-\u06d9-\u06da-\u06db-\u06dc-\u06dd-\u06de-\u06df-\u06e0-\u06e1-\u06e2-\u06e3-\u06e4-\u06e5-\u06e6-\u06e7-\u06e8-\u06e9-\u06ea-\u06eb-\u06ec-\u06ed-\u06ee-\u06ef-\u06f0-\u06f1-\u06f2-\u06f3-\u06f4-\u06f5-\u06f6-\u06f7-\u06f8-\u06f9-\u06fa-\u06fb-\u06fc-\u06fd-\u06fe-\u06ff-\u0700-\u0701-\u0702-\u0703-\u0704-\u0705-\u0706-\u0707-\u0708-\u0709-\u070a-\u070b-\u070c-\u070d-\u070e-\u070f-\u0710-\u0711-\u0712-\u0713-\u0714-\u0715-\u0716-\u0717-\u0718-\u0719-\u071a-\u071b-\u071c-\u071d-\u071e-\u071f-\u0720-\u0721-\u0722-\u0723-\u0724-\u0725-\u0726-\u0727-\u0728-\u0729-\u072a-\u072b-\u072c-\u072d-\u072e-\u072f-\u0730-\u0731-\u0732-\u0733-\u0734-\u0735-\u0736-\u0737-\u0738-\u0739-\u073a-\u073b-\u073c-\u073d-\u073e-\u073f-\u0740-\u0741-\u0742-\u0743-\u0744-\u0745-\u0746-\u0747-\u0748-\u0749-\u074a-\u074b-\u074c-\u074d-\u074e-\u074f-\u0750-\u0751-\u0752-\u0753-\u0754-\u0755-\u0756-\u0757-\u0758-\u0759-\u075a-\u075b-\u075c-\u075d-\u075e-\u075f-\u0760-\u0761-\u0762-\u0763-\u0764-\u0765-\u0766-\u0767-\u0768-\u0769-\u076a-\u076b-\u076c-\u076d-\u076e-\u076f-\u0770-\u0771-\u0772-\u0773-\u0774-\u0775-\u0776-\u0777-\u0778-\u0779-\u077a-\u077b-\u077c-\u077d-\u077e-\u077f-\u0780-\u0781-\u0782-\u0783-\u0784-\u0785-\u0786-\u0787-\u0788-\u0789-\u078a-\u078b-\u078c-\u078d-\u078e-\u078f-\u0790-\u0791-\u0792-\u0793-\u0794-\u0795-\u0796-\u0797-\u0798-\u0799-\u079a-\u079b-\u079c-\u079d-\u079e-\u079f-\u07a0-\u07a1-\u07a2-\u07a3-\u07a4-\u07a5-\u07a6-\u07a7-\u07a8-\u07a9-\u07aa-\u07ab-\u07ac-\u07ad-\u07ae-\u07af-\u07b0-\u07b1-\u07b2-\u07b3-\u07b4-\u07b5-\u07b6-\u07b7-\u07b8-\u07b9-\u07ba-\u07bb-\u07bc-\u07bd-\u07be`

## Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 42\)](#).

### **ConcurrentUpdateException**

Concurrent updates caused an exception, for example, if you request an update to an Application Auto Scaling resource that already has a pending update.

HTTP Status Code: 400

### **InternalServiceException**

The service encountered an internal error.

HTTP Status Code: 400

### **ObjectNotFoundException**

The specified object could not be found. For any `Put` or `Register` API operation, which depends on the existence of a scalable target, this exception is thrown if the scalable target with the specified service namespace, resource ID, and scalable dimension does not exist. For any `Delete` or `Deregister` API operation, this exception is thrown if the resource that is to be deleted or deregistered cannot be found.

HTTP Status Code: 400

### **ValidationException**

An exception was thrown for a validation issue. Review the available parameters for the API request.

HTTP Status Code: 400

## Example

If you plan to create requests manually, you must replace the Authorization header contents in the examples (`AUTHPARAMS`) with a signature. For more information, see [Signature Version 4 Signing Process](#) in the *AWS General Reference*. If you plan to use the [AWS CLI](#) or one of the [AWS SDKs](#), these tools sign the requests for you.

## Example

The following example deregisters a scalable target for an Amazon ECS service called `web-app` that is running in the `default` cluster.

## Sample Request

```
POST / HTTP/1.1
Host: autoscaling.us-west-2.amazonaws.com
Accept-Encoding: identity
Content-Length: 117
X-Amz-Target: AnyScaleFrontendService.DeregisterScalableTarget
X-Amz-Date: 20160506T210150Z
User-Agent: aws-cli/1.10.23 Python/2.7.11 Darwin/15.4.0 botocore/1.4.8
Content-Type: application/x-amz-json-1.1
Authorization: AUTHPARAMS

{
  "ResourceId": "service/default/web-app",
  "ServiceNamespace": "ecs",
  "ScalableDimension": "ecs:service:DesiredCount"
```

```
}
```





## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 42\)](#).

### **ConcurrentUpdateException**

Concurrent updates caused an exception, for example, if you request an update to an Application Auto Scaling resource that already has a pending update.

HTTP Status Code: 400

### **InternalServiceException**

The service encountered an internal error.

HTTP Status Code: 400

### **InvalidNextTokenException**

The next token supplied was invalid.

HTTP Status Code: 400

### **ValidationException**

An exception was thrown for a validation issue. Review the available parameters for the API request.

HTTP Status Code: 400

## Example

If you plan to create requests manually, you must replace the Authorization header contents in the examples (AUTHPARAMS) with a signature. For more information, see [Signature Version 4 Signing Process](#) in the *AWS General Reference*. If you plan to use the [AWS CLI](#) or one of the [AWS SDKs](#), these tools sign the requests for you.

## Example

The following example describes the scalable targets for the `ecs` service namespace.

### Sample Request

```
POST / HTTP/1.1
Host: autoscaling.us-west-2.amazonaws.com
Accept-Encoding: identity
Content-Length: 27
X-Amz-Target: AnyScaleFrontendService.DescribeScalableTargets
X-Amz-Date: 20160506T184921Z
User-Agent: aws-cli/1.10.23 Python/2.7.11 Darwin/15.4.0 botocore/1.4.8
Content-Type: application/x-amz-json-1.1
Authorization: AUTHPARAMS

{
  "ServiceNamespace": "ecs"
}
```

### Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: 3f10dab0-13bb-11e6-a873-676fff004c09
Content-Type: application/x-amz-json-1.1
Content-Length: 272
Date: Fri, 06 May 2016 18:49:21 GMT

{
```

Application Auto Scaling API Reference  
Example

---

```
"ScalableTargets": [  
  {  
    "CreationTime": 1462558906.199,  
    "MaxCapacity": 10,  
    "MinCapacity": 1,  
    "ResourceId": "service/default/web-app",  
    "RoleARN": "arn:aws:iam::012345678910:role/  
ApplicationAutoscalingECSRole",  
    "ScalableDimension": "ecs:service:DesiredCount",  
    "ServiceNamespace": "ecs"  
  }  
]
```





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

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

Required: No

#### ScalableDimension (p. 13)

The scalable dimension. This string consists of the service namespace, resource type, and scaling property. If you specify a scalable dimension, you must also specify a resource ID.

- `ecs:service:DesiredCount` - The desired task count of an ECS service.
- `ec2:spot-fleet-request:TargetCapacity` - The target capacity of a Spot fleet request.
- `elasticmapreduce:instancegroup:InstanceCount` - The instance count of an EMR Instance Group.

Type: String

Valid Values: `ecs:service:DesiredCount` | `ec2:spot-fleet-request:TargetCapacity` | `elasticmapreduce:instancegroup:InstanceCount`

Required: No

#### ServiceNamespace (p. 13)

The namespace of the AWS service. For more information, see [AWS Service Namespaces](#) in the *Amazon Web Services General Reference*.

Type: String

Valid Values: `ecs` | `elasticmapreduce` | `ec2`

Required: Yes

## Response Syntax

```
{
  "NextToken": "string",
  "ScalingActivities": [
    {
      "ActivityId": "string",
      "Cause": "string",
      "Description": "string",
      "Details": "string",
      "EndTime": number,
      "ResourceId": "string",
      "ScalableDimension": "string",
      "ServiceNamespace": "string",
      "StartTime": number,
      "StatusCode": "string",
      "StatusMessage": "string"
    }
  ]
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

#### NextToken (p. 14)

The token required to get the next set of results. This value is `null` if there are no more results to return.

Type: String



## Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: a2704130-13db-11e6-9fca-039a3edb2541
Content-Type: application/x-amz-json-1.1
Content-Length: 1784
Date: Fri, 06 May 2016 22:41:12 GMT

{
  "ScalingActivities": [
    {
      "ActivityId": "0b812df9-a093-4074-9064-8a8f6c0521f5",
      "Cause": "monitor alarm web-app-cpu-gt-75 in state ALARM triggered
policy web-app-cpu-gt-75",
      "Description": "Setting desired count to 3.",
      "ResourceId": "service/default/web-app",
      "ScalableDimension": "ecs:service:DesiredCount",
      "ServiceNamespace": "ecs",
      "StartTime": 1462568034.684,
      "StatusCode": "Pending"
    },
    {
      "ActivityId": "4d759079-a31f-4d0c-8468-504c56e2eecf",
      "Cause": "monitor alarm web-app-cpu-gt-75 in state ALARM triggered
policy web-app-cpu-gt-75",
      "Description": "Setting desired count to 3.",
      "EndTime": 1462574276.686,
      "ResourceId": "service/default/web-app",
      "ScalableDimension": "ecs:service:DesiredCount",
      "ServiceNamespace": "ecs",
      "StartTime": 1462574194.658,
      "StatusCode": "Successful",
      "StatusMessage": "Successfully set desired count to 3. Change
successfully fulfilled by ecs."
    },
    {
      "ActivityId": "90aff0eb-dd6a-443c-889b-b809e78061c1",
      "Cause": "monitor alarm web-app-cpu-gt-75 in state ALARM triggered
policy web-app-cpu-gt-75",
      "Description": "Setting desired count to 9.",
      "EndTime": 1462574333.492,
      "ResourceId": "service/default/web-app",
      "ScalableDimension": "ecs:service:DesiredCount",
      "ServiceNamespace": "ecs",
      "StartTime": 1462574254.223,
      "StatusCode": "Successful",
      "StatusMessage": "Successfully set desired count to 9. Change
successfully fulfilled by ecs."
    },
    {
      "ActivityId": "ee381679-5079-46b5-ac1a-418253981efd",
      "Cause": "monitor alarm web-app-cpu-gt-75 in state ALARM triggered
policy web-app-cpu-gt-75",
      "Description": "Setting desired count to 10.",
      "ResourceId": "service/default/web-app",
      "ScalableDimension": "ecs:service:DesiredCount",
      "ServiceNamespace": "ecs",
      "StartTime": 1462574434.077,
```

```
    "StatusCode": "InProgress",  
    "StatusMessage": "Successfully set desired count to 10. Waiting for  
change to be fulfilled by ecs."  
  }  
]  
}
```



- Spot fleet request - The resource type is `spot-fleet-request` and the unique identifier is the Spot fleet request ID. Example: `spot-fleet-request/sfr-73fbd2ce-aa30-494c-8788-1cee4EXAMPLE`.
- EMR cluster - The resource type is `instancegroup` and the unique identifier is the cluster ID and instance group ID. Example: `instancegroup/j-2EEZNYKUA1NTV/ig-1791Y4E1L8YI0`.

Type: String

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

Pattern: `[\u0020-\u007F\u0000-\u00FF\u0800-\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: No

#### ScalableDimension (p. 18)

The scalable dimension. This string consists of the service namespace, resource type, and scaling property. If you specify a scalable dimension, you must also specify a resource ID.

- `ecs:service:DesiredCount` - The desired task count of an ECS service.
- `ec2:spot-fleet-request:TargetCapacity` - The target capacity of a Spot fleet request.
- `elasticmapreduce:instancegroup:InstanceCount` - The instance count of an EMR Instance Group.

Type: String

Valid Values: `ecs:service:DesiredCount | ec2:spot-fleet-request:TargetCapacity | elasticmapreduce:instancegroup:InstanceCount`

Required: No

#### ServiceNamespace (p. 18)

The namespace of the AWS service. For more information, see [AWS Service Namespaces](#) in the *Amazon Web Services General Reference*.

Type: String

Valid Values: `ecs | elasticmapreduce | ec2`

Required: Yes

## Response Syntax

```
{
  "NextToken": "string",
  "ScalingPolicies": [
    {
      "Alarms": [
        {
          "AlarmARN": "string",
          "AlarmName": "string"
        }
      ],
      "CreationTime": number,
      "PolicyARN": "string",
      "PolicyName": "string",
      "PolicyType": "string",
      "ResourceId": "string",
      "ScalableDimension": "string",
      "ServiceNamespace": "string",
      "StepScalingPolicyConfiguration": {
        "AdjustmentType": "string",
        "Cooldown": number,
        "MetricAggregationType": "string",
        "MinAdjustmentMagnitude": number,
        "StepAdjustments": [
          {
```

```
    "MetricIntervalLowerBound": number ,  
    "MetricIntervalUpperBound": number ,  
    "ScalingAdjustment": number  
  }  
] }  
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response. The following data is returned in JSON format by the service.

### NextToken (p. 19)

The token required to get the next set of results. This value is `null` if there are no more results to return.

Type: String

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

### ScalingPolicies (p. 19)

A list of scaling policy objects.

Type: array of [ScalingPolicy \(p. 36\)](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 42\)](#).

### ConcurrentUpdateException

Concurrent updates caused an exception, for example, if you request an update to an Application Auto Scaling resource that already has a pending update.

HTTP Status Code: 400

### FailedResourceAccessException

Failed access to resources caused an exception. This exception currently only applies to [DescribeScalingPolicies \(p. 18\)](#). It is thrown when Application Auto Scaling is unable to retrieve the alarms associated with a scaling policy due to a client error, for example, if the role ARN specified for a scalable target does not have the proper permissions to call the CloudWatch [DescribeAlarms](#) API operation on behalf of your account.

HTTP Status Code: 400

### InternalServiceException

The service encountered an internal error.

HTTP Status Code: 400

### InvalidNextTokenException

The next token supplied was invalid.

HTTP Status Code: 400

### ValidationException

An exception was thrown for a validation issue. Review the available parameters for the API request.

HTTP Status Code: 400



## Example

If you plan to create requests manually, you must replace the Authorization header contents in the examples (AUTHPARAMS) with a signature. For more information, see [Signature Version 4 Signing Process](#) in the *AWS General Reference*. If you plan to use the [AWS CLI](#) or one of the [AWS SDKs](#), these tools sign the requests for you.

## Example

The following example describes the scaling policies for the `ecs` service namespace.

### Sample Request

```
POST / HTTP/1.1
Host: autoscaling.us-west-2.amazonaws.com
Accept-Encoding: identity
Content-Length: 27
X-Amz-Target: AnyScaleFrontendService.DescribeScalingPolicies
X-Amz-Date: 20160506T194435Z
User-Agent: aws-cli/1.10.23 Python/2.7.11 Darwin/15.4.0 botocore/1.4.8
Content-Type: application/x-amz-json-1.1
Authorization: AUTHPARAMS

{
  "ServiceNamespace": "ecs"
}
```

### Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: f662c515-13c2-11e6-add4-41b78770ca43
Content-Type: application/x-amz-json-1.1
Content-Length: 1363
Date: Fri, 06 May 2016 19:44:35 GMT

{
  "ScalingPolicies": [
    {
      "Alarms": [
        {
          "AlarmARN": "arn:aws:cloudwatch:us-
west-2:012345678910:alarm:web-app-cpu-gt-75",
          "AlarmName": "web-app-cpu-gt-75"
        }
      ],
      "CreationTime": 1462561899.23,
      "PolicyARN": "arn:aws:autoscaling:us-
west-2:012345678910:scalingPolicy:6d8972f3-
efc8-437c-92d1-6270f29a66e7:resource/ecs/service/default/web-app:policyName/
web-app-cpu-gt-75",
      "PolicyName": "web-app-cpu-gt-75",
      "PolicyType": "StepScaling",
      "ResourceId": "service/default/web-app",
      "ScalableDimension": "ecs:service:DesiredCount",
      "ServiceNamespace": "ecs",
      "StepScalingPolicyConfiguration": {
        "AdjustmentType": "PercentChangeInCapacity",
        "Cooldown": 60,

```

Application Auto Scaling API Reference  
Example

---

```
        "StepAdjustments": [
            {
                "MetricIntervalLowerBound": 0,
                "ScalingAdjustment": 200
            }
        ]
    },
    {
        "Alarms": [
            {
                "AlarmARN": "arn:aws:cloudwatch:us-
west-2:012345678910:alarm:web-app-cpu-lt-25",
                "AlarmName": "web-app-cpu-lt-25"
            }
        ],
        "CreationTime": 1462562575.099,
        "PolicyARN": "arn:aws:autoscaling:us-
west-2:012345678910:scalingPolicy:6d8972f3-
efc8-437c-92d1-6270f29a66e7:resource/ecs/service/default/web-app:policyName/
web-app-cpu-lt-25",
        "PolicyName": "web-app-cpu-lt-25",
        "PolicyType": "StepScaling",
        "ResourceId": "service/default/web-app",
        "ScalableDimension": "ecs:service:DesiredCount",
        "ServiceNamespace": "ecs",
        "StepScalingPolicyConfiguration": {
            "AdjustmentType": "PercentChangeInCapacity",
            "Cooldown": 1,
            "StepAdjustments": [
                {
                    "MetricIntervalUpperBound": 0,
                    "ScalingAdjustment": -50
                }
            ]
        }
    }
]
```

## PutScalingPolicy

Creates or updates a policy for an Application Auto Scaling scalable target.

Each scalable target is identified by a service namespace, resource ID, and scalable dimension. A scaling policy applies to the scalable target identified by those three attributes. You cannot create a scaling policy without first registering a scalable target using [RegisterScalableTarget \(p. 27\)](#).

To update a policy, specify its policy name and the parameters that you want to change. Any parameters that you don't specify are not changed by this update request.

You can view the scaling policies for a service namespace using [DescribeScalingPolicies \(p. 18\)](#). If you are no longer using a scaling policy, you can delete it using [DeleteScalingPolicy \(p. 3\)](#).

## Request Syntax

```
{
  "PolicyName": "string",
  "PolicyType": "string",
  "ResourceId": "string",
  "ScalableDimension": "string",
  "ServiceNamespace": "string",
  "StepScalingPolicyConfiguration": {
    "AdjustmentType": "string",
    "Cooldown": number,
    "MetricAggregationType": "string",
    "MinAdjustmentMagnitude": number,
    "StepAdjustments": [
      {
        "MetricIntervalLowerBound": number,
        "MetricIntervalUpperBound": number,
        "ScalingAdjustment": number
      }
    ]
  }
}
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 40\)](#).

The request accepts the following data in JSON format.

### PolicyName (p. 23)

The name of the scaling policy.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `\p{Print}+`

Required: Yes

### PolicyType (p. 23)

The policy type. If you are creating a new policy, this parameter is required. If you are updating a policy, this parameter is not required.

Type: String

Valid Values: `StepScaling`

Required: No

### ResourceId (p. 23)

The identifier of the resource associated with the scaling policy. This string consists of the resource type and unique identifier.

- ECS service - The resource type is `service` and the unique identifier is the cluster name and service name. Example: `service/default/sample-webapp`.
- Spot fleet request - The resource type is `spot-fleet-request` and the unique identifier is the Spot fleet request ID. Example: `spot-fleet-request/sfr-73fbd2ce-aa30-494c-8788-1cee4EXAMPLE`.
- EMR cluster - The resource type is `instancegroup` and the unique identifier is the cluster ID and instance group ID. Example: `instancegroup/j-2EEZNYKUA1NTV/ig-1791Y4E1L8YI0`.

Type: String

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

Pattern: `[\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDF00-\uDFFF\r\n\t]*`

Required: Yes

### ScalableDimension (p. 23)

The scalable dimension. This string consists of the service namespace, resource type, and scaling property.

- `ecs:service:DesiredCount` - The desired task count of an ECS service.
- `ec2:spot-fleet-request:TargetCapacity` - The target capacity of a Spot fleet request.
- `elasticmapreduce:instancegroup:InstanceCount` - The instance count of an EMR Instance Group.

Type: String

Valid Values: `ecs:service:DesiredCount | ec2:spot-fleet-request:TargetCapacity | elasticmapreduce:instancegroup:InstanceCount`

Required: Yes

### ServiceNamespace (p. 23)

The namespace of the AWS service. For more information, see [AWS Service Namespaces](#) in the *Amazon Web Services General Reference*.

Type: String

Valid Values: `ecs | elasticmapreduce | ec2`

Required: Yes

### StepScalingPolicyConfiguration (p. 23)

The configuration for the step scaling policy. If you are creating a new policy, this parameter is required. If you are updating a policy, this parameter is not required. For more information, see [StepScalingPolicyConfiguration \(p. 39\)](#) and [StepAdjustment \(p. 38\)](#).

Type: [StepScalingPolicyConfiguration \(p. 39\)](#) object

Required: No

## Response Syntax

```
{
  "PolicyARN": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### PolicyARN (p. 24)

The Amazon Resource Name (ARN) of the resulting scaling policy.



Authorization: AUTHPARAMS

```
{
  "PolicyName": "web-app-cpu-gt-75",
  "ScalableDimension": "ecs:service:DesiredCount",
  "ResourceId": "service/default/web-app",
  "StepScalingPolicyConfiguration": {
    "Cooldown": 60,
    "StepAdjustments": [
      {
        "ScalingAdjustment": 200,
        "MetricIntervalLowerBound": 0
      }
    ],
    "AdjustmentType": "PercentChangeInCapacity"
  },
  "PolicyType": "StepScaling",
  "ServiceNamespace": "ecs"
}
```

## Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: 5bc8d06e-13be-11e6-a468-37acb4b5alb2
Content-Type: application/x-amz-json-1.1
Content-Length: 175
Date: Fri, 06 May 2016 19:11:38 GMT

{
  "PolicyARN": "arn:aws:autoscaling:us-
west-2:012345678910:scalingPolicy:6d8972f3-
efc8-437c-92d1-6270f29a66e7:resource/ecs/service/default/web-app:policyName/
web-app-cpu-gt-75"
}
```







## Example

If you plan to create requests manually, you must replace the Authorization header contents in the examples (AUTHPARAMS) with a signature. For more information, see [Signature Version 4 Signing Process](#) in the *AWS General Reference*. If you plan to use the [AWS CLI](#) or one of the [AWS SDKs](#), these tools sign the requests for you.

## Example

The following example registers an Amazon ECS service with Application Auto Scaling.

### Sample Request

```
POST / HTTP/1.1
Host: autoscaling.us-west-2.amazonaws.com
Accept-Encoding: identity
Content-Length: 229
X-Amz-Target: AnyScaleFrontendService.RegisterScalableTarget
X-Amz-Date: 20160506T182145Z
User-Agent: aws-cli/1.10.23 Python/2.7.11 Darwin/15.4.0 botocore/1.4.8
Content-Type: application/x-amz-json-1.1
Authorization: AUTHPARAMS

{
  "ScalableDimension": "ecs:service:DesiredCount",
  "ResourceId": "service/default/web-app",
  "RoleARN": "arn:aws:iam::012345678910:role/
ApplicationAutoscalingECSRole",
  "MinCapacity": 1,
  "ServiceNamespace": "ecs",
  "MaxCapacity": 10
}
```

# Data Types

---

The Application 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:

- [Alarm](#) (p. 31)
- [ScalableTarget](#) (p. 32)
- [ScalingActivity](#) (p. 34)
- [ScalingPolicy](#) (p. 36)
- [StepAdjustment](#) (p. 38)
- [StepScalingPolicyConfiguration](#) (p. 39)

## Alarm

Represents a CloudWatch alarm associated with a scaling policy.

### Contents

#### **AlarmARN**

The Amazon Resource Name (ARN) of the alarm.

Type: String

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

Required: Yes

#### **AlarmName**

The name of the alarm.

Type: String

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

Required: Yes



**ServiceNamespace**

The namespace of the AWS service. For more information, see [AWS Service Namespaces](#) in the *Amazon Web Services General Reference*.

Type: String

Valid Values: ecs | elasticmapreduce | ec2

Required: Yes

# ScalingActivity

Represents a scaling activity.

## Contents

### ActivityId

The unique identifier of the scaling activity.

Type: String

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

Required: Yes

### Cause

A simple description of what caused the scaling activity to happen.

Type: String

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

Required: Yes

### Description

A simple description of what action the scaling activity intends to accomplish.

Type: String

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

Required: Yes

### Details

The details about the scaling activity.

Type: String

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

Required: No

### EndTime

The Unix timestamp for when the scaling activity ended.

Type: Timestamp

Required: No

### ResourceId

The identifier of the resource associated with the scaling activity. This string consists of the resource type and unique identifier.

- ECS service - The resource type is `service` and the unique identifier is the cluster name and service name. Example: `service/default/sample-webapp`.
- Spot fleet request - The resource type is `spot-fleet-request` and the unique identifier is the Spot fleet request ID. Example: `spot-fleet-request/sfr-73fbd2ce-aa30-494c-8788-1cee4EXAMPLE`.
- EMR cluster - The resource type is `instancegroup` and the unique identifier is the cluster ID and instance group ID. Example: `instancegroup/j-2EEZNYKUA1NTV/ig-1791Y4E1L8YI0`.

Type: String

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

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

Required: Yes

### ScalableDimension

The scalable dimension. This string consists of the service namespace, resource type, and scaling property.

- `ecs:service:DesiredCount` - The desired task count of an ECS service.
- `ec2:spot-fleet-request:TargetCapacity` - The target capacity of a Spot fleet request.

- `elasticmapreduce:instancegroup:InstanceCount` - The instance count of an EMR Instance Group.

Type: String

Valid Values: `ecs:service:DesiredCount` | `ec2:spot-fleet-request:TargetCapacity` | `elasticmapreduce:instancegroup:InstanceCount`

Required: Yes

#### **ServiceNamespace**

The namespace of the AWS service. For more information, see [AWS Service Namespaces](#) in the *Amazon Web Services General Reference*.

Type: String

Valid Values: `ecs` | `elasticmapreduce` | `ec2`

Required: Yes

#### **StartTime**

The Unix timestamp for when the scaling activity began.

Type: Timestamp

Required: Yes

#### **StatusCode**

Indicates the status of the scaling activity.

Type: String

Valid Values: `Pending` | `InProgress` | `Successful` | `Overridden` | `Unfulfilled` | `Failed`

Required: Yes

#### **StatusMessage**

A simple message about the current status of the scaling activity.

Type: String

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

Required: No

# ScalingPolicy

Represents a scaling policy.

## Contents

### Alarms

The CloudWatch alarms associated with the scaling policy.

Type: array of [Alarm \(p. 31\)](#) objects

Required: No

### CreationTime

The Unix timestamp for when the scaling policy was created.

Type: Timestamp

Required: Yes

### PolicyARN

The Amazon Resource Name (ARN) of the scaling policy.

Type: String

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

Pattern: `[ \u0020-\u007F\u0000-\u00FF\u0080\u00C0-\u00FF\u00r\n\t ]*`

Required: Yes

### PolicyName

The name of the scaling policy.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `\p{Print}+`

Required: Yes

### PolicyType

The scaling policy type.

Type: String

Valid Values: `StepScaling`

Required: Yes

### ResourceId

The identifier of the resource associated with the scaling policy. This string consists of the resource type and unique identifier.

- ECS service - The resource type is `service` and the unique identifier is the cluster name and service name. Example: `service/default/sample-webapp`.
- Spot fleet request - The resource type is `spot-fleet-request` and the unique identifier is the Spot fleet request ID. Example: `spot-fleet-request/sfr-73fbd2ce-aa30-494c-8788-1cee4EXAMPLE`.
- EMR cluster - The resource type is `instancegroup` and the unique identifier is the cluster ID and instance group ID. Example: `instancegroup/j-2EEZNYKUA1NTV/ig-1791Y4E1L8YI0`.

Type: String

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

Pattern: `[ \u0020-\u007F\u0000-\u00FF\u0080\u00C0-\u00FF\u00r\n\t ]*`

Required: Yes

### ScalableDimension

The scalable dimension. This string consists of the service namespace, resource type, and scaling property.

- `ecs:service:DesiredCount` - The desired task count of an ECS service.
- `ec2:spot-fleet-request:TargetCapacity` - The target capacity of a Spot fleet request.



- `elasticmapreduce:instancegroup:InstanceCount` - The instance count of an EMR Instance Group.

Type: String

Valid Values: `ecs:service:DesiredCount` | `ec2:spot-fleet-request:TargetCapacity` | `elasticmapreduce:instancegroup:InstanceCount`

Required: Yes

#### **ServiceNamespace**

The namespace of the AWS service. For more information, see [AWS Service Namespaces](#) in the *Amazon Web Services General Reference*.

Type: String

Valid Values: `ecs` | `elasticmapreduce` | `ec2`

Required: Yes

#### **StepScalingPolicyConfiguration**

The configuration for the step scaling policy.

Type: [StepScalingPolicyConfiguration \(p. 39\)](#) object

Required: No

## StepAdjustment

Represents a step adjustment for a [StepScalingPolicyConfiguration](#) (p. 39). Describes an adjustment based on the difference between the value of the aggregated CloudWatch metric and the breach threshold that you've defined for the alarm.

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.

## 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 scalable dimension while a negative number removes from the current scalable dimension.

Type: Integer

Required: Yes

# StepScalingPolicyConfiguration

Represents a step scaling policy configuration.

## Contents

### AdjustmentType

The adjustment type, which specifies how the `ScalingAdjustment` parameter in a [StepAdjustment \(p. 38\)](#) is interpreted.

Type: String

Valid Values: `ChangeInCapacity` | `PercentChangeInCapacity` | `ExactCapacity`

Required: No

### Cooldown

The amount of time, in seconds, after a scaling activity completes where previous trigger-related scaling activities can influence future scaling events.

For scale out policies, while `Cooldown` is in effect, the capacity that has been added by the previous scale out event that initiated the `Cooldown` is calculated as part of the desired capacity for the next scale out. The intention is to continuously (but not excessively) scale out. For example, an alarm triggers a step scaling policy to scale out an Amazon ECS service by 2 tasks, the scaling activity completes successfully, and a `Cooldown` period of 5 minutes starts. During the `Cooldown` period, if the alarm triggers the same policy again but at a more aggressive step adjustment to scale out the service by 3 tasks, the 2 tasks that were added in the previous scale out event are considered part of that capacity and only 1 additional task is added to the desired count.

For scale in policies, the `Cooldown` period is used to block subsequent scale in requests until it has expired. The intention is to scale in conservatively to protect your application's availability. However, if another alarm triggers a scale out policy during the `Cooldown` period after a scale-in, Application Auto Scaling scales out your scalable target immediately.

Type: Integer

Required: No

### MetricAggregationType

The aggregation type for the CloudWatch metrics. Valid values are `Minimum`, `Maximum`, and `Average`.

Type: String

Valid Values: `Average` | `Minimum` | `Maximum`

Required: No

### MinAdjustmentMagnitude

The minimum number to adjust your scalable dimension as a result of a scaling activity. If the adjustment type is `PercentChangeInCapacity`, the scaling policy changes the scalable dimension of the scalable target by this amount.

Type: Integer

Required: No

### StepAdjustments

A set of adjustments that enable you to scale based on the size of the alarm breach.

Type: array of [StepAdjustment \(p. 38\)](#) objects

Required: No

# Common Parameters

---

The following table lists the parameters that all actions use for signing Signature Version 4 requests. Any action-specific parameters are listed in the topic for that action. To view sample requests, see [Examples of Signed Signature Version 4 Requests](#) or [Signature Version 4 Test Suite](#) 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'T'HHMMSS'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. For a list of services that support AWS Security Token Service, go to [Using Temporary Security Credentials to Access AWS](#) in *Using Temporary Security Credentials*.

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 common errors that all actions return. Any action-specific errors are listed in the topic for the action.

**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

**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

**Throttling**

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