

# Auto Scaling

## Developer Guide

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## API usage instructions

## API usage instructions

Before calling the Auto Scaling Open API, you need to activate Auto Scaling at Alibaba Cloud website, and authorize your Auto Scaling to access Open API on the Auto Scaling console (based on Alibaba Cloud Resource Access Management [RAM], Auto Scaling uses ECS Open API to replace the ECS instance resources). Errors will occur in case of any inconformity:

| Error                                                            | Error Code             | Description                                                        | HTTP Status Code |
|------------------------------------------------------------------|------------------------|--------------------------------------------------------------------|------------------|
| Auto Scaling is not activated and thus the API cannot be called. | Forbidden.Unsubscribed | Do not have permission to access this API.                         | 403              |
| You have not fully authorized Open API to Auto Scaling.          | Forbidden.Unauthorized | A required authorization for the specified action is not supplied. | 403              |

## Calling method

## Calling method

You can call the Auto Scaling API by sending an HTTP GET request to the Auto Scaling API server and adding the relevant request parameters to the request according to the interface instructions. Results are returned based on how the request is processed.

# Request structure

## Request structure

### Service address

The access address for the Auto Scaling API service is **ess.aliyuncs.com**.

### Communication protocols

The system supports request communication through the HTTP or HTTPS channel. We recommend that you send requests over HTTPS for enhanced security.

### Request methods

The system allows you to send HTTP GET requests. This requires request parameters to be included in the request URL.

### Request parameters

For each request, you must specify the operation you want to execute, namely the Action parameter (for example, CreateScalingGroup), and each operation must contain the public and specific request parameters of the specified operation.

### Character encoding

Requests and returned results are encoded using the UTF-8 character set.

## Common parameters

This section describes the common request parameters and the common request parameters

## Common request parameters

The following table describes the common parameters that comprise of a URL for a GET request over HTTP or HTTPS protocol.

| Name             | Type   | Required | Description                                                                                                                                                                                                                             |
|------------------|--------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Action           | String | Yes      | The target API.                                                                                                                                                                                                                         |
| AccessKeyId      | String | Yes      | Equivalent to a logon password. However, an AccessKey is used to call APIs, while logon password is used to log on to the console. For more information, see <a href="#">Create an AccessKey</a> .                                      |
| Signature        | String | Yes      | Your signature. For more information, see <a href="#">Signature</a> .                                                                                                                                                                   |
| SignatureMethod  | String | Yes      | Signature method. Value: HMAC-SHA1.                                                                                                                                                                                                     |
| Timestamp        | String | Yes      | Request time stamp. Use the offset from Coordinated Universal Time (UTC), the time display is based on ISO8601. Format: YYYY-MM-DDThh:mm:ssZ. For example, 2018-01-01T12:00:00Z indicates 20:00:00, Jan 01, 2018, Beijing time (UTC+8). |
| SignatureVersion | String | Yes      | Signature algorithm version. Value: 1.0.                                                                                                                                                                                                |
| SignatureNonce   | String | Yes      | Unique random number, which is used to prevent network replay attacks. Different random numbers must be used for different requests.                                                                                                    |
| Version          | String | Yes      | The API version to use. Value: 2014-08-28.                                                                                                                                                                                              |

|        |        |    |                                                                                    |
|--------|--------|----|------------------------------------------------------------------------------------|
| Format | String | No | Type of the response parameters. Optional values: json   xml. Default value: json. |
|--------|--------|----|------------------------------------------------------------------------------------|

## Request example

```
https://ess.aliyuncs.com/?Action=XXXXXX
&Format=xml
&Version=2014-08-28
&Signature=Pc5WB8gokVn0xfeu%2FZV%2BiNM1dgI%3D
&SignatureMethod=HMAC-SHA1
&SignatureNonce=15215528852396
&SignatureVersion=1.0
&AccessKeyId=key-test
&Timestamp=2012-06-01T12:00:00Z
...
```

## Common response parameters

| Name      | Type   | Description                                                                                                   |
|-----------|--------|---------------------------------------------------------------------------------------------------------------|
| RequestId | String | The request ID. We return a unique RequestId for every API request, whether the request is successful or not. |

## Signature mechanism

## Signature mechanism

Auto Scaling performs authentication on each access request. Therefore, each request, whether being sent via HTTP or HTTPS, must contain signature information. By using Access Key ID and Access Key Secret, Auto Scaling performs symmetric encryption to authenticate the request sender. The Access Key ID and Access Key Secret are officially issued to visitors by Alibaba Cloud (visitors can apply for and manage them at Alibaba Cloud's official website). The Access Key ID indicates the identity of the visitor. The Access Key Secret is the secret key used to encrypt and verify the signature string on the server. It must be kept confidential and should only be available to Alibaba Cloud and the user.

When a user calls a server, the following method is used to sign the request:

The Canonicalized Query String is constructed using the request parameters.

The request parameters are ordered alphabetically by the parameter names (this includes the “public request parameters” and user-defined parameters for the given request interfaces described in this document, but not the Signature parameter mentioned in “public request parameters” ).

**NOTE:** For a request submitted using the GET method, these parameters constitute the parameter section of the request URI (that is, the section in the URI following “?” and connected by “&” ).

The name and value of each request parameter are encoded. The names and values must be URL encoded using the UTF-8 character set. The URL encoding rules are as follows:

- i. English letters A–Z and a–z, digits 0–9, and characters “-”, “\_”, “.”, and “~” are not encoded.
- ii. Other characters are encoded in the “%XY” format, with “XY” representing the characters’ ASCII code in hexadecimal notation. For example, the English double quotes are encoded as “%22” .
- iii. Extended UTF-8 characters are encoded in the “%XY%ZA...” format.
- iv. Note that a space is encoded into “%20” instead of a plus sign “+” .

**NOTE:** Generally, libraries that support URL encoding (for example, Java’ s `java.net.URLEncoder`) are all encoded according to the rules for the “application/x-www-form-urlencoded” MIME-type. If this encoding method is used, replace the plus signs “+” in the encoded strings with “%20” , the asterisks “\*” with “%2A” , and change “%7E” back to the tilde “~” to conform to the encoding rules described above.

Connect the encoded parameter names and values with the equal sign “=” .

Then, sort the parameter name and value pairs connected by equal signs in alphabetical order, and connect them with the “&” symbol to produce the Canonicalized Query String.

Follow the rules below to construct the string used for signature calculation by using the Canonicalized Query String constructed in the previous step:

```
StringToSign=
HTTPMethod + "&" +
percentEncode( "/" ) + "&" +
percentEncode(CanonicalizedQueryString)
```

HTTPMethod is the HTTP method used for request submission, for example, GET.

percentEncode( "/" ) is the coded value for the character "/" according to the URL encoding rules described in 1.ii, namely, "%2F" .

percentEncode(CanonicalizedQueryString) is the encoded string of the Canonicalized Query String constructed in Step 1, produced by following the URL encoding rules described in 1.ii.

According to RFC2104 definitions, use the above signature sting to calculate the signature' s HMAC value.

**NOTE:** The Key used for calculating the signature is the Access Key Secret held by the user, which ends with the "&" character (ASCII:38) and is based on the SHA1 hashing.

According to Base64 encoding rules, encode the above HMAC value into a string. This gives you the signature value.

Add the obtained signature value to the request parameters as the Signature parameter. This completes the request signing process.

**NOTE:** When the obtained signature value is submitted to the ECS server as the final request parameter value, the value is URL encoded like other parameters according to RFC3986 rules.

Take DescribeScalingGroups as an example. The request URL prior to signing is as follows:

```
http://ess.aliyuncs.com/?TimeStamp=2014-08-15T11%3A10%3A07Z&Format=xml&AccessKeyId=testid&Action=DescribeScalingGroups&SignatureMethod=HMAC-SHA1&RegionId=cn-qingdao&SignatureNonce=1324fd0e-e2bb-4bb1-917c-bd6e437f1710&SignatureVersion=1.0&Version=2014-08-28
```

Thus, the StringToSign is:

```
GET&%2F&AccessKeyId%3Dtestid&Action%3DDescribeScalingGroups&Format%3Dxml&RegionId%3Dcn-qingdao&SignatureMethod%3DHMAC-SHA1&SignatureNonce%3D1324fd0e-e2bb-4bb1-917c-bd6e437f1710&SignatureVersion%3D1.0&TimeStamp%3D2014-08-15T11%253A10%253A07Z&Version%3D2014-08-28
```

Assume that the Access Key ID is "testid" , the Access Key Secret is "testsecret" , and the Key used for HMAC calculation is "testsecret&" . The calculated signature value is "SmhZuLUnXmqxSEZ%2FGqyiWqmf%2BM=" .

The signed request URL is (added with the Signature parameter):

```
http://ess.aliyuncs.com/?TimeStamp=2014-08-15T11%3A10%3A07Z&Format=xml&AccessKeyId=testid&Action=DescribeScalingGroups&SignatureMethod=HMAC-SHA1&RegionId=cn-qingdao&SignatureNonce=1324fd0e-e2bb-4bb1-917c-bd6e437f1710&SignatureVersion=1.0&Version=2014-08-28&Signature=SmhZuLUnXmqxSEZ%2FGqyiwGqmf%2BM%3D
```

For details about request signing and submission, refer to the appendix [How to Call Interfaces](#).

## Response results

We return the results in either XML or JSON format, but JSON is the default choice. You can switch to XML schema by specifying the request parameter `Format`. For more information, see [Common parameters](#).

**Note:** Response examples in our API documents have line breaks and indentions to make them easy to read. The actual response results are not formatted.

## Success response example

Every successful response has a request ID in the `RequestId` element and other API-specific response parameters. The HTTP status code for a success response is 2XX.

XML format

```
<?xml version="1.0" encoding="UTF-8"?> <!--Result root node-->
<ActionResponse> <!--Response request tag-->
<RequestId>4C467B38-3910-447D-87BC-AC049166F223</RequestId> <!--Response result data-->
</ActionResponse>
```

JSON format

```
{
  "RequestId": "4C467B38-3910-447D-87BC-AC049166F223" /* Response result data */
}
```



## Error response example

Every error response consists of a request ID in the `RequestId` element and access endpoint in the `HostId` element, the error code, and the error message. The HTTP status code for an error response is 4xx or 5xx.

You can fix the exception according to the API-specific error codes or common error codes and try the request again. Alternatively, you can open a ticket and provide additional inputs such as the `HostId` and `RequestId` to get technical support from us.

### XML format

```
<?xml version="1.0" encoding="UTF-8"?> <!--Result root node-->
<Error>
<RequestId>540CFF28-407A-40B5-B6A5-74Bxxxxxxxx</RequestId> <!--Request ID-->
<HostId>ess.aliyuncs.com</HostId> <!--Endpoint-->
<Code>ServiceUnavailable</Code> <!--Error code-->
<Message>The request has failed due to a temporary failure of the server.</Message> <!--Error message-->
</Error>
```

### JSON format

```
{
  "RequestId": "540CFF28-407A-40B5-B6A5-74Bxxxxxxxx", /* Request ID */
  "HostId": "ess.aliyuncs.com", /* Endpoint */
  "Code": "ServiceUnavailable", /* Error code */
  "Message": "The request has failed due to a temporary failure of the server." /* Error message */
}
```

## Common error codes

| Error code                  | Error message                                                                                      | HTTP status code | Meaning                                   |
|-----------------------------|----------------------------------------------------------------------------------------------------|------------------|-------------------------------------------|
| InvalidAccessKeyId.NotFound | The Access Key ID provided does not exist in our records.                                          | 400              | The specified AccessKey does not exist.   |
| InvalidParameter            | The specified value of parameter <parameter name> is not valid.                                    | 400              | The specified parameter is invalid.       |
| MissingParameter            | The input parameter <parameter name> that is mandatory for processing this request is not supplied | 400              | You must specify the required parameters. |

|                        |                                                                                    |     |                                                                                 |
|------------------------|------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------|
| NoSuchVersion          | The specified version does not exist.                                              | 400 | The specified API version does not exist.                                       |
| ResourceNotAvailable   | Resource you requested is not available in this region or zone.                    | 400 | ESS service is unavailable in the specified region.                             |
| Throttling             | Request was denied due to request throttling.                                      | 400 | You have made too many frequent requests in short time. Please try again later. |
| UnsupportedOperation   | The specified action is not supported.                                             | 400 | Unable to call the specified API.                                               |
| Forbidden              | Users are not authorized to operate on the specified resource.                     | 403 | You cannot perform the specified action.                                        |
| Forbidden.RiskControl  | This operation is forbidden by Aliyun Risk Control system.                         | 403 | The specified action is under risk control.                                     |
| Forbidden.Unsubscribed | Do not have permission to access this API.                                         | 403 | You must enable the ESS service before calling this API.                        |
| SignatureDoesNotMatch  | The signature we calculated does not match the one you provided.                   | 403 | The signature calculated by us is different from the one you provide.           |
| InternalServerError    | The request processing has failed due to some unknown error, exception or failure. | 500 | Internal error.                                                                 |
| ServiceUnavailable     | The request has failed due to a temporary failure of the server.                   | 503 | The server cannot respond to your request. Please try again later.              |

## Scaling group

# Create a scaling group

A scaling group is a collection of ECS instances with the same application scenarios.

It defines the maximum and minimum numbers of ECS instances in the group, and their associated Server Load Balancer instances, RDS instances, and other attributes.

## Description

This operation creates a scaling group according to input parameters.

MaxSize and MinSize respectively define the maximum and minimum number of ECS instances in a scaling group.

- When the current number (total capacity) of ECS instances in the scaling group is smaller than MinSize, the Auto Scaling service automatically attaches ECS instances to the scaling group to make odds even.
- When the current number (total capacity) of ECS instances in the scaling group is greater than MaxSize, the Auto Scaling service automatically removes ECS instances from the scaling group to make odds even.

Default Cooldown indicates the default cool-down time of the scaling group.

- During the cool-down time after a scaling activity (adding or removing ECS instances) is run, the scaling group cannot perform any other scaling activity.
- Currently, this only applies to scaling activities triggered by CloudMonitor's alarm tasks.

Removal Policy is used to select the ECS instances you want to remove from the scaling group when multiple candidates for removal exist.

- If a Server Load Balancer instance is specified in the scaling group, the scaling group automatically attaches its ECS instances to the Server Load Balancer instance.
- The Server Load Balancer instance must be enabled.
- Health check must be enabled for all listener ports configured for the Server Load Balancer instance; otherwise, creation fails.
- The default weight of an ECS instance attached to the Server Load Balancer instance is 50.

If an RDS instance is specified in the scaling group, the scaling group automatically attaches the intranet IP addresses of its ECS instances to the RDS access whitelist.

- The specified RDS instance must be in running status.

- The specified RDS instance's whitelist must have room for more IP addresses.

The scaling group does not take effect immediately after being created. It must be enabled to support scaling rule trigger and perform scaling activities.

For more information about how to remove ECS instances from the scaling group, see [Removal policies](#).

The scaling group, Server Load Balancer instance, and RDS instance must be in the same region.

You can create up to 20 scaling groups.

## Request parameters

| Name             | Type    | Required | Description                                                                                                                                                                                                                                                               |
|------------------|---------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Action           | String  | Yes      | Operation interface name, required parameter. Value: CreateScalingGroup                                                                                                                                                                                                   |
| RegionId         | String  | Yes      | ID of the region where a scaling group is located.                                                                                                                                                                                                                        |
| MaxSize          | Integer | Yes      | Maximum number of ECS instances in the scaling group. Value range: [0, 100].                                                                                                                                                                                              |
| MinSize          | Integer | Yes      | Minimum number of ECS instances in the scaling group. Value range: [0, 100].                                                                                                                                                                                              |
| ScalingGroupName | String  | No       | Name shown for the scaling group, which must contain 2-40 characters (English or Chinese). The name must begin with a number, an upper/lower-case letter or a Chinese character and may contain numbers, "_", "-", or ".". The account name is unique in the same region. |

|                 |         |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------|---------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |         |    | If this parameter is not specified, the default value is ScalingGroupId.                                                                                                                                                                                                                                                                                                                                                                                                                      |
| DefaultCooldown | Integer | No | Default cool-down time (in seconds) of the scaling group. Value range: [0, 86400]. The default value is 300s.                                                                                                                                                                                                                                                                                                                                                                                 |
| RemovalPolicy.N | String  | No | <p>Policy for removing ECS instances from the scaling group. Optional values:</p> <ul style="list-style-type: none"> <li>- OldestInstance: removes the first ECS instance attached to the scaling group.</li> <li>- NewestInstance: removes the first ECS instance attached to the scaling group.</li> <li>- OldestScalingConfiguration: removes the ECS instance with the oldest scaling configuration.</li> </ul> <p>Default values: OldestScalingConfiguration and OldestInstance. You</p> |

|                 |        |    |                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------|--------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |        |    | can enter up to two removal policies.                                                                                                                                                                                                                                                                                                                                                                  |
| LoadBalancerIds | String | No | ID list of a Server Load Balancer instance. A Json Array with format: [ "lb-id0" , "lb-id1" , ... "lb-idz" ], support up to 5 Load Balancer instance.                                                                                                                                                                                                                                                  |
| DBInstanceIds   | String | No | ID list of an RDS instance. A Json Array with format: [ "rm-id0" , "rm-id1" , ... "rm-idz" ], support up to 8 RDS instance.                                                                                                                                                                                                                                                                            |
| VSwitchId       | String | No | If you create a VPC scaling group, you must specify the ID of a VSwitch.                                                                                                                                                                                                                                                                                                                               |
| VSwitchIds.N    | String | No | <p>Parameter VSwitchIds.N is used to create instance in multiple zones. Parameter VSwitchIds.N has a priority over parameter VSwitchId.</p> <ul style="list-style-type: none"> <li>- The valid range of N is [1, 5], and you can specify at most 5 VSwitches in a VPC.</li> <li>- The priority of VSwitches descends from 1 to 5, and 1 indicates the highest priority.</li> <li>- When you</li> </ul> |

|  |  |  |                                                                                                                                                           |
|--|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |  |  | fail to create an instance in the zone to which a specified VSwitch belongs, another VSwitch with less priority replaces the specified one automatically. |
|--|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------|

## Return parameters

| Name           | Type   | Description                                                         |
|----------------|--------|---------------------------------------------------------------------|
| ScalingGroupId | String | ID of a scaling group, generated by the system and globally unique. |

## Error codes

For errors common to all interfaces, see [Client Error Table](#) or [Server Error Table](#).

| Error message                                  | Error code                        | Description                                                      | HTTP status code |
|------------------------------------------------|-----------------------------------|------------------------------------------------------------------|------------------|
| The scaling group name already exists.         | InvalidScalingGroupName.Duplicate | The specified value of parameter <parameter name> is duplicated. | 400              |
| The scaling group quota is exceeded.           | QuotaExceeded.ScalingGroup        | Scaling group quota exceeded.                                    | 400              |
| The specified region does not exist.           | InvalidRegionId.NotFound          | The specified region does not exist.                             | 404              |
| The specified MinSize is greater than MaxSize. | InvalidParameter.Conflict         | The value of parameter <parameter name> and parameter            | 400              |

|                                                                                                                                               |                                                    |                                                                                            |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------------------------------------|-----|
|                                                                                                                                               |                                                    | <parameter name><br>are conflict.                                                          |     |
| The specified Server Load Balancer instance does not exist in this account.                                                                   | InvalidScalingGroupId.NotFound                     | The specified scaling group does not exist.                                                | 404 |
| The specified Server Load Balancer instance and scaling group are not in the same region.                                                     | InvalidLoadBalancerId.RegionMismatch               | The specified Load Balancer and the specified scaling group are not in the same Region.    | 400 |
| The specified Server Load Balancer instance is not active.                                                                                    | IncorrectLoadBalancerStatus                        | The current status of the specified load balancer does not support this action.            | 400 |
| Health check is not enabled for the specified Server Load Balancer instance.                                                                  | IncorrectLoadBalancerHealthCheck                   | The current health check type of specified load balancer does not support this action.     | 400 |
| The specified Server Load Balancer instance becomes private after the VswitchID is specified.                                                 | InvalidLoadBalancerId.IncorrectAddressType         | The current address type of specified load balancer does not support this action.          | 400 |
| The network type of the ECS instance contained in the specified Server Load Balancer is different from the network type of the scaling group. | InvalidLoadBalancerId.IncorrectInstanceNetworkType | The network type of the instance in specified Load Balancer does not support this action.  | 400 |
| The ECS instance contained in the specified Server Load Balancer and VSwitchId are not in the same VPC.                                       | InvalidLoadBalancerId.VPCMismatch                  | The specified VSwitch and the instance in specified Load Balancer are not in the same VPC. | 400 |
| The specified RDS instance does not exist in this account.                                                                                    | InvalidDBInstanceId.NotFound                       | DB instance "XXX" does not exist.                                                          | 404 |
| The specified RDS instance and scaling group are not in the same region.                                                                      | InvalidDBInstanceId.RegionMismatch                 | DB instance "XXX" and the specified scaling group are not in the same Region.              | 400 |
| The specified RDS instance is not running.                                                                                                    | IncorrectDBInstanceStatus                          | The current status of DB instance "XXX" does not support                                   | 400 |



|                                                                                                           |                                    |                                                                |     |
|-----------------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------------------------|-----|
|                                                                                                           |                                    | this action.                                                   |     |
| The number of IP addresses in the access whitelist of the specified RDS instance exceeds the upper limit. | QuotaExceeded.DBInstanceSecurityIP | Security IP quota exceeded in DB instance "XXX" .              | 400 |
| The specified VSwitch does not exist.                                                                     | InvalidVSwitchId.NotFound          | The specified VSwitch does not exist.                          | 404 |
| The private IP address quota of the VSwitch is exceeded.                                                  | QuotaExceeded.PrivateIpAddress     | Private IP address quota exceeded in the specified VSwitch.    | 400 |
| The instance quota of the VPC is exceeded.                                                                | QuotaExceeded.VPCInstance          | Instance quota exceeded in the specified VPC.                  | 400 |
| The VSwitch is unavailable and instances cannot be created.                                               | IncorrectVSwitchStatus             | The current status of VSwitch does not support this operation. | 400 |

## Example

### Request example

```
http://ess.aliyuncs.com/?Action=CreateScalingGroup
&RegionId=cn-qingdao
&MaxSize=20
&MinSize=2
&LoadBalancerId=147b46d767c-cn-qingdao-cm5-a01
&DBInstanceId.1=rdszzzyunybaeu
&DBInstanceId.2=rdsia3u3yia3u3y
&<Public Request Parameters>
```

### Return example

XML format:

```
<CreateScalingGroupResponse>
<ScalingGroupId>dP8VqSd9ENXPc0ciVmbcrBT1</ScalingGroupId>
<RequestId>536E9CAD-DB30-4647-AC87-AA5CC38C5382</RequestId>
</CreateScalingGroupResponse>
```

JSON format:

```
{
  "RequestId": "536E9CAD-DB30-4647-AC87-AA5CC38C5382",
  "ScalingGroupId": "dP8VqSd9ENXPc0ciVmbcrBT1"
}
```

# Modify a scaling group

## Modify a scaling group

### Description

Modifies the attributes of a scaling group. However, the following attributes cannot be modified:

- RegionId
- LoadBalancerId
- DBInstanceId

The interface can be called only when the scaling group is active or inactive.

When the scaling configuration specified for the scaling group needs to be modified, the instance type attribute of the modified scaling configuration must be consistent with that of the active scaling configuration.

- After a new scaling configuration is added to the scaling group, the running ECS instances which are created based on the previous scaling configuration remain unchanged.

When the number (total capacity) of ECS instances in the scaling group does not meet the modified MaxSize or MinSize specification, the Auto Scaling service automatically attaches or removes ECS instances to/from the group to make odds even.

### Request parameters

| Name   | Type   | Required? | Description                                          |
|--------|--------|-----------|------------------------------------------------------|
| Action | String | Yes       | Operation interface name, required parameter. Value: |

|                              |         |     |                                                                                                                                                                                                                                                                                                            |
|------------------------------|---------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                              |         |     | ModifyScalingGroup                                                                                                                                                                                                                                                                                         |
| ScalingGroupId               | String  | Yes | Scaling group ID                                                                                                                                                                                                                                                                                           |
| ScalingGroupName             | String  | No  | Name shown for the scaling group, which must contain 2-40 characters (English or Chinese). The name must begin with a number, an upper/lower-case letter or a Chinese character and may contain numbers, "_", "-" or ".". The account name is unique in the same region.                                   |
| ActiveScalingConfigurationId | String  | No  | ID of the active scaling configuration in the scaling group.                                                                                                                                                                                                                                               |
| MinSize                      | Integer | No  | Minimum number of ECS instances in the scaling group. Value range: [0, 100].                                                                                                                                                                                                                               |
| MaxSize                      | Integer | No  | Maximum number of ECS instances in the scaling group. Value range: [0, 100].                                                                                                                                                                                                                               |
| DefaultCooldown              | Integer | No  | Default cool-down time (in seconds) of the scaling group. Value range: [0, 86400].                                                                                                                                                                                                                         |
| RemovalPolicy.N              | String  | No  | Policy for removing ECS instances from the scaling group.<br>Options:<br>- OldestInstance: removes the first ECS instance attached to the scaling group.<br>- NewestInstance: removes the first ECS instance attached to the scaling group.<br>- OldestScalingConfiguration: removes the ECS instance with |

|  |  |  |                                                                             |
|--|--|--|-----------------------------------------------------------------------------|
|  |  |  | the oldest scaling configuration. You can enter up to two removal policies. |
|--|--|--|-----------------------------------------------------------------------------|

## Return parameters

Public parameters.

## Error code

For errors common to all interfaces, refer to the [Client Error Table](#) or [Server Error Table](#).

| Error                                                                                                        | Error code                                         | Description                                                                                                 | HTTP status code |
|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------|------------------|
| The specified scaling group does not exist in this account.                                                  | InvalidScalingGroupId.NotFound                     | The specified scaling group does not exist.                                                                 | 404              |
| The scaling group name already exists.                                                                       | InvalidScalingGroupName.Duplicate                  | The specified value of parameter <parameter name> is duplicated.                                            | 400              |
| The specified scaling configuration does not exist in the scaling group.                                     | InvalidScalingConfigurationId.NotFound             | The specified scaling configuration does not exist.                                                         | 404              |
| The instance types of the specified scaling configuration and the active scaling configuration do not match. | InvalidScalingConfigurationId.InstanceTypeMismatch | The specified scaling configuration and existing active scaling configuration have different instance type. | 400              |
| The specified MinSize is greater than MaxSize.                                                               | InvalidParameter.Conflict                          | The value of parameter <parameter name> and parameter <parameter name> are conflict.                        | 400              |

## Example

### Request example

```
http://ess.aliyuncs.com/?Action=ModifyScalingGroup
```

```
&ScalingGroupId=cqS5QbbhmvGLcJbWoDbWLj2V
&ScalingGroupName=ScalingGroup
&<Public Request Parameters>
```

### Return example

XML format:

```
< ModifyScalingGroupResponse>
<RequestId>6469DCD0-13AC-487E-85A0-CE4922908FDE</RequestId>
</ ModifyScalingGroupResponse>
```

JSON format:

```
"RequestId": "6469DCD0-13AC-487E-85A0-CE4922908FDE"
```

# Enable a scaling group

# Enable a scaling group

## Description

Enables the specified scaling group.

- After the scaling group is successfully enabled (the group is active), the ECS instances specified by the interface are attached to the group.
- If the current number of ECS instances in the scaling group is still smaller than MinSize after the ECS instances specified by the interface are attached, the Auto Scaling service automatically creates ECS instances in Pay-As-You-Go mode to make odds even. For example, a scaling group is created with MinSize = 5. Two existing ECS instances are specified by the InstanceId.N parameter when the scaling group is enabled. Three additional ECS instances are automatically created after the two ECS instances are attached by the Auto Scaling service to the scaling group.

The interface can be called only when the scaling group is inactive.

If the scaling group has no active scaling configurations, you need to input scaling configurations when enabling the scaling group.

- A single scaling group can have only one active scaling configuration at a time.
- If an active scaling configuration has been created before the scaling group is enabled, input of a new active scaling configuration through the interface makes the previous scaling configuration inactive.

Restrictions on attaching ECS instances:

- The attached ECS instance and the scaling group must be in the same region.
- The attached ECS instance and the instance with active scaling configurations must be of the same type.
- The attached ECS instance must in the running state.
- The attached ECS instance has not been attached to other scaling groups.
- The attached ECS instance supports Subscription and Pay-As-You-Go payment methods.
- If the VswitchID is specified for a scaling group, you cannot attach Classic ECS instances or ECS instances on other VPCs to the scaling group.
- If the VswitchID is not specified for the scaling group, ECS instances of the VPC type cannot be attached to the scaling group

The call fails if the number (total capacity) of instances specified by the interface plus instances in the scaling group is greater than MaxSize.

## Request parameters

| Name                         | Type   | Required? | Description                                                                                                 |
|------------------------------|--------|-----------|-------------------------------------------------------------------------------------------------------------|
| Action                       | String | Yes       | Operation interface name, required parameter; value: EnableScalingGroup                                     |
| ScalingGroupId               | String | Yes       | Scaling group ID.                                                                                           |
| ActiveScalingConfigurationId | String | No        | ID of the scaling configuration to be activated in a scaling group.                                         |
| InstanceId.N                 | String | No        | ID of the ECS instance to be attached to the scaling group after it is enabled. You can input up to 20 IDs. |

## Return parameters

Public parameters

## Error code

For errors common to all interfaces, refer to the [Client Error Table](#) or [Server Error Table](#).

| Error                                                                                                        | Error code                                         | Description                                                                                                      | HTTP status code |
|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------|
| The specified scaling group does not exist in this account.                                                  | InvalidScalingGroupId.NotFound                     | The specified scaling group does not exist.                                                                      | 404              |
| Open API is not fully authorized to the Auto Scaling service.                                                | Forbidden.Unauthorized                             | A required authorization for the specified action is not supplied.                                               | 403              |
| The specified scaling group is in the deleting state.                                                        | IncorrectScalingGroupStatus                        | The current status of the specified scaling group does not support this action.                                  | 400              |
| The specified scaling configuration does not exist in the scaling group.                                     | InvalidScalingConfigurationId.NotFound             | The specified scaling configuration does not exist.                                                              | 404              |
| The instance types of the specified scaling configuration and the active scaling configuration do not match. | InvalidScalingConfigurationId.InstanceTypeMismatch | The specified scaling configuration and the existing active scaling configuration have different instance types. | 400              |
| No active scaling configuration is specified for the scaling group.                                          | MissingActiveScalingConfiguration                  | An active scaling configuration for the specified scaling group is not supplied.                                 | 400              |
| The specified ECS instance does not exist in this account.                                                   | InvalidInstanceId.NotFound                         | Instance "XXX" does not exist.                                                                                   | 404              |
| The specified ECS instance and the scaling group are not in the same region.                                 | InvalidInstanceId.RegionMismatch                   | Instance "XXX" and the specified scaling group are not in the same Region.                                       | 400              |
| The instance types of the specified ECS instance and the scaling                                             | InvalidInstanceId.InstanceTypeMismatch             | Instance "XXX" and the existing active scaling configuration have                                                | 400              |

|                                                                                                                                               |                                                    |                                                                                                   |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------------------------------------------------------|-----|
| configuration do not match.                                                                                                                   |                                                    | different instance types.                                                                         |     |
| The specified ECS instance is not in the running status.                                                                                      | IncorrectInstanceStatus                            | The current status of instance "XXX" does not support this action.                                | 400 |
| The network types of the specified ECS instance and the scaling configuration do not match.                                                   | InvalidInstanceId.NetworkTypeMismatch              | The network type of instance "XXX" does not support this action.                                  | 400 |
| The specified scaling group and the attached ECS instance are not in the same VPC.                                                            | InvalidInstanceId.VPCMismatch                      | Instance "XXX" and the specified scaling group are not in the same VPC.                           | 400 |
| The specified ECS instance has been attached to another scaling group.                                                                        | InvalidInstanceId.InUse                            | Instance "XXX" is already attached to another scaling group.                                      | 400 |
| The specified Server Load Balancer instance is not active.                                                                                    | IncorrectLoadBalancerStatus                        | The current status of the specified load balancer does not support this action.                   | 400 |
| Health check is not enabled for the specified Server Load Balancer instance.                                                                  | IncorrectLoadBalancerHealthCheck                   | The current health check type of specified load balancer does not support this action.            | 400 |
| The network type of the ECS instance contained in the specified Server Load Balancer is different from the network type of the scaling group. | InvalidLoadBalancerId.IncorrectInstanceNetworkType | The network type of the instance in specified load balancer does not support this action.         | 400 |
| The ECS instance contained in the specified Server Load Balancer and VSwitchId are not in the same VPC.                                       | InvalidLoadBalancerId.VPCMismatch                  | The specified virtual switch and the instance in specified load balancer are not in the same VPC. | 400 |
| The specified RDS instance is not running.                                                                                                    | IncorrectDBInstanceStatus                          | The current status of DB instance "XXX" does not support this action.                             | 400 |
| Total Capacity after the ECS instance is attached is greater                                                                                  | IncorrectCapacity.MaxSize                          | To attach the instances, the total capacity will be                                               | 400 |



|               |  |                            |  |
|---------------|--|----------------------------|--|
| than MaxSize. |  | greater than the max size. |  |
|---------------|--|----------------------------|--|

## Example

### Request example

```
http://ess.aliyuncs.com/?Action=EnableScalingGroup
&ScalingGroupId=dmIDKNcyWfzncX9MWX1bwFV
&InstanceId.1=i-283vvytn
&<Public Request Parameters>
```

### Return example

XML format:

```
< EnableScalingGroupResponse>
<RequestId>6469DCD0-13AC-487E-85A0-CE4922908FDE</RequestId>
</ EnableScalingGroupResponse>
```

JSON format:

```
{
  "RequestId": "6469DCD0-13AC-487E-85A0-CE4922908FDE"
}
```

## Disable a scaling group

## Disable a scaling group

### Description

This operation disables a specified scaling group.

- The scaling activities in progress before the scaling group is disabled are continued until completion, whereas scaling activities triggered after the scaling group is disabled are rejected.
- The interface can be called only when the scaling group is active.

## Request parameters

| Name           | Type   | Required? | Description                                                              |
|----------------|--------|-----------|--------------------------------------------------------------------------|
| Action         | String | Yes       | Operation interface name, required parameter. Value: DisableScalingGroup |
| ScalingGroupId | String | Yes       | Scaling group ID                                                         |

## Return parameters

Public parameters

## Error code

For errors common to all interfaces, refer to the [Client Error Table](#) or [Server Error Table](#).

| Error                                                       | Error code                     | Description                                 | HTTP Status Code |
|-------------------------------------------------------------|--------------------------------|---------------------------------------------|------------------|
| The specified scaling group does not exist in this account. | InvalidScalingGroupId.NotFound | The specified scaling group does not exist. | 404              |

## Example

### Request example

```
http://ess.aliyuncs.com/?Action=DisableScalingGroup
&ScalingGroupId=dmIDKNcyWfzncX9MWX1bwFV
&<Public Request Parameters>
```

### Return example

XML example:

```
< DisableScalingGroupResponse>
<RequestId>6469DCD0-13AC-487E-85A0-CE4922908FDE</RequestId>
</ DisableScalingGroupResponse>
```

JSON format:

```
{  
  "RequestId": "6469DCD0-13AC-487E-85A0-CE4922908FDE"  
}
```

# Delete a scaling group

## Delete a scaling group

### Description

This operation deletes a specified scaling group.

ForceDelete indicates whether to forcibly delete a scaling group and remove and release ECS instances if the scaling group has ECS instances or scaling activities are in progress.

If ForceDelete is set to false, the scaling group can be deleted only when the following conditions are met:

- Condition 1: No scaling activities are in progress in the scaling group.
- Condition 2: The current number (total capacity) of ECS instances in the scaling group is 0.
- When the two conditions are met, the scaling group is disabled and then deleted.

When ForceDelete is set to true

- The scaling group is disabled to reject new scaling activity requests. When the existing scaling activity is completed, all ECS instances are removed from the scaling group and the group is then deleted (manually attached ECS instances are removed from the scaling group, whereas ECS instances automatically created by the Auto Scaling service are deleted).

Deleting a scaling group also deletes scaling configurations, rules, activities, and requests.

The following tasks or instances are not deleted: scheduled tasks, Cloud Monitor alarm tasks, Server Load Balancer instances, and RDS instances.

## Request parameters

| Name           | Type   | Required? | Description                                                                                                                                                                                                                                                    |
|----------------|--------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Action         | String | Yes       | Operation interface name, required parameter. Value: DeleteScalingGroup                                                                                                                                                                                        |
| ScalingGroupId | String | Yes       | Scaling group ID                                                                                                                                                                                                                                               |
| ForceDelete    | Bool   | No        | Indicates whether to forcibly delete a scaling group and remove and release ECS instances if the scaling group has ECS instances or scaling activities are in progress. The default value is false, indicating that the scaling group is not forcibly deleted. |

## Return parameters

Public parameters

## Error code

| Error                                                         | Error code                     | Description                                                                                               | HTTP status code |
|---------------------------------------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------|------------------|
| The specified scaling group does not exist in this account.   | InvalidScalingGroupId.NotFound | The specified scaling group does not exist.                                                               | 404              |
| Open API is not fully authorized to the Auto Scaling service. | Forbidden.Unauthorized         | A required authorization for the specified action is not supplied.                                        | 403              |
| The specified scaling group still has ECS instances           | InstanceInUse                  | You cannot delete a scaling configuration or scaling group while there is an instance associated with it. | 400              |

## Example

Request example

```
http://ess.aliyuncs.com/?Action=DeleteScalingGroup
&ScalingGroupId=dmIDKNcyWfzncX9MWX1bwFV
&<Public Request Parameters>
```

### Return example

XML format:

```
<DeleteScalingGroupResponse>
<RequestId>6469DCD0-13AC-487E-85A0-CE4922908FDE</RequestId>
</DeleteScalingGroupResponse>
```

JSON format:

```
{
  "RequestId": "6469DCD0-13AC-487E-85A0-CE4922908FDE"
}
```

## Query a scaling group

## Query a scaling group

### Description

This operation queries the information of a scaling group. Scaling groups have the following life cycle states:

- Active: In this state, the scaling group can receive scaling rule execution requests and trigger scaling activities.
- Inactive: In this state, the scaling group does not receive scaling rule execution requests.
- Deleting: The scaling group is being deleted and does not receive scaling rule execution requests.

### Request parameters

| Name   | Type   | Required? | Description         |
|--------|--------|-----------|---------------------|
| Action | String | Yes       | Operation interface |

|                    |         |     |                                                                                                                                             |
|--------------------|---------|-----|---------------------------------------------------------------------------------------------------------------------------------------------|
|                    |         |     | name, required parameter. Value: DescribeScalingGroups                                                                                      |
| RegionId           | String  | Yes | ID of the region where the scaling group is located.                                                                                        |
| ScalingGroupId.N   | String  | No  | Scaling group ID. You can enter up to 20 IDs. Invalid scaling group IDs are not displayed in query results, and no error is reported.       |
| ScalingGroupName.N | String  | No  | Scaling group name. You can enter up to 20 names. Invalid scaling group names are not displayed in query results, and no error is reported. |
| PageNumber         | Integer | No  | Page number of the scaling group list, starting from 1. Default value: 1.                                                                   |
| PageSize           | Integer | No  | When querying by page, this parameter indicates the number of lines per page. Maximum value: 50; default value: 10.                         |

## Return parameters

| Name          | Type                | Description                    |
|---------------|---------------------|--------------------------------|
| TotalCount    | Integer             | Total number of scaling groups |
| PageNumber    | Integer             | Current page number            |
| PageSize      | Integer             | Number of lines per page       |
| ScalingGroups | ScalingGroupSetType | Scaling group information set  |

ScalingGroupSetType is a set of ScalingGroupItemTypes:

| Name         | Type                 | Description               |
|--------------|----------------------|---------------------------|
| ScalingGroup | ScalingGroupItemType | Scaling group information |

The attributes of ScalingGroupItemType are listed below:

| Name                         | Type                 | Description                                                                                                       |
|------------------------------|----------------------|-------------------------------------------------------------------------------------------------------------------|
| ScalingGroupId               | String               | Scaling group ID.                                                                                                 |
| ScalingGroupName             | String               | Name shown for the scaling group.                                                                                 |
| ActiveScalingConfigurationId | String               | ID of the active scaling configuration in the scaling group.                                                      |
| RegionId                     | String               | ID of the region where the scaling group is located.                                                              |
| MinSize                      | Integer              | Minimum number of ECS instances in the scaling group.                                                             |
| MaxSize                      | Integer              | Maximum number of ECS instances in the scaling group.                                                             |
| DefaultCooldown              | Integer              | Default cool-down time of the scaling group.                                                                      |
| RemovalPolicies              | RemovalPolicySetType | A set of policies for removing ECS instances from the scaling group.                                              |
| LoadBalancerId               | String               | ID of the Server Load Balancer instance.                                                                          |
| DBInstanceIds                | DBInstanceIdSetType  | ID of the RDS instance.                                                                                           |
| VSwitchId                    | String               | ID of the virtual switch corresponding to the scaling group.                                                      |
| LifecycleState               | String               | Status of the scaling group.                                                                                      |
| TotalCapacity                | Integer              | Total number of ECS instances in the scaling group.                                                               |
| ActiveCapacity               | Integer              | Number of ECS instances which have been attached to the scaling group and are running properly.                   |
| PendingCapacity              | Integer              | Number of ECS instances which are being attached to the scaling group with relevant configurations not completed. |
| RemovingCapacity             | Integer              | Number of ECS instances which are being removed from the scaling group.                                           |
| CreationTime                 | String               | Time when the scaling group                                                                                       |

|  |  |             |
|--|--|-------------|
|  |  | is created. |
|--|--|-------------|

RemovalPolicySetType is a set of String types:

| Name          | Type   | Description                                               |
|---------------|--------|-----------------------------------------------------------|
| RemovalPolicy | String | Policy for removing ECS instances from the scaling group. |

DBInstanceIdSetType is a set of String types:

| Name         | Type   | Description            |
|--------------|--------|------------------------|
| DBInstanceId | String | ID of the RDS instance |

## Error code

For errors common to all interfaces, refer to the [Client Error Table](#) or [Server Error Table](#).

## Example

### Request example

```
http://ess.aliyuncs.com/?Action=DescribeScalingGroups
&RegionId=cn-qingdao
&PageSize=50
&<Public Request Parameters>
```

### Return example

XML format:

```
<DescribeScalingGroupsResponse>
<RequestId>6393C3A8-B611-42F2-AFA6-F080FC45D5D0</RequestId>
<TotalCount>1</TotalCount>
<PageNumber>1</PageNumber>
<PageSize>10</PageSize>
<ScalingGroups>
<ScalingGroup>
<ActiveCapacity>1</ActiveCapacity> <ActiveScalingConfigurationId>
dYo713cNYIB4ddEVIKbcpOef
</ActiveScalingConfigurationId>
<DBInstanceIds>
<DBInstanceId>rdszzzyyunybaeu</DBInstanceId>
</DBInstanceIds>
<VSwitchId>vpc-25j4god4l</VSwitchId>
```



```

<DefaultCooldown>20</DefaultCooldown>
<LifecycleState>Active</LifecycleState>
<LoadBalancerId>147b46d767c-cn-qingdao-cm5-a01</LoadBalancerId>
<MaxSize>1</MaxSize>
<MinSize>0</MinSize>
<PendingCapacity>0</PendingCapacity>
<RegionId>cn-qingdao</RegionId>
<RemovingCapacity>0</RemovingCapacity>
<ScalingGroupId>dyrSuvBOtO1dEdIIbplQb8</ScalingGroupId>
<ScalingGroupName>dyrSuvBOtO1dEdIIbplQb8</ScalingGroupName>
<RemovalPolicies>
<RemovalPolicy>OldestScalingConfiguration</RemovalPolicy>
<RemovalPolicy>OldestInstance</RemovalPolicy>
</RemovalPolicies>
<TotalCapacity>1</TotalCapacity>
<CreationTime>2014-08-14T10:58Z</CreationTime>
</ScalingGroup>
</ScalingGroups>
</DescribeScalingGroupsResponse>

```

JSON format:

```

{
  "RequestId": "68386699-8B9E-4D5B-BC4C-75A28F6C2A00",
  "TotalCount": 1,
  "PageSize": 10,
  "PageNumber": 1,
  "ScalingGroups": {
    "ScalingGroup": [
      {
        "ScalingGroupId": "b8pYCVbIV5k9cz4PWpbe0k19",
        "ScalingGroupName": "b8pYCVbIV5k9cz4PWpbe0k19",
        "RegionId": "cn-qingdao",
        "RemovingCapacity": 0,
        "DefaultCooldown": 300,
        "MinSize": 1,
        "MaxSize": 2,
        "LifecycleState": "Inactive",
        "ActiveScalingConfigurationId": " dyo713cNYIB4ddEVIKbcpOef",
        "LoadBalancerId": "147b46d767c-cn-qingdao-cm5-a01",
        "PendingCapacity": 0,
        "TotalCapacity": 0,
        "ActiveCapacity": 0,
        "CreationTime": "2014-08-14T10:58Z",
        "DBInstanceIds": {
          "DBInstanceId": [
            "rdsia3u3yia3u3y",
            "rdszzzyunybaeu"
          ]
        }
      }
    ],
  },
  "VSwitchId": "vpc-25j4god4l",
  "RemovalPolicies": {
    "RemovalPolicy": [
      "OldestScalingConfiguration",
    ]
  }
}

```

```
"OldestInstance"  
]  
}  
}  
]  
}  
}
```

## Query the list of ECS instances in a scaling group

## Query the list of ECS instances in a scaling group

### Description

Queries the list of ECS instances in a scaling group. You can query by scaling group ID, scaling configuration ID, health status, lifecycle status, and creation type.

The ECS instances in a scaling group can be created automatically or attached manually.

- ECS instances can be automatically created by the Auto Scaling service based on your scaling configurations and rules.
- ECS instances can also be manually attached to a scaling group.

An ECS instance in a scaling group may be in the following states during its lifecycle:

- Pending: The ECS instance is being attached to the scaling group, with operations such as instance creation, attaching to Server Load Balancer, and adding to the RDS access whitelist.
- InService: The ECS instance is successfully added to the scaling group and provides services properly.
- Removing: The ECS instance is being removed from the scaling group.

An ECS instance in a scaling group may be in the following health states:

- Healthy: The ECS instance is healthy.
- Unhealthy: The ECS instance is unhealthy if it is not running.

The Auto Scaling service automatically removes unhealthy ECS instances from scaling groups.

- If the unhealthy ECS instances are automatically created, the Auto Scaling service disables and releases them.
- If the unhealthy ECS instances are manually attached, the Auto Scaling service does not disable or release them.

## Request parameters

| Name                   | Type   | Required? | Description                                                                                                                                                                                                                                                       |
|------------------------|--------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Action                 | String | Yes       | Operation interface name, required parameter. Value: DescribeScalingInstances.                                                                                                                                                                                    |
| RegionId               | String | Yes       | ID of the region where the scaling group is located.                                                                                                                                                                                                              |
| ScalingGroupId         | String | No        | Scaling group ID.                                                                                                                                                                                                                                                 |
| ScalingConfigurationId | String | No        | ID of the associated scaling configuration.                                                                                                                                                                                                                       |
| InstanceId.N           | String | No        | ECS instance ID. You can input up to 20 IDs. Invalid instance IDs are not displayed in query results, and no error is reported.                                                                                                                                   |
| HealthStatus           | String | No        | Health status of an ECS instance in the scaling group. Options: Healthy and Unhealthy.                                                                                                                                                                            |
| LifecycleState         | String | No        | Lifecycle status of an ECS instance in the scaling group. Options:<br>- InService: the ECS instance has been added to the scaling group and runs properly.<br>- Pending: the ECS instance is being attached to the scaling group with relevant configurations not |

|              |         |    |                                                                                                                                                                                                                                                                               |
|--------------|---------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              |         |    | completed.<br>- Removing: the ECS instance is being removed from the scaling group.                                                                                                                                                                                           |
| CreationType | String  | No | ECS instance creation type.<br>Options:<br>- AutoCreated: the ECS instance is automatically created by the Auto Scaling service in the scaling group.<br>- Attached: the ECS instance is created outside the Auto Scaling service and manually attached to the scaling group. |
| PageNumber   | Integer | No | Page number of the ECS instance list, starting from 1.<br>Default value: 1                                                                                                                                                                                                    |
| PageSize     | Integer | No | When querying by page, this parameter indicates the number of lines per page.<br>Maximum value: 50;<br>default value: 10                                                                                                                                                      |

## Return parameters

| Name             | Type                   | Description                       |
|------------------|------------------------|-----------------------------------|
| TotalCount       | Integer                | Total number of ECS instances     |
| PageNumber       | Integer                | Current page number               |
| PageSize         | Integer                | Number of lines per page          |
| ScalingInstances | ScalingInstanceSetType | A set of ECS instance information |

ScalingInstanceSetType is a set of ScalingInstanceItemTypes:

| Name            | Type                    | Description              |
|-----------------|-------------------------|--------------------------|
| ScalingInstance | ScalingInstanceItemType | ECS instance information |

The attributes of `ScalingInstanceItemType` are listed below:

| Name                   | Type   | Description                                                  |
|------------------------|--------|--------------------------------------------------------------|
| InstanceId             | String | ECS instance ID.                                             |
| ScalingGroupId         | String | ID of the scaling group to which the ECS instance belongs.   |
| ScalingConfigurationId | String | ID of the associated scaling configuration.                  |
| HealthStatus           | String | Health status of the ECS instance in the scaling group.      |
| LifecycleState         | String | Lifecycle status of the ECS instance in the scaling group.   |
| CreationTime           | String | Time when the ECS instance is attached to the scaling group. |
| CreationType           | String | ECS instance creation type.                                  |

## Error code

For errors common to all interfaces, refer to the [Client Error Table](#) or [Server Error Table](#).

## Example

### Request example

```
http://ess.aliyuncs.com/?Action=DescribeScalingInstances
&RegionId=cn-qingdao
&ScalingGroupId=dBCYxE26IHKcGq1xPcTNBwV
&<Public Request Parameters>
```

### Return example

XML format:

```
<DescribeScalingInstancesResponse>
<RequestId>DFF8797F-5B73-4BD7-A7D0-03479C458F7A</RequestId>
<TotalCount>1</TotalCount>
<PageNumber>1</PageNumber>
<PageSize>10</PageSize>
<ScalingInstances>
<ScalingInstance>
<CreationTime>2014-08-15T17:37Z</CreationTime>
<CreationType>AutoCreated</CreationType>
```

```
<HealthStatus>Healthy</HealthStatus>
<InstanceId>i-283vvytn</InstanceId>
<LifecycleState>InService</LifecycleState> <ScalingConfigurationId>
cGsGHrdMBa3DcDrrBVcc4k2H
</ScalingConfigurationId>
<ScalingGroupId>dBCYxE26IHKcGq1xPcTNBwV</ScalingGroupId>
</ScalingInstance>
</ScalingInstances>
</DescribeScalingInstancesResponse>
```

JSON format:

```
{
  "RequestId": "13305F2D-A4C2-4E6B-B7C7-0F2150842EA3",
  "TotalCount": 1,
  "PageNumber": 1,
  "PageSize": 50,
  "ScalingInstances": {
    "ScalingInstance": [
      {
        "ScalingConfigurationId": "bU5uZHcAgtzwcL4IeDeavqTS",
        "CreationType": "AutoCreated",
        "InstanceId": "i-28sov3exk",
        "CreationTime": "2014-08-14T10:59Z",
        "HealthStatus": "Healthy",
        "LifecycleState": "InService",
        "ScalingGroupId": "dE9YbOdCHqaFdFZXVdDjQCB"
      }
    ]
  }
}
```

## Query a scaling activity

## Query a scaling activity

### Description

Queries a scaling activity.

- You can specify a scaling group ID to query all scaling activities in this scaling group.
- You can filter the query results based on the scaling activity status.

- Only scaling activities during the last 30 days can be returned.

## Request parameters

| Name                | Type    | Required? | Description                                                                                                                                                                                                                                                                                        |
|---------------------|---------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Action              | String  | Yes       | Operation interface name, required parameter. Value: DescribeScalingActivities                                                                                                                                                                                                                     |
| RegionId            | String  | Yes       | Region of the scaling activity                                                                                                                                                                                                                                                                     |
| ScalingGroupId      | String  | No        | Scaling group ID                                                                                                                                                                                                                                                                                   |
| ScalingActivityId.N | String  | No        | Scaling group ID. You can enter up to 10 IDs. Invalid scaling group IDs are neglected in the query results, and no error is reported.                                                                                                                                                              |
| StatusCode          | String  | No        | Scaling activity status. Optional values:<br>- Successful: Successful scaling activities.<br>- Warning: Partially successful scaling activities.<br>- Failed: Failed scaling activities.<br>- InProgress: Scaling activities in progress.<br>- Rejected: The scaling activity request is rejected. |
| PageNumber          | Integer | No        | Page number of the scaling activity list starting from 1. The default value is 1.                                                                                                                                                                                                                  |
| PageSize            | Integer | No        | When querying by page, this parameter indicates the number of lines per page. Maximum value: 50; default value: 10                                                                                                                                                                                 |

## Return parameters

| Name              | Type                   | Description                             |
|-------------------|------------------------|-----------------------------------------|
| TotalCount        | Integer                | Total number of the scaling activities  |
| PageNumber        | Integer                | Current page number                     |
| PageSize          | Integer                | Number of lines per page                |
| ScalingActivities | ScalingActivitySetType | Set of the scaling activity information |

ScalingActivitySetType is a set consisting of the ScalingActivityItemType:

| Name            | Type                    | Description                  |
|-----------------|-------------------------|------------------------------|
| ScalingActivity | ScalingActivityItemType | Scaling activity information |

Attributes of the ScalingActivityItemType are introduced as follows:

| Name              | Type    | Description                               |
|-------------------|---------|-------------------------------------------|
| ScalingActivityId | String  | Scaling activity ID                       |
| ScalingGroupId    | String  | Scaling group ID                          |
| Description       | String  | Description on the scaling activity       |
| Cause             | String  | Cause that triggers the scaling activity  |
| StartTime         | String  | Start time of the scaling activity        |
| EndTime           | String  | End time of the scaling activity          |
| Progress          | Integer | Running speed of the scaling activity     |
| StatusCode        | String  | Current status of the scaling activity    |
| StatusMessage     | String  | Message about the scaling activity status |

## Error code

For errors common to all interfaces, see [Client Error Table](#) or [Server Error Table](#).



## Example

### Request example

```
http://ess.aliyuncs.com/?Action=DescribeScalingActivities
&RegionId=cn-qingdao
&PageSize=50
&<Public Request Parameters>
```

### Return example

XML format:

```
<DescribeScalingActivitiesResponse>
<RequestId>8FAAE99E-EB43-4838-85AD-93F62454904C</RequestId>
<TotalCount>1</TotalCount>
<PageNumber>1</PageNumber>
<PageSize>10</PageSize>
<ScalingActivities>
<ScalingActivity>
<Cause>A scheduled task excuete scaling rule "srtest", changing the Total Capacity from "0" to "1".</Cause>
<Description>Add "1" ECS instance</Description>
<EndTime>2014-08-17T12:39Z</EndTime>
<Progress>100</Progress>
<ScalingActivityId>ebta5WbUzC8gcwUWvfchyT4U</ScalingActivityId>
<ScalingGroupId>AG6CQdPU8OKdwLjgZcJ2eaQ</ScalingGroupId>
<StartTime>2014-08-17T12:39Z</StartTime>
<StatusCode>Successful</StatusCode>
<StatusMessage>"1" ECS instances is added. </StatusMessage>
</ScalingActivity>
</ScalingActivities>
</DescribeScalingActivitiesResponse>
```

JSON format:

```
{
  "RequestId":"0A016AD6-A91F-4210-9DEE-D5BBD4270F45",
  "TotalCount":2582,
  "PageNumber":1,
  "PageSize":1,
  "ScalingActivities":{
    "ScalingActivity":[
      {
        "ScalingActivityId":"bBxOR5dhKFoccGkbTrcyHE2g",
        "StartTime":"2014-08-18T20:49Z",
        "EndTime":"2014-08-18T20:49Z",
        "Cause":" A scheduled task excuete scaling rule \"srtest\", changing the Total Capacity from \"0\" to \"1\".",
        "Description":" Add \"1\" ECS instance ",
        "Progress":100,

```

```
"ScalingGroupId":"c7acXJbAJmpPcGE7G3bwwbS9",
"StatusCode":"Successful",
"StatusMessage":"\"1\" ECS instances is added. "
}
],
},
}
```

## Scaling configuration

# Create a scaling configuration

## Description

This operation creates a scaling configuration according to input parameters.

- Scaling configurations cannot be changed. To use a new scaling configuration, you must create it and activate it in a scaling group (by changing the `ActiveScalingConfigurationId` attribute).
- When creating a scaling configuration, you must select an image to determine the system disk configuration of the new instance. The image contains OS and the application software configuration. After an instance is created based on an image, the system disk of the instance is a clone of the image.
- When creating an instance, you must add it to a security group. Therefore, you need to specify a security group in a scaling configuration. The security group must be created in advance. Mutual access is allowed between instances in the same security group in the intranet. By default, firewalls are deployed between security groups, and mutual access between security groups is disabled. However, firewall permissions of a security group can be set through security group authorization (by using the interface for granting security group permissions). Instances in one security group cannot exceed 1,000. If the instances in a security group exceed this limit, and the security group is specified when creating an instance, a failure prompt is displayed.
- When you create an instance through a scaling configuration, if `InternetChargeType` is set to `PayByBandwidth`, the value of `InternetMaxBandwidthOut` is the selected fixed bandwidth value; if `InternetChargeType` is set to `PayByTraffic`, `InternetMaxBandwidthOut` specifies the upper limit of the bandwidth value, and billing is based on the actual network traffic. When setting `InternetChargeType` and `InternetMaxBandwidthOut`, calculate the possible bandwidth

expenses carefully.

- The value of `InternetMaxBandwidthIn` is unrelated to billing in all circumstances. Incoming data traffic of the instance is free of charge.
- During instance creation, the system allocates a system disk with an appropriate size for the instance based on the image specified by the user. Moreover, the system will also specify the type of the system disk as a cloud disk or an ephemeral disk if you have the permission to activate an ephemeral disk. (By default, a new user does not have this permission.)
- The capacity of a cloud disk cannot exceed 2,000 GB and the capacity of an ephemeral disk cannot exceed 1 TB (1,024 GB).
- The `Portable` attribute of a cloud disk created with an instance is `False`, that is, the cloud disk cannot be detached or attached. The `DeleteWithInstance` attribute of all created disks is `True`.
- A maximum of four data disks can be added to an instance. The total capacity of ephemeral disks for an instance cannot exceed 2 TB (2,048 GB). (This value does not include the capacity of the system disk.)
- When the system disk is a cloud disk, data disks cannot be ephemeral disks; when the system disk is an ephemeral disk, data disks can be ephemeral disks or cloud disks.
- During instance creation, the ECS system allocates a system disk with an appropriate size for the instance based on the image specified by the user.
- If the instance memory is 512 MB or less, Windows OS is not supported. If the instance memory is 4 GB or more, a 32-bit OS is not supported.
- When the `VSwitchId` value is not set in a scaling group, the security group with the `VPCId` value set cannot be used to create a scaling configuration.
- When the `VSwitchId` value is set in a scaling group, the security group of the classic network type or with a different `VPCId` value cannot be used to create a scaling configuration.
- A maximum of 10 scaling configurations can be created in a scaling group.

## Request parameters

| Name           | Type   | Required | Description                                                                                     |
|----------------|--------|----------|-------------------------------------------------------------------------------------------------|
| Action         | String | Yes      | Operation interface, required. The parameter value is <code>CreateScalingConfiguration</code> . |
| ScalingGroupId | String | Yes      | ID of the scaling group of a scaling configuration.                                             |
| ImageId        | String | Yes      | ID of an image file, indicating the image resource selected when an instance is enabled.        |
| InstanceType   | String | Yes      | Resource type of an ECS instance.                                                               |

|                          |         |     |                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------|---------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SecurityGroupId          | String  | Yes | ID of the security group to which a newly created instance belongs. Mutual access is allowed between instances in one security group.                                                                                                                                                                                                                                                              |
| ScalingConfigurationName | String  | No  | Name shown for the scheduled task. The name must contain 2-40 English or Chinese characters, and start with a number, a letter in upper or lower case or a Chinese character. The name can contain numbers, "_", "-", " " or ".". The account name in the same scaling group is unique in the same region. If this parameter value is not specified, the default value is ScalingConfiguration Id. |
| InternetChargeType       | String  | No  | Network billing type, Values: PayByBandwidth or PayByTraffic. If this parameter value is not specified, the default value is PayByBandwidth.                                                                                                                                                                                                                                                       |
| InternetMaxBandwidthIn   | Integer | No  | Maximum incoming bandwidth from the public network, measured in Mbps (Mega bit per second). The value range is [1,200]. If this parameter value is not specified, AliyunAPI automatically sets the value to 200 Mbps.                                                                                                                                                                              |
| InternetMaxBandwidthOut  | Integer | No  | Maximum outgoing bandwidth from the public network, measured in Mbps                                                                                                                                                                                                                                                                                                                               |

|                     |         |    |                                                                                                                                                                                                                                                                                                                                      |
|---------------------|---------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     |         |    | (Mega bit per second). The value range for PayByBandwidth is [1,100]. If this parameter value is not specified, AliyunAPI automatically sets the value to 0 Mbps. The value range for PayByTraffic is [1,100]. If this parameter value is not specified, an error is reported.                                                       |
| IoOptimized         | String  | No | <p>Whether the instance is I/O optimized or not. Optional value:</p> <ul style="list-style-type: none"> <li>- optimized: The specified instance is I/O optimized.</li> </ul> <p>Instances of generation I instance types are not I/O optimized by default. For non I/O optimized instance, IoOptimized is an optional parameter.</p> |
| SystemDisk.Category | String  | No | Category of the system disk. The parameter value options are cloud and ephemeral. The default value is cloud.                                                                                                                                                                                                                        |
| DataDisk.N.Size     | Integer | No | Size of data disk N (ranging from 1 to 4), in GB. The value ranges from 5 to 2,000 for a cloud disk and from 5 to 1,024 for an ephemeral disk. A maximum of four values can be entered.                                                                                                                                              |

|                               |        |    |                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------|--------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DataDisk.N.Category           | String | No | Category of data disk N (ranging from 1 to 4). The parameter value options are cloud and ephemeral. The default value is cloud. A maximum of four values can be entered.                                                                                                                                                                                                                              |
| DataDisk.N.SnapshotId         | String | No | Snapshot used for creating the data disk N (ranging from 1 to 4). If this parameter is specified, the DataDisk.N.Size parameter is neglected, and the size of the created disk is the size of the snapshot. If this snapshot is created before July 15, 2013 (included), the snapshot cannot be called, and InvalidSnapshot.Too Old is returned in Response. A maximum of four values can be entered. |
| DataDisk.N.Device             | String | No | Attaching point of the data disk N (ranging from 1 to 4). If this parameter is empty, the ECS automatically assigns the attaching point when an ECS is created. The parameter value ranges from <b>/dev/xvdb</b> to <b>/dev/xvdz</b> . The default value is empty. A maximum of four values can be entered.                                                                                           |
| DataDisk.n.DeleteWithInstance | String | No | Whether the data disk will be released along with the instance. Optional values:                                                                                                                                                                                                                                                                                                                      |

|                    |         |    |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------|---------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    |         |    | <ul style="list-style-type: none"> <li>- true: Release the data disk along with the instance.</li> <li>- false: Retain the data disk when you release the instance.</li> </ul> <p>Default value: true<br/>DataDisk.n.DeleteWithInstance is valid only for independent cloud disks, for which the parameter DataDisk.n.Category is set to cloud, cloud_efficiency or cloud_ssd. Otherwise, an error returns.</p> |
| LoadBalancerWeight | Integer | No | The weight of the backend server, the value range is [0, 100] and the default value is 50.                                                                                                                                                                                                                                                                                                                      |
| UserData           | String  | No | The user-defined data of the instance. The UserData of an instance must be encoded in Base64 format. The maximum size of the raw data is 16 KB.                                                                                                                                                                                                                                                                 |
| KeyPairName        | String  | No | <p>Key pair name.</p> <ul style="list-style-type: none"> <li>- If a Windows ECS instance is being created, ignore this parameter.</li> </ul>                                                                                                                                                                                                                                                                    |

|             |        |    |                                                                                                                                                                                                                                                                 |
|-------------|--------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |        |    | <p>By default, no value is set. If a value is set for the <code>KeyPairName</code> parameter, the password content is still bound to the instance - the user password authentication method will be disabled during the initialization of a Linux instance.</p> |
| RamRoleName | String | No | <p>The name of the instance RAM role. You can query the name of an instance RAM role by using the RAM API <code>ListRoles</code>. You can also see the API <code>CreateRole</code> and <code>ListRoles</code> for more information.</p>                         |
| Tags        | String | No | <p>The tags of an instance. You should input the information of the tag with the format of the Key-Value, such as</p> <pre>{ "key1" : "value1" , "key2" : "value2" ' ... "key5" : "value5" }</pre> <p>.</p>                                                     |



|                 |        |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------|--------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |        |    | <p>At most 5 tags can be specified.</p> <p>Key</p> <ul style="list-style-type: none"> <li>- It can be up to 64 characters in length.</li> <li>- Cannot begin with aliyun.</li> <li>- Cannot begin with http:// or https://.</li> <li>- Cannot be a null string.</li> </ul> <p>Value</p> <ul style="list-style-type: none"> <li>- It can be up to 128 characters in length.</li> <li>- Cannot begin with aliyun.</li> <li>- Cannot begin with http:// or https://.</li> <li>- Can be a null string.</li> </ul> |
| InstanceTypes.N | String | No | <ul style="list-style-type: none"> <li>- InstanceType will be ignored if InstanceTypes.N is applied.</li> <li>- N ranges from 1 to 10, which means one fleet can contain up</li> </ul>                                                                                                                                                                                                                                                                                                                        |

|              |        |    |                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------|--------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              |        |    | <p>to 10 instance types.</p> <ul style="list-style-type: none"><li>- N is the priority of each instance type in your fleet and 1 means the highest. In other words, the greater the number is, the lower the priority of instance type is.</li><li>- If you cannot launch an instance from the instance type with the relatively higher priority, the system will automatically use the instance type a level lower.</li></ul> |
| InstanceName | String | No | The name of the instance launched from the current fleet.                                                                                                                                                                                                                                                                                                                                                                      |
| HostName     | String | No | Host name of the ECS instance.                                                                                                                                                                                                                                                                                                                                                                                                 |

|  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |  |  | <ul style="list-style-type: none"><li>- It cannot start or end with a period (.) or a hyphen (-). It cannot have two or more consecutive periods (.) or hyphens (-).</li><li>- For <b>Windows</b>: It can be [2, 15] characters in length.It can contain uppercase or lowercase letters, digits, periods (.), and hyphens (-).It cannot be digits only.</li><li>- For other OSs, such as <b>Linux</b>: It can be [2, 128] characters in length.It can be segments separated by periods (.).It can</li></ul> |
|--|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                 |         |    |                                                                                                                                                                                                                          |
|-----------------|---------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |         |    | contain uppercase or lowercase letters, digits, and hyphens (-).                                                                                                                                                         |
| PasswordInherit | Boolean | No | Whether to use the password pre-configured in the image you select or not. When PasswordInherit is specified, the Password must be null. For a secure access, make sure that the selected image has password configured. |

## Return parameters

| Name                   | Type   | Description                                                                          |
|------------------------|--------|--------------------------------------------------------------------------------------|
| ScalingConfigurationId | String | ID of a scaling configuration. It is generated by the system and is globally unique. |

## Error code

For errors common to all interfaces, see the [Client Error Table](#) or [Server Error Table](#).

| Error message                                                             | Error code                                | Description                                                          | HTTP status code |
|---------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------|------------------|
| The specified scaling group does not exist in this account.               | InvalidScalingGroupId.NotFound            | The specified scaling group does not exist.                          | 404              |
| The scaling configuration name already exists.                            | InvalidScalingConfigurationName.Duplicate | The specified value of parameter <parameter name> is duplicated.     | 400              |
| Scaling configuration quantity exceeds the upper limit for a user to use. | QuotaExceeded.ScalingConfiguration        | Scaling configuration quota exceeded in the specified scaling group. | 400              |

|                                                                                                           |                                             |                                                                                                             |     |
|-----------------------------------------------------------------------------------------------------------|---------------------------------------------|-------------------------------------------------------------------------------------------------------------|-----|
| Specified image is not in this account.                                                                   | InvalidImageId.NotFound                     | The specified image does not exist.                                                                         | 404 |
| Specified security group is not in this account.                                                          | InvalidSecurityGroupId.NotFound             | The specified security group does not exist.                                                                | 404 |
| Specified image does not support the specified instance type.                                             | InvalidImageId.InstanceTypeMismatch         | The specified image does not support the specified instance type.                                           | 400 |
| Specified network type is inconsistent for the specified security group and the scaling group.            | InvalidSecurityGroupId.IncorrectNetworkType | The network type of specified Security Group does not support this action.                                  | 400 |
| The specified security group and the virtual switch are not in the same VPC.                              | InvalidSecurityGroupId.VPCMismatch          | The specified security group and the specified virtual switch are not in the same VPC.                      | 400 |
| The number of ECS instances attached to the specified security group exceeds the upper limit.             | QuotaExceeded.SecurityGroupInstance         | Instance quota exceeded in the specified security group.                                                    | 400 |
| The specified scaling configuration and the existing scaling configuration have different instance types. | InstanceType.Mismatch                       | The specified scaling configuration and existing active scaling configuration have different instance type. | 400 |
| Ephemeral disk capacity exceeds 2 TB (2,048 GB).                                                          | QuotaExceeded.EphemeralDiskSize             | Ephemeral disk size quota exceeded.                                                                         | 403 |
| Type of the specified system disk conflicts with that of the data disk.                                   | InvalidParameter.Conflict                   | The value of parameter <parameter name> and parameter <parameter name> are conflict.                        | 400 |
| You are unauthorized to create an ephemeral system disk.                                                  | InvalidSystemDiskCategory.ValueUnauthorized | The system disk category is not authorized.                                                                 | 403 |
| Specified snapshot does not exist.                                                                        | InvalidDataDiskSnapshotId.NotFound          | Snapshot "XXX" does not exist.                                                                              | 404 |
| Capacity of the specified snapshot exceeds the upper                                                      | InvalidDataDiskSnapshotId.SizeNotSupported  | The capacity of snapshot "XXX" exceeds the size                                                             | 400 |

|                                                                                                                           |                                     |                                                                                       |     |
|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------|-----|
| limit of the disk size.                                                                                                   |                                     | limit of the specified disk category.                                                 |     |
| The snapshot is created before July 15, 2013 (included), and thus cannot be called.                                       | InvalidSnapshot.Too Old             | This operation is denied because the specified snapshot is created before 2013-07-15. | 403 |
| Data disk attaching point has been occupied.                                                                              | InvalidDevice.InUse                 | Device "XXX" has been occupied.                                                       | 403 |
| The public network bandwidth and the billing type cannot be specified for a scaling group for which VSwitch is specified. | InvalidParameter.Conflict           | The value of parameter InternetChargeType and parameter VSwitchId are conflict.       | 400 |
| The value of parameter InternetChargeType and parameter VSwitchId are conflict.                                           | InvalidParameter.Conflict           | The value of parameter InternetChargeType and parameter VSwitchId are conflict.       | 400 |
| The specified KeyPairName does not exist.                                                                                 | InvalidKeyPairName.NotFound         | The specified KeyPairName does not exist in our records.                              | 400 |
| The parameter KeyPairName is only valid for a Windows instance.                                                           | InvalidParameter                    | The specified value of parameter KeyPairName is not valid.                            | 400 |
| The RamRoleName is only applicable to VPC instances.                                                                      | InvalidNetworkType.ForRAMRole       | RAMRole can't be used For classic instance.                                           | 400 |
| The specified RamRoleName does not exist.                                                                                 | InvalidRamRole.NotFound             | The specified RamRoleName does not exist.                                             | 400 |
| The specified UserData should be encoded in Base64 format.                                                                | InvalidUserData.Base64FormatInvalid | The specified parameter UserData must be base64 encoded                               | 400 |
| The size of the specified UserData exceeds 16 KB                                                                          | InvalidUserData.Size Exceeded       | The specified parameter UserData exceeds the size.                                    | 400 |

## Example

## Request example

```
http://ess.aliyuncs.com/?Action=CreateScalingConfiguration
&ScalingGroupId=AG6CQdPU8OKdwLjgZcj2eaQ
&SecurityGroupId=sg-280ih3w4b
&ImageId=centos6u5_64_20G_aliaegis_20140703.vhd
&InstanceType=ecs.t1.xsmall
&<Public Request Parameters>
```

## Return example

XML format:

```
<CreateScalingConfigurationResponse>
<ScalingConfigurationId>eOs27Kb0oXvQcUYjEGelJqUy</ScalingConfigurationId>
<RequestId>5CC0AD41-08ED-4559-A683-6F56355FE068</RequestId>
</CreateScalingConfigurationResponse>
```

JSON format:

```
{
  "RequestId": "5CC0AD41-08ED-4559-A683-6F56355FE068",
  "ScalingConfigurationId": "eOs27Kb0oXvQcUYjEGelJqUy",
}
```

# Query a scaling configuration

## Query a scaling configuration

### Description

This operation queries scaling configuration information. You can query all scaling configurations in a scaling group by specifying the scaling group ID.

Scaling configuration states (LifecycleState) can be set to either of the following:

- Active: Scaling groups use scaling configurations in the active status to automatically create ECS instances.
- Inactive: The scaling configuration is inactive in a scaling group. The scaling group will not use scaling configurations in inactive state to automatically create ECS instances.

## Request parameters

| Name                       | Type    | Required? | Description                                                                                                                                                             |
|----------------------------|---------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Action                     | String  | Yes       | Operation interface, required. The parameter value is DescribeScalingConfigurations.                                                                                    |
| RegionId                   | String  | Yes       | Region ID of the scaling group of a scaling configuration.                                                                                                              |
| ScalingGroupId             | String  | No        | Scaling group ID.                                                                                                                                                       |
| ScalingConfigurationId.N   | String  | No        | ID of a scaling configuration. A maximum of 10 values can be entered. Invalid scaling configuration IDs are neglected in the query result and no error is reported.     |
| ScalingConfigurationName.N | String  | No        | Name of a scaling configuration. A maximum of 10 values can be entered. Invalid scaling configuration names are neglected in the query result and no error is reported. |
| PageNumber                 | Integer | No        | Page number of the scaling configuration list. The initial value and default value are both 1.                                                                          |
| PageSize                   | Integer | No        | When querying by page, this parameter indicates the number of lines per page. Maximum value: 50; default                                                                |



|  |  |  |            |
|--|--|--|------------|
|  |  |  | value: 10. |
|--|--|--|------------|

## Return parameters

| Name                  | Type                        | Description                            |
|-----------------------|-----------------------------|----------------------------------------|
| TotalCount            | Integer                     | Total number of scaling configurations |
| PageNumber            | Integer                     | Current page number                    |
| PageSize              | Integer                     | Number of lines per page               |
| ScalingConfigurations | ScalingConfigurationSetType | Scaling configuration information set  |

ScalingConfigurationSetType is a set of ScalingConfigurationItemTypes:

| Name                 | Type                         | Description                       |
|----------------------|------------------------------|-----------------------------------|
| ScalingConfiguration | ScalingConfigurationItemType | Scaling configuration information |

Attributes of the ScalingConfigurationItemType are listed below:

| Name                     | Type            | Description                                                                                |
|--------------------------|-----------------|--------------------------------------------------------------------------------------------|
| ScalingConfigurationId   | String          | ID of a scaling configuration                                                              |
| ScalingConfigurationName | String          | Name shown for a scaling configuration                                                     |
| ScalingGroupId           | String          | ID of the scaling group of a scaling configuration                                         |
| ImageId                  | String          | ID of an image file                                                                        |
| InstanceType             | String          | Resource rule of an instance                                                               |
| SecurityGroupId          | String          | ID of a security group                                                                     |
| InternetChargeType       | String          | Network billing type                                                                       |
| InternetMaxBandwidthIn   | Integer         | Maximum incoming bandwidth from the public network, measured in Mbps (Mega bit per second) |
| InternetMaxBandwidthOut  | Integer         | Maximum outgoing bandwidth from the public network, measured in Mbps (Mega bit per second) |
| SystemDisk.Category      | String          | Category of the system disk                                                                |
| DataDisks                | DataDiskSetType | Data disk information set                                                                  |
| LifecycleState           | String          | Scaling configuration status                                                               |

|              |        |                                              |
|--------------|--------|----------------------------------------------|
|              |        | in a scaling group                           |
| CreationTime | String | Time when a scaling configuration is created |

DataDiskSetType is a set of DataDiskItemTypes:

| Name     | Type             | Description           |
|----------|------------------|-----------------------|
| DataDisk | DataDiskItemType | Data disk information |

Attributes of the DataDiskItemType are listed below:

| Name       | Type    | Description                                        |
|------------|---------|----------------------------------------------------|
| Size       | Integer | Disk capacity                                      |
| Category   | String  | Disk category                                      |
| SnapshotId | String  | ID of the snapshot used for creating the data disk |
| Device     | String  | Data disk attaching point                          |

## Error code

For errors common to all interfaces, refer to the [Client Error Table](#) or [Server Error Table](#).

## Example

### Request example

```
http://ess.aliyuncs.com/?Action=CreateScalingConfiguration
&RegionId=cn-qingdao
&PageSize=50
&<Public Request Parameters>
```

### Return example

XML format:

```
<DescribeScalingConfigurationsResponse>
<RequestId>804F240A-8D3E-40A1-BD68-6B333DEA2CA8</RequestId>
<TotalCount>1</TotalCount>
<PageNumber>1</PageNumber>
<PageSize>50</PageSize>
<ScalingConfigurations>
<ScalingConfiguration>
```

```

<CreationTime>2014-08-14T10:58Z</CreationTime>
<ImageId>centos6u5_64_20G_aliaegis_20140703.vhd</ImageId>
<InstanceType>ecs.t1.xsmall</InstanceType>
<InternetChargeType>PayByBandwidth</InternetChargeType>
<InternetMaxBandwidthIn>200</InternetMaxBandwidthIn>
<InternetMaxBandwidthOut>0</InternetMaxBandwidthOut>
<LifecycleState>Active</LifecycleState> <ScalingConfigurationId>
bU5uZHcAgtzwcL4IeDeavqTS
</ScalingConfigurationId>
<ScalingConfigurationName>
c1908dd1-690f-4c9b-ab73-350f1f06e84f
</ScalingConfigurationName>
<ScalingGroupId>dE9YbOdCHqaFdFZXHVdDjQCB</ScalingGroupId>
<SecurityGroupId>sg-280ih3w4b</SecurityGroupId>
<SystemDiskCategory>cloud</SystemDiskCategory>
<DataDisks>
<DataDisk>
<Size>200</Size>
<Category>cloud</Category>
<SnapshotId>s-280s7ngih</SnapshotId>
<Device>/dev/xvdb</Device>
</DataDisk>
</DataDisks>
</ScalingConfiguration>
</ScalingConfigurations>
</DescribeScalingConfigurationsResponse>

```

JSON format:

```

{
  "RequestId": "67E4324F-CE14-4C2C-9D60-5422641DB76F",
  "TotalCount": 1,
  "PageNumber": 1,
  "PageSize": 1,
  "ScalingConfigurations": {
    "ScalingConfiguration": [
      {
        "ScalingConfigurationId": "eqkz17cfW3clcPExOtLNVID",
        "SecurityGroupId": "sg-280ewzxvg",
        "CreationTime": "2014-08-18T21:07Z",
        "SystemDiskCategory": "cloud",
        "InternetMaxBandwidthIn": 200,
        "InternetMaxBandwidthOut": 0,
        "LifecycleState": "Inactive",
        "InternetChargeType": "PayByBandwidth",
        "ImageId": "rhel5u7_64_20G_aliaegis_20131231.vhd",
        "InstanceType": "ecs.s2.small",
        "ScalingConfigurationName": "LxVdcOqPBV",
        "ScalingGroupId": "dRsEAGdvbjR5c4SVc2bqLubj",
        "DataDisks": {
          "DataDisk": [{
            "Size": 200,
            "Category": "cloud",
            "SnapshotId": "s-280s7ngih",

```

```
"Device" :"/dev/xvdb"
}}
}
}
]
}
}
```

## Delete a scaling configuration

## Delete a scaling configuration

### Description

Deletes a specified scaling configuration.

- An active scaling configuration in a scaling group cannot be deleted.
- If any ECS instance created according to a scaling configuration is still in the scaling group, the scaling configuration cannot be deleted.

### Request parameters

| Name                   | Type   | Required? | Description                                                                       |
|------------------------|--------|-----------|-----------------------------------------------------------------------------------|
| Action                 | String | Yes       | Operation interface, required. The parameter value is DeleteScalingConfiguration. |
| ScalingConfigurationId | String | Yes       | ID of a scaling configuration.                                                    |

### Return parameters

Public parameters

### Error code

For errors common to all interfaces, refer to the [Client Error Table](#) or [Server Error Table](#).

| Error | Error code | Description | HTTP status code |
|-------|------------|-------------|------------------|
|-------|------------|-------------|------------------|

|                                                                           |                                             |                                                                                                           |     |
|---------------------------------------------------------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----|
| The specified scaling configuration does not exist in this account.       | InvalidScalingConfigurationId.NotFound      | The specified scaling configuration does not exist.                                                       | 404 |
| The specified scaling configuration is not in inactive state.             | IncorrectScalingConfigurationLifecycleState | The current lifecycle state of specified scaling configuration does not support this action.              | 400 |
| The scaling configuration has an associated ECS instance not deleted yet. | InstanceInUse                               | You cannot delete a scaling configuration or scaling group while there is an instance associated with it. | 400 |

## Example

### Request example

```
http://ess.aliyuncs.com/?Action=DeleteScalingConfiguration
&ScalingConfigurationId=eOs27Kb0oXvQcUYjEGelJqUy
&<Public Request Parameters>
```

### Return example

XML format:

```
<DeleteScalingConfigurationResponse>
<RequestId>61D30272-7111-44D9-BB45-FCB55E4A1410</RequestId>
</DeleteScalingConfigurationResponse>
```

JSON format:

```
"RequestId": "61D30272-7111-44D9-BB45-FCB55E4A1410"
```

## Scaling rule

# Create a scaling rule

## Create a scaling rule

A scaling rule defines specific scaling actions, for example, adding or removing  $n$  ECS instances.

If the execution of a scaling rule results in a number of ECS instances in the scaling group that is less than the MinSize or greater than the MaxSize, Auto Scaling automatically adjusts the number of ECS instances to be added or removed by executing the “Adjust scaling group instance quantity to MinSize” or “Adjust scaling group instance quantity to MaxSize” rule.

- Example 1: If a scaling group has a MaxSize of 3, the current number of instances (Total Capacity) is 2, and a scaling rule instructs the system to “add 3 ECS instances”, this operation actually only adds one ECS instance. (The values in the scaling rule are not changed.)
- Example 2: If a scaling group has a MinSize of 2, the current number of instances (Total Capacity) is 3, and a scaling rule instructs the system to “remove 5 ECS instances”, this operation actually only removes one ECS instance. (The values in the scaling rule are not changed.)

## Description

This operation creates a scaling rule according to input parameters.

When AdjustmentType is TotalCapacity, the quantity of ECS instances in the current scaling group is adjusted to the specified value, and the corresponding AdjustmentValue must be no less than 0.

When AdjustmentType is QuantityChangeInCapacity or PercentChangeInCapacity, if the corresponding AdjustmentValue is a positive number, additional ECS instances are increased; if the corresponding AdjustmentValue is a negative number, ECS instances are decreased.

When AdjustmentType is PercentChangeInCapacity, the Auto Scaling service uses the formula: **current number of instances (Total Capacity) \* AdjustmentValue/100** and follow standard rounding principles to confirm the number of ECS instances to be added or removed.

When a cool-down time (Cooldown) is specified in a scaling rule, the specified Cooldown is applied to the scaling group after the scaling activity to perform this rule is completed.

Otherwise, the DefaultCooldown is applied to the scaling group.

A maximum of 10 scaling rules can be created in a scaling group.

The only identifier of a scaling rule returned (ScalingRuleAri) can be primarily used by the following interfaces:

- By specifying the ExecuteScalingRule' s ScalingRuleAri parameter, you can manually perform a scaling rule.
- By specifying the CreateScheduledTask' s ScheduledAction parameter, you can schedule the performing of a scaling rule.

## Request parameters

| Name            | Type    | Required? | Description                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------|---------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Action          | String  | Yes       | Operation interface, required. The parameter value is CreateScalingRule.                                                                                                                                                                                                                                                                                                                          |
| ScalingGroupId  | String  | Yes       | ID of the scaling group of a scaling rule.                                                                                                                                                                                                                                                                                                                                                        |
| AdjustmentType  | String  | Yes       | Adjustment mode of a scaling rule.<br>Optional values:<br>- QuantityChangeInCapacity: It is used to increase or decrease a specified number of ECS instances.<br>- PercentChangeInCapacity: It is used to increase or decrease a specified proportion of ECS instances.<br>- TotalCapacity: It is used to adjust the quantity of ECS instances in the current scaling group to a specified value. |
| AdjustmentValue | Integer | Yes       | Adjusted value of a scaling rule. Value range:<br>- QuantityChangeInCa                                                                                                                                                                                                                                                                                                                            |

|                 |         |    |                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------|---------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |         |    | capacity: (0, 100] U (-100, 0]<br>- PercentChangeInCapacity: [0, 10000] U [-10000, 0]<br>- TotalCapacity: [0, 100]                                                                                                                                                                                                                                                                          |
| ScalingRuleName | String  | No | Name shown for the scaling group, which is a string containing 2 to 40 English or Chinese characters. It must begin with a number, a letter (case-insensitive) or a Chinese character and can contain numbers, "_", "-", " " or ".". The account name in the same scaling group is unique in the same region. If this parameter value is not specified, the default value is ScalingRuleId. |
| Cooldown        | Integer | No | Cool-down time of a scaling rule. Value range: [0, 86,400], in seconds. The default value is empty.                                                                                                                                                                                                                                                                                         |

## Return parameters

| Name           | Type   | Description                                                        |
|----------------|--------|--------------------------------------------------------------------|
| ScalingRuleId  | String | ID of a scaling rule, generated by the system and globally unique. |
| ScalingRuleAri | String | Unique identifier of a scaling rule.                               |

## Error code

For errors common to all interfaces, see [Client Error Table](#) or [Server Error Table](#).

| Error                 | Error code           | Description           | HTTP status code |
|-----------------------|----------------------|-----------------------|------------------|
| The specified scaling | InvalidScalingGroupI | The specified scaling | 404              |



|                                                                  |                                  |                                                                  |     |
|------------------------------------------------------------------|----------------------------------|------------------------------------------------------------------|-----|
| group does not exist in this account.                            | d.NotFound                       | group does not exist.                                            |     |
| The scaling rule name already exists.                            | InvalidScalingRuleName.Duplicate | The specified value of parameter <parameter name> is duplicated. | 400 |
| Scaling rule quantity exceeds the upper limit for a user to use. | QuotaExceeded.ScalingRule        | Scaling rule quota exceeded in the specified scaling group.      | 400 |

## Example

### Request example

```
http://ess.aliyuncs.com/?Action=CreateScalingRule
&ScalingGroupId=AG6CQdPU8OKdwLjgZcJ2eaQ
&AdjustmentType=QuantityChangeInCapacity
&AdjustmentValue=-10
&<Public Request Parameters>
```

### Return example

XML format:

```
<CreateScalingRuleResponse>
<ScalingRuleAri>
ari:acs:ess:cn-qingdao:1344371:scalingrule/eMKWG8SRNb9dBLAjweNI1Ik
</ScalingRuleAri>
<ScalingRuleId>eMKWG8SRNb9dBLAjweNI1Ik</ScalingRuleId>
<RequestId>570C84F4-A434-488A-AFA1-1E3213682B33</RequestId>
</CreateScalingRuleResponse>
```

JSON format:

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368",
  "ScalingRuleId": "eMKWG8SRNb9dBLAjweNI1Ik",
  "ScalingRuleAri": "ari:acs:ess:cn-qingdao:1344371:scalingrule/eMKWG8SRNb9dBLAjweNI1Ik"
}
```

## ModifyScalingRule

## Description

Modifies the attributes of a scaling rule.

## Request parameters

| Name            | Type    | Required? | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|---------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Action          | String  | Yes       | Operation interface, required. The parameter value is <code>ModifyScalingRule</code> .                                                                                                                                                                                                                                                                                                                                                                                                          |
| ScalingRuleId   | String  | Yes       | ID of a scaling rule.                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| AdjustmentType  | String  | No        | Adjustment mode of a scaling rule.<br>Optional values: <ul style="list-style-type: none"><li>- <code>QuantityChangeInCapacity</code>: It is used to increase or decrease a specified number of ECS instances.</li><li>- <code>PercentChangeInCapacity</code>: It is used to increase or decrease a specified proportion of ECS instances.</li><li>- <code>TotalCapacity</code>: It is used to adjust the quantity of ECS instances in the current scaling group to a specified value.</li></ul> |
| AdjustmentValue | Integer | No        | Adjusted value of a scaling rule. Value range: <ul style="list-style-type: none"><li>- <code>QuantityChangeInCapacity</code>: (0, 100] U [-100, 0)</li><li>- <code>PercentChangeInCapacity</code>: [0, 10,000] U [-10,000, 0]</li><li>- <code>TotalCapacity</code>: [0, 100]</li></ul>                                                                                                                                                                                                          |
| ScalingRuleName | String  | No        | Name shown for the                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

|          |         |    |                                                                                                                                                                                                                                                                                                                                                                                        |
|----------|---------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |         |    | <p>scaling group, which is a string containing 2 to 40 English or Chinese characters. It must begin with a number, a letter (case-insensitive) or a Chinese character and can contain numbers, "_", "-", " " or ".".</p> <p>The account name in the same scaling group is unique in the same region. If this parameter value is not specified, the default value is ScalingRuleId.</p> |
| Cooldown | Integer | No | <p>Cool-down time of a scaling rule. Value range: [0, 86,400], in seconds. The default value is empty.</p>                                                                                                                                                                                                                                                                             |

## Response parameters

| Name           | Type   | Description                                                        |
|----------------|--------|--------------------------------------------------------------------|
| ScalingRuleId  | String | ID of a scaling rule, generated by the system and globally unique. |
| ScalingRuleAri | String | Unique identifier of a scaling rule.                               |

## Example

### Request example

```
http://ess.aliyuncs.com/?Action=CreateScalingRule
&ScalingGroupId=AG6CQdPU8OKdwLjgZcJ2eaQ
&AdjustmentType=QuantityChangeInCapacity
&AdjustmentValue=-10
&<Common Request Parameters>
```

### Response example

XML format

```
<ModifyScalingRuleResponse>
<ScalingRuleAri>ari:acs:ess:cn-qingdao:1344371:scalingrule/eMKWG8SRNb9dBLAjweNI1Ik</ScalingRuleAri>
<ScalingRuleId>eMKWG8SRNb9dBLAjweNI1Ik</ScalingRuleId>
<RequestId>570C84F4-A434-488A-AFA1-1E3213682B33</RequestId>
</ModifyScalingRuleResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368",
  "ScalingRuleId": "eMKWG8SRNb9dBLAjweNI1Ik",
  "ScalingRuleAri": "ari:acs:ess:cn-qingdao:1344371:scalingrule/eMKWG8SRNb9dBLAjweNI1Ik"
}
```

## Error codes

For errors common to all interfaces, refer to the [Client Error Table](#) or [Server Error Table](#).

| Error code                                                  | Error message                                                    | HTTP status code                                                | Description                                                 |
|-------------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|
| InvalidScalingGroupId.NotFound                              | The specified scaling group does not exist.                      | 404                                                             | The specified scaling group does not exist in this account. |
| InvalidScalingRuleName.Duplicate                            | The specified value of parameter <parameter name> is duplicated. | 400                                                             | The scaling rule name already exists                        |
| Scaling rule quota exceeded in the specified scaling group. | 400                                                              | Scaling rule quantity exceeds the upper limit for a user to use | QuotaExceeded.ScalingRule                                   |

## Query a scaling rule

## Query a scaling rule

### Description

Queries information of a scaling rule. You can query all scaling rules in a scaling group by specifying

the scaling group ID.

## Request parameters

| Name              | Type    | Required? | Description                                                                                                                                                                         |
|-------------------|---------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Action            | String  | Yes       | Operation interface, required. The parameter value is DescribeScalingRules.                                                                                                         |
| RegionId          | String  | Yes       | Region ID of the scaling group of a scaling rule.                                                                                                                                   |
| ScalingGroupId    | String  | No        | Scaling group ID.                                                                                                                                                                   |
| ScalingRuleId.N   | String  | No        | ID of a scaling rule. A maximum of 10 values can be entered. Invalid scaling rule IDs are neglected in the query result and no error is reported.                                   |
| ScalingRuleName.N | String  | No        | Name of a scaling rule. A maximum of 10 values can be entered. Invalid scaling rule names are neglected in the query result and no error is reported.                               |
| ScalingRuleAri.N  | String  | No        | Unique identifier of a scaling rule. A maximum of 10 values can be entered. Invalid unique identifiers of scaling rules are neglected in the query result and no error is reported. |
| PageNumber        | Integer | No        | Page number of the scaling rule list. The initial value and default value are both 1.                                                                                               |
| PageSize          | Integer | No        | When querying by page, this parameter indicates the number of lines per page. Maximum                                                                                               |

|  |  |  |                               |
|--|--|--|-------------------------------|
|  |  |  | value: 50; default value: 10. |
|--|--|--|-------------------------------|

## Return parameters

| Name         | Type               | Description                   |
|--------------|--------------------|-------------------------------|
| TotalCount   | Integer            | Total number of scaling rules |
| PageNumber   | Integer            | Current page number           |
| PageSize     | Integer            | Number of lines per page      |
| ScalingRules | ScalingRuleSetType | Scaling rule information set  |

ScalingRuleSetType is a set of ScalingRuleItemTypes:

| Name        | Type                | Description              |
|-------------|---------------------|--------------------------|
| ScalingRule | ScalingRuleItemType | Scaling rule information |

The attributes of ScalingRuleItemType are listed below:

| Name            | Type    | Description                         |
|-----------------|---------|-------------------------------------|
| ScalingRuleId   | String  | ID of a scaling rule                |
| ScalingGroupId  | String  | Scaling group ID                    |
| ScalingRuleName | String  | Name of a scaling rule              |
| Cooldown        | Integer | Cool-down time                      |
| AdjustmentType  | String  | Adjustment mode                     |
| AdjustmentValue | Integer | Adjustment value                    |
| ScalingRuleAri  | String  | Unique identifier of a scaling rule |

## Error code

For errors common to all interfaces, refer to the [Client Error Table](#) or [Server Error Table](#).

## Example

### Request example

```
http://ess.aliyuncs.com/?Action=DescribeScalingRules
&RegionId=cn-qingdao
```

```
&ScalingGroupId=AG6CQdPU8OKdwLjgZcJ2eaQ
&PageSize=50
&<Public Request Parameters>
```

## Return example

XML format:

```
<DescribeScalingRulesResponse>
<PageNumber>1</PageNumber>
<PageSize>50</PageSize>
<ScalingRules>
<ScalingRule>
<AdjustmentType>QuantityChangeInCapacity</AdjustmentType>
<AdjustmentValue>1</AdjustmentValue>
<Cooldown>20</Cooldown>
<ScalingGroupId>AG6CQdPU8OKdwLjgZcJ2eaQ</ScalingGroupId> <ScalingRuleAri>
ari:acs:ess:cn-qingdao:1344371:scalingRule/eMKWG8SRNb9dBLAjweNI1Ik
</ScalingRuleAri>
<ScalingRuleId>eMKWG8SRNb9dBLAjweNI1Ik</ScalingRuleId>
<ScalingRuleName>eMKWG8SRNb9dBLAjweNI1Ik</ScalingRuleName>
</ScalingRule>
</ScalingRules>
<TotalCount>1</TotalCount>
<RequestId>3306A40D-3412-4101-9F19-5F81E3055DAD</RequestId>
</DescribeScalingRulesResponse>
```

JSON format:

```
{
  "RequestId": "B583BFEF-A779-427A-9B74-262DDD249702",
  "TotalCount": 1,
  "PageNumber": 1,
  "PageSize": 10,
  "ScalingRules": {
    "ScalingRule": [
      {
        "ScalingRuleId": "efcqrZdjlookc0UkE3dA5I0a",
        "ScalingRuleAri": "ari:acs:ess:cn-qingdao:1344371:scalingRule/efcqrZdjlookc0UkE3dA5I0a",
        "Cooldown": 500,
        "ScalingGroupId": "ccMvs9dcZIE5c9CtrwbXzizr",
        "AdjustmentType": "TotalCapacity",
        "ScalingRuleName": "KFJoxGKXXt",
        "AdjustmentValue": 5
      }
    ]
  }
}
```

# Delete a scaling rule

## Delete a scaling rule

### Description

Deletes a specified scaling rule.

### Request parameters

| Name          | Type   | Required? | Description                                                              |
|---------------|--------|-----------|--------------------------------------------------------------------------|
| Action        | String | Yes       | Operation interface, required. The parameter value is DeleteScalingRule. |
| ScalingRuleId | String | Yes       | ID of a scaling rule.                                                    |

### Return parameters

Public parameters.

### Error code

For errors common to all interfaces, refer to the Client Error Table or Server Error Table.

| Error                                                     | Error code                        | Description                                | HTTP status code |
|-----------------------------------------------------------|-----------------------------------|--------------------------------------------|------------------|
| The specified scaling rule does not exist in this account | InvalidScalingRuleId.<br>NotFound | The specified scaling rule does not exist. | 404              |

### Example

#### Request example

```
http://ess.aliyuncs.com/?Action=DeleteScalingRule
&ScalingRuleId=eMKWG8SRNb9dBLAjweNI1Ik
```



```
&<Public Request Parameters>
```

### Return example

XML format:

```
<DeleteScalingRuleResponse>  
<RequestId>F0595173-CA3A-4597-B0D3-97A07A042B9C</RequestId>  
</DeleteScalingRuleResponse>
```

JSON format:

```
"RequestId": "F0595173-CA3A-4597-B0D3-97A07A042B9C"
```

## Trigger task

## Execute a scaling rule

## Execute a scaling rule

### Description

Executes a specified scaling rule.

- The interface can be called only when the scaling group is active.
- The interface can be called only when no scaling activity in the scaling group is in progress.
- When no scaling activity in the scaling group is in progress, the interface can be directly executed without cooldown.
- Successfully calling this interface only means that the Auto Scaling service has accepted the call request, and the scaling activity can be executed, but does not necessarily mean that the scaling activity can be successfully executed. You can use the returned `ScalingActivityId` to check the status of the scaling activity.
- When the total capacity of to-be-attached ECS instances specified by this scaling rule plus

the instances in the current scaling group is greater than **MaxSize**, the rule **Total Capacity = MaxSize** is applied.

- When the total capacity of instances in the current scaling group minus the number of ECS instances to be reduced according to the scaling rule is smaller than **MinSize**, the rule **Total Capacity = MinSize** is applied.
- You can only perform auto scaling for at most 100 ECS instances of all scaling groups in all regions. (The number only includes the number of ECS instances automatically created, but does not include the number of manually attached ECS instances.)

## Request parameters

| Name           | Type   | Required? | Description                                                                                                                                                                                                                                   |
|----------------|--------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Action         | String | Yes       | Operation interface name, required parameter. Value: <code>ExecuteScalingRule</code> .                                                                                                                                                        |
| ScalingRuleAri | String | Yes       | Unique identifier of the scaling rule.                                                                                                                                                                                                        |
| ClientToken    | String | No        | Used to ensure request idempotence. The value is generated by a client. It must be unique among all requests and can contain a maximum of 64 ASCII characters. For details, refer to the appendix <a href="#">How to ensure idempotence</a> . |

## Return parameters

| Name              | Type   | Description          |
|-------------------|--------|----------------------|
| ScalingActivityId | String | Scaling activity ID. |

## Error code

For errors common to all interfaces, refer to the [Client Error Table](#) or [Server Error Table](#).

| Error                                        | Error code                                  | Description                             | HTTP status code |
|----------------------------------------------|---------------------------------------------|-----------------------------------------|------------------|
| The specified scaling rule does not exist in | <code>InvalidScalingRuleAri.NotFound</code> | The specified scaling rule Ari does not | 404              |

|                                                                                                                                               |                                                    |                                                                                                                                                   |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| this account.                                                                                                                                 |                                                    | exist.                                                                                                                                            |     |
| Open API is not fully authorized to the Auto Scaling service.                                                                                 | Forbidden.Unauthorized                             | A required authorization for the specified action is not supplied.                                                                                | 403 |
| The specified scaling rule is not active.                                                                                                     | IncorrectScalingGroupStatus                        | The current status of the specified scaling group does not support this action.                                                                   | 400 |
| The scaling group to which the scaling rule belongs has a scaling activity in progress.                                                       | ScalingActivityInProgress                          | You cannot delete a scaling group or launch a new scaling activity while there is a scaling activity in progress for the specified scaling group. | 400 |
| Your account balance is not enough.                                                                                                           | InsufficientBalance                                | Your account does not have enough balance.                                                                                                        | 400 |
| Your ECS instance quota is exceeded.                                                                                                          | QuotaExceed.Instance                               | Living instance quota exceeded.                                                                                                                   | 400 |
| The Server Load Balancer instance in the scaling group to which the scaling rule belongs is not active.                                       | IncorrectLoadBalancerStatus                        | The current status of the specified load balancer does not support this action.                                                                   | 400 |
| Health check is not enabled for the Server Load Balancer in the scaling group to which the specified scaling rule belongs.                    | IncorrectLoadBalancerHealthCheck                   | The current health check type of specified load balancer does not support this action.                                                            | 400 |
| The network type of the ECS instance contained in the specified Server Load Balancer is different from the network type of the scaling group. | InvalidLoadBalancerId.IncorrectInstanceNetworkType | The network type of the instance in specified load balancer does not support this action.                                                         | 400 |
| The ECS instance contained in the specified Server Load Balancer and VSwitchId are not in the same VPC.                                       | InvalidLoadBalancerId.VPCMismatch                  | The specified virtual switch and the instance in specified load balancer are not in the same VPC.                                                 | 400 |
| The RDS instance in the scaling group to                                                                                                      | IncorrectDBInstanceStatus                          | The current status of DB instance "XXX"                                                                                                           | 400 |

|                                                                                                                                                                             |                                     |                                                                                      |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------------------------------|-----|
| which the specified scaling rule belongs is not running.                                                                                                                    |                                     | does not support this action.                                                        |     |
| The number of IP addresses in the white list that can access the RDS instance in the scaling group to which the specified scaling rule belongs has reached the upper limit. | QuotaExceeded.DBInstanceSecurityIP  | Security IP quota exceeded in DB instance "XXX" .                                    | 400 |
| The number of ECS instances attached to the specified security group exceeds the upper limit.                                                                               | QuotaExceeded.SecurityGroupInstance | Instance quota exceeded in the specified security group.                             | 400 |
| The number of instances in the scaling group does not change after the scaling rule is executed.                                                                            | IncorrectCapacity.NoChange          | To execute the specified scaling rule, the total capacity will not change.           | 400 |
| The Auto Scaling ECS instance quota is exceeded.                                                                                                                            | QuotaExceeded.ScalingInstance       | Scaling instance quota exceeded.                                                     | 400 |
| The Pay-As-You-Go ECS instance quota is exceeded.                                                                                                                           | QuotaExceeded.AfterpayInstance      | Living afterpay instance quota exceeded.                                             | 400 |
| The specified ECS instance type or disk type cannot be created in the specified region.                                                                                     | ResourceNotAvailable.ECS            | The specified region or zone does not offer the specified disk or instance category. |     |

## Example

### Request example

```
http://ess.aliyuncs.com/?Action=ExecuteScalingRule
&ScalingRuleAri=ari:acs:ess:cn-qingdao:1344371:scalingRule/cCBpdYdQuBe2cUxOdu6piOk
&<Public Request Parameters>
```

### Return example

XML format:

```
<ExecuteScalingRuleResponse>
<ScalingActivityId>ebta5WbUzC8gcwUWvfchyT4U</ScalingActivityId>
<RequestId>262216B9-F9D4-4D16-BE9B-BD1C39A4F42B</RequestId>
</ExecuteScalingRuleResponse>
```

JSON format:

```
"RequestId": "6469DCD0-13AC-487E-85A0-CE4922908FDE",
"ScalingActivityId": "ebta5WbUzC8gcwUWvfchyT4U"
```

## Attach an ECS instance

## Attach an ECS instance

### Description

Attaches an ECS instance to a specified scaling group. Restrictions on the attached ECS instance:

- The attached ECS instance and the scaling group must be in the same region.
- The attached ECS instance must be in the running state.
- The attached ECS instance has not been attached to other scaling groups.
- The attached ECS instance supports Subscription and Pay-As-You-Go payment methods.
- If the VswitchID is specified for a scaling group, you cannot attach Classic ECS instances or ECS instances on other VPCs to the scaling group.
- If the VswitchID is not specified for the scaling group, ECS instances of the VPC type cannot be attached to the scaling group.

The interface can be called only when the scaling group is active.

The interface can be called only when the scaling group has no scaling activity in progress.

When the scaling group has no scaling activity in progress, the interface can be directly executed without cooldown.

Successfully calling this interface only means that the Auto Scaling service has accepted the call request, and the scaling activity can be executed, but does not necessarily mean that the scaling activity can be successfully executed. You can use the returned `ScalingActivityId` to check the status of the scaling activity.

The call attempt may fail when the total capacity of instances specified by this interface plus the instances of the scaling group is greater than `MaxSize`.

The manually attached ECS instance is not associated with the active scaling configurations of the scaling group.

## Request parameters

| Name           | Type   | Required? | Description                                                                         |
|----------------|--------|-----------|-------------------------------------------------------------------------------------|
| Action         | String | Yes       | Operation interface name, required parameter. Value: <code>AttachInstances</code> . |
| ScalingGroupId | String | Yes       | Scaling group ID.                                                                   |
| InstanceId.N   | String | Yes       | ECS instance ID. You can input up to 20 IDs.                                        |

## Return parameters

| Name              | Type   | Description         |
|-------------------|--------|---------------------|
| ScalingActivityId | String | Scaling activity ID |

## Error code

For errors common to all interfaces, see the [Client Error Table](#) or [Server Error Table](#).

| Error                                                        | Error code                                  | Description                                                        | HTTP status code |
|--------------------------------------------------------------|---------------------------------------------|--------------------------------------------------------------------|------------------|
| The specified scaling group does not exist in this account.  | <code>InvalidScalingGroupId.NotFound</code> | The specified scaling group does not exist.                        | 404              |
| OpenAPI is not fully authorized to the Auto Scaling service. | <code>Forbidden.Unauthorized</code>         | A required authorization for the specified action is not supplied. | 403              |
| The specified scaling                                        | <code>IncorrectScalingGro</code>            | The current status of                                              | 400              |

|                                                                                               |                                        |                                                                                                                                                   |     |
|-----------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| group is not active.                                                                          | upStatus                               | the specified scaling group does not support this action.                                                                                         |     |
| The specified ECS instance does not exist in this account.                                    | InvalidInstanceId.NotFound             | Instance "XXX" does not exist.                                                                                                                    | 404 |
| The specified ECS instance and the scaling group are not in the same region.                  | InvalidInstanceId.RegionMismatch       | Instance "XXX" and the specified scaling group are not in the same Region.                                                                        | 400 |
| The specified ECS instance and the instance with valid scaling configurations do not match.   | InvalidInstanceId.InstanceTypeMismatch | Instance "XXX" and existing active scaling configurations have different instance types.                                                          | 400 |
| The specified ECS instance is not in the running status.                                      | IncorrectInstanceStatus                | The current status of instance "XXX" does not support this action.                                                                                | 400 |
| The specified ECS instance and the scaling group are not in the same region.                  | InvalidInstanceId.NetworkTypeMismatch  | The network type of instance "XXX" does not support this action.                                                                                  | 400 |
| The specified scaling group and the attached ECS instance are not in the same VPC.            | InvalidInstanceId.VPCMismatch          | Instance "XXX" and the specified scaling group are not in the same VPC.                                                                           | 400 |
| The specified ECS instance has been attached to another scaling group.                        | InvalidInstanceId.InUse                | Instance "XXX" is already attached to another scaling group.                                                                                      | 400 |
| The specified scaling group has an in-progress scaling activity.                              | ScalingActivityInProgress              | You cannot delete a scaling group or launch a new scaling activity while there is a scaling activity in progress for the specified scaling group. | 400 |
| The Server Load Balancer instance of the specified scaling group is not in the active status. | IncorrectLoadBalancerStatus            | The current status of the specified load balancer does not support this action.                                                                   | 400 |
| Health check is not enabled for the Server Load Balancer                                      | IncorrectLoadBalancerHealthCheck       | The current health check type of specified load                                                                                                   | 400 |

|                                                                                                                                               |                                                    |                                                                                                   |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------------------------------------------------------|-----|
| of the specified scaling group.                                                                                                               |                                                    | balancer does not support this action.                                                            |     |
| The network type of the ECS instance contained in the specified Server Load Balancer is different from the network type of the scaling group. | InvalidLoadBalancerId.IncorrectInstanceNetworkType | The network type of the instance in specified load balancer does not support this action.         | 400 |
| The ECS instance contained in the specified Server Load Balancer and VSwitchId are not in the same VPC.                                       | InvalidLoadBalancerId.VPCMismatch                  | The specified virtual switch and the instance in specified load balancer are not in the same VPC. | 400 |
| The RDS instance in the specified scaling group is not in the running status.                                                                 | IncorrectDBInstanceStatus                          | The current status of DB instance "XXX" does not support this action.                             | 400 |
| The number of IP addresses in the whitelist that can access the RDS instance in the scaling group has exceeded the upper limit.               | QuotaExceeded.DBInstanceSecurityIP                 | Security IP quota exceeded in DB instance "XXX" .                                                 | 400 |
| The number of ECS instances attached to the specified security group exceeds the upper limit.                                                 | QuotaExceeded.SecurityGroupInstance                | Instance quota exceeded in the specified security group.                                          | 400 |
| Total Capacity after the ECS instance is attached is greater than MaxSize.                                                                    | IncorrectCapacity.MaxSize                          | To attach the instances, the total capacity will be greater than the MaxSize.                     | 400 |

## Example

### Request example

```
http://ess.aliyuncs.com/?Action=AttachInstances
&ScalingGroupId=AG6CQdPU8OKdwLjgZcJ2eaQ
&InstanceId.1=i-28wt48iaa
&<Public Request Parameters>
```



### Return example

XML format:

```
<AttachInstancesResponse>
  <ScalingActivityId>bybj9OcaOT4ucPMbFhcqHfA3</ScalingActivityId>
  <RequestId>DD0309B7-2613-4792-9B86-275906695253</RequestId>
</AttachInstancesResponse>
```

JSON format:

```
"RequestId": "6469DCD0-13AC-487E-85A0-CE4922908FDE",
"ScalingActivityId": "ebta5WbUzC8gcwUWvfchyT4U"
```

## Remove an ECS instance

## Remove an ECS instance

### Description

Removes an ECS instance from a specified scaling group.

- When the ECS instance automatically created by the Auto Scaling service is removed from the scaling group, the ECS instance is disabled and released.
- When the manually attached ECS instance is removed from the scaling group, the ECS instance is neither disabled nor released.
- The interface can be called only when the scaling group is active.
- The interface can be called only when no scaling activity in the scaling group is in progress.
- When no scaling activity in the scaling group is in progress, the interface can be directly executed without cooldown.
- Successfully calling this interface only means that the Auto Scaling service has accepted the call request, and the scaling activity can be executed, but does not necessarily mean that the scaling activity can be successfully executed. You can use the returned `ScalingActivityId` to check the status of the scaling activity.
- When the total capacity of instances of the scaling group minus instances specified by this interface is smaller than `MinSize`, the call fails.

## Request parameters

| Name           | Type   | Required? | Description                                                           |
|----------------|--------|-----------|-----------------------------------------------------------------------|
| Action         | String | Yes       | Operation interface name, required parameter. Value: RemoveInstances. |
| ScalingGroupId | String | Yes       | Scaling group ID.                                                     |
| InstanceId.N   | String | Yes       | ECS instance ID. You can input up to 20 IDs.                          |

## Return parameters

| Name              | Type   | Description         |
|-------------------|--------|---------------------|
| ScalingActivityId | String | Scaling activity ID |

## Error code

For errors common to all interfaces, refer to the [Client Error Table](#) or [Server Error Table](#).

| Error                                                            | Error code                     | Description                                                                                                                                       | HTTP status code |
|------------------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| The specified scaling group does not exist in this account.      | InvalidScalingGroupId.NotFound | The specified scaling group does not exist.                                                                                                       | 404              |
| The specified ECS instance does not exist in the scaling group.  | InvalidInstanceId.NotFound     | Instance "XXX" does not exist.                                                                                                                    | 404              |
| Open API is not fully authorized to the Auto Scaling service.    | Forbidden.Unauthorized         | A required authorization for the specified action is not supplied.                                                                                | 403              |
| The specified scaling group is not active.                       | IncorrectScalingGroupStatus    | The current status of the specified scaling group does not support this action.                                                                   | 400              |
| The specified scaling group has an in-progress scaling activity. | ScalingActivityInProgress      | You cannot delete a scaling group or launch a new scaling activity while there is a scaling activity in progress for the specified scaling group. | 400              |

|                                                                                                         |                             |                                                                                 |     |
|---------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------|-----|
| The Server Load Balancer instance in the scaling group to which the scaling rule belongs is not active. | IncorrectLoadBalancerStatus | The current status of the specified load balancer does not support this action. | 400 |
| The RDS instance in the scaling group to which the specified scaling rule belongs is not running.       | IncorrectDBInstanceStatus   | The current status of DB instance "XXX" does not support this action.           | 400 |
| After instance removal, the total capacity is lower than MinSize.                                       | IncorrectCapacity.MinSize   | To remove the instances, the total capacity will be lesser than the MinSize.    | 400 |

## Example

### Request example

```
http://ess.aliyuncs.com/?Action=RemoveInstances
&ScalingGroupId=AG6CQdPU8OKdwLjgZcJ2eaQ
&InstanceId.1=i-28wt48iaa
&<Public Request Parameters>
```

### Return example

XML format:

```
<RemoveInstancesResponse>
<ScalingActivityId>bybj9OcaOT4ucPMbFhcqHfA3</ScalingActivityId>
<RequestId>DD0309B7-2613-4792-9B86-275906695253</RequestId>
</RemoveInstancesResponse>
```

JSON format:

```
"RequestId": "6469DCD0-13AC-487E-85A0-CE4922908FDE",
"ScalingActivityId": "ebta5WbUzC8gcwUWvfchyT4U"
```

## Scheduled task

# Create a scheduled task

## Create a scheduled task

### Description

This operation creates a scheduled task according to input parameters.

- You can create up to 20 scheduled tasks.
- When the trigger of a scheduled task fails because a scaling activity in a scaling group is in progress or the scaling group is disabled, the scheduled task is automatically retried within the LaunchExpirationTime; otherwise, the scheduled trigger task is abandoned.
- If multiple tasks are scheduled at similar times to execute the rule of the same group, the earliest task triggers the scaling activity first, and other tasks make attempts to execute the rule within their Launch Expiration Time because a scaling group executes only one scaling activity at a time. If another scheduled task is still making triggering attempts within its Launch Expiration Time after the scaling activity is finished, the scaling rule is executed and the corresponding scaling activity is triggered.

### Request parameters

| Name            | Type   | Required? | Description                                                                                                   |
|-----------------|--------|-----------|---------------------------------------------------------------------------------------------------------------|
| Action          | String | Yes       | Operation interface name, required parameter. Value: CreateScheduledTask.                                     |
| RegionId        | String | Yes       | ID of the region in which the scheduled task is located.                                                      |
| ScheduledAction | String | Yes       | Operations performed when the scheduled task is triggered. Fill in the unique identifier of the scaling rule. |
| LaunchTime      | String | Yes       | Time point at which the scheduled task is triggered.                                                          |

|                      |         |    |                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------|---------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      |         |    | <p>The date format follows the ISO8601 standard and uses UTC time. It is in the format of YYYY-MM-DDThh:mmZ.</p> <p>If RecurrenceType is specified, the time point specified by this attribute is the default time point at which the circle is executed. If RecurrenceType is not specified, the task is executed once on the designated date and time.</p> <p>A time point 90 days after creation or modification cannot be entered.</p> |
| ScheduledTaskName    | String  | No | <p>Display name of the scheduled task, which must be 2-40 characters (English or Chinese) long. It must begin with a number, an upper/lower-case letter or a Chinese character and may contain numbers, "_", "-" or ".".</p> <p>The account name is unique in the same region.</p> <p>If this parameter is not specified, the default value ScheduledScalingTaskId is used.</p>                                                            |
| Description          | String  | No | <p>Description of the scheduled task, which is 2-200 characters (English or Chinese) long.</p>                                                                                                                                                                                                                                                                                                                                             |
| LaunchExpirationTime | Integer | No | <p>Time period within which the failed scheduled task is retried.</p> <p>The default value is 600s.</p> <p>Value range: [0, 21600]</p>                                                                                                                                                                                                                                                                                                     |

|                   |        |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------|--------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RecurrenceType    | String | No | Type of the scheduled task to be repeated. Optional values:<br>- Daily: Recurrence interval by day for a scheduled task.<br>- Weekly: Recurrence interval by week for a scheduled task.<br>- Monthly: Recurrence interval by month for a scheduled task.<br>RecurrenceType, RecurrenceValue and RecurrenceEndTime must be specified.                                                                                                                                       |
| RecurrenceValue   | String | No | Value of the scheduled task to be repeated.<br>- Daily: Only one value in the range [1,31] can be filled.<br>- Weekly: Multiple values can be filled. The values of Sunday to Saturday are 0 to 6 in sequence. Multiple values shall be separated by a comma ",".<br>- Monthly: In the format of A-B. The value range of A and B is 1 to 31, and the B value must be greater than the A value.<br>RecurrenceType, RecurrenceValue and RecurrenceEndTime must be specified. |
| RecurrenceEndTime | String | No | End time of the scheduled task to be repeated.<br>The date format follows the ISO8601 standard and uses UTC time. It is in the format of YYYY-MM-DDThh:mmZ.<br>A time point 90 days                                                                                                                                                                                                                                                                                        |

|             |      |    |                                                                                                                                                                                                 |
|-------------|------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |      |    | after creation or modification cannot be entered. RecurrenceType, RecurrenceValue and RecurrenceEndTime must be specified.                                                                      |
| TaskEnabled | Bool | No | Whether to enable the scheduled task.<br>- When the parameter is set to true, the task is enabled.<br>- When the parameter is set to false, the task is disabled.<br>The default value is true. |

## Return parameters

| Name            | Type   | Description                                                                     |
|-----------------|--------|---------------------------------------------------------------------------------|
| ScheduledTaskId | String | ID of the scheduled task, which is generated by the system and globally unique. |

## Error code

For errors common to all interfaces, refer to the [Client Error Table](#) or [Server Error Table](#).

| Error                                                                                      | Error Code                         | Description                                                                                 | HTTP Status Code |
|--------------------------------------------------------------------------------------------|------------------------------------|---------------------------------------------------------------------------------------------|------------------|
| The specified region does not exist.                                                       | InvalidRegionId.NotFound           | The specified region does not exist.                                                        | 404              |
| The scheduled task name already exists.                                                    | InvalidScheduledTaskName.Duplicate | The specified value of parameter <parameter name> is duplicated.                            | 400              |
| The specified ScheduledAction and the specified scheduled task are not in the same region. | ScheduledAction.RegionMismatch     | The specified scheduled task and the specified scheduled action are not in the same Region. | 400              |
| Your scheduled task quota is exceeded.                                                     | QuotaExceeded.ScheduledTask        | Scheduled task quota exceeded.                                                              | 400              |

## Example

### Request example

```
http://ess.aliyuncs.com/?Action=CreateScheduledTask
&RegionId=cn-qingdao
&LaunchTime=2014-08-17T16:52Z
&RecurrenceType=Daily
&RecurrenceValue=1
&RecurrenceEndTime=2014-08-17T16:55Z
&ScheduledAction=ari:acs:ess:cn-qingdao:1344371:scalingRule/cCBpdYdQuBe2cUxOdu6piOk
&<Public Request Parameters>
```

### Return example

XML format:

```
<CreateScheduledTaskResponse>
<ScheduledTaskId>edRtShc57WGXdT8TIPbrjsnV</ScheduledTaskId>
<RequestId>0F02D931-2B12-44D7-A0E9-39925C13D15E</RequestId>
</CreateScheduledTaskResponse>
```

JSON format:

```
"RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368",
"ScheduledTaskId": "edRtShc57WGXdT8TIPbrjsnV"
```

## Modify a scheduled task

## Modify a scheduled task

### Description

Modifies the attributes of a scheduled task.

### Request parameters

| Name | Type | Required? | Description |
|------|------|-----------|-------------|
|------|------|-----------|-------------|



|                   |        |     |                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------|--------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Action            | String | Yes | Operation interface name, required parameter. Value: ModifyScheduledTask.                                                                                                                                                                                                                                                                                           |
| ScheduledTaskId   | String | Yes | ID of the scheduled task.                                                                                                                                                                                                                                                                                                                                           |
| ScheduledTaskName | String | No  | Display name of the scheduled task, which must be 2-40 characters (English or Chinese) long. It must begin with a number, an upper/lower-case letter or a Chinese character and may contain numbers, "_", "-", " " or "." .<br>The account name is unique in the same region. If this parameter is not specified, the default value ScheduledScalingTaskId is used. |
| Description       | String | No  | Description of the scheduled task, which is 2-200 characters (English or Chinese) long.                                                                                                                                                                                                                                                                             |
| ScheduledAction   | String | No  | Operations performed when the scheduled task is triggered. Fill in the unique identifier of the scaling rule.                                                                                                                                                                                                                                                       |
| LaunchTime        | String | No  | Time point at which the scheduled task is triggered.<br>The date format follows the ISO8601 standard and uses UTC time. It is in the format of YYYY-MM-DDThh:mmZ.<br>If RecurrenceType is specified, the time point specified by this attribute is the default time point at which the circle is executed.<br>If RecurrenceType is                                  |

|                      |         |    |                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------|---------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      |         |    | not specified, the task is executed once on the designated date and time.<br>A time point 90 days after creation or modification cannot be entered.                                                                                                                                                                                                                  |
| LaunchExpirationTime | Integer | No | Time period within which the failed scheduled task is retried.<br>The default value is 600s.<br>Value range: [0, 21600]                                                                                                                                                                                                                                              |
| RecurrenceType       | String  | No | Type of the scheduled task to be repeated.<br>Optional values:<br>- Daily: Recurrence interval by day for a scheduled task.<br>- Weekly: Recurrence interval by week for a scheduled task.<br>- Monthly: Recurrence interval by month for a scheduled task.<br>After modification, RecurrenceType, RecurrenceValue and RecurrenceEndTime must be set simultaneously. |
| RecurrenceValue      | String  | No | Value of the scheduled task to be repeated.<br>- Daily: Only one value in the range [1,31] can be filled.<br>- Weekly: Multiple values can be filled. The values of Sunday to Saturday are 0 to 6 in sequence. Multiple values shall be separated by a comma ",".<br>- Monthly: In the format of A-B. The                                                            |

|                   |        |    |                                                                                                                                                                                                                                                                                                                                             |
|-------------------|--------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   |        |    | value range of A and B is 1 to 31, and the B value must be greater than the A value.<br>After modification, RecurrenceType, RecurrenceValue and RecurrenceEndTime must be set simultaneously.                                                                                                                                               |
| RecurrenceEndTime | String | No | End time of the scheduled task to be repeated. The date format follows the ISO8601 standard and uses UTC time. It is in the format of YYYY-MM-DDThh:mmZ.<br>A time point 90 days after creation or modification cannot be entered.<br>After modification, RecurrenceType, RecurrenceValue and RecurrenceEndTime must be set simultaneously. |
| TaskEnabled       | Bool   | No | Whether to enable the scheduled task.<br>- When the parameter is set to true, the task is enabled.<br>- When the parameter is set to false, the task is disabled.<br>The default value is true.                                                                                                                                             |

## Return parameters

Public parameters.

## Error code

For errors common to all interfaces, refer to the [Client Error Table](#) or [Server Error Table](#).

| Error                                                                                      | Error Code                         | Description                                                                                 | HTTP Status Code |
|--------------------------------------------------------------------------------------------|------------------------------------|---------------------------------------------------------------------------------------------|------------------|
| The specified scheduled task does not exist in your account.                               | InvalidScheduledTaskId.NotFound    | The specified scheduled task does not exist.                                                | 404              |
| The scheduled task name already exists.                                                    | InvalidScheduledTaskName.Duplicate | The specified value of parameter <parameter name> is duplicated.                            | 400              |
| The specified ScheduledAction and the specified scheduled task are not in the same region. | ScheduledAction.RegionMismatch     | The specified scheduled task and the specified scheduled action are not in the same Region. | 400              |

## Example

### Request example

```
http://ess.aliyuncs.com/?Action=ModifyScheduledTask
&ScheduledTaskId=edRtShc57WGXdt8TIPbrjsnV
&LaunchTime=2014-08-18T10:52Z
&RecurrenceEndTime=2014-08-20T16:55Z
&<Public Request Parameters>
```

### Return example

XML format:

```
<ModifyScheduledTaskResponse>
<RequestId>F9372E8D-C163-471F-BEB4-3A02B3CE176E</RequestId>
</ModifyScheduledTaskResponse>
```

JSON format:

```
"RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
```

## Query a scheduled task

# Query a scheduled task

## Description

Queries information of a scheduled task.

You can use the `ScheduledAction` to query the relevant scheduled task.

## Request parameters

| Name                | Type   | Required? | Description                                                                                                                                                                          |
|---------------------|--------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Action              | String | Yes       | Operation interface name, required parameter. Value: <code>DescribeScheduledTasks</code> .                                                                                           |
| RegionId            | String | Yes       | Region of the scheduled task.                                                                                                                                                        |
| ScheduledTaskId.N   | String | No        | ID of the scheduled task. You can enter at most 20 IDs. Invalid scheduled task IDs are not displayed in the query results, and no error is reported.                                 |
| ScheduledTaskName.N | String | No        | Display name of the scheduled task. You can enter at most 20 display names. Names of invalid scheduled tasks will be neglected in the query results, and no error is reported.       |
| ScheduledAction.N   | String | No        | Operations performed when the scheduled task is triggered. You can enter at most 20 operations. Invalid operations are not displayed in the query results, and no error is reported. |

|            |         |    |                                                                                                                     |
|------------|---------|----|---------------------------------------------------------------------------------------------------------------------|
| PageNumber | Integer | No | Page number of the scheduled task list, starting from 1. The default value is 1.                                    |
| PageSize   | Integer | No | When querying by page, this parameter indicates the number of lines per page. Maximum value: 50; default value: 10. |

## Return parameters

| Name           | Type                 | Description                         |
|----------------|----------------------|-------------------------------------|
| TotalCount     | Integer              | Total number of scheduled tasks     |
| PageNumber     | Integer              | Current page number                 |
| PageSize       | Integer              | Number of lines per page            |
| ScheduledTasks | ScheduledTaskSetType | A set of scheduled task information |

ScheduledTaskSetType is a set of ScheduledTaskItemTypes:

| Name          | Type                  | Description                       |
|---------------|-----------------------|-----------------------------------|
| ScheduledTask | ScheduledTaskItemType | Information of the scheduled task |

The attributes of the ScheduledTaskItemType are listed below:

| Name                 | Type    | Description                                               |
|----------------------|---------|-----------------------------------------------------------|
| ScheduledTaskId      | String  | ID of the scheduled task                                  |
| ScheduledTaskName    | String  | Name of the scheduled task                                |
| Description          | String  | Description of the scheduled task                         |
| ScheduledAction      | String  | Operations performed when the scheduled task is triggered |
| LaunchTime           | String  | Time point at which the scheduled task is triggered       |
| LaunchExpirationTime | Integer | Retry interval for the failed scheduled task              |
| RecurrenceType       | String  | Type of the scheduled task to be repeated                 |

|                   |        |                                               |
|-------------------|--------|-----------------------------------------------|
| RecurrenceValue   | String | Value of the scheduled task to be repeated    |
| RecurrenceEndTime | String | End time of the scheduled task to be repeated |
| TaskEnabled       | Bool   | Whether to enable the scheduled task          |

## Error code

For errors common to all interfaces, refer to the [Client Error Table](#) or [Server Error Table](#).

## Example

### Request example

```
http://ess.aliyuncs.com/?Action=DescribeScheduledTasks
&RegionId=cn-qingdao
&ScheduledTaskId.1=edRtShc57WGXdt8TIPbrjsnV
&PageSize=50
&<Public Request Parameters>
```

### Return example

XML format:

```
<DescribeScheduledTasksResponse>
<RequestId>B9B498DA-E836-45FF-83C7-1930492FDD5A</RequestId>
<TotalCount>1</TotalCount>
<PageNumber>1</PageNumber>
<PageSize>50</PageSize>
<ScheduledTasks>
<ScheduledTask>
<Description/>
<LaunchExpirationTime>600</LaunchExpirationTime>
<LaunchTime>2014-08-18T10:52Z</LaunchTime>
<RecurrenceEndTime>2014-08-20T16:55Z</RecurrenceEndTime>
<RecurrenceType>Daily</RecurrenceType>
<RecurrenceValue>1</RecurrenceValue>
<ScheduledAction>
ari:acs:ess:cn-qingdao:1344371:scalingrule/cCBpdYdQuBe2cUxOdu6piOk
</ScheduledAction>
<ScheduledTaskId>edRtShc57WGXdt8TIPbrjsnV</ScheduledTaskId>
<ScheduledTaskName>edRtShc57WGXdt8TIPbrjsnV</ScheduledTaskName>
<TaskEnabled>true</TaskEnabled>
</ScheduledTask>
</ScheduledTasks>
</DescribeScheduledTasksResponse>
```

JSON format:

```
{
  "RequestId": "43434132-91C4-4264-8343-681130760A5C",
  "TotalCount": 1,
  "PageSize": 1,
  "PageNumber": 1,
  "ScheduledTasks": {
    "ScheduledTask": [
      {
        "TaskEnabled": true,
        "ScheduledTaskId": "b27CLSc8T478c2iqHr6fqbf",
        "Description": "ditingshigechunqingchunan",
        "ScheduledTaskName": "9906a33f-14eb-42b8-8bdb-ee8cdf912706",
        "LaunchExpirationTime": 120,
        "RecurrenceType": "Daily",
        "RecurrenceEndTime": "2014-08-13T19:19Z",
        "LaunchTime": "2014-08-12T17:55Z",
        "RecurrenceValue": "1",
        "ScheduledAction": "ari:acs:ess:cn-qingdao:1344371:scalingrule/qGx9feK1giadmp3XXKer94cD"
      }
    ]
  }
}
```

# Delete a scheduled task

# Delete a scheduled task

## Description

Deletes a specified scaling rule.

## Request parameters

| Name            | Type   | Required? | Description                                                              |
|-----------------|--------|-----------|--------------------------------------------------------------------------|
| Action          | String | Yes       | Operation interface name, required parameter. Value:DeleteScheduledTask. |
| ScheduledTaskId | String | Yes       | ID of the scheduled                                                      |



|  |  |  |       |
|--|--|--|-------|
|  |  |  | task. |
|--|--|--|-------|

## Return parameters

Public parameters.

## Error code

For errors common to all interfaces, refer to the [Client Error Table](#) or [Server Error Table](#).

| Error                                                        | Error code                      | Description                                  | HTTP status code |
|--------------------------------------------------------------|---------------------------------|----------------------------------------------|------------------|
| The specified scheduled task does not exist in your account. | InvalidScheduledTaskId.NotFound | The specified scheduled task does not exist. | 404              |

## Example

### Request example

```
http://ess.aliyuncs.com/?Action=DeleteScheduledTask
&ScheduledTaskId=edRtShc57WGXdt8TIPbrjsnV
&<Public Request Parameters>
```

### Return example

XML format:

```
<DeleteScheduledTaskResponse>
<RequestId>7683D637-CF8A-41DC-85A8-E128061E65FC</RequestId>
</DeleteScheduledTaskResponse>
```

JSON format:

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

## How to ensure idempotence

## How to ensure idempotence

If a request timeout or internal server error is encountered when the “Execute a Scaling Rule” interface is called to create or release an ECS instance, the client might try to resend the request. In this case, the client can prevent the server from creating more instances than expected by providing the optional ClientToken parameter. This parameter also ensures the idempotence of the request. ClientToken is a unique and case sensitive string which is generated by the client and cannot contain more than 64 ASCII characters.

If you use the same ClientToken value to call the CreateInstance interface, the server returns identical request results that contain the same ScalingActivityId. Therefore, when you encounter an error and try again, by providing the same ClientToken value, you can ensure that only one scaling activity is created and the corresponding ScalingActivityId is obtained.

If you provide a ClientToken that has already been used, but with different request parameters, the Auto Scaling service returns the IdempotentParameterMismatch error code. However, note that you must change the SignatureNonce, TimeStamp, and Signature parameters. Because the Auto Scaling service uses SignatureNonce to prevent replay attacks and TimeStamp to mark the time of each request, the second request must provide different SignatureNonce and TimeStamp parameter values. This also produces a different Signature value.

Generally, you only need to retry the client in the case of Error 503 (ServiceUnAvailable) or no response. When Error 200 is returned, a retry generates the same results as the last time, without affecting the server status. When Error 4xx or 500 is returned, a retry usually may fail unless the message clearly indicates “try it later” .