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Document conventions

Style	Description	Example
 Danger	A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 Danger: Resetting will result in the loss of user configuration data.
 Warning	A warning notice indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	 Warning: Restarting will cause business interruption. About 10 minutes are required to restart an instance.
 Notice	A caution notice indicates warning information, supplementary instructions, and other content that the user must understand.	 Notice: If the weight is set to 0, the server no longer receives new requests.
 Note	A note indicates supplemental instructions, best practices, tips, and other content.	 Note: You can use Ctrl + A to select all files.
>	Closing angle brackets are used to indicate a multi-level menu cascade.	Click Settings > Network > Set network type .
Bold	Bold formatting is used for buttons, menus, page names, and other UI elements.	Click OK .
<code>Courier font</code>	Courier font is used for commands	Run the <code>cd /d C:/window</code> command to enter the Windows system folder.
<i>Italic</i>	Italic formatting is used for parameters and variables.	<code>bae log list --instanceid</code> <i>Instance_ID</i>
[] or [a b]	This format is used for an optional value, where only one item can be selected.	<code>ipconfig [-all -t]</code>
{ } or {a b}	This format is used for a required value, where only one item can be selected.	<code>switch {active stand}</code>

Table of Contents

1.Preparations	12
1.1. Log on to the API Tool console	12
1.2. Obtain API information	12
1.3. Obtain an AccessKey pair	13
1.4. Obtain an STS AccessKey 3-tuple	15
1.5. Obtain the values of common header parameters	18
1.6. Obtain the endpoint of ECS	19
1.7. Obtain ECS SDKs	20
2.Java SDK call example	21
2.1. Getting started	21
2.2. User Manual	23
2.2.1. Install ECS SDK for Java	23
2.2.2. Configure authentication credentials	24
2.2.3. Configure connection requests	24
2.2.4. Initiate a request	25
2.2.5. Troubleshooting	26
2.2.6. Use CommonRequest to call API operations	27
3.Python SDK call example	30
3.1. Getting started	30
3.2. User Manual	31
3.2.1. Install ECS SDK for Python	31
3.2.2. Configure authentication credentials	32
3.2.3. Set HTTPS requests	32
3.2.4. Initiate a request	33
3.2.5. Handle errors	34
3.2.6. Use CommonRequest to call API operations	34

4.Go SDK call example	37
4.1. Getting started	37
4.2. User Manual	38
4.2.1. Install the core package of SDK for Go	39
4.2.2. Configure authentication credentials	39
4.2.3. Initiate a request	39
4.2.4. Handle errors	40
4.2.5. Use CommonRequest to call API operations	42
5.API reference	45
5.1. ECS API	45
5.1.1. Make API requests	45
5.1.1.1. Overview	45
5.1.1.2. Request structure	45
5.1.1.3. Authorization	45
5.1.1.4. Request signatures	46
5.1.1.5. Responses	48
5.1.2. RAM authorization	50
5.1.3. Common parameters	53
5.1.4. Instances	55
5.1.4.1. RunInstances	55
5.1.4.2. CreateInstance	109
5.1.4.3. StartInstance	151
5.1.4.4. StopInstance	155
5.1.4.5. RebootInstance	158
5.1.4.6. DeleteInstance	161
5.1.4.7. AttachInstanceRamRole	164
5.1.4.8. DetachInstanceRamRole	167
5.1.4.9. DescribeInstanceStatus	171

5.1.4.10. DescribeInstances	173
5.1.4.11. DescribeUserData	191
5.1.4.12. DescribeInstanceRamRole	193
5.1.4.13. DescribeInstanceTypeFamilies	196
5.1.4.14. DescribeInstanceTypes	201
5.1.4.15. ModifyInstanceAttribute	206
5.1.4.16. ModifyInstanceVpcAttribute	215
5.1.4.17. ModifyInstanceVncPasswd	221
5.1.4.18. SoftDeleteInstances	223
5.1.4.19. RestoreSoftDeletedInstances	225
5.1.5. Dedicated hosts	227
5.1.5.1. AllocateDedicatedHosts	227
5.1.5.2. ModifyDedicatedHostAttribute	236
5.1.5.3. ModifyInstanceDeployment	239
5.1.5.4. DescribeDedicatedHostTypes	244
5.1.5.5. DescribeDedicatedHosts	247
5.1.5.6. ReleaseDedicatedHost	256
5.1.5.7. CreateDedicatedHostCluster	258
5.1.5.8. DescribeDedicatedHostClusters	261
5.1.5.9. ModifyDedicatedHostClusterAttribute	267
5.1.5.10. DeleteDedicatedHostCluster	269
5.1.6. Deployment set	270
5.1.6.1. CreateDeploymentSet	270
5.1.6.2. ModifyDeploymentSetAttribute	274
5.1.6.3. DescribeDeploymentSets	276
5.1.6.4. DeleteDeploymentSet	281
5.1.7. Storage sets	283
5.1.7.1. CreateStorageSet	283

5.1.7.2. DescribeStorageSets	286
5.1.7.3. DescribeStorageSetDetails	289
5.1.7.4. ModifyStorageSetAttribute	293
5.1.7.5. DeleteStorageSet	295
5.1.8. Disks	297
5.1.8.1. CreateDisk	297
5.1.8.2. DescribeDisks	311
5.1.8.3. AttachDisk	329
5.1.8.4. DetachDisk	336
5.1.8.5. ModifyDiskAttribute	340
5.1.8.6. ReInitDisk	343
5.1.8.7. ResetDisk	348
5.1.8.8. ReplaceSystemDisk	352
5.1.8.9. ResizeDisk	361
5.1.8.10. DeleteDisk	367
5.1.9. Snapshots	370
5.1.9.1. CreateSnapshot	370
5.1.9.2. DescribeSnapshots	379
5.1.9.3. DeleteSnapshot	392
5.1.9.4. CopySnapshot	395
5.1.9.5. DescribeSnapshotLinks	398
5.1.9.6. DescribeSnapshotsUsage	403
5.1.9.7. CreateAutoSnapshotPolicy	404
5.1.9.8. DeleteAutoSnapshotPolicy	407
5.1.9.9. ModifyAutoSnapshotPolicyEx	409
5.1.9.10. ModifySnapshotAttribute	412
5.1.9.11. DescribeAutoSnapshotPolicyEX	414
5.1.9.12. ApplyAutoSnapshotPolicy	419

5.1.9.13. CancelAutoSnapshotPolicy	422
5.1.9.14. CreateSnapshotGroup	423
5.1.9.15. DescribeSnapshotGroups	430
5.1.9.16. DeleteSnapshotGroup	435
5.1.9.17. ModifySnapshotGroup	438
5.1.10. Images	439
5.1.10.1. CreateImage	439
5.1.10.2. DescribeImages	449
5.1.10.3. ModifyImageAttribute	461
5.1.10.4. DeleteImage	463
5.1.10.5. CopyImage	465
5.1.10.6. CancelCopyImage	471
5.1.10.7. ModifyImageSharePermission	473
5.1.10.8. DescribeImageSharePermission	476
5.1.10.9. ImportImage	479
5.1.10.10. ExportImage	488
5.1.10.11. DescribeImageSupportInstanceTypes	493
5.1.11. Networks	496
5.1.11.1. ModifyInstanceNetworkSpec	496
5.1.11.2. AttachClassicLinkVpc	502
5.1.11.3. ModifyInstanceSpec	505
5.1.11.4. DescribeClassicLinkInstances	517
5.1.11.5. DetachClassicLinkVpc	520
5.1.12. Security groups	522
5.1.12.1. CreateSecurityGroup	522
5.1.12.2. AuthorizeSecurityGroup	527
5.1.12.3. AuthorizeSecurityGroupEgress	538
5.1.12.4. RevokeSecurityGroup	548

5.1.12.5. JoinSecurityGroup	556
5.1.12.6. LeaveSecurityGroup	559
5.1.12.7. DeleteSecurityGroup	561
5.1.12.8. DescribeSecurityGroupAttribute	563
5.1.12.9. DescribeSecurityGroups	571
5.1.12.10. DescribeSecurityGroupReferences	576
5.1.12.11. ModifySecurityGroupAttribute	579
5.1.12.12. ModifySecurityGroupPolicy	581
5.1.12.13. ModifySecurityGroupRule	583
5.1.12.14. ModifySecurityGroupEgressRule	592
5.1.13. SSH key pairs	601
5.1.13.1. CreateKeyPair	601
5.1.13.2. ImportKeyPair	603
5.1.13.3. AttachKeyPair	606
5.1.13.4. DetachKeyPair	610
5.1.13.5. DeleteKeyPairs	613
5.1.13.6. DescribeKeyPairs	615
5.1.14. Elastic network interfaces	618
5.1.14.1. CreateNetworkInterface	618
5.1.14.2. AttachNetworkInterface	625
5.1.14.3. AssignPrivateIpAddresses	630
5.1.14.4. UnassignPrivateIpAddresses	635
5.1.14.5. DescribeNetworkInterfaces	639
5.1.14.6. DetachNetworkInterface	650
5.1.14.7. DeleteNetworkInterface	654
5.1.14.8. ModifyNetworkInterfaceAttribute	657
5.1.14.9. AssignIpv6Addresses	662
5.1.14.10. UnassignIpv6Addresses	666

5.1.15. Regions and zones	669
5.1.15.1. DescribeRegions	669
5.1.15.2. DescribeZones	672
5.1.15.3. DescribeAvailableResource	677
5.1.15.4. DescribeResourcesModification	685
5.1.16. Operations and monitoring	692
5.1.16.1. GetInstanceConsoleOutput	692
5.1.16.2. GetInstanceScreenshot	696
5.1.16.3. DescribeDiskMonitorData	698
5.1.16.4. DescribeInstanceMonitorData	703
5.1.16.5. DescribeSnapshotMonitorData	708
5.1.16.6. DescribeEniMonitorData	712
5.1.17. Cloud Assistant	718
5.1.17.1. CreateCommand	718
5.1.17.2. InvokeCommand	724
5.1.17.3. RunCommand	730
5.1.17.4. DescribeCommands	740
5.1.17.5. ModifyCommand	746
5.1.17.6. StopInvocation	749
5.1.17.7. DescribeInvocationResults	751
5.1.17.8. DescribeInvocations	761
5.1.17.9. DescribeCloudAssistantStatus	776
5.1.17.10. DeleteCommand	780
5.1.17.11. SendFile	782
5.1.17.12. DescribeSendFileResults	786
5.1.18. Tags	794
5.1.18.1. AddTags	794
5.1.18.2. RemoveTags	798

5.1.18.3. DescribeTags	800
5.1.18.4. TagResources	805
5.1.18.5. ListTagResources	809
5.1.18.6. UntagResources	816
5.1.19. Other operations	820
5.1.19.1. DescribeTasks	820
5.1.19.2. DescribeTaskAttribute	824
5.1.19.3. CancelTask	829
5.1.19.4. JoinResourceGroup	831
5.1.20. Appendix	833
5.1.20.1. Glossary	833
5.1.20.2. Instance statuses	834
5.1.20.3. Common errors	835
5.1.20.4. Disk categories	838
5.1.20.5. How to ensure idempotency	838
5.1.20.6. API behavior when an instance is locked for secur...	838
5.1.20.7. ISO 8601 date and time formats	840
6. Appendixes	841
6.1. Use the ASAPI gateway to call API operations	841
6.2. Use the ASAPI gateway to make API calls	843
6.2.1. Generate an endpoint for ASAPI	843
6.2.2. Obtain Apsara Stack SDKs	847
6.3. STS overview	848
6.3.1. What is STS?	848
6.3.2. AssumeRole	849

1. Preparations

1.1. Log on to the API Tool console

You can log on to the API Tool console from the Apsara Uni-manager Management Console.

Prerequisites

- Before you log on to the Apsara Uni-manager Management Console, the endpoint of the console is obtained from the deployment personnel.
- A browser is available. We recommend that you use Google Chrome.

Procedure

1. Enter the URL of the Apsara Uni-manager Management Console in the address bar and press Enter.
2. Enter your username and password.

Obtain the username and password that are used to log on to the Apsara Uni-manager Management Console from the operations administrator.

 **Note** When you log on to the Apsara Uni-manager Management Console for the first time, you must change the password of your account. For security purposes, your password must meet the minimum complexity requirements. The password must be 10 to 32 characters in length and must contain at least two of the following character types:

- Uppercase or lowercase letters
- Digits
- Special characters, which include ! @ # \$ %

3. Click **Log On**.
4. If your account has multi-factor authentication (MFA) enabled, perform corresponding operations in the following scenarios:
 - You log on to the Apsara Uni-manager Management Console for the first time after MFA is enabled by the administrator.
 - a. On the Bind Virtual MFA Device page, bind an MFA device.
 - b. Enter the username and password again as in Step 2 and click **Log On**.
 - c. Enter a six-digit MFA verification code and click **Authenticate**.
 - You have enabled MFA and bound an MFA device.

Enter a six-digit MFA verification code and click **Authenticate**.

 **Note** For more information, see the *Bind a virtual MFA device to enable MFA* topic in *Apsara Uni-manager Management Console User Guide*.

5. In the top navigation bar, choose **Products > Others > API Tool**.

1.2. Obtain API information

To call API operations by using an SDK, you must first obtain information about the service name, API operation name, and API version.

Context

The information on the API Directory page of the Apsara Uni-manager Management Console is for reference only. For more information about how to call API operations, see the developer guides of cloud services. If the information on the API Directory page is different from that in the developer guide of a cloud service, the information in the developer guide prevails.

Procedure

1. Log on to the Apsara Uni-manager Management Console.
2. In the top navigation bar, click **Products** and choose **Others > API Tool**.
3. In the left-side navigation pane, click **API Directory**.
4. On the **API Directory** page, select the required cloud service from the Product Name drop-down list, enter a keyword of an operation name in the search box, and then click Search.
5. In the search result, you can view the **cloud service name**, **API operation name**, and **API version**.

1.3. Obtain an AccessKey pair

AccessKey credentials are assigned by Resource Access Management (RAM) or Security Token Service (STS). You need to provide only a single type of AccessKey credentials for authentication when you call API operations. This topic describes how to obtain an AccessKey pair that is assigned by RAM.

Background information

An AccessKey pair is used to verify the identity of a request sender. An AccessKey pair consists of an AccessKey ID and an AccessKey secret that are used to implement symmetric encryption. The AccessKey ID is used to identify a user. The AccessKey secret is used to encrypt the signature string.

You can use RAM or STS to assign an AccessKey pair for authentication.

- An AccessKey pair that is assigned by RAM to a third party consists of an AccessKey ID and an AccessKey secret.
- An AccessKey 3-tuple that is assigned by STS to a third party consists of an AccessKey ID, an AccessKey secret, and a security token. For more information, see [Obtain an STS AccessKey 3-tuple](#).

The Apsara Uni-manager Management Console provides AccessKey pairs to personal accounts and organizations. Only the administrators of level-1 organizations and operations administrators can obtain the AccessKey pairs of organizations. We recommend that you use the AccessKey pairs of personal accounts to call the operations provided by the Apsara Uni-manager Management Console and cloud services. If you use the AccessKey pair of a personal account, configure the header parameters that are described in the following table for access control. Otherwise, an error that indicates insufficient permissions may occur.

 Warning

The AccessKey pair of a personal account is managed and limited by the permission system of the Apsara Uni-manager Management Console. If you need to obtain the AccessKey pair of an organization, make sure that your operation is allowed by an administrator. This ensures security.

Parameter	Description
x-acs-regionid	The ID of the region. Example: cn-hangzhou-*
x-acs-organizationid	The ID of the organization in the Apsara Uni-manager Management Console. For more information about how to obtain organization IDs, see <i>GetOrganizationList</i> in <i>Apsara Uni-manager Management Console Developer Guide</i> .
x-acs-resourcegroupid	The ID of the resource set in the Apsara Uni-manager Management Console. For more information about how to obtain resource set IDs, see <i>ListResourceGroup</i> in <i>Apsara Uni-manager Management Console Developer Guide</i> .
x-acs-instanceid	The ID of the instance that you want to manage. If you want to obtain the ID of an Elastic Compute Service (ECS) instance, you can obtain the ID from the ECS instance list.

Obtain the AccessKey pair of a personal account

To obtain the AccessKey pair of a personal account, perform the following steps:

1. Log on to the Apsara Uni-manager Management Console.
2. In the upper-right corner of the homepage, click the profile picture and then select **User Information**.
3. In the **AccessKey Pair** section, view the AccessKey pair of the personal account.

 Note

An AccessKey pair consists of an AccessKey ID and an AccessKey secret. These credentials provide full permissions on cloud resources within your account. You must keep the AccessKey pair confidential.

Obtain the AccessKey pair of an organization

To obtain the AccessKey pair of an organization, perform the following steps:

1. Log on to the Apsara Uni-manager Management Console as an administrator.

2. In the top navigation bar, click **Enterprise**.
3. In the left-side navigation pane, choose **Resources > Organizations**.
4. In the organization list, click the name of the level-1 organization whose AccessKey pair you want to obtain.
5. Click **Management AccessKey** on the right side of the page.
6. In the Management AccessKey dialog box, view the AccessKey pair of the organization.

1.4. Obtain an STS AccessKey 3-tuple

This topic describes how to use Security Token Service (STS) to call Elastic Compute Service (ECS) API operations in Apsara Stack.

Background information

STS allows you to manage temporary credentials to your Apsara Stack resources. You can use STS to call Apsara Stack API operations.

When you use STS to call API operations, you must specify an AccessKey ID, an AccessKey secret, and a security token, which form an STS AccessKey 3-tuple. For more information about STS, see [What is STS](#).

Procedure

1. Obtain the `Resource Access Management (RAM) role`.
 - i. Log on to the Apsara Uni-manager Management Console.
 - ii. In the upper-right corner of the homepage, click the profile picture and then click **User Information**.
 - iii. Click **View Current Role Policy**.

In the **View Policies of Current Role** dialog box, view your RAM role in `RAM Role`.

2. Obtain the STS AccessKey 3-tuple.

Note

In the following code, replace the variables with actual values. Delete the angle brackets (<>) in the final code.

- `<yourRegionID>`: Replace it with the region ID.
- `<yourAccessKeyID>`: Replace it with your AccessKey ID.
- `<yourAccessKeySecret>`: Replace it with your AccessKey secret.
- `<yourRoleSessionName>`: Replace it with the actual session name. For more information, see [AssumeRole](#).
- `<yourRoleArn>`: Replace it with your RAM role.
- `<sts.aliyuns.com>`: Replace it with the actual endpoint of STS. For more information, see [AssumeRole](#).


```

public static void main(String[] args) {
    // Create a DefaultAcsClient instance and initialize it.
    // Specify your actual region ID, AccessKey ID, and AccessKey secret.
    DefaultProfile profile = DefaultProfile.getProfile("<yourRegionID>", "<yourAccessKeyID>", "<yourAccessKeySecret>");
    HttpClientConfig clientConfig = HttpClientConfig.getDefault();
    clientConfig.setIgnoreSSLCerts(true);
    clientConfig.setProtocolType(ProtocolType.HTTPS);
    profile.setHttpClientConfig(clientConfig);
    IAcsClient client = new DefaultAcsClient(profile);
    String assumeRole = callAssumeRole(client);
    if (StringUtils.isEmpty(assumeRole)) return;
    JSONObject assumeRoleJson = JSONObject.parseObject(assumeRole);
    JSONObject credentials = assumeRoleJson.getJSONObject("Credentials");
    // Obtain the STS AccessKey 3-tuple.
    String stsAK = credentials.getString("AccessKeyId");
    String stsSK = credentials.getString("AccessKeySecret");
    String stsToken = credentials.getString("SecurityToken");
}

private static String callAssumeRole(IAcsClient client) {
    CommonRequest request = new CommonRequest();
    // Replace "sts.aliyuns.com" with the actual endpoint of STS. The format of an STS
    // endpoint is sts-vpc.${global:region}.${global:internet-domain}.
    request.setSysDomain("sts.aliyuns.com");
    request.setSysProduct("Sts");
    request.setSysAction("AssumeRole");
    request.setSysVersion("2015-04-01");
    request.setSysMethod(MethodType.POST);
    request.setHttpContentType(FormatType.FORM);
    // Replace "<yourRoleSessionName>" with the name of the current session.
    request.putQueryParameter("RoleSessionName", "<yourRoleSessionName>");
    // Replace "<yourRoleArn>" with the actual Alibaba Cloud Resource Name (ARN) obtained
    // for the RAM role in the preceding step.
    request.putQueryParameter("RoleArn", "<yourRoleArn>");
    try {
        CommonResponse response = client.getCommonResponse(request);
        return response.getData();
    } catch (ServerException e) {
        System.out.println(e.getErrCode());
        System.out.println(e.getErrMsg());
    } catch (ClientException e) {
        System.out.println(e.getErrCode());
        System.out.println(e.getErrMsg());
    }
    return null;
}

```

3. Use the AccessKey 3-tuple assigned by STS to call an operation of a service. The following sample code provides an example on how to use the AccessKey 3-tuple assigned by STS to call the ECS

DescribeZones operation:

 Note

In the following code, replace the variables with actual values. Delete the angle brackets (<>) in the final code.

- <yourRegionID>: Replace it with the region ID.
- <yourStsAccesskeyID>: Replace it with your STS AccessKey ID.
- <yourStsAccessKeySecret>: Replace it with your STS AccessKey secret.
- <yourStsToken>: Replace it with your STS security token.
- <yourResourceGroupID>: Replace it with the actual resource set ID.
- <yourOrganizationID>: Replace it with the actual organization ID.

```
public static void main(String[] args) {
    // Replace "<yourRegionID>" with the actual region ID.
    // Replace "<yourStsAccesskeyID>" and "<yourStsAccessKeySecret>" with the AccessKey
    ID and AccessKey secret of the 3-tuple obtained in the preceding step.
    DefaultProfile profile = DefaultProfile.getProfile("<yourRegionID>", "<yourStsAcces
    skey>", "<yourStsAccessSecret>");
    HttpClientConfig clientConfig = HttpClientConfig.getDefault();
    clientConfig.setIgnoreSSLCerts(true);
    clientConfig.setProtocolType(ProtocolType.HTTPS);
    profile.setHttpClientConfig(clientConfig);
    IAcsClient client = new DefaultAcsClient(profile);
    CommonRequest request = new CommonRequest();
    request.setSysDomain("ecs.aliyuns.com");
    request.setSysProduct("ECS");
    request.setSysAction("DescribeZones");
    request.setSysVersion("2014-05-26");
    request.setSysMethod(MethodType.POST);
    request.setHttpContentType(FormatType.FORM);
    // Replace "<yourRegionID>" with the actual region ID.
    request.putHeadParameter("x-acs-regionid", "<yourRegionID>");
    // Replace "<yourStsToken>" with the security token of the 3-tuple obtained in the
    preceding step.
    request.putQueryParameter("SecurityToken", "<yourStsToken>");
    // Optional. Replace "<yourResourceGroupID>" with the actual resource set ID.
    // request.putHeadParameter("x-acs-resourcegroupid", "<yourResourceGroupID>");
    // Required. Replace "<yourOrganizationID>" with the actual organization ID.
    request.putHeadParameter("x-acs-organizationid", "<yourOrganizationID>");
    try {
        CommonResponse response = client.getCommonResponse(request);
        System.out.println(response.getData());
    } catch (ServerException e) {
        System.out.println(e.getErrCode());
        System.out.println(e.getErrMsg());
    } catch (ClientException e) {
        System.out.println(e.getErrCode());
        System.out.println(e.getErrMsg());
    }
}
```

1.5. Obtain the values of common header parameters

You must provide multiple header parameters when you call Apsara Stack API operations. This topic describes the header parameters and how to obtain the values of the parameters. This topic also describes the return values of some parameters after you call API operations.

Header parameters

Parameter	Description
x-acs-regionid	The ID of the region. For more information about how to obtain region IDs, see Obtain a region ID .
x-acs-organizationid	The ID of the organization in the Apsara Uni-manager Management Console. For more information about how to obtain organization IDs, see Obtain an organization ID .
x-acs-resourcegroupid	The ID of the resource set in the Apsara Uni-manager Management Console. For more information about how to obtain resource set IDs, see Obtain a resource set ID .
x-acs-instanceid	The ID of the instance that you want to manage. For more information about how to obtain instance IDs, see Obtain an instance ID .

Obtain a region ID

1. Log on to the Apsara Uni-manager Management Console as an administrator.
2. In the top navigation bar, click **Enterprise**.
3. In the left-side navigation pane, choose **Resources > Regions**.
4. Click the name of the organization whose region ID you want to view.
5. View the region ID in the **Regions** section on the right.

Obtain an organization ID

Call an operation to obtain an organization ID. For more information about how to obtain organization IDs, see *GetOrganizationList* in *Apsara Uni-manager Management Console Developer Guide*.

Obtain a resource set ID

Call an operation to obtain a resource set ID. For more information about how to obtain resource set IDs, see *ListResourceGroup* in *Apsara Uni-manager Management Console Developer Guide*.

Obtain an instance ID

You can obtain the ID of an instance in a service console of the Apsara Uni-manager Management Console. In this example, the Elastic Compute Service (ECS) console is used. Perform the following operations to obtain the ID of an ECS instance:

1. Log on to the Apsara Uni-manager Management Console.
2. In the top navigation bar, choose **Products > Elastic Computing > Elastic Compute Service**.
3. In the left-side navigation pane, choose **Instances & Images > Instances**.
4. View the **instance ID** in the instance list.

Response parameters

After you call operations to query the instances of cloud services, the following additional response parameters are returned by default.

Parameter	Description
ResourceGroupName	The name of the resource set.
ResourceGroup	The ID of the resource set.
DepartmentName	The name of the organization.
Department	The ID of the organization.

1.6. Obtain the endpoint of ECS

This topic describes how to obtain the endpoint of Elastic Compute Service (ECS).

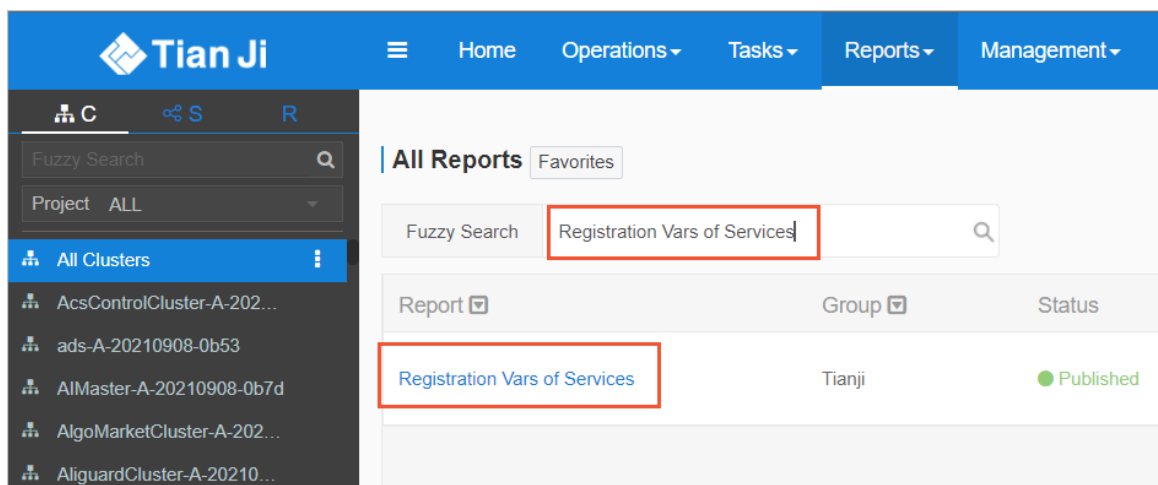
Background information

To use the Portable OpenAPI Proxy (POP) gateway to call API operations in Apsara Stack, you must obtain service endpoints. You can obtain service endpoints from Apsara Stack onsite O&M engineers or by performing the following steps.

Procedure

1. Log on to the Apsara Infrastructure Management console.
 - i. Log on to the Apsara Uni-manager Operations Console.
 - ii. In the top navigation bar, choose **Products > Platforms > Apsara Infrastructure Management Framework**.
2. In the left-side navigation pane, click **Reports**.

3. On the **All Reports** page, search for `Registration Vars of Services` and click the report name.



4. On the **Registration Vars of Services** page, click the  icon next to **Service** and search for

`ECS`.

5. Find the `ecs-yaochi` service, right-click the **Service Registration** column, and then select **Show More** from the shortcut menu.

On the **Details** page, view the value of `vpc-internal.openapi.endpoint`. The value indicates the `endpoint` of EIP.

1.7. Obtain ECS SDKs

If you want to use the POP gateway to call API operations in Apsara Stack, you must obtain an Elastic Compute Service (ECS) SDK. This topic describes how to obtain ECS SDKs.

ECS SDKs encapsulate the API version released on May 26, 2014. It identifies callers based on their AccessKey pairs and provides features such as automatic signature to allow you to create and manage resources by calling API operations.

To use ECS features, you must install ECS SDKs and Alibaba Cloud core libraries. For example, to use ECS SDK for Java, you must download `aliyun-java-sdk-core` and `aliyun-java-sdk-ecs`.

An SDK includes code and examples. You can create cloud applications by using an SDK in your desired programming language.

The SDKs for Java, Python, and Go are provided. You can select the SDKs from [Alibaba Cloud SDKs](#) based on your business requirements.

Note

We recommend that you use an SDK for Java, Python, or Go. If you use SDKs in other programming languages, the SDKs may be incompatible with your system.

We recommend that you use the SDK core library that is provided on the Alibaba Cloud official website. The SDK core library is shared by all cloud services and is compatible with Apsara Stack.

2. Java SDK call example

2.1. Getting started

This topic describes how to obtain and use Elastic Compute Service (ECS) SDK for Java.

Prerequisites

- An Apsara Stack tenant account that has the required permissions and an AccessKey pair are obtained. The AccessKey pair consists of an AccessKey ID and an AccessKey secret. For more information, see [Obtain an AccessKey pair](#).
- The endpoint of ECS is obtained. For more information, see [Obtain the endpoint of ECS](#).
- Java Development Kit (JDK) 1.8 or later is installed before you can use Apsara Stack SDK for Java.

Install Apsara Stack SDK for Java

If you use Apache Maven to manage Java projects, import JAR files to the pom.xml file of the projects.

To use ECS SDKs, you must install the SDK core library and the ECS SDKs. We recommend that you use the core library version 4.5.17 or later, and use the SDK version 4.23.2.

Use ECS SDK for Java

To use ECS SDK for Java, perform the following steps:

1. Create a DefaultAcsClient instance and initiate it.
2. Create an API request and configure the required parameters.
3. Initiate the API request and handle the response or exception.

 Note

In the following code, replace the variables with actual values. Delete the angle brackets (<>) in the final code.

- <yourRegionID>: Replace it with the region ID.
- <yourAccessKeyID>: Replace the parameter with your AccessKey ID.
- <yourAccessKeySecret>: Replace it with your AccessKey secret.
- <Product>: Replace it with the name of the current service.
- <Endpoint>: Replace it with the endpoint of the current service.
- <readTimeout>: Replace it with a read timeout period based on your business requirements. Unit: milliseconds.
- <connectionTimeout>: Replace it with a connection timeout period based on your business requirements. Unit: milliseconds.
- <maxRequestsPerHost>: Replace it with the maximum number of requests that are supported by each host.
- <maxRequests>: Replace it with the maximum number of requests.
- <http://192.168.XX:33XX>: Replace it with the IP address and port of the proxy.

```
import com.aliyuncs.profile.DefaultProfile;
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.http.HttpClientConfig;
import com.aliyuncs.http.ProtocolType;
import com.aliyuncs.ecs.model.v20140526.*;
public class Main {
    public static void main(String[] args) {
        // Create a DefaultAcsClient instance and initialize it.
        DefaultProfile profile = DefaultProfile.getProfile(
            "<yourRegionID>",           // Replace it with the region ID.
            "<yourAccessKeyID>",       // Replace it with your AccessKey ID.
            "<yourAccessKeySecret>"); // Replace it with your AccessKey secret.
        // Specify the endpoint of the service. Replace the variables with the actual values.
        profile.addEndpoint("<yourRegionID>", "<Product>", "<Endpoint>");
        // Configure the request parameters.
        HttpClientConfig clientConfig = HttpClientConfig.getDefault();
        clientConfig.setIgnoreSSLCerts(true); // Ignore the certificate.
        clientConfig.setReadTimeoutMillis(<readTimeout>); // Optional. Specify the read timeout period. Unit: milliseconds.
        clientConfig.setConnectionTimeoutMillis(<connectionTimeout>); // Optional. Specify the connection timeout period. Unit: milliseconds.
        clientConfig.setMaxRequestsPerHost(<maxRequestsPerHost>); // Optional. Specify the maximum number of requests per host.
        clientConfig.setMaxRequests(<maxRequests>); // Optional. Specify the maximum number of requests.
        clientConfig.setProxyAddress(<ProxyAddress>); // Optional. Specify the proxy address.
```



```
clientConfig.setProtocolType(ProtocolType.HTTP); // Optional. Specify the request protocol. Default value: HTTP.
/* Optional. Specify the IP address and port of the proxy.
clientConfig.setHttpProxy("<http://192.168.XX:33XX>");
or
clientConfig.setHttpsProxy("<https://192.168.XX:33XX>");
*/
profile.setHttpClientConfig(clientConfig);
IAcsClient client = new DefaultAcsClient(profile);
// Create an API request and configure the required parameters.
DescribeInstancesRequest request = new DescribeInstancesRequest();
// Configure service-related parameters.
request.setPageSize(10);
request.setPageNumber(1);
// Configure special header parameters. Specify the organization ID and resource set ID to use resources that belong to the specified organization and resource set.
request.putHeaderParameter("x-acs-organizationid", "1");
request.putHeaderParameter("x-acs-resourcegroupid", "11");
// Initiate the request and handle the response and exceptions.
DescribeInstancesResponse response;
try {
    response = client.getAcsResponse(request);
    for (DescribeInstancesResponse.Instance instance:response.getInstances()) {
        System.out.println(instance.getInstanceName());
    }
} catch (ServerException e) {
    e.printStackTrace();
} catch (ClientException e) {
    e.printStackTrace();
}
}
```

2.2. User Manual

2.2.1. Install ECS SDK for Java

This topic describes how to install and use Elastic Compute Service (ECS) SDK for Java.

Apsara Stack SDK for Java supports Java Development Kit (JDK) 1.8 or later. You can install Apsara Stack SDK for Java by adding Maven dependencies or downloading the SDK package. For more information, visit [Alibaba Cloud SDKs](#).

To use ECS SDKs, you must install ECS SDK for Java and the core library of Apsara Stack SDK for Java. We recommend that you use the core library version 4.5.17 or later and use ECS SDK for Java 4.23.2.

For example, to use ECS SDK for Java, you must install ECS SDK for Java and the core library of Apsara Stack SDK for Java and add the following dependencies to the pom.xml file: For more information about the specific SDK version, visit [Alibaba Cloud SDKs](#).

```
<!-- Alibaba Cloud SDK for Java -->
<dependency>
  <groupId>com.aliyun</groupId>
  <artifactId>aliyun-java-sdk-core</artifactId>
  <version>4.5.17</version>
</dependency>
<!-- ecs java sdk -->
<dependency>
  <groupId>com.aliyun</groupId>
  <artifactId>aliyun-java-sdk-ecs</artifactId>
  <version>4.23.2</version>
</dependency>
```

2.2.2. Configure authentication credentials

When you use an Apsara Stack SDK to access Apsara Stack services, you must provide an authorized account for authentication. This topic describes how to configure authentication credentials.

Apsara Stack SDK for Java supports authentication by using AccessKey pairs. For more information about how to obtain an AccessKey pair, see [Obtain an AccessKey pair](#).

If you want to use your AccessKey pair to access Apsara Stack, you must configure the AccessKey pair as the credentials when you initialize the client.

Note

Do not disclose code that contains your AccessKey pair. For example, do not commit the code to public GitHub projects. Otherwise, your account may be compromised.

```
DefaultProfile profile = DefaultProfile.getProfile(
    "<yourRegionID>",           // Replace it with the actual region ID.
    "<yourAccessKeyId>",       // Replace it with your AccessKey ID.
    "<yourAccessKeySecret>"); // Replace it with your AccessKey secret.
```

Note

In the preceding sample code, replace the variables with actual values. Delete the angle brackets (<>) in the final code.

2.2.3. Configure connection requests

This topic describes how to configure a connection request by using the HttpClientConfig object.

You can use the following code to configure the HttpClientConfig object. We recommend that you select and configure the following parameters based on your business requirements.

 Note

You must use actual values to replace the variables in the following sample code. Do not retain the angle brackets (<>) in the final code.

The following list describes the variables:

- <readTimeout>: Specify the read timeout period based on your business requirements. Unit: milliseconds.
- <connectionTimeout>: Specify the connection timeout period based on your business requirements. Unit: milliseconds.
- <maxRequestsPerHost>: Specify the maximum number of requests that are supported by each server based on your business requirements. The supported data type is INTEGER.
- <maxRequests>: Specify the maximum number of requests based on your business requirements. The supported data type is INTEGER.
- <http://192.168.XX.XX:33XX>: Replace it with the actual IP address and port of the proxy.

```
// Obtain the HttpClientConfig object.
HttpClientConfig clientConfig = HttpClientConfig.getDefault();
// Specify whether to ignore certificates.
clientConfig.setIgnoreSSLCerts(true);
// (Optional) Specify the read timeout period. Unit: milliseconds.
clientConfig.setReadTimeoutMillis(<readTimeout>);
// (Optional) Specify the connection timeout period. Unit: milliseconds.
clientConfig.setConnectionTimeoutMillis(<connectionTimeout>);
// (Optional) Specify the maximum number of requests that are supported by each server. The
supported data type is INTEGER.
clientConfig.setMaxRequestsPerHost(<maxRequestsPerHost>);
// (Optional) Specify the maximum number of requests. The supported data type is INTEGER.
clientConfig.setMaxRequests(<maxRequests>);
// (Optional) Specify the protocol type.
clientConfig.setProtocolType(ProtocolType.HTTP);
/** (Optional) Specify whether to configure the proxy based on your business requirements.
The following code is available:
clientConfig.setHttpProxy("<http://192.168.XX.XX:33XX>");
Or
clientConfig.setHttpsProxy("<https://192.168.XX.XX:33XX>");
Replace https://192.168.XX.XX:33XX with the actual IP address and port of the proxy.
*/
profile.setHttpClientConfig(clientConfig);
```

2.2.4. Initiate a request

This topic describes how to use Elastic Compute Service (ECS) SDK for Java to initiate a request.

Procedure

1. Create an `AcsClient` instance.

```
IACSClient client = new DefaultAcsClient(profile);
```

2. Create a request.

Name the request in the `${apiName}Request` format. Replace `${apiName}` with the name of the API operation. Example: `DescribeInstances`.

When SDKs of multiple services are used, different requests may have the same name. Differentiate the requests by SDK package.

```
DescribeInstancesRequest();
// Configure service-related parameters.
request.setPageSize(10);
request.setPageNumber(1);
// Configure special header parameters. Specify the organization ID and resource set ID
to use resources that belong to the specified organization and resource set.
request.putHeaderParameter("x-acs-organizationid", "1");
request.putHeaderParameter("x-acs-resourcegroupid", "");
```

3. Initiate the request and handle the response.

```
DescribeInstancesResponse response;
try {
    response = client.getAcsResponse(request);
    for (DescribeInstancesResponse.Instance instance:response.getInstances()) {
        System.out.println(instance.instance.getInstanceName());
    }
} catch (ServerException e) {
    e.printStackTrace();
} catch (ClientException e) {
    e.printStackTrace();
}
```

In normal cases, all returned fields are deserialized into the response. You can call

`response.getXXX()` to obtain the values of the response fields.

```
String instanceStatus = instance.getStatus()
```

If an exception occurs or if you want to obtain the original HTTP response, call `doAction()` to obtain the original response.

```
HttpResponse response = client.doAction(request);
```

2.2.5. Troubleshooting

If the server or SDK encounters an error when you use SDK for Java, it returns an error response. The error response contains an error code and an error message.

In most cases, you do not need to handle the errors returned by SDK for Java. You need to only handle the errors returned by the server based on error messages.

- `ServerException` indicates a server error.
- `ClientException` indicates an SDK error.

For example, when the following error occurs, you can modify the AccessKey ID based on the error message to solve the problem:

```
com.aliyuncs.exceptions.ClientException: InvalidAccessKeyId.NotFound : Specified access key is not found.
```

If you want to handle SDK errors, refer to the following example to write your code:

```
try {
    FooResponse response = client.getAcsResponse(request);
    // Handle the response.
    // ...
}catch (ServerException e){
    // You can add your logic to handle errors.
    // For example, print the error message.
    System.out.println("ErrorCode=" + e.getErrCode());
    System.out.println("ErrorMessage=" + e.getErrMsg());
    // If the error persists, you can submit a ticket with the request ID included.
    System.out.println("ResponseId=" + e.getRequestId());
}catch (ClientException e){
    // You can add your logic to handle errors.
    // For example, print the error message.
    System.out.println("ErrorCode=" + e.getErrCode());
    System.out.println("ErrorMessage=" + e.getErrMsg());
}
```

2.2.6. Use CommonRequest to call API operations

If you want to call an Elastic Compute Service (ECS) API operation without an SDK or if the request and response of an API operation that you call by using an SDK do not meet your business requirements, you can use CommonRequest to call the API operation. You can use CommonRequest to call all API operations.

Benefits

CommonRequest provides the following benefits:

- **Lightweight:** You only need to download the core package. You do not need to download and install SDKs of Apsara Stack services.
- **Easy to use:** You can call the newly released API operations of a service without the need to update the SDK of the service.
- **Fast in iteration.**

Use CommonRequest to call an API operation

If you want to send a CommonRequest request, you must obtain the values of the following parameters. You can obtain the values of these parameters from ECS API references.

- **Domain:** the endpoint of the service.
- **Version:** the version of the API in the YYYY-MM-DD format.

You can obtain the API version from the common request parameters in the API references of cloud services.

- Operation information: the name of the API operation that you want to call.

You must obtain the value of the `Action` parameter and specify the API operation in the

```
request.setSysAction("<Action>")
```

 format.

For example, if you want to use `CommonRequest` to call the `RunInstances` operation, you must

specify the API operation in the `request.setSysAction("RunInstances")` format.

Example: Call an remote procedure call (RPC) API operation

The following code provides an example of how to call the `DescribeInstanceStatus` operation to obtain the status list of ECS instances.

Note

In the following code, replace the variables with actual values. Delete the angle brackets (<>) in the final code.

- <yourRegionID>: Replace it with the actual region ID.
- <yourAccessKeyID>: Replace it with your AccessKey ID.
- <yourAccessKeySecret>: Replace it with your AccessKey secret.
- <Endpoint>: Replace it with the endpoint of the current service.
- <yourSecurityToken>: Replace it with your security token.
- <yourResourceGroupID>: Replace it with your resource set ID.
- <yourOrganizationID>: Replace it with your organization ID.
- <yourInstanceID>: Replace it with your instance ID.
- <http://192.168.XX.XX:33XX>: Replace it with the IP address and port of the proxy.

```
import com.aliyuncs.CommonRequest;
import com.aliyuncs.CommonResponse;
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.http.HttpClientConfig;
import com.aliyuncs.http.ProtocolType;
import com.aliyuncs.profile.DefaultProfile;

public class Sample {
    public static void main(String[] args) {
        // Create a DefaultAcsClient instance and initialize it.
        DefaultProfile profile = DefaultProfile.getProfile(
            "<yourRegionID>", // Replace it with the actual region ID.
            "<yourAccessKeyID>", // Replace it with your AccessKey ID.
            "<yourAccessKeySecret>"); // Replace it with your AccessKey secret.
        // Specify the endpoint of the current service. Replace the variable with the actual
```

```

// Specify the endpoint of the current service. Replace the variable with the actual
1 endpoint.
    profile.addEndpoint("<Endpoint>");
    HttpClientConfig clientConfig = HttpClientConfig.getDefault();
    clientConfig.setProtocolType(ProtocolType.HTTP);
    /** Optional. Specify the IP address and port of the proxy.
    clientConfig.setHttpProxy("<http://192.168.XX.XX:33XX>");
    or
    clientConfig.setHttpsProxy("<https://192.168.XX:33XX>");
    specify the IP address and port of the proxy.
    */
    profile.setHttpClientConfig(clientConfig);
    IAcsClient client = new DefaultAcsClient(profile);
    // Create an API request and configure parameters.
    CommonRequest request = new CommonRequest();
    // Replace the parameter with the actual service endpoint.
    request.setDomain("ecs.aliyuncs.com");
    request.setSysProduct("Ecs");
    request.setVersion("2014-05-26");
    request.setAction("DescribeInstanceStatus");
    request.putQueryParameter("PageNumber", "1");
    request.putQueryParameter("PageSize", "30");
    request.putHeadParameter("x-acs-resourcegroupid", "<yourResourceGroupID>");// Optional. Specify the resource set ID.
    request.putHeadParameter("x-acs-organizationid", "<yourOrganizationID>");// Required. Specify the organization ID.
    request.putHeadParameter("x-acs-caller-sdk-source", "ApiTestDemo");// Required. Specify the source of the API call.
    request.putHeadParameter("x-acs-regionid", "<yourRegionID>");// Optional. Specify the region ID. If you use Apsara Stack Enterprise V3.15.0 or earlier versions, this parameter is required.
    // request.putHeadParameter("x-acs-instanceid", "<yourInstanceID>");// Optional. Specify the instance ID. This parameter is required when you want to delete, modify, or query a single instance.
    /**
    When you use STS AccessKey credentials to call an API operation, you must add the SecurityToken field in the request parameters.
    Example:
    request.putQueryParameter("SecurityToken", "<yourSecurityToken>");
    Replace <yourSecurityToken> with your security token.
    */
    try {
        CommonResponse response = client.getCommonResponse(request);
        System.out.println(response.getData());
    } catch (ServerException e) {
        // TODO Auto-generated catch block
        e.printStackTrace();
    } catch (ClientException e) {
        // TODO Auto-generated catch block
        e.printStackTrace();
    }
}
}

```

3. Python SDK call example

3.1. Getting started

This topic describes how to obtain and use Elastic Compute Service (ECS) SDK for Python.

Prerequisites

- An Apsara Stack tenant account that has the required permissions and an AccessKey pair are obtained. The AccessKey pair consists of an AccessKey ID and an AccessKey secret. For more information, see [Obtain an AccessKey pair](#).
- The endpoint of ECS is obtained. For more information, see [Obtain the endpoint of ECS](#).

Install ECS SDK for Python

1. Install the SDK core library.

- If you use Python 2.x, run the following command:

```
pip install aliyun-python-sdk-core
```

- If you use Python 3.x, run the following command:

```
pip3 install aliyun-python-sdk-core-v3
```

2. Install ECS SDK for Python.

The following sample code shows how to install ECS SDK for Python.

- If you use Python 2.x, run the following command:

```
pip install aliyun-python-sdk-ecs
```

- If you use Python 3.x, run the following command:

```
pip3 install aliyun-python-sdk-ecs
```

Use ECS SDK for Python

To use ECS SDK for Python, perform the following steps:

1. Create a client instance. When you create a client instance, you must obtain the region ID, AccessKey ID, and AccessKey secret.
2. Create an API request and configure the required parameters.
3. Initiate the API request and handle the response or exception.

 Note

In the following code, replace the variables with actual values. Delete the angle brackets (<>) in the final code.

- <yourRegionID>: Replace it with the actual region ID.
- <yourAccessKeyID>: Replace it with your AccessKey ID.
- <yourAccessKeySecret>: Replace it with your AccessKey secret.
- <ecs.aliyuns.com>: Replace it with the endpoint of the service.
- <http://192.168.XX:33XX>: Replace it with the IP address and port of the proxy.

```
#!/usr/bin/env python
#coding=utf-8
from aliyunsdkcore import client
from aliyunsdkcore.profile import region_provider
from aliyunsdkecs.request.v20140526 import DescribeInstancesRequest
# global config
region_id = '<yourRegionID>' # Specify the region ID.
access_key = '<yourAccessKeyID>' # Specify the AccessKey ID.
access_secret = '<yourAccessKeySecret>' # Specify the AccessKey secret.
http_proxy='<http://192.168.XX:33XX>', # Specify the IP address and port of the proxy.
# product config
product_name = 'ECS' # Specify the service name.
endpoint = '<ecs.aliyuns.com>' # Specify the endpoint of the service.
# create client
region_provider.modify_point(product_name, region_id, endpoint)
clt = client.AcsClient(access_key, access_secret, region_id)
# setup request
request = DescribeInstancesRequest.DescribeInstancesRequest()
request.set_accept_format('json') # Specify the response format.
# get response
response = clt.do_action_with_exception(request)
print(response)
```

3.2. User Manual

3.2.1. Install ECS SDK for Python

This topic describes how to install and use Elastic Compute Service (ECS) SDK for Python.

Background information

Apsara Stack SDK for Python supports Python 2.6.x, Python 2.7.x, Python 3.x, or later. You can install Apsara Stack SDK for Python by using pip.

 Note

To use the SDK of a cloud service, you must install the core library of Apsara Stack SDK for Python. For example, if you want to use ECS SDK for Python, you must install the SDK core library for Python and ECS SDK for Python.

Install ECS SDK for Python

1. Install the SDK core library.

- If you use Python 2.x, run the following command:

```
pip install aliyun-python-sdk-core
```

- If you use Python 3.x, run the following command:

```
pip3 install aliyun-python-sdk-core-v3
```

2. Install ECS SDK for Python.

The following sample code shows how to install ECS SDK for Python:

- If you use Python 2.x, run the following command:

```
pip install aliyun-python-sdk-ecs
```

- If you use Python 3.x, run the following command:

```
pip3 install aliyun-python-sdk-ecs
```

3.2.2. Configure authentication credentials

When you use Apsara Stack SDK to access Apsara Stack services, you must provide an Apsara Stack tenant account for authentication. This topic describes how to configure authentication credentials.

Apsara SDK for Java supports authentication based on AccessKey pairs. For information about how to obtain an AccessKey pair, see [Obtain an AccessKey pair](#).

If you want to use your AccessKey pair to access Apsara Stack, you must configure the AccessKey pair as the credentials when you initialize the client.

 Note

Do not disclose code that contains your AccessKey pair. For example, do not commit the code to public GitHub projects. Otherwise, your account may be compromised.

```
from aliynsdckore import client  
clt = client.AcsClient(access_key, acces_secret, region_id)
```

3.2.3. Set HTTPS requests

Apsara Stack SDK for Python allows you to initiate API requests over HTTP and HTTPS.

You can specify the HTTP or HTTPS protocol for a specific request, or set a global default protocol.

 **Note** The default HTTP or HTTPS protocol of a service takes precedence over the global default protocol.

Add OpenSSL support

The HTTPS protocol support of Apsara Stack SDK for Python is based on the OpenSSL support in Python. To use Apsara Stack SDK for Python to send HTTPS requests, you must add OpenSSL support in Python. OpenSSL supports TLS 1.2 and later.

Run the `python -c "import ssl"` command to check whether your Python environment supports OpenSSL. If the error message

```
ImportError: No module named ssl
```

 is not returned, OpenSSL is already supported.

Otherwise, run the following command to install it:

```
pip install pyopenssl
```

Set the protocol to HTTP or HTTPS for a single request

The following sample code provides an example on how to set HTTPS as the protocol for a request:

```
request = DescribeInstancesRequest()
request.set_protocol_type("https")
# Set the value to https or http.
```

Set a global default protocol

The following sample code provides an example on how to set a global default protocol:

```
import aliyunsdkcore.request
aliyunsdkcore.request.set_default_protocol_type("https")
# Create a request and call client.do_action_with_exception() to send the request.
```

3.2.4. Initiate a request

This topic describes how to use Elastic Compute Service (ECS) SDK for Python to initiate a request.

Procedure

1. Import ECS SDK for Python.

```
from aliyunsdkcore import client
from aliyunsdkcore.profile import region_provider
from aliyunsdkecs.request.v20140526 import DescribeInstancesRequest
```

2. Create an AcsClient instance.

```
client.region_provider.modify_point(product_name, region_id, endpoint)
clt = client.AcsClient(access_key, access_secret, region_id)
```

3. Create a request object.

```
request = DescribeInstancesRequest.DescribeInstancesRequest()
request.set_accept_format('json')
```

4. Initiate the request and handle the response.

```
response = clt.do_action_with_exception(request)
print(response)
```

3.2.5. Handle errors

If an error occurs on the server side or SDK side when you use the Python SDK, the Python SDK returns the corresponding exception message. An exception message contains the detailed error information, namely the error code and the error message.

Generally, you are not required to handle the errors returned by the Python SDK. You are only required to handle the errors on the server side according to the error message.

- `ServerException` is the error message on the server side.
- `ClientException` is the error message on the SDK side.

For example, if the following error occurs, modify the ID of AccessKey according to the detailed error message.

```
aliyun sdkcore.acs\_exception.exceptions.ServerException: HTTP Status: 404 Error:InvalidAccessKeyId.NotFound Specified access key is not found.
```

To handle the errors returned by the Python SDK, see the following code example for reference:

```
try:
    response = client.do_action_with_exception(request)
except ServerException as e:
    # Add your own error handling logic here.
    # For example, print the detailed error message.
    print e.get_http_status()
    print e.get_error_code()
    print e.get_error_msg()
```

3.2.6. Use CommonRequest to call API operations

If you want to call an Elastic Compute Service (ECS) API operation without an SDK or if the request and response of an API operation that you call by using an SDK do not meet your business requirements, you can use CommonRequest to call the API operation. You can use CommonRequest to call all API operations.

Benefits

CommonRequest provides the following benefits:

- **Lightweight:** You only need to download the core package. You do not need to download and install SDKs of Apsara Stack services.

- Easy to use: You can call the newly released API operations of a service without the need to update the SDK of the service.
- Fast in iteration.

Use CommonRequest to call an API operation

If you want to send a CommonRequest request, you must obtain the values of the following parameters. You can obtain the values of these parameters from the API references of cloud services.

- Domain: the endpoint of the service.
- Version: the version of the API in the YYYY-MM-DD format.

You can get the API version from the common parameters in the API references of cloud services.

- Operation information: the name of the API operation that you want to call.

You must obtain the `Action` parameter and specify the API operation in the

```
request.set_action_name('Action') format.
```

For example, if you want to use `CommonRequest` to call the `RunInstances` operation, you must specify the API operation in the `request.set_action_name('RunInstances')` format.

Example: Call an remote procedure call (RPC) API operation

The following code provides an example of how to call the `DescribeInstanceStatus` operation to obtain the status list of ECS instances.

Note

In the following code, replace the variables with actual values. Delete the angle brackets (<>) in the final code.

- <yourRegionID>: Replace it with the region ID.
- <yourAccessKeyID>: Replace it with your AccessKey ID.
- <yourAccessKeySecret>: Replace it with your AccessKey secret.
- <yourSecurityToken>: Replace it with your security token.
- <yourResourceGroupID>: Replace it with your resource set ID.
- <yourOrganizationID>: Replace it with your organization ID.
- <yourInstanceID>: Replace it with the instance ID.
- <ecs.aliyuncs.com>: Replace it with the endpoint of the service.

```
#!/usr/bin/env python
# coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.request import CommonRequest
# Specify the AccessKey ID, AccessKey secret, and region ID.
client = AcsClient('{<yourAccessKeyID>}', '{<yourAccessKeySecret>}', '{<yourRegionID>}')
request = CommonRequest()
request.set_product('Ecs')
request.set_action_name('DescribeInstanceStatus')
request.set_version('2014-05-26')
request.set_domain('<ecs.aliyuncs.com>') # Specify the endpoint of the service.
# or:
# request = CommonRequest(product='Ecs', action_name='DescribeInstanceStatus', version='2014-05-26', domain='ecs.aliyuncs.com')
#####
# Specify the request protocol. Valid values: https and http. Default value: http.
# Specify HTTPS as the protocol:
# request.set_protocol_type('https')
#####
request.set_accept_format('json')
request.set_method('POST')
request.add_query_param('PageNumber', '1')
request.add_query_param('PageSize', '30')
#####
# When you use an STS AccessKey 3-tuple to call an API operation, add the SecurityToken field in the request parameters.
# Example:
# request.add_query_param("SecurityToken", "<yourSecurityToken>");
# Specify your security token.
#####
# Optional. Specify the resource set ID.
request.add_header("x-acs-resourcegroupid", "<yourResourceGroupID>")
# Required. Specify the organization ID.
request.add_header("x-acs-organizationid", "<yourOrganizationID>")
# Required. Specify the source of the API call.
request.add_header("x-acs-caller-sdk-source", "ApiTestDemo")
# Optional. Specify the region ID. This parameter is required if you use Apsara Stack Enterprise V3.15.0 or earlier.
request.add_header("x-acs-regionid", "<yourRegionID>")
# Optional. Specify the instance ID. This parameter is required if you want to modify, delete, or query an instance.
# request.add_header("x-acs-instanceid", "<yourInstanceID>")

response = client.do_action_with_exception(request)
# python2: print(response)
print(str(response, encoding = 'utf-8'))
```

4. Go SDK call example

4.1. Getting started

Apsara Stack SDK for Go allows you to access Elastic Compute Service (ECS) without performing complex programming operations. This topic describes how to obtain and use ECS SDK for Go.

Prerequisites

- An Apsara Stack tenant account and an AccessKey pair (AccessKey ID and AccessKey secret) are obtained. For more information, see [Obtain an AccessKey pair](#).
- Obtain the endpoint of ECS. For more information, see [Obtain the endpoint of ECS](#).

Install the core package of Apsara Stack SDK for Go

Apsara Stack SDK for Go supports Go 1.10.x and later. You can run the following command to install the core package:

```
go get -u github.com/aliyun/alibaba-cloud-sdk-go/sdk
```

Use ECS SDK for Go

The following sample code shows how to use ECS SDK for Go:

1. Initialize a client instance.
2. Create an API request and configure the required parameters.
3. Initiate the API request and handle the response or exception.

Note

In the following sample code, replace the following variables with actual values. Delete the angle brackets (<>) from the final code.

- <yourRegionID>: Replace the variable with the actual region ID.
- <yourAccessKeyID>: Replace the variable with your AccessKey ID.
- <yourAccessKeySecret>: Replace the variable with your AccessKey secret.
- <Endpoint>: Replace the variable with the endpoint of the required service.
- <http://192.168.XX:33XX>: Replace the variable with the IP address and port of the proxy that you use.

```

package main
import (
    "github.com/aliyun/alibaba-cloud-sdk-go/services/ecs"
    "github.com/aliyun/alibaba-cloud-sdk-go/sdk/requests"
    "fmt"
)
func main() {
    // Create an ecsClient instance.
    ecsClient, err := ecs.NewClientWithAccessKey(
        "<yourRegionID>", // Replace the variable with the actual region ID
        "<yourAccessKeyID>", // Replace the variable with your AccessKey ID.
        "<yourAccessKeySecret>" // Replace the variable with your AccessKey secret.
    )
    if err != nil {
        // Handle exceptions.
        panic(err)
    }
    // Configure proxies.
    ecsClient.SetHttpProxy("https://192.168.XX:33XX") // Configure the HTTP proxy.
    ecsClient.GetHttpProxy() // Query the HTTP proxy.

    ecsClient.SetHttpsProxy("<https://192.168.XX:33XX>") // Configure the HTTPS proxy.
    ecsClient.GetHttpsProxy() // Query the HTTPS proxy.

    ecsClient.SetNoProxy("127.0.0.1,localhost") // Configure the IP addresses or domain names that do not require proxies.
    client.GetNoProxy() // Query the IP addresses or domain names that do not require proxies.
    // Create an API request and configure the required parameters.
    request := ecs.CreateDescribeInstancesRequest()
    // Specify the endpoint of the service.
    request.Domain = "<Endpoint>"
    // Set request.PageSize to 10.
    request.PageSize = requests.NewInteger(10)
    // Initiate the request and handle exceptions.
    response, err := ecsClient.DescribeInstances(request)
    if err != nil {
        // Handle exceptions.
        panic(err)
    }
    fmt.Println(response)
}

```

4. Optional. Switch to HTTP or HTTPS.

```
request.Scheme = "HTTPS"
```

4.2. User Manual

4.2.1. Install the core package of SDK for Go

This topic describes how to install the core package of SDK for Go.

Apsara Stack SDK for Go supports Go 1.10.x and later. You can run the following command to install the core package:

```
go get -u github.com/aliyun/alibaba-cloud-sdk-go/sdk
```

4.2.2. Configure authentication credentials

When you use Apsara Stack SDK to access Apsara Stack services, you must provide an Apsara Stack tenant account for authentication. This topic describes how to configure authentication credentials.

Apsara SDK for Java supports authentication based on AccessKey pairs. For information about how to obtain an AccessKey pair, see [Obtain an AccessKey pair](#).

If you want to use your AccessKey pair to access Apsara Stack, you must configure the AccessKey pair as the credentials when you initialize the client.

Note

Do not disclose code that contains your AccessKey pair. For example, do not commit the code to public GitHub projects. Otherwise, your account may be compromised.

The following code provides an example on how to initialize an `ecsClient` instance.

```
// Initialize the ecsClient instance.
ecsClient, err := ecs.NewClientWithAccessKey(
    "<yourRegionID>",           // Replace the variable with the actual region ID
    .
    "<yourAccessKeyID>",       // Replace the variable with your AccessKey ID.
    "<yourAccessKeySecret>")   // Replace the variable with your AccessKey secret.
```

Note

In the preceding sample code, replace the variables with actual values. Remove the brackets (<>) from the final code.

4.2.3. Initiate a request

This topic describes how to use Apsara Stack Elastic Compute Service (ECS) SDK for Go to initiate a request.

The following example shows how to use ECS SDK for Go to initiate a request.

1. Import ECS SDK for Go.

```
import "github.com/aliyun/alibaba-cloud-sdk-go/services/ecs"
```

2. Create an `AcsClient` instance that contains all API operations of ECS.

```
ecsClient, err := <ecs>.NewClientWithAccessKey( //Replace the variable with the name of
the service.
    "<yourRegionID>", // Replace the variable with the actual region ID.
    "<yourAccessKeyID>", // Replace the variable with your AccessKey ID.

    "<yourAccessKeySecret>") // Replace the variable with your AccessKey secret.
ecsClient.Domain = "ecs.aliyuns.com" // Specify the endpoint of the service.
```

3. Use the `xxx.CreateXXXRequest` method to create a request.

The naming convention for this method is `${service}.Create${apiName}Request`.

- `${service}` specifies the service name in lowercase. Example: `ecs`. When you call an SDK of another service, you can replace `ecs` with the actual service name.
- `${apiName}` indicates the name of an API operation. Example: `DescribeInstances`.

```
request := ecs.CreateDescribeInstanceRequest()
request.InstanceIds = ""
```

4. Initiate the request and handle the response.

```
response, err := ecsClient.DescribeInstanceAttribute(request)
```

4.2.4. Handle errors

When you use Alibaba Cloud SDK for Go, a `ClientError` or `ServerError` is returned when an error occurs on the server side or on the SDK side. Both error types are included in `sdk.errors`. The errors conform to the standard Go error interface and can be handled in a similar manner to standard Go errors.

Troubleshooting

You can use the following code to handle errors:

```
response, err := ecsClient.DescribeInstances(request)
if err != nil {
    // Obtain error information.
    err.Error()
}
```

ClientError

When you send a request, if an error occurs in the SDK and cannot be automatically handled, the SDK returns a `ClientError`.

The following sample code provides an example on how to identify and obtain the error message in a `ClientError` returned by ECS SDK for Go.

 Note

If you use a specific error struct, you must add the error package `github.com/aliyun/alibaba-cloud-sdk-go/sdk/errors` by using the following code

```
package main
import (
    "github.com/aliyun/alibaba-cloud-sdk-go/services/ecs" // Replace ecs with the name
    of the service.
    "github.com/aliyun/alibaba-cloud-sdk-go/sdk/requests"
    // Specify the error package that you want to add.
    "github.com/aliyun/alibaba-cloud-sdk-go/sdk/errors"
    "fmt"
)
```

```
response, err := ecsClient.DescribeInstances(request)
if clientError, ok := err.(*errors.ClientError); ok{
    // Obtain the error code.
    clientError.ErrorCode()
    // Obtain the error message.
    clientError.Message()
    // Obtain the original error. The return value may be nil.
    clientError.OriginError()
}
```

ServerError

If the server returns an error response, the SDK wraps the response into a `ServerError` and returns it to the client. In this case, you can still obtain the original HTTP response from `Response`.

The following sample code provides an example on how to identify and obtain the error message in a `ServerError` and `Response` returned by ECS SDK for Go.

 Note

When you use a specific error struct, you must add the error package

`github.com/aliyun/alibaba-cloud-sdk-go/sdk/errors` by using the following code:

```
import (
    "github.com/aliyun/alibaba-cloud-sdk-go/services/ecs" // Replace ecs with the name
    of the service.
    "github.com/aliyun/alibaba-cloud-sdk-go/sdk/requests"
    // Specify the error package that you want to add.
    "github.com/aliyun/alibaba-cloud-sdk-go/sdk/errors"
    "fmt"
)
```

```
response, err := ecsClient.DescribeInstances(request)
if serverError, ok := err.(*errors.ServerError); ok {
    // Obtain the error code.
    serverError.ErrorCode()
    // Obtain the error message.
    serverError.Message()
    // Obtain the original HTTP response.
    response.GetOriginHttpResponse()
}
```

4.2.5. Use CommonRequest to call API operations

If you want to call an API operation without an SDK or if the request and response of an API operation that you call by using an SDK do not meet your business requirements, you can use CommonRequest to call the API operation. You can use CommonRequest to call all API operations.

Benefits

CommonRequest provides the following benefits:

- **Lightweight:** You only need to download the core package. You do not need to download and install SDKs of Apsara Stack services.
- **Easy to use:** You can call the newly released API operations of a service without the need to update the SDK of the service.
- **Fast in iteration.**

Use CommonRequest to call an API operation

If you want to send a CommonRequest request, you must obtain the values of the following parameters. You can obtain the values of these parameters from ECS API references.

- **Domain:** the endpoint of the service.
- **Version:** the version of the API in the YYYY-MM-DD format.

You can obtain the API version from the common request parameters in the API references of cloud services.

- **Operation information:** the name of the API operation that you want to call.

You must obtain the value of the `Action` parameter and specify the API operation in the

```
request.setSysAction("<Action>")
```

 format.

For example, if you want to use `CommonRequest` to call the `RunInstances` operation, you must

specify the API operation in the `request.setSysAction("RunInstances")` format.

Example: Call an remote procedure call (RPC) API operation

The following code provides an example of how to call the `DescribeInstanceStatus` operation to obtain the status list of ECS instances.

 Note

In the following code, replace the variables with actual values. Delete the angle brackets (<>) in the final code.

- <yourRegionID>: Replace it with the actual region ID.
- <yourAccessKeyID>: Replace it with your AccessKey ID.
- <yourAccessKeySecret>: Replace it with your AccessKey secret.
- <ecs.aliyuncs.com>: Replace it with the endpoint of the service.
- <yourSecurityToken>: Replace it with your security token.
- <yourResourceGroupID>: Replace it with the resource set ID.
- <yourOrganizationID>: Replace it with the organization ID.
- <yourInstanceID>: Replace it with the instance ID.

```

package main
import (
    "github.com/aliyun/alibaba-cloud-sdk-go/sdk/requests"
    "github.com/aliyun/alibaba-cloud-sdk-go/sdk"
    "fmt"
)
func main() {
    client, err := sdk.NewClientWithAccessKey(
        "<yourRegionID>", //Replace it with the region ID.
        "<yourAccessKeyID>", //Replace it with the AccessKey ID.
        "<yourAccessKeySecret>") //Replace it with your AccessKey secret.
    if err != nil {
        panic(err)
    }
    request := requests.NewCommonRequest()
    request.Method = "POST"
    request.Domain = "<ecs.aliyuncs.com>" // Replace it with the endpoint of the service.
    request.Product = "Ecs"
    request.Version = "2014-05-26"
    // This is a RPC API operation. Therefore, the ApiName(Action) parameter must be specified.
    request.ApiName = "DescribeInstanceStatus"
    // Configure service-related parameters.
    request.QueryParams["PageNumber"] = "1"
    request.QueryParams["PageSize"] = "30"
    /*
        When you use Security Token Service (STS) AccessKey credentials to call an RPC API operation, you must add the SecurityToken field in the request parameters.
        Example:
        request.QueryParams["SecurityToken"]="<yourSecurityToken>"
        Specify your security token.
    */
    request.Headers["x-acs-caller-sdk-source"] = "ApiTestDemo" // Required. Specify the source of the call.
    request.Headers["x-acs-regionid"] = "<yourRegionID>" // Optional. Specify your region ID. This parameter is required if you use Apsara Stack Enterprise V3.15.0 or earlier.
    request.Headers["x-acs-resourcegroupid"] = "<yourResourceGroupID>" // Optional. Specify the resource set ID.
    request.Headers["x-acs-organizationid"] = "<yourOrganizationID>" // Required. Specify the organization ID.
    // request.Headers["x-acs-instanceid"] = "<yourInstanceID>" // Optional. Specify the instance ID. This parameter is required if you want to modify, delete, or query an instance.
    response, err := client.ProcessCommonRequest(request)
    if err != nil {
        panic(err)
    }
    fmt.Print(response.GetHttpContentString())
}

```

5. API reference

5.1. ECS API

5.1.1. Make API requests

5.1.1.1. Overview

You can call an operation by sending an HTTP GET request to the ECS endpoint. You must specify the relevant request parameters in the request based on the operation descriptions. The system returns the processing result of the request. Requests and responses are encoded using UTF-8.

5.1.1.2. Request structure

Endpoints

For information about how to obtain the endpoint of Elastic Compute Service (ECS), see [Obtain the endpoint of ECS](#).

Methods

You can send requests by using the HTTP GET method. This method requires that you specify request parameters in the request URL.

Protocols

You can call API operations by sending HTTP or HTTPS requests. To enhance security, we recommend that you send HTTPS requests.

Request parameters

When you make an API request, you must set the Action parameter to the operation (such as StartInstance) that you want to perform. You must also specify common request parameters and operation-specific request parameters.

Encoding

Requests and responses are both encoded in UTF-8.

5.1.1.3. Authorization

To ensure the security of your account, we recommend that you call ECS API operations as a RAM user. Before you can call ECS API operations as a RAM user, you must create and authorize the RAM user.

In RAM, you can authorize the RAM user to perform the following API operations on an ECS resource:

- AttachDisk
- AuthorizeSecurityGroup
- CreateDisk
- CreateImage
- CreateInstance

- `CreateSecurityGroup`
- `CreateSnapshot`
- `DeleteDisk`
- `DeleteImage`
- `DeleteInstance`
- `DeleteSecurityGroup`
- `DeleteSnapshot`
- `DescribeAutoSnapshotPolicy`
- `DescribeDisks`
- `DescribeImages`
- `DescribeInstanceMonitorData`
- `DescribeInstances`
- `DescribeInstanceState`
- `DescribeInstanceTypes`
- `DescribeRegions`
- `DescribeSecurityGroupAttribute`
- `DescribeSecurityGroups`
- `DescribeSnapshots`
- `DescribeZones`
- `DetachDisk`
- `JoinSecurityGroup`
- `LeaveSecurityGroup`
- `ModifyAutoSnapshotPolicy`
- `ModifyDiskAttribute`
- `ModifyInstanceAttribute`
- `ModifyInstanceNetworkSpec`
- `RebootInstance`
- `ReplaceSystemDisk`
- `ReInitDisk`
- `ResetDisk`
- `RevokeSecurityGroup`
- `StartInstance`
- `StopInstance`

5.1.1.4. Request signatures

You must sign all HTTP and HTTPS API requests to ensure security. Elastic Compute Service (ECS) uses the request signature to verify the identity of a request sender.

ECS implements symmetric encryption with an AccessKey pair to verify the identity of the request sender. An AccessKey pair is an identity credential issued to Apsara Stack tenant accounts and RAM users that is similar to a logon username and password. An AccessKey pair consists of an AccessKey ID and an AccessKey secret. The AccessKey ID is used to verify the identity of the user, and the AccessKey secret is used to encrypt and verify the signature string. You must keep your AccessKey secret strictly confidential. For information about how to obtain AccessKey pairs, see [Obtain an AccessKey pair](#).

Perform the following steps to sign an access request:

1. Create a canonicalized query string by arranging the request parameters.
 - i. Sort the request parameters (including all common and operation-specific request parameters except Signature) in alphabetical order.

 **Note** If you use the GET method to send a request, the request parameters are included as a part of the request URI and connected by ampersands (&). The first request parameter follows the question mark (?).

- ii. Encode the request parameters. Encode the name and value of each request parameter. The names and values must be URL encoded by using the UTF-8 character set. The following rules apply in the encoding process:
 - Uppercase letters, lowercase letters, digits, and some special characters such as ampersands (&), hyphens (-), underscores (_), periods (.), and tildes (~) do not need to be encoded.
 - Other characters must be percent encoded in the %XY format. XY represents the ASCII code of the characters in hexadecimal notation. For example, double quotation marks (") are encoded as %22.
 - Extended UTF-8 characters are encoded in the %XY%ZA... format.
 - Spaces must be encoded as %20 instead of plus signs (+).

The preceding encoding method is similar to but different from the `application/x-www-form-urlencoded` MIME encoding algorithms, such as `java.net.URLEncoder` in the Java standard library. You can encode the parameter names and values by using the encoding method in the Java standard library. Then, in the encoded string, replace plus signs (+) with %20, asterisks (*) with %2A, and %7E with tildes (~) to obtain an encoded string that complies with the preceding encoding rules. You can use the following `percentEncode` method to implement the encoding:

```
private static final String ENCODING = "UTF-8";
private static String percentEncode(String value) throws UnsupportedOperationException {
    return value != null ? URLEncoder.encode(value, ENCODING).replace("+", "%20").
        replace("*", "%2A").replace("%7E", "~") : null;
}
```

- iii. Connect the encoded parameter names and values with equal signs (=).
 - iv. Sort the connected parameter name-value pairs in the order specified in Step 1.i and connect these pairs by using ampersands (&) to generate a canonicalized query string.
2. Create a string-to-sign from the encoded canonicalized query string based on the following rules:

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

- o HTTPMethod specifies the HTTP method used to make the request, such as GET.
 - o percentEncode("/") specifies the encoded value for the forward slash (/) based on the URL encoding rules described in Step 1.ii. The value is %2F. percentEncode(CanonicalizedQueryString) specifies the encoded string of the canonicalized query string constructed in Step 1. The encoding follows the URL encoding rules described in Step 1.ii.
3. Calculate the [RFC 2104](#)-compliant HMAC value of the string-to-sign.

 **Note** Use the SHA1 algorithm to calculate the HMAC value of the string-to-sign. The AccessKey secret to which an ampersand (&) (ASCII:38) is appended is used as the key for HMAC calculation.

4. Encode the HMAC value in Base64 to obtain the signature string.
5. Add the signature string to the request as the Signature parameter. The result is the signed API request.

 **Note** When the signature string is submitted to ECS as the final request parameter value, the value must be URL-encoded like other parameters based on rules defined in [RFC 3986](#).

In this example, DescribeRegions is used. Assume that the AccessKey ID is *testid* and the AccessKey secret is *testsecret*. The following URL is the request URL to be signed:

```
http://ecs.example.com/?TimeStamp=2016-02-23T12:46:24Z&Format=XML&AccessKeyId=testid&Action=DescribeRegions&SignatureMethod=HMAC-SHA1&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad82f****&Version=2014-05-26&SignatureVersion=1.0
```

The following code is the calculated string-to-sign (StringToSign):

```
GET&%2F&AccessKeyId%3Dtestid%26Action%3DDescribeRegions%26Format%3DXML%26SignatureMethod%3DHMAC-SHA1%26SignatureNonce%3D3ee8c1b8-83d3-44af-a94f-4e0ad82f****%26SignatureVersion%3D1.0%26TimeStamp%3D2016-02-23T12%253A46%253A24Z%26Version%3D2014-05-26
```

The AccessKey secret is *testsecret*, so the key used for the HMAC calculation is *testsecret&* and the calculated signature string is *CT9X0VtwR86fNWSnsc6v8YG*****.

In the original API request, set the value of Signature to the calculated signature string. The following signed request URL is obtained:

```
http://ecs.example.com/?SignatureVersion=1.0&Action=DescribeRegions&Format=XML&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad82f****&Version=2014-05-26&AccessKeyId=testid&Signature=CT9X0VtwR86fNWSnsc6v8YGO****&SignatureMethod=HMAC-SHA1&TimeStamp=2016-02-23T12%3A46%3A24Z
```

5.1.1.5. Responses

API responses use a unified format. 2xx HTTP status codes indicate successful calls. 4xx or 5xx HTTP status codes indicate failed calls. Responses can be returned in XML or JSON format. By default, responses are returned in XML format. You can specify the response format in the request of an API call.

 **Note** To improve readability, the sample responses in this topic are formatted. The actual responses are not formatted with line breaks or indentation.

Successful response examples

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<!--Result root node-->
<API name+Response>
  <!--Returned request tag-->
  <RequestId>4C467B38-3910-447D-87BC-AC049166F216</RequestId>
  <!--Returned results-->
</API name+Response>
```

- JSON format

```
{
  "RequestId": "4C467B38-3910-447D-87BC-AC049166F216",
  /*Returned results*/
}
```

Error response examples

If an error occurs when you call an operation, the requested data will not be returned. You can troubleshoot the error based on the error code specific to the operation and the [common errors](#). If the operation fails to be called, a 4xx or 5xx HTTP status code will be returned. The response body contains the error code, the error message, a unique request ID, and the ID of the site accessed by the request.

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<Error>
  <RequestId>8906582E-6722-409A-A6C4-0E7863B733A5</RequestId>
  <HostId>ecs.example.com</HostId>
  <Code>InvalidOwnerId</Code>
  <Message>The specified OwnerId is not valid. </Message>
</Error>
```

- JSON format

```
{
  "RequestId": "8906582E-6722-409A-A6C4-0E7863B733A5",
  "HostId": "ecs.example.com",
  "Code": "InvalidOwnerId",
  "Message": "The specified OwnerId is not valid."
}
```

5.1.2. RAM authorization

When you call an ECS API operation to access the ECS resources in your Apsara Stack tenant account as a RAM user, ECS checks with RAM whether the RAM user has the permissions on these resources.

ECS determines which permissions to check based on the involved resources and the semantics of the API operation. describes the resources involved in each ECS API operation.

Resources involved in ECS API operations

Action	Resource
AttachDisk	acs:ecs:\$regionid:\$accountid:disk/\$diskid acs:ecs:\$regionid:\$accountid:instance/\$instanceid
AuthorizeSecurityGroup	acs:ecs:\$regionid:\$accountid:securitygroup/\$securitygroupid[and acs:ecs:\$regionid:\$accountid:securitygroup/\$sourcegroupid] Note If you specify the SourceGroupId parameter in the API request, you must specify the sourcegroupid variable.
CreateDisk	acs:ecs:\$regionid:\$accountid:disk/*[and acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotid] Note If you specify the SnapshotId parameter in the API request, you must specify the snapshotid variable.
CreateImage	acs:ecs:\$regionid:\$accountid:image/*acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotid
CreateInstance	acs:ecs:\$regionid:\$accountid:instance/*acs:ecs:\$regionid:\$accountid:securitygroup/\$securitygroupidacs:ecs:\$regionid:\$accountid:image/\$imageid[and acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotid] Note If you specify the DataDisk.N.SnapshotId parameter in the API request, you must specify the snapshotid variable.
CreateSecurityGroup	acs:ecs:\$regionid:\$accountid:securitygroup/*
CreateSnapshot	acs:ecs:\$regionid:\$accountid:disk/\$diskid acs:ecs:\$regionid:\$accountid:snapshot/*
DeleteDisk	acs:ecs:\$regionid:\$accountid:disk/\$diskid
DeleteImage	acs:ecs:\$regionid:\$accountid:image/\$imageid
DeleteInstance	acs:ecs:\$regionid:\$accountid:instance/\$instanceid

Action	Resource
DeleteSecurityGroup	acs:ecs:\$regionid:\$accountid:securitygroup/\$securitygroupid
DeleteSnapshot	acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotid
DescribeAutoSnapshotPolicy	acs:ecs:*\$accountid:snapshot/*
DescribeDisks	acs:ecs:\$regionid:\$accountid:disk/*
DescribeImages	acs:ecs:\$regionid:\$accountid:image/*
DescribeInstanceMonitorData	acs:ecs:\$regionid:\$accountid:instance/\$instanceid
DescribeInstanceStatus	acs:ecs:\$regionid:\$accountid:instance/*
DescribeInstanceTypes	acs:ecs:*\$accountid:*
DescribeRegions	acs:ecs:*\$accountid:*
DescribeSecurityGroupAttribute	acs:ecs:\$regionid:\$accountid:securitygroup/\$securitygroupid
DescribeSecurityGroups	acs:ecs:\$regionid:\$accountid:securitygroup/*
DescribeSnapshots	acs:ecs:\$regionid:\$accountid:snapshot/*
DescribeZones	acs:ecs:*\$accountid:*
DetachDisk	acs:ecs:\$regionid:\$accountid:disk/\$diskid acs:ecs:\$regionid:\$accountid:instance/\$instanceid
JoinSecurityGroup	acs:ecs:\$regionid:\$accountid:instance/\$instanceid acs:ecs:\$regionid:\$accountid:securitygroup/\$securitygroupid
LeaveSecurityGroup	acs:ecs:\$regionid:\$accountid:instance/\$instanceid acs:ecs:\$regionid:\$accountid:securitygroup/\$securitygroupid
ModifyAutoSnapshotPolicy	acs:ecs:*\$accountid:snapshot/*
ModifyDiskAttribute	acs:ecs:\$regionid:\$accountid:disk/\$diskid
ModifyInstanceAttribute	acs:ecs:\$regionid:\$accountid:instance/\$instanceid
ModifyInstanceNetworkSpec	acs:ecs:\$regionid:\$accountid:instance/\$instanceid
RebootInstance	acs:ecs:\$regionid:\$accountid:instance/\$instanceid

Action	Resource
ReplaceSystemDisk	acs:ecs:\$regionid:\$accountid:instance/\$instanceid[and acs:ecs:\$regionid:\$accountid:image/\$imageid]  Note If you want to use a custom image, you must specify the imageid variable.
ReInitDisk	acs:ecs:\$regionid:\$accountid:disk/\$diskid
ResetDisk	acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotid acs:ecs:\$regionid:\$accountid:disk/\$diskid
RevokeSecurityGroup	acs:ecs:\$regionid:\$accountid:securitygroup/\$securitygroupid[and acs:ecs:\$regionid:\$accountid:securitygroup/\$sourcegroupid]  Note If you specify the SourceGroupId parameter in the API request, you must specify the sourcegroupid variable.
StartInstance	acs:ecs:\$regionid:\$accountid:instance/\$instanceid
StopInstance	acs:ecs:\$regionid:\$accountid:instance/\$instanceid
DescribeInstances	acs:ecs:\$regionid:\$accountid:instance/*
CreateVpc	acs:ecs:\$regionid:\$accountid:vpc/*
ModifyVpcAttribute	acs:ecs:\$regionid:\$accountid:vpc/\$vpcid
DescribeVRouters	acs:ecs:\$regionid:\$accountid:vrouter/*
CreateVSwitch	acs:ecs:\$regionid:\$accountid:vswitch/*
CreateRouteTable	acs:ecs:\$regionid:\$accountid:routetable/*
CreateRouteEntry	acs:ecs:\$regionid:\$accountid:routetable/\$routetableid
AllocateEipAddress	acs:ecs:\$regionid:\$accountid:eip/*
AssociateEipAddress	acs:ecs:\$regionid:\$accountid:eip/\$allocationid acs:ecs:\$regionid:\$accountid:instance/\$instanceid
ReleaseEipAddress	acs:ecs:\$regionid:\$accountid:eip/\$allocationid
DescribeVpcs	acs:ecs:\$regionid:\$accountid:vpc/*
DeleteVpc	acs:ecs:\$regionid:\$accountid:vpc/\$vpcid
ModifyVRouterAttribute	acs:ecs:\$regionid:\$accountid:vrouter/\$vrouterid

Action	Resource
DescribeVSwitches	acs:ecs:\$regionid:\$accountid:vswitch/*
DeleteVSwitch	acs:ecs:\$regionid:\$accountid:vswitch/\$vswitchid
DescribeRouteTables	acs:ecs:\$regionid:\$accountid:routetable/*
DeleteRouteEntry	acs:ecs:\$regionid:\$accountid:routetable/\$routetableid
DescribeEipAddresses	acs:ecs:\$regionid:\$accountid:eip/*
UnassociateEipAddresses	acs:ecs:\$regionid:\$accountid:eip/\$eipid acs:ecs:\$regionid:\$accountid:instance/\$instanceid
ModifySecurityGroupAttribute	acs:ecs:\$regionid:\$accountid:securitygroup/\$securitygroupid
DescribeEipMonitorData	acs:ecs:\$regionid:\$accountid:eip/\$allocationid
ModifyVSwitchAttribute	acs:ecs:\$regionid:\$accountid:vswitch/\$vswitchid
DescribeInstanceVncUrl	acs:ecs:\$regionid:\$accountid:instance/\$instanceid
ModifySnapshotAttribute	acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotid
ModifyInstanceVpcAttribute	acs:ecs:\$regionid:\$accountid:instance/\$instanceid
ModifyEipAddressAttribute	acs:ecs:\$regionid:\$accountid:eip/\$allocationid
DescribeDiskMonitorData	acs:ecs:\$regionid:\$accountid:disk/\$diskid

5.1.3. Common parameters

Common parameters include common request parameters, common headers, and common response parameters.

Common request parameters

Common request parameters must be included in all Elastic Compute Service (ECS) API requests.

Common request parameters

Parameter	Type	Required	Description
Format	String	No	The format in which to return the response. Set the value to JSON.
Version	String	Yes	The version number of the API. Specify the version number in the YYYY-MM-DD format. Example: 2014-05-26.
AccessKeyId	String	Yes	The AccessKey ID provided to you by Apsara Stack.

Parameter	Type	Required	Description
AccessKeySecret	String	Yes	The AccessKey secret provided to you by Apsara Stack.
RegionId	String	Yes	The region ID provided to you by Apsara Stack.
Product	String	Yes	The name of the service to which the API operation belongs.

You can obtain the values of the `Product` and `Version` parameters in the Apsara Uni-manager Management Console. Perform the following steps:

1. Log on to the Apsara Uni-manager Management Console.
2. In the top navigation bar, choose **Products > Others > API Tool**.
3. In the left-side navigation pane of the API Tool page, click **API Directory**.
4. In the **Operation Name** field, enter the name of an operation to query its information.

Common headers

Parameter	Description
x-acs-organizationid	The ID of the organization in the Apsara Uni-manager Management Console. For more information, see Obtain an organization ID in Obtain the values of common header parameters.
x-acs-resourcegroupid	The ID of the resource set in the Apsara Uni-manager Management Console. For more information, see Obtain a resource set ID in Obtain the values of common header parameters.
x-acs-instanceid	The ID of the instance that you want to manage. For more information, see Obtain an instance ID in Obtain the values of common header parameters.

 **Note** When you call API operations of various Alibaba Cloud services, you must include the values of the x-acs-instanceid, x-acs-organizationid, and x-acs-resourcegroupid parameters in the request header to specify the ID of the current instance and the organization and resource set to which the instance belongs. If you are creating an instance and querying the instance list, you do not need to specify the ID of the instance. By default, if the values of these parameters are not included in the request header when you call API operations, the root organization and root resource set are used.

Common response parameters

API responses use the HTTP response format:

- A 2xx HTTP status code indicates a successful call.
- A 4xx or 5xx HTTP status code indicates a failed call.

Responses are returned in the JSON format. Every response returns a unique request ID regardless of whether the call is successful.

5.1.4. Instances

5.1.4.1. RunInstances

Creates one or more Elastic Compute Service (ECS) instances.

Description

- **Preparations:**

- Instance type selection: Call the `DescribeInstanceTypes` operation to query the performance data of instance types.
- Query for available resources: Call the `DescribeAvailableResource` operation to query available resources in a specific region or zone.
- Network planning: Make sure that you have security groups available for use. For more information, see `CreateSecurityGroup` in ECS Developer Guide. Before you create an instance of the Virtual Private Cloud (VPC) type, create a VPC in the region where you want to create the instance.

- **Precautions:**

- You can create a maximum of 100 instances at a time.
- You can use the `AutoReleaseTime` parameter to set the time when to automatically release the instances.
- After instances are created, you can call the `DescribeInstances` operation to check their states.
- By default, instances automatically start after they are created. Instances are ready for use when they are in the Running (`Running`) state.
- After you call this operation, an error is returned if a parameter is invalid or if available resources are insufficient. For more information, see the "Error codes" section of this topic.

- **Best practices:**

- You can call the `RunInstances` operation to batch create instances. To better manage and search for these instances, we recommend that you specify tags by using the `Tag.N.Key` and `Tag.N.Value` parameters for the instances. You can also append incremental suffixes (`UniqueSuffix`) to the hostname (`HostName`) and to the instance name (`InstanceName`).
- A launch template contains parameters required to create an instance so that you do not have to specify these parameters every time you create instances. You can call the `CreateLaunchTemplate` operation to create a launch template. Then, in your request to call the `RunInstances` operation, you can specify the `LaunchTemplateId` and `LaunchTemplateVersion` parameters to use the launch template.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RunInstances	The operation that you want to perform. Set the value to RunInstances.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-qingdao-****	The ID of the region in which to create the instance. You can call the DescribeRegions operation to query the most recent region list.
ImageId	String	No	aliyun_2_1903_x64_20G_alibase_20200324.vhd	The ID of the image to use to create the instance. You can call the DescribeImages operation to query available images. If you do not set <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> to specify a launch template, you must specify the <code>ImageId</code> parameter.
ImageFamily	String	No	daily-update	The name of the image family. You can set this parameter to obtain the latest available custom image from the specified image family to create instances. - If the <code>ImageId</code> parameter is specified, you cannot set the <code>ImageFamily</code> parameter. - If you do not set the <code>ImageId</code> parameter but use the <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> parameter to specify a launch template that has the <code>ImageId</code> parameter set, you cannot set the <code>ImageFamily</code> parameter. - If you do not set the <code>ImageId</code> parameter but use the <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> parameter to specify a launch template that does not have the <code>ImageId</code> parameter set, you can set the <code>ImageFamily</code> parameter. - If you do not set the <code>ImageId</code>, <code>LaunchTemplateId</code>, or <code>LaunchTemplateName</code> parameter, you can set the <code>ImageFamily</code> parameter.

Parameter	Type	Required	Example	Description
InstanceType	String	No	ecs.g6.large	The instance type. If you do not use <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> to specify a launch template, you must set the <code>InstanceType</code> parameter. - Select an appropriate instance type. To learn about the performance data about instance types, see the "Instance families and instance types" topic or call the <code>DescribeInstanceTypes</code> operation. - Query available ECS resources. You can call the <code>DescribeAvailableResource</code> operation to query available resources in a specific region or zone.
SecurityGroupId	String	No	sg-bp15ed6xe1yxe1cg7****	The ID of the security group to which to assign the instance. Instances within the same security group can communicate with each other. The maximum number of instances that a security group can contain varies based on the security group type.  Note The network type of the new instance is determined by the security group specified by the <code>SecurityGroupId</code> parameter. For example, if the specified security group is of the VPC type, the new instance is also of the VPC type and you must specify the <code>VSwitchId</code> parameter. If you do not use <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> to specify a launch template, you must set the <code>SecurityGroupId</code> parameter. You can set <code>SecurityGroupId</code> to specify a single security group or set <code>SecurityGroupIds.N</code> to specify one or more security groups. You cannot specify both <code>SecurityGroupId</code> and <code>SecurityGroupIds.N</code>.

Parameter	Type	Required	Example	Description
SecurityGroupIds.N	RepeatList	No	sg-bp15ed6xe1yxeycg7****	The ID of security group N to which to assign the instance. The valid values of N depend on the maximum number of security groups to which an instance can belong. You cannot specify both the <code>SecurityGroupId</code> and <code>SecurityGroupIds.N</code> parameters.
VSwitchId	String	No	vsw-bp1s5fnvk4gn2tws0****	The ID of the vSwitch to which to connect to the instance. You must set this parameter when you create an instance of the VPC type. The specified vSwitch and security group must belong to the same VPC. If you specify the <code>VSwitchId</code> parameter, the zone specified by the <code>ZoneId</code> parameter must be the zone where the specified vSwitch is located. You can also leave the <code>ZoneId</code> parameter empty. Then, the system selects the zone where the specified vSwitch resides.

Parameter	Type	Required	Example	Description
InstanceName	String	No	k8s-node-[1,4]-alibabacloud	The name of the instance. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code>. It can contain letters, digits, colons (:), underscores (_), periods (.), and hyphens (-). The default value of this parameter is the <code>InstanceId</code> value. Note When you create multiple ECS instances, you can use <code>UniqueSuffix</code> to configure different instance names for the instances. You can also use the <code>name_prefix[begin_number, bits]name_suffix</code> naming format to configure incremental instance names. For example, if you set <code>InstanceName</code> to <code>k8s-node-[1,4]-alibabacloud</code>, the name of the first created ECS instance is <code>k8s-node-0001-alibabacloud</code>.
Description	String	No	Instance_Description	The description of the instance. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code>.
InternetMaxBandwidthIn	Integer	No	10	The maximum inbound bandwidth. Unit: Mbit/s. Valid values: - When the maximum outbound bandwidth is less than or equal to 10 Mbit/s, the valid values of <code>InternetMaxBandwidthIn</code> are 1 to 10 and the default value is 10. - When the maximum outbound public bandwidth is greater than 10 Mbit/s, the valid values of this parameter are 1 to the <code>InternetMaxBandwidthOut</code> value and the default value is the <code>InternetMaxBandwidthOut</code> value.

Parameter	Type	Required	Example	Description
InternetMaxBandwidthOut	Integer	No	10	The maximum outbound bandwidth. Unit: Mbit/s. Valid values: 0 to 100. Default value: 0.

Parameter	Type	Required	Example	Description
HostName	String	No	k8s-node-[1,4]-ecshost	The hostname of the instance. Take note of the following items: - The hostname cannot start or end with a period (.) or hyphen (-). It cannot contain consecutive periods (.) or hyphens (-). - For Windows instances, the hostname must be 2 to 15 characters in length and cannot contain periods (.) or contain only digits. It can contain letters, digits, and hyphens (-). - For instances that run other operating systems such as Linux, take note of the following items: - The hostname must be 2 to 64 characters in length. You can use periods (.) to separate a hostname into multiple segments. Each segment can contain letters, digits, and hyphens (-). - You can use the <code>\${instance_id}</code> placeholder to pass instance IDs into the hostname specified by <code>HostName</code>. For example, if you set <code>HostName</code> to <code>k8s-\${instance_id}</code> and the instance is assigned an ID of <code>i-123abc****</code>, the hostname of the instance is <code>k8s-i-123abc****</code>. Note When you create multiple ECS instances, you can use the <code>UniqueSuffix</code> parameter to configure different hostnames for the instances. You can also use the <code>name_prefix[begin_number, bits]name_suffix</code> naming format to configure incremental hostnames. For example, if you set <code>HostName</code> to <code>k8s-node-[1,4]-ecshost</code>, the hostname of the first created instance is <code>k8s-node-0001-ecshost</code>.

Parameter	Type	Required	Example	Description
HostNames.N	RepeatList	No	ecs-host-01	The hostname of instance N. You can use this parameter to specify different hostnames for multiple instances. Take note of the following items: - The maximum value of N must be the same as the <code>Amount</code> value. For example, if you set <code>Amount</code> to 2, you can use <code>HostNames.1</code> and <code>HostNames.2</code> to specify hostnames for the individual instances. Examples: <code>HostNames.1=test1</code> and <code>HostNames.2=test2</code>. - You cannot specify both the <code>HostName</code> and <code>HostNames.N</code> parameters. - The hostname cannot start or end with a period (.) or hyphen (-). It cannot contain consecutive periods (.) or hyphens (-). - For Windows instances, the hostname must be 2 to 15 characters in length and cannot contain periods (.) or contain only digits. It can contain letters, digits, and hyphens (-). - For instances that run other operating systems such as Linux, the hostname must be 2 to 64 characters in length. You can use periods (.) to separate a hostname into multiple segments. Each segment can contain letters, digits, and hyphens (-).

Parameter	Type	Required	Example	Description
UniqueSuffix	Boolean	No	true	Specifies whether to automatically append incremental suffixes to the hostname specified by the <code>HostName</code> parameter and to the instance name specified by the <code>InstanceName</code> parameter when you batch create instances. The incremental suffixes can range from 001 to 999. Valid values: • true • false Default value: false. When the <code>HostName</code> or <code>InstanceName</code> value is set in the <code>name_prefix[begin_number,bits]</code> format without <code>name_suffix</code>, the <code>UniqueSuffix</code> parameter does not take effect. The names are sorted in the specified sequence.

Parameter	Type	Required	Example	Description
Password	String	No	EcsV587!	The password of the instance. The password must be 8 to 30 characters in length and contain at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. Special characters include: <pre>() ` ~ ! @ # \$ % ^ & * - _ + = { } [] : ; ' < > , . ? /</pre> For Windows instances, the password cannot start with a forward slash (/).  Note For security reasons, we recommend that you use HTTPS to send requests if the Password parameter is specified.
PasswordInherit	Boolean	No	false	Specifies whether to use the password preset in the image. Valid values: - true: uses the preset password. - false: does not use the preset password.  Note If you set this parameter to true, make sure that you leave the Password parameter empty and the selected image has a preset password.
Zoneld	String	No	cn-qingdao-****-a	The ID of the zone in which to create the instance. You can call the DescribeZones operation to query the most recent zone list. If you do not specify a zone ID, the system randomly selects a zone.

Parameter	Type	Required	Example	Description
SystemDisk.Size	String	No	40	The size of the system disk. Unit: GiB. Valid values: 20 to 500. The value of this parameter must be at least 20 and greater than or equal to the image size. Default value: 40 or the size of the image, whichever is greater.
SystemDisk.Category	String	No	cloud_ssd	The category of the system disk. Valid values: - cloud_efficiency: ultra disk - san_efficiency: shared ultra disk - cloud_ssd: standard SSD - san_ssd: shared SSD - cloud_ppperf: premium performance disk - cloud_sperf: standard performance disk Default value: cloud_efficiency.
SystemDisk.DiskName	String	No	cloud_ssdSystem	The name of the system disk. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code>. It can contain letters, digits, periods (.), colons (:), underscores (_), and hyphens (-). This parameter is empty by default.
SystemDisk.Description	String	No	SystemDisk_Description	The description of the system disk. The description must be 2 to 256 characters in length, and cannot start with <code>http://</code> or <code>https://</code>.
SystemDisk.AutoSnapshotPolicyId	String	No	sp-bp67acfmazb4p****	The ID of the automatic snapshot policy to apply to the system disk.

Parameter	Type	Required	Example	Description
DataDisk.N.Size	Integer	No	2000	The size of data disk N. Valid values of N: 1 to 16. Unit: GiB. Valid values: - Valid values when DataDisk.N.Category is set to cloud_efficiency: 20 to 32768 - Valid values when DataDisk.N.Category is set to san_efficiency: 20 to 32768 - Valid values when DataDisk.N.Category is set to cloud_ssd: 20 to 32768 - Valid values when DataDisk.N.Category is set to san_ssd: 20 to 32768 - Valid values when DataDisk.N.Category is set to cloud_ppperf: 20 to 32768 - Valid values when DataDisk.N.Category is set to cloud_sperf: 20 to 32768 The value of this parameter must be greater than or equal to the size of the snapshot specified by the <code>SnapshotId</code> parameter.
DataDisk.N.SnapshotId	String	No	s-bp17441ohwka0yuh****	The ID of the snapshot to use to create data disk N. Valid values of N: 1 to 16. If the <code>DataDisk.N.SnapshotId</code> parameter is specified, the <code>DataDisk.N.Size</code> parameter is ignored. The data disk is created with the size of the specified snapshot.
DataDisk.N.Category	String	No	cloud_ssd	The category of data disk N. Valid values: - cloud_efficiency: ultra disk - san_efficiency: shared ultra disk - cloud_ssd: standard SSD - san_ssd: shared SSD - cloud_ppperf: premium performance disk - cloud_sperf: standard performance disk Default value: cloud_efficiency.

Parameter	Type	Required	Example	Description
DataDisk.N.Encrypted	String	No	false	Specifies whether to encrypt data disk N. Valid values: - true: encrypts data disk N. - false: does not encrypt data disk N. Default value: false.
DataDisk.N.KMSKeyId	String	No	0e478b7a-4262-4802-b8cb-00d3fb40****	The ID of the Key Management Service (KMS) key to use for data disk N.
DataDisk.N.DiskName	String	No	cloud_ssdData	The name of data disk N. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code> . It can contain letters, digits, periods (.), colons (:), underscores (_), and hyphens (-). This parameter is empty by default.
DataDisk.N.Description	String	No	DataDisk_Description	The description of data disk N. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> .
DataDisk.N.Device	String	No	null	The mount point of data disk N.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.

Parameter	Type	Required	Example	Description
DataDisk.N.DeleteWithInstance	Boolean	No	true	Specifies whether to release data disk N when the instance is released. Valid values: - true: releases data disk N when the instance is released. - false: does not release data disk N when the instance is released. Default value: true.
DataDisk.N.AutoSnapshotPolicyId	String	No	sp-bp67acfmxb4p****	The ID of the automatic snapshot policy to apply to data disk N.
IoOptimized	String	No	optimized	Specifies whether the instance is I/O optimized. For instances of retired instance types, the default value is none. For instances of other instance types, the default value is optimized. Valid values: - none: The instance is not I/O optimized. - optimized: The instance is I/O optimized.
NetworkInterface.N.PrimaryIpAddress	String	No	172.16.236.***	The primary IP address to assign to elastic network interface (ENI) N.  Note You can bind only a single secondary ENI when you create an instance. After the instance is created, you can call the CreateNetworkInterface and AttachNetworkInterface operations to bind more secondary ENIs. The default value is an IP address that is randomly selected from within the CIDR block of the vSwitch to which to connect the secondary ENI.
NetworkInterface.N.VSwitchId	String	No	vsw-bp67acfmxb4p****	The ID of the vSwitch to which to connect ENI N. Set the value of N to 1.
NetworkInterface.N.SecurityGroupId	String	No	sg-bp67acfmxb4p****	The ID of the security group to which to assign ENI N. Set the value of N to 1.

Parameter	Type	Required	Example	Description
NetworkInterface.N.SecurityGroupIds.N	RepeatList	No	sg-bp15ed6xe1yxeycg7****	The ID of security group N to which to assign ENI N.  Note - If the value of the first N is 1, only a primary ENI is configured for the instance. - The second N indicates that one or more security group IDs can be specified. The valid values of N depend on the maximum number of security groups to which an instance can belong.
NetworkInterface.N.NetworkInterfaceName	String	No	Network_Name	The name of ENI N. Set the value of N to 1.
NetworkInterface.N.Description	String	No	Network_Description	The description of ENI N. Set the value of N to 1. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code>.

Parameter	Type	Required	Example	Description
NetworkInterface. N.QueueNumber	Integer	No	8	The number of queues supported by ENI N.  Note - Set the value of N to 1, which indicates that only a single primary ENI can be configured for the instance. - The value of this parameter cannot exceed the maximum number of queues per ENI allowed for the specified instance type. - The total number of queues for all ENIs on the instance cannot exceed the queue quota for the instance type. To learn about the maximum number of queues per ENI and the queue quota for an instance type, you can call the <code>DescribeInstanceTypes</code> operation to query the <code>MaximumQueueNumberPerEni</code> and <code>TotalEniQueueQuantity</code> values.
UserData	String	No	ZWNobyBoZWxs byBLY3Mh	The user data of the instance. The user data must be encoded in Base64. The raw data can be up to 16 KB in size.
KeyPairName	String	No	KeyPair_Name	The name of the key pair to bind to the instance. - For Windows instances, this parameter is ignored. This parameter is empty by default. The <code>Password</code> parameter takes effect even if the <code>KeyPairName</code> parameter is specified. - For Linux instances, the password-based logon method is disabled by default.

Parameter	Type	Required	Example	Description
RamRoleName	String	No	RAM_Name	The name of the instance Resource Access Management (RAM) role. You can call the ListRoles operation provided by RAM to query the instance RAM roles that you created.
Amount	Integer	No	3	The number of instances that you want to create. Valid values: 1 to 100. Default value: 1.
MinAmount	Integer	No	2	The minimum number of instances that can be created. Valid values: 1 to 100. - If the number of instances that available resources are sufficient to create is smaller than the MinAmount value, instances cannot be created. - If the number of ECS instances that available resources are sufficient to create is greater than or equal to the MinAmount value, instances are created based on the number of available resources.
AutoReleaseTime	String	No	2018-01-01T12:05:00Z	The automatic release time of the instance. Specify the time in the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time must be in UTC. - If the value of seconds (<code>ss</code>) is not <code>00</code> , the time is automatically rounded to the nearest minute based on the value of minutes (<code>mm</code>). - The specified time must be at least 30 minutes later than the current time. - The specified time must be at most three years from the current time.
SpotPriceLimit	Float	No	0.97	 Note This parameter is unavailable.

Parameter	Type	Required	Example	Description
SecurityEnhancementStrategy	String	No	Active	Specifies whether to enable security hardening. Valid values: - Active: enables security hardening. This value is applicable only to public images. - Deactive: does not enable security hardening. This value is applicable to all image types.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The ClientToken value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see <i>How to ensure idempotence</i> in <i>ECS Developer Guide</i> .
Tag.N.Key	String	No	TestKey	The key of tag N to add to the instance, disks, and primary ENI. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain <code>http://</code> or <code>https://</code> .
Tag.N.Value	String	No	TestValue	The value of tag N to add to the instance, disks, and primary ENI. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length. It cannot start with acs: or contain <code>http://</code> or <code>https://</code> .
HpcClusterId	String	No	hpc-bp67acfmxb4p****	The ID of the Elastic High Performance Computing (E-HPC) cluster to which to assign the instance.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether required parameters are specified, the request format, service limits, and available ECS resources. If the check fails, the corresponding error code is returned. If the check succeeds, the <code>DryRunOperation</code> error code is returned. • false: The validity of the request is checked, and the request is made if the check succeeds. Default value: false.
DedicatedHostId	String	No	dh-bp67acfmxazb4p****	The ID of the dedicated host on which to create the instance. You can call the <code>DescribeDedicatedHosts</code> operation to query the dedicated host list.
LaunchTemplateId	String	No	lt-bp1apo0bbbkuy0rj****	The ID of the launch template. For more information, see <code>DescribeLaunchTemplates</code>. To use a launch template to create an instance, you must use the <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> parameter to specify the launch template.
LaunchTemplateName	String	No	LaunchTemplate_Name	The name of the launch template. To use a launch template to create an instance, you must use the <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> parameter to specify the launch template.

Parameter	Type	Required	Example	Description
LaunchTemplateVersion	Long	No	3	The version of the launch template. If you set the <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> parameter but do not set the version number of the launch template, the default template version is used.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which to assign the instance.
DeploymentSetId	String	No	ds-bp1brhwhoqinyjd6****	The ID of the deployment set to which to deploy the instance.
PrivateIpAddress	String	No	10.1.2.1	The private IP address to assign to the instance. To assign a private IP address to an instance of the VPC type, make sure that the IP address is an idle IP address within the CIDR block of the vSwitch specified by the <code>VSwitchId</code> parameter.  Note If the <code>PrivateIpAddress</code> parameter is specified, take note of the following items: - If <code>Amount</code> is set to 1, a single instance is created and the specified private IP address is assigned to the instance. - If <code>Amount</code> is set to a numeric value greater than 1, the specified number of instances are created and consecutive private IP addresses starting from the specified one are assigned to the instances. In this case, you cannot specify parameters that start with <code>NetworkInterface.N</code> to bind secondary ENIs to these instances.

Parameter	Type	Required	Example	Description
CreditSpecification	String	No	Standard	The performance mode of the burstable instance. Valid values: - Standard: standard mode - Unlimited: unlimited mode This parameter is empty by default.
Ipv6Address.N	RepeatList	No	Ipv6Address.1=2001:db8:1234:1a00::***	IPv6 address N to assign to the primary ENI. Up to 10 IPv6 addresses can be assigned to the primary ENI. Valid values of the second N: 1 to 10. Example: <pre>Ipv6Address.1=2001:db8:1234:1a00::***</pre> Note If this parameter is specified, you must set <code>Amount</code> to 1 and cannot specify <code>Ipv6AddressCount</code>, <code>Ipv6Address.N</code>, or <code>NetworkInterface.N.Ipv6AddressCount</code>.
Ipv6AddressCount	Integer	No	1	The number of IPv6 addresses to randomly generate for the primary ENI. Valid values: 1 to 10. You cannot specify both the <code>Ipv6Addresses.N</code> and <code>Ipv6AddressCount</code> parameters.

Parameter	Type	Required	Example	Description
NetworkInterface.QueueNumber	Integer	No	8	The number of queues supported by the primary ENI.  Note • The value of this parameter cannot exceed the maximum number of queues per ENI allowed for the specified instance type. • The total number of queues for all ENIs on the instance cannot exceed the queue quota for the instance type. To learn about the maximum number of queues per ENI and the queue quota for an instance type, you can call the <code>DescribeInstanceTypes</code> operation to query the <code>MaximumQueueNumberPerEni</code> and <code>TotalEniQueueQuantity</code> values.

Parameter	Type	Required	Example	Description
DeletionProtection	Boolean	No	false	The release protection attribute of the instance. This parameter specifies whether you can use the ECS console or call the <code>DeleteInstance</code> operation to release the instance. Valid values: - true: enables release protection. - false: disables release protection.  Note This attribute can protect instances only against manual releases, not against automatic releases.
Affinity	String	No	default	Specifies whether to associate the instance on a dedicated host with the dedicated host. Valid values: - default: does not associate the instance with the dedicated host. - host: associates the instance with the dedicated host. Default value: default.
Tenancy	String	No	default	Specifies whether to create the instance on a dedicated host. Valid values: - default: creates the instance on a non-dedicated host. - host: creates the instance on a dedicated host. If you do not set the <code>DedicatedHostId</code> parameter, Alibaba Cloud selects a dedicated host for the instance. Default value: default.
StorageSetId	String	No	ss-bp67acfmxazb4p****	The ID of the storage set. You can call the <code>StorageSetPartitionNumber</code> operation to query the storage set list.
StorageSetPartitionNumber	Integer	No	2	The maximum number of partitions in the storage set. Valid values: greater than or equal to 2. This parameter is required when you set <code>StorageSetId</code>.

Parameter	Type	Required	Example	Description
CpuOptions.Core	Integer	No	2	The number of CPU cores. This parameter cannot be specified but only uses its default value.
CpuOptions.ThreadsPerCore	Integer	No	2	The number of threads per core. The following formula is used to calculate the number of vCPUs of the instance: $\text{CpuOptions.Core value} \times \text{CpuOptions.ThreadPerCore value}.$ - If <code>CpuOptions.ThreadPerCore</code> is set to 1, hyperthreading is disabled. - This parameter is applicable only to specific instance types.
CpuOptions.NumberOfCpusPerNode	String	No	1	The number of CPU Numa nodes.

Response parameters

Parameter	Type	Example	Description
InstanceIds	List	["i-bp67acfmazb4pd2****", "i-bp1i43l28m7u48p1****", "i-bp12yqg7jdyxl11f****"]	The IDs of the instances (<code>InstanceIdSet</code>).
OrderId	String	1234567890	 Note This parameter is not supported.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TradePrice	Float	0.165	 Note This parameter is not supported.

Examples

Sample requests


```
https://ecs.example.com/?Action=RunInstances
&RegionId=cn-qingdao-****-d01
&ImageId=aliyun_2_1903_x64_20G_alibase_20200324.vhd
&InstanceType=ecs.g6.large
&SecurityGroupId=sg-bp67acfmxazb4p****
&VSwitchId=vsw-bpls5fnvk4gn2tws0****
&SystemDisk.AutoSnapshotPolicyId=sp-bp67acfmxazb4p****
&Amount=3**
&<Common request parameters>
```

Sample success responses

XML **format**

```
<RunInstancesResponse>
  <InstanceIdSets>
    <InstanceIdSet>i-bp67acfmxazb4pd2****</InstanceIdSet>
    <InstanceIdSet>i-bp1i43l28m7u48p1****</InstanceIdSet>
    <InstanceIdSet>i-bp12yqg7jdyxl11f****</InstanceIdSet>
  </InstanceIdSets>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</RunInstancesResponse>
```

JSON **format**

```
{
  "InstanceIdSets": {
    "InstanceIdSet": [
      "i-bp67acfmxazb4pd2****",
      "i-bp1i43l28m7u48p1****",
      "i-bp12yqg7jdyxl11f****"
    ]
  },
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
404	InvalidSecurityGroupId	The specified SecurityGroupId is invalid or does not exist.	The error message returned because the specified SecurityGroupId parameter is invalid or does not exist.

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType beyond the permitted range.	The error message returned because the specified InstanceType parameter is invalid.
404	InvalidSecurityGroupId.NotFound	The SecurityGroupId provided does not exist in our records.	The error message returned because the specified security group does not exist in this account. Check whether the security group ID is correct.
400	InvalidDescription.Malformed	The specified parameter "Description" is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is not valid.	The error message returned because the specified instance billing method for network usage is invalid.
400	InvalidParameter	The specified parameter "InternetMaxBandwidthOut" is not valid.	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.
400	InvalidHostName.Malformed	The specified parameter "HostName" is not valid.	The error message returned because the specified HostName parameter is invalid.
403	InvalidParams.InstanceNameExceed	The uniqueSuffix takes three naming places, please shorten your InstanceName.	The error message returned because the instance name must be shortened to make space for the incremental suffix added by UniqueSuffix. The incremental suffix is three characters in length.
403	InvalidParams.HostnameExceed	The uniqueSuffix takes three naming places, please shorten your Hostname.	The error message returned because the instance hostname must be shortened to make space for the incremental suffix added by UniqueSuffix. The incremental suffix is three characters in length.

HTTP status code	Error code	Error message	Description
400	InvalidPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the specified Password parameter is invalid.
400	InvalidPasswordParameter.Mismatch	The input password should be null when passwdInherit is true.	The error message returned because the Password parameter is specified when PasswdInherit is specified.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Category" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	InvalidDiskName.Malformed	The specified parameter "SystemDisk.DiskName or DataDisk.n.DiskName" is not valid.	The error message returned because the specified SystemDisk.DiskName or DataDisk.N.DiskName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
400	InvalidDiskDescription.Malformed	The specified parameter "SystemDisk.DiskDescription" or "DataDisk.n.Description" is not valid.	The error message returned because the specified SystemDisk.Description or DataDisk.N.Description parameter is invalid.
400	InvalidDataDiskSize.ValueNotSupported	The specified DataDisk.n.Size beyond the permitted range, or the capacity of snapshot exceeds the size limit of the specified disk category.	The error message returned because the specified DataDisk.N.Size parameter is invalid or because the snapshot size exceeds the maximum capacity allowed for the specified disk category.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned because the specified DataDisk.N.Category parameter is invalid.
404	InvalidDataDiskSnapshotId.NotFound	The specified parameter "DataDisk.n.SnapshotId" is not valid.	The error message returned because the specified DataDisk.N.SnapshotId parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidDataDevice.Malformed	The specified parameter "DataDisk.n.Device" is not valid.	The error message returned because the specified DataDisk.N.Device parameter is invalid.
400	InvalidNodeControllerId.Malformed	The specified parameter "NodeControllerId" is not valid.	The error message returned because the specified node controller ID is invalid.
400	InvalidInnerIpAddress.Malformed	The specified parameter "InnerIpAddress" is not valid.	The error message returned because the specified InnerIpAddress parameter is invalid.
400	InvalidInnerIpAddresses.Unusable	The specified InnerIpAddress is already used or not found in usable ip range.	The error message returned because the specified internal IP address is unavailable.
400	InvalidParameter.Conflict	The specified image does not support the specified instance type.	The error message returned because the specified image cannot be used for instances of the specified instance type.
400	ImageNotSupportCloudInit	The specified image does not support cloud-init.	The error message returned because the specified image does not support cloud-init.
400	InvalidSnapshotId.BasedSnapshotTooOld	The specified snapshot is created before 2013-07-15.	The error message returned because the specified snapshot was created on or before July 15, 2013.
400	QuotaExceed.AfterpayInstance	Living afterpay instances quota exceeded.	The error message returned because the maximum number of active pay-as-you-go instances has been reached.
403	ImageNotSubscribed	The specified image has not been subscribed.	The error message returned because you have not subscribed to the specified Alibaba Cloud Marketplace image.
403	InvalidSystemDiskCategory.ValueUnauthorized	The disk category is not authorized.	The error message returned because you are not authorized to use the specified disk category.
403	InvalidSnapshotId.NotReady	The specified snapshot has not completed yet.	The error message returned because the specified snapshot is being created.

HTTP status code	Error code	Error message	Description
403	InstanceDiskCategoryLimitExceed	The total size of specified disk category in an instance exceeds.	The error message returned because the total size of disks of the specified category exceeds the maximum capacity allowed for an instance.
403	InvalidDevice.InUse	The specified device has been occupied.	The error message returned because the specified device already has a disk attached.
403	ImageRemovedInMarket	The specified market image is not available, Or the specified user defined image includes product code because it is based on an image subscribed from marketplace, and that image in marketplace including exact the same product code has been removed.	The error message returned because the specified Alibaba Cloud Marketplace image is unavailable, or because the specified custom image contains the product code of the Alibaba Cloud Marketplace image from which the custom image is derived, and the Alibaba Cloud Marketplace image was removed from Alibaba Cloud Marketplace.
404	InvalidClusterId.NotFound	The ClusterId provided does not exist in our records.	The error message returned because the specified ClusterId parameter does not exist.
403	CategoryNotSupported	The specified zone does not offer the specified disk category.	The error message returned because the specified disk category is unavailable in the specified zone.
400	InvalidInstanceName.Malformed	The specified parameter "InstanceName" is not valid.	The error message returned because the specified InstanceName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter but cannot start with http:// or https://.
400	InvalidDiskDescription.Malformed	The specified parameter "SystemDisk.DiskDescription or DataDisk.n.Description" is not valid.	The error message returned because the specified SystemDisk.Description or DataDisk.N.Description parameter is invalid.

HTTP status code	Error code	Error message	Description
403	QuotaExceed.PortableCloudDisk	The quota of portable cloud disk exceeds.	The error message returned because the maximum number of removable disks has been reached.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
400	InvalidParameter.Conflict	The specified region and cluster do not match.	The error message returned because the specified region and the specified cluster do not correspond to each other.
403	SecurityGroupInstanceLimitExceed	Exceeding the allowed amount of instances of a security group.	The error message returned because the maximum number of instances in the security group has been reached.
403	NodeControllerUnavailable	The Node Controller is temporarily unavailable.	The error message returned because the node controller is unavailable.
403	RegionUnauthorized	There is no authority to create instance in the specified region.	The error message returned because you are not authorized to create instances in the specified region.
403	CategoryNotSupported	The specified Zone or cluster does not offer the specified disk category.	The error message returned because the specified disk category is unavailable in the specified zone or cluster.
403	InvalidSnapshotId.NotDataDiskSnapshot	The specified snapshot is system disk snapshot.	The error message returned because the specified snapshot is a system disk snapshot.
403	CategoryNotSupported	The specified cluster does not offer the specified disk category.	The error message returned because the specified disk category is unavailable in the specified cluster.
404	InvalidVSwitchId.NotFound	Specified virtual switch does not exist.	The error message returned because the specified VSwitchId parameter does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitchId parameter does not exist.

HTTP status code	Error code	Error message	Description
400	InvalidParameter.Mismatch	Specified security group and virtual switch are not in the same VPC.	The error message returned because the specified security group and vSwitch do not belong to the same VPC.
400	InvalidNetworkType.Mismatch	Specified parameter "InternetMaxBandwidthIn" or "InternetMaxBandwidthOut" conflict with instance network type.	The error message returned because the specified InternetMaxBandwidthIn or InternetMaxBandwidthOut parameter conflicts with the instance network type.
400	InvalidNetworkType.Mismatch	Specified parameter "InternetChargeType" conflict with instance network type.	The error message returned because the network type of the instance does not support the specified billing method for network usage.
400	InvalidPrivateIpAddress	Specified private IP address is not in the CIDR block of virtual switch.	The error message returned because the specified private IP address is not within the CIDR block of the specified vSwitch.
400	InvalidPrivateIpAddress.Malformed	Specified private IP address is malformed.	The error message returned because the specified PrivateIpAddress parameter is invalid.
400	InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	The error message returned because the specified private IP address is already in use. Try another IP address.
400	QuotaExceeded.PrivateIpAddress	Don't have enough private IPs in this switch	The error message returned because all the private IP addresses within the CIDR block of the specified vSwitch are already in use. Try another vSwitch.
400	QuotaExceeded	Living instances quota exceeded in this VPC.	The error message returned because the maximum number of active instances has been reached.
400	IncorrectVSwitchStatus	The current status of virtual switch does not support this operation.	The error message returned because the specified vSwitch is in the Pending state and cannot be deleted.

HTTP status code	Error code	Error message	Description
400	InvalidParameter.Mismatch	Specified virtual switch is not in the specified zone.	The error message returned because the specified vSwitch does not exist in the specified zone.
400	ResourceNotAvailable	Resource you requested is not available in this region or zone.	The error message returned because VPC is not supported by the specified region or zone.
400	MissingParameter	The input parameter "VSwitchId" that is mandatory for processing this request is not supplied.	The error message returned because the VSwitchId parameter is not specified.
400	InvalidDiskCategory.Mismatch	The specified disk categories' combination is not supported.	The error message returned because the combination of specified disk categories is not supported.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are not authorized to perform operations on the specified resource.
403	DeleteWithInstance.Conflict	The specified disk is not a portable disk and cannot be set to DeleteWithInstance attribute.	The error message returned because the specified disk is not removable and cannot be released along with the instance.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account. Check whether the image ID is correct.
403	InstanceDiskNumLimitExceed	The number of specified disk in an instance exceeds.	The error message returned because the number of specified disks exceeds the upper limit for an instance.
403	IoOptimized.NotSupported	The specified image is not support IoOptimized Instance.	The error message returned because the specified image does not support I/O optimized instances.
404	IoOptimized.NotSupported	The specified instancetype is not support IoOptimized instance	The error message returned because the specified instance type does not support I/O optimization.

HTTP status code	Error code	Error message	Description
403	InvalidDiskSize.TooSmall	Specified disk size is less than the size of snapshot	The error message returned because the specified disk size is smaller than the snapshot size.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified instance billing method does not exist.
400	MissingParameter	The specified parameter "Period" is not null.	The error message returned because the Period parameter is not specified.
400	InvalidPeriod	The specified period is not valid.	The error message returned because the specified Period parameter is invalid.
403	InvalidDiskCategory.Mismatch	The specified disk categories combination is not supported.	The error message returned because the combination of specified disk categories is not supported.
403	IoOptimized.NotSupported	Vpc is not support IoOptimized instance.	The error message returned because the VPC does not support I/O optimized instances.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned because the specified DataDisk.N.Category parameter is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Category" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
403	InvalidDiskCategory.NotSupported	The specified disk category is not support the specified instance type.	The error message returned because the specified disk category does not support the instance type.
400	InstanceDiskCategoryLimitExceed	The specified DataDisk.n.Size beyond the permitted range, or the capacity of snapshot exceeds the size limit of the specified disk category.	The error message returned because the specified DataDisk.N.Size parameter is invalid or because the snapshot size exceeds the maximum capacity allowed for the specified disk category.

HTTP status code	Error code	Error message	Description
403	QuotaExceed.BuyImage	The specified image is from the image market? You have not bought it or your quota has been exceeded.	The error message returned because you have not purchased the specified Alibaba Cloud Marketplace image or because the maximum number of images has been reached.
404	DependencyViolation.IoOptimized	The specified instancetype must be IoOptimized instance.	The error message returned because the specified instance type is not I/O optimized.
404	PaymentMethodNotFound	No payment method has been registered on the account.	The error message returned because you have not configured a payment method for your account.
400	InvalidInstanceType.ValueNotSupported	InternetMaxBandwidthOut should be set.	The error message returned because the InternetMaxBandwidthOut parameter is not specified.
400	InvalidInstanceType.ValueNotSupported	instancetype is not valid.	The error message returned because the specified InstanceType parameter is invalid.
400	InvalidClientToken.ValueNotSupported	clienttoken is not valid.	The error message returned because the specified ClientToken parameter is invalid.
400	InvalidIoOptimize.ValueNotSupported	The specified IoOptimize is not valid.	The error message returned because the specified IoOptimized parameter is invalid.
400	InvalidHostName.Malformed	The specified parameter HostName is not valid.	The error message returned because the specified HostName parameter is invalid.
404	HOSTNAME_ILLEGAL	hostname is not valid.	The error message returned because the specified HostName parameter is invalid.
400	InvalidInternetMaxBandwidthOut.Malformed	The specified parameter internetMaxBandwidthOut is not valid.	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.
400	InvalidInternetMaxBandwidthIn.Malformed	The specified parameter internetMaxBandwidthIn is not valid.	The error message returned because the specified InternetMaxBandwidthIn parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidSnapshotId.NotFound	The specified parameter SnapshotId is not exist.	The error message returned because the specified snapshot does not exist. Check whether the snapshot ID is correct.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	InvalidResourceId.NotSupported	The specified ResourceId does not support tagging.	The error message returned because the specified resource does not support tagging.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not correspond to each other.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags has exceeded the upper limit.
400	InvalidMinAmount.Malformed	The specified parameter MinAmount is not valid.	The error message returned because the specified MinAmount parameter is invalid.
400	InvalidMaxAmount.Malformed	The specified parameter MaxAmount is not valid.	The error message returned because the specified MaxAmount parameter is invalid.
400	InvalidAutoReleaseTime.Malformed	The specified parameter AutoReleaseTime is not valid.	The error message returned because the specified AutoReleaseTime parameter is invalid. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
400	InvalidPrivateIpAddress.Malformed	The specified parameter PrivateIpAddress is not valid.	The error message returned because the specified PrivateIpAddress parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidInnerIpAddress.Malformed	The specified parameter InnerIpAddress is not valid.	The error message returned because the specified InnerIpAddress parameter is invalid.
404	InvalidSystemDiskSize.LessThanImageSize	The specified parameter SystemDisk.Size is less than the image size.	The error message returned because the specified system disk size is smaller than the image size.
404	InvalidSystemDiskSize.LessThanMinSize	The specified parameter SystemDisk.Size is less than the min size.	The error message returned because the specified system disk size is smaller than the minimum allowable size.
403	OperationDenied	The specified RegionId does not support the creation of the network type ECS instance.	The error message returned because instances of the specified network type cannot be created in the specified region. Check whether instance resources of this network type are available in the region.
400	OperationDenied.NoVlan	The specified parameter "VlanId" is not valid or vlan has not enough IP address.	The error message returned because the specified VlanId parameter is invalid or because available IP addresses in the specified VLAN are insufficient.
403	OperationDenied.ImageNotValid	The specified Image is disabled or is deleted.	The error message returned because the specified ImageId parameter does not exist.
403	OperationDenied.SnapshotNotValid	The specified snapshot is not allowed to create disk.	The error message returned because the specified snapshot cannot be used to create disks.
403	OperationDenied.SnapshotNotAllowed	The specified snapshot is not allowed to create disk.	The error message returned because the specified snapshot cannot be used to create disks.
403	OperationDenied.ZoneNotAllowed	The creation of Instance to the specified Zone is not allowed.	The error message returned because instances cannot be created in the specified zone.

HTTP status code	Error code	Error message	Description
403	OperationDenied.ZoneSystemCategoryNotMatch	The specified Zone or cluster does not offer the specified disk category or the specified zone and cluster do not match.	The error message returned because the specified disk category is unavailable in the specified zone or cluster or because the specified zone and cluster do not correspond to each other.
403	OperationDenied.ResourceControl	The specified region is in resource control, please try later.	The error message returned because the specified region is under resource control. Try again later.
403	OperationDenied.NoStock	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the specified operation is valid.
403	OperationDenied.SnapshotParamsNotValid	The capacity of snapshot exceeds the size limit of the specified disk category or the specified category is not authorized.	The error message returned because the maximum snapshot size has been reached or because you are not authorized to use the specified disk category.
404	OperationDenied.CreatingConflict	Another Instance has been creating	The error message returned because no other instances can be created while an instance is being created.
403	OperationDenied.DiskTypeNotSupport	The type of the disk does not support the operation	The error message returned because the specified operation is invalid.
400	OperationDenied.QuotaExceed	The quota of tags on resource is beyond permitted range.	The error message returned because the maximum number of tags that can be added to the resource has been reached.
400	Account.Arrearage	Your account has been in arrears.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidUserData.Forbidden	User not authorized to input the parameter "UserData", please apply for permission "UserData"	The error message returned because you do not have the permissions to manage user data. Apply for the permissions first.

HTTP status code	Error code	Error message	Description
400	InvalidUserData.Size Exceeded	The specified parameter "UserData" exceeds the size.	The error message returned because the size of user data specified by the UserData parameter exceeds the upper limit.
400	InvalidUserData.Not Supported	The specified parameter "UserData" only support the vpc and IoOptimized Instance.	The error message returned because the specified UserData parameter is not supported. UserData is supported only by I/O optimized instances that reside in VPCs.
404	InvalidZoneId.NotFound	The specified zoneid does not exist.	The error message returned because the specified ZoneId.N parameter does not exist.
403	Zone.NotOpen	The specified zone is not granted to you to buy resources yet.	The error message returned because you are not authorized to purchase resources in the specified zone.
403	Zone.NotOnSale	The resource in the specified zone is no longer available for sale. Please try other regions and zones.	The error message returned because the requested resources are unavailable in the specified zone. Try another resource type or select another region or zone.
403	InvalidClusterId.NotFound	The specified clusterid does not exist.	The error message returned because the specified ClusterId parameter does not exist.
403	OperationDenied.No Stock	The resource is out of stock in the specified zone. Please try other types, or choose other regions and zones.	The error message returned because the requested resources are unavailable in the specified zone. Try another resource type or select another region or zone.
403	InvalidInstanceType.ZoneNotSupported	The specified zone does not support this instancetype.	The error message returned because the specified instance type is not supported in the specified zone.
400	InstanceDiskNumber.LimitExceed	The total number of specified disk in an instance exceeds.	The error message returned because the number of specified disks exceeds the upper limit for an instance.

HTTP status code	Error code	Error message	Description
400	InvalidDiskCategory.ValueNotSupported	The specified parameter "DiskCategory" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	InvalidSpotStrategy	The specified SpotStrategy is not valid.	The error message returned because the specified SpotStrategy parameter is invalid.
400	InvalidSpotPriceLimit	The specified SpotPriceLimit is not valid.	The error message returned because the specified SpotPriceLimit parameter is invalid.
400	InvalidSpotDuration	The specified SpotDuration is not valid.	The error message returned because the specified SpotDuration parameter is invalid.
400	InvalidSpotAuthorized	The specified Spot param is unauthorized.	The error message returned because you are not authorized to set the SpotDuration parameter.
400	InvalidSpotPrepaid	The specified Spot type is not support PrePay Instance.	The error message returned because preemptible instances do not support the subscription billing method.
400	InvalidSpotAliUid	The specified UID is not authorized to use SPOT instance.	The error message returned because you are not authorized to create preemptible instances.
400	InvalidParameter.Bandwidth	%s	The error message returned because the specified bandwidth is invalid.
400	InvalidDataDiskCategory.ValueNotSupported	%s	The error message returned because the specified data disk category is invalid. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidSystemDiskCategory.ValueNotSupported	%s	The error message returned because the operation is not applicable to the specified system disk category.

HTTP status code	Error code	Error message	Description
400	InvalidParameter.Conflict	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned because the specified InternetChargeType parameter is invalid.
400	InvalidInstanceType.ValueNotSupported	%s	The error message returned because the operation is not applicable to the specified instance type.
403	InstanceType.Offline	%s	The error message returned because the operation is not supported while the instance type is retired or while resources of the instance type are insufficient.
400	RegionUnauthorized	%s	The error message returned because you are not authorized to perform the operation in the specified region. %s is a variable. An error message is dynamically returned based on call conditions.
400	Zone.NotOnSale	%s	The error message returned because the requested resources are unavailable in the specified zone. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidSystemDiskSize.ValueNotSupported	%s	The error message returned because the specified SystemDisk.Size parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidDataDiskSize.ValueNotSupported	%s	The error message returned because the specified data disk size is invalid. %s is a variable. An error message is dynamically returned based on call conditions.
403	DependencyViolation.WindowsInstance	The instance creating is window, cannot use ssh key pair to login.	The error message returned because the specified instance is a Windows instance and does not support logons using SSH key pairs.
400	InvalidInstanceType.ValueNotSupported	The specified parameter "KeyPairName" only support IoOptimized Instance.	The error message returned because non-I/O optimized instances do not support key pairs.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified resource group does not exist.
403	InvalidUser.PassRoleForbidden	The RAM user does not have the privilege to pass a RAM role.	The error message returned because the RAM user is not authorized to pass a RAM role.
404	InvalidRamRole.NotFound	The specified parameter "RAMRoleName" does not exist.	The error message returned because the specified RAMRoleName parameter does not exist.
404	InvalidLaunchTemplate.NotFound	%s	The error message returned because the specified launch template does not exist. Check whether the parameter value is correct.
404	InvalidLaunchTemplateVersion.NotFound	%s	The error message returned because the specified launch template of the specified version does not exist. Check whether the parameter values are correct.
400	InvalidInstanceType.ElasticNetworkInterfaceNotSupported	The specified instance type does not support Elastic Network Interface, you can not attach Elastic Network Interface to generation I instances.	The error message returned because ENIs are not supported by the specified instance type.

HTTP status code	Error code	Error message	Description
400	InvalidParameter.EncryptedIllegal	%s	The error message returned because the specified parameter is invalid. Check whether your encryption operation is valid. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidParameter.EncryptedNotSupported	%s	The error message returned because the specified parameter is invalid and your encryption operation is not supported. %s is a variable. An error message is dynamically returned based on call conditions.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	Forbidden.RiskControl	This operation is forbidden by Aliyun RiskControl system.	The error message returned because the operation is forbidden by the risk control system.
403	InvalidInstance.UnpaidOrder	The specified Instance has unpaid order.	The error message returned because you have unpaid orders for the specified instance. Pay for the orders and try again.
403	RealNameAuthenticationError	Your account has not passed the real-name authentication yet.	The error message returned because you have not completed real-name verification. Complete real-name verification and try again.
403	InvalidInstanceType.NotSupported	The specified InstanceType is not Supported.	The error message returned because the specified InstanceType parameter is not supported.
403	InvalidPayMethod	The specified pay method is not valid.	The error message returned because the specified payment method is invalid.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.

HTTP status code	Error code	Error message	Description
400	InvalidSpotPriceLimit.LowerThanPublicPrice	The specified parameter "spotPriceLimit" can't be lower than current public price.	The error message returned because the specified SpotPriceLimit value is less than the current market price.
400	InvalidRelationResource.NotFound	The relation resource has been deleted.	The error message returned because the associated resource has been deleted.
400	IncorrectRecycleBinStatus	The operation is not permitted due to resource status.	The error message returned because the operation is not supported while the resource is in the current state.
400	InvalidHpcClusterId.Unnecessary	The specified HpcClusterId is unnecessary	The error message returned because the HpcClusterId parameter is specified.
400	InvalidVSwitchId.Necessary	The VSwitchId is necessary	The error message returned because the VSwitchId parameter is not specified.
400	InvalidHpcClusterId.Necessary	The HpcClusterId is necessary	The error message returned because the HpcClusterId parameter is not specified.
400	InvalidHpcClusterId.NotFound	The specified HpcClusterId is not found	The error message returned because the specified HpcClusterId parameter does not exist.
404	InvalidVSwitchId.NotExist	%s	The error message returned because the specified VSwitchId parameter does not exist.
403	ImageNotSupportInstanceType	The specified image does not support the specified InstanceType.	The error message returned because the specified image does not support the specified instance type.
400	InvalidSecurityGroup.NotInDefaultVpc	%s	The error message returned because the specified security group is not in the default VPC. Check whether the specified SecurityGroupId parameter is valid.

HTTP status code	Error code	Error message	Description
400	VpcNotFound	Vpc is not found according to the specified VSwitch or the vpc does not belong to you.	The error message returned because no VPC is found based on the specified vSwitch or because the corresponding VPC does not belong to you.
400	InvalidSystemDiskSize.ImageNotSupportResize	The specified image does not support resize.	The error message returned because the specified image does not support resizing.
403	OperationDenied.InvalidNetworkType	%s	The error message returned because the operation is not supported by the specified network type.
400	InvalidSpotInterruptionBehavior	%s	The error message returned because the specified SpotInterruptionBehavior parameter is invalid.
403	InvalidSpotInterruptionBehavior.ClassicNetworkNotSupport	The specified SpotInterruptionBehavior does not support Classic network Instance.	The error message returned because the operation is not supported by instances in the classic network.
403	InvalidSpotInterruptionBehavior.LocalDiskNotSupport	The specified SpotInterruptionBehavior does not support local disk instance.	The error message returned because the operation is not supported by instances that have local disks attached.
400	InvalidDeploymentOnHost	%s	The error message returned because the instance cannot be deployed in the specified deployment set.
400	InvalidInstanceChargeType.NotSupport	The Dedicated host not support the specified Instance charge type.	The error message returned because the dedicated host does not support instances that use the specified billing method.
400	InvalidNetworkType.NotSupported	The classic networkType not support create ECS on dedicatedHost	The error message returned because dedicated hosts do not support instances in the classic network.
400	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified DedicatedHostId parameter does not exist.

HTTP status code	Error code	Error message	Description
400	InvalidDedicatedHostStatus.NotSupport	Operation denied due to dedicated host status.	The error message returned because the operation is not supported while the dedicated host is in the current state.
400	IncorrectDedicatedHostStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
400	ChargeTypeViolation.PostPaidDedicatedHost	Prepaid instance onto postpaid dedicated host is not allowed	The error message returned because subscription instances cannot be deployed on pay-as-you-go dedicated hosts.
400	InvalidPeriod.ExceededDedicatedHost	Instance expired date can't exceed dedicated host expired date.	The error message returned because the expiration date of the instance is later than that of the dedicated host.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorize.	The error message returned because you are not authorized to use the specified instance type.
400	DedicatedHostType.Unmatched	The specified DedicatedHostType doesn't match the instance type.	The error message returned because the specified dedicated host type does not correspond to the specified instance type.
400	MissingParameter	The input parameter ImageId that is mandatory for processing this request is not supplied.	The error message returned because the ImageId parameter is not specified.
400	MissingParameter	The input parameter InstanceType that is mandatory for processing this request is not supplied.	The error message returned because the InstanceType parameter is not specified.
400	ChargeTypeViolation.PostPaidDedicatedHost	Prepaid instance onto postpaid dedicated host is not allowed.	The error message returned because subscription instances cannot be deployed on pay-as-you-go dedicated hosts.
400	InvalidParam.NetworkInterface	%s	The error message returned because a specified parameter is invalid. Check whether the parameter corresponds to the operation.

HTTP status code	Error code	Error message	Description
403	OperationDenied.ImageNotValid	%s	The error message returned because the image does not support the operation.
403	QuotaExceed.PostPaidDisk	Living postPaid disks quota exceeded.	The error message returned because the maximum number of pay-as-you-go disks has been reached.
401	InvalidRamRole.NotEcsRole	The specified ram role is not authorized for ecs, please check your role policy.	The error message returned because the specified RAM role is not authorized to use ECS. Check your role policy.
403	InvalidParameter.NotMatch	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
400	InvalidParameter.CreditSpecification	The specified CreditSpecification is not supported in this region.	The error message returned because the specified credit specification is not supported in this region.
404	InvalidMarketImage.NotFound	The specified marketplace image does not exist, please change the imageId and try again.	The error message returned because the specified Alibaba Cloud Marketplace image does not exist. Modify the imageId parameter value and try again later.
400	IncorrectVpcStatus	Current VPC status does not support this operation.	The error message returned because the operation is not supported while the VPC is in the current state.
400	InvalidInstanceType.NotSupported	The specified instanceType is not supported by the deployment set.	The error message returned because the specified instance type is not supported by the deployment set. Try another instance type.
400	InvalidVpcZone.NotSupported	The specified operation is not allowed in the zone to which your VPC belongs, please try in other zones.	The error message returned because the region to which the VPC belongs does not support the specified operation. Try another region.
400	IncorrectDefaultVpcStatus	The status of the default VPC is invalid.	The error message returned because the state of the default VPC is invalid.

HTTP status code	Error code	Error message	Description
404	DeploymentSet.NotFound	The specified deployment set does not exist.	The error message returned because the specified DeploymentSetId parameter does not exist.
400	InvalidAutoRenewPeriod.ValueNotSupported	The specified autoRenewPeriod is invalid.	The error message returned because the specified AutoRenewPeriod parameter is invalid.
403	OperationDenied.LocalDiskUnsupported	The configuration change is not allowed when the specified instance has local disks mounted.	The error message returned because the instance types of instances that have local disks attached cannot be changed.
403	OperationDenied.InconsistentNetwork	The specified security group and vswitch are not in the same vpc.	The error message returned because the specified security group and vSwitch do not belong to the same VPC.
403	OperationDenied	If the network segment of the vswitch is the same as that of its VPC. Therefore, the VPC cannot create other vswitches across the region.	The error message returned because the VPC and vSwitch have the same CIDR block and no additional vSwitches can be created for zones in the VPC.
403	DefaultVswitch.Existed	The default vswitch for VPC already exists.	The error message returned because a default vSwitch already exists in the current VPC.
400	InvalidMarketImageChargeType.NotSupported	The specified chargeType of marketImage is unsupported.	The error message returned because the billing method of the Alibaba Cloud Marketplace image is not supported.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because the resources are insufficient.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	CategoryViolation	The specified instance does not support this operation because of its disk category.	The error message returned because the configurations of instances that have local disks attached cannot be changed.

HTTP status code	Error code	Error message	Description
400	InvalidPeriodType.ValueNotSupported	The specified parameter PeriodType is invalid.	The error message returned because the specified PeriodType parameter is invalid.
403	ResourcesNotInSameZone	The specified instance and dedicated host are not in the same zone.	The error message returned because the specified instance and dedicated host are not located within the same region.
403	InvalidDisk.SystemDiskSize	The specified SystemDiskSize beyond the permitted range.	The error message returned because the specified system disk size exceeds the upper limit.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.
400	OperationDenied	The current user does not support this operation.	The error message returned because your account does not support the operation.
403	InsufficientBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified InstanceType parameter does not exist or because you are not authorized to manage instances of the specified instance type.
400	InvalidParam.Tenancy	The specified Tenancy is invalid.	The error message returned because the specified Tenancy parameter is invalid.
403	MaxEniIpv6IpsCountExceeded	%s	The error message returned because the maximum number of IPv6 addresses that can be assigned to the ENI has been reached.
403	InvalidIp.IpRepeated	%s	The error message returned because the specified IP address already exists.
403	InvalidIp.IpAssigned	%s	The error message returned because the specified IP address is already assigned.

HTTP status code	Error code	Error message	Description
403	InvalidIp.Address	%s	The error message returned because the specified IPv6 address is invalid.
403	InvalidOperation.Ipv4CountExceeded	%s	The error message returned because the maximum number of IPv4 addresses has been reached.
403	InvalidOperation.Ipv6CountExceeded	%s	The error message returned because the maximum number of IPv6 addresses has been reached.
403	InvalidOperation.Ipv6NotSupport	%s	The error message returned because IPv6 addresses do not support this operation.
403	InvalidVSwitch.Ipv6NotTurnOn	%s	The error message returned because the IPv6 feature is not enabled for your current vSwitch. Enable the feature and try again.
403	InvalidParam.Amount	%s	The error message returned because the specified Amount parameter is invalid.
403	InvalidVSwitchId.IpInvalid	%s	The error message returned because the specified PrivateIpAddress parameter is invalid.
403	Forbidden.RegionId	%s	The error message returned because the service is unavailable in the current region.
400	IncorrectVpcStatus	The current status of vpc does not support this operation.	The error message returned because the operation is not supported while the VPC is in the current state.
403	QuotaExceed.DeploymentSetInstanceQuotaFull	instance quota in one deployment set exceeded.	The error message returned because the maximum number of instances in the current deployment set has been reached.

HTTP status code	Error code	Error message	Description
403	InvalidRegion.NotSupport	The specified region does not support byok.	The error message returned because the Bring Your Own Key (BYOK) feature is not supported in the region.
403	UserNotInTheWhiteList	The user is not in byok white list.	The error message returned because you are not authorized to use the BYOK feature. Try again when you are authorized.
400	InvalidParameter.EncryptedIllegal	The specified parameter Encrypted must be true when kmsKeyId is not empty.	The error message returned because the encryption feature is not enabled after a KMS key ID is specified.
400	IoOptimized.NotSupported	The specified instance must be IoOptimized instance when kmsKeyId is not empty.	The error message returned because I/O optimized instances must be used after the KMSKeyId parameter is specified.
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a KMS key ID is specified for a disk. You can call the DescribeKey operation of KMS to query information about the specified CMK.
404	InvalidParameter.KMSKeyId.NotFound	The specified KMSKeyId does not exist.	The error message returned because the specified DataDisk.N.KMSKeyId parameter does not exist.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access KMS resources.
403	SecurityRisk.3DVerification	We have detected a security risk with your default credit or debit card. Please proceed with verification via the link in your email.	The error message returned because risks are detected in your default credit card or debit card. Click the URL in the email for verification.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.

HTTP status code	Error code	Error message	Description
400	JoinedGroupLimitExceed	%s	The error message returned because the maximum number of security groups to which the specified resource can be assigned has been exceeded. For more information, see the return value of the %s placeholder in the error message.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified SecurityGroupId parameter does not exist.
404	InvalidDiskIds.NotPortable	The specified DiskId is not portable.	The error message returned because the specified disk is not removable.
403	QuotaExceed.Tags	%s	The error message returned because the number of specified tags exceeds the upper limit. %s is a variable. An error message is dynamically returned based on call conditions.
403	QuotaExceed.ElasticQuota	No additional quota is available for the specified ECS instance type.	The error message returned because the maximum number of instances of the specified instance type in the region has been reached. You can try another region or instance type, or reduce the number of instances that you want to purchase. Alternatively, you can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of the specified ECS instances has exceeded the quota of the specified instance type.	The error message returned because the maximum number of instances of the specified instance type in the region has been reached. You can try another region or instance type, or reduce the number of instances that you want to purchase. Alternatively, you can go to the ECS console or Quota Center to request a quota increase.

HTTP status code	Error code	Error message	Description
403	QuotaExceed.ElasticQuota	The number of vCPUs assigned to the ECS instances has exceeded the quota in the zone.	The error message returned because the maximum number of vCPUs for all instance types has been reached in the zone. You can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of the specified ECS instances has exceeded the quota of the specified instance type, or the number of vCPUs assigned to the ECS instances has exceeded the quota in the zone.	The error message returned because the maximum number of instances of the specified instance type in the region has been reached or because the maximum number of vCPUs for all instance types has been reached. You can go to the ECS console or Quota Center to request a quota increase.
400	InvalidHttpEndpoint.NotSupported	The specified HttpEndpoint not supported, you can use enabled(default) or disabled.	The error message returned because the specified HttpEndpoint parameter is invalid. The valid values of this parameter are enabled and disabled. The default value is enabled.
400	InvalidHttpTokens.NotSupported	The specified HttpTokens not supported, you can use optional(default) or required.	The error message returned because the specified HttpTokens parameter is invalid. The valid values of this parameter are optional and required. The default value is optional.
400	InvalidHttpPutResponseHopLimit.NotSupported	The specified HttpPutResponseHopLimit not supported, more than 1 and less than 64 is reasonable.	The error message returned because the specified HttpPutResponseHopLimit parameter is invalid. The valid values of this parameter are 1 to 64.
400	InvalidOperation.VpcHasEnabledAdvancedNetworkFeature	The specified vpc has enabled advanced network feature.	The error message returned because advanced features are enabled for the specified VPC. You cannot create low-specification instances in the VPC.

HTTP status code	Error code	Error message	Description
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because you cannot modify security groups managed by cloud services.
403	InvalidParameter.InvalidEniQueueNumber	%s	The error message returned because the specified number of queues per ENI is invalid. For more information, see the return value of the %s placeholder in the error message.
403	InvalidOperation.MaxEniQueueNumberExceeded	%s	The error message returned because the maximum number of queues per elastic network interface (ENI) has been reached. For more information, see the return value of the %s placeholder in the error message.
403	InvalidOperation.ExceedInstanceTypeQueueNumber	%s	The error message returned because the maximum number of queues for all ENIs on an instance has been reached. For more information, see the return value of the %s placeholder in the error message.
400	MissingParameter.PrivatePoolOptionsId	The specified PrivatePoolOptions.Id should not be null.	The error message returned because the PrivatePoolOptions.Id parameter is not specified.
400	Invalid.PrivatePoolOptionsId	The specified PrivatePoolOptions.Id is invalid.	The error message returned because the specified PrivatePoolOptions.Id parameter is invalid.
400	Invalid.PrivatePoolOptionsId	The parameter PrivatePoolOptions.Id should be null when PrivatePoolOptions.MatchCriteria is not Target.	The error message returned because the PrivatePoolOptions.Id parameter is specified when the PrivatePoolOptions.MatchCriteria parameter is set to Open or None.
400	DedicatedHostNotSupported	DedicatedHost is not supported for PrivatePool.	The error message returned because private pools cannot be used to create instances on dedicated hosts.

HTTP status code	Error code	Error message	Description
400	SpotNotSupported	Spot is not supported for PrivatePool.	The error message returned because private pools cannot be used to create preemptible instances.
400	ClassicNetworkNotSupported	Classic network is not supported for PrivatePool.	The error message returned because private pools cannot be used to create instances in the classic network.
400	Invalid.InstanceId	Instance does not exist.	The error message returned because the instance does not exist.
400	Invalid.PrivatePoolOptions.MatchCriteria	Target mode does not support this operation.	The error message returned because the operation is not supported while the PrivatePoolOptions.MatchCriteria parameter is set to Target.
400	MissingParameter.PrivatePoolOptions.Id	The specified PrivatePoolOptions.Id should not be null.	The error message returned because the PrivatePoolOptions.Id parameter is not specified.
400	Invalid.PrivatePoolOptions.Id	The PrivatePool does not exist.	The error message returned because the private pool does not exist.
400	Invalid.InstanceType	The InstanceType does not match the PrivatePool.	The error message returned because the instance type does not match the private pool.
400	Invalid.InstanceChargeType	The InstanceChargeType does not match the PrivatePool.	The error message returned because the specified instance billing method does not match the specified private pool.
400	Invalid.ZoneId	The ZoneId does not match the PrivatePool.	The error message returned because the zone does not match the private pool.
400	Invalid.PrivatePoolOptions.MatchCriteria	The PrivatePoolOptions.MatchCriteria does not match the PrivatePool.	The error message returned because the specified PrivatePoolOptions.MatchCriteria parameter does not match the private pool.

HTTP status code	Error code	Error message	Description
400	InvalidPlatform.ValueNotSupported	The Platform does not match the PrivatePool.	The error message returned because the specified Platform parameter does not match the private pool.
400	InvalidAliUid	The PrivatePool does not belong to the user of the Instance.	The error message returned because the private pool does not belong to the user who attempted to create the instance.
400	Invalid.InstanceId	The Instance does not attach to a PrivatePool.	The error message returned because the instance does not match the private pool.

5.1.4.2. CreateInstance

Creates an Elastic Compute Service (ECS) instance.

Description

 **Note** You can call the DescribeAvailableResource operation to query available resources in a specific region or zone. If you want to batch create instances that automatically enter the Running state after they are created, we recommend that you call the RunInstances operation.

When you call this operation, take note of the following items:

- **Instance type:**
 - You can use the `IoOptimized` parameter to specify whether to create an I/O optimized instance.
 - Select an appropriate instance type. To learn about the performance data about instance types, see the "Instance families and instance types" topic in *ECS Production Introduction* or call the DescribeInstanceTypes operation.
 - Query available resources. You can call the DescribeAvailableResource operation to query available resources in a specific region or zone.
- **Image:**
 - The image determines the system disk configurations of the new instance. The system disk of the new instance is a clone of the specified image.
 - If you want to create instances with 512 MiB of memory, you cannot use Windows Server images except for Windows Server Semi-Annual Channel images.
 - If you want to create instances with 4 GiB or more of memory, you cannot use 32-bit operating system image.
- **Network type:**
 - Each instance that resides in a virtual private cloud (VPC) must be connected only to a single vSwitch.

- If the `VSwitchId` parameter is specified, the security group specified by `SecurityGroupId` and the vSwitch specified by `VSwitchId` must belong to the same VPC.
- The value of `PrivateIpAddress` depends on that of `VSwitchId` and cannot be separately specified. If both the `VSwitchId` and `PrivateIpAddress` parameters are specified, the IP address specified by `PrivateIpAddress` must be available in the CIDR block of the specified vSwitch.
- **Security group:**
 - If no security group is available in the region where you want to create an instance, you must call the `CreateSecurityGroup` operation to create a security group in that region first.
 - The maximum number of instances that a security group can contain varies based on the security group type.
 - Instances within the same security group can communicate with each other over the internal network. By default, instances in different security groups cannot communicate with each other. You can allow communication between instances by allowing mutual access between their security groups. For more information, see `AuthorizeSecurityGroup` and `AuthorizeSecurityGroupEgress` in ECS Developer Guide.
- **Storage:**
 - The instance is assigned a system disk whose capacity is determined based on the size of the specified image. The capacity of the system disk must be at least `20 GiB` and greater than or equal to the image size. For information about system disk categories, see the description of the `SystemDisk.Category` parameter.
 - When the system disk of an instance is a basic disk (`cloud`), ultra disk (`cloud_efficiency`), or standard SSD (`cloud_ssd`), the data disks of the instance cannot be local SSDs (`ephemeral_ssd`).
 - The system disks of I/O optimized instances can only be ultra disks (`cloud_efficiency`) or standard SSDs (`cloud_ssd`).
 - The maximum size of a data disk varies based on its category. For more information, see the description of the `DataDisk.N.Size` parameter.
 - A maximum of 16 data disks can be attached to each instance. The mount points of data disks are allocated by the system in alphabetical order from `/dev/xvdb` to `/dev/xvdz`.
- **User data:** If the instance type supports user data, you can use the `UserData` parameter to pass in user data. User data is encoded in Base64. We recommend that you do not pass in confidential information (such as passwords or private keys) in plaintext as user data. This is because the system does not encrypt `UserData` values when API requests are transmitted. If you must pass in confidential information, we recommend that you encrypt and encode the information in Base64, and then decode and decrypt the information in the same way within the instance.
- **Others:** When you call API operations by using Alibaba Cloud SDKs, you must delete periods (.) from some request parameters before you use the parameters. For example, use `SystemDiskCategory` instead of `SystemDisk.Category` as a request parameter.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateInstance	The operation that you want to perform. Set the value to CreateInstance.
InstanceType	String	Yes	ecs.g6.large	The instance type. - Select an appropriate instance type. To learn about the performance data about instance types, see the "Instance families and instance types" topic in <i>ECS Production Introduction</i> or call the DescribeInstanceTypes operation. - Query available resources. You can call the DescribeAvailableResource operation to query available resources in a specific region or zone.
RegionId	String	Yes	cn-qingdao-****	The ID of the region in which to create the instance. You can call the DescribeRegions operation to query the most recent region list.
ImageId	String	No	ubuntu_18_04_64_20G_alibase_20190624.vhd	The ID of the image to use to create the instance.
SecurityGroupId	String	No	sg-bp15ed6xe1yxeycg****	The ID of the security group to which to assign the instance. Instances within the same security group can communicate with each other.

Parameter	Type	Required	Example	Description
InstanceName	String	No	2018-12-06T103200Z	The name of the instance. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code> . It can contain letters, digits, colons (:), underscores (_), and hyphens (-). If you do not specify this parameter, the instance ID is used as the instance name by default.
InternetMaxBandwidthIn	Integer	No	50	The maximum inbound bandwidth. Unit: Mbit/s. Valid values: - When the maximum outbound bandwidth is less than or equal to 10 Mbit/s, the valid values of InternetMaxBandwidthIn are 1 to 10 and the default value is 10. - When the maximum outbound public bandwidth is greater than 10 Mbit/s, the valid values of this parameter are 1 to the <code>InternetMaxBandwidthOut</code> value and the default value is the <code>InternetMaxBandwidthOut</code> value.
InternetMaxBandwidthOut	Integer	No	5	The maximum outbound bandwidth. Unit: Mbit/s. Valid values: 0 to 100. Default value: 0.

Parameter	Type	Required	Example	Description
HostName	String	No	LocalHostName	The hostname of the instance. - The hostname cannot start or end with a period (.) or hyphen (-). It cannot contain consecutive periods (.) or hyphens (-). - For Windows instances, the hostname must be 2 to 15 characters in length and cannot contain periods (.) or contain only digits. It can contain letters, digits, and hyphens (-). - For instances that run other operating systems such as Linux, the hostname must be 2 to 64 characters in length. You can use periods (.) to separate the hostname into multiple segments. Each segment can contain letters, digits, and hyphens (-).
Password	String	No	TestEcs123!	The password of the instance. The password must be 8 to 30 characters in length and contain at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. Special characters include: <pre>() ` ~ ! @ # \$ % ^ & * - _ + = { } [] : ; ' < > , . ? /</pre> Take note of the following items: - For security reasons, we recommend that you use HTTPS to send requests if the Password parameter is specified. - Passwords of Windows instances cannot start with a forward slash (/). - Passwords cannot be set for instances that run specific types of operating systems such as Others Linux and Fedora CoreOS. For these instances, only key pairs can be set.

Parameter	Type	Required	Example	Description
PasswordInherit	Boolean	No	false	Specifies whether to use the password preset in the image. When you use this parameter, leave Password empty and make sure that the selected image has a password preset.
DeploymentSetId	String	No	ds-bp1brhwhoqinyjd6****	The ID of the deployment set to which to deploy the instance.
ZoneId	String	No	cn-qingdao-env17-amtest11001-a	The ID of the zone in which to create the instance. You can call the DescribeZones operation to query the most recent zone list. Note If the <code>VSwitchId</code> parameter is specified, the zone specified by the <code>ZoneId</code> parameter must be the zone where the specified vSwitch is located. You can also leave the <code>ZoneId</code> parameter empty. Then, the system selects the zone where the specified vSwitch is located.
ClusterId	String	No	c-bp67acfmazb4p****	The ID of the cluster in which to create the instance. Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.

Parameter	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The ClientToken value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see <i>How to ensure idempotence</i> in <i>ECS Developer Guide</i> .
VlanId	String	No	10	The ID of the virtual LAN (VLAN).
InnerIpAddress	String	No	192.168.*.*	The internal IP address to assign to the instance.
SystemDisk.Size	Integer	No	40	The size of the system disk. Unit: GiB. Valid values: 20 to 500. The value of this parameter must be at least 20 and greater than or equal to the image size. Default value: 40 or the size of the image, whichever is greater.
SystemDisk.Category	String	No	cloud_ssd	The category of the system disk. Valid values: - cloud_efficiency: ultra disk - san_efficiency: shared ultra disk - cloud_ssd: standard SSD - san_ssd: shared SSD - cloud_ppperf: premium performance disk - cloud_sperf: standard performance disk Default value: cloud_efficiency.

Parameter	Type	Required	Example	Description
SystemDisk.DiskName	String	No	SystemDiskName	The name of the system disk. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code>. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.
SystemDisk.Description	String	No	TestDescription	The description of the system disk. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code>. This parameter is empty by default.
DataDisk.N.Size	Integer	No	2000	The size of data disk N. Valid values of N: 1 to 16. Unit: GiB. Valid values: - Valid values when DataDisk.N.Category is set to <code>cloud_efficiency</code>: 20 to 32768 - Valid values when DataDisk.N.Category is set to <code>san_efficiency</code>: 20 to 32768 - Valid values when DataDisk.N.Category is set to <code>cloud_ssd</code>: 20 to 32768 - Valid values when DataDisk.N.Category is set to <code>san_ssd</code>: 20 to 32768 - Valid values when DataDisk.N.Category is set to <code>cloud_ppperf</code>: 20 to 32768 - Valid values when DataDisk.N.Category is set to <code>cloud_sperf</code>: 20 to 32768 The value of this parameter must be greater than or equal to the size of the snapshot specified by the <code>SnapshotId</code> parameter.

Parameter	Type	Required	Example	Description
DataDisk.N.SnapshotId	String	No	s-bp17441ohwka0yuh****	The ID of the snapshot to use to create data disk N. Valid values of N: 1 to 16. - If the <code>DataDisk.N.SnapshotId</code> parameter is specified, the <code>DataDisk.N.Size</code> parameter is ignored. The data disk is created with the size of the specified snapshot. - Use snapshots created after July 15, 2013. Otherwise, an error is returned and your request is rejected.
DataDisk.N.Category	String	No	cloud_ssd	The category of data disk N. Valid values: - cloud_efficiency: ultra disk - san_efficiency: shared ultra disk - cloud_ssd: standard SSD - san_ssd: shared SSD - cloud_ppperf: premium performance disk - cloud_sperf: standard performance disk Default value: cloud_efficiency.
DataDisk.N.DiskName	String	No	DataDiskName	The name of data disk N. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code>. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.
DataDisk.N.Description	String	No	TestDescription	The description of data disk N. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code>. This parameter is empty by default.

Parameter	Type	Required	Example	Description
DataDisk.N.Device	String	No	null	The mount point of data disk N.  Note This property will be removed in the future. We recommend that you use other properties to improve code compatibility.
DataDisk.N.DeleteWithInstance	Boolean	No	true	Specifies whether to release data disk N when the instance is released. Valid values: - true: releases data disk N when the instance is released. - false: does not release data disk N when the instance is released. Default value: true.
DataDisk.N.Encrypted	Boolean	No	false	Specifies whether to encrypt data disk N. Valid values: - true: encrypts data disk N. - false: does not encrypt data disk N. Default value: false.
DataDisk.N.KMSKeyId	String	No	0e478b7a-4262-4802-b8cb-00d****	The ID of the Key Management Service (KMS) key to use for data disk N.
Description	String	No	InstanceTest	The description of the instance. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code>. This parameter is empty by default.

Parameter	Type	Required	Example	Description
VSwitchId	String	No	vsw-bp1s5fnvk4gn2tws0****	The ID of the vSwitch to which to connect the instance. This parameter is required when you create an instance in a VPC. You can call the <code>DescribeVSwitches</code> operation to query available vSwitches. Note If the <code>VSwitchId</code> parameter is specified, the zone specified by the <code>ZoneId</code> parameter must be the zone where the specified vSwitch is located. You can also leave the <code>ZoneId</code> parameter empty. Then, the system selects the zone where the specified vSwitch is located.
PrivateIpAddress	String	No	172.16.236.**	The private IP address to assign to the instance. The private IP address must be an available IP address in the CIDR block of the specified vSwitch.
IoOptimized	String	No	optimized	Specifies whether the instance is I/O optimized. Valid values: - none: The instance is not I/O optimized. - optimized: The instance is I/O optimized.
UseAdditionalService	Boolean	No	true	Specifies whether to use the system configurations for virtual machines provided by Alibaba Cloud (Windows: NTP and KMS. Linux: NTP and YUM).
Tag.N.value	String	No	null	The value of tag N. Note This parameter will be removed in the future. We recommend that you use the <code>Tag.N.Value</code> parameter to ensure future compatibility.

Parameter	Type	Required	Example	Description
Tag.N.key	String	No	null	The key of tag N.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	No	TestKey	The key of tag N to add to the instance, disks, and primary elastic network interface (ENI). Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with <code>acs:</code> or <code>aliyun</code>. It cannot contain <code>http://</code> or <code>https://</code>.
Tag.N.Value	String	No	TestValue	The value of tag N to add to the instance, disks, and primary ENI. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length. It cannot start with <code>acs:</code> or contain <code>http://</code> or <code>https://</code>.
UserData	String	No	ZWNobyBoZWxsbyBLY3Mh	The user data of the instance. The user data must be encoded in Base64. The maximum size of raw data is 16 KB.

Parameter	Type	Required	Example	Description
KeyPairName	String	No	KeyPairTestName	The name of the key pair to bind to the instance. - For Windows instances, this parameter is ignored. This parameter is empty by default. The <code>Password</code> parameter is valid even if the KeyPairName parameter is specified. - For Linux instances, the password-based logon method is disabled by default. To make the instance more secure, we recommend that you use a key pair as logon credentials.
RamRoleName	String	No	RAMTestName	The name of the instance Resource Access Management (RAM) role. You can call the ListRoles operation provided by RAM to query the instance RAM roles that you created.
SecurityEnhancementStrategy	String	No	Active	Specifies whether to enable security hardening. Valid values: - Active: enables security hardening. This value is applicable only to public images. - Deactive: does not enable security hardening. This value is applicable to all images.
ResourceGroupId	String	No	rg-bp67acfmazb4p****	The ID of the resource group to which to assign the instance.
HpcClusterId	String	No	hpc-bp67acfmazb4p****	The ID of the HPC cluster to which to assign the instance.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Default value: false. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether required parameters are specified, the request format, service limits, and available ECS resources. If the check fails, the corresponding error code is returned. If the check succeeds, the <code>DryRunOperation</code> error code is returned. • false: The validity of the request is checked, and the request is made if the check succeeds.
DedicatedHostId	String	No	dh-bp67acfmxazb4p****	The ID of the dedicated host on which to create the instance. You can call the <code>DescribeDedicatedHosts</code> operation to query the dedicated host list.
CreditSpecification	String	No	Standard	The performance mode of the burstable instance. Valid values: • Standard: standard mode • Unlimited: unlimited mode This parameter is empty by default.
DeletionProtection	Boolean	No	false	The release protection attribute of the instance. This parameter specifies whether you can use the ECS console or call the <code>DeleteInstance</code> operation to release the instance. • true: enables release protection. • false: disables release protection.  Note This attribute can protect instances only against manual releases, not against automatic releases.

Parameter	Type	Required	Example	Description
Affinity	String	No	default	Specifies whether to associate the instance on a dedicated host with the dedicated host. Valid values: • default: does not associate the instance with the dedicated host. • host: associates the instance with the dedicated host. Default value: default.
Tenancy	String	No	default	Specifies whether to create the instance on a dedicated host. Valid values: • default: creates the instance on a non-dedicated host. • host: creates the instance on a dedicated host. If you do not specify the <code>DedicatedHostId</code> parameter, Alibaba Cloud selects a dedicated host for the instance. Default value: default.
StorageSetId	String	No	ss-bp1j4i2jdf3owlhe****	The ID of the storage set. You can call the <code>DescribeStorageSets</code> operation to query the storage set list.
StorageSetPartitionNumber	Integer	No	2	The maximum number of partitions in the storage set. Valid values: greater than or equal to 2. This parameter is required when you set <code>StorageSetId</code> .

Response parameters

Parameter	Type	Example	Description
InstanceId	String	i-bp67acfmazb4p***	The ID of the instance.

Parameter	Type	Example	Description
OrderId	String	1234567890	 Note This parameter is not supported.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TradePrice	Float	0.165	 Note This parameter is not supported.

Examples

Sample requests

```
https://ecs.example.com/?Action=CreateInstance
&RegionId=cn-qingdao-****
&ImageId=ubuntu_18_04_64_20G_alibase_20190624.vhd
&SecurityGroupId=sg-bp15ed6xelyxeycg****
&HostName=LocalHostName
&InstanceType=ecs.g6.large
&<Common request parameters>
```

Sample success responses

XML **format**

```
<CreateInstanceResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
  <InstanceId>i-bp67acfmxazb4p****</InstanceId>
</CreateInstanceResponse>
```

JSON **format**

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368",
  "InstanceId": "i-bp67acfmxazb4p****"
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
400	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is not valid.	The error message returned because the specified instance billing method for network usage is invalid.
400	InvalidParameter	The specified parameter "InternetMaxBandwidthOut" is not valid.	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Category" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
404	IoOptimized.NotSupported	The specified instancetype is not support IoOptimized instance	The error message returned because the specified instance type does not support I/O optimization.
400	InvalidDataDiskSize.ValueNotSupported	The specified DataDisk.n.Size beyond the permitted range, or the capacity of snapshot exceeds the size limit of the specified disk category.	The error message returned because the specified DataDisk.N.Size parameter is invalid or because the snapshot size exceeds the maximum capacity allowed for the specified disk category.
403	InvalidDiskCategory.NotSupported	The specified disk category is not support the specified instance type.	The error message returned because the specified disk category does not support the instance type.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified instance type does not exist or because you are not authorized to manage instances of the specified instance type.
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist in this account. Check whether the security group ID is correct.

HTTP status code	Error code	Error message	Description
400	InvalidDescription.Malformed	The specified parameter "Description" is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidHostName.Malformed	The specified parameter "HostName" is not valid.	The error message returned because the specified HostName parameter is invalid.
400	InvalidPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the specified Password parameter is invalid.
400	InvalidPasswordParameter.Mismatch	The input password should be null when passwdInherit is true.	The error message returned because the Password parameter is specified when PasswdInherit is specified.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Category" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	InvalidDiskName.Malformed	The specified parameter "SystemDisk.DiskName or DataDisk.n.DiskName" is not valid.	The error message returned because the specified SystemDisk.DiskName or DataDisk.N.DiskName parameter is invalid.
400	InvalidDiskDescription.Malformed	The specified parameter "SystemDisk.DiskDescription" or "DataDisk.n.Description" is not valid.	The error message returned because the specified SystemDisk.Description or DataDisk.N.Description parameter is invalid.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned because the specified DataDisk.N.Category parameter is invalid.
404	InvalidDataDiskSnapshotId.NotFound	The specified parameter "DataDisk.n.SnapshotId" is not valid.	The error message returned because the specified DataDisk.N.SnapshotId parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidDataDevice.Malformed	The specified parameter "DataDisk.n.Device" is not valid.	The error message returned because the specified DataDisk.N.Device parameter is invalid.
400	InvalidNodeControllerId.Malformed	The specified parameter "NodeControllerId" is not valid.	The error message returned because the specified node controller ID is invalid.
400	InvalidInnerIpAddress.Malformed	The specified parameter "InnerIpAddress" is not valid.	The error message returned because the specified InnerIpAddress parameter is invalid.
400	InvalidInnerIpAddresses.Unusable	The specified InnerIpAddress is already used or not found in usable ip range.	The error message returned because the specified internal IP address is unavailable.
400	OperationDenied	The specified parameter "VlanId" is not valid or vlan has not enough IP address.	The error message returned because the specified VlanId parameter is invalid or because available IP addresses in the specified VLAN are insufficient.
400	InvalidParameter.Conflict	The specified image does not support the specified instance type.	The error message returned because the specified image cannot be used for instances of the specified instance type.
400	ImageNotSupportCloudInit	The specified image does not support cloud-init.	The error message returned because the specified image does not support cloud-init.
400	InvalidSnapshotId.BasedSnapshotTooOld	The specified snapshot is created before 2013-07-15.	The error message returned because the specified snapshot was created on or before July 15, 2013.
400	QuotaExceed.AfterpayInstance	The maximum number of Pay-As-You-Go instances is exceeded: %s	The error message returned because resources are insufficient to create pay-as-you-go instances of the specified instance type. Reduce the number of instances to be created.
403	ImageNotSubscribed	The specified image has not be subscribed.	The error message returned because you have not subscribed to the specified Alibaba Cloud Marketplace image.

HTTP status code	Error code	Error message	Description
400	InvalidMarketImageChargeType.NotSupported	The specified chargeType of marketImage is unsupported.	The error message returned because the billing method of the Alibaba Cloud Marketplace image is not supported.
403	OperationDenied	The specified Image is disabled or is deleted.	The error message returned because the specified image is disabled or deleted.
403	InvalidSystemDiskCategory.ValueUnauthorized	The disk category is not authorized.	The error message returned because you are not authorized to use the specified disk category.
403	InvalidSnapshotId.NotReady	The specified snapshot has not completed yet.	The error message returned because the specified snapshot is being created.
403	OperationDenied	The specified snapshot is not allowed to create disk.	The error message returned because the specified snapshot cannot be used to create disks.
403	InstanceDiskCategoryLimitExceed	The total size of specified disk category in an instance exceeds.	The error message returned because the total size of disks of the specified category exceeds the maximum capacity allowed for an instance.
403	InvalidDevice.InUse	The specified device has been occupied.	The error message returned because the specified device already has a disk attached.
403	ImageRemovedInMarket	The specified market image is not available, Or the specified user defined image includes product code because it is based on an image subscribed from marketplace, and that image in marketplace including exact the same product code has been removed.	The error message returned because the specified Alibaba Cloud Marketplace image is unavailable, or because the specified custom image contains the product code of the Alibaba Cloud Marketplace image from which the custom image is derived and the Alibaba Cloud Marketplace image was removed from Alibaba Cloud Marketplace.
404	InvalidClusterId.NotFound	The ClusterId provided does not exist in our records.	The error message returned because the specified ClusterId parameter does not exist.

HTTP status code	Error code	Error message	Description
403	OperationDenied	The creation of Instance to the specified Zone is not allowed.	The error message returned because instances cannot be created in the specified zone.
403	CategoryNotSupported	The specified zone does not offer the specified disk category.	The error message returned because the specified disk category is unavailable in the specified zone.
403	OperationDenied	The specified Zone or cluster does not offer the specified disk category or the specified zone and cluster do not match.	The error message returned because the specified disk category is unavailable in the specified zone or cluster or because the specified zone and cluster do not correspond to each other.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because the requested resources are insufficient.
400	InvalidInstanceName.Malformed	The specified parameter "InstanceName" is not valid.	The error message returned because the specified InstanceName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter but cannot start with http:// or https://.
400	InvalidDiskDescription.Malformed	The specified parameter "SystemDisk.DiskDescription or DataDisk.n.Description" is not valid.	The error message returned because the specified SystemDisk.Description or DataDisk.N.Description parameter is invalid.
403	QuotaExceed.PortableCloudDisk	The quota of portable cloud disk exceeds.	The error message returned because the maximum number of removable disks has been reached.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

HTTP status code	Error code	Error message	Description
403	OperationDenied	Sales of this resource are temporarily suspended in the specified region; please try again later.	The error message returned because the requested resources are unavailable in the specified region. Try again later.
400	InvalidParameter.Conflict	The specified region and cluster do not match.	The error message returned because the specified region and the specified cluster do not correspond to each other.
403	SecurityGroupInstanceLimitExceed	The maximum number of instances in a security group is exceeded.	The error message returned because the maximum number of instances in the specified security group has been reached.
403	NodeControllerUnavailable	The Node Controller is temporarily unavailable.	The error message returned because the node controller is unavailable.
403	RegionUnauthorized	There is no authority to create instance in the specified region.	The error message returned because you are not authorized to create instances in the specified region.
403	CategoryNotSupported	The specified Zone or cluster does not offer the specified disk category.	The error message returned because the specified disk category is unavailable in the specified zone or cluster.
403	InvalidSnapshotId.NotDataDiskSnapshot	The specified snapshot is system disk snapshot.	The error message returned because the specified snapshot is a system disk snapshot.
403	CategoryNotSupported	The specified cluster does not offer the specified disk category.	The error message returned because the specified disk category is unavailable in the specified cluster.
404	InvalidVSwitchId.NotFound	Specified virtual switch does not exist.	The error message returned because the specified vSwitch does not exist.
400	InvalidParameter.Mismatch	Specified security group and virtual switch are not in the same VPC.	The error message returned because the specified security group and vSwitch do not belong to the same VPC.

HTTP status code	Error code	Error message	Description
400	InvalidNetworkType.Mismatch	Specified parameter "InternetChargeType" conflict with instance network type.	The error message returned because the network type of the instance does not support the specified billing method for network usage.
400	InvalidPrivateIpAddress	Specified private IP address is not in the CIDR block of virtual switch.	The error message returned because the specified private IP address is not within the CIDR block of the specified vSwitch.
400	InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	The error message returned because the specified private IP address is already in use. Try another IP address.
400	QuotaExceeded.PrivateIpAddress	Don't have enough private IPs in this switch	The error message returned because all the private IP addresses within the CIDR block of the specified vSwitch are already in use. Try a different vSwitch.
400	QuotaExceeded	Living instances quota exceeded in this VPC.	The error message returned because the maximum number of active instances has been reached.
400	IncorrectVSwitchStatus	The current status of virtual switch does not support this operation.	The error message returned because the specified vSwitch is in the Pending state and cannot be deleted.
400	InvalidParameter.Mismatch	Specified virtual switch is not in the specified zone.	The error message returned because the specified vSwitch does not exist in the specified zone.
400	ResourceNotAvailable	Resource you requested is not available in this region or zone.	The error message returned because VPC is not supported by the specified region or zone.
400	MissingParameter	The input parameter "VSwitchId" that is mandatory for processing this request is not supplied.	The error message returned because the VSwitchId parameter is not specified.
400	InvalidDiskCategory.Mismatch	The specified disk categories' combination is not supported.	The error message returned because the combination of specified disk categories is not supported.

HTTP status code	Error code	Error message	Description
403	DeleteWithInstance.Conflict	The specified disk is not a portable disk and cannot be set to DeleteWithInstance attribute.	The error message returned because the specified disk is not removable and cannot be released along with the instance.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account. Check whether the image ID is correct.
403	InstanceDiskNumLimitExceed	The number of specified disk in an instance exceeds.	The error message returned because the number of specified disks exceeds the upper limit for an instance.
403	IoOptimized.NotSupported	The specified image is not support IoOptimized Instance.	The error message returned because the specified image does not support I/O optimized instances.
403	ImageNotSupportInstanceType	The specified image don't support the InstanceType instance.	The error message returned because the specified image does not support the instance type.
400	InvalidIoOptimizedValue.ValueNotSupported	IoOptimized value not supported.	The error message returned because the specified IoOptimized parameter is invalid.
404	OperationDenied	Another Instance has been creating	The error message returned because no other instances can be created while an instance is being created.
403	InvalidDiskSize.TooSmall	Specified disk size is less than the size of snapshot	The error message returned because the specified disk size is smaller than the snapshot size.
403	OperationDenied	The type of the disk does not support the operation	The error message returned because the specified disk category does not support this operation.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified instance billing method does not exist.

HTTP status code	Error code	Error message	Description
400	MissingParamter	The specified parameter "Period" is not null.	The error message returned because the Period parameter is not specified.
400	InvalidPeriod	The specified period is not valid.	The error message returned because the specified Period parameter is invalid.
403	InvalidDiskCategory.Mismatch	The specified disk categories combination is not supported.	The error message returned because the combination of specified disk categories is not supported.
403	IoOptimized.NotSupported	Vpc is not support IoOptimized instance.	The error message returned because the VPC does not support I/O optimized instances.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned because the specified DataDisk.N.Category parameter is invalid.
400	InstanceDiskCategoryLimitExceed	The specified DataDisk.n.Size beyond the permitted range, or the capacity of snapshot exceeds the size limit of the specified disk category.	The error message returned because the specified DataDisk.N.Size parameter is invalid or because the snapshot size exceeds the maximum capacity allowed for the specified disk category.
403	OperationDenied	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the specified operation is valid.
403	QuotaExceed.BuyImage	The specified image is from the image market, You have not bought it or your quota has been exceeded.	The error message returned because you have not purchased the specified Alibaba Cloud Marketplace image or because your image quota has been used up.
404	DependencyViolation.IoOptimized	The specified instancetype must be IoOptimized instance.	The error message returned because the specified instance type is not I/O optimized.
404	PaymentMethodNotFound	No payment method has been registered on the account.	The error message returned because you have not configured a payment method for your account.

HTTP status code	Error code	Error message	Description
404	HOSTNAME_ILLEGAL	hostname is not valid.	The error message returned because the specified HostName parameter is invalid.
404	InvalidSystemDiskSize.LessThanImageSize	The specified parameter SystemDisk.Size is less than the image size.	The error message returned because the specified system disk size is smaller than the image size.
404	InvalidSystemDiskSize.LessThanMinSize	The specified parameter SystemDisk.Size is less than the min size.	The error message returned because the specified system disk size is smaller than the minimum allowable size.
404	InvalidSystemDiskSize.MoreThanMaxSize	The specified SystemDisk.Size parameter exceeds the maximum size.	The error message returned because the specified system disk size exceeds the upper limit.
404	InvalidDataDiskSnapshotId.NotFound	The specified parameter DataDisk.n.SnapshotId is not valid.	The error message returned because the specified DataDisk.N.SnapshotId parameter is invalid.
403	InvalidVSwitchId.NotFound	The VSwitchId provided does not exist in our records.	The error message returned because the specified vSwitch does not exist.
400	InvalidParameter	The specified vm bandwidth is not valid.	The error message returned because the specified bandwidth of the instance is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter SystemDisk.Category is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
403	InvalidParameter.ResourceOwnerAccount	ResourceOwnerAccount is Invalid.	The error message returned because the specified ResourceOwnerAccount parameter is invalid.
404	InvalidSystemDiskSize	The specified parameter SystemDisk.Size is invalid.	The error message returned because the specified SystemDisk.Size parameter is invalid.
400	InvalidParameter.Bandwidth	The specified parameter Bandwidth is not valid.	The error message returned because the specified bandwidth is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidIpAddress.AlreadyUsed	The specified IPAddress is already used by other resource.	The error message returned because the specified IP address is already in use. Try another one.
403	InvalidUserData.Forbidden	User not authorized to input the parameter "UserData", please apply for permission "UserData"	The error message returned because you do not have the permissions to manage user data. Apply for the permissions first.
400	InvalidUserData.SizeExceeded	The specified parameter "UserData" exceeds the size.	The error message returned because the size of user data specified by the UserData parameter exceeds the upper limit.
400	InvalidUserData.NotSupported	The specified parameter "UserData" only support the vpc and IoOptimized Instance.	The error message returned because the specified UserData parameter is not supported. UserData is supported only by I/O optimized instances that reside in VPCs.
403	Zone.NotOpen	The specified zone is not granted to you to buy resources yet.	The error message returned because you are not authorized to purchase resources in the specified zone.
403	Zone.NotOnSale	The specified zone is not available for purchase.	The error message returned because the requested resources are unavailable in the specified zone. Try a different instance type or select a different region or zone.
403	InvalidClusterId.NotFound	The specified clusterId does not exist.	The error message returned because the specified ClusterId parameter does not exist.
403	InvalidInstanceType.ZoneNotSupported	The specified zone does not support this instancetype.	The error message returned because the specified instance type is not supported in the specified zone.
400	InstanceDiskNumber.LimitExceed	The total number of specified disk in an instance exceeds.	The error message returned because the number of specified disks exceeds the upper limit for an instance.

HTTP status code	Error code	Error message	Description
400	Account.Arrearage	Your account has an outstanding payment.	The error message returned because you have unpaid orders in your account.
400	InvalidDiskCategory.ValueNotSupported	The specified parameter "DiskCategory" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	InvalidAutoRenewPeriod.ValueNotSupported	The specified autoRenewPeriod is not valid.	The error message returned because the specified AutoRenewPeriod parameter is invalid.
400	QuotaExceed.AfterpayInstance	The maximum number of Pay-As-You-Go instances is exceeded.	The error message returned because resources are insufficient to create pay-as-you-go instances of the specified instance type. Reduce the number of instances to be created.
400	InvalidSpotStrategy	The specified SpotStrategy is not valid.	The error message returned because the specified SpotStrategy parameter is invalid.
400	InvalidSpotParam.EmptyZoneID	The specified ZoneId is empty when SpotStrategy is set.	The error message returned because the ZoneId parameter is not specified while the SpotStrategy parameter is specified.
400	InvalidSpotPriceLimit	The specified SpotPriceLimit is not valid.	The error message returned because the specified SpotPriceLimit parameter is invalid.
400	InvalidSpotDuration	The specified SpotDuration is not valid.	The error message returned because the specified SpotDuration parameter is invalid.
400	InvalidSpotAuthorized	The specified Spot param is unauthorized.	The error message returned because you are not authorized to set the SpotDuration parameter.

HTTP status code	Error code	Error message	Description
400	InvalidSpotPrepaid	The specified Spot type is not support PrePay Instance.	The error message returned because preemptible instances do not support the subscription billing method.
400	InvalidSpotAliUid	The specified UID is not authorized to use SPOT instance.	The error message returned because you are not authorized to create preemptible instances.
403	InvalidPayMethod	The specified pay method is not valid.	The error message returned because the specified payment method is invalid.
403	OperationDenied.ImageNotValid	The specified Image is disabled or is deleted.	The error message returned because the specified ImageId parameter does not exist.
400	InvalidTagKey.Malformed	The specified Tag.N.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidParameter.Bandwidth	%s	The error message returned because the specified bandwidth is invalid.
400	InvalidDataDiskCategory.ValueNotSupported	%s	The error message returned because the specified data disk category is invalid. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidSystemDiskCategory.ValueNotSupported	%s	The error message returned because the operation is not supported by the specified system disk category.
400	InvalidParameter.Conflict	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned because the specified billing method for network usage is not supported.

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueNotSupported	%s	The error message returned because the operation is not supported by the specified instance type.
403	InstanceType.Offline	%s	The error message returned because the operation is not supported while the instance type is retired or while resources of the instance type are insufficient.
400	RegionUnauthorized	%s	The error message returned because you are not authorized to perform the operation in the specified region. %s is a variable. An error message is dynamically returned based on call conditions.
500	InternalError	%s	The error message returned because an internal error has occurred.
400	Zone.NotOnSale	%s	The error message returned because the requested resources are unavailable in the specified zone. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidSystemDiskSize.ValueNotSupported	%s	The error message returned because the specified SystemDisk.Size parameter is invalid.
400	InvalidDataDiskSize.ValueNotSupported	%s	The error message returned because the specified data disk size is invalid. %s is a variable. An error message is dynamically returned based on call conditions.
403	DependencyViolation.WindowsInstance	The instance creating is window, cannot use ssh key pair to login.	The error message returned because the specified instance is a Windows instance and does not support logons using SSH key pairs.

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueNotSupported	The specified parameter "KeyPairName" only support loOptimized Instance.	The error message returned because non-I/O optimized instances do not support key pairs.
403	RealNameAuthenticationError	Your account has not passed the real-name authentication yet.	The error message returned because you have not completed real-name verification. Complete real-name verification and try again.
403	InvalidNetworkType.MismatchRamRole	Ram role cannot be applied to instances of Classic network type.	The error message returned because instance RAM roles can be used only for instances in VPCs, not for instances in the classic network.
403	InvalidUser.PassRoleForbidden	The RAM user does not have the privilege to pass a RAM role.	The error message returned because the RAM user is not authorized to pass a RAM role.
404	InvalidRamRole.NotFound	The specified RAMRoleName does not exist.	The error message returned because the specified RamRoleName parameter does not exist.
400	OperationDenied	The specified InstanceType or Zone is not available or not authorized.	The error message returned because the specified instance type or zone is unavailable or because you are not authorized to use resources of the specified instance type or within the specified zone.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified resource group does not exist.

HTTP status code	Error code	Error message	Description
403	IncorrectVpcStatus	Current VPC status does not support this operation.	The error message returned because the operation is not supported while the VPC is in the current state.
400	InvalidParameter.EncryptedIllegal	%s	The error message returned because the specified parameter is invalid. Check whether your encryption operation is valid. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidParameter.EncryptedNotSupported	%s	The error message returned because the specified parameter is invalid and your encryption operation is not supported. %s is a variable. An error message is dynamically returned based on call conditions.
400	EncryptedOption.Conflict	%s	The error message returned because the parameter used to encrypt disks is not supported. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidSpotPriceLimit.LowerThanPublicPrice	The specified parameter "spotPriceLimit" can't be lower than current public price.	The error message returned because the specified value of SpotPriceLimit is lower than the current market price.
400	InvalidHpcClusterId.Unnecessary	The specified HpcClusterId is unnecessary.	The error message returned because the HpcClusterId parameter is specified.
400	InvalidVSwitchId.Necessary	The VSwitchId is necessary.	The error message returned because the VSwitchId parameter is not specified.
400	InvalidHpcClusterId.Necessary	The HpcClusterId is necessary.	The error message returned because the HpcClusterId parameter is not specified.
400	InvalidHpcClusterId.NotFound	The specified HpcClusterId is not found.	The error message returned because the specified HpcClusterId parameter does not exist.

HTTP status code	Error code	Error message	Description
400	InvalidHpcClusterId.Creating	The specified HpcClusterId is creating.	The error message returned because the specified HPC cluster is being created.
400	QuotaExceeded.PrivateIpAddress	Don't have enough private IPs in this switch.	The error message returned because no private IP address is available in the CIDR block of the vSwitch. Try a different vSwitch.
400	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified PeriodUnit parameter is invalid.
400	IncorrectImageStatus	Encrypted snapshots do not support this operation.	The error message returned because the operation is not supported by encrypted snapshots.
400	InvalidTagValue.Malformed	The specified Tag.N.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	InvalidSecurityGroup.NotInDefaultVpc	%s	The error message returned because the specified security group is not in the default VPC. Check whether the specified SecurityGroupId parameter is valid.
400	VpcNotFound	Vpc is not found according to the specified VSwitch or the vpc does not belong to you.	The error message returned because no VPC is found based on the specified vSwitch or because the corresponding VPC does not belong to you.
403	InvalidParameter.NotMatch	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
403	OperationDenied.InvalidNetworkType	%s	The error message returned because the operation is not supported by the specified network type.
400	InvalidSpotInterruptionBehavior	%s	The error message returned because the specified SpotInterruptionBehavior parameter is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidSpotInterruptionBehavior.ClassicNetworkNotSupport	The specified SpotInterruptionBehavior does not support Classic network Instance.	The error message returned because the operation is not supported by instances in the classic network.
403	InvalidSpotInterruptionBehavior.LocalDiskNotSupport	The specified SpotInterruptionBehavior does not support local disk instance.	The error message returned because the operation is not supported by instances that have local disks attached.
400	OperationDenied.IllegalPaymentPolicy	The current payment policy is illegal, please connect your service provider to authenticate relative agreement.	The error message returned because the current payment policy is invalid. Contact your service provider to validate agreements relevant to the payment policy.
400	InvalidDeploymentOnHost	%s	The error message returned because the instance cannot be deployed in the specified deployment set.
400	InvalidInstanceChargeType.NotSupport	The Dedicated host not support the specified Instance charge type.	The error message returned because the dedicated host does not support instances that use the specified billing method.
400	InvalidNetworkType.NotSupported	The classic networkType not support create ECS on dedicatedHost	The error message returned because dedicated hosts do not support instances that reside in the classic network.
400	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified DedicatedHostId parameter does not exist.
400	InvalidDedicatedHostStatus.NotSupport	Operation denied due to dedicated host status.	The error message returned because the operation is not supported while the dedicated host is in the current state.
400	IncorrectDedicatedHostStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
400	ChargeTypeViolation.PostPaidDedicatedHost	Prepaid instance onto postpaid dedicated host is not allowed	The error message returned because subscription instances cannot be deployed on pay-as-you-go dedicated hosts.

HTTP status code	Error code	Error message	Description
400	InvalidPeriod.ExceededDedicatedHost	Instance expired date can't exceed dedicated host expired date.	The error message returned because the expiration date of the instance is later than that of the dedicated host.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorize.	The error message returned because you are not authorized to use the specified instance type.
400	DedicatedHostType.Unmatched	The specified DedicatedHostType doesn't match the instance type.	The error message returned because the specified dedicated host type does not correspond to the specified instance type.
400	ChargeTypeViolation.PostPaidDedicatedHost	Prepaid instance onto postpaid dedicated host is not allowed.	The error message returned because subscription instances cannot be deployed on pay-as-you-go dedicated hosts.
400	InvalidParam.Tenancy	The specified Tenancy is invalid.	The error message returned because the specified Tenancy parameter is invalid.
403	OperationDenied.ImageNotValid	%s	The error message returned because the image does not support the operation.
403	QuotaExceed.PostPaidDisk	Living postPaid disks quota exceeded.	The error message returned because the maximum number of pay-as-you-go disks has been reached.
403	QuotaExceed.DeploymentSetInstanceQuotaFull	instance quota in one deployment set exceeded.	The error message returned because the maximum number of instances in the current deployment set has been reached.
403	InvalidDiskCategory.NotSupported	The specified disk category is not supported.	The error message returned because the specified disk category does not support the operation.
400	InvalidParameter.CreditSpecification	The specified CreditSpecification is not supported in this region.	The error message returned because the specified credit specification is not supported in this region.

HTTP status code	Error code	Error message	Description
403	OperationDenied.ImageNotValid	the specified image is not published in the region.	The error message returned because the specified image is unavailable in the region.
403	OperationDenied.ImageNotValid	the specified image is not found in marketplace.	The error message returned because the specified image does not exist in Alibaba Cloud Marketplace.
404	InvalidMarketImage.NotFound	The specified marketplace image does not exist, please change the imageId and try again.	The error message returned because the specified Alibaba Cloud Marketplace image does not exist. Modify the ImageId parameter value and try again later.
400	InvalidInstanceType.NotSupported	The specified instanceType is not supported by the deployment set.	The error message returned because the specified instance type is not supported by the deployment set. Try another instance type.
400	InvalidVpcZone.NotSupported	Zone of the specified VSwitch is not available for creating, please try in other zones.	The error message returned because the default vSwitch cannot be created in the specified zone. Try another zone.
400	IncorrectDefaultVpcStatus	The status of the default VPC is invalid.	The error message returned because the state of the default VPC is invalid.
404	DeploymentSet.NotFound	The specified deployment set does not exist.	The error message returned because the specified DeploymentSetId parameter does not exist.
403	OperationDenied.LocalDiskUnsupported	The configuration change is not allowed when the specified instance has local disks mounted.	The error message returned because the instance types of instances that have local disks attached cannot be changed.
403	OperationDenied.InconsistentNetwork	The specified security group and vswitch are not in the same vpc.	The error message returned because the specified security group and vSwitch do not belong to the same VPC.

HTTP status code	Error code	Error message	Description
403	OperationDenied	If the network segment of the vswitch is the same as that of its VPC. Therefore, the VPC cannot create other vswitches across the region.	The error message returned because the VPC and vSwitch have the same CIDR block and no additional vSwitches can be created for zones in the VPC.
403	DefaultVswitch.Existed	The default vswitch for VPC already exists.	The error message returned because a default vSwitch already exists in the current VPC.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	CategoryViolation	The specified instance does not support this operation because of its disk category.	The error message returned because the configurations of instances that have local disks attached cannot be changed.
403	ResourcesNotInSameZone	The specified instance and dedicated host are not in the same zone.	The error message returned because the specified instance and dedicated host are not located within the same region.
403	InvalidRegion.NotSupported	The specified region does not support byok.	The error message returned because the Bring Your Own Key (BYOK) feature is not supported in the region.
403	UserNotInTheWhiteList	The user is not in byok white list.	The error message returned because you are not authorized to use the BYOK feature. Try again when you are authorized.
400	InvalidParameter.EncryptedIllegal	The specified parameter Encrypted must be true when kmsKeyId is not empty.	The error message returned because the encryption feature is not enabled after a KMS key ID is specified.
400	IoOptimized.NotSupported	The specified instance must be ioOptimized instance when kmsKeyId is not empty.	The error message returned because I/O optimized instances must be used after the KMSKeyId parameter is specified.

HTTP status code	Error code	Error message	Description
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a KMS key ID is specified for a disk. You can call the DescribeKey operation of KMS to query information about the specified CMK.
404	InvalidParameter.KMSKeyId.NotFound	The specified KMSKeyId does not exist.	The error message returned because the specified DataDisk.N.KMSKeyId parameter does not exist.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access KMS resources.
403	SecurityRisk.3DVerification	We have detected a security risk with your default credit or debit card. Please proceed with verification via the link in your email.	The error message returned because risks are detected in your default credit card or debit card. Click the URL in the email for verification.
403	InvalidDisk.SystemDiskSize	The specified SystemDiskSize beyond the permitted range.	The error message returned because the specified system disk size exceeds the upper limit.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.
400	OperationDenied	The current user does not support this operation.	The error message returned because your account does not support the operation.
403	InsufficientBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group does not exist.

HTTP status code	Error code	Error message	Description
403	InvalidVSwitchId.Invalid	%s	The error message returned because the specified PrivateIpAddress parameter is invalid.
404	InvalidDiskIds.NotPortable	The specified DiskId is not portable.	The error message returned because the specified disk is not removable.
403	QuotaExceed.Tags	%s	The error message returned because the number of specified tags exceeds the upper limit. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
401	InvalidRamRole.NotEcsRole	The specified ram role is not authorized for ecs, please check your role policy.	The error message returned because the specified RAM role is not authorized to use ECS. Check your role policy.
403	EnterpriseGroupLimited.MutliGroupType	The specified instance can not join multi SecurityGroup types.	The error message returned because the specified instance cannot belong to both a basic and an advanced security group. You can call the DescribeSecurityGroups operation to query the type of a specific security group.
403	QuotaExceed.ElasticQuota	No additional quota is available for the specified ECS instance type.	The error message returned because the maximum number of instances of the specified instance type in the region has been reached. You can try another region or instance type, or reduce the number of instances that you want to purchase. Alternatively, you can go to the ECS console or Quota Center to request a quota increase.

HTTP status code	Error code	Error message	Description
403	QuotaExceed.ElasticQuota	The number of the specified ECS instances has exceeded the quota of the specified instance type.	The error message returned because the maximum number of instances of the specified instance type in the region has been reached. You can try another region or instance type, or reduce the number of instances that you want to purchase. Alternatively, you can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of vCPUs assigned to the ECS instances has exceeded the quota in the zone.	The error message returned because the maximum number of vCPUs for all instance types has been reached in the zone. You can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of the specified ECS instances has exceeded the quota of the specified instance type, or the number of vCPUs assigned to the ECS instances has exceeded the quota in the zone.	The error message returned because the maximum number of instances of the specified instance type in the current region has been reached or because the maximum number of vCPUs for all instance types has been reached. You can go to the ECS console or Quota Center to request a quota increase.
400	InvalidHttpEndpoint.NotSupported	The specified HttpEndpoint not supported, you can use enabled(default) or disabled.	The error message returned because the specified HttpEndpoint parameter is invalid. The valid values of this parameter are enabled and disabled. The default value is enabled.
400	InvalidHttpTokens.NotSupported	The specified HttpTokens not supported, you can use optional(default) or required.	The error message returned because the specified HttpTokens parameter is invalid. The valid values of this parameter are optional and required. The default value is optional.

HTTP status code	Error code	Error message	Description
400	InvalidHttpPutResponseHopLimit.NotSupported	The specified HttpPutResponseHopLimit not supported, more than 1 and less than 64 is reasonable.	The error message returned because the specified HttpPutResponseHopLimit parameter is invalid. The valid values of this parameter are 1 to 64.
400	InvalidPrivateIpAddress.Malformed	Specified private IP address is malformed.	The error message returned because the specified PrivateIpAddress parameter is invalid.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because you cannot modify security groups managed by cloud services.
400	InvalidOperation.VpcHasEnabledAdvancedNetworkFeature	The specified vpc has enabled advanced network feature.	The error message returned because advanced features are enabled for the specified VPC. You cannot create low-specification instances in the VPC.
400	MissingParameter.PrivatePoolOptionsId	The specified PrivatePoolOptions.Id should not be null.	The error message returned because the PrivatePoolOptions.Id parameter is not specified.
400	Invalid.PrivatePoolOptionsId	The specified PrivatePoolOptions.Id is invalid.	The error message returned because the specified PrivatePoolOptions.Id parameter is invalid.
400	Invalid.PrivatePoolOptionsId	The parameter PrivatePoolOptions.Id should be null when PrivatePoolOptions.MatchCriteria is not Target.	The error message returned because the PrivatePoolOptions.Id parameter is specified when the PrivatePoolOptions.MatchCriteria parameter is set to Open or None.
400	DedicatedHostNotSupported	DedicatedHost is not supported for PrivatePool.	The error message returned because private pools cannot be used to create instances on dedicated hosts.
400	SpotNotSupported	Spot is not supported for PrivatePool.	The error message returned because private pools cannot be used to create preemptible instances.

HTTP status code	Error code	Error message	Description
400	ClassicNetworkNotSupported	Classic network is not supported for PrivatePool.	The error message returned because private pools cannot be used to create instances in the classic network.
400	Invalid.InstanceId	Instance does not exist.	The error message returned because the instance does not exist.
400	Invalid.PrivatePoolOptions.MatchCriteria	Target mode does not support this operation.	The error message returned because the operation is not supported while the PrivatePoolOptions.MatchCriteria parameter is set to Target.
400	MissingParameter.PrivatePoolOptions.Id	The specified PrivatePoolOptions.Id should not be null.	The error message returned because the PrivatePoolOptions.Id parameter is not specified.
400	Invalid.PrivatePoolOptions.Id	The PrivatePool does not exist.	The error message returned because the private pool does not exist.
400	Invalid.InstanceType	The InstanceType does not match the PrivatePool.	The error message returned because the instance type does not match the private pool.
400	Invalid.InstanceChargeType	The InstanceChargeType does not match the PrivatePool.	The error message returned because the specified instance billing method does not match the specified private pool.
400	Invalid.ZoneId	The ZoneId does not match the PrivatePool.	The error message returned because the zone does not match the private pool.
400	Invalid.PrivatePoolOptions.MatchCriteria	The PrivatePoolOptions.MatchCriteria does not match the PrivatePool.	The error message returned because the specified PrivatePoolOptions.MatchCriteria parameter does not match the private pool.
400	InvalidPlatform.ValueNotSupported	The Platform does not match the PrivatePool.	The error message returned because the specified Platform parameter does not match the private pool.

HTTP status code	Error code	Error message	Description
400	InvalidAliUid	The PrivatePool does not belong to the user of the Instance.	The error message returned because the private pool does not belong to the user who attempted to create the instance.
400	Invalid.InstanceId	The Instance dose not attached to a PrivatePool.	The error message returned because the instance does not match the private pool.

5.1.4.3. StartInstance

You can call this operation to start an ECS instance. After the operation is called, the instance enters the Starting state.

Description

When you call this operation, take note of the following items:

- The ECS instance to be started must be in the **Stopped** (`Stopped`) state.
- If `OperationLocks` in the `DescribeInstances` response contains `"LockReason" : "security"` for an instance, the instance is locked for security reasons and cannot be started through calls to this operation.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	StartInstance	The operation that you want to perform. Set the value to StartInstance.
InstanceId	String	Yes	i-bp67acfmxazb4p****	The ID of the instance that you want to start.

Parameter	Type	Required	Example	Description
InitLocalDisk	Boolean	No	true	Specifies whether to restore the instance to its initial health status. This parameter is applicable to instances of the instance families such as d1 and i2 that are equipped with local disks. If a local disk of a d1 or i2 instance fails, you can use this parameter to specify whether to restore the instance to its initial health status on startup. Default value: false. Valid values: • true: restores the instance to its initial health status on startup. After the instance is restored to its initial health status, data stored on the local disks of the instance is lost. • false: does not perform any operations and keeps the instance in the current state.
DryRun	Boolean	No	true	Specifies whether to check the validity of the request without actually making the request. Default value: false. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether RAM users are authorized, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, the DryRunOperation error code is returned. • false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned and the request is made.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=StartInstance
&InstanceId=i-bp67acfmazb4p****
&InitLocalDisk=true
&<Common request parameters>
```

Sample success responses

XML format

```
<StartInstanceResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</StartInstanceResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InsufficientBalance	Your account does not have enough balance.	The error message returned because you have insufficient balance in your account. Add funds to your account and try again.
500	InstanceNotReady	The specified instance is not ready for use	The error message returned because the specified instance cannot be connected for the moment. Try again later.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	DiskError	IncorrectDiskStatus.	The error message returned because the status of the specified disk is invalid.
403	InstanceExpired	The postPaid instance has been expired.Please ensure your account have enough balance.	The error message returned because the pay-as-you-go instance has expired. Make sure that your account balance is sufficient.
403	InstanceExpired	The prePaid instance has been expired.	The error message returned because the subscription instance has expired.
403	InstanceNotReady	The specified instance is not ready for use.	The error message returned because the operation is not supported while the resource is in the current state. Try again later.
403	DiskInArrears	The specified operation is denied as your disk has expired.	The error message returned because the disk has expired due to overdue payments.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because the requested resources are insufficient in the specified zone. Try other resource types, regions, or zones.
403	OperationDenied.SpotPriceLowerThanPublicPrice	The spot instance price is lower than public price.	The error message returned because the user-defined maximum hourly price of a preemptible instance is lower than the current market price.
403	IncorrectInstanceState	%s	The error message returned because the operation is not supported while the instance is in the current state.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

5.1.4.4. StopInstance

You can call this operation to stop an ECS instance in the Running state. After the operation is called, the status of the instance changes to Stopping and then to Stopped.

Description

- If OperationLocks in the DescribeInstances response contains "LockReason" : "security" for an instance, the instance is locked for security reasons and cannot be stopped through calls to this operation.
- To stop an instance of an instance family equipped with local SSDs, take note of the following items:
 - After the instance is stopped, data in its local disks is cleared. To ensure data availability, we recommend that you implement data redundancy at the application layer.
 - ECS automatically ignores the `ConfirmStop` parameter in the requests to stop instances of other instance families.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	StopInstance	The operation that you want to perform. Set the value to StopInstance.
InstanceId	String	Yes	i-bp67acfmxazb4p h***	The ID of the instance.
ForceStop	Boolean	No	false	Specifies whether to forcibly stop the instance. Default value: false. Valid values: • true: forcibly stops the instance. • false: normally stops the instance.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	true	Specifies whether to check the validity of the request without actually making the request. Default value: false. Valid values: • true: The validity of the request is checked but the request is not made. Check items include the request format, service limits, available ECS resources, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, the <code>DryRunOperation</code> error code is returned. • false: The validity of the request is checked, and the request is made if the check succeeds.

Response parameters

Parameter	Type	Example	Description
RequestId	String	1C488B66-B819-4D14-8711-C4EAAA13AC01	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=StopInstance
&InstanceId=i-bp67acfmxazb4ph***
&ConfirmStop=true
&ForceStop=false
&<Common request parameters>
```

Sample success responses

XML format

```
<StopInstanceResponse>
  <RequestId>1C488B66-B819-4D14-8711-C4EAAA13AC01</RequestId>
</StopInstanceResponse>
```

JSON format

```
{
  "RequestId": "1C488B66-B819-4D14-8711-C4EAAA13AC01"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	DiskError	IncorrectDiskStatus	The error message returned because the status of the specified disk is invalid.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InstanceType.ParameterMismatch	The input parameter ConfirmStop must be true when an instance have localstorage.	The error message returned because the ConfirmStop parameter is set to false for an instance that uses local storage.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance first.
403	InvalidInstanceId.NotSupport	Classic network Instance does not support this operation.	The error message returned because the operation is not supported by instances in the classic network.
403	InvalidInstanceId.NotSupport	Pre pay instance does not support this operation.	The error message returned because the operation is not supported by subscription instances.
403	InvalidInstanceId.NotSupport	Local disk instance does not support this operation.	The error message returned because the operation is not supported by instances that use local disks.

HTTP status code	Error code	Error message	Description
403	InvalidInstanceId.NotSupport	Spot instance does not support this operation.	The error message returned because the operation is not supported by preemptible instances.
403	IncorrectInstanceState	%s	The error message returned because the operation is not supported while the instance is in the current state.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

5.1.4.5. RebootInstance

You can call this operation to restart an instance in the Running state.

Description

- Only instances in the **Running** (`Running`) state can be restarted.
- After the operation is called, the status of the corresponding instance changes to **Starting** (`Starting`).
- Instances can be forcibly restarted. A forced restart (`ForceStop`) is equivalent to powering off traditional servers to restart them. This operation can cause data loss if data in the instance is not written to disks.
- If `OperationLocks` in the `DescribeInstances` response contains "LockReason": "security" for an instance, the instance is locked for security reasons and cannot be restarted through calls to this operation.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RebootInstance	The operation that you want to perform. Set the value to <code>RebootInstance</code> .
InstanceId	String	Yes	i-bp67acfmxyzb4p-h***	The ID of the instance.

Parameter	Type	Required	Example	Description
ForceStop	Boolean	No	false	Specifies whether to forcibly stop the instance to restart it. Default value: false. Valid values: • true: forcibly stops the instance. This operation is equivalent to the typical power-off operation. Cache data that is not written to storage in the instance will be lost. • false: normally stops the instance.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Default value: false. Valid values: • true: The validity of the request is checked but the request is not made. Check items include the request format, service limits, available ECS resources, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, the <code>DryRunOperation</code> error code is returned. • false: The validity of the request is checked, and the request is made if the check succeeds.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=RebootInstance
&InstanceId=i-bp67acfmazb4ph***
&ForceStop=false
&<Common request parameters>
```

Sample success responses

`XML` format

```
<RebootInstanceResponse>
  <RequestId>F2E2C40D-AB09-45A1-B5C5-EB9F5C4E4E4A</RequestId>
</RebootInstanceResponse>
```

JSON **format**

```
{
  "RequestId": "F2E2C40D-AB09-45A1-B5C5-EB9F5C4E4E4A"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	DiskError	IncorrectDiskStatus.	The error message returned because the status of the specified disk is invalid.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance first.
403	IncorrectInstanceState	%s	The error message returned because the operation is not supported while the instance is in the current state.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

5.1.4.6. DeleteInstance

You can call this operation to release an ECS instance.

Description

- After an instance is released, all the physical resources used by the instance are recycled. Relevant data is erased and cannot be recovered.
- Disks attached to the instance:
 - The disks for which `DeleteWithInstance` is set to true are released along with the instance.
 - For disks for which `DeleteAutoSnapshot` is set to false, the automatic snapshots are retained.
 - For disks for which `DeleteAutoSnapshot` is set to true, the automatic snapshots are released.
 - Manual snapshots of the disks are retained.
 - If `OperationLocks` in the `DescribeInstances` response contains `"LockReason" : "security"` for an instance, the instance is locked for security reasons. Even if `DeleteWithInstance` is set to false for the disks attached to the instance, this parameter is ignored and the disks are released along with the instance.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteInstance	The operation that you want to perform. Set the value to DeleteInstance.
InstanceId	String	Yes	i-bp1g6zv0ce8ogh u7k***	The ID of the instance.

Parameter	Type	Required	Example	Description
Force	Boolean	No	false	Specifies whether to forcibly release the instance in the Running (<code>Running</code>) state. Default value: false. Valid values: • true: forcibly releases the instance in the Running (<code>Running</code>) state. This operation is equivalent to the power-off operation. Temporary data in the memory and storage of the instance is erased and cannot be recovered. • false: normally releases the instance. This value is valid only for an instance in the Stopped (<code>Stopped</code>) state.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=DeleteInstance
&InstanceId=i-bp1g6zv0ce8oghu7k****
&Force=false
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteInstanceResponse>
  <RequestId>928E2273-5715-46B9-A730-238DC996A533</RequestId>
</DeleteInstanceResponse>
```

JSON format

```
{
  "RequestId": "928E2273-5715-46B9-A730-238DC996A533"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned because the operation is not supported while the instance uses the current billing method.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	DependencyViolation.SLBConfiguring	Specified operation is denied as your instance is using by another product.	The error message returned because the instance is referenced by an SLB instance that is being configured.
400	DependencyViolation.RouteEntry	Specified instance is used by route entry.	The error message returned because custom routing rules still exist in the VPC.
400	InvalidParameter	The input parameter InstanceId is invalid.	The error message returned because the specified InstanceId parameter is invalid.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
403	IncorrectInstanceStatus.Initializing	The specified instance status does not support this operation.	The error message returned because the instance is being initialized and cannot be released. Try again later.
403	IncorrectInstanceStatus	The specified instance is still attached by volumes.	The error message returned because the specified instance still has data volumes.
403	InvalidOperation.DeletionProtection	%s	The error message returned because the operation is invalid. Disable release protection for the instance first.

HTTP status code	Error code	Error message	Description
403	InvalidOperation.EniLinked	%s	The error message returned because the operation is not supported while the instance is bound with elastic network interfaces (ENIs). You must unbind the ENIs before you can release the instance.

5.1.4.7. AttachInstanceRamRole

You can call this operation to attach an instance RAM role to one or more instances. An instance can have only one instance RAM role. If an instance already has an instance RAM role, an error is returned when you attach another instance RAM role to the instance.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AttachInstanceRamRole	The operation that you want to perform. Set the value to AttachInstanceRamRole.
InstanceIds	String	Yes	["i-bp14ss25xca5ex1u****" , "i-bp154z5o1qjalfs****" , "i-bp10ws62o04ubhvj****" ...]	The IDs of instances. The value can be a JSON array that consists of up to 100 instance IDs. Separate multiple instance IDs with commas (,).
RamRoleName	String	Yes	RamRoleTest	The name of the instance RAM role. You can call the ListRoles operation provided by RAM to query the instance RAM roles that you created.
RegionId	String	Yes	cn-qingdao-env17-d01	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
AttachInstanceRamRoleResults	Array of AttachInstanceRamRoleResults		Details about the results of attaching the instance RAM role.
AttachInstanceRamRoleResult			
Code	String	200	Indicates whether the instance RAM role was attached. If 200 is returned, the instance RAM role was attached. If any other value is returned, the instance RAM role failed to be attached. For more information, see the "Error codes" section.
InstanceId	String	i-bp10ws62o04ubhvi***	The ID of the instance.
Message	String	success	Indicates whether the instance RAM role was attached. If success is returned, the instance RAM role was attached. If any other value is returned, the instance RAM role failed to be attached. For more information, see the "Error codes" section.
Success	Boolean	true	Indicates whether the instance RAM role was attached. - true: The instance RAM role was attached. - false: The instance RAM role failed to be attached.
FailCount	Integer	0	The number of the instances to which the instance RAM role failed to be attached.
RamRoleName	String	RamRoleTest	The name of the instance RAM role.
RequestId	String	D9553E4C-6C3A-4D66-AE79-9835AF705639	The ID of the request.
TotalCount	Integer	1	The total number of instances to which you attempted to attach the instance RAM role.

Examples

Sample requests

```
https://ecs.example.com/?Action=AttachInstanceRamRole
&InstanceIds=["i-bp10ws62o04ubhvi****"]
&RamRoleName=RamRoleTest
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

XML format

```
<AttachInstanceRamRoleResponse>
  <RequestId>E6352369-5C2B-41CD-AB50-471550C8F674</RequestId>
  <AttachInstanceRamRoleResults>
    <AttachInstanceRamRoleResult>
      <InstanceId>i-bp10ws62o04ubhvi****</InstanceId>
      <Code>200</Code>
      <Message>success</Message>
    </AttachInstanceRamRoleResult>
  </AttachInstanceRamRoleResults>
  <TotalCount>1</TotalCount>
  <FailCount>0</FailCount>
  <RamRoleName>RamRoleTest</RamRoleName>
</AttachInstanceRamRoleResponse>
```

JSON format

```
{
  "RequestId": "D9553E4C-6C3A-4D66-AE79-9835AF705639",
  "AttachInstanceRamRoleResults": {
    "AttachInstanceRamRoleResult": [
      {
        "Message": "success",
        "InstanceId": "i-bp10ws62o04ubhvi****",
        "Code": "200"
      }
    ]
  },
  "TotalCount": 1,
  "FailCount": 0,
  "RamRoleName": "RamRoleTest"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceIds.Malformed	The specified instanceids are not valid.	The error message returned because the specified Instanceids parameter is invalid.

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified instanceId does not exist	The error message returned because a specified instance does not exist.
403	InvalidNetworkType.MismatchRamRole	Ram role cannot be applied to instances of Classic network type.	The error message returned because instance RAM roles can be used only for instances in VPCs, not for instances in the classic network.
403	InvalidUser.PassRoleForbidden	The RAM user does not have the privilege to pass a RAM role.	The error message returned because the RAM user is not authorized to pass the RAM role.
404	InvalidRamRole.NotFound	The specified RAMRoleName does not exist.	The error message returned because the specified RamRoleName parameter does not exist.
404	InvalidRamRole.NotEcsRole	The specified ram role is not authorized for ecs, please check your role policy.	The error message returned because the specified RAM role is not authorized to use ECS. Check your role policy.

5.1.4.8. DetachInstanceRamRole

You can call this operation to detach instance RAM roles from one or more ECS instances.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DetachInstanceRamRole	The operation that you want to perform. Set the value to DetachInstanceRamRole.
InstanceIds	String	Yes	["i-bp67acfmxb4p****", "i-bp67acfmxb4p****", "i-bp67acfmxb4p****" ...]	The IDs of instances. The value can be a JSON array that consists of up to 100 instance IDs. Separate multiple instance IDs with commas (,).
RegionId	String	Yes	cn-qingdao-env17-d01	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
RamRoleName	String	No	RamRoleTest	The name of the instance RAM role. You can call the ListRoles operation provided by RAM to query the instance RAM roles that you created.

Response parameters

Parameter	Type	Example	Description
DetachInstanceRamRoleResults	Array of DetachInstanceRamRoleResult		Details about the results of detaching instance RAM roles from the instances.
DetachInstanceRamRoleResult			
Code	String	200	Indicates whether the instance RAM role was detached. If 200 is returned, the instance RAM role was detached. If any other value is returned, the instance RAM role failed to be detached. For more information, see the "Error codes" section.
Instanceid	String	i-bp67acfmxazb4p***	The ID of the instance from which you attempted to detach the instance RAM role.
InstanceRamRoleSets	Array of InstanceRamRoleSet		Details about the instance RAM role of the instance.
InstanceRamRoleSet			
Instanceid	String	i-bp67acfmxazb4p***	The ID of the instance.
RamRoleName	String	RamRoleTest	The name of the instance RAM role.

Parameter	Type	Example	Description
Message	String	Success	The message that indicates whether the instance RAM role was detached. If success is returned, the instance RAM role was detached. If any other value is returned, the instance RAM role failed to be detached. For more information, see the "Error codes" section.
Success	Boolean	true	Indicates whether the instance RAM role was detached.
FailCount	Integer	0	The number of instances from which instance RAM roles failed to be detached.
RamRoleName	String	RamRoleTest	The name of the instance RAM role.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of instances from which you attempted to detach instance RAM roles.

Examples

Sample requests

```
https://ecs.example.com/?Action=DetachInstanceRamRole
&InstanceIds=["i-bp67acfmxazb4p****"]
&RegionId=cn-qingdao-env17-d01
&RamRoleName=RamRoleTest
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DetachInstanceRamRoleResponse>
  <TotalCount>1</TotalCount>
  <DetachInstanceRamRoleResults>
    <DetachInstanceRamRoleResult>
      <Message>success</Message>
      <InstanceId>i-bp16qng6jnvt6g7t****</InstanceId>
      <Code>200</Code>
      <InstanceRamRoleSets>
        <InstanceId>i-bp16qng6jnvt6g7t****</InstanceId>
        <RamRoleName>RamRoleTest</RamRoleName>
      </InstanceRamRoleSets>
    </DetachInstanceRamRoleResult>
  </DetachInstanceRamRoleResults>
  <RequestId>14D5B163-CE6C-4489-B979-DBE5D0495A63</RequestId>
  <RamRoleName></RamRoleName>
  <FailCount>0</FailCount>
</DetachInstanceRamRoleResponse>
```

JSON **format**

```
{
  "TotalCount": 1,
  "DetachInstanceRamRoleResults": {
    "DetachInstanceRamRoleResult": [
      {
        "Message": "success",
        "InstanceId": "i-bp16qng6jnvt6g7t****",
        "Code": "200",
        "InstanceRamRoleSets": {
          "InstanceId": "i-bp16qng6jnvt6g7t****",
          "RamRoleName": "RamRoleTest"
        }
      }
    ]
  },
  "RequestId": "14D5B163-CE6C-4489-B979-DBE5D0495A63",
  "RamRoleName": "",
  "FailCount": 0
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceIds.Malformed	The specified instanceids are not valid.	The error message returned because the specified InstanceIds parameter is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidNetworkType.MismatchRamRole	Ram role cannot be applied to instances of Classic network type.	The error message returned because instance RAM roles can be used only for instances in VPCs, not for instances in the classic network.
403	InvalidUser.PassRoleForbidden	The RAM user does not have the privilege to pass a RAM role.	The error message returned because the RAM user is not authorized to pass the RAM role.

5.1.4.9. DescribeInstanceStatus

You can call this operation to query the status information of multiple instances.

Description

You can also call this operation to query the list of instances.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceStatus	The operation that you want to perform. Set the value to DescribeInstanceStatus.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId.N	RepeatList	No	i-bp1j4i2jdf3owlhe****	The ID of instance N. Valid values of N: 1 to 100. Specify multiple values in the repeated list format.
ZoneId	String	No	cn-qingdao-env17-amtest11001-a	The zone ID of the instance.
ClusterId	String	No	cls-bp67acfmxyzb4p****	The cluster ID of the instance.

Parameter	Type	Required	Example	Description
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 50. Default value: 10.

Response parameters

Parameter	Type	Example	Description
InstanceStatuses	Array of InstanceStatus		The status information of the instances.
InstanceStatus			
InstanceId	String	i-bp1j4i2jdf3owlhe***	The ID of the instance.
Status	String	Running	The status of the instance.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	58	The total number of instances.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeInstanceStatus
&RegionId=cn-qingdao-env17-d01
&PageSize=1
&PageNumber=1
&InstanceId.1=i-bp1j4i2jdf3owlhe****
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeInstanceStatusResponse>
  <PageNumber>1</PageNumber>
  <InstanceStatuses>
    <InstanceStatus>
      <Status>Running</Status>
      <InstanceId>i-bp1j4i2jdf3owlhe****</InstanceId>
    </InstanceStatus>
  </InstanceStatuses>
  <TotalCount>58</TotalCount>
  <PageSize>1</PageSize>
  <RequestId>746C3444-9A24-4D7D-B8A8-DCBF7AC8BD66</RequestId>
</DescribeInstanceStatusResponse>
```

JSON format

```
{
  "PageNumber": 1,
  "InstanceStatuses": {
    "InstanceStatus": [
      {
        "Status": "Running",
        "InstanceId": "i-bp1j4i2jdf3owlhe****"
      }
    ]
  },
  "TotalCount": 58,
  "PageSize": 1,
  "RequestId": "746C3444-9A24-4D7D-B8A8-DCBF7AC8BD66"
}
```

5.1.4.10. DescribeInstances

You can call this operation to query the details of one or more instances.

Description

- You can specify multiple request parameters to be queried. Specified parameters have logical AND relations. Only the specified parameters are included in the filter conditions. However, if `InstanceIds` is set to an empty JSON array, it is regarded as a valid filter condition and an empty result is returned.
- If you are using a RAM user or RAM role, an empty list is returned when the user or the role does not have the permission to call this operation. You can include the `DryRun` parameter in your request to check whether the empty list is caused by the lack of permissions.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstances	The operation that you want to perform. Set the value to DescribeInstances.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
VpcId	String	No	v-bp67acfmxb4p****	The ID of the VPC to which the instance belongs.
VSwitchId	String	No	vsw-bp67acfmxb4p****	The ID of the vSwitch to which the instance is connected.
ZoneId	String	No	cn-qingdao-env17-amtest11001-a	The zone ID of the instance.
InstanceNetworkType	String	No	vpc	The network type of the instance. Valid values: - classic: classic network - vpc: VPC
SecurityGroupId	String	No	sg-bp67acfmxb4p****	The ID of the security group to which the instance belongs.
InstanceIds	String	No	["i-bp67acfmxb4p****", "i-bp67acfmxb4p****", ... "i-bp67acfmxb4p****"]	The IDs of instances. The value can be a JSON array that consists of up to 100 instance IDs. Separate multiple instance IDs with commas (,).
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10.

Parameter	Type	Required	Example	Description
InnerIpAddresses	String	No	["10.1.1.1", "10.1.2.1", ... "10.1.10.1"]	The internal IP addresses of classic network-type instances. This parameter takes effect when InstanceNetworkType is set to classic. The value can be a JSON array that consists of up to 100 IP addresses. Separate multiple IP addresses with commas (,).
PrivateIpAddresses	String	No	["172.16.1.1", "172.16.2.1", ... "172.16.10.1"]	The private IP addresses of VPC-type instances. This parameter takes effect when InstanceNetworkType is set to vpc. The value can be a JSON array that consists of up to 100 IP addresses. Separate multiple IP addresses with commas (,).
PublicIpAddresses	String	No	["42.1.1. **", "42.1.2. **", ... "42.1.10. **"]	 Note This parameter is not supported.
EipAddresses	String	No	["42.1.1. **", "42.1.2. **", ... "42.1.10. **"]	The elastic IP addresses (EIPs) of instances. This parameter takes effect when InstanceNetworkType is set to vpc. The value can be a JSON array that consists of up to 100 IP addresses. Separate multiple IP addresses with commas (,).
InstanceName	String	No	test- InstanceName	The name of the instance. Fuzzy search with the asterisk (*) wildcard is supported.
ImageId	String	No	m- bp67acfmxb4p ****	The ID of the image.

Parameter	Type	Required	Example	Description
Status	String	No	Running	The status of the instance. Valid values: - Running - Starting - Stopping - Stopped
LockReason	String	No	security	The reason why the instance is locked.
IoOptimized	Boolean	No	true	Specifies whether the instance is I/O optimized.
Tag.N.Key	String	No	TestKey	The key of tag N of the instance. Valid values of N: 1 to 20.
Tag.N.Value	String	No	TestValue	The value of tag N of the instance. Valid values of N: 1 to 20.
InstanceType	String	No	ecs.g5.large	The instance type of the instance.
InstanceTypeFamily	String	No	ecs.g5	The instance family of the instance.
KeyPairName	String	No	test-KeyPairName	The name of the SSH key pair bound to the instance.
ResourceGroupId	String	No	rg-bp67acfmxb4p****	The ID of the resource group to which the instance belongs.
HpcClusterId	String	No	hpc-bp67acfmxb4p****	The ID of the HPC cluster to which the instance belongs.
RdmaIpAddresses	String	No	10.10.10.102	The RDMA IP addresses of HPC instances.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Default value: false. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether RAM users are authorized, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, the DryRunOperation error code is returned. • false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned and the request is made.
AdditionalAttributes.N	RepeatList	No	META_OPTIONS	The value of attribute N. Valid values of N: 1 to 20.
HttpEndpoint	String	No	enabled	Specifies whether the access channel for instance metadata is enabled. Valid values: • enabled • disabled Default value: enabled.
HttpTokens	String	No	optional	Specifies whether to forcibly use the security-enhanced mode (IMDSv2) to access instance metadata. Valid values: • optional: does not forcibly use the security-enhanced mode (IMDSv2) to access instance metadata. • required: forcibly uses the security-enhanced mode (IMDSv2) to access instance metadata. After you set this parameter to required, you cannot access instance metadata in normal mode. Default value: optional.

Response parameters

Parameter	Type	Example	Description
Instances	Array of Instance		Details about the instances.
Instance			
AutoReleaseTime	String	test	 Note This parameter is not supported.
ClusterId	String	C-bp67acfmazb4p***	The ID of the cluster to which the instance belongs.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
Cpu	Integer	8	The number of vCPUs.
CpuOptions	Struct		The CPU options.
CoreCount	Integer	2	The number of CPU cores.
Numa	String	2	The number of threads allocated. Valid value: 2.
ThreadsPerCore	Integer	4	The number of threads per core.
CreationTime	String	2017-12-10T04:04Z	The time when the instance was created.
CreditSpecification	String	Standard	The performance mode of the burstable instance. Valid values: - Standard: standard mode - Unlimited: unlimited mode
DedicatedHostAttribute	Struct		The attributes of the dedicated hosts.
DedicatedHostClusterId	String	dc-bp67acfmazb4h***	The ID of the dedicated host cluster.

Parameter	Type	Example	Description
DedicatedHostId	String	dh-bp67acfmxazb4p***	The ID of the dedicated host.
DedicatedHostName	String	test-DedicatedHostName	The name of the dedicated host.
DedicatedInstanceAttribute	Struct		The attributes of the instance on a dedicated host.
Affinity	String	default	 Note This parameter is not supported.
Tenancy	String	default	Indicates whether the instance is hosted on a dedicated host. Valid values: - default: The instance is not hosted on a dedicated host. - host: The instance is hosted on a dedicated host.
DeletionProtection	Boolean	false	 Note This parameter is not supported.
DeploymentSetGroupNo	Integer	1	The group number of the instance in a deployment set when the deployment set is used to distribute instances across multiple physical machines.
DeploymentSetId	String	ds-bp67acfmxazb4p***	The ID of the deployment set.
Description	String	This is a description example.	The description of the instance.
DeviceAvailable	Boolean	true	Indicates whether data disks can be attached to the instance.
EcsCapacityReservationAttr	Struct		The capacity reservation attributes of the ECS instance.

Parameter	Type	Example	Description
CapacityReservationId	String	cr-bp67acfmxazb4p*** *	The ID of the capacity reservation.
CapacityReservationPreference	String	cr-bp67acfmxazb4p*** *	The preference of the capacity reservation.
EipAddress	Struct		Details about the EIP associated with the instance.
AllocationId	String	i-bp67acfmxazb4p*** *	The ID of the instance with which the EIP is associated.
Bandwidth	Integer	5	The maximum public bandwidth of the EIP. Unit: Mbit/s.
InternetChargeType	String	test	 Note This parameter is not supported.
IpAddress	String	42.112.17.**	The EIP.
IsSupportUnassociate	Boolean	true	Indicates whether the EIP can be disassociated.
ExpiredTime	String	2017-12-10T04:04Z	 Note This parameter is not supported.
GPUAmount	Integer	4	The number of GPUs for the instance type.
GPUSpec	String	NVIDIA V100	The category of GPUs for the instance type.
HostName	String	test-HostName	The hostname of the instance.
HpcClusterId	String	hpc-bp67acfmxazb4p*** *	The ID of the HPC cluster to which the instance belongs.

Parameter	Type	Example	Description
ImageId	String	m-bp67acfmazb4p*** *	The ID of the image that the instance is running.
InnerIpAddress	List	10.170.**.***	The internal IP address of the instance.
InstanceChargeType	String	test	 Note This parameter is not supported.
InstanceId	String	i-bp67acfmazb4p*** *	The ID of the instance.
InstanceName	String	test-InstanceName	The name of the instance.
InstanceNetworkType	String	vpc	The network type of the instance. Valid values: - classic: classic network - vpc: VPC
InstanceType	String	ecs.g5.large	The instance type of the instance.
InstanceTypeFamily	String	ecs.g5	The instance family of the instance.
InternetChargeType	String	test	 Note This parameter is not supported.
InternetMaxBandwidthIn	Integer	50	The maximum inbound public bandwidth. Unit: Mbit/s.
InternetMaxBandwidthOut	Integer	5	The maximum outbound public bandwidth. Unit: Mbit/s.
IoOptimized	Boolean	true	Indicates whether the instance is I/O optimized.
KeyPairName	String	test-KeyPairName	The name of the key pair.

Parameter	Type	Example	Description
LocalStorageAmount	Integer	2	The number of local disks attached to the instance.
LocalStorageCapacity	Long	1000	The capacity of local disks attached to the instance.
Memory	Integer	1024	The memory size of the instance. Unit: MiB.
MetadataOptions	Struct		The metadata options.
HttpEndpoint	String	enabled	Indicates whether the access channel for instance metadata was enabled. Valid values: - enabled - disabled
HttpPutResponseHopLimit	Integer	0	 Note This parameter is not supported.
HttpTokens	String	optional	Indicates whether to forcibly use the security-enhanced mode (IMDSv2) to access instance metadata. Valid values: - optional: does not forcibly use the security-enhanced mode (IMDSv2) to access instance metadata. - required: forcibly uses the security-enhanced mode (IMDSv2) to access instance metadata.
NetworkInterfaces	Array of NetworkInterface		Details about the ENIs bound to the instance.
NetworkInterface			
MacAddress	String	00:16:3e:32:b4:**	The MAC address of the ENI.

Parameter	Type	Example	Description
NetworkInterfaceId	String	eni-2zeh9atclduxvf1z***	The ID of the ENI.
PrimaryIpAddress	String	172.17.**.***	The private IP address of the primary ENI.
OSName	String	CentOS 7.4 64-bit	The name of the operating system for the instance.
OSNameEn	String	CentOS 7.4 64 bit	The English name of the operating system for the instance.
OSType	String	linux	The operating system type of the instance. Valid values: - windows - linux
OperationLocks	Array of LockReason		Details about the reasons why the instance was locked.
LockReason			
LockMsg	String	The specified instance is locked due to financial reason.	The message returned when the instance was locked.
LockReason	String	test	 Note This parameter is not supported.
PublicIpAddress	List	121.40.61.***	 Note This parameter is not supported.
RdmaIpAddress	List	10.10.10.102	The RDMA IP address of the HPC instance.
Recyclable	Boolean	false	Indicates whether the instance can be recycled.
RegionId	String	cn-qingdao-env17-d01	The region ID of the instance.

Parameter	Type	Example	Description
ResourceGroupId	String	rg-bp67acfmxb4p***	The ID of the resource group to which the instance belongs.
SaleCycle	String	month	Note This parameter is not supported.
SecurityGroupIds	List	sg-bp67acfmxb4p***	The IDs of security groups to which the instance belongs.
SerialNumber	String	51d1353b-22bf-4567-a176-8b3e12e4****	The serial number of the instance.
SpotPriceLimit	Float	0.00	Note This parameter is not supported.
SpotStrategy	String	test	Note This parameter is not supported.
StartTime	String	test	Note This parameter is not supported.
Status	String	Running	The status of the instance.
StoppedMode	String	test	Note This parameter is not supported.
Tags	Array of Tag		The tags of the instance.
Tag			
TagKey	String	TestKey	The tag key of the instance.

Parameter	Type	Example	Description
TagValue	String	TestValue	The tag value of the instance.
VlanId	String	10	The VLAN ID of the instance.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
VpcAttributes	Struct		The VPC attributes of the instance.
NatIpAddress	String	172.17.**.***	The NAT IP address of the instance. It is used by ECS instances in different VPCs for communication.
PrivateIpAddress	List	172.17.**.***	The private IP address of the instance.
VSwitchId	String	vsw-2zeh0r1pabwtg6wcs****	The ID of the vSwitch to which the instance is connected.
VpcId	String	vpc-2zeuphj08tt7q3brd***	The ID of the VPC to which the instance belongs.
ZoneId	String	cn-qingdao-env17-amtest11001-a	The zone ID of the instance.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	58	The total number of instances returned.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeInstances
&RegionId=cn-qingdao-env17-d01
&PageSize=1
PageNumber=1
&<Common request parameters>
```

Sample success responses

XML **format**

```
<DescribeInstancesResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>58</TotalCount>
  <PageSize>1</PageSize>
  <RequestId>97935DF1-0289-4AA2-9DD1-72377838B16B</RequestId>
  <Instances>
    <Instance>
      <ImageId>centos_7_06_64_20G_alibase_20190711.vhd</ImageId>
      <VlanId></VlanId>
      <EipAddress>
        <IpAddress></IpAddress>
        <AllocationId></AllocationId>
      </EipAddress>
      <ZoneId>cn-qingdao-env17-amtest11001-a</ZoneId>
      <IoOptimized>true</IoOptimized>
      <SerialNumber>51d1353b-22bf-4567-a176-8b3e12e43***</SerialNumber>
      <Cpu>2</Cpu>
      <Memory>8192</Memory>
      <DeviceAvailable>true</DeviceAvailable>
      <SecurityGroupIds>
        <SecurityGroupId>sg-bp17zljqpohu6j2i***</SecurityGroupId>
      </SecurityGroupIds>
      <SaleCycle></SaleCycle>
      <AutoReleaseTime></AutoReleaseTime>
      <ResourceGroupId></ResourceGroupId>
      <OSType>linux</OSType>
      <OSName>CentOS 7.6 64-bit</OSName>
      <InstanceNetworkType>classic</InstanceNetworkType>
      <HostName>iZbp1j4i2jdf3owlheb***</HostName>
      <CreationTime>2019-11-11T08:35Z</CreationTime>
      <Tags>
        <Tag>
          <TagValue>asg-bp1d8uuut40f4qc4***</TagValue>
          <TagKey>acs:autoscaling:scalingGroupId</TagKey>
        </Tag>
        <Tag>
          <TagValue>ESS</TagValue>
          <TagKey>ESS</TagKey>
        </Tag>
      </Tags>
      <EcsCapacityReservationAttr>
        <CapacityReservationPreference>none</CapacityReservationPreference>
        <CapacityReservationId></CapacityReservationId>
      </EcsCapacityReservationAttr>
```

```

        <RegionId>cn-qingdao-env17-d01</RegionId>
        <DeletionProtection>>false</DeletionProtection>
        <OperationLocks>
    </OperationLocks>
    <ExpiredTime>2099-12-31T15:59Z</ExpiredTime>
    <CpuOptions>
        <Numa></Numa>
        <ThreadsPerCore>2</ThreadsPerCore>
        <CoreCount>1</CoreCount>
    </CpuOptions>
    <InnerIpAddress>
        <IpAddress>10.80.61.42</IpAddress>
    </InnerIpAddress>
    <InstanceTypeFamily>ecs.mn4</InstanceTypeFamily>
    <InstanceId>i-bplj4i2jdf3owlhe****</InstanceId>
    <InternetMaxBandwidthIn>50</InternetMaxBandwidthIn>
    <CreditSpecification></CreditSpecification>
    <InternetChargeType>PayByTraffic</InternetChargeType>
    <SpotStrategy>NoSpot</SpotStrategy>
    <StoppedMode>Not-applicable</StoppedMode>
    <InternetMaxBandwidthOut>1</InternetMaxBandwidthOut>
    <VpcAttributes>
        <NatIpAddress></NatIpAddress>
        <PrivateIpAddress>
    </PrivateIpAddress>
        <VSwitchId></VSwitchId>
        <VpcId></VpcId>
    </VpcAttributes>
    <SpotPriceLimit>0</SpotPriceLimit>
    <StartTime>2019-11-11T08:35Z</StartTime>
    <InstanceName>ECS-asg-MyFirstScalingGroup</InstanceName>
    <Description>ECS</Description>
    <OSNameEn>CentOS 7.6 64 bit</OSNameEn>
    <PublicIpAddress>
        <IpAddress>121.40.77.XXX</IpAddress>
    </PublicIpAddress>
    <InstanceType>ecs.mn4.large</InstanceType>
    <Status>Running</Status>
    <MetadataOptions>
        <HttpTokens></HttpTokens>
        <HttpEndpoint></HttpEndpoint>
    </MetadataOptions>
    <Recyclable>>false</Recyclable>
    <ClusterId></ClusterId>
    <GPUSpec></GPUSpec>
    <InstanceChargeType>PostPaid</InstanceChargeType>
    <GPUMount>0</GPUMount>
    <DedicatedHostAttribute>
        <DedicatedHostId></DedicatedHostId>
        <DedicatedHostName></DedicatedHostName>
    </DedicatedHostAttribute>
    <DedicatedInstanceAttribute>
        <Affinity></Affinity>
        <Tenancy></Tenancy>

```

```

        </DedicatedInstanceAttribute>
        <DeploymentSetId></DeploymentSetId>
    </Instance>
</Instances>
</DescribeInstancesResponse>

```

JSON **format**

```

{
  "PageNumber": 1,
  "TotalCount": 58,
  "PageSize": 1,
  "RequestId": "97935DF1-0289-4AA2-9DD1-72377838B16B",
  "Instances": {
    "Instance": [
      {
        "ImageId": "centos_7_06_64_20G_alibase_20190711.vhd",
        "VlanId": "",
        "EipAddress": {
          "IpAddress": "",
          "AllocationId": "",
        },
        "ZoneId": "cn-qingdao-env17-amtest11001-a",
        "IoOptimized": true,
        "SerialNumber": "51d1353b-22bf-4567-a176-8b3e12e43***",
        "Cpu": 2,
        "Memory": 8192,
        "DeviceAvailable": true,
        "SecurityGroupIds": {
          "SecurityGroupId": [
            "sg-bp17zljqpohu6j2i****"
          ]
        },
        "SaleCycle": "",
        "AutoReleaseTime": "",
        "ResourceGroupId": "",
        "OSType": "linux",
        "OSName": "CentOS 7.6 64-bit",
        "InstanceNetworkType": "classic",
        "HostName": "iZbp1j4i2jdf3owlheb****",
        "CreationTime": "2019-11-11T08:35Z",
        "Tags": {
          "Tag": [
            {
              "TagValue": "asg-bp1d8uuut40f4qc4****",
              "TagKey": "acs:autoscaling:scalingGroupId"
            },
            {
              "TagValue": "ESS",
              "TagKey": "ESS"
            }
          ]
        },
        "EcsCapacityReservationAttr": {

```

```

    "CapacityReservationPreference": "none",
    "CapacityReservationId": ""
  },
  "RegionId": "cn-qingdao-env17-d01",
  "DeletionProtection": false,
  "OperationLocks": {
    "LockReason": []
  },
  "ExpiredTime": "2099-12-31T15:59Z",
  "CpuOptions": {
    "Numa": "",
    "ThreadsPerCore": 2,
    "CoreCount": 1
  },
  "InnerIpAddress": {
    "IpAddress": [
      "10.80.61.42"
    ]
  },
  "InstanceTypeFamily": "ecs.mn4",
  "InstanceId": "i-bp1j4i2jdf3owlhe****",
  "InternetMaxBandwidthIn": 50,
  "CreditSpecification": "",
  "InternetChargeType": "PayByTraffic",
  "SpotStrategy": "NoSpot",
  "StoppedMode": "Not-applicable",
  "InternetMaxBandwidthOut": 1,
  "VpcAttributes": {
    "NatIpAddress": "",
    "PrivateIpAddress": {
      "IpAddress": []
    },
    "VSwitchId": "",
    "VpcId": ""
  },
  "SpotPriceLimit": 0,
  "StartTime": "2019-11-11T08:35Z",
  "InstanceName": "ECS-asg-MyFirstScalingGroup",
  "Description": "ECS",
  "OSNameEn": "CentOS 7.6 64 bit",
  "PublicIpAddress": {
    "IpAddress": [
      "121.40.77.XXX"
    ]
  },
  "InstanceType": "ecs.mn4.large",
  "Status": "Running",
  "MetadataOptions": {
    "HttpTokens": "",
    "HttpEndpoint": ""
  },
  "Recyclable": false,
  "ClusterId": "",
  "GPUSpec": "",

```

```

        "InstanceChargeType": "PostPaid",
        "GPUEAmount": 0,
        "DedicatedHostAttribute": {
            "DedicatedHostId": "",
            "DedicatedHostName": ""
        },
        "DedicatedInstanceAttribute": {
            "Affinity": "",
            "Tenancy": ""
        },
        "DeploymentSetId": ""
    }
}
}
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified InstanceChargeType parameter does not exist.
404	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is not valid	The error message returned because the specified InternetChargeType parameter is invalid.
404	InvalidLockReason.NotFound	The specified LockReason is not found	The error message returned because the specified LockReason parameter does not exist.
404	InvalidFilterKey.NotFound		The error message returned because the specified start time or end time is invalid.
404	InvalidNetworkType.NotFound	The specified InstanceNetworkType is not found	The error message returned because the specified InstanceNetworkType parameter does not exist.
404	InvalidStatus.NotFound	The specified Status is not found	The error message returned because the specified resource status does not exist.

HTTP status code	Error code	Error message	Description
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not match.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags has exceeded the upper limit.
400	InvalidHpcClusterId.NotFound	The specified HpcClusterId is not found.	The error message returned because the specified HpcClusterId parameter does not exist.
400	InvalidHpcClusterId.Creating	The specified HpcClusterId is creating.	The error message returned because the specified HPC cluster is being created.

5.1.4.11. DescribeUserData

You can call this operation to query the user data of an ECS instance.

Description

- The returned user data is encoded in Base64.
- If the instance does not have user data configured, an empty result is returned.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeUserData	The operation that you want to perform. Set the value to DescribeUserData.
InstanceId	String	Yes	i-bp1a0cmfrfi71qlh****	The ID of the instance.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
InstanceId	String	i-bp1a0cmfrfi71qlh***	The ID of the instance.
RegionId	String	cn-qingdao-env17-d01	The region ID of the instance.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
UserData	String	ZWNobyBoZWxsbyBly3Mh	The user data of the instance.

Examples

Sample requests

```
https://ecs.example.com/?Action= DescribeUserData
&RegionId=cn-qingdao-env17-d01
&InstanceId=i-bp1a0cmfrfi71qlh****
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeUserDataResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
  <UserData>ZWNobyBoZWxsbyBly3Mh</UserData>
  <InstanceId>i-bp1a0cmfrfi71qlh****</InstanceId>
  <RegionId>cn-qingdao-env17-d01</RegionId>
</DescribeUserDataResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "UserData": "ZWNobyBoZWxsbyBly3Mh",
  "InstanceId": "i-bp1a0cmfrfi71qlh****",
  "RegionId": "cn-qingdao-env17-d01"
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
404	InvalidInstanceid.NotFound	The specified Instanceid does not exist.	The error message returned because the specified Instanceid parameter does not exist.

5.1.4.12. DescribeInstanceRamRole

You can call this operation to query the instance RAM roles attached to one or more ECS instances.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceRamRole	The operation that you want to perform. Set the value to DescribeInstanceRamRole.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the instance RAM role. You can call the DescribeRegions operation to query the most recent region list.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 50. Default value: 10.
InstanceIds	String	No	["i-bp67acfmxb4p****", "i-bp67acfmxb4p****", "bp67acfmxb4p****" ...]	The IDs of instances. A maximum of 100 instance IDs can be entered at a time. You must specify at least one of the <code>InstanceIds</code> and <code>RamRoleName</code> parameters.

Parameter	Type	Required	Example	Description
RamRoleName	String	No	EcsServiceRole-EcsDocGuideTest	The name of the instance RAM role. This parameter can be used to query all the ECS instances to which the instance RAM role is attached. You can call the ListRoles operation provided by RAM to query the instance RAM roles that you created. You must specify at least one of the <code>InstanceIds</code> and <code>RamRoleName</code> parameters.

Response parameters

Parameter	Type	Example	Description
InstanceRamRoleSets	Array of InstanceRamRoleSet		Details about the instance RAM roles.
InstanceRamRoleSet			
InstanceId	String	i-bp67acfmazb4p***	The ID of the instance.
RamRoleName	String	EcsServiceRole-EcsDocGuideTest	The name of the instance RAM role.
RegionId	String	cn-qingdao-env17-d01	The region ID of the instance RAM role.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of instance RAM roles returned.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeInstanceRamRole
&RegionId=cn-qingdao-env17-d01
&InstanceIds=["i-bp67acfmazb4p***"]
&PageNumber=1
&PageSize=1
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeInstanceRamRoleResponse>
  <RequestId>8F4CAE3F-7892-4662-83A5-2C2FFD639553</RequestId>
  <InstanceRamRoleSets>
    <InstanceRamRoleSet>
      <InstanceId>i-bp67acfmxazb4p****</InstanceId>
      <RamRoleName>EcsServiceRole-EcsDocGuideTest</RamRoleName>
    </InstanceRamRoleSet>
  </InstanceRamRoleSets>
  <TotalCount>1</TotalCount>
  <PageNumber>1</PageNumber>
  <PageSize>1</PageSize>
</DescribeInstanceRamRoleResponse>
```

JSON format

```
{
  "RequestId": "8F4CAE3F-7892-4662-83A5-2C2FFD639553",
  "InstanceRamRoleSets": {
    "InstanceRamRoleSet": [
      {
        "InstanceId": "i-bp67acfmxazb4p****",
        "RamRoleName": "EcsServiceRole-EcsDocGuideTest"
      }
    ]
  },
  "TotalCount": 1,
  "PageNumber": 1,
  "PageSize": 1
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceIds.Malformed	The specified instanceids are not valid.	The error message returned because the specified Instanceids parameter is invalid.
404	InvalidInstanceId.NotFound	The specified instanceid does not exist	The error message returned because a specified instance does not exist.
403	InvalidNetworkType.MismatchRamRole	Ram role cannot be applied to instances of Classic network type.	The error message returned because instance RAM roles can be used only for instances in VPCs, not for instances in the classic network.

HTTP status code	Error code	Error message	Description
403	InvalidParameter.All Empty	%s	The error message returned because no parameters are specified. Specify required parameters.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

5.1.4.13. DescribeInstanceTypeFamilies

You can call this operation to query the instance families provided by ECS.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceTypeFamilies	The operation that you want to perform. Set the value to DescribeInstanceTypeFamilies.
RegionId	String	Yes	cn-qingdao-env17-d01	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
Generation	String	No	ecs-3	The generation of the instance family. Valid values: - ecs-1: Generation I, which consists of the earliest and cost-effective instance families - ecs-2: Generation II, which provides upgraded software and hardware and higher performance than Generation I - ecs-3: Generation III, which consists of high-performance instance families and is suitable for different business scenarios - ecs-4: Generation IV, which consists of the low-latency instance families that can meet a wide variety of business requirements - ecs-5: Generation V, which includes Bare Metal Instance families and enterprise-level instance families such as g6, c6, and r6, and delivers quicker response and higher performance

Response parameters

Parameter	Type	Example	Description
InstanceTypeFamilies	Array of InstanceTypeFamily		Details about the instance families.
InstanceTypeFamily			
Generation	String	ecs-5	The generation of the instance family.
InstanceTypeFamilyId	String	ecs.g6	The ID of the instance family.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeInstanceTypeFamilies
&RegionId=cn-qingdao-env17-d01
&Generation=ecs-5
&<Common request parameters>
```

Sample success responses

`XML` format


```

<DescribeInstanceTypeFamiliesResponse>
  <InstanceTypeFamilies>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.g6</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
    </InstanceTypeFamily>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.ebmg6</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
    </InstanceTypeFamily>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.ebmg6e</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
    </InstanceTypeFamily>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.g6e</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
    </InstanceTypeFamily>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.c6</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
    </InstanceTypeFamily>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.r6</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
    </InstanceTypeFamily>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.t6</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
    </InstanceTypeFamily>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.hfc6</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
    </InstanceTypeFamily>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.hfg6</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
    </InstanceTypeFamily>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.hfr6</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
    </InstanceTypeFamily>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.ebmc6</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
    </InstanceTypeFamily>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.ebmr6</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
    </InstanceTypeFamily>
  </InstanceTypeFamilies>
  <RequestId>A66D039A-EC35-4130-B0D1-E9873C0742D2</RequestId>
</DescribeInstanceTypeFamiliesResponse>

```

JSON **format**

```
{
  "InstanceTypeFamilies": {
    "InstanceTypeFamily": [
      {
        "InstanceTypeFamilyId": "ecs.g6",
        "Generation": "ecs-5"
      },
      {
        "InstanceTypeFamilyId": "ecs.ebmg6",
        "Generation": "ecs-5"
      },
      {
        "InstanceTypeFamilyId": "ecs.ebmg6e",
        "Generation": "ecs-5"
      },
      {
        "InstanceTypeFamilyId": "ecs.g6e",
        "Generation": "ecs-5"
      },
      {
        "InstanceTypeFamilyId": "ecs.c6",
        "Generation": "ecs-5"
      },
      {
        "InstanceTypeFamilyId": "ecs.r6",
        "Generation": "ecs-5"
      },
      {
        "InstanceTypeFamilyId": "ecs.t6",
        "Generation": "ecs-5"
      },
      {
        "InstanceTypeFamilyId": "ecs.hfc6",
        "Generation": "ecs-5"
      },
      {
        "InstanceTypeFamilyId": "ecs.hfg6",
        "Generation": "ecs-5"
      },
      {
        "InstanceTypeFamilyId": "ecs.hfr6",
        "Generation": "ecs-5"
      },
      {
        "InstanceTypeFamilyId": "ecs.ebmc6",
        "Generation": "ecs-5"
      },
      {
        "InstanceTypeFamilyId": "ecs.ebmr6",
        "Generation": "ecs-5"
      }
    ]
  }
}
```

```
} ,  
  "RequestId": "A66D039A-EC35-4130-B0D1-E9873C0742D2"  
}
```

5.1.4.14. DescribeInstanceTypes

Queries instance types provided by Elastic Compute Service (ECS).

Description

The DescribeInstanceTypes operation is used to query only the specifications and performance data of instance types. To query instance types that are available in a region or zone, call the DescribeAvailableResource operation.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceTypes	The operation that you want to perform. Set the value to DescribeInstanceTypes.
InstanceTypeFamily	String	No	ecs.g6	The instance family to which the instance type belongs. For information about the valid values, see DescribeInstanceTypeFamilies. For more information, see Instance types in Introduction to Instance Families and Instance Types.
InstanceTypes.N	RepeatList	No	ecs.g6.large	Instance type N. Valid values of N: 1 to 10. If this parameter is left empty, information about all instance types is queried.

Response parameters

Parameter	Type	Example	Description
InstanceTypes	Array of InstanceType		Details about the instance types.
InstanceType			
BaselineCredit	Integer	4	The baseline vCPU computing performance (overall computing performance of all vCPUs) of the t5 burstable instance family.

Parameter	Type	Example	Description
CpuCoreCount	Integer	8	The number of vCPUs.
DiskQuantity	Integer	17	The maximum number of cloud disks that can be attached per instance.
EniIpv6AddressQuantity	Integer	1	The maximum number of IPv6 addresses per elastic network interface (ENI).
EniPrivateIpAddressQuantity	Integer	6	The maximum number of private IP addresses per ENI.
EniQuantity	Integer	2	The maximum number of ENIs that can be bound to an instance.
EniTotalQuantity	Integer	0	 Note This parameter is not supported.
EniTrunkSupported	Boolean	true	 Note This parameter is not supported.
EriQuantity	Integer	0	The number of elastic RDMA interfaces (ERIs).
GPUMount	Integer	2	The number of GPUs.
GPUSpec	String	NVIDIA V100	The GPU type.
InitialCredit	Integer	120	The initial vCPU credits of the t5 burstable instance family.
InstanceBandwidthRx	Integer	1024000	The maximum inbound internal bandwidth. Unit: Kbit/s.
InstanceBandwidthTx	Integer	1024000	The maximum outbound internal bandwidth. Unit: Kbit/s.

Parameter	Type	Example	Description
InstanceFamilyLevel	String	EnterpriseLevel	The level of the instance family. Valid values: - EntryLevel - EnterpriseLevel - CreditEntryLevel
InstancePpsRx	Long	300000	The inbound packet forwarding rate over the internal network. Unit: pps.
InstancePpsTx	Long	300000	The outbound packet forwarding rate over the internal network. Unit: pps.
InstanceTypeFamily	String	ecs.g5	The instance family of the instance.
InstanceTypeId	String	ecs.g5.large	The ID of the instance type.
LocalStorageAmount	Integer	1	The number of local disks attached per instance.
LocalStorageCapacity	Long	2048	The capacity of each local disk attached per instance. Unit: GiB.
LocalStorageCategory	String	local_ssd_pro	The category of local disks. Valid values: - local_hdd_pro: local Serial Advanced Technology Attachment (SATA) HDDs that are attached to d1 instances - local_ssd_pro: local Non-Volatile Memory Express (NVMe) SSDs that are attached to i2 or gn5 instances
MaximumConnectionCount	Long	0	 Note This parameter is not supported.
MaximumQueueNumberPerEni	Integer	4	The maximum number of queues per ENI (including primary and secondary ENIs).
MemorySize	Float	8.0	The memory size. Unit: GiB.

Parameter	Type	Example	Description
NvmeSupport	String	unsupported	Indicates whether the cloud disk can be attached by using the NVMe protocol. Valid values: - required: The cloud disk can be attached by using the NVMe protocol. - unsupported: The cloud disk cannot be attached by using the NVMe protocol.
PrimaryEniQueueNumber	Integer	4	The default number of queues supported by the primary ENI.
QueuePairNumber	Integer	22	The maximum number of queue pairs (QPs) per ENI.
SecondaryEniQueueNumber	Integer	4	The default number of queues supported by the secondary ENI.
TotalEniQueueQuantity	Integer	128	The maximum number of NIC queues that supported by the instance type.  Note The queues of the primary NIC are excluded.
RequestId	String	00827261-20B7-4562-83F2-4DF3987XXXXX	The ID of the request.
NextToken	String	e71d8a535bd9****	The query token returned in this call.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeInstanceTypes
&InstanceTypeFamily=ecs.g6
&<Common request parameters>
```

Sample success responses

`XML` format

```
<NextToken>e71d8a535bd9****</NextToken>
<RequestId>00827261-20B7-4562-83F2-4DF3987XXXXX</RequestId>
<InstanceTypes>
  <InstancePpsTx>300000</InstancePpsTx>
  <NvmeSupport>unsupported</NvmeSupport>
  <PrimaryEniQueueNumber>4</PrimaryEniQueueNumber>
  <TotalEniQueueQuantity>128</TotalEniQueueQuantity>
  <LocalStorageCapacity>2048</LocalStorageCapacity>
  <InstanceTypeFamily>ecs.g5</InstanceTypeFamily>
  <InstancePpsRx>300000</InstancePpsRx>
  <EniQuantity>0</EniQuantity>
  <InstanceBandwidthRx>1024000</InstanceBandwidthRx>
  <InstanceBandwidthTx>1024000</InstanceBandwidthTx>
  <LocalStorageAmount>1</LocalStorageAmount>
  <SecondaryEniQueueNumber>4</SecondaryEniQueueNumber>
  <LocalStorageCategory>local_ssd_pro</LocalStorageCategory>
  <GPUSpec>NVIDIA V100</GPUSpec>
  <InstanceTypeId>ecs.g5.large</InstanceTypeId>
  <MemorySize>8</MemorySize>
  <MaximumQueueNumberPerEni>4</MaximumQueueNumberPerEni>
  <EniIpv6AddressQuantity>1</EniIpv6AddressQuantity>
  <CpuCoreCount>8</CpuCoreCount>
  <InitialCredit>120</InitialCredit>
  <EniQuantity>2</EniQuantity>
  <GPUMount>2</GPUMount>
  <DiskQuantity>17</DiskQuantity>
  <QueuePairNumber>22</QueuePairNumber>
  <BaselineCredit>4</BaselineCredit>
  <InstanceFamilyLevel>EnterpriseLevel</InstanceFamilyLevel>
  <EniPrivateIpAddressQuantity>6</EniPrivateIpAddressQuantity>
</InstanceTypes>
```

JSON **format**

```
{
  "NextToken": "e71d8a535bd9****",
  "RequestId": "00827261-20B7-4562-83F2-4DF3987XXXXX",
  "InstanceTypes": {
    "InstancePpsTx": 300000,
    "NvmeSupport": "unsupported",
    "PrimaryEniQueueNumber": 4,
    "TotalEniQueueQuantity": 128,
    "LocalStorageCapacity": 2048,
    "InstanceTypeFamily": "ecs.g5",
    "InstancePpsRx": 300000,
    "EniQuantity": 0,
    "InstanceBandwidthRx": 1024000,
    "InstanceBandwidthTx": 1024000,
    "LocalStorageAmount": 1,
    "SecondaryEniQueueNumber": 4,
    "LocalStorageCategory": "local_ssd_pro",
    "GPUSpec": "NVIDIA V100",
    "InstanceTypeId": "ecs.g5.large",
    "MemorySize": 8,
    "MaximumQueueNumberPerEni": 4,
    "EniIpv6AddressQuantity": 1,
    "CpuCoreCount": 8,
    "InitialCredit": 120,
    "EniQuantity": 2,
    "GPUAmount": 2,
    "DiskQuantity": 17,
    "QueuePairNumber": 22,
    "BaselineCredit": 4,
    "InstanceFamilyLevel": "EnterpriseLevel",
    "EniPrivateIpAddressQuantity": 6
  }
}
```

5.1.4.15. ModifyInstanceAttribute

Modifies some attributes of an Elastic Compute Service (ECS) instance, such as the password, name, description, hostname, security group, and user data. If the instance is a burstable instance, you can also change its performance mode.

Description

When you query the instance information and the responses contain `{"OperationLocks": {"LockReason": "security"}}`, the instance is locked for security reasons and all operations cannot take effect on the instance.

When you call this operation, take note of the following items:

- Modify the hostname (`HostName`): After the hostname is modified, you must restart the instance by using the ECS console or by calling the `RebootInstance` operation for the new hostname to take effect. The new hostname does not take effect if you restart the instance from within the operating system.

- Reset the password (`Password`):
 - The instance must not be in the **Starting** (`Starting`) state.
 - After the password is reset, you must restart the instance by using the ECS console or by calling the `RebootInstance` operation for the new password to take effect. The new password does not take effect if you restart the instance from within the operating system.
- Modify user data (`UserData`):
 - The instance must be in the **Stopped** (`Stopped`) state.
 - The instance must meet the limits on user data.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceAttribute	The operation that you want to perform. Set the value to <code>ModifyInstanceAttribute</code> .
InstanceId	String	Yes	i-bp67acfmxazb4ph***	The ID of the instance.
Password	String	No	EcsV****	The password of the instance. The password must be 8 to 30 characters in length and contain at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. Special characters include: <pre>() ` ~ ! @ # \$ % ^ & * _ + = { }</pre> <pre>[] : ; ' < > , . ? /</pre> For Windows instances, the password cannot start with a forward slash (/).  Note For security reasons, we recommend that you use HTTPS to send requests if the <code>Password</code> parameter is specified.

Parameter	Type	Required	Example	Description
HostName	String	No	LocalHost	The hostname of the instance. After the hostname is modified, you must call the RebootInstance operation for the new hostname to take effect. - For Windows Server, the hostname must be 2 to 15 characters in length and can contain letters, digits, and hyphens (-). It cannot start or end with a hyphen (-), contain consecutive hyphens (-), or contain only digits. - For other operating systems such as Linux, the hostname must be 2 to 64 characters in length. You can use periods (.) to separate a hostname into multiple segments. Each segment can contain letters, digits, and hyphens (-). The hostname cannot contain consecutive periods (.) or hyphens (-). It cannot start or end with a period (.) or a hyphen (-).
InstanceName	String	No	EcsInstance	The name of the instance. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
Description	String	No	InstanceAttribute	The description of the instance. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.

Parameter	Type	Required	Example	Description
UserData	String	No	ZWNobyBoZWxsbyBLY3Mh	The user data of the instance. User data must be encoded in Base64. The size of the user data must be no greater than 16 KB before it is encoded in Base64. We recommend that you do not pass in confidential information such as passwords and private keys in the plaintext format. If you must pass in confidential information, we recommend that you encrypt and Base64-encode the information before you pass it in. Then you can decode and decrypt the information in the same way within the instance.
Recyclable	Boolean	No	false	Specifies whether the instance can be recycled.
CreditSpecification	String	No	Standard	The performance mode of the burstable instance. Valid values: - Standard: standard mode - Unlimited: unlimited mode This parameter is empty by default.
DeletionProtection	Boolean	No	false	The release protection attribute of the instance. This parameter specifies whether you can use the ECS console or call the DeleteInstance operation to release the instance. This parameter is empty by default.  Note This attribute can protect instances only against manual releases, not against automatic releases.

Parameter	Type	Required	Example	Description
SecurityGroupIds. N	RepeatList	No	sg- bp15ed6xe1yxeyc g7o****	The IDs of replacement security groups. • All security group IDs must be unique. • The instance is moved from the current security groups to the replacement security groups. If you want the instance to remain in the current security groups, you must add the IDs of the current security groups to the list. • You can move the instance to security groups of a different type. However, the list cannot contain the IDs of both basic and advanced security groups. • The specified security group and instance must belong to the same virtual private cloud (VPC). • The valid values of N are based on the maximum number of security groups to which an instance can belong. For more information, see the "Security group limits" section in Limits. • New security groups become valid for corresponding instances after a short latency.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F- 4DC5-B3DB- A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ModifyInstanceAttribute
&InstanceId=i-bp67acfmazb4ph***
&CreditSpecification=Standard
&DeletionProtection=false
&Description=InstanceAttribute
&HostName=LocalHost
&InstanceName=EcsInstance
&Password=EcsV*
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyInstanceAttributeResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</ModifyInstanceAttributeResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceName.Malformed	The specified parameter "InstanceName" is not valid.	The error message returned because the specified InstanceName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
400	InvalidDescription.Malformed	The specified parameter "Description" is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidHostPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the specified Password parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidHostName.Malformed	The specified parameter "HostName" is not valid.	The error message returned because the specified HostName parameter is invalid.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist within this account. Check whether the security group ID is correct.
403	OperationDenied	The instance amount in the specified SecurityGroup reach its limit.	The error message returned because the maximum number of instances in the specified security group has been reached.
403	OperationDenied	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
400	InvalidPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the specified Password parameter is invalid.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	InvalidUserData.Forbidden	User not authorized to input the parameter "UserData" please apply for permission "UserData"	The error message returned because you are not authorized to configure the UserData parameter. Apply for the permissions first.

HTTP status code	Error code	Error message	Description
400	InvalidUserData.Size Exceeded	The specified parameter "UserData" exceeds the size.	The error message returned because the size of user data specified by the UserData parameter exceeds the upper limit.
400	InvalidUserData.Not Supported	The specified parameter "UserData" only support the vpc and IoOptimized Instance.	The error message returned because the specified UserData parameter is not supported. UserData is supported only by I/O optimized instances of the VPC type.
400	ImageNotSupportCloudInit	The specified image does not support cloud-init.	The error message returned because the specified image does not support cloud-init.
400	ChargeTypeViolation	Pay-As-You-Go instances do not support this operation.	The error message returned because the pay-as-you-go billing method does not support this operation.
400	InvalidParameter.RecycleBin	You do not have permission to set recyclable properties.	The error message returned because you are not authorized to perform this operation.
400	InvalidParameter.CreditSpecification	The specified CreditSpecification is not supported in this region.	The error message returned because the specified credit specification is not supported in this region.
400	InvalidInstanceStatus.CreditSpecRestricted	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
400	InvalidInstanceStatus.NotRunning	The current status of the resource is invalid, you can only do this operation when instance is running.	The error message returned because the operation is not supported while the instance is in the current state. Try again when the instance is in the Running state.
404	Credit.NotFound	The specified credit information does not exist.	The error message returned because the specified credit information does not exist.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

HTTP status code	Error code	Error message	Description
404	InvalidParameter.SecurityGroupIdRepeated	The specified security group ids has repeated.	The error message returned because the specified SecurityGroupIds.N parameter already exists. Check whether the specified SecurityGroupIds.N parameter is valid.
403	InvalidUser.Unauthorized	The user is not authorized	The error message returned because you are not authorized to perform this operation.
404	InvalidSecurityGroupType.NotSupportClassic	The specified SecurityGroupIds have classic group type.	The error message returned because the specified security group is in the classic network. Check whether the specified SecurityGroupIds.N parameter is valid.
404	InvalidSecurityGroupVpc.NotBelongToOnVpc	The specified SecurityGroupIds are belong to different vpc.	The error message returned because the specified security groups belong to different VPCs. Check whether the specified SecurityGroupIds.N parameter is valid. You can call the DescribeSecurityGroups operation to query the VPCs to which the security groups belong.
403	EnterpriseGroupLimited.MutliGroupType	The specified instance can not join multi SecurityGroup types.	The error message returned because the specified instance cannot belong to both a basic and an advanced security group. You can call the DescribeSecurityGroups operation to query the type of a specific security group.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.

HTTP status code	Error code	Error message	Description
400	JoinedGroupLimitExceed	%s	The error message returned because the maximum number of security groups to which the specified resource can be assigned has been exceeded. For more information, see the return value of the %s placeholder in the error message.
403	InstanceNotInSecurityGroup	The instance not in the group.	The error message returned because the specified instance does not belong to the security group.
403	InvalidOperation.InvalidRegion	%s	The error message returned because the specified RegionId parameter is invalid.
400	InvalidParameter	The specified parameter is not valid.	The error message returned because a specified parameter is invalid.
403	OperationDenied	The specified Image is disabled or is deleted.	The error message returned because the specified image is disabled or deleted.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because you cannot modify security groups managed by cloud services.

5.1.4.16. ModifyInstanceVpcAttribute

Modifies the virtual private cloud (VPC), private IP address, or vSwitch of an Elastic Compute Service (ECS) instance in a VPC.

Description

The instance must be in the **Stopped** (`Stopped`) state.

- When you call this operation to modify the private IP address or vSwitch of an instance, take note of the following items:
 - If the instance is a new instance, you must restart the instance before you call this operation on it.
 - After the private IP address or vSwitch of an instance is modified, you must restart the instance before you can call this operation again.
- When you call this operation to modify the VPC of an instance, take note of the following items:

- Instance:
 - The instance cannot be associated with Server Load Balancer (SLB) instances.
 - The instance cannot be in the Locked or To Be Released state.
 - The instance cannot be used in other cloud services. For example, the instance cannot be in the process of being migrated or having its VPC changed, or the databases deployed on the instance cannot be managed by Data Transmission (DTS).
- Network:
 - The instance cannot have secondary ENIs bound.
 - The instance cannot have IPv6 addresses assigned.
 - The primary ENI of the instance cannot be associated with multiple IP addresses.
 - The vSwitch specified by the VSwitchId parameter must belong to the new VPC.
 - The vSwitches before and after the modification must reside within the same zone.
 - If the private IP address of the primary ENI is specified, the private IP address must be available and within the CIDR block of the vSwitch. If the private IP address is not specified, the system randomly assigns one. The available IP addresses in the CIDR block of the new vSwitch must be sufficient.
 - The Alibaba Cloud account that owns the new VPC cannot share the VPC to other accounts.
- Security group (SecurityGroupId.N):
 - The valid values of N depend on the maximum number of security groups to which an instance can belong. Make sure that the quota for security groups within your account is sufficient.
 - The specified security groups must belong to the new VPC.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceVpcAttribute	The operation that you want to perform. If you use a custom HTTP or HTTPS URL to initiate an API request, you must specify the <code>Action</code> parameter. Set the value to <code>ModifyInstanceVpcAttribute</code> .
InstanceId	String	Yes	i-bp1iudwa5b1tqa*****	The ID of the instance.

Parameter	Type	Required	Example	Description
VSwitchId	String	Yes	vsw- bp1s5fnvk4gn3t w*****	The ID of the vSwitch. - If this parameter is set to the ID of the current vSwitch, the vSwitch of the instance remains unchanged. - If this parameter is set to the ID of a different vSwitch and the <code>VpcId</code> parameter is not specified, the new vSwitch must belong to the same zone and VPC as the current vSwitch. - If the <code>VpcId</code> parameter is specified, the vSwitch specified by this parameter must belong to the specified VPC and to the same zone as the current vSwitch.
PrivateIpAddress	String	No	172.17.**.***	The new private IP address of the instance.  Note The <code>PrivateIpAddress</code> value depends on the <code>VSwitchId</code> value. The specified IP address must be within the CIDR block of the specified vSwitch. By default, a private IP address is randomly assigned from the CIDR block of the specified vSwitch.
VpcId	String	No	vpc- bp1vwnn14rqpyic zj****	The ID of the new VPC.

Parameter	Type	Required	Example	Description
SecurityGroupId.N	RepeatList	No	sg-o6w9l8bc8dgmkw87****	The ID of security group N to which the instance belongs after the VPC is changed. This parameter is required only when the VpcId parameter is specified. - You can specify one or more security groups to which the instance belongs after the modification. The valid values of N depend on the maximum number of security groups to which an instance can belong. - The specified security groups must belong to the VPC specified by the <code>VpcId</code> parameter.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ModifyInstanceVpcAttribute
&InstanceId=i-bpliuwa5bltqa*****
&VSwitchId=vsw-bpls5fnvk4gn3tw*****
&PrivateIpAddress=172.17.***.***
&VpcId=vpc-bplvwnn14rppyiczj****
&SecurityGroupId.N=sg-o6w9l8bc8dgmkw87****
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyInstanceAttributeResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3****</RequestId>
</ModifyInstanceAttributeResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
400	InvalidPrivateIpAddress.Malformed	Specified private IP address is malformed.	The error message returned because the specified PrivateIpAddress parameter is invalid.
400	InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	The error message returned because the specified private IP address is already in use. Try another IP address.
400	IncorrectVSwitchStatus	The current status of virtual switch does not support this operation.	The error message returned because the specified vSwitch is in the Pending state and cannot be deleted.
404	InvalidVSwitchId.NotFound	Specified virtual switch does not exist.	The error message returned because the specified VSwitchId parameter does not exist.
400	IncorrectInstanceStatus	The current status of instance does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
400	OperationDenied	Specified operation is denied as your instance is not in VPC.	The error message returned because the specified instance is not in a VPC.
400	InvalidVSwitchId.Mismatch	Specified instance and virtual switch are not in the same zone.	The error message returned because the specified instance and vSwitch do not belong to the same zone.
400	InvalidPrivateIpAddress.Mismatch	Specified private IP address is not in the CIDR block of virtual switch.	The error message returned because the specified private IP address is not in the CIDR block of the specified vSwitch.
404	InvalidVSwitchId.NotFound	Specified virtual switch is not found in current VPC.	The error message returned because the specified vSwitch does not exist in the current VPC.

HTTP status code	Error code	Error message	Description
400	InvalidPrivateIp.Changing	Previous action is not finished yet.	The error message returned because the private IP address is being modified.
404	NoSuchResource	The specified resource is not found.	The error message returned because the specified resource does not exist.
400	InvalidPrivateIpAddress.Duplicated	error new ip is the same with old ip	The error message returned because the new IP address is the same as the original one.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	OperationDenied	%s	The error message returned because the operation is denied.
404	InvalidVSwitch.NotBelongToVpc	%s	The error message returned because the specified vSwitch does not belong to the specified VPC. Check whether the specified VSwitchId parameter is valid.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified SecurityGroupId parameter does not exist.
404	InvalidSecurityGroupType.NotSupportClassic	The specified SecurityGroupIds have classic group type.	The error message returned because the specified security group is in the classic network. Check whether the specified SecurityGroupIds.N parameter is valid.

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupVpc.NotBelongToOnVpc	The specified SecurityGroupIds are belong to different vpc.	The error message returned because the specified security groups belong to different VPCs. Check whether the specified SecurityGroupIds.N parameter is valid. You can call the DescribeSecurityGroups operation to query the VPCs to which the security groups belong.
404	EnterpriseGroupLimited.MutliGroupType	The specified instance can not join multi SecurityGroup types.	The error message returned because the specified instance cannot belong to both a basic and an advanced security group. You can call the DescribeSecurityGroups operation to query the type of a specific security group.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because security groups managed by cloud services cannot be modified.

5.1.4.17. ModifyInstanceVncPasswd

You can call this operation to change the VNC password of an instance.

Description

- The VNC password must be six characters in length and can contain uppercase letters, lowercase letters, and digits.
- After you change the VNC password of an instance:
 - If the instance is I/O optimized, the new password takes effect immediately.
 - If the instance is not I/O optimized, you must restart the instance by using the ECS console or by calling the RebootInstance operation for the new password to take effect.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceVncPasswd	The operation that you want to perform. Set the value to ModifyInstanceVncPasswd.

Parameter	Type	Required	Example	Description
InstanceId	String	Yes	i-bp67acfmxazb4ph***	The ID of the instance.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
VncPassword	String	Yes	123456	The new VNC password of the instance.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ModifyInstanceVncPasswd
&RegionId=cn-qingdao-env17-d01
&InstanceId=i-bp67acfmxazb4ph***
&VncPassword=123456
&<Common request parameters>
```

Sample success responses

XML **format**

```
<ModifyInstanceVncPasswdResponse>
  <RequestId>FDB6C963-9CE8-4B7F-BCA3-845F6BD29AFC</RequestId>
</ModifyInstanceVncPasswdResponse>
```

JSON **format**

```
{
  "RequestId": "FDB6C963-9CE8-4B7F-BCA3-845F6BD29AFC"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
400	IncorrectVncPassword.Malformed	The specified parameter VncPassword is not valid.	The error message returned because the specified VncPassword parameter is invalid.
404	NoSuchResource	The specified resource is not found.	The error message returned because the specified resource does not exist.

5.1.4.18. SoftDeleteInstances

Logically deletes one or more Elastic Compute Service (ECS) instances.

Description

Logical deletion is a new method to delete ECS resources. Different from the DeleteInstance operation, after an instance is logically deleted by calling the SoftDeleteInstances operation, the instance is moved to the recycle bin and is retained here for a specified period of time, which is specified by the Hours parameter. During the retention period, computing resources such as CPUs and memory are released, elastic IP addresses (EIPs) are disassociated from the instance, and storage resources are retained. After the retention period, all ECS resources including storage resources are permanently deleted and cannot be restored.

When you call this operation, take note of the following items:

- Instances of instance families equipped with local disks cannot be logically deleted.
- The instance must be in the **Stopped** (Stopped) or **Running** (Running) state.
- After an instance is logically deleted, the instance enters a retention period. During the retention period, you can only recover or permanently delete the instance but cannot associate or disassociate other resources with or from it, such as attaching or detaching a disk.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	SoftDeleteInstances	The operation that you want to perform. Set the value to SoftDeleteInstances.
InstanceId.N	RepeatList	Yes	i-bp1g6zv0ce8ogh u7k***	The ID of instance N. You can call the DescribeInstances operation to query the IDs of the instances. N indicates the number of instances that you want to logically delete. Valid values of N: 1 to 100.
RegionId	String	Yes	cn-qingdao-****- d01	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
Hours	Integer	No	72	The retention period. Unit: hours. Valid values: 1 to 720. Default value: 72.
ClientToken	String	No	123e4567-e89b- 12d3-a456- 42665544****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that the value is unique among different requests. The ClientToken value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see <i>How to ensure idempotence in ECS Developer Guide</i> .

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F- 4DC5-B3DB- A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.example.com/?Action=SoftDeleteInstances
&InstanceId.1=i-bp1g6zv0ce8oghu7k***
&RegionId=cn-qingdao-****-d01
&Hours=72
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>
    473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E
</RequestId>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	IncorrectInstanceState	%s	The error message returned because the operation is not supported while the instance is in the current state.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance does not exist. Check whether the instance ID is correct.

5.1.4.19. RestoreSoftDeletedInstances

Restores one or more Elastic Compute Service (ECS) instances that are logically deleted.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RestoreSoftDeletedInstances	The operation that you want to perform. Set the value to RestoreSoftDeletedInstances.

Parameter	Type	Required	Example	Description
InstanceId.N	RepeatList	Yes	i-bp1g6zv0ce8ogh u7k***	The ID of logically deleted instance N that you want to restore. You can call the DescribeInstances operation to query the ID of the instance. N indicates the number of instances that you want to restore. Valid values of N: 1 to 100.
RegionId	String	Yes	cn-qingdao-****- d01	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
AttemptStartVm	Boolean	No	true	Specifies whether to start the instance after it is restored. Valid values: • true: starts the instance. • false: does not start the instance. Default value: true.
ClientToken	String	No	123e4567-e89b- 12d3-a456- 42665544****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that the value is unique among different requests. The ClientToken value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see <i>How to ensure idempotence in ECS Developer Guide</i> .

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F- 4DC5-B3DB- A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.example.com/?Action=RestoreSoftDeletedInstances
&InstanceId.1=i-bp1g6zv0ce8oghu7k***
&RegionId=cn-qingdao-****-d01
&AttemptStartVm=true
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>
    473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E
</RequestId>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	IncorrectInstanceState	%s	The error message returned because the operation is not supported while the instance is in the current state.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance does not exist. Check whether the instance ID is correct.

5.1.5. Dedicated hosts

5.1.5.1. AllocateDedicatedHosts

You can call this operation to create one or more dedicated hosts. A dedicated host is a physical server dedicated to a single tenant. You can create ECS instances on a dedicated host and view the attributes of the dedicated host.

Description

Before you create a dedicated host, you can call the DescribeAvailableResource operation to view the available resources in the target region or zone.

- You can create a maximum of 100 dedicated hosts at a time.
- After you create a dedicated host, you can use its ID that is returned by the system as the request

parameter to call the `DescribeDedicatedHosts` operation to query the status of the dedicated host.

- After you submit a request to create a dedicated host, an error is returned if a specified parameter is invalid or the requested resources are insufficient. For more information about error causes, see [Error codes](#).
- After a dedicated host is created, you can call the `ModifyInstanceDeployment` operation to migrate ECS instances from a shared host to the dedicated host. You can also migrate ECS instances from another dedicated host to the created dedicated host.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AllocateDedicatedHosts	The operation that you want to perform. Set the value to <code>AllocateDedicatedHosts</code> .
DedicatedHostType	String	Yes	ddh.c5	The dedicated host type. You can call the <code>DescribeDedicatedHostTypes</code> operation to obtain the most recent list of dedicated host types.
RegionId	String	Yes	cn-qingdao-env17-d01	The ID of the region in which to create the dedicated host. You can call the <code>DescribeRegions</code> operation to query the most recent region list.
Tag.N.Key	String	No	Environment	The key of tag N to be bound to the dedicated host. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with <code>acs:</code> or <code>aliyun</code> . It cannot contain <code>http://</code> or <code>https://</code> .
Tag.N.Value	String	No	Production	The value of tag N to be bound to the dedicated host. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length. It cannot start with <code>acs:</code> or contain <code>http://</code> or <code>https://</code> .
ResourceGroupId	String	No	rg-bp67acfmazb4ph***	The ID of the resource group to which to assign the dedicated host.

Parameter	Type	Required	Example	Description
Zoneld	String	No	cn-qingdao-env17-amtest11001-a	The ID of the zone in which to create the dedicated host. This parameter is empty by default, which indicates that the system automatically assigns a zone.
DedicatedHostName	String	No	myDDH	The name of the dedicated host. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). The name must start with a letter and cannot start with http:// or https://.
ActionOnMaintenance	String	No	Migrate	The policy used to migrate the instances deployed on the dedicated host when the dedicated host fails or needs to be repaired online. Valid values: • Migrate: The instances are migrated to another physical server and restarted. If the dedicated host is attached with cloud disks, the default value is Migrate. • Stop: The instances on the dedicated host are stopped. If the dedicated host cannot be repaired, the instances are migrated to another physical server and restarted. If the dedicated host is attached with local disks, the default value is Stop.
NetworkAttributes.SlbUdpTimeout	Integer	No	60	The timeout period of the UDP session that is established to SLB. Unit: seconds. Valid values: 15 to 310.
NetworkAttributes.UdpTimeout	Integer	No	60	The timeout period for the UDP session between a user and an Apsara Stack service on the dedicated host. Unit: seconds. Valid values: 15 to 310.

Parameter	Type	Required	Example	Description
Description	String	No	This-is-my-DDH	The description of the dedicated host. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
AutoPlacement	String	No	off	Specifies whether to add the dedicated host to the resource pool for automatic deployment. If you do not specify the DedicatedHostId parameter when you create an ECS instance on a dedicated host, Apsara Stack automatically selects a dedicated host from the resource pool to host the instance. Valid values: - on: adds the dedicated host to the resource pool for automatic deployment. - off: does not add the dedicated host to the resource pool for automatic deployment. Default value: on.  Note If you do not want to add the dedicated host to the resource pool for automatic deployment, set the value to off.
Quantity	Integer	No	1	The number of dedicated hosts that you want to create. Valid values: 1 to 100 Default value: 1

Parameter	Type	Required	Example	Description
AutoReleaseTime	String	No	2019-08-21T12:30:24Z	The automatic release time of the dedicated host. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.  Note - It must be at least half an hour later than the current time. - It must be at most three years later than the current time. - If the value of the seconds (ss) is not 00, it is automatically set to 00.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence in ECS Developer Guide.

Response parameters

Parameter	Type	Example	Description
DedicatedHostIds	List	<pre>"DedicatedHostIds": { "DedicatedHostId": ["dh-bp67acfmxazb4ph**", "dh-bp67acfmxazb4pi**"] }</pre>	The IDs of the dedicated hosts.
RequestId	String	E2A664A6-2933-4C64-88AE-5033D003EADF	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=AllocateDedicatedHosts
&RegionId=cn-qingdao-env17-d01
&DedicatedHostType=ddh.sn1ne
&Quantity=2
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&<Common request parameters>
```

Sample success responses

XML format

```
<AllocateDedicatedHostsResponse>
  <RequestId>E2A664A6-2933-4C64-88AE-5033D003EADF</RequestId>
  <DedicatedHostIdSets>
    <DedicatedHostId>dh-bp67acfmxazb4ph***</DedicatedHostId>
    <DedicatedHostId>dh-bp67acfmxazb4pi***</DedicatedHostId>
  </DedicatedHostIdSets>
</AllocateDedicatedHostsResponse>
```

JSON format

```
{
  "RequestId": "E2A664A6-2933-4C64-88AE-5033D003EADF",
  "DedicatedHostIdSets": {
    "DedicatedHostId": [
      "dh-bp67acfmxazb4ph***",
      "dh-bp67acfmxazb4pi***"
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
400	InvalidDescription.Malformed	The specified parameter "Description" is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.

HTTP status code	Error code	Error message	Description
403	OperationDenied	The creation of Host to the specified Zone is not allowed.	The error message returned because you are not authorized to create a dedicated host in the specified zone.
403	OperationDenied.No Stock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because the requested resources are insufficient.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	OperationDenied	Sales of this resource are temporarily suspended in the specified region; please try again later.	The error message returned because this resource is unavailable in the specified region. Try again later.
400	InvalidParameter.Conflict	The specified region and cluster do not match.	The error message returned because the specified region and the specified cluster do not correspond to each other.
403	NodeControllerUnavailable	The Node Controller is temporarily unavailable.	The error message returned because the node controller is unavailable.
404	OperationDenied	Another Host has been creating	The error message returned because another host is being created.
403	OperationDenied	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the operation is valid.
404	PaymentMethodNotFound	No payment method has been registered on the account.	The error message returned because you have not registered a payment method for your account.
404	InvalidDedicatedHostName.Malformed	The specified parameter DedicatedHostName is not valid.	The error message returned because the specified DedicatedHostName parameter is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidParameter.ResourceOwnerAccount	ResourceOwnerAccount is Invalid.	The error message returned because the specified ResourceOwnerAccount parameter is invalid.
403	InvalidUserData.Forbidden	User not authorized to input the parameter "UserData", please apply for permission "UserData"	The error message returned because you are not authorized to manage user data.
403	Zone.NotOpen	The specified zone is not granted to you to buy resources yet.	The error message returned because you are not authorized to purchase resources in the specified zone.
403	Zone.NotOnSale	The specified zone is not available for purchase.	The error message returned because the requested resources are unavailable in the specified zone. Change the resource type or select a different zone.
403	InvalidDedicatedHostType.ValueNotSupported	The specified DedicatedHostType does not exist or beyond the permitted range.	The error message returned because the specified DedicatedHostType parameter does not exist.
403	InvalidDedicatedHostType.ZoneNotSupported	The specified zone does not support this dedicatedHostType.	The error message returned because the specified DedicatedHostType parameter is not supported in the specified zone.
400	InvalidAutoRenewPeriod.ValueNotSupported	The specified autoRenewPeriod is not valid.	The error message returned because the specified AutoReleaseTime parameter is invalid.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidDedicatedHostType.ValueNotSupported	%s	The error message returned because the specified DedicatedHostType parameter is invalid.
400	RegionUnauthorized	%s	The error message returned because you are not authorized to perform the operation in the specified region.

HTTP status code	Error code	Error message	Description
500	InternalServerError	%s	The error message returned because an internal error has occurred. Try again later.
400	Zone.NotOnSale	%s	The error message returned because the requested resources are unavailable in the specified zone.
400	OperationDenied	The specified DedicatedHostType or Zone is not available or not authorized.	The error message returned because the specified dedicated host type or zone is unavailable or you are not authorized to manage the resources.
400	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified PeriodUnit parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	InvalidParameter.NotMatch	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
403	Account.Arrearage	Your account has been in arrears.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
400	QuotaExceed.AfterpayDedicatedHost	The maximum number of Pay-As-You-Go DedicatedHosts is exceeded: %s	The error message returned because the pay-as-you-go resources of the specified dedicated host type are insufficient. Reduce the number of dedicated hosts to be created.
400	InvalidChargeType.ValueNotSupported	ChargeType is not valid	The error message returned because the specified billing method is invalid.
400	InvalidParameter.SlbUdpTimeout	The specified value is invalid.	The error message returned because the specified NetworkAttributes.SlbUdpTimeout parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidParameter.UdpTimeout	The specified value is invalid.	The error message returned because the specified NetworkAttributes.UdpTimeout parameter is invalid.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.

5.1.5.2. ModifyDedicatedHostAttribute

You can call this operation to modify some attributes of a dedicated host, such as the name, description, and instance migration policy applied when the dedicated host fails.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDedicatedHostAttribute	The operation that you want to perform. Set this parameter to ModifyDedicatedHostAttribute.
DedicatedHostId	String	Yes	ddh-xxxxxxxxxxxxxxxxxxx	The ID of the dedicated host.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the dedicated host. You can call the DescribeRegions operation to query the most recent region list.
DedicatedHostName	String	No	myDDH	The name of the dedicated host. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
Description	String	No	this-is-my-ddh	The description of the dedicated host. The description must be 2 to 256 characters in length and cannot start with http:// or https://.

Parameter	Type	Required	Example	Description
ActionOnMaintenance	String	No	Migrate	The policy used to migrate the instances deployed on the dedicated host when the dedicated host fails or needs to be repaired online. Valid values: • Migrate: The instances are migrated to another physical server and restarted. • Stop: The instances on the dedicated host are stopped. If the dedicated host cannot be repaired, the instances are migrated to another physical server and restarted. If the dedicated host is attached with cloud disks, the default value is Migrate. If the dedicated host is attached with local disks, the default value is Stop.
NetworkAttributes.SlbUdpTimeout	Integer	No	60	The timeout period of the UDP session that is established to SLB. Unit: seconds. Valid values: 15 to 310.
NetworkAttributes.UdpTimeout	Integer	No	60	The timeout period for the UDP session between a user and an Apsara Stack service on the dedicated host. Unit: seconds. Valid values: 15 to 310.
AutoPlacement	String	No	on	Specifies whether to add the dedicated host to the resource pool for automatic deployment. If you do not specify the DedicatedHostId parameter when you create an instance on a dedicated host, Apsara Stack automatically selects a dedicated host from the resource pool to host the instance. Valid values: • on: adds the dedicated host to the resource pool for automatic deployment. • off: does not add the dedicated host to the resource pool for automatic deployment.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2A4EA075-CB5B-41B7-B0EB-70D339F64DE7	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.example.com/? Action=ModifyDedicatedHostAttribute
&DedicatedHostId=ddh-xxxxxxxxxxxxxxxxxxxxx
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyDedicatedHostAttributeResponse>
  <RequestId>2A4EA075-CB5B-41B7-B0EB-70D339F64DE7</RequestId>
</ModifyDedicatedHostAttributeResponse>
```

JSON format

```
{
  "RequestId": "2A4EA075-CB5B-41B7-B0EB-70D339F64DE7"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified DedicatedHostId parameter does not exist.
400	InvalidDedicatedHostName.Malformed	The specified parameter DedicatedHostName is not valid.	The error message returned because the specified DedicatedHostName parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidDescription.Malformed	The specified parameter Description is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
403	InvalidUser.Unauthorized	The user is not authorized	The error message returned because you are not authorized to perform this operation.
400	InvalidParameter.SlbUdpTimeout	The specified value is invalid.	The error message returned because the specified NetworkAttributes.SlbUdpTimeout parameter is invalid.
400	InvalidParameter.UdpTimeout	The specified value is invalid.	The error message returned because the specified NetworkAttributes.UdpTimeout parameter is invalid.

5.1.5.3. ModifyInstanceDeployment

You can call this operation to change the deployment set of an instance or migrate an instance to a dedicated host. When you migrate an instance, you can change its instance type.

Description

When you migrate an instance to a dedicated host or change the instance type during the migration, make sure that the following requirements are met:

- The instance is in the **Stopped** (Stopped) state. The instance is automatically restarted after the migration.
- The instance is located in a VPC.
- The instance and the dedicated host belong to the same region, zone, and account.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceDeployment	The operation that you want to perform. Set the value to ModifyInstanceDeployment.

Parameter	Type	Required	Example	Description
InstanceId	String	Yes	i-bp67acfmxazb4ph***	The ID of the instance. The instance must be in the Stopped (Stopped) state.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
DeploymentSetId	String	No	ds-bp67acfmxazb4ph***	The ID of the deployment set. If you want to add an instance to a deployment set or change the deployment set of an instance, you must specify this parameter.  Note You cannot change the deployment set of an instance when you modify dedicated host-related parameters of the instance, such as <code>Tenancy</code> , <code>Affinity</code> , and <code>DedicatedHostId</code> .
Force	Boolean	No	false	Specifies whether to forcibly change the host of the instance. Default value: false. Valid values: • true: forcibly changes the host of the instance. The instance must be in the Running (Running) or Stopped (Stopped) state so that it can be restarted for the host change to take effect. • false: does not forcibly change the host of the instance. You can add the instance to a deployment set only when the instance resides on the current host. If you change the host of the instance, deployment set replacement may fail.

Parameter	Type	Required	Example	Description
DedicatedHostId	String	No	dh-bp67acfmxazb4p h***	The ID of the destination dedicated host. You can call the <code>DescribeDedicatedHosts</code> operation to query the available dedicated hosts. When you migrate an instance from a shared host to a dedicated host or from one dedicated host to another: - To migrate the instance to a specific dedicated host, you must specify this parameter. - To migrate the instance to an automatically selected dedicated host, you must leave this parameter empty and set <code>Tenancy</code> to <code>host</code>.
Tenancy	String	No	host	Specifies whether to deploy the instance on a dedicated host. Valid value: <code>host</code>. This value indicates that the instance is deployed on a dedicated host.
MigrationType	String	No	live	Specifies whether to stop the instance to migrate it to the destination dedicated host. Default value: <code>reboot</code>. Valid values: <code>reboot</code>: stops the instance to migrate it. <code>live</code>: does not stop the instance to migrate it. In this case, you must specify DedicatedHostId. If you set <code>MigrationType</code> to <code>live</code>, you cannot change the instance type during the migration.

Parameter	Type	Required	Example	Description
InstanceType	String	No	ecs.c6.large	The target instance type. You can call the DescribeInstanceTypes operation to query the most recent instance type list. When you migrate an instance to a dedicated host, you can change the instance type. The target instance type must match the specified dedicated host type. - To change the instance type, you must specify <code>DedicatedHostId</code>. - You cannot change the instance type when you use the automatic deployment feature to migrate the instance.

Response parameters

Parameter	Type	Example	Description
RequestId	String	04F0F334-1335-436C-A1D7-6C044FE73368	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ModifyInstanceDeployment
&InstanceId=i-bp67acfmazb4ph****
&RegionId=cn-qingdao-env17-d01
&DedicatedHostId=dh-bp67acfmazb4ph****
&Tenancy=host
&MigrationType=live
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyInstanceDeploymentResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</ModifyInstanceDeploymentResponse>
```

JSON format

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

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified DedicatedHostId parameter does not exist.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
400	OperationDenied.UnstoppedInstance	Operation denied due to unstopped instance.	The error message returned because the operation is not supported while the instance is in the current state. Check whether the instance is stopped.
400	InvalidDedicatedHostStatus.NotSupport	Operation denied due to dedicated host status.	The error message returned because the operation is not supported while the dedicated host is in the current state.
400	InvalidPeriod.ExceededDedicatedHost	Instance expired date can't exceed dedicated host expired date.	The error message returned because the expiration date of the instance is later than that of the dedicated host.
404	InvalidInstanceNetworkType.NotSupport	The specified Instance network type not support.	The error message returned because the operation is not supported while the instance is of the current network type.
404	InvalidInstanceType.NotSupport	The Dedicated host not support the specified instance type.	The error message returned because the dedicated host does not support the specified instance type.
400	OperationDenied.LocalDiskInstance	Operation denied due to instance has local disk	The error message returned because the operation is denied while the instance is equipped with local disks.
403	IncorrectInstanceStatus	%s	The error message returned because the operation is not supported while the instance is in the current state.

HTTP status code	Error code	Error message	Description
400	InvalidParam.Tenancy	The specified Tenancy is invalid.	The error message returned because the specified Tenancy parameter is invalid.
403	OperationDenied.NoStock	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the operation is valid.
400	ChargeTypeViolation.PostPaidDedicatedHost	Prepaid instance onto postpaid dedicated host is not allowed	The error message returned because subscription instances cannot be deployed to pay-as-you-go dedicated hosts.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified InstanceType parameter does not exist or you are not authorized to manage instances of the specified instance type.

5.1.5.4. DescribeDedicatedHostTypes

You can call this operation to query the details about dedicated host types supported in a region, or the ECS instance families supported by a specific dedicated host type.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDedicatedHostTypes	The operation that you want to perform. Set the value to DescribeDedicatedHostTypes.
RegionId	String	Yes	cn-qingdao-env17-d01	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
DedicatedHostType	String	No	ddh.sn1ne	The dedicated host type.
SupportedInstanceTypeFamily	String	No	ecs.sn1ne	The ECS instance family supported by the dedicated host type.

Response parameters

Parameter	Type	Example	Description
DedicatedHostTypes	Array		The collection of details about dedicated host types.
DedicatedHostType			
Cores	Integer	2	The number of cores in a single physical CPU.
DedicatedHostType	String	ddh.sn1ne	The dedicated host type. You can submit a ticket to request more dedicated host types.
GPUSpec	String	gpu	The GPU model.
LocalStorageAmount	Integer	0	The number of local disks on a dedicated host.
LocalStorageCapacity	Long	0	The capacity of a local disk. Unit: GiB.
LocalStorageCategory	String	local	The category of the local disk.
MemorySize	Float	112.0	The size of the memory. Unit: GiB.
PhysicalGpus	Integer	2	The number of physical GPUs.
Sockets	Integer	2	The number of physical CPUs.
SupportedInstanceTypeFamilies	List	ecs.sn1ne	The ECS instance families supported by the dedicated host type. 
SupportedInstanceTypesList	List	ecs.sn1ne.large	The ECS instance types supported by the dedicated host type. 
TotalVcpus	Integer	56	The total number of vCPUs.
TotalVgpus	Integer	10	The total number of vGPUs.

Parameter	Type	Example	Description
RequestId	String	5FE5FF06-3A33-4658-8495-6445FC54E327	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeDedicatedHostTypes
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeDedicatedHostTypesResponse>
  <DedicatedHostTypes>
    <DedicatedHostType>
      <LocalStorageAmount>0</LocalStorageAmount>
      <Sockets>2</Sockets>
      <DedicatedHostType>ddh.sn1ne</DedicatedHostType>
      <LocalStorageCapacity>0</LocalStorageCapacity>
      <SupportedInstanceTypeFamilies>
        <SupportedInstanceTypeFamily>ecs.sn1ne</SupportedInstanceTypeFamily>
      </SupportedInstanceTypeFamilies>
      <MemorySize>112.0</MemorySize>
      <Cores>32</Cores>
      <TotalVcpu>56</TotalVcpu>
      <LocalStorageCategory></LocalStorageCategory>
    </DedicatedHostType>
    <DedicatedHostType>
      <LocalStorageAmount>0</LocalStorageAmount>
      <Sockets>2</Sockets>
      <DedicatedHostType>ddh.sn2ne</DedicatedHostType>
      <LocalStorageCapacity>0</LocalStorageCapacity>
      <SupportedInstanceTypeFamilies>
        <SupportedInstanceTypeFamily>ecs.sn2ne</SupportedInstanceTypeFamily>
      </SupportedInstanceTypeFamilies>
      <MemorySize>224.0</MemorySize>
      <Cores>32</Cores>
      <TotalVcpu>56</TotalVcpu>
      <LocalStorageCategory></LocalStorageCategory>
    </DedicatedHostType>
  </DedicatedHostTypes>
  <RequestId>5FE5FF06-3A33-4658-8495-6445FC54E327</RequestId>
</DescribeDedicatedHostTypesResponse>
```

JSON format


```
{
  "DedicatedHostTypes": {
    "DedicatedHostType": [
      {
        "LocalStorageAmount": 0,
        "Sockets": 2,
        "DedicatedHostType": "ddh.sn1ne",
        "LocalStorageCapacity": 0,
        "SupportedInstanceTypeFamilies": {
          "SupportedInstanceTypeFamily": [
            "ecs.sn1ne"
          ]
        },
        "MemorySize": 112,
        "Cores": 32,
        "TotalVcpus": 56,
        "LocalStorageCategory": ""
      },
      {
        "LocalStorageAmount": 0,
        "Sockets": 2,
        "DedicatedHostType": "dh.c60m83.n1",
        "LocalStorageCapacity": 0,
        "SupportedInstanceTypeFamilies": {
          "SupportedInstanceTypeFamily": [
            "ecs.n1"
          ]
        },
        "MemorySize": 84,
        "Cores": 32,
        "TotalVcpus": 40,
        "LocalStorageCategory": ""
      }
    ]
  },
  "RequestId": "9A0FE8A2-720C-45AE-B2D9-813060FCBBF5"
}
```

5.1.5.5. DescribeDedicatedHosts

You can call this operation to query the details about one or more dedicated hosts, including the physical performance specifications, machine code, service status, and a list of ECS instances that are deployed on the dedicated hosts.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDedicatedHosts	The operation that you want to perform. Set the value to DescribeDedicatedHosts.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the dedicated host. You can call the DescribeRegions operation to query the most recent region list.
ZoneId	String	No	cn-qingdao-env17-amtest11001-a	The zone ID of the dedicated host.
DedicatedHostIds	String	No	["dh-bp165p6xk2tlw61e****", "dh-bp165p6xk2tlw61e****", ... "dh-bp165p6xk2tlw61e****"]	The IDs of dedicated hosts. You can specify up to 100 dedicated host IDs in a single request. Separate multiple IDs with commas (,).
DedicatedHostName	String	No	test-DedicatedHostName	The name of the dedicated host.
Status	String	No	Available	The service status of the dedicated host. Default value: Available. Valid values: - Available: The dedicated host is available for use. - Under-Assessment: The dedicated host has potential failures and may fail when it is used. - Permanent-Failure: The dedicated host has permanent failures and cannot be used.
DedicatedHostType	String	No	ddh.g5	The dedicated host type.
PageNumber	Integer	No	1	The number of the page to return. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10.

Parameter	Type	Required	Example	Description
Tag.N.Key	String	No	TestKey	The key of tag N of the dedicated host. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.
Tag.N.Value	String	No	TestValue	The value of tag N of the dedicated host. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.

Response parameters

Parameter	Type	Example	Description
DedicatedHosts	Array		The collection of details about dedicated hosts.
DedicatedHost			
ActionOnMaintenance	String	Migrate	The policy used to migrate the instances deployed on the dedicated host when the dedicated host fails or needs to be repaired online. Valid values: • Migrate: The instances are migrated to another physical server and restarted. If the dedicated host is attached with cloud disks, the default value is Migrate. • Stop: The instances on the dedicated host are stopped. If the dedicated host cannot be repaired, the instances are migrated to another physical server and restarted. If the dedicated host is attached with local disks, the default value is Stop.

Parameter	Type	Example	Description
AutoPlacement	String	on	Indicates whether the dedicated host was added to the resource pool for automatic deployment. Valid values: - on: The dedicated host was added to the resource pool for automatic deployment. - off: The dedicated host was not added to the resource pool for automatic deployment.
AutoReleaseTime	String	2017-01-01T12:00:00Z	The automatic release time of the dedicated host. The time follows the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mmZ</code> format. The time is displayed in UTC.
Capacity	Struct		The performance specifications of the dedicated host.
AvailableLocalStorage	Integer	65	The available space of the local disk. Unit: GiB.
AvailableMemory	Float	25	The available space of the memory. Unit: GiB.
AvailableVcpus	Integer	5	The number of available vCPUs.
AvailableVgpus	Integer	2	The number of available vGPUs.
LocalStorageCategory	String	i2	The category of the local disk.
TotalLocalStorage	Integer	512	The total capacity of the local disk. Unit: GiB.
TotalMemory	Float	1024	The total capacity of the memory. Unit: GiB.
TotalVcpus	Integer	56	The total number of vCPUs.
TotalVgpus	Integer	10	The total number of vGPUs.

Parameter	Type	Example	Description
ChargeType	String	test	 Note This parameter is not supported.
Cores	Integer	3	The number of physical cores in a single CPU.
CreationTime	String	2018-01-01T12:00:00Z	The time when the dedicated host was created. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
DedicatedHostId	String	dh-bp165p6xk2tlw61e***	The ID of the dedicated host.
DedicatedHostName	String	myDDH	The name of the dedicated host.
DedicatedHostType	String	ddh.g5	The dedicated host type.
Description	String	This is a description example.	The description of the dedicated host.
ExpiredTime	String	test	 Note This parameter is not supported.
GPUSpec	String	gpu	The GPU model.
Instances	Array		The ECS instances that are deployed on the dedicated host.
Instance			
InstanceId	String	i-bp1a0cmfrfi71qlh3fk3	The ID of the ECS instance.
InstanceType	String	ecs.g5	The instance family of the ECS instance.
MachineId	String	2099-09-08T16:00Z	The machine code of the dedicated host.

Parameter	Type	Example	Description
NetworkAttributes	Struct		The network attributes of the dedicated host.
SlbUdpTimeout	Integer	60	The timeout period of the UDP session that was established to SLB.
UdpTimeout	Integer	60	The timeout period of the UDP session.
OperationLocks	Array		The reasons why the resources of the dedicated host were locked.
OperationLock			
LockReason	String	financial	The reason why the resource of the dedicated host was locked.
PhysicalGpus	Integer	10	The number of physical GPUs.
RegionId	String	cn-qingdao-env17-d01	The region ID of the dedicated host.
ResourceGroupId	String	rg-****	The ID of the resource group to which the dedicated host belongs.
SaleCycle	String	test	 Note This parameter is not supported.
Sockets	Integer	5	The number of physical CPUs.
Status	String	Available	The service status of the dedicated host. Valid values: Available, Under-Assessment, and Permanent-Failure.
SupportedCustomInstanceTypeFamilies	List	ecs.ddh6s.custom	The custom instance families supported by the dedicated host.
SupportedInstanceTypeFamilies	List	ecs.g5	The ECS instance types supported by the dedicated host.

Parameter	Type	Example	Description
SupportedInstanceTypesList	List	ecs.g5	The ECS instance type supported by the dedicated host.
Tags	Array		The tags of the dedicated host.
Tag			
TagKey	String	TestKey	The tag key of the dedicated host.
TagValue	String	TestValue	The tag value of the dedicated host.
Zoneld	String	cn-qingdao-env17-amtest11001-a	The zone ID of the dedicated host.
PageNumber	Integer	5	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	C9E9EA51-6B74-409E-BA40-107126A200D4	The ID of the request.
TotalCount	Integer	3	The total number of dedicated hosts.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeDedicatedHosts
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

`XML` format

```

<DescribeDedicatedHostsResponse>
  <PageNumber>1</PageNumber>
  <DedicatedHosts>
    <DedicatedHost>
      <DedicatedHostId>dh-bp165p6xk2tlw61e****</DedicatedHostId>
      <Description></Description>
      <ResourceGroupId></ResourceGroupId>
      <SupportInstanceTypeFamilies>
        <SupportInstanceTypeFamily>ecs.selne</SupportInstanceTypeFamily>
      </SupportInstanceTypeFamilies>
      <Instances>
    </Instances>
      <Cores>32</Cores>
      <ZoneId>cn-qingdao-env17-amtest11001-a</ZoneId>
      <CreationTime>2018-08-13T07:59Z</CreationTime>
      <Sockets>2</Sockets>
      <Status>Available</Status>
      <DedicatedHostType>ddh.selne</DedicatedHostType>
      <RegionId>cn-qingdao-env17-d01</RegionId>
      <DedicatedHostName>test-DedicatedHostName</DedicatedHostName>
      <Capacity>
        <AvailableVcpus>56</AvailableVcpus>
        <TotalMemory>448</TotalMemory>
        <TotalVcpus>56</TotalVcpus>
        <AvailableLocalStorage>0</AvailableLocalStorage>
        <TotalLocalStorage>0</TotalLocalStorage>
        <LocalStorageCategory></LocalStorageCategory>
        <AvailableMemory>448</AvailableMemory>
      </Capacity>
      <OperationLocks>
    </OperationLocks>
      <MachineId> 73aa79494f26e****</MachineId>
    </DedicatedHost>
  </DedicatedHosts>
  <TotalCount>1</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>9D5CC4F5-921A-4E02-B971-0DAF703407BE</RequestId>
</DescribeDedicatedHostsResponse>

```

JSON **format**


```

{
  "PageNumber": 1,
  "DedicatedHosts": {
    "DedicatedHost": [
      {
        "DedicatedHostId": "dh-bp165p6xk2tlw61e****",
        "Description": "",
        "ResourceGroupId": "",
        "SupportInstanceTypeFamilies": {
          "SupportInstanceTypeFamily": [
            "ecs.s6ne"
          ]
        },
        "Instances": {
          "Instance": []
        },
        "Cores": 32,
        "ZoneId": "cn-qingdao-env17-amtest11001-a",
        "CreationTime": "2018-08-13T07:59Z",
        "Sockets": 2,
        "Status": "Available",
        "DedicatedHostType": "ddh.s6ne",
        "RegionId": "cn-qingdao-env17-d01",
        "DedicatedHostName": "test-DedicatedHostName",
        "AutoReleaseTime": "",
        "Capacity": {
          "AvailableVcpus": 56,
          "TotalMemory": 448,
          "TotalVcpus": 56,
          "AvailableLocalStorage": 0,
          "TotalLocalStorage": 0,
          "LocalStorageCategory": "",
          "AvailableMemory": 448
        },
        "OperationLocks": {
          "OperationLock": []
        },
        "MachineId": " 73aa79494f26e****",
      }
    ]
  },
  "TotalCount": 1,
  "PageSize": 10,
  "RequestId": "9D5CC4F5-921A-4E02-B971-0DAF703407BE"
}

```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidStatus.ValueNotSupported	The specified dedicated host status is not supported.	The error message returned because the operation is not supported while the dedicated host is in the current state.
400	MissingParameter.RegionId	The regionId should not be null.	The error message returned because the required RegionId parameter is not specified.
403	InvalidDedicatedHostIds.Malformed	The amount of specified dedicatedHostIds exceeds the limit.	The error message returned because more than 100 dedicated host IDs are specified in the DedicatedHostIds value.
400	InvalidParameter.DedicatedHostIds	The specified parameter dedicatedHostIds is not valid.	The error message returned because the specified DedicatedHostIds parameter is invalid.
400	InvalidRegion.NotFound	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.
400	InvalidZone.NotFound	The specified parameter ZoneId is not valid.	The error message returned because the specified ZoneId parameter is invalid.
404	InvalidLockReason.NotFound	The specified LockReason is not found	The error message returned because the specified reason why the resources of the dedicated host were locked does not exist.

5.1.5.6. ReleaseDedicatedHost

You can call this operation to release a dedicated host.

Description

Before you release a dedicated host, make sure that no ECS instances are deployed on the dedicated host.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	ReleaseDedicatedHost	The operation that you want to perform. Set the value to ReleaseDedicatedHost.
DedicatedHostId	String	Yes	dh-xxxxxxxxxxxxxxxxxx	The ID of the dedicated host to be released.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the dedicated host. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	A1B15AC8-E6F6-49A4-8985-8C07104B9199	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.example.com/? Action=ReleaseDedicatedHost
&DedicatedHostId=dh-xxxxxxxxxxxxxxxxxx
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

XML format

```
<ReleaseDedicatedHostResponse>
  <RequestId>A1B15AC8-E6F6-49A4-8985-8C07104B9199</RequestId>
</ReleaseDedicatedHostResponse>
```

JSON format

```
{
  "RequestId": "A1B15AC8-E6F6-49A4-8985-8C07104B9199"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InstanceExist	Instance exists on the dedicated host.	The error message returned because ECS instances exist on the dedicated host.
400	ChargeTypeViolation	The operation is not permitted due to charge type of the dedicated host.	The error message returned because the billing method of the dedicated host does not support this operation.
400	IncorrectHostStatus.Initializing	The specified dedicatedHost status is not support this operation	The error message returned because the operation is not supported while the dedicated host is in the current state.
404	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified DedicatedHostId parameter does not exist.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

5.1.5.7. CreateDedicatedHostCluster

You can call this operation to create a dedicated host cluster.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateDedicatedHostCluster	The operation that you want to perform. Set the value to CreateDedicatedHostCluster.
RegionId	String	Yes	cn-qingdao-env8e-d01	The ID of the region in which to create the dedicated host cluster. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether RAM users are authorized, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, the <code>DryRunOperation</code> error code is returned. • false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned and the request is made. Default value: false.
Tag.N.Key	String	No	TestKey	The key of tag N to be bound to the dedicated host cluster. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 64 characters in length and cannot start with <code>acs:</code> or <code>aliyun</code>. It cannot contain <code>http://</code> or <code>https://</code>.
Tag.N.Value	String	No	TestValue	The value of tag N to be bound to the dedicated host cluster. Valid values of N: 1 to 20. The tag value cannot be an empty string. It can be up to 64 characters in length and cannot start with <code>acs:</code> or <code>aliyun</code>. It cannot contain <code>http://</code> or <code>https://</code>.
ResourceGroupId	String	No	rg-bp67acfmazb4p****	The ID of the resource group to which to assign the dedicated host cluster.
ZoneId	String	No	cn-qingdao-env8e-nu20001-a	The ID of the zone in which to create the dedicated host cluster. You can call the DescribeZones operation to query the most recent zone list.

Parameter	Type	Required	Example	Description
DedicatedHostClusterName	String	No	myDDHCluster	The name of the dedicated host cluster. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter. It cannot contain <code>http://</code> or <code>https://</code>. This parameter is empty by default.
Description	String	No	This-is-my-DDHCluster	The description of the dedicated host cluster. The description must be 2 to 256 characters in length. It cannot start with <code>http://</code> or <code>https://</code>. This parameter is empty by default.

Response parameters

Parameter	Type	Example	Description
DedicatedHostClusterId	String	dc-bp12wlf6bw0vz9v2***	The ID of the dedicated host cluster.
RequestId	String	E2A664A6-2933-4C64-88AE-5033D003EADF	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=CreateDedicatedHostCluster
&RegionId=cn-qingdao-env8e-d01
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateDedicatedHostClusterResponse>
  <RequestId>214A2187-B06F-4E49-A081-4D053466A8C7</RequestId>
  <DedicatedHostClusterId>dc-bp12wlf6bw0vz9v2****</DedicatedHostClusterId>
</CreateDedicatedHostClusterResponse>
```

JSON format

```
{
  "RequestId": "214A2187-B06F-4E49-A081-4D053466A8C7",
  "DedicatedHostClusterId": "dc-bp12wlf6bw0vz9v2****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.

5.1.5.8. DescribeDedicatedHostClusters

You can call this operation to query details of one or more dedicated host clusters.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDedicatedHostClusters	The operation that you want to perform. Set the value to DescribeDedicatedHostClusters.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-qingdao-env8e-d01	The region ID of the dedicated host cluster. You can call the DescribeRegions operation to query the most recent region list.
Tag.N.Key	String	No	TestKey	The key of tag N of the dedicated host cluster. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 64 characters in length and cannot start with <code>acs:</code> or <code>aliyun</code>. It cannot contain <code>http://</code> or <code>https://</code>. If a single tag is specified to query resources, up to 1,000 resources that are bound with this tag can be displayed in the response. If multiple tags are specified to query resources, up to 1,000 resources that are bound with all these tags can be displayed in the response. To query more than 1,000 resources that are bound with specified tags, call the ListTagResources operation.
Tag.N.Value	String	No	TestValue	The value of tag N of the dedicated host cluster. Valid values of N: 1 to 20. The tag value cannot be an empty string. It can be up to 64 characters in length and cannot start with <code>acs:</code> or <code>aliyun</code>. It cannot contain <code>http://</code> or <code>https://</code>.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the dedicated host cluster belongs. If this parameter is specified to query resources, up to 1,000 resources that belong to the specified resource group can be displayed in the response.
ZoneId	String	No	cn-qingdao-env8e-nu20001-a	The zone ID of the dedicated host cluster. You can call the DescribeZones operation to query the most recent zone list.

Parameter	Type	Required	Example	Description
DedicatedHostClusterIds	String	No	["dc-bp12wlf6am0vz9v2****", "dc-bp12wlf6am0vz9v3****"]	The IDs of dedicated host clusters. The value can be a JSON array that consists of up to 100 dedicated host cluster IDs in the format of ["dc-xxxxxxxxxx", "dc-yyyyyyyyyy", ... "dc-zzzzzzzzzz"]. Separate multiple IDs with commas (,).
DedicatedHostClusterName	String	No	myDDHCluster	The name of the dedicated host cluster.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	5	The number of entries to return per page. Valid values: 1 to 100. Default value: 10.

Response parameters

Parameter	Type	Example	Description
DedicatedHostClusters	Array of DedicatedHostCluster		Details about the dedicated host clusters.
DedicatedHostCluster			
DedicatedHostClusterCapacity	Struct		The capacity of the dedicated host cluster.
AvailableMemory	Integer	4	The available memory size. Unit: GiB.
AvailableVcpus	Integer	2	The number of available vCPUs.
LocalStorageCapacities	Array of LocalStorageCapacity		The local storage capacity.

Parameter	Type	Example	Description
LocalStorageCapacity			
AvailableDisk	Integer	20	The available capacity of the local disk. Unit: GiB.
DataDiskCategory	String	cloud	The category of the data disk. Valid values: - cloud: basic disk. - cloud_efficiency: ultra disk - cloud_essd: standard SSD
TotalDisk	Integer	40	The total capacity of the local disk. Unit: GiB.
TotalMemory	Integer	8	The total memory size. Unit: GiB.
TotalVcpus	Integer	4	The total number of vCPUs.
DedicatedHostClusterId	String	dc-bp12wlf6am0vz9v2***	The ID of the dedicated host cluster.
DedicatedHostClusterName	String	myDDHCluster	The name of the dedicated host cluster.
DedicatedHostIds	List	["dh-bp181e5064b5sotr***", "dh-bp18064b5sotrr9c***"]	The IDs of dedicated hosts in the dedicated host cluster.
Description	String	This-is-my-DDHCluster	The description of the dedicated host cluster.
RegionId	String	cn-qingdao-env8e-d01	The region ID of the dedicated host cluster.
ResourceGroupId	String	rg-bp67acfmazb4p***	The ID of the resource group to which the dedicated host cluster belongs.
Tags	Array of Tag		The tags of the dedicated host cluster.
Tag			

Parameter	Type	Example	Description
TagKey	String	TestKey	The tag key of the dedicated host cluster.
TagValue	String	TestValue	The tag value of the dedicated host cluster.
Zoneld	String	cn-qingdao-env8e-nu20001-a	The zone ID of the dedicated host cluster.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	5	The number of entries returned per page.
RequestId	String	214A2187-B06F-4E49-A081-4D053466A8C7	The ID of the request.
TotalCount	Integer	2	The total number of dedicated host clusters.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeDedicatedHostClusters
&RegionId=cn-qingdao-env8e-d01
&ZoneId=cn-qingdao-env8e-nu20001-a
&DedicatedHostClusterName=myDDHCluster
&PageNumber=1
&PageSize=5
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeDedicatedHostClustersResponse>
  <DedicatedHostClusters>
    <DedicatedHostCluster>
      <Description>This-is-my-DDHCluster</Description>
      <ZoneId>cn-qingdao-env8e-nu20001-a</ZoneId>
      <DedicatedHostClusterName>myDDHCluster</DedicatedHostClusterName>
      <ResourceGroupId>rg-bp67acfmxazb4p****</ResourceGroupId>
      <DedicatedHostClusterCapacity>
        <TotalMemory>0</TotalMemory>
        <AvailableMemory>0</AvailableMemory>
        <AvailableVcpus>0</AvailableVcpus>
        <TotalVcpus>0</TotalVcpus>
        <LocalStorageCapacities>
          </LocalStorageCapacities>
        </DedicatedHostClusterCapacity>
        <RegionId>cn-qingdao-env8e-d01</RegionId>
        <DedicatedHostIds>
          </DedicatedHostIds>
        <DedicatedHostClusterId>dc-bpli7d8p4ku9jgob****</DedicatedHostClusterId>
      </DedicatedHostCluster>
    </DedicatedHostClusters>
    <TotalCount>1</TotalCount>
    <RequestId>502C9C44-B851-44F4-8805-3EC15E726745</RequestId>
    <PageSize>10</PageSize>
    <PageNumber>1</PageNumber>
  </DescribeDedicatedHostClustersResponse>
```

JSON **format**

```
{
  "DedicatedHostClusters": {
    "DedicatedHostCluster": [
      {
        "Description": "This-is-my-DDHCluster",
        "ZoneId": "cn-qingdao-env8e-nu20001-a",
        "DedicatedHostClusterName": "myDDHCluster",
        "ResourceGroupId": "rg-bp67acfmazb4p****",
        "DedicatedHostClusterCapacity": {
          "TotalMemory": 0,
          "AvailableMemory": 0,
          "AvailableVcpus": 0,
          "TotalVcpus": 0,
          "LocalStorageCapacities": {
            "LocalStorageCapacity": []
          }
        },
        "RegionId": "cn-qingdao-env8e-d01",
        "DedicatedHostIds": {
          "DedicatedHostId": []
        },
        "DedicatedHostClusterId": "dc-bpli7d8p4ku9jgob****"
      }
    ]
  },
  "TotalCount": 1,
  "RequestId": "502C9C44-B851-44F4-8805-3EC15E726745",
  "PageSize": 10,
  "PageNumber": 1
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParamter.RegionId	The regionId should not be null.	The error message returned because the RegionId parameter is not specified.
400	InvalidRegion.NotFound	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.
400	InvalidZone.NotFound	The specified parameter ZoneId is not valid.	The error message returned because the specified ZoneId parameter is invalid.

5.1.5.9. ModifyDedicatedHostClusterAttribute

You can call this operation to modify some attributes of a dedicated host cluster, such as the name and description.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDedicatedHostClusterAttribute	The operation that you want to perform. Set the value to <code>ModifyDedicatedHostClusterAttribute</code> .
DedicatedHostClusterId	String	Yes	dc-bp12wlf6am0vz9v2****	The ID of the dedicated host cluster.
RegionId	String	Yes	cn-qingdao-env8e-d01	The region ID of the dedicated host cluster. You can call the <code>DescribeRegions</code> operation to query the most recent region list.
DedicatedHostClusterName	String	No	newClusterName	The new name of the dedicated host cluster. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter. The name cannot contain <code>http://</code> or <code>https://</code> .
Description	String	No	newClusterDescription	The new description of the dedicated host cluster. The description must be 2 to 256 characters in length. It cannot start with <code>http://</code> or <code>https://</code> .

Response parameters

Parameter	Type	Example	Description
RequestId	String	11B55F58-D3A4-4A9B-9596-342420D02FF8	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ModifyDedicatedHostClusterAttribute
&RegionId=cn-qingdao-env8e-d01
&DedicatedHostClusterId=dc-bp12wlf6am0vz9v2****
&DedicatedHostClusterName=newClusterName
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyDedicatedHostClusterAttributeResponse>
  <RequestId>11B55F58-D3A4-4A9B-9596-342420D02FF8</RequestId>
</ModifyDedicatedHostClusterAttributeResponse>
```

JSON format

```
{
  "RequestId": "11B55F58-D3A4-4A9B-9596-342420D02FF8"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidDescription.Malformed	The specified parameter Description is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
403	InvalidUser.Unauthorized	The user is not authorized	The error message returned because you are not authorized to perform this operation.

5.1.5.10. DeleteDedicatedHostCluster

You can call this operation to delete a dedicated host cluster.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteDedicatedHostCluster	The operation that you want to perform. Set the value to DeleteDedicatedHostCluster.

Parameter	Type	Required	Example	Description
DedicatedHostClusterId	String	Yes	dc-bp12wlf6am0vz9v2****	The ID of the dedicated host cluster.
RegionId	String	Yes	cn-qingdao-env8e-d01	The region ID of the dedicated host cluster.

Response parameters

Parameter	Type	Example	Description
RequestId	String	11B55F58-D3A4-4A9B-9596-342420D02FF8	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=DeleteDedicatedHostCluster
&DedicatedHostClusterId=dc-bp12wlf6am0vz9v2****
&RegionId=cn-qingdao-env8e-d01
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteDedicatedHostClusterResponse>
  <RequestId>11B55F58-D3A4-4A9B-9596-342420D02FF8</RequestId>
</DeleteDedicatedHostClusterResponse>
```

JSON format

```
{
  "RequestId": "11B55F58-D3A4-4A9B-9596-342420D02FF8"
}
```

5.1.6. Deployment set

5.1.6.1. CreateDeploymentSet

You can call this operation to create a deployment set in a specified region.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateDeploymentSet	The operation that you want to perform. Set the value to CreateDeploymentSet.
RegionId	String	Yes	cn-qingdao-****	The ID of the region in which to create the deployment set. You can call the DescribeRegions operation to query the most recent region list.
OnUnableToRedeployFailedInstance	String	No	CancelMembershipAndStart	The emergency solution to be used in the following situation: Instances in the deployment set cannot be evenly distributed to different zones due to resource insufficiency after the instances are failed over from faulty physical machines to normal physical machines. Default value: CancelMembershipAndStart. Valid values: - CancelMembershipAndStart: removes the instances from the deployment set and restarts the instances immediately after the failover is complete. - KeepStopped: keeps the instances in the abnormal state and restarts them after ECS resources are replenished.
Description	String	No	This is a description example.	The description of the deployment set. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence in ECS Developer Guide.

Parameter	Type	Required	Example	Description
DeploymentSetName	String	No	FinanceDeployment	The name of the deployment set. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
Domain	String	No	null	The deployment domain. Valid values: • Default • Switch Default value: Default
Granularity	String	No	null	The deployment granularity. Valid values: • Host: The minimum scheduling granularity is a physical server. • Rack: The minimum scheduling granularity is a rack. • Switch: The minimum scheduling granularity is a VSwitch. Default value: Host. If Domain is set to Switch, you cannot set Granularity to Switch.
Strategy	String	No	null	The deployment strategy. Valid values: • LooseDispersion: dispersed as much as possible • LooseAggregation: aggregated as much as possible • StrictAggregation: strictly aggregated • StrictDispersion: strictly dispersed Default value: LooseDispersion. If Granularity is set to Switch, you can set Strategy to one of the preceding values. If Granularity is set to Rack or Host, you can set Strategy only to LooseDispersion or StrictDispersion.

Response parameters

Parameter	Type	Example	Description
DeploymentSetId	String	ds-bp1frxuzdg87zh4pzq***	The ID of the deployment set.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=CreateDeploymentSet
&RegionId=cn-qingdao-****
&DeploymentSetName=FinanceDeployment
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateDeploymentSetResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
  <DeploymentSetId>ds-bp1frxuzdg87zh4pzq***</DeploymentSetId>
</CreateDeploymentSetResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368",
  "DeploymentSetId": "ds-bp1frxuzdg87zh4pzq***"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter RegionId that is mandatory for processing this request is not supplied.	The error message returned because the required RegionId parameter is not specified.
400	InvalidDeploymentSetName.Malformed	Specified deployment set name is not valid.	The error message returned because the specified DeploymentSetName parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidDescription.Malformed	The specified parameter Description is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidDeploymentSetId.NotFound	The specified DeploymentSetId does not exist.	The error message returned because the specified deployment set ID does not exist.
400	MissingParameter	The input parameter DeploymentSetId that is mandatory for processing this request is not supplied.	The error message returned because the required DeploymentSetId parameter is not specified.
400	InvalidParameter.Domain	The specified parameter Domain is not valid.	The error message returned because the specified Domain parameter is invalid.
400	InvalidParameter.Strategy	The specified parameter Strategy is not valid	The error message returned because the specified Strategy parameter is invalid.
400	InvalidParameter.granularity	The specified parameter Granularity is not valid.	The error message returned because the specified Granularity parameter is invalid.
400	DependencyViolation.domain.granularity	The DeploymentSet domain and granularity is violation.	The error message returned because the specified Domain and Granularity parameters do not correspond to each other.
400	DependencyViolation.strategy.granularity	The DeploymentSet strategy and granularity is violation.	The error message returned because the specified Strategy and Granularity parameters do not correspond to each other.
400	DEPLOYMENTSET.QUOTA_FULL	The deploymentSet quota is full	The error message returned because the maximum number of deployment sets has been reached.

5.1.6.2. ModifyDeploymentSetAttribute

Modifies the name or description of a deployment set.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDeploymentSetAttribute	The operation that you want to perform. Set the value to ModifyDeploymentSetAttribute.
DeploymentSetId	String	Yes	ds-bp1frxuzdg87zh4p****	The ID of the deployment set.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the deployment set. You can call the DescribeRegions operation to query the most recent region list.
Description	String	No	TestDescription	The new description of the deployment set. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
DeploymentSetName	String	No	DeploymentSetTestName	The new name of the deployment set. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ModifyDeploymentSetAttribute
&RegionId=cn-qingdao-env17-d01
&DeploymentSetId=ds-bp1frxuzdg87zh4p****
&DeploymentSetName=DeploymentSetTestName
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyDeploymentSetAttributeResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</ModifyDeploymentSetAttributeResponse>
```

JSON format

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

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter RegionId that is mandatory for processing this request is not supplied.	The error message returned because the required RegionId parameter is not specified.
400	InvalidDeploymentSetName.Malformed	Specified deployment set name is not valid.	The error message returned because the specified DeploymentSetName parameter is invalid.
400	InvalidDescription.Malformed	The specified parameter Description is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidDeploymentSetId.NotFound	The specified DeploymentSetId does not exist.	The error message returned because the specified DeploymentSetId parameter does not exist. Check whether the deployment set ID is correct.
403	QuotaExceed.DeploymentSetInstanceQuotaFull	instance quota in one deployment set exceeded.	The error message returned because the maximum number of instances in the deployment set has been reached.

5.1.6.3. DescribeDeploymentSets

You can call this operation to query the attributes of one or more deployment sets.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDeploymentSets	The operation that you want to perform. Set the value to DescribeDeploymentSets.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the deployment set. You can call the DescribeRegions operation to query the most recent region list.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1
PageSize	Integer	No	10	The number of the page to return . Valid values: 1 to 50 Default value: 10
DeploymentSetIds	String	No	["ds-bp67acfmazb4pj****", "ds-bp67acfmazb4pj****", ... "ds-bp67acfmazb4pj****"]	The IDs of deployment sets. The value can be a JSON array that consists of up to 100 deployment set IDs. Separate multiple deployment set IDs with commas (,).
DeploymentSetName	String	No	FinanceDeployment****	The name of the deployment set.
Strategy	String	No	Availability	The deployment strategy. Valid values: - LooseDispersion: dispersed as much as possible - LooseAggregation: aggregated as much as possible - StrictAggregation: strictly aggregated - StrictDispersion: strictly dispersed Default value: LooseDispersion. If Granularity is set to Switch, you can set Strategy to one of the preceding values. If Granularity is set to Rack or Host, you can set Strategy only to LooseDispersion or StrictDispersion.

Parameter	Type	Required	Example	Description
NetworkType	String	No	null	The network type of instances in the deployment set.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
Granularity	String	No	null	The deployment granularity. Valid values: • Host: The minimum scheduling granularity is a physical server. • Rack: The minimum scheduling granularity is a rack. • Switch: The minimum scheduling granularity is a VSwitch. Default value: Host
Domain	String	No	null	The deployment domain. Valid values: • Default • Switch Default value: Default

Response parameters

Parameter	Type	Example	Description
DeploymentSets	Array		The collection of details about deployment sets.
DeploymentSet			
CreationTime	String	2017-12-05T22:40:00Z	The time when the deployment set was created.
DeploymentSetDescription	String	FinanceDeptLooseDispersion	The description of the deployment set.
DeploymentSetId	String	ds-deploymentse****	The ID of the deployment set.

Parameter	Type	Example	Description
DeploymentSet Name	String	FinanceDept	The name of the deployment set.
DeploymentStrategy	String	Availability	The deployment strategy.
Domain	String	Default	The deployment domain.
Granularity	String	Host	The deployment granularity.
InstanceAmount	Integer	1	The number of instances in the deployment set.
InstanceIds	List	["i-instanc****"]	The IDs of the instances in the deployment set.
Strategy	String	StrictDispersion	The deployment strategy.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RegionId	String	cn-qingdao-env17-d01	The region ID of the deployment set.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of queried deployment sets.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeDeploymentSets
&RegionId=cn-qingdao-env17-d01
&PageSize=1
&<Common request parameters>
```

Sample success responses

XML format

```

<DescribeDeploymentSetsResponse>
  <DeploymentSets>
    <DeploymentSet>
      <CreationTime>Tue Jul 23 17:24:33 CST 2019</CreationTime>
      <Granularity>switch</Granularity>
      <DeploymentSetDescription>autogen deploymentset, do not delete</Deploymen
tSetDescription>
      <Domain>default</Domain>
      <InstanceIds>
        <InstanceId>i-bp67acfmxazb4ph***</InstanceId>
        <InstanceId>i-bp67acfmxazb4pi***</InstanceId>
        <InstanceId>i-bp67acfmxazb4pj***</InstanceId>
      </InstanceIds>
      <InstanceAmount>0</InstanceAmount>
      <Strategy>LooseAggregation</Strategy>
      <DeploymentSetName>FinanceDeploymen***</DeploymentSetName>
      <DeploymentStrategy>Availability</DeploymentStrategy>
      <DeploymentSetId>ds-bp120c8htdxx3869***</DeploymentSetId>
    </DeploymentSet>
  </DeploymentSets>
  <PageNumber>1</PageNumber>
  <TotalCount>5</TotalCount>
  <PageSize>1</PageSize>
  <RegionId>cn-qingdao-env17-d01</RegionId>
  <RequestId>FB5EF912-FD87-4CF7-91D9-9204974A63F3</RequestId>
</DescribeDeploymentSetsResponse>

```

JSON **format**

```
{
  "DeploymentSets": {
    "DeploymentSet": [
      {
        "CreationTime": "2017-12-05T22:40:00Z",
        "Granularity": "Switch",
        "DeploymentSetDescription": "autogen deploymentset, do not delete",
        "Domain": "Default",
        "InstanceIds": {
          "InstanceId": [
            "i-bp67acfmxyzb4ph***",
            "i-bp67acfmxyzb4pi***",
            "i-bp67acfmxyzb4pj***"
          ]
        },
        "InstanceAmount": 0,
        "Strategy": "LooseAggregation",
        "DeploymentSetName": "FinanceDeploymen****",
        "DeploymentStrategy": "Availability",
        "DeploymentSetId": "ds-bp120c8htdxx3869****"
      }
    ]
  },
  "PageNumber": 1,
  "TotalCount": 5,
  "PageSize": 1,
  "RegionId": "cn-qingdao-env17-d01",
  "RequestId": "FB5EF912-FD87-4CF7-91D9-9204974A63F3"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidDeploymentSetIds.TooManyInput	The parameter DeploymentSets size should less than 100.	The error message returned because more than 100 deployment sets are specified.

5.1.6.4. DeleteDeploymentSet

Deletes a deployment set.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteDeploymentSet	The operation that you want to perform. Set the value to DeleteDeploymentSet.

Parameter	Type	Required	Example	Description
DeploymentSetId	String	Yes	ds-deploymentsetid1	The ID of the deployment set. You cannot delete a deployment set that contains instances.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the deployment set. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=DeleteDeploymentSet
&RegionId=cn-qingdao-env17-d01
&DeploymentSetId=ds-bp1frxuzdg87zh4pz***
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteDeploymentSetResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</DeleteDeploymentSetResponse>
```

JSON format

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

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter "DeploymentSetId" that is mandatory for processing this request is not supplied.	The error message returned because the required DeploymentSetId parameter is not specified.
403	DependencyViolation.NotEmpty	There are still instance(s) in the specified DeploymentSetId.	The error message returned because the specified deployment set contains instances.
403	DependencyViolation.ReferByHPC	The specified deployment set is still referred by an HPC cluster.	The error message returned because the specified deployment set is associated with other High Performance Computing (HPC) clusters.

5.1.7. Storage sets

5.1.7.1. CreateStorageSet

Creates a storage set in a zone within a specified region.

Description

A storage set can distribute disks or Shared Block Storage devices to different locations. You can specify the number of partitions in a storage set. A larger number of partitions indicate more discrete distribution of disks or Shared Block Storage devices.

For more information about storage sets, see *Create a storage set* in *Defined Storage User Guide*.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateStorageSet	The operation that you want to perform. Set the value to CreateStorageSet.
RegionId	String	Yes	cn-qingdao-****-d01	The region in which you want to create a storage set. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
Zoneld	String	Yes	cn-qingdao-****-d01-a	The zone in which you want to create the storage set. You can call the DescribeZones operation to query the most recent zone list.
StorageSetName	String	No	storageSetTest	The name of the storage set. The name must be 2 to 128 characters in length. The name must start with a letter but cannot start with <code>http://</code> or <code>https://</code> . The name can contain letters, digits, colons (:), underscores (_), and hyphens (-).
MaxPartitionNumber	Integer	No	10	The maximum number of partitions in the storage set. Valid values: greater than or equal to 2. Default value: 2.
Description	String	No	storageSetTest	The description of the storage set. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> .
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that the value is unique among different requests. The ClientToken value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see <i>How to ensure idempotence</i> in <i>ECS Developer Guide</i> .

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.

Parameter	Type	Example	Description
StorageSetId	String	ss-bp67acfmxazb4ph** *	The ID of the storage set.

Examples

Sample requests

```
http(s)://ecs.example.com/?Action=CreateStorageSet
&RegionId=cn-qingdao-****-d01
&ZoneId=cn-qingdao-****-d01-a
&StorageSetName=testStorageSetName
&MaxPartitionNumber=10
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateStorageSetResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3****</RequestId>
  <StorageSetId>ss-bp67acfmxazb4ph***</StorageSetId>
</CreateStorageSetResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3****",
  "StorageSetId": "ss-bp67acfmxazb4ph***"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidClientToken.ValueNotSupported	clienttoken is not valid.	The error message returned because the specified ClientToken parameter is invalid.
403	InvalidUser.NotSupported	%s	The error message returned because your account does not support this operation.
403	InvalidRegionId.NotFound	%s	The error message returned because the specified RegionId parameter does not exist.

HTTP status code	Error code	Error message	Description
403	InvalidParameter	%s	The error message returned because a specified parameter is invalid.

5.1.7.2. DescribeStorageSets

Queries the information of one or more storage sets, such as the region, zone, creation time, and maximum number of partitions.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeStorageSets	The operation that you want to perform. Set the value to DescribeStorageSets.
RegionId	String	Yes	cn-qingdao-****-d01	The region to which the storage set belongs. You can call the DescribeRegions operation to query the list of supported regions.
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that the value is unique among different requests. The value of ClientToken can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see <i>Create a storage set</i> in <i>Cloud Defined Storage (CDS) User Guide</i> .
StorageSetIds	String	No	["ss-bp1d6tsvznfghy7y****", "ss-bp1ippxbaql9zet7****", ... "ss-bp1ib7bcz07l****"]	The list of storage set IDs to return. The value is a JSON array that consists of up to 100 storage set IDs. The storage set IDs must be separated by commas (,).
ZoneId	String	No	cn-qingdao-****-d01-a	The zone to which the queried disk or Shared Block Storage device belongs.

Parameter	Type	Required	Example	Description
StorageSetName	String	No	storageSetTest	The name of the storage set. The name must be 2 to 128 characters in length. It must start with a letter but cannot start with <code>http://</code> or <code>https://</code> . It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
PageNumber	Integer	No	1	The number of the page to return. Page start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 100. Default value: 10.

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.
StorageSets	Array of StorageSet		Details about the storage sets. The value of this parameter is an array that consists of StorageSet data.
StorageSet			
CreationTime	String	2022-03-31T00:00:00Z	The time when the storage set was created.
Description	String	testDescription	The description of the storage set.
RegionId	String	cn-qingdao-****-d01	The ID of the region to which the storage set belongs.

Parameter	Type	Example	Description
StorageSetId	String	ss-bp67acfmxazb4ph** **	The ID of the storage set.
StorageSetName	String	testStorageSetName	The name of the storage set.
StorageSetPartitionNumber	Integer	3	The maximum number of partitions supported by the storage set.
ZoneId	String	cn-qingdao-****-d01-a	The zone to which the queried disk or Shared Block Storage device belongs.
TotalCount	Integer	20	The total number of storage sets.

Examples

Sample requests

```
http(s)://ecs.example.com/?Action=DescribeStorageSets
&RegionId=cn-qingdao-****-d01
&PageSize=1
&PageNumber=1
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeStorageSetsResponse>
  <TotalCount>20</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3****</RequestId>
  <PageNumber>1</PageNumber>
  <StorageSets>
    <Description>testDescription</Description>
    <ZoneId>cn-qingdao-****-d01-a</ZoneId>
    <CreationTime>2022-03-31T00:00:00Z</CreationTime>
    <StorageSetPartitionNumber>3</StorageSetPartitionNumber>
    <RegionId>cn-qingdao-****-d01</RegionId>
    <StorageSetId>ss-bp67acfmxazb4ph****</StorageSetId>
    <StorageSetName>testStorageSetName</StorageSetName>
  </StorageSets>
</DescribeStorageSetsResponse>
```

JSON format

```
{
  "TotalCount": 20,
  "PageSize": 10,
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3****",
  "PageNumber": 1,
  "StorageSets": {
    "Description": "testDescription",
    "ZoneId": "cn-qingdao-****-d01-a",
    "CreationTime": "2022-03-31T00:00:00Z",
    "StorageSetPartitionNumber": 3,
    "RegionId": "cn-qingdao-****-d01",
    "StorageSetId": "ss-bp67acfmazb4ph****",
    "StorageSetName": "testStorageSetName"
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidClientToken.ValueNotSupported	clienttoken is not valid.	The error message returned because the specified ClientToken parameter is invalid.
403	InvalidUser.NotSupported	%s	The error message returned because your account does not support this operation.
403	InvalidRegionId.NotFound	%s	The error message returned because the specified RegionId parameter does not exist.
403	InvalidParameter	%s	The error message returned because a specified parameter is invalid.

5.1.7.3. DescribeStorageSetDetails

Queries the detailed information of disks or Shared Block Storage devices in a storage set.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeStorageSetDetails	The operation that you want to perform. Set the value to DescribeStorageSetDetails.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-qingdao-****-d01	The region to which the storage set belongs. You can call the DescribeRegions operation to query the most recent region list.
StorageSetId	String	Yes	ss-bp67acfmxb4ph****	The ID of the storage set. You can call the DescribeStorageSets operation to query available resource set IDs.
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The ClientToken value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see the <i>Create a storage set</i> topic in <i>Cloud Defined Storage (CDS) User Guide</i> .
StorageSetPartitionNumber	Integer	No	10	The maximum number of partitions in the storage set.
DiskIds	String	No	["d-bp1d6tsvznfghy7y****", "d-bp1ippxb4ql9zet7****", ... "d-bp1ib7bcz07l****"]	The IDs of disks or Shared Block Storage devices. The value can be a JSON array that consists of up to 100 disk or Shared Block Storage device IDs. Separate the IDs with commas (,).
PageNumber	Integer	No	1	The number of the page to return. - Pages start from page 1. - Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. - Maximum value: 100. - Default value: 10.

Response parameters

Parameter	Type	Example	Description
Disks	Array of Disk		Details about disks or Shared Block Storage devices in the storage set. It is an array that consists of disk information.
Disk			
Category	String	cloud_ssd	The category of the disk or Shared Block Storage device.
CreationTime	String	2022-03-31T00:00:00Z	The time when the disk or Shared Block Storage device was created.
DiskId	String	d-bp67acfmxazb4p*** *	The ID of the disk or Shared Block Storage device.
DiskName	String	testDiskName	The name of the disk or Shared Block Storage device.
RegionId	String	cn-qingdao-****-d01	The region to which the disk or Shared Block Storage device belongs.
StorageSetId	String	ss-bp67acfmxazb4ph** **	The ID of the storage set.
StorageSetPartitionNumber	Integer	10	The number of partitions in the storage set.
ZoneId	String	cn-qingdao-****-d01-a	The zone to which the disk or Shared Block Storage device belongs.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	49765E79-0D5D-4451-B3AE-580A2083****	The ID of the request.
TotalCount	Integer	1	The total number of storage sets.

Examples

Sample requests

```
http(s)://ecs.example.com/?Action=DescribeStorageSetDetails
&RegionId=cn-qingdao-****-d01
&StorageSetId=ss-bp67acfmxazb4ph****
&<Common request parameters>
```

Sample success responses

XML **format**

```
<DescribeStorageSetDetailsResponse>
  <TotalCount>1</TotalCount>
  <PageSize>1</PageSize>
  <RequestId>49765E79-0D5D-4451-B3AE-580A2083****</RequestId>
  <PageNumber>1</PageNumber>
  <Disks>
    <Category>cloud_ssd</Category>
    <ZoneId>cn-qingdao-****-d01-a</ZoneId>
    <CreationTime>2022-03-31T00:00:00Z</CreationTime>
    <StorageSetPartitionNumber>10</StorageSetPartitionNumber>
    <RegionId>cn-qingdao-****-d01</RegionId>
    <StorageSetId>ss-bp67acfmxazb4ph****</StorageSetId>
    <DiskName>testDiskName</DiskName>
    <DiskId>d-bp67acfmxazb4p****</DiskId>
  </Disks>
</DescribeStorageSetDetailsResponse>
```

JSON **format**

```
{
  "TotalCount": 1,
  "PageSize": 1,
  "RequestId": "49765E79-0D5D-4451-B3AE-580A2083****",
  "PageNumber": 1,
  "Disks": {
    "Category": "cloud_ssd",
    "ZoneId": "cn-qingdao-****-d01-a",
    "CreationTime": "2022-03-31T00:00:00Z",
    "StorageSetPartitionNumber": 10,
    "RegionId": "cn-qingdao-****-d01",
    "StorageSetId": "ss-bp67acfmxazb4ph****",
    "DiskName": "testDiskName",
    "DiskId": "d-bp67acfmxazb4p****"
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidClientToken.ValueNotSupported	clienttoken is not valid.	The error message returned because the specified ClientToken parameter is invalid.
403	InvalidUser.NotSupported	%s	The error message returned because your account does not support this operation.
403	InvalidRegionId.NotFound	%s	The error message returned because the specified RegionId parameter does not exist.
403	InvalidParameter	%s	The error message returned because a specified parameter is invalid.

5.1.7.4. ModifyStorageSetAttribute

Modifies the name or description of a storage set.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyStorageSetAttribute	The operation that you want to perform. Set the value to ModifyStorageSetAttribute.
RegionId	String	Yes	cn-qingdao-****-d01	The region to which the storage set belongs. You can call the DescribeRegions operation to query the list of supported regions.
StorageSetId	String	Yes	ss-bp67acfmxazb4ph****	The ID of the storage set. You can call the DescribeStorageSets operation to query the ID of the storage set that you want to modify.
Description	String	No	testStorageSetDescription	The description of the storage set. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> .

Parameter	Type	Required	Example	Description
StorageSetName	String	No	testStorageSetName	The name of the storage set. The name must be 2 to 128 characters in length. The name must start with a letter and cannot start with <code>http://</code> or <code>https://</code> . The name can contain letters, digits, colons (.), underscores (_), and hyphens (-).
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that the value is unique among different requests. The value of ClientToken can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see <i>How to ensure idempotence</i> in <i>ECS Developer Guide</i> .

Response parameters

Parameter	Type	Example	Description
RequestId	String	04F0F334-1335-436C-A1D7-6C044FE7****	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.example.com/?Action=ModifyStorageSetAttribute
&RegionId=cn-qingdao-****-d01
&StorageSetId=ss-bp67acfmazb4ph****
&StorageSetName=testStorageSetName
&Description=testStorageSetDescription
&<Common request parameters>
```

Sample success responses

`XML` format


```
<ModifyStorageSetAttributeResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE7****</RequestId>
</ModifyStorageSetAttributeResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE7****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidClientToken.ValueNotSupported	clienttoken is not valid.	The error message returned because the specified ClientToken parameter is invalid.
403	InvalidUser.NotSupported	%s	The error message returned because your account does not support this operation.
403	InvalidRegionId.NotFound	%s	The error message returned because the specified RegionId parameter does not exist.
403	InvalidParameter	%s	The error message returned because a specified parameter is invalid.

5.1.7.5. DeleteStorageSet

Deletes an empty storage set. The storage set that you want to delete must be empty and cannot contain disks or Shared Block Storage devices.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteStorageSet	The operation that you want to perform. Set the value to DeleteStorageSet.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-qingdao-****-d01	The region to which the storage set belongs. You can call the DescribeRegions operation to query the list of supported regions.
StorageSetId	String	Yes	ss-bp67acfmxazb4ph***	The ID of the storage set. You can call the DescribeStorageSets operation to query the ID of the storage set that you want to delete.
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that the value is unique among different requests. The value of ClientToken can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see <i>How to ensure idempotence</i> in <i>ECS Developer Guide</i> .

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.example.com/?Action=DeleteStorageSet
&RegionId=cn-qingdao-****-d01
&StorageSetId=ss-bp67acfmxazb4ph***
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteStorageSetResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE7****</RequestId>
</DeleteStorageSetResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE7****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidClientToken.ValueNotSupported	clienttoken is not valid.	The error message returned because the specified ClientToken parameter is invalid.
403	InvalidUser.NotSupported	%s	The error message returned because your account does not support this operation.
403	InvalidRegionId.NotFound	%s	The error message returned because the specified RegionId parameter does not exist.
403	InvalidParameter	%s	The error message returned because a specified parameter is invalid.

5.1.8. Disks

5.1.8.1. CreateDisk

Creates a data disk.

Description

- By default, the DeleteAutoSnapshot parameter is set to true when a disk is created. This indicates that when the disk is released, the automatic snapshots of the disk are deleted. You can call the ModifyDiskAttribute operation to modify the value of this parameter.
- You must specify one of the Size and SnapshotId parameters. The Size parameter specifies the size of the disk and the SnapshotId parameter specifies the snapshot that is used to create the disk.
- When you create a disk, you can enable the multi-attach feature. Before you create a disk, we recommend that you familiarize yourself with the functions and limits of this feature. For more information, see [Enable the multi-attach feature for disks that support NVMe in ECS User Guide](#).
- You can create premium performance disks, standard performance disks, ultra disks, and SSDs.

 **Note** By default, shared SSDs and shared ultra disks cannot be created. To create shared SSDs and shared ultra disks, submit a ticket.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateDisk	The operation that you want to perform. Set the value to CreateDisk.
RegionId	String	Yes	cn-qingdao-****-d01	The ID of the region in which you want to create the disk. You can call the DescribeRegions operation to query the most recent region list.
ZoneId	String	No	cn-qingdao-****-d01-a	The ID of the zone in which you want to create the disk. This parameter is required.
SnapshotId	String	No	S-bp67acfmxazb4p****	The ID of the snapshot used to create the disk. The following limits apply to the <code>SnapshotId</code> and <code>Size</code> parameters: - If the size of the snapshot specified by the <code>SnapshotId</code> parameter is greater than the value of the <code>Size</code> parameter, the size of the created disk is equal to the specified snapshot size. - If the size of the snapshot specified by the <code>SnapshotId</code> parameter is smaller than the value of the <code>Size</code> parameter, the size of the created disk is equal to the value of <code>Size</code>.
DiskName	String	No	test-DiskName	The name of the disk. The name must be 2 to 128 characters in length. The name must start with a letter and cannot start with <code>http://</code> or <code>https://</code>. The name can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.

Parameter	Type	Required	Example	Description
Size	Integer	No	2000	The size of the disk. Unit: GiB. The value of this parameter must be greater than or equal to the size of the specified snapshot. Valid values: - Valid values if DataDiskCategory is set to cloud_efficiency: 20 to 32768. - Valid values if DataDiskCategory is set to san_efficiency: 20 to 32768. - Valid values if DataDiskCategory is set to cloud_ssd: 20 to 32768. - Valid values if DataDiskCategory is set to san_ssd: 20 to 32768. - Valid values if DataDiskCategory is set to cloud_ppperf: 20 to 32768. - Valid values if DataDiskCategory is set to cloud_sperf: 20 to 32768. If the SnapshotId parameter is specified, the following limits apply to the SnapshotId and Size parameters: - If the size of the snapshot specified by the SnapshotId parameter is greater than the value of the Size parameter, the size of the created disk is equal to the specified snapshot size. - If the size of the snapshot specified by the SnapshotId parameter is smaller than the value of the Size parameter, the size of the created disk is equal to the value of Size.

Parameter	Type	Required	Example	Description
DiskCategory	String	No	cloud_ssd	The category of the data disk. Valid values: - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - cloud_ppperf: premium performance disk - cloud_sperf: standard performance disk - san_ssd: shared SSD - san_efficiency: shared ultra disk. Default value: cloud_efficiency.  Note By default, shared SSDs and shared ultra disks cannot be created. To create shared SSDs and shared ultra disks, submit a ticket.
Description	String	No	This is a description example.	The description of the disk. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code>. This parameter is empty by default.
Encrypted	Boolean	No	false	Specifies whether to encrypt the disk. Valid values: - true - false Default value: false.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that the value is unique among different requests. The value of ClientToken can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see <i>How to ensure idempotence</i> in <i>ECS Developer Guide</i>.

Parameter	Type	Required	Example	Description
InstanceId	String	No	i-bp1g6zv0ce8ogp12****	 Note This parameter is unavailable.
ResourceGroupId	String	No	rg-bp67acfmazb4p****	 Note This parameter is unavailable.
KMSKeyId	String	No	0e478b7a-4262-4802-b8cb-00d3fb40826X	The ID of the Key Management Service (KMS) key to use for the disk.
PerformanceLevel	String	No	PL1	 Note This parameter is unavailable.
StorageSetId	String	No	ss-bp67acfmazb4p****	The ID of the storage set. You can call the DescribeStorageSets operation to query the ID of the storage set.
EncryptAlgorithm	String	No	aes-256	The encryption algorithm. Valid values: - aes-256: AES-256 algorithm - sm4-128: SM4 encryption algorithm
StorageSetPartitionNumber	Integer	No	3	The sequential number of the partition to which the storage set belongs. This parameter is required only when the <code>StorageSetId</code> parameter is specified.
StorageClusterId	String	No	dbsc-j5e1sf2vaf5he8m2****	 Note This parameter is unavailable.

Parameter	Type	Required	Example	Description
MultiAttach	String	No	Disabled	Specifies whether to enable the multi-attach feature for the disk. Valid values: - Disabled - Enabled You can set this parameter to Enabled only for premium performance disks. Default value: Disabled.  Note You can call the AttachDisk operation to attach disks to instances after the disks are created. Disks for which the multi-attach feature is enabled can be attached only as data disks.
Tag.N.key	String	No	TestKey	The key of tag N of the disk.  Note We recommend that you use the Tag.N.Value parameter to ensure future compatibility.
Tag.N.Key	String	No	TestKey	The key of tag N of the disk. Valid values of N: 1 to 20. The tag key cannot be an empty string. The tag key can be up to 128 characters in length and cannot contain <code>http://</code> or <code>https://</code>. The tag key cannot start with <code>acs:</code> or <code>aliyun</code>.
Tag.N.Value	String	No	TestValue	The value of tag N of the disk. Valid values of N: 1 to 20. The tag value can be an empty string. The tag value can be up to 128 characters in length and cannot start with <code>acs:</code> or contain <code>http://</code> or <code>https://</code>.

Parameter	Type	Required	Example	Description
Tag.N.value	String	No	TestValue	The value of tag N of the disk.  Note We recommend that you use the Tag.N.Value parameter to ensure future compatibility.

Response parameters

Parameter	Type	Example	Description
DiskId	String	d-bp131n0q38u3a4zi1****	The ID of the disk.
OrderId	String	20413515388****	 Note This parameter is unavailable.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=CreateDisk
&RegionId=cn-qingdao-****-d01
&ZoneId=cn-qingdao-****-d01-a
&SnapshotId=s-bp67acfmazb4p****
&DiskName=test-DiskName
&Size=2000
&DiskCategory=cloud_ssd
&Description=This is a description example.
&Encrypted=false
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&Tag.1.Key=TestKey
&Tag.1.Value=TestValue
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateDiskResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3****</RequestId>
  <DiskId>d-bp131n0q38u3a4zi1****</DiskId>
</CreateDiskResponse>
```

JSON **format**

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3****",
  "DiskId": "d-bp131n0q38u3a4zi1****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidSize.ValueNotSupported	The specified parameter Size is not valid.	The error message returned because the specified Size parameter is invalid.
400	InvalidDiskName.Malformed	The specified disk name is wrongly formed.	The error message returned because the specified DiskName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). The name must start with a letter and cannot start with http:// or https://.
400	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	MissingParameter	The input parameter either "SnapshotId" or "Size" should be specified.	The error message returned because the SnapshotId and Size parameters are not specified. You must specify at least one of the parameters.
400	InvalidDiskCategory.NotSupported	The specified disk category is not support.	The error message returned because the specified DiskCategory parameter is invalid.

HTTP status code	Error code	Error message	Description
400	Account.Arrearage	Your account has an outstanding payment.	The error message returned because you have unpaid orders in your account.
400	InvalidDiskCategory.ValueNotSupported	The specified parameter "DiskCategory" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	InvalidDataDiskCategory.ValueNotSupported	%s	The error message returned because the specified data disk category is invalid. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidParameter.Conflict	%s	The error message returned because the specified parameter is invalid. Check whether parameter conflicts exist. %s is a variable. An error message is dynamically returned based on call conditions.
400	RegionUnauthorized	%s	The error message returned because you are not authorized to perform the operation in the specified region. %s is a variable. An error message is dynamically returned based on call conditions.
400	Zone.NotOnSale	%s	The error message returned because the requested resources are unavailable in the specified zone. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidDataDiskSize.ValueNotSupported	%s	The error message returned because the specified data disk size is invalid. %s is a variable. An error message is dynamically returned based on call conditions.

HTTP status code	Error code	Error message	Description
400	OperationDenied	The specified Zone is not available or not authorized.	The error message returned because the specified zone is unavailable or because you are not authorized to access the specified zone.
400	InvalidDiskSize.NotSupported	The specified parameter size is not valid.	The error message returned because the specified Size parameter is invalid.
400	InvalidDiskSizeOrCategory	The specified disk category or size is invalid.	The error message returned because the specified DiskCategory or Size parameter is invalid.
400	InvalidParameter.EncryptedIllegal	%s	The error message returned because the specified parameter is invalid. Check whether your encryption operation is supported. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidParameter.EncryptedNotSupported	%s	The error message returned because the specified parameter is invalid and your encryption operation is not supported. %s is a variable. An error message is dynamically returned based on call conditions.
400	EncryptedOption.Conflict	%s	The error message returned because the parameter used to encrypt disks is not supported. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidParameter.EncryptedIllegal	The specified parameter Encrypted must be true when kmsKeyId is not empty.	The error message returned because the encryption feature is not enabled after a KMS key ID is specified.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.

HTTP status code	Error code	Error message	Description
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	InvalidPerformanceLevel.Malformed	The specified parameter PerformanceLevel is not valid.	The error message returned because the specified PerformanceLevel parameter is invalid.
400	InvalidInstance.NotFoundSystemDisk	The specified instance has no system disk.	The error message returned because the specified instance has no system disk attached. Make sure that the specified instance has a system disk attached. You can call the DescribeInstances operation to query the details of the specified instance.
403	InvalidDataDiskCategory.NotSupported	Specified disk category is not supported.	The error message returned because the specified DiskCategory parameter is invalid.
403	InstanceDiskCategoryLimitExceed	The total size of specified disk category in an instance exceeds.	The error message returned because the total size of disks of the specified category exceeds the maximum capacity allowed for an instance.
403	InvalidSnapshot.NotReady	The specified snapshot creation is not completed yet.	The error message returned because the specified snapshot is not created.
403	InvalidSnapshot.TooOld	This operation is forbidden because the specified snapshot is created before 2013-07-15.	The error message returned because the specified snapshot was created on or before July 15, 2013 and cannot be used to create disks.
403	InvalidSnapshot.TooLarge	The capacity of snapshot exceeds 2000GB.	The error message returned because the snapshot size exceeds 2,000 GB.
403	OperationDenied	The specified snapshot is not allowed to create disk.	The error message returned because the specified snapshot cannot be used to create disks.

HTTP status code	Error code	Error message	Description
403	QuotaExceed.PortableCloudDisk	The quota of portable cloud disk exceeds.	The error message returned because the maximum number of removable disks has been reached.
403	InvalidDiskCategory.ValueUnauthorized	The disk category is not authorized.	The error message returned because you are not authorized to manage the specified disk category.
403	InvalidSnapshotId.NotReady	The specified snapshot has not completed yet.	The error message returned because the specified snapshot is being created.
403	InvalidSnapshotId.NotDataDiskSnapshot	The specified snapshot is system disk snapshot.	The error message returned because the specified snapshot is a system disk snapshot.
403	InvalidDiskSize.TooSmall	Specified disk size is less than the size of snapshot.	The error message returned because the specified disk size is smaller than the snapshot size.
403	OperationDenied	The type of the disk does not support the operation.	The error message returned because the specified disk category does not support this operation.
403	InvalidDataDiskCategory.NotSupported	%s	The error message returned because the specified data disk category is invalid. %s is a variable. An error message is dynamically returned based on call conditions.
403	InvalidDiskSize.NotSupported	disk size is not supported.	The error message returned because the specified Size parameter is invalid.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.
403	InvalidPayMethod	The specified pay method is not valid.	The error message returned because the specified payment method is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidDiskCategory.NotSupported	The specified disk category is not supported.	The error message returned because the specified disk category does not support the operation.
403	InvalidDiskSize.NotSupported	The specified disk size is not supported.	The error message returned because the specified disk size is not supported.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not authorized to manage the disk. Try again when you are authorized.
403	QuotaExceed.PostPaidDisk	Living postPaid disks quota exceeded.	The error message returned because the maximum number of pay-as-you-go disks has been reached.
403	InvalidRegion.NotSupported	The specified region does not support byok.	The error message returned because the Bring Your Own Key (BYOK) feature is not supported in the specified region.
403	UserNotInTheWhiteList	The user is not in byok white list.	The error message returned because you are not authorized to use the BYOK feature. Try again when you are authorized.
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a KMS key ID is specified for a disk. You can call the DescribeKey operation of KMS to query information about the specified CMK.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access KMS resources.
403	SecurityRisk.3DVerification	We have detected a security risk with your default credit or debit card. Please proceed with verification via the link in your email.	The error message returned because risks are detected in your default credit card or debit card. Click the URL in the email for verification.

HTTP status code	Error code	Error message	Description
403	InvalidStatus.Upgrading	The instance is upgrading; please try again later.	The error message returned because the configurations of the specified instance are being upgraded. Try again later.
403	QuotaExceed.Tags	%s	The error message returned because the maximum number of tags has been reached. %s is a variable. An error message is dynamically returned based on call conditions.
403	OperationDenied.SnapshotNotAllowed	The specified snapshot is not allowed to create disk.	The error message returned because the specified snapshot cannot be used to create disks.
403	LastTokenProcessing	The last token request is processing.	The error message returned because the last token request is being processed. Try again later.
403	InvalidParameter.MultiAttach	The specified param MultiAttach is not valid.	The error message returned because the specified MultiAttach parameter is invalid.
403	InvalidParameter.MultiAttachAndInstanceIdConflict	The parameter MultiAttach and InstanceId are conflict.	The error message returned because the MultiAttach and InstanceId parameters are both specified.
403	InvalidParameter.DiskCategoryAndMultiAttachConflict	The specified disk category does not support multi attach set.	The error message returned because the MultiAttach parameter is specified for the Shared Block Storage device.
403	InvalidParameter.DiskCategoryAndMultiAttachNotMatch	The specified disk category does not support multi attach enabled.	The error message returned because the specified disk category does not support the multi-attach feature.
403	OperationDenied.ZoneNotSupportMultiAttachDisk	The specified zone does support multi attach disk.	The error message returned because disks for which the multi-attach feature is enabled cannot be created in the specified zone.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.

HTTP status code	Error code	Error message	Description
404	InvalidZoneId.NotFound	The specified zone does not exist.	The error message returned because the specified ZoneId parameter does not exist.
404	InvalidSnapshotId.NotFound	The specified SnapshotId does not exist.	The error message returned because the specified snapshot does not exist. Check whether the snapshot ID is correct.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified resource group does not exist.
404	InvalidParameter.KMSKeyId.NotFound	The specified KMSKeyId does not exist.	The error message returned because the specified KMSKeyId parameter does not exist.
404	InvalidInstanceId.NotFound	The InstanceId provided does not exist in our records.	The error message returned because the specified instance does not exist. Check whether the instance ID is correct.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance does not exist. Check whether the instance ID is correct.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

5.1.8.2. DescribeDisks

Queries one or more Elastic Block Storage (EBS) devices that you created, including cloud disks and local disks.

Description

- You can specify multiple request parameters such as `RegionId`, `ZoneId`, `DiskIds`, and `InstanceId` to be queried. Specified parameters have logical AND relations. Only the specified parameters are included in the filter conditions.
- The `DiskIds` value is a JSON array. If `DiskIds` is not specified, it is not used as a filter condition. If `DiskIds` is set to an empty JSON array, it is regarded as a valid filter condition, and an empty result is

returned.

- A disk that has the multi-attach feature enabled can be attached to multiple instances. You can query the attach information of the disk based on the Attachment values in the response.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDisks	The operation that you want to perform. Set the value to DescribeDisks.
RegionId	String	Yes	cn-qingdao-****	The region ID of the disk. You can call the DescribeRegions operation to query the most recent region list.
ZoneId	String	No	cn-qingdao-****-a	The zone ID of the disk. You can call the DescribeZones operation to query the most recent zone list.
DiskIds	String	No	["d-bp67acfmxb4p****", "d-bp67acfmxb4p****", ... "d-bp67acfmxb4p****"]	The IDs of disks. The value is a JSON array that consists of up to 100 disk IDs. Separate the disk IDs with commas (,).
InstanceId	String	No	i-bp67acfmxb4p****	The ID of the instance to which the disk is attached.
DiskType	String	No	all	The type of the disk. Valid values: • all: system disk and data disk • system: system disk • data: data disk Default value: all.

Parameter	Type	Required	Example	Description
Category	String	No	all	The category of the data disk. Valid values: - cloud_efficiency: ultra disk - san_efficiency: shared ultra disk - cloud_ssd: standard SSD - san_ssd: shared standard SSD - cloud_ppperf: premium performance disk - cloud_sperf: standard performance disk Default value: cloud_efficiency.
Status	String	No	All	The state of the cloud disk. Valid values: - In_use: The cloud disk is being used. - Available: The cloud disk can be attached. - Attaching: The cloud disk is being attached. - Detaching: The cloud disk is being detached. - Creating: The cloud disk is being created. - Relniting: The cloud disk is being initialized. - All: All states. Default value: All.
SnapshotId	String	No	S-bp67acfmxazb4p****	The ID of the snapshot used to create the cloud disk.
Portable	Boolean	No	false	Specifies whether the disk is removable. Valid values: - true: The disk is removable. A removable disk can independently exist and can be attached to or detached from an instance within the same zone. - false: The disk is not removable. A disk that is not removable cannot independently exist or be attached to or detached from an instance within the same zone.

Parameter	Type	Required	Example	Description
DeleteWithInstance	Boolean	No	false	Specifies whether to release the cloud disk when its associated instance is released. Valid values: • true: The cloud disk is released when its associated instance is released. • false: The disk is not released but is retained when its attached instance is released. Default value: false.
DeleteAutoSnapshot	Boolean	No	false	Specifies whether to delete the automatic snapshots of the cloud disk when the disk is released. Valid values: • true: The automatic snapshots of the cloud disk is deleted when the disk is released. • false: The automatic snapshots of the cloud disk is not deleted when the disk is released. Default value: false.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 100. Default value: 10.
NextToken	String	No	AAAAAdDWBf2*** *	The query token. Set the value to the <code>NextToken</code> value returned in the last call to the <code>DescribeDisks</code> operation.
MaxResults	Integer	No	50	The maximum number of entries to return on each page. Valid values: 1 to 500. Default value: 10.
DiskName	String	No	test-DiskName	The name of the disk.

Parameter	Type	Required	Example	Description
AutoSnapshotPolicyId	String	No	sp-m5e2w2jutw8bv31a****	The ID of the automatic snapshot policy that is applied to the cloud disk.
EnableAutoSnapshot	Boolean	No	false	Specifies whether the automatic snapshot policy feature is enabled for the cloud disk. - true: The automatic snapshot policy feature is enabled for the cloud disk. - false: The automatic snapshot policy feature is disabled for the cloud disk.  Note By default, the automatic snapshot policy feature is enabled for created cloud disks. You need to only apply an automatic snapshot policy to a cloud disk before you can use the automatic snapshot policy.
EnableAutomatedSnapshotPolicy	Boolean	No	false	Specifies whether to query disks that have automatic snapshot policies applied. - true: queries disks that have automatic snapshot policies applied. - false: does not query disks that have automatic snapshot policies applied. Default value: false.
Filter.1.Key	String	No	CreationStartTime	The key of filter 1 used to query resources. Set the value to <code>CreationStartTime</code>. You can specify a time by setting both <code>Filter.1.Key</code> and <code>Filter.1.Value</code> to query resources that were created after the time.

Parameter	Type	Required	Example	Description
Filter.2.Key	String	No	CreationEndTime	The key of filter 2 used to query resources. Set the value to <code>CreationEndTime</code> . You can specify a time by setting both <code>Filter.2.Key</code> and <code>Filter.2.Value</code> to query resources that were created before the time.
Filter.1.Value	String	No	2017-12-05T22:40:00Z	The value of filter 1 used to query resources. Set the value to a time. If you specify this parameter, you must also specify the <code>Filter.1.Key</code> parameter. Specify the time in the <code>yyyy-MM-ddTHH:mmZ</code> format. The time must be in UTC.
Filter.2.Value	String	No	2017-12-06T22:40:00Z	The value of filter 2 used to query resources. Set the value to a time. If you specify this parameter, you must also specify the <code>Filter.2.Key</code> parameter. Specify the time in the <code>yyyy-MM-ddTHH:mmZ</code> format. The time must be in UTC.
EnableShared	Boolean	No	false	Specifies whether the disk is a Shared Block Storage device. Valid values: - true - false Default value: false.
Encrypted	Boolean	No	false	Specifies whether to query only encrypted cloud disks. Valid values: - true: queries only encrypted cloud disks. - false: does not query encrypted cloud disks. Default value: false.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether RAM users are granted required permissions, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, the <code>DryRunOperation</code> error code is returned. • false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned, and the request is made. Default value: false.
KMSKeyId	String	No	0e478b7a-4262-4802-b8cb-00d3fb408***	The ID of the Key Management Service (KMS) key used by the cloud disk.
MultiAttach	String	No	Disabled	Specifies whether the multi-attach feature is enabled for the disk. Valid values: • Disabled: does not enable the multi-attach feature. • Enabled: enables the multi-attach feature. • LegacyShared: queries Shared Block Storage devices.
Tag.N.key	String	No	hide	The key of tag N of the disk.  Note We recommend that you use the Tag.N.Key parameter to ensure future compatibility.

Parameter	Type	Required	Example	Description
Tag.N.Key	String	No	TestKey	The key of tag N of the disk. Valid values of N: 1 to 20. If a single tag is specified to query resources, up to 1,000 resources that have this tag added can be displayed in the response. If multiple tags are specified to query resources, up to 1,000 resources that have all these tags added can be displayed in the response. To query more than 1,000 resources that have specified tags added, call the ListTagResources operation.
Tag.N.Value	String	No	TestValue	The value of tag N of the disk. Valid values of N: 1 to 20.
Tag.N.value	String	No	hide	The value of tag N of the disk.  Note We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
AdditionalAttributes.N	RepeatList	No	null	The value of attribute N.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.

Response parameters

Parameter	Type	Example	Description
Disks	Array of Disk		Details about the disks.
Disk			

Parameter	Type	Example	Description
AttachedTime	String	2018-01-01T01:04:22Z	The time when the disk was attached. The time follows the ISO 8601 standard in UTC. The time is displayed in UTC. This parameter is valid only when <code>Status</code> is set to <code>Available</code>.
Attachments	Array of Attachment		The attach information of the cloud disk. The value is an array that consists of the <code>Attachment</code> values. This value is not returned when you query Shared Block Storage devices.
Attachment			
AttachedTime	String	2022-04-10T06:08:56Z	The time when the cloud disk was last attached. The time follows the ISO 8601 standard in UTC. The format is <code>yyyy-MM-ddThh:mmZ</code>.
Device	String	/dev/xvda	The device name of the disk on its associated instance. Example: <code>/dev/xvdb</code>. This parameter has a value only when <code>Status</code> is set to <code>In_use</code>. Otherwise, the parameter is empty.
Instanceld	String	i-bp67acfmazb4q***	The ID of the instance to which the disk is attached.
AutoSnapshotPolicyId	String	sp-bp67acfmazb4p***	The ID of the automatic snapshot policy that is applied to the cloud disk.
BdfId	String	test	 Note This parameter is not supported.

Parameter	Type	Example	Description
Category	String	cloud_ssd	The category of the disk. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - cloud_essd: enhanced SSD (ESSD) - cloud_ppperf: premium performance disk - cloud_sperf: standard performance disk
CreationTime	String	2018-01-01T01:01:22Z	The time when the disk was created.
DeleteAutoSnapshot	Boolean	false	Indicates whether the automatic snapshots of the cloud disk are deleted when the disk is released. Valid values: - true: The automatic snapshots of the cloud disk are deleted when the disk is released. - false: The automatic snapshots of the cloud disk are retained when the disk is released. The snapshots created by calling the CreateSnapshot operation or by using the ECS console are not affected by this parameter.
DeleteWithInstance	Boolean	true	Indicates whether the cloud disk is released when its associated instance is released. Valid values: - true: The cloud disk is released when its associated instance is released. - false: The cloud disk is retained when its associated instance is released.
Description	String	This is a description example.	The description of the disk.
DetachedTime	String	2018-01-08T01:01:22Z	The time when the cloud disk was detached. This parameter is valid only when <code>Status</code> is set to <code>Available</code>.

Parameter	Type	Example	Description
Device	String	/dev/xvdb	The device name of the disk on its associated instance. Example: /dev/xvdb. This parameter has a value only when the <code>Status</code> value is <code>In_use</code>. Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
DiskChargeType	String	PostPaid	Note This parameter is not supported.
DiskId	String	d-bp18um4r4f2fve24***	The ID of the disk.
DiskName	String	test-DiskName	The name of the disk.
EnableAutoSnapshot	Boolean	false	Indicates whether the automatic snapshot policy feature was enabled for the cloud disk. Valid values: - true: The automatic snapshot policy feature was enabled for the cloud disk. - false: the automatic snapshot policy was disabled for the cloud disk. Note By default, the automatic snapshot policy feature is enabled for created cloud disks. You only need to apply an automatic snapshot policy to a cloud disk before you can use the automatic snapshot policy.
EnableAutomatedSnapshotPolicy	Boolean	false	Indicates whether an automatic snapshot policy was applied to the cloud disk. - true: An automatic snapshot policy was applied to the cloud disk. - false: No automatic snapshot policy was applied to the cloud disk. Default value: false.

Parameter	Type	Example	Description
Encrypted	Boolean	false	Indicates whether to query only encrypted cloud disks. - true: queries only encrypted cloud disks. - false: does not query encrypted cloud disks. Default value: false.
ExpiredTime	String	2018-01-10T01:01:22Z	 Note This parameter is not supported.
IOPS	Integer	4000	The maximum number of IOPS.
IOPSRead	Integer	2000	The maximum number of I/O read operations per second.
IOPWrite	Integer	2000	The maximum number of I/O write operations per second.
ImageId	String	m-bp13aqm171qynt3***	The ID of the image that was used to create the instance. This parameter is empty unless the cloud disk was created from an image. The value of this parameter remains unchanged throughout the lifecycle of the cloud disk.
InstanceId	String	i-bp1j4i2jdf3owlhe***	The ID of the instance to which the disk was attached. This parameter has a value only when the <code>Status</code> value is <code>In_use</code>.
KMSKeyId	String	0e478b7a-4262-4802-b8cb-00d3fb40****	Specifies whether to query only encrypted cloud disks.
MountInstanceNum	Integer	1	The number of instances to which the Shared Block Storage device is attached.
MountInstances	Array of MountInstance		The attach information of the disk.
MountInstance			

Parameter	Type	Example	Description
AttachedTime	String	2017-12-05T2340:00Z	The time when the cloud disk was attached. The time follows the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time is displayed in UTC.
Device	String	/dev/xvda	The mount point of the disk.
InstanceId	String	i-bp1j4i2jdf3owlhe*** *	The ID of the instance to which the disk was attached.
MultiAttach	String	Disabled	Indicates whether the multi-attach feature was enabled for the cloud disk.
OperationLocks	Array of OperationLock		The reasons why the disk was locked.
OperationLock			
LockReason	String	security	The security reason why the disk was locked.
PerformanceLevel	String	null	 Note This parameter is not supported.
Portable	Boolean	false	Indicates whether the disk is removable. Valid values: • true: The disk is removable. A removable disk can independently exist and can be attached to or detached from an instance within the same zone. • false: The disk is not removable. A disk that is not removable cannot independently exist or be attached to or detached from an instance within the same zone.
ProductCode	String	test	 Note This parameter is not supported.
RegionId	String	cn-qingdao-****	The region ID of the disk.

Parameter	Type	Example	Description
ResourceGroupId	String	rg-bp67acfmazb4p***	 Note This parameter is not supported.
SerialNumber	String	bp18um4r4f2fve2***	The serial number of the disk.
Size	Integer	2000	The size of the disk. Unit: GiB.
SourceSnapshotId	String	s-bp67acfmazb4p***	The ID of the snapshot that is used to create the cloud disk. This parameter is empty unless the cloud disk was created from a snapshot. The value of this parameter remains unchanged throughout the lifecycle of the cloud disk.
Status	String	Available	The state of the cloud disk. Valid values: - In_use: The cloud disk is being used. - Available: The cloud disk can be attached. - Attaching: The cloud disk is being attached. - Detaching: The cloud disk is being detached. - Creating: The cloud disk is being created. - ReIniting: The cloud disk is being initialized.
StorageClusterId	String	hide	 Note This parameter is not supported.
StorageSetId	String	ss-i-bp1j4i2jdf3owlhe***	The ID of the storage set.
StorageSetPartitionNumber	Integer	11	The number of partitions in the storage set.
Tags	Array of Tag		The tags of the disk.
Tag			

Parameter	Type	Example	Description
TagKey	String	TestKey	The key of the tag.
TagValue	String	TestValue	The value of the tag.
Type	String	data	The type of the disk. Valid values: - system: system disk - data: data disk
Zoneld	String	cn-qingdao-****-a	The zone ID of the disk.
NextToken	String	AAAAAdWBF2****	The query token returned in this call.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.
TotalCount	Integer	76	The total number of entries returned.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeDisks
&RegionId=cn-qingdao-****
&PageNumber=1
&PageSize=1
&<Common request parameters>
```

Sample success responses

XML format

```
<TotalCount>76</TotalCount>
<RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3****</RequestId>
<PageSize>1</PageSize>
<NextToken>AAAAAdWBF2****</NextToken>
<PageNumber>1</PageNumber>
<Disks>
  <DetachedTime>2018-01-08T01:01:22Z</DetachedTime>
  <Category>cloud_essd</Category>
```

```

<Category>cloud_ssd</Category>
<KMSKeyId>0e478b7a-4262-4802-b8cb-00d3fb40****</KMSKeyId>
<Description>This is a description example.</Description>
<Size>2000</Size>
<Encrypted>>false</Encrypted>
<DeleteAutoSnapshot>>false</DeleteAutoSnapshot>
<StorageSetPartitionNumber>11</StorageSetPartitionNumber>
<IOPS>4000</IOPS>
<MultiAttach>Disabled</MultiAttach>
<ImageId>m-bp13aqm17lqynt3****</ImageId>
<StorageSetId>ss-i-bp1j4i2jdf3owlhe****</StorageSetId>
<Status>Available</Status>
<AttachedTime>2018-01-01T01:04:22Z</AttachedTime>
<IOPSRead>2000</IOPSRead>
<IOPSWrite>2000</IOPSWrite>
<ZoneId>cn-qingdao-****-a</ZoneId>
<InstanceId>i-bp1j4i2jdf3owlhe****</InstanceId>
<SourceSnapshotId>s-bp67acfmazb4p****</SourceSnapshotId>
<Device>/dev/xvdb</Device>
<EnableAutomatedSnapshotPolicy>>false</EnableAutomatedSnapshotPolicy>
<DeleteWithInstance>>true</DeleteWithInstance>
<EnableAutoSnapshot>>false</EnableAutoSnapshot>
<AutoSnapshotPolicyId>sp-bp67acfmazb4p****</AutoSnapshotPolicyId>
<DiskName>test-DiskName</DiskName>
<Portable>>false</Portable>
<Type>data</Type>
<MountInstanceNum>1</MountInstanceNum>
<SerialNumber>bp18um4r4f2fve2****</SerialNumber>
<CreationTime>2018-01-01T01:01:22Z</CreationTime>
<RegionId>cn-qingdao-****</RegionId>
<DiskId>d-bp18um4r4f2fve24****</DiskId>
<MountInstances>
  <AttachedTime>2017-12-05T2340:00Z</AttachedTime>
  <InstanceId>i-bp1j4i2jdf3owlhe****</InstanceId>
  <Device>/dev/xvda</Device>
</MountInstances>
<Attachments>
  <AttachedTime>2022-04-10T06:08:56Z</AttachedTime>
  <InstanceId>i-bp67acfmazb4p****</InstanceId>
  <Device>/dev/xvda</Device>
</Attachments>
<OperationLocks>
  <LockReason>security</LockReason>
</OperationLocks>
<Tags>
  <TagKey>TestKey</TagKey>
  <TagValue>TestValue</TagValue>
</Tags>
</Disks>

```

JSON **format**

```

{
  "TotalCount": 76,

```



```

"RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3****",
"PageSize": 1,
"NextToken": "AAAAAdDWBf2****",
"PageNumber": 1,
"Disks": {
    "DetachedTime": "2018-01-08T01:01:22Z",
    "Category": "cloud_ssd",
    "KMSKeyId": "0e478b7a-4262-4802-b8cb-00d3fb40****",
    "Description": "This is a description example.",
    "Size": 2000,
    "Encrypted": false,
    "DeleteAutoSnapshot": false,
    "StorageSetPartitionNumber": 11,
    "IOPS": 4000,
    "MultiAttach": "Disabled",
    "ImageId": "m-bp13aqm171qynt3****",
    "StorageSetId": "ss-i-bp1j4i2jdf3owlhe****",
    "Status": "Available",
    "AttachedTime": "2018-01-01T01:04:22Z",
    "IOPSRead": 2000,
    "IOPSWrite": 2000,
    "ZoneId": "cn-qingdao-****-a",
    "InstanceId": "i-bp1j4i2jdf3owlhe****",
    "SourceSnapshotId": "s-bp67acfmazb4p****",
    "Device": "/dev/xvdb",
    "EnableAutomatedSnapshotPolicy": false,
    "DeleteWithInstance": true,
    "EnableAutoSnapshot": false,
    "AutoSnapshotPolicyId": "sp-bp67acfmazb4p****",
    "DiskName": "test-DiskName",
    "Portable": false,
    "Type": "data",
    "MountInstanceNum": 1,
    "SerialNumber": "bp18um4r4f2fve2****",
    "CreationTime": "2018-01-01T01:01:22Z",
    "RegionId": "cn-qingdao-****",
    "DiskId": "d-bp18um4r4f2fve24****",
    "MountInstances": {
        "AttachedTime": "2017-12-05T2340:00Z",
        "InstanceId": "i-bp1j4i2jdf3owlhe****",
        "Device": "/dev/xvda"
    },
},
"Attachments": {
    "AttachedTime": "2022-04-10T06:08:56Z",
    "InstanceId": "i-bp67acfmazb4q****",
    "Device": "/dev/xvda"
},
"OperationLocks": {
    "LockReason": "security"
},
"Tags": {
    "TagKey": "TestKey",
    "TagValue": "TestValue"
}

```

```

    }
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidDiskType.ValueNotSupported	The specified disk type is not supported.	The error message returned because the specified DiskType parameter is invalid.
400	InvalidCategory.ValueNotSupported	The specified disk category is not supported.	The error message returned because the specified Category parameter is invalid.
400	InvalidStatus.ValueNotSupported	The specified disk status is not supported.	The error message returned because the operation is not supported while the disk is in the current state.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not correspond to each other.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags has exceeded the upper limit.
400	InvalidRegion.NotFound	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.
400	InvalidZoneId.NotFound	The zoneId provided does not exist in our records.	The error message returned because the specified ZoneId parameter does not exist.
400	MissingParameter.RegionId	The regionId should not be null.	The error message returned because the RegionId parameter is not specified.
400	InvalidParameter.DiskIds	The specified parameter diskIds is not valid.	The error message returned because the specified DiskIds parameter is invalid.
400	IncompleteParameter	Some fields can not be null in this request.	The error message returned because a required parameter is not specified.

HTTP status code	Error code	Error message	Description
400	InvalidParamter	Some parameters are invalid in this request.	The error message returned because the request contains invalid parameters.
400	InvalidSnapshot.NotFound	The specified parameter SnapshotId is not valid.	The error message returned because the specified SnapshotId parameter is invalid.
403	InvalidDiskIds.Malformed	The amount of specified disk Ids exceeds the limit.	The error message returned because the specified DiskIds parameter is invalid.
403	UserNotInTheWhitelist	The user is not in volume white list.	The error message returned because you are not authorized to manage Shared Block Storage devices. Submit a ticket to apply for the authorization.
403	InvalidParameter.MultiAttachAndEnableSharedNotMatch	The parameter MultiAttach and EnableShared are not match.	The error message returned because the specified MultiAttach and EnableShared parameters do not match.
403	InvalidParameter.MultiAttach	The specified param MultiAttach is not valid.	The error message returned because the specified MultiAttach parameter is invalid.
404	InvalidDiskChargeType.NotFound	The DiskChargeType does not exist in our records	The error message returned because the specified DiskChargeType parameter does not exist.
404	InvalidLockReason.NotFound	The specified LockReason is not found	The error message returned because the specified LockReason parameter does not exist.
404	InvalidDiskIds.ValueNotSupported	The specified parameter "DiskIds" is not supported.	The error message returned because the specified DiskIds parameter is invalid.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

5.1.8.3. AttachDisk

Attaches a system disk or data disk to an instance. The instance and the disk must reside in the same zone.

Description

When you call this operation, take note of the following items:

- The disk to be attached must be in the **Unattached** (`Available`) state.
- When the disk is attached as a data disk, take note of the following items:
 - The instance must be in the **Running** (`Running`) or **Stopped** (`Stopped`) state.
- When the disk is attached as a system disk, take note of the following items:
 - The instance must be the original instance from which the system disk is detached.
 - The instance must be in the **Stopped** (`Stopped`) state.
 - The logon credentials must be configured.
- When you query the instance information and the responses contain `{"OperationLocks": {"LockReason": "security"}}`, the instance is locked for security reasons and all operations cannot take effect on the instance.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AttachDisk	The operation that you want to perform. Set the value to AttachDisk.
DiskId	String	Yes	d-bp198f7xn673w2rw****	The ID of the disk to be attached. The disk specified by the <code>DiskId</code> parameter and the instance specified by the <code>InstanceId</code> parameter must reside in the same zone.  Note For more information about the limits on attaching a data disk and system disk, see the "Description" section of this topic.
InstanceId	String	Yes	i-bp1ahcvgu9z55pk7****	The ID of the instance to which to attach the disk.
Device	String	No	testName	The device name of the disk.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.

Parameter	Type	Required	Example	Description
<code>DeleteWithInstance</code>	Boolean	No	false	Specifies whether to release the disk along with the instance to which it is attached. Valid values: • <code>true</code>: releases the disk when the instance is released. • <code>false</code>: does not release the disk when the instance is released. Default value: <code>false</code>. Note If <code>OperationLocks</code> in the <code>DescribeInstances</code> response contains <code>"LockReason" : "security"</code> for the instance to which the disk is attached, the instance is locked for security reasons. In this case, the disk is released along with the instance even if <code>DeleteWithInstance</code> is set to <code>false</code>.
<code>Bootable</code>	Boolean	No	false	Specifies whether to attach the disk as a system disk. Default value: <code>false</code>. Note You can set <code>Bootable</code> to <code>true</code> only when the instance is in the No System Disk state.

Parameter	Type	Required	Example	Description
Password	String	No	EcsV587!	The password set when you attach the system disk. The password is applicable only to the administrator and root users. The password must be 8 to 30 characters in length and contain at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. Special characters include: <pre>() ` ~ ! @ # \$ % ^ & * _ + = { }</pre> <pre>[] : ; ' < > , . ? /</pre> For Windows instances, the password cannot start with a forward slash (/).  Note For security reasons, we recommend that you use HTTPS to send requests if the <code>Password</code> parameter is specified.
KeyPairName	String	No	test- KeyPairName	The name of the SSH key pair that you bind to the Linux instance when you attach the system disk. - Windows instances do not support logons based on SSH key pairs. The <code>Password</code> parameter takes effect even if the KeyPairName parameter is specified. - For Linux instances, the username and password logon method is disabled by default.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=AttachDisk
&DiskId=d-bp198f7xn673w2rw****
&InstanceId=i-bp1ahcvgu9z55pk7****
&DeleteWithInstance=false
&<Common request parameters>
```

Sample success responses

XML **format**

```
<AttachDiskResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</AttachDiskResponse>
```

JSON **format**

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
400	InvalidDevice.Malformed	The specified device is not valid.	The error message returned because the specified Device parameter does not exist.

HTTP status code	Error code	Error message	Description
403	InstanceDiskLimitExceeded	The amount of the disk on instance in question reach its limits.	The error message returned because the maximum number of disks that can be attached to the specified instance has been reached.
403	InvalidDevice.InUse	The specified device has been occupied.	The error message returned because the specified device already has a disk attached.
403	IncorrectDiskStatus	The operation is not supported in this status.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and you have no overdue payments for it.
403	DiskNotPortable	The specified disk is not a portable disk.	The error message returned because the specified disk is not removable.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	ResourcesNotInSameZone	The specified instance and disk are not in the same zone.	The error message returned because the specified instance and disk are not in the same zone.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance and try again.
403	DiskInArrears	The specified operation is denied as your disk owing fee.	The error message returned because you have an overdue payment for the specified disk.
400	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
403	DiskError	IncorrectDiskStatus.	The error message returned because the state of the specified disk is invalid.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
400	InvalidParameter	The input parameter is mandatory for processing this request is empty.	The error message returned because a required parameter is not specified.
403	DiskId.ValueNotSupported	The specified parameter diskid is not supported.	The error message returned because the category of the specified Elastic Block Storage (EBS) device does not support this operation.
403	DiskId.StatusNotSupported	The specified disk status is not supported.	The error message returned because this operation is not supported while the disk is in the current state.
404	InvalidDisk.InUse	The specified disk has been occupied.	The error message returned because the specified disk is in use.
404	DiskAttachedNumberExceeded	The attaching times of the specified disk exceeded.	The error message returned because the maximum number of instances to which the specified disk can be attached has been reached.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not authorized to manage the disk. Try again when you are authorized.
400	InvalidRegionId.Malformed	The specified RegionId is not valid	The error message returned because the specified RegionId parameter is invalid.
400	InvalidOperation.InstanceTypeNotSupported	The instance type of the specified instance does not support hot attach disk.	The error message returned because the instance to which the disk is attached does not support the hot swapping of disks.
400	DiskCategory.OperationNotSupported	The operation is not supported to the specified disk due to its disk category	The error message returned because the specified disk category does not support the operation.

HTTP status code	Error code	Error message	Description
400	InvalidOperation.InstanceTypeNotSupported	The specified disk which has kms key should only attach to ioOptimized instance.	The error message returned because the specified instance is not supported. You can set Key Management Service (KMS) keys only for I/O optimized instances.
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a KMS key ID is specified for a disk. You can call the DescribeKey operation of KMS to query the information of the specified CMK.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because Elastic Compute Service (ECS) is not authorized to access your KMS resources.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
400	InvalidParameter.AllEmpty	%s	The error message returned because the required parameters are not specified.
403	InvalidInstanceType.NotSupportDiskCategory	The instanceType of the specified instance does not support this disk category.	The error message returned because the instance type specified by the InstanceType parameter does not support the disk category of the instance. Try another instance type. For information about the disk categories supported by instance types, see the instance family documentation.

5.1.8.4. DetachDisk

You can call this operation to detach a data disk or system disk from an instance.

Description

When you call this operation, take note of the following items:

- The disk to be detached must be in the Running (`In_Use`) state.
- The instance from which you want to detach a data disk must be in the **Running** (`Running`) or

Stopped (`Stopped`) state.

- The instance from which you want to detach the system disk must be in the **Stopped** (`Stopped`) state.
- If the API response contains `{"OperationLocks": {"LockReason": "security"}}` when you query information of an instance, the instance is locked for security reasons and all operations are prohibited on it.
- DetachDisk is an asynchronous operation. It takes about one minute for the disk to be detached after this operation is called.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DetachDisk	The operation that you want to perform. Set the value to DetachDisk.
DiskId	String	Yes	d-bp67acfmxazb4p****	The ID of the disk to be detached.
InstanceId	String	Yes	i-bp67acfmxazb4p****	The ID of the instance from which the disk is to be detached.
DeleteWithInstance	Boolean	No	false	The automatic release attribute of the system disk. That is, this parameter specifies whether the system disk is released when its attached instance is released. Valid values: • true: The system disk is released when its attached instance is released. • false: The system disk is not released but is retained when its attached instance is released. Default value: true.  Note If a data disk is to be detached, the default value is <code>false</code>.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=DetachDisk
&DiskId=d-bp67acfmazb4p****
&InstanceId=i-bp67acfmazb4p****
&<Common request parameters>
```

Sample success responses

XML **format**

```
<DetachDiskResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</DetachDiskResponse>
```

JSON **format**

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Ensure that the disk is available and you have no overdue payment for it.
403	DiskNotPortable	The specified disk is not a portable disk.	The error message returned because the specified disk is not removable.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the resource is locked for security reasons.

HTTP status code	Error code	Error message	Description
403	DependencyViolation	The specified disk has not been attached on the specified instance.	The error message returned because the operation is not supported while the resource has other dependencies. For example, the specified disk is not attached to the specified instance, or the specified security group cannot be deleted while it contains instances.
403	DiskTypeViolation	The specified disk is a system disk and cannot support the operation.	The error message returned because the specified disk is a system disk and cannot be detached from the associated instance.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	InvalidParameter	The input parameter is mandatory for processing this request is empty.	The error message returned because a required parameter is not specified.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not authorized to manage the disk.
400	InvalidRegionId.Malformed	The specified RegionId is not valid	The error message returned because the specified region ID is invalid.
404	InvalidDisk.AlreadyDetached	The specified disk has been detached.	The error message returned because the specified disk has been detached.
400	InvalidOperation.InstanceTypeNotSupported	The instance type of the specified instance does not support hot detach disk.	The error message returned because the instance to which the disk is attached does not support the hot swapping of disks.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

5.1.8.5. ModifyDiskAttribute

You can call this operation to modify the attributes of one or more Block Storage devices, including their names, descriptions, and whether they are released along with their attached instances.

Description

If you set `DeleteWithInstance` to false for a disk and the instance to which the disk is attached is locked for security reasons, the `DeleteWithInstance` parameter will be ignored and the disk will be released along with the instance. (If the value of `LockReason` is security in `OperationLocks` of the API response when you query information of an instance, the instance is locked for security reasons.)

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDiskAttribute	The operation that you want to perform. Set the value to <code>ModifyDiskAttribute</code> .
DiskId	String	No	d-bp198f7xn673w2rw****	The ID of the disk to be modified. Note You can specify either <code>DiskId</code> or <code>DiskIds.N</code> but you cannot specify both of them.
DiskIds.N	RepeatList	No	d-bp198f7xn673w2rw****	The ID of disk N to be modified. Valid values of N: 0 to 100. Note You can specify either <code>DiskId</code> or <code>DiskIds.N</code> but you cannot specify both of them.

Parameter	Type	Required	Example	Description
DiskName	String	No	test-DiskName	The name of the disk. The name must be 2 to 128 characters in length, and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
Description	String	No	This is a description example.	The description of the disk. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
DeleteWithInstance	Boolean	No	false	Specifies whether the disk is released with the instance. This parameter is empty by default, which indicates that the current value remains unchanged. An error will be returned if you set this parameter to false in the following cases: • The specified disk is a local disk. • The specified disk is a basic disk and is not removable.
DeleteAutoSnapshot	Boolean	No	false	Specifies whether the automatic snapshots of the disk are deleted when it is released. This parameter is empty by default, which indicates that the current value remains unchanged.
EnableAutoSnapshot	Boolean	No	true	Specifies whether to apply a created automatic snapshot policy to the disk. This parameter is empty by default, which indicates that the current value remains unchanged.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ModifyDiskAttribute
&DiskId=d-bp198f7xn673w2rw****
&DiskName=test-DiskName
&<Common request parameters>
```

Sample success responses

XML **format**

```
<ModifyDiskAttributeResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</ModifyDiskAttributeResponse>
```

JSON **format**

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified disk does not exist. Check whether the disk ID is correct.
400	InvalidDiskName.Malformed	The specified disk name is wrongly formed.	The error message returned because the specified DiskName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
404	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.

HTTP status code	Error code	Error message	Description
400	NoAttributeToModify	No attribute to be modified in this request.	The error message returned because no attributes of the specified disk are modified.
403	QuotaExceed.Snapshot	The snapshot quota exceeds.	The error message returned because the maximum number of snapshots has been reached. To store new snapshots, delete snapshots that are no longer needed.
403	DiskNotPortable	The specified disk is not a portable disk.	The error message returned because the specified disk is not removable.
403	IncorrectDiskStatus	The operation is not supported in this status.	The error message returned because the operation is not supported while the disk is in the current state. Ensure that the disk is available and you have no overdue payment for it.
400	IncompleteParameter	Some fields can not be null in this request.	The error message returned because some required parameters are not specified.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not authorized to manage the disk.
400	InvalidRegionId.Malformed	The specified RegionId is not valid	The error message returned because the specified region ID is invalid.
404	InvalidInstanceId.NotFound	Specified attached instance does not exist.	The error message returned because the specified instance ID does not exist.

5.1.8.6. ReInitDisk

Re-initializes a disk.

Description

When you call this operation, take note of the following items:

- The disk to be re-initialized must be in the **In Use** (In_use) state and the instance to which the disk is attached must be in the **Stopped** (Stopped) state.
- If the instance has never been started since it was created, the disks attached to it cannot be re-initialized.

- When a system disk is re-initialized, it is restored to the state of the image from which it was created. If the image has been deleted, the disk cannot be re-initialized.
- When a separately created data disk is re-initialized, it is restored to an empty data disk.
- When a data disk that was created from a snapshot is re-initialized, the disk is restored to the state of the snapshot. If the snapshot has been deleted, the disk cannot be re-initialized and an error is returned.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ReInitDisk	The operation that you want to perform. Set the value to ReInitDisk.
DiskId	String	Yes	d-bp67acfmxazb4p****	The ID of the disk.
Password	String	No	EcsV587!	Specifies whether to reset the password of the instance when you re-initialize its system disk. The password must be 8 to 30 characters in length and contain at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. Special characters include: <pre>() ` ~ ! @ # \$ % ^ & * _ + = { }</pre> <pre>[] : ; ' < > , . ? /</pre> For Windows instances, the password cannot start with a forward slash (/).  Note For security reasons, we recommend that you use HTTPS to send requests if the <code>Password</code> parameter is specified.

Parameter	Type	Required	Example	Description
KeyPairName	String	No	test- KeyPairName	The name of the key pair.  Note The parameter is applicable only to Linux instances. You can bind an SSH key pair to an instance as the logon credential when you re-initialize its system disk. After the SSH key pair is bound, the username and password logon method is disabled for the instance.
AutoStartInstance	Boolean	No	true	Specifies whether to automatically start the instance after the disk is re-initialized. Default value: false.
SecurityEnhancementStrategy	String	No	Active	Specifies whether to use Security Center after the system disk is re-initialized. Valid values: - Active: uses Security Center after the system disk is re-initialized. This value is applicable only to public images. - Deactive: does not use Security Center after the system disk is re-initialized. This value is applicable to all images. Default value: Deactive.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ReInitDisk
&DiskId=d-bp67acfmazb4p****
&KeyPairName=test-KeyPairName
&AutoStartInstance=true
&SecurityEnhancementStrategy=Active
&<Common request parameters>
```

Sample success responses

XML format

```
<ReInitDiskResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3****</RequestId>
</ReInitDiskResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and you have no overdue payments for it.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the instance is locked for security reasons.

HTTP status code	Error code	Error message	Description
403	InvalidSnapshot.TooOld	The disk is created from a snapshotId made before 2013-07-15, it cannot be re-initiated the specified disk any more since the detached first time.	The error message returned because snapshots created before July 15, 2013 do not support this operation.
403	OperationDenied	The snapshot which is used to create the specified disk has been deleted.	The error message returned because the snapshot used to create the specified disk does not exist.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance and try again.
403	DiskCreatingSnapshot	The operation is denied due to a snapshot of the specified disk is not completed yet.	The error message returned because a snapshot is being created for the specified disk.
403	InvalidSourceSnapshot	The snapshot which is used to create the specified disk has been deleted.	The error message returned because the snapshot used to create the specified disk has been deleted.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account. Check whether the image ID is correct.
403	SharedImageDeleted	The specified image by others shared is deleted.	The error message returned because the specified shared image has been deleted.
400	InvalidPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the specified Password parameter is invalid.
400	DiskCategory.OperationNotSupported	The operation is not supported to the specified disk due to its disk category	The error message returned because the specified disk category does not support this operation.
400	InvalidKeyPairName.NotFound	The specified KeyPairName does not exist.	The error message returned because the specified KeyPairName parameter does not exist.

HTTP status code	Error code	Error message	Description
400	DependencyViolation.ioOptimize	The specified parameter InstanceId is not valid.	The error message returned because the I/O optimization configuration of the instance is invalid.
403	UserNotInTheWhiteList	The user is not in volume white list.	The error message returned because you are not authorized to manage the Shared Block Storage device.
400	InvalidRegionId.Malformed	The specified RegionId is not valid	The error message returned because the specified RegionId parameter is invalid.
404	InvalidDiskId.OperationNotSupported	The operation is not supported due to image not exist.	The error message returned because the specified ImageId parameter does not exist.
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a KMS key ID is specified for a disk. You can call the DescribeKey operation of KMS to query the information of the specified CMK.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because Elastic Compute Service (ECS) is not authorized to access your KMS resources.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

5.1.8.7. ResetDisk

Restores a disk to a specific point in time from a snapshot of the disk.

Description

When you call this operation, take note of the following items:

- The disk must be in the In Use (In_Use) state.
- The instance to which the disk is attached must be in the Stopped (Stopped) state.
- The snapshot specified by the SnapshotId parameter must be created from the disk specified by the DiskId parameter.

- When you call the `DescribeInstances` operation to query the instance information and the responses contain `{"OperationLocks": {"LockReason" : "security"}}`, the instance is locked for security reasons and all operations cannot take effect on the instance.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ResetDisk	The operation that you want to perform. Set the value to ResetDisk.
DiskId	String	Yes	d-bp198f7xn673w2rw****	The ID of the disk.
SnapshotId	String	Yes	s-bp1btgnlb4licd41****	The ID of the snapshot that is used to restore the disk.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ResetDisk
&DiskId=d-bp198f7xn673w2rw****
&SnapshotId=s-bp1btgnlb4licd41****
&<Common request parameters>
```

Sample success responses

XML format

```
<ResetDiskResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</ResetDiskResponse>
```

JSON format

```
{
  "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
404	Disk.NotFound	The specified disk does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
404	InvalidSnapshotId.NotFound	The specified SnapshotId does not exist.	The error message returned because the specified SnapshotId parameter does not exist. Check whether the snapshot ID is correct.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and you have no overdue payments for it.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InvalidParameter.Mismatch	The specified snapshot is not created from the specified disk.	The error message returned because an encrypted snapshot cannot be used to roll back an unencrypted disk.
403	InvalidSnapshot.TooOld	The snapshotId is created before 2013-07-15, it cannot be restored since the first time the disk detached.	The error message returned because snapshots created before July 15, 2013 do not support this operation.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance and try again.

HTTP status code	Error code	Error message	Description
403	OperationDenied	The specified snapshot does not support ResetDisk.	The error message returned because the specified snapshot does not support this operation.
403	InvalidSnapshotId.NotFound	The specified snapshot has not completed yet.	The error message returned because the specified snapshot is being created.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
400	DiskCategory.OperationNotSupported	The operation is not supported to the specified disk due to its disk category	The error message returned because the specified disk category does not support this operation.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
403	Operation.Conflict	The operation may conflict with others.	The error message returned because the operation conflicts with other operations.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not authorized to manage the disk. Try again when you are authorized.
400	InvalidRegionId.Malformed	The specified RegionId is not valid	The error message returned because the specified RegionId parameter is invalid.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

HTTP status code	Error code	Error message	Description
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a Key Management Service (KMS) key ID is specified for a disk. You can call the DescribeKey operation of KMS to query the information of the specified CMK.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because Elastic Compute Service (ECS) is not authorized to access your KMS resources.

5.1.8.8. ReplaceSystemDisk

You can call this operation to replace the system disk or operating system of an ECS instance. After the system disk is replaced, the ID of the system disk changes and the original disk is released.

Description

When you call this operation, take note of the following items:

- You cannot change the category of the system disk.
- The instance to which the system disk to be replaced is attached must be in the Stopped (Stopped) state.
- If OperationLocks in the DescribeInstances response contains "LockReason" : "security" for an instance, the instance is locked for security reasons and cannot be restarted.
- You can use the SystemDisk.Size parameter to specify the capacity of the new system disk.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ReplaceSystemDisk	The operation that you want to perform. Set the value to ReplaceSystemDisk.
InstanceId	String	Yes	i-bp67acfmxb4p****	The ID of the instance.
ImageId	String	No	m-bp67acfmxb4p****	The ID of the image to be used to replace the system disk.

Parameter	Type	Required	Example	Description
SystemDisk.Size	Integer	No	80	The capacity of the new system disk. Unit: GiB. Valid values: Max{20, the size of the image specified by ImageId} to 500. Default value: 40 or the size of the specified image, whichever is greater.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence in ECS Developer Guide.
UseAdditionalService	Boolean	No	true	Specifies whether to use the virtual machine system configuration provided by Apsara Stack (Windows: NTP and KMS. Linux: NTP and YUM).  Note This parameter takes effect only when you attach a system disk, whose device name is /dev/xvda.

Parameter	Type	Required	Example	Description
Password	String	No	EcsV587!	The new password of the instance. The password must be 8 to 30 characters in length. It must include at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. Special characters include: <pre>() ` ~ ! @ # \$ % ^ & * - _ + = { } [] : ; ' < > , . ? /</pre> The password of a Windows instance cannot start with a forward slash (/). This parameter is empty by default, which indicates that the current password remains unchanged. Note If the <code>Password</code> parameter is specified, we recommend that you send requests over HTTPS to avoid password leaks.
PasswordInherit	Boolean	No	false	Specifies whether to use the password preset in the image. Default value: false. Note If the PasswordInherit parameter is set to true, you must not specify the Password parameter and make sure that the selected image has a password preset.
KeyPairName	String	No	test- KeyPairName	The name of the key pair. Note This parameter is applicable only to Linux instances. You can bind an SSH key pair to the instance as a logon credential. However, the password logon method is disabled after you bind the SSH key pair.

Parameter	Type	Required	Example	Description
Platform	String	No	CentOS	The distribution of the operating system. Valid values: - CentOS - Ubuntu
Architecture	String	No	i386	The system architecture. Valid values: - i386 - x86_64
SecurityEnhancementStrategy	String	No	Active	Specifies whether to use Security Center after you replace the system disk. Valid values: - Active: Security Center is used for free after the system disk is replaced. This value is applicable only to public images. - Deactive: Security Center is not used for free after the system disk is replaced. This value is applicable to all images. Default value: Deactive.

Response parameters

Parameter	Type	Example	Description
DiskId	String	d-bp67acfmazb4p***	The ID of the new system disk.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ReplaceSystemDisk
&InstanceId=i-bp67acfmxyz4p****
&ImageId=m-bp67acfmxyz4p****
&SystemDisk.Size=80
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&PasswordInherit=false
&KeyPairName=test-KeyPairName
&SecurityEnhancementStrategy=Active
&<Common request parameters>
```

Sample success responses

XML format

```
<ReplaceSystemDiskResponse>
  <DiskId>d-bp67acfmxyz4p****</DiskId>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</ReplaceSystemDiskResponse>
```

JSON format

```
{
  "RequestId": "337568C5-64F3-4B76-8CDD-D3D8C57B5B8C",
  "DiskId": "d-bp67acfmxyz4p****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
400	InvalidSystemDiskSize.ValueNotSupported	The specified parameter SystemDisk.Size is invalid.	The error message returned because the specified SystemDisk.Size parameter is invalid.
404	InvalidInstanceId.NotFound	The specified instance does not exist.	The error message returned because the specified InstanceId parameter does not exist.
403	InvalidSystemDiskStatus.IsTransferring	The current status of the resource does not support this operation, system disk is transferring.	The error message returned because the operation is not supported while the resource is in the current state. Try again after the system disk stops transmitting data.

HTTP status code	Error code	Error message	Description
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and you have no overdue payments for it.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account. Check whether the image ID is correct.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the resource is locked for security reasons.
403	ImageNotSubscribed	The specified image has not been subscribed.	The error message returned because you have not subscribed to the specified Alibaba Cloud Marketplace image.
403	ImageRemovedInMarket	The specified market image is not available, Or the specified user defined image includes product code because it is based on an image subscribed from marketplace, and that image in marketplace including exact the same product code has been removed.	The error message returned because the specified Alibaba Cloud Marketplace image is unavailable, or because the specified custom image contains the product code of the Alibaba Cloud Marketplace image from which the custom image is derived and the Alibaba Cloud Marketplace image has been removed from Alibaba Cloud Marketplace.
500	OperationDenied	Internal Error.	The error message returned because an internal error has occurred.
400	InvalidParameter.Conflict	The specified image does not support the specified instance type.	The error message returned because the specified image does not support the specified instance type.

HTTP status code	Error code	Error message	Description
404	InvalidSystemDiskSize.MoreThanMaxSize	The specified SystemDisk.Size parameter exceeds the maximum size.	The error message returned because the specified system disk size exceeds the allowed maximum size.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance first.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned because the billing method of the instance does not support this operation.
403	DiskCreatingSnapshot	The operation is denied due to a snapshot of the specified disk is not completed yet.	The error message returned because a snapshot is being created for the specified disk.
403	IoOptimized.NotSupported	The specified image is not support IoOptimized Instance.	The error message returned because the specified image does not support I/O optimized instances.
403	ImageNotSupportInstanceType	The specified image don not support the InstanceType instance.	The error message returned because the specified image does not support the specified instance type.
403	QuotaExceed.BuyImage	The specified image is from the image market, You have not bought it or your quota has been exceeded.	The error message returned because you have not purchased the specified Alibaba Cloud Marketplace image or your image quota has been used up.
404	InvalidSystemDiskSize.LessThanImageSize	The specified parameter SystemDisk.Size is less than the image size.	The error message returned because the specified system disk size is smaller than the image size.
404	InvalidSystemDiskSize.LessThanMinSize	The specified parameter SystemDisk.Size is less than the min size.	The error message returned because the specified system disk size is smaller than the allowed minimum size.

HTTP status code	Error code	Error message	Description
404	NoSuchResource	The specified resource is not found.	The error message returned because the specified resource does not exist.
400	InvalidSystemDiskSize.ImageNotSupportResize	The specified image does not support resize.	The error message returned because the specified image does not support resizing.
400	InvalidSystemDiskSize	The specified parameter SystemDisk.Size is invalid.	The error message returned because the specified SystemDisk.Size parameter is invalid.
403	INST_HAS_UNPAID_ORDER	The instance has unpaid order.	The error message returned because you have unpaid orders for the instance.
400	InvalidSystemDiskSize.ValueNotSupported	The specified parameter SystemDisk.Size is invalid	The error message returned because the specified SystemDisk.Size parameter is invalid.
400	InvalidPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the specified Password parameter is invalid.
400	InvalidPasswordParameter.Mismatch	The input password should be null when passwdInherit is true.	The error message returned because the Password parameter is specified when PasswdInherit is set to true.
400	OperationDenied	The specified image contains the snapshot of the data disk,does not support this operation.	The error message returned because the operation is not supported while the image contains data disk snapshots.
400	InvalidDiskCategory.ValueNotSupported	The specified parameter "DiskCategory" is not valid.	The error message returned because the specified disk category is invalid.
403	OperationDenied.InstanceCreating	The specified instance is creating.	The error message returned because the specified instance is being created.
400	InvalidParameter.Conflict	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.

HTTP status code	Error code	Error message	Description
400	InvalidSystemDiskSize.ValueNotSupported	%s	The error message returned because the specified SystemDisk.Size parameter is invalid.
400	OperationDenied	%s	The error message returned because the operation is denied.
400	InvalidKeyPairName.NotFound	The specified KeyPairName does not exist.	The error message returned because the specified KeyPairName parameter does not exist.
400	DependencyViolation.InstanceId	The specified parameter InstanceId is not valid.	The error message returned because the specified InstanceId parameter is invalid.
403	InvalidParameter.NotMatch	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
400	MissingParameter.Architecture	Architecture should not be null.	The error message returned because the Architecture parameter is not specified.
400	InvalidArchitecture.Malformed	Architecture is not valid.	The error message returned because the specified Architecture parameter is invalid.
400	MissingParameter.Platform	Platform should not be null.	The error message returned because the Platform parameter is not specified.
400	InvalidPlatform.Malformed	Platform is not valid.	The error message returned because the specified Platform parameter is invalid.
400	InvalidParameter.AllEmpty	%s	The error message returned because the required parameters are not specified.
400	InvalidDiskId.NotFound	The specified disk do not exist.	The error message returned because the specified disk does not exist.
400	InvalidDataDisk.DiskStatusViolation	The operation is not permitted due to status of the DataDisk.	The error message returned because the operation is not supported while the data disk is in the current state.

HTTP status code	Error code	Error message	Description
400	InvalidDatadisk.DiskCategoryViolation	The operation is not permitted due to category of the Datadisk.	The error message returned because the category of the data disk does not support the operation.
403	ResourcesNotInSameZone	The specified instance and disk are not in the same zone.	The error message returned because the specified instance and disk are not in the same zone.
400	InvalidSystemDiskSize.ValueNotSupported	The specified SystemDiskSize is not valid.	The error message returned because the specified SystemDisk.Size parameter is invalid.
400	MissingParameter	The input parameter "ImageId" that is mandatory for processing this request is not supplied.	The error message returned because the ImageId parameter is not specified.
403	ImageNotSupportInstanceType	The specified instanceType is not supported by instance with marketplace image.	The error message returned because the specified Alibaba Cloud Marketplace image does not support the instance type.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	OperationDenied.ImageNotValid	%s	The error message returned because the image does not support the operation.

5.1.8.9. ResizeDisk

You can call this operation to resize a system disk or data disk.

Description

 **Note** Before you call this operation to resize a disk, you must check the partition format of the disk. You cannot resize an MBR disk to larger than 2 TiB in size without data loss. To resize an MBR disk to larger than 2 TiB in size, we recommend that you create and attach a new data disk with the desired size. Then, we recommend that you use the GPT partition format to partition and format the new data disk and copy data from the MBR-formatted data disk to the new GPT-formatted data disk. For more information, see [Expand a disk in ECS User Guide](#).

- You can resize the disks of different categories, including basic disks (`cloud`), ultra disks (`cloud_essd`), and NVMe SSDs (`cloud_essd_nvme`).

fficiency), and standard SSDs (cloud_ssd).

- You cannot resize a disk when a snapshot is being created for the disk.
- The instance to which the disk to be resized is attached must be in the **Running** (Running) or **Stopped** (Stopped) state.
- After you resize a disk, its partitions and file systems are not changed. You must manually allocate the storage space on the disk after it is resized.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ResizeDisk	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the Action parameter. Set the value to ResizeDisk.
DiskId	String	Yes	d-bp67acfmxb4p****	The ID of the disk.
NewSize	Integer	Yes	1900	The new disk capacity. Unit: GiB. Valid values: • For ultra disks (cloud_efficiency): 20 to 32768 • For standard SSDs (cloud_efficiency): 20 to 32768 • For basic disks (cloud): 5 to 2000 The new disk capacity must be greater than the original disk capacity.
Type	String	No	offline	The method used to resize the disk. Default value: offline. Valid values: • offline: resizes the disk offline. After you resize a disk offline, you must restart its associated instance by using the ECS console or by calling the RebootInstance operation to make the resizing operation take effect. • online: resizes the disk online. After you resize a disk online, the operation takes effect immediately without the need to restart the instance. You can resize ultra disks and standard SSDs online.

Parameter	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client token to generate the value, but you must make sure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence in ECS Developer Guide .

Response parameters

Parameter	Type	Example	Description
RequestId	String	F3CD6886-D8D0-4FEE-B93E-1B73239673DE	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ResizeDisk
&DiskId=d-bp67acfmazb4p****
&NewSize=1900
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&<Common request parameters>
```

Sample success responses

XML format

```
<ResizeDiskResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</ResizeDiskResponse>
```

JSON format

```
{
  "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidDataDiskSize.ValueNotSupported	The specified DataDisk.n.Size beyond the permitted range, or the capacity of snapshot exceeds the size limit of the specified disk category.	The error message returned because the specified DataDisk.N.Size parameter is invalid or the snapshot size exceeds the maximum capacity that is allowed for the specified category.
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance does not exist.
403	OperationDenied	The type of the disk does not support the operation.	The error message returned because the specified disk category does not support the operation.
403	OperationDenied	The status of the disk or the instance that the disk is attaching with does not support the operation.	The error message returned because the operation is not supported while the disk or instance is in the current state.
403	InvalidDiskSize.TooSmall	Specified new disk size is less than the original disk size.	The error message returned because the specified new disk capacity is smaller than the original disk capacity.
403	InvalidDiskSize.TooLarge	Specified new disk size is beyond the permitted range.	The error message returned because the specified new disk capacity exceeds the capacity limit.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance first.
403	DiskError	IncorrectDiskStatus	The error message returned because the status of the specified disk is invalid.
403	DiskInArrears	The specified operation is denied as your disk owing fee.	The error message returned because you have an overdue payment for the disk.

HTTP status code	Error code	Error message	Description
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	DiskCreatingSnapshot	The operation is denied due to a snapshot of the specified disk is not completed yet.	The error message returned because a snapshot is being created for the specified disk.
400	InvalidDataDiskCategory.ValueNotSupported	%s	The error message returned because the specified data disk category is invalid.
400	InvalidParameter.Conflict	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
400	InvalidDataDiskSize.ValueNotSupported	%s	The error message returned because the specified data disk capacity is invalid.
400	InvalidSystemDiskSize.ValueNotSupported	%s	The error message returned because the specified system disk size is invalid.
403	InvalidDiskSize	Specified new disk size is less than or equal the original disk size.	The error message returned because the specified new disk capacity is smaller than or equal to the original disk capacity.
400	IncompleteParamter	Some fields can not be null in this request.	The error message returned because some required parameters are not specified.
403	Operation.Conflict	The operation may conflicts with others.	The error message returned because the operation conflicts with other operations.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the resource is locked for security reasons.

HTTP status code	Error code	Error message	Description
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and you have no overdue payment for it.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are authorized to manage the disk. Try again when you are authorized.
400	InvalidRegionId.Malformed	The specified RegionId is not valid	The error message returned because the specified RegionId parameter is invalid.
403	InvalidDiskCategory.NotSupported	The specified disk category is not supported.	The error message returned because the specified disk category does not support the operation.
400	InvalidParam.Type	The specified type is not supported.	The error message returned because the specified Type parameter is invalid.
403	InvalidRegion.NotSupport	The specified region does not support resize online.	The error message returned because online resizing is not supported in the specified region.
403	InvalidDiskCategory.NotSupported	The specified disk category does not support resize online.	The error message returned because the specified disk category does not support online resizing.
403	IncorrectInstanceStatus	The current status of the resource does not support resize online.	The error message returned because this operation is not supported while the resource is in the current state.
403	InvalidInstanceStatus.NotRunning	The status of instance to which the disk attaches must be running when resizing online.	The error message returned because the instance to which the disk is attached is not in the Running state when you resize the disk online.
403	IncorrectDiskStatus	The current status of the resource does not support resize online	The error message returned because online resizing is not supported while the resource is in the current state.

HTTP status code	Error code	Error message	Description
400	LastOrderProcessing	The previous order is still processing, please try again later.	The error message returned because the order is being processed. Try again later.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	SecurityRisk.3DVerification	We have detected a security risk with your default credit or debit card. Please proceed with verification via the link in your email.	The error message returned because risks are detected in your default credit card or debit card. Click the link in the email for verification.
400	InvalidSystemDiskSize.ImageNotSupportResize	The specified image does not support resize.	The error message returned because the specified image does not support resizing.

5.1.8.10. DeleteDisk

Releases a data disk.

Description

When you call this operation to release a data disk, take note of the following items:

- Manual snapshots of the disk are retained.
- You can call the `ModifyDiskAttribute` operation to configure whether to retain automatic snapshots of the disk or release them along with the disk. We recommend that you delete the snapshots that are no longer needed to maintain a sufficient quota for new automatic snapshots.
- The disk must be in the `Unattached (Available)` state.
- If the specified `DiskId` parameter does not exist, the request is ignored.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteDisk	The operation that you want to perform. Set the value to <code>DeleteDisk</code> .

Parameter	Type	Required	Example	Description
DiskId	String	Yes	d-bp198f7xn673w2rw****	The ID of the disk that you want to release.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=DeleteDisk
&DiskId=d-bp198f7xn673w2rw****
&<Common request parameters>
```

Sample success responses

XML **format**

```
<DeleteDiskResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3****</RequestId>
</DeleteDiskResponse>
```

JSON **format**

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and you have no overdue payments for it.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	DiskNotPortable	The specified disk is not a portable disk.	The error message returned because the specified disk is not removable.
403	DiskTypeViolation	The specified disk is a system disk and cannot support the operation.	The error message returned because the specified disk is a system disk and cannot be detached from the instance to which it is attached.
403	DiskCreatingSnapshot	The operation is denied due to a snapshot of the specified disk is not completed yet.	The error message returned because a snapshot of the specified disk is being created.
403	IncorrectDiskStatus.Initializing	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and you have no overdue payments for it.
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
403	DiskStillAttached	The disk is still attached to the disk.	The error message returned because the specified disk is still attached to an instance.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not authorized to manage the disk. Try again when you are authorized.
400	InvalidRegionId.Malformed	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidDiskStatus.DeleteProtection	The specified disk is under delete protection, can not be deleted.	The error message returned because deletion protection is enabled for the specified disk and the disk cannot be released. Possible cause: The disk was detached from an instance to which it was attached as the system disk, and the detached system disk was retained as a data disk. The detached system disk cannot be released before the instance is released.

5.1.9. Snapshots

5.1.9.1. CreateSnapshot

Creates a snapshot for a disk.

Description

In the following scenarios, snapshots cannot be created for a disk:

- The number of manual snapshots of the disk has reached 256.
- A snapshot is being created for the disk.
- The Elastic Compute Service (ECS) instance to which the disk is attached has never been started.
- The instance to which the disk is attached is not in the **Stopped** (`Stopped`) or **Running** (`Running`) state.
- If the response contains `{"OperationLocks": {"LockReason" : "security"}}` when you query the information of the instance, the instance is locked for security reasons and all operations are prohibited on it.

When you create a snapshot, take note of the following items:

- About 1 hour after an instance is created or the system disk of an instance is replaced, you can create a snapshot for a disk that is attached to the instance. After a data disk is attached to an instance, you must wait a period of time before you can create a snapshot for the data disk. The amount of time to wait depends on the volume of data stored on the disk.
- If a snapshot is being created, this snapshot cannot be used to create a custom image by calling the `CreateImage` operation.
- If the disk for which you want to create a snapshot is attached to an ECS instance, do not change the instance state during snapshot creation.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateSnapshot	The operation that you want to perform. Set the value to CreateSnapshot.
DiskId	String	Yes	d-bp1s5fnvk4gn2tws0****	The ID of the disk. You can call the DescribeDisks operation to query the disk ID.
SnapshotName	String	No	test-Snapshot****	The name of the snapshot. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code>. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). It cannot start with <code>auto</code> because snapshots whose names start with <code>auto</code> are recognized as automatic snapshots.
Description	String	No	This is a description example.	The description of the snapshot. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code>. This parameter is empty by default.
RetentionDays	Integer	No	30	The retention period of the snapshot. Valid values: 1 to 65535. Unit: days. The snapshot is automatically released when the retention period expires. This parameter is empty by default, which indicates that the snapshot is not automatically released.

Parameter	Type	Required	Example	Description
Category	String	No	Standard	The type of the snapshot. Valid values: - Standard: normal snapshot - Flash: local snapshot  Note This parameter will be removed in the future. We recommend that you use the <code>InstantAccess</code> parameter to ensure future compatibility. This parameter and the <code>InstantAccess</code> parameter cannot be specified at the same time.
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that the value is unique among different requests. The value of ClientToken can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence in ECS Developer Guide.
Tag.N.value	String	No	null	The value of tag N that you want to add to the snapshot.  Note This parameter will be removed in the future. We recommend that you use the <code>Tag.N.Value</code> parameter to ensure future compatibility.

Parameter	Type	Required	Example	Description
Tag.N.key	String	No	null	The key of tag N that you want to add to the snapshot.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	No	TestKey	The key of tag N that you want to add to the snapshot. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot contain <code>http://</code> or <code>https://</code>. It cannot start with <code>acs:</code> or <code>aliyun</code>.
Tag.N.Value	String	No	TestValue	The value of tag N that you want to add to the snapshot. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with <code>acs:</code> or contain <code>http://</code> or <code>https://</code>.

Parameter	Type	Required	Example	Description
InstantAccess	Boolean	No	false	Specifies whether to enable the instant access feature. Valid values: • true: enables the instant access feature. This feature can be enabled only for premium performance disks and standard performance disks Note After the instant access feature is enabled, the snapshot can be used to roll back disks or create disks across zones even when the snapshot is being created. The snapshot is available regardless of the sizes of premium performance disks or standard performance disks. • false: disables the instant access feature. If <code>InstantAccess</code> is set to <code>false</code>, a normal snapshot is created. Default value: <code>false</code>. Note This parameter and the <code>Category</code> parameter cannot be specified at the same time. For more information, see the "Description" section in this topic.
InstantAccessRetentionDays	Integer	No	1	The validity period of the instant access feature. When the validity period ends, the feature is disabled and the instant access (IA) snapshot is automatically released. This parameter takes effect only when <code>InstantAccess</code> is set to <code>true</code>. Unit: days. Valid values: 1 to 65535. By default, the value of this parameter is the same as that of <code>RetentionDays</code>.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.
SnapshotId	String	s-bp17441ohwka0yuh****	The ID of the snapshot.

Examples

Sample requests

```
https://ecs.example.com/?Action=CreateSnapshot
&DiskId=d-bpls5fnvk4gn2tw0****
&SnapshotName=test-SnapshotName
&Description=This is a description example.
&ClientToken=123e4567-e89b-12d3-a456-42665544****
&Tag.1.Key=TestKey
&Tag.1.Value=TestValue
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateSnapshotResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3****</RequestId>
  <SnapshotId>s-bp17441ohwka0yuh****</SnapshotId>
</CreateSnapshotResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3****",
  "SnapshotId": "s-bp17441ohwka0yuh****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The specified DiskId does not exist.	The error message returned because the specified disk does not exist. Check whether the disk ID is correct.

HTTP status code	Error code	Error message	Description
400	InvalidSnapshotName.Malformed	The specified SnapshotName is wrongly formed.	The error message returned because the specified SnapshotName parameter is invalid.
404	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	IncorrectDiskStatus.CreatingSnapshot	A previous snapshot creation is in process.	The error message returned because another snapshot is being created for the disk. Wait until the snapshot is created and try again.
403	InstanceLockedForSecurity	The disk attached instance is locked due to security.	The error message returned because the instance to which the disk is attached is locked for security reasons.
403	IncorrectDiskStatus.NeverAttached	The specified disk has never been attached to any instance.	The error message returned because the removable disk has never been attached to instances and its data remains unchanged.
403	QuotaExceed.Snapshot	The snapshot quota exceeds.	The error message returned because the maximum number of snapshots has been reached. To create snapshots, delete snapshots that are no longer needed.
403	IncorrectDiskStatus.NeverUsed	The specified disk has never been used after creating.	The error message returned because the specified disk has never been used and its data remains unchanged.
403	CreateSnapshot.Failed	The process of creating snapshot is failed.	The error message returned because the snapshot fails to be created.

HTTP status code	Error code	Error message	Description
403	DiskInArrears	The specified operation is denied as your disk has expired.	The error message returned because the disk has expired due to an overdue payment.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	DiskId.ValueNotSupported	The specified parameter diskid is not supported.	The error message returned because the category of the specified Elastic Block Storage (EBS) device does not support this operation.
400	DiskCategory.OperationNotSupported	The operation is not supported to the specified disk due to its disk category	The error message returned because the specified disk category does not support this operation.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is usable and you have no overdue payments for it.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance does not exist. Check whether the instance ID is correct.
403	IncorrectVolumeStatus	The current volume status does not support this operation.	The error message returned because the operation is not supported while the Shared Block Storage device is in the current state.

HTTP status code	Error code	Error message	Description
404	InvalidVolumeId.NotFound	The specified volume does not exist.	The error message returned because the specified Shared Block Storage device does not exist. Check whether the Shared Block Storage device ID is correct.
403	IdempotentParameterMismatch	The specified clientToken is used.	The error message returned because the specified client token is already in use.
403	IncorrectDiskType.NotSupport	The specified device type is not supported.	The error message returned because the specified disk type does not support this operation.
403	IncorrectDiskStatus.Transferring	The specified device is transferring, you can retry after the process is finished.	The error message returned because the specified disk is being migrated. Wait until the disk is migrated and try again.
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a KMS key ID is specified for a disk. You can call the DescribeKey operation of Key Management Service (KMS) to query information about the specified CMK.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access KMS resources.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.

HTTP status code	Error code	Error message	Description
403	IdempotentProcessing	The previous idempotent request(s) is still processing.	The error message returned because a previous idempotent request is being processed. Try again later.
400	InvalidRetentionDays.Malformed	The specified RetentionDays is not valid.	The error message returned because the specified RetentionDays parameter is invalid. Check whether the value of the RetentionDays parameter is valid.
403	QuotaExceed.Tags	%s	The error message returned because the number of specified tags exceeds the upper limit. %s is a variable. An error message is dynamically returned based on call conditions.
403	InvalidSnapshotCategory.Malformed	The specified Category is not valid.	The error message returned because the specified Category parameter is invalid. Check whether the value of the Category parameter is valid.

5.1.9.2. DescribeSnapshots

Queries all snapshots of an Elastic Compute Service (ECS) instance or disk.

Description

You can specify multiple request parameters such as InstanceId, DiskId, and SnapshotIds to be queried. Specified parameters are used as filter conditions and have logical AND relations.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSnapshots	The operation that you want to perform. Set the value to DescribeSnapshots.
RegionId	String	Yes	cn-qingdao-****	The region ID of the disk. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
InstanceId	String	No	i-bp67acfmxazb4p****	The ID of the instance. You can call the DescribeInstances operation to query the instance ID.
DiskId	String	No	d-bp67acfmxazb4p****	The ID of the disk. You can call the DescribeSnapshots to query the disk ID.
SnapshotLinkId	String	No	sp-bp67acfmxazb4p****	The ID of the snapshot chain. You can call the DescribeSnapshotLinks to query the disk snapshot chain ID.
SnapshotIds	String	No	["s-bp67acfmxazb4p****", "s-bp67acfmxazb4p****", ... "s-bp67acfmxazb4p****"]	The IDs of snapshots. The value can be a JSON array that consists of up to 100 snapshot IDs. Separate the snapshot IDs with commas (,).
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 100. Default value: 10.
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a****	The token used to start the query. Set the value to the NextToken value obtained from the response to the previous request.
MaxResults	Integer	No	10	The maximum number of entries to return on each page. Maximum value: 100. Default value: 10.
SnapshotName	String	No	test-SnapshotName	The name of the snapshot.

Parameter	Type	Required	Example	Description
Status	String	No	all	The state of the snapshot. Valid values: - progressing: The snapshot is being created. - accomplished: The snapshot is created. - failed: The snapshot fails to be created. - all: All states. Default value: all.
SnapshotType	String	No	all	The type of the snapshot. Valid values: - auto: automatic snapshot - user: manual snapshot (also called user-created snapshot) - all: all snapshot types Default value: all.
Filter.1.Key	String	No	CreationStartTime	The key of filter 1 used to query resources. Set the value to <code>CreationStartTime</code>. You can specify a time by setting both <code>Filter.1.Key</code> and <code>Filter.1.Value</code> to query resources that were created after the time.
Filter.2.Key	String	No	CreationEndTime	The key of filter 2 used to query resources. Set the value to <code>CreationEndTime</code>. You can specify a time by setting both <code>Filter.2.Key</code> and <code>Filter.2.Value</code> to query resources that were created before the time.

Parameter	Type	Required	Example	Description
Filter.1.Value	String	No	2022-04-10T17:00Z	The value of filter 1 used to query resources. Set the value to a time. If you specify this parameter, you must also specify the <code>Filter.1.Key</code> parameter. Specify the time in the <code>yyyy-MM-ddTHH:mmZ</code> format. The time must be in UTC.
Filter.2.Value	String	No	2022-04-10T22:00Z	The value of filter 2 used to query resources. Set the value to a time. If you specify this parameter, you must also specify the <code>Filter.2.Key</code> parameter. Specify the time in the <code>yyyy-MM-ddTHH:mmZ</code> format. The time must be in UTC.
Usage	String	No	none	Specifies whether the snapshot has been used to create images or disks. Valid values: - image: The snapshot has been used to create custom images. - disk: The snapshot has been used to create disks. - image_disk: The snapshot has been used to create custom images and data disks. - none: The snapshot has not been used to create images or disks.
SourceDiskType	String	No	Data	The type of the source disk for which the snapshot was created. Valid values: - system: system disk - data: data disk
Tag.N.value	String	No	SnapshotTest	The value of tag N of the resource.  Note This parameter will be removed in the future. We recommend that you use the <code>Tag.N.Value</code> parameter to ensure future compatibility.

Parameter	Type	Required	Example	Description
Tag.N.key	String	No	SnapshotTest	The key of tag N of the resource.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	No	TestKey	The key of tag N of the snapshot. Valid values of N: 1 to 20. If a single tag is specified to query resources, up to 1,000 resources that have this tag added can be displayed in the response. If multiple tags are specified to query resources, up to 1,000 resources that have all these tags added can be displayed in the response. To query more than 1,000 resources that are bound with specified tags, call the ListTagResources operation.
Tag.N.Value	String	No	TestValue	The value of tag N of the policy. Valid values of N: 1 to 20. If a single tag is specified to query resources, up to 1,000 resources that have this tag added can be displayed in the response. If multiple tags are specified to query resources, up to 1,000 resources that have all these tags added can be displayed in the response. To query more than 1,000 resources that are bound with specified tags, call the ListTagResources operation.

Parameter	Type	Required	Example	Description
Encrypted	Boolean	No	false	Specifies whether the snapshot is encrypted. Valid values: - true - false Default value: false.
ResourceGroupId	String	No	rg-bp67acfmazb4p****	The ID of the resource group to which the snapshot belongs.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: - true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether Resource Access Management (RAM) users are granted required permissions, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, the DryRunOperation error code is returned. - false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned, and the request is made. Default value: false.
KMSKeyId	String	No	0e478b7a-4262-4802-b8cb-00d3fb40****	The ID of the Key Management Service (KMS) key used for the data disk.

Parameter	Type	Required	Example	Description
Category	String	No	Standard	The category of the snapshot. Valid values: - Standard: normal snapshot - Flash: local snapshot  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0a****	The token used to start the next query.
PageNumber	Integer	1	The number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.
Snapshots	Array of Snapshot		Details about the snapshots.
Snapshot			
Category	String	standard	The category of the snapshot. Valid values: - standard: normal snapshot - flash: local snapshot
CreationTime	String	2022-04-13T13:00:52Z	The time when the snapshot was created. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
Description	String	FinanceDept	The description of the snapshot.

Parameter	Type	Example	Description
Encrypted	Boolean	false	Indicates whether the snapshot was encrypted.
InstantAccess	Boolean	false	Indicates whether the instant access feature was enabled. Valid values: - true: The instant access feature was enabled. This feature can be enabled only for premium performance disks and standard performance disks - false: The instant access feature was disabled. The snapshot is a normal snapshot for which the instant access feature is disabled.
InstantAccessRetentionDays	Integer	30	Indicates the duration of the instant access feature. The instant access feature is automatically disabled when the specified duration expires. By default, the value of this parameter is the same as that of <code>RetentionDays</code> .
KMSKeyId	String	0e478b7a-4262-4802-b8cb-00d3fb40****	The ID of the KMS key used for the data disk.
LastModifiedTime	String	test	The time when the snapshot was last changed. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
ProductCode	String	jxsc000***	 Note This parameter is not supported.
Progress	String	100	The progress of the snapshot creation task. Unit: percent (%).
RemainTime	Integer	38	The remaining time required to create the snapshot. Unit: seconds.
ResourceGroupId	String	rg-bp67acfmazb4p***	The ID of the resource group to which the snapshot belongs.

Parameter	Type	Example	Description
RetentionDays	Integer	30	The retention period of the automatic snapshot.
SnapshotId	String	s-bp67acfmazb4p*** *	The ID of the snapshot.
SnapshotName	String	test-SnapshotName	The name of the snapshot. This parameter is returned only if a snapshot name was specified when the snapshot was created.
SnapshotSN	String	64472-116742336-61976****	The serial number of the snapshot.
SnapshotType	String	all	The type of the snapshot. Valid values: • auto: automatic snapshot • user: manual snapshot (also called user-created snapshot) • all: all snapshot types
SourceDiskId	String	d-bp67acfmazb4p*** *	The ID of the source disk. This parameter is retained even after the source disk of the snapshot is released.
SourceDiskSize	String	2000	The capacity of the source disk. Unit: GiB.
SourceDiskType	String	Data	The attribute of the source disk. Valid values: • System • Data
SourceStorageType	String	disk	The type of the source disk for which the snapshot was created.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.

Parameter	Type	Example	Description
Status	String	accomplished	The state of the snapshot. Valid values: - progressing: The snapshot is being created. - accomplished: The snapshot is created. - failed: The snapshot fails to be created.
Tags	Array of Tag		The tags of the snapshot.
Tag			
TagKey	String	TestKey	The tag key of the policy.
TagValue	String	TestValue	The tag value of the policy.
Usage	String	none	Indicates whether the snapshot has been used to create images or disks. Valid values: - image: The snapshot has been used to create custom images. - disk: The snapshot has been used to create disks. - image_disk: The snapshot has been used to create custom images and data disks. - none: The snapshot has not been used to create images or disks.
TotalCount	Integer	36	The total number of snapshots.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeSnapshots
&RegionId=cn-qingdao-****
&InstanceId=i-bp67acfmxazb4p****
&DiskId=d-bp67acfmxazb4p****
&SnapshotIds=["s-bp67acfmxazb4p****", "s-bp67acfmxazb5p****", ... "s-bp67acfmxazb6p****"]
&PageNumber=1
&PageSize=10
&SnapshotName=testSnapshotName
&Status=all
&SnapshotType=all
&Usage=none
&SourceDiskType=Data
&Tag.1.Key=TestKey
&Tag.1.Value=TestValue
&Encrypted=false
&DryRun=false
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeSnapshotsResponse>
  <TotalCount>36</TotalCount>
  <NextToken>caeba0bbb2be03f84eb48b699f0a****</NextToken>
  <PageSize>10</PageSize>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3****</RequestId>
  <PageNumber>1</PageNumber>
  <Snapshots>
    <Status>accomplished</Status>
    <InstantAccess>false</InstantAccess>
    <Usage>none</Usage>
    <Progress>100</Progress>
    <Category>standard</Category>
    <KMSKeyId>0e478b7a-4262-4802-b8cb-00d3fb40****</KMSKeyId>
    <Description>FinanceDept</Description>
    <ResourceGroupId>rg-bp67acfmazb4p****</ResourceGroupId>
    <ProductCode>jxsc000****</ProductCode>
    <Encrypted>false</Encrypted>
    <RetentionDays>30</RetentionDays>
    <InstantAccessRetentionDays>30</InstantAccessRetentionDays>
    <SnapshotName>test-SnapshotName</SnapshotName>
    <SourceDiskId>d-bp67acfmazb4p****</SourceDiskId>
    <SourceStorageType>disk</SourceStorageType>
    <SnapshotSN>64472-116742336-61976**** </SnapshotSN>
    <SnapshotId>s-bp67acfmazb4p****</SnapshotId>
    <SourceDiskSize>2000</SourceDiskSize>
    <LastModifiedTime>test</LastModifiedTime>
    <CreationTime>2022-04-13T13:00:52Z</CreationTime>
    <SnapshotType>all</SnapshotType>
    <RemainTime>38</RemainTime>
    <SourceDiskType>Data</SourceDiskType>
    <Tags>
      <TagKey>TestKey</TagKey>
      <TagValue>TestValue</TagValue>
    </Tags>
  </Snapshots>
</DescribeSnapshotsResponse>
```

JSON **format**


```

{
  "TotalCount": 36,
  "NextToken": "caeba0bbb2be03f84eb48b699f0a****",
  "PageSize": 10,
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3****",
  "PageNumber": 1,
  "Snapshots": {
    "Status": "accomplished",
    "InstantAccess": false,
    "Usage": "none",
    "Progress": 100,
    "Category": "standard",
    "KMSKeyId": "0e478b7a-4262-4802-b8cb-00d3fb40****",
    "Description": "FinanceDept",
    "ResourceGroupId": "rg-bp67acfmxazb4p****",
    "ProductCode": "jxsc000***",
    "Encrypted": false,
    "RetentionDays": 30,
    "InstantAccessRetentionDays": 30,
    "SnapshotName": "test-SnapshotName",
    "SourceDiskId": "d-bp67acfmxazb4p****",
    "SourceStorageType": "disk",
    "SnapshotSN": "64472-116742336-61976****",
    "SnapshotId": "s-bp67acfmxazb4p****",
    "SourceDiskSize": 2000,
    "LastModifiedTime": "test",
    "CreationTime": "2022-04-13T13:00:52Z",
    "SnapshotType": "all",
    "RemainTime": 38,
    "SourceDiskType": "Data",
    "Tags": {
      "TagKey": "TestKey",
      "TagValue": "TestValue"
    }
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidSnapshotIds. Malformed	The amount of specified specified snapshot Ids exceeds the limit.	The error message returned because the specified SnapshotIds parameter is invalid.
404	InvalidUsage	The specified Usage is not valid	The error message returned because the specified Usage parameter is invalid.

HTTP status code	Error code	Error message	Description
404	InvalidSourceDiskType	The specified SourceDiskType is not valid	The error message returned because the specified SourceDiskType parameter is invalid.
404	InvalidStatus.NotFound	The specified Status is not found	The error message returned because the specified Status parameter does not exist.
404	InvalidSnapshotType.NotFound	The specified SnapshotType is not found	The error message returned because the specified SnapshotType parameter does not exist.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not correspond to each other.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags has exceeded the upper limit.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
404	InvalidSnapshotLinkId.NotFound	The specified snapshot link is not found.	The error message returned because the specified SnapshotLinkId parameter does not exist.
403	InvalidSnapshotCategory.Malformed	The specified Category is not valid.	The error message returned because the specified Category parameter is invalid. Check whether the specified Category parameter is valid.

5.1.9.3. DeleteSnapshot

Deletes a snapshot. If you call this operation to delete a snapshot that is being created, the associated snapshot creation task is also canceled.

Description

When you call this operation, take note of the following items:

- If the specified snapshot does not exist, the request is ignored.

- A snapshot that has already been used to create custom images cannot be deleted. You must call the `DeleteImage` operation to delete the custom images before you can delete the snapshot.
- If the specified snapshot has been used to create disks and the `Force` parameter is not specified or is set to `false`, the snapshot cannot be deleted directly. If you want to delete the snapshot, set the `Force` parameter to `true` to forcefully delete the snapshot. The disks created from the snapshot cannot be re-initialized after the snapshot is forcefully deleted.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteSnapshot	The operation that you want to perform. Set the value to <code>DeleteSnapshot</code> .
SnapshotId	String	Yes	s-bp1btgnlb4licd41****	The ID of the snapshot. You can call the <code>DescribeSnapshots</code> operation to query the snapshot ID.
Force	Boolean	No	false	Specifies whether to forcefully delete the snapshot that has been used to create disks. Valid values: • <code>true</code>: forcefully deletes the snapshot. After the snapshot is forcefully deleted, the disks created from this snapshot cannot be re-initialized. • <code>false</code>: does not forcefully delete the snapshot. Default value: <code>false</code>.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request. Every response returns a unique request ID regardless of whether the call is successful.

Examples

Sample requests

```
https://ecs.example.com/?Action=DeleteSnapshot
&SnapshotId=s-bp1btgnlb4licd41****
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteSnapshotResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7B****</RequestId>
</DeleteSnapshotResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7B****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	SnapshotCreatedImage	The snapshot has been used to create user defined image(s).	The error message returned because the specified snapshot has been used to create custom images and cannot be deleted. You must call the DeleteImage operation to delete the custom images before you can delete the snapshot.
403	SnapshotCreatedDisk	The snapshot has been used to create disk(s).	The error message returned because the specified snapshot has been used to create disks and the Force parameter is not specified or is set to false. If you want to delete the snapshot, set the Force parameter to true to forcefully delete the snapshot. After the snapshot is forcefully deleted, the disks created from the snapshot cannot be re-initialized.
400	MissingParameter	The input parameter SnapshotId that is mandatory for processing this request is not supplied.	The error message returned because the required SnapshotId parameter is not specified.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
404	InvalidSnapshotId.NotFound	The specified snapshot is not found	The error message returned because the specified snapshot does not exist.

HTTP status code	Error code	Error message	Description
403	Operation.Conflict	The operation may conflicts with others, please retry later.	The error message returned because the operation conflicts with other operations. Try again later.

5.1.9.4. CopySnapshot

You can call this operation to copy a normal snapshot from one region to another.

Description

When you call this operation, take note of the following items:

- New snapshots, which are the copies of source snapshots, cannot be used to roll back the disks for which the source snapshots were created.
- Encrypted snapshots cannot be copied.
- Local snapshots cannot be copied.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CopySnapshot	The operation that you want to perform. Set the value to CopySnapshot.
SnapshotId	String	Yes	S-bp67acfmxazb4p****	The ID of the source snapshot.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the source snapshot. You can call the DescribeRegions operation to query the most recent region list.
DestinationRegionId	String	Yes	cn-beijing-env17-d01	The region ID of the new snapshot.
DestinationSnapshotName	String	Yes	test-DestinationSnapshotName	The name of the new snapshot. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), periods (.), and hyphens (-). It must start with a letter and cannot start with http:// or https://. This parameter is empty by default.

Parameter	Type	Required	Example	Description
DestinationSnapshotDescription	String	Yes	This is a description example.	The description of the new snapshot. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.
RetentionDays	Integer	No	60	The retention period of the new snapshot. Unit: days. The new snapshot will be automatically released when it expires. Valid values: 1 to 65536. This parameter is empty by default, which indicates that the snapshot will not be automatically released.
Tag.N.Key	String	No	TestKey	The key of tag N to be bound to the new snapshot. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.
Tag.N.Value	String	No	TestValue	The value of tag N to be bound to the new snapshot. The tag value can be an empty string. It can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.

Response parameters

Parameter	Type	Example	Description
RequestId	String	C8B26B44-0189-443E-9816-D951F59623A9	The ID of the request.
SnapshotId	String	s-bp17441ohwka0yui***	The ID of the new snapshot.

Examples

Sample requests

```
https://ecs.example.com/?Action=CopySnapshot
&DestinationRegionId=cn-beijing-env17-d01
&RegionId=cn-qingdao-env17-d01
&SnapshotId=s-bp67acfmazb4p****
&<Common request parameters>
```

Sample success responses

XML format

```
<CopySnapshotResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
  <SnapshotId>s-bp17441ohwka0yuh****</SnapshotId>
</CopySnapshotResponse>
```

JSON format

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9",
  "SnapshotId": "s-bp17441ohwka0yuh****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidSnapshotId.NotFound	The specified snapshot is not exists.	The error message returned because the specified SnapshotId parameter does not exist.
403	InvalidUser.NotInWhiteList	The user is not in the white list of copying snapshot.	The error message returned because you are not authorized to perform this operation.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.

HTTP status code	Error code	Error message	Description
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	InvalidRegionId.Malformed	The specified RegionId is not valid	The error message returned because the specified RegionId parameter is invalid.

5.1.9.5. DescribeSnapshotLinks

You can call this operation to query the snapshot chains of one or more disks. A snapshot chain is a chain of all the snapshots created for a disk. A disk corresponds to a chain of snapshots.

Description

When you call this operation, take note of the following items:

- You can specify multiple request parameters such as `RegionId` , `DiskIds` , and `InstanceId` to be queried. Specified parameters have logical AND relations.
- Only the specified parameters are used as filter conditions. If the `DiskIds` and `SnapshotLinkIds` parameters are set to empty JSON arrays, they are regarded as valid filter conditions and an empty result is returned.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSnapshotLinks	The operation that you want to perform. Set the value to DescribeSnapshotLinks.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the disk. You can call the DescribeRegions operation to query the most recent region list.
InstanceId	String	No	i-bp1ahcvgu9z55pk7****	The ID of the instance.

Parameter	Type	Required	Example	Description
DiskIds	String	No	["d-bp198f7xn673w2rw****", "d-bp12te2l9m0170wc****", ... "d-bp1btgnlb4lgdzoj****"]	The IDs of disks. The value is a JSON array that consists of up to 100 disk IDs. Separate multiple disk IDs with commas (,).
SnapshotLinkIds	String	No	["sl-bp14r3b4xczuenhr****", "sl-bp1eftye2796vi2a****", ... "sl-bp1aixnfbjo290a8****"]	The IDs of snapshot chains. The value is a JSON array that consists of up to 100 snapshot chain IDs. Separate multiple snapshot chain IDs with commas (,).
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	50	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10.

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	50	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SnapshotLinks	Array of SnapshotLink		Details about the snapshot chains.
SnapshotLink			
Category	String	test	 Note This parameter is not supported.

Parameter	Type	Example	Description
InstanceId	String	i-bp1ahcvgu9z55pk7* ***	The ID of the instance.
InstanceName	String	test-InstanceName	The name of the instance.
RegionId	String	cn-qingdao-env17-d01	The ID of the region where the source disk of the snapshot chain is located.
SnapshotLinkId	String	sl-bp14r3b4xczuenhr** **	The ID of the snapshot chain.
SourceDiskId	String	d-bp198f7xn673w2rw ****	The ID of the source disk. This parameter is retained even if the source disk is deleted.
SourceDiskName	String	test-SourceDiskName	The name of the source disk.
SourceDiskSize	Integer	40	The size of the source disk. Unit: GiB.
SourceDiskType	String	cloud_ssd	The category of the source disk. Valid values: - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - cloud_essd: enhanced SSD (ESSD) - ephemeral_ssd: local SSD - cloud: basic disk
TotalCount	Integer	1	The total number of snapshots.
TotalSize	Long	2097152	The total size of all snapshots in the snapshot chain. Unit: byte.
TotalCount	Integer	9	The total number of snapshot chains.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeSnapshotLinks
&RegionId=cn-qingdao-env17-d01
&InstanceId=i-bp1ahcvgu9z55pk7****
&DiskIds=["d-bp198f7xn673w2rw****", "d-bp12te2l9m0170wc****", ... "d-bp1btgnlb4lgdzoi****"]
&SnapshotLinkIdIds=["sl-bp14r3b4xczuenhr****", "sl-bp1leftye2796vi2a****", ... "sl-bp1aixnfbjo
290a8****"]
&PageNumber=1
&PageSize=10
&<Common request parameters>
```

Sample success responses

XML **format**

```
<DescribeSnapshotLinksResponse>
  <SnapshotLinks>
    <SnapshotLink>
      <SourceDiskSize>20</SourceDiskSize>
      <TotalSize>2097152</TotalSize>
      <SourceDiskType>data</SourceDiskType>
      <RegionId>cn-qingdao-env17-d01</RegionId>
      <SnapshotLinkId>sl-bp14r3b4xczuenhr****</SnapshotLinkId>
      <SourceDiskId>d-bp198f7xn673w2rw****</SourceDiskId>
      <TotalCount>1</TotalCount>
    </SnapshotLink>
    <SnapshotLink>
      <SourceDiskSize>40</SourceDiskSize>
      <TotalSize>2097152</TotalSize>
      <SourceDiskType>data</SourceDiskType>
      <RegionId>cn-qingdao-env17-d01</RegionId>
      <SnapshotLinkId>sl-bp14r3b4xczuenhr****</SnapshotLinkId>
      <SourceDiskId>d-bp198f7xn673w2rw****</SourceDiskId>
      <TotalCount>1</TotalCount>
    </SnapshotLink>
  </SnapshotLinks>
  <PageNumber>1</PageNumber>
  <PageSize>2</PageSize>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
  <TotalCount>9</TotalCount>
</DescribeSnapshotLinksResponse>
```

JSON **format**

```

{
  "SnapshotLinks": {
    "SnapshotLink": [
      {
        "SourceDiskSize": 20,
        "TotalSize": 2097152,
        "SourceDiskType": "data",
        "RegionId": "cn-qingdao-env17-d01",
        "SnapshotLinkId": "sl-bp14r3b4xczuenhr****",
        "SourceDiskId": "d-bp198f7xn673w2rw****",
        "TotalCount": 1
      },
      {
        "SourceDiskSize": 40,
        "TotalSize": 2097152,
        "SourceDiskType": "data",
        "RegionId": "cn-qingdao-env17-d01",
        "SnapshotLinkId": "sl-bp14r3b4xczuenhr****",
        "SourceDiskId": "d-bp198f7xn673w2rw****",
        "TotalCount": 1
      }
    ]
  },
  "PageNumber": 1,
  "PageSize": 2,
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "TotalCount": 9
}

```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegionId	The specified regionId is invalid.	The error message returned because the specified RegionId parameter is invalid.
400	InvalidSnapshotLinkIds	The specified snapshotLinkIds is invalid.	The error message returned because the specified SnapshotLinkIds parameter is invalid.
400	InvalidDiskIds	The specified diskIds is invalid.	The error message returned because the specified DiskIds parameter is invalid.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

5.1.9.6. DescribeSnapshotsUsage

You can call this operation to query the number of snapshots stored in a region and the total size of the snapshots.

If you want to view the snapshot usage information on each disk in the current region, we recommend that you call the DescribeSnapshotLinks operation to query snapshot chain information.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSnapshotsUsage	The operation that you want to perform. Set the value to DescribeSnapshotsUsage.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the snapshot. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SnapshotCount	Integer	5	The number of snapshots stored in the current region.
SnapshotSize	Long	122	The total size of snapshots stored in the current region. Unit: byte.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeSnapshotsUsage
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeSnapshotsUsageResponse>
  <SnapshotCount>5</SnapshotCount>
  <SnapshotSize>122</SnapshotSize>
  <RequestId>ED5CF6DD-71CA-462C-9C94-A61A78A01479</RequestId>
</DescribeSnapshotsUsageResponse>
```

JSON format

```
{
  "SnapshotCount": "5",
  "SnapshotSize": "122",
  "RequestId": "ACD9BBB0-A9D1-46D7-9630-B7A69889E110"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidParam.RegionId	The specified region is not exist.	The error message returned because the specified RegionId parameter does not exist.

5.1.9.7. CreateAutoSnapshotPolicy

You can call this operation to create an automatic snapshot policy.

Description

After an automatic snapshot policy is created, you can call the `ApplyAutoSnapshotPolicy` operation to apply the policy to disks. You can also call the `ModifyAutoSnapshotPolicyEx` operation to modify the automatic snapshot policy.

When you call this operation, take note of the following items:

- A maximum of 100 automatic snapshot policies can be created in each region per Apsara Stack tenant account.
- If an automatic snapshot is being created when the time scheduled for a new automatic snapshot is due, the new snapshot task is skipped. This may occur when a disk contains a large volume of data. For example, an automatic snapshot policy is applied to a disk that contains a large volume of data, and the policy specifies that snapshots are created at 09:00, 10:00, 11:00, and 12:00. The system starts to create a snapshot for the disk at 09:00. The snapshot creation process takes 80 minutes and ends at 10:20. The system skips the automatic snapshot task scheduled for 10:00 and creates the next automatic snapshot for the disk at 11:00.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateAutoSnapshotPolicy	The operation that you want to perform. Set the value to CreateAutoSnapshotPolicy.
regionId	String	Yes	cn-qingdao-env17-d01	The ID of the region in which to create an automatic snapshot policy. You can call the DescribeRegions operation to query the most recent region list.
repeatWeekdays	String	Yes	["1","2"]	The days of the week on which to create automatic snapshots. Valid values: 1 to 7, which correspond to Monday to Sunday. 1 indicates Monday. To schedule multiple automatic snapshots to be created for a disk in a week, you can set this parameter to a JSON array. - You can specify up to seven values in the array. - Separate the values in the array with commas (,). Example: ["1", "2" .. "7"] .
retentionDays	Integer	Yes	30	The number of days for which to retain automatic snapshots. Valid values: -1: Automatic snapshots are permanently retained. 1 to 65535: Automatic snapshots are retained for a specified number of days. Default value: -1.
timePoints	String	Yes	["0", "1", ... "23"]	The point in time at which to create automatic snapshots. Unit: hours. Valid values: 0 to 23. These values correspond to the hours of the day from 00:00 to 23:00. 1 indicates 01:00. To schedule multiple automatic snapshots to be created for a disk in a day, you can set this parameter to a JSON array that consists of multiple values. You can specify up to 24 values in the array.

Parameter	Type	Required	Example	Description
autoSnapshotPolicyName	String	No	test-autoSnapshotPolicyName	The name of the automatic snapshot policy. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). The name must start with a letter and cannot start with http:// or https://. This parameter is empty by default.

Response parameters

Parameter	Type	Example	Description
AutoSnapshotPolicyId	String	sp-bp12m37ccmxvbmi5****	The ID of the automatic snapshot policy.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=CreateAutoSnapshotPolicy
&regionId=cn-qingdao-env17-d01
&repeatWeekdays=["1"]
&retentionDays=30
&timePoints=["0", "19"]
&autoSnapshotPolicyName=test-autoSnapshotPolicyName
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateAutoSnapshotPolicyResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
  <AutoSnapshotPolicyId>sp-bp12m37ccmxvbmi5****</AutoSnapshotPolicyId>
</CreateAutoSnapshotPolicyResponse>
```

JSON format

```
{
  "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673DE",
  "AutoSnapshotPolicyId": "sp-bp12m37ccmxvbmi5****"
}
```


Error codes

HTTP status code	Error code	Error message	Description
403	ParameterInvalid	The specified RegionId parameter is invalid.	The error message returned because the specified regionId parameter is invalid.
403	ParameterInvalid	The specified RepeatWeekDays parameter is invalid.	The error message returned because the specified repeatWeekDays parameter is invalid.
403	ParameterInvalid	The specified TimePoints parameter is invalid.	The error message returned because the specified timePoints parameter is invalid.
403	ParameterInvalid	The specified RetentionDays parameter is invalid.	The error message returned because the specified retentionDays parameter is invalid.
403	AutoSnapshotPolicy.QuotaExceed	The maximum number of automatic snapshot policy has been reached.	The error message returned because the maximum number of automatic snapshot policies has been reached.
400	DiskCategory.OperationNotSupported	The type of the specified disk does not support creating a snapshot.	The error message returned because the operation is not supported by the current disk category.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.

5.1.9.8. DeleteAutoSnapshotPolicy

You can call this operation to delete an automatic snapshot policy. After an automatic snapshot policy is deleted, the policy will no longer be applied to the disks that it previously took effect on.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteAutoSnapshotPolicy	The operation that you want to perform. Set the value to DeleteAutoSnapshotPolicy.
autoSnapshotPolicyId	String	Yes	sp-bp12m37ccmxvbm5****	The ID of the automatic snapshot policy. You can call the DescribeAutoSnapshotPolicies operation to query available automatic snapshot policies.
regionId	String	Yes	cn-qingdao-env17-d01	The region ID of the automatic snapshot policy. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request. Every response returns a unique request ID regardless of whether the call is successful.

Examples

Sample requests

```
https://ecs.example.com/?Action=DeleteAutoSnapshotPolicy
&autoSnapshotPolicyId=sp-bp12m37ccmxvbm5****
&regionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

XML **format**

```
<DeleteAutoSnapshotPolicyResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</DeleteAutoSnapshotPolicyResponse>
```

JSON **format**

```
{
  "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	ParameterInvalid	The specified automatic snapshot policy does not exist.	The error message returned because the specified autoSnapshotPolicyID parameter does not exist.
404	ParameterInvalid	The specified automatic snapshot policy does not exist in the region.	The error message returned because the specified automatic snapshot policy does not exist in the current region.

5.1.9.9. ModifyAutoSnapshotPolicyEx

You can call this operation to modify an automatic snapshot policy. After an automatic snapshot policy is modified, the modifications take effect immediately on the disks to which the policy is applied.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyAutoSnapshotPolicyEx	The operation that you want to perform. Set the value to ModifyAutoSnapshotPolicyEx.
autoSnapshotPolicyId	String	Yes	sp-bp12m37ccmxvbmj5****	The ID of the automatic snapshot policy. You can call the DescribeAutoSnapshotPolicies operation to query available automatic snapshot policies.
regionId	String	Yes	cn-qingdao-env17-d01	The region ID of the automatic snapshot policy. You can call the DescribeRegions operation to query the most recent region list.
autoSnapshotPolicyName	String	No	test-autoSnapshotPolicyName	The name of the automatic snapshot policy. If this parameter is not specified, the original name is retained.

Parameter	Type	Required	Example	Description
timePoints	String	No	["0", "1"]	The point in time at which to create automatic snapshots. Unit: hours. Valid values: 0 to 23. These values correspond to the hours of the day from 00:00 to 23:00. 1 indicates 01:00. To schedule multiple automatic snapshots to be created for a disk in a day, you can set timePoints to a JSON array that consists of multiple values. - You can specify up to 24 values in the array. - Separate the values in array with commas (.). Example: ["0", "1", ... "23"].
repeatWeekdays	String	No	["1", "7"]	The days of the week on which to create automatic snapshots. Valid values: 1 to 7, which correspond to Monday to Sunday. 1 indicates Monday. To schedule multiple automatic snapshots to be created for a disk in a week, you can set repeatWeekdays to a JSON array that consists of multiple values. - You can specify up to seven values in the array. - Separate the values in the array with commas (.). Example: ["1", "2", ... "7"].
retentionDays	Integer	No	30	The number of days for which to retain automatic snapshots. Valid values: -1: Automatic snapshots are permanently retained. 1 to 65536: Automatic snapshots are retained for a specified number of days.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ModifyAutoSnapshotPolicyEx
&autoSnapshotPolicyId=sp-bp12m37ccmxvbm5****
&regionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyAutoSnapshotPolicyResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</ModifyAutoSnapshotPolicyResponse>
```

JSON format

```
{
  "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	ParameterInvalid	The specified automatic snapshot policy does not exist.	The error message returned because the specified automatic snapshot policy does not exist.
404	ParameterInvalid	The specified automatic snapshot policy does not exist in the region.	The error message returned because the specified automatic snapshot policy does not exist in the current region.
403	ParameterInvalid	The specified RegionId parameter is invalid.	The error message returned because the specified regionId parameter is invalid.
403	ParameterInvalid	The specified RepeatWeekDays parameter is invalid.	The error message returned because the specified repeatWeekDays parameter is invalid.
403	ParameterInvalid	The specified TimePoints parameter is invalid.	The error message returned because the specified timePoints parameter is invalid.

HTTP status code	Error code	Error message	Description
403	ParameterInvalid	The specified AutoSnapshotPolicyId is invalid.	The error message returned because the specified autoSnapshotPolicyId parameter is invalid.
403	ParameterInvalid	The specified RetentionDays parameter is invalid.	The error message returned because the specified retentionDays parameter is invalid.

5.1.9.10. ModifySnapshotAttribute

Modifies the name or description of a snapshot.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifySnapshotAttribute	The operation that you want to perform. Set the value to ModifySnapshotAttribute.
SnapshotId	String	Yes	s-bp199lyn9bb47pa****	The ID of the snapshot. You can call the DescribeSnapshots operation to query the snapshot ID.
SnapshotName	String	No	testSnapshotName	The name of the snapshot. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code>. It can contain letters, digits, colons (.), underscores (_), and hyphens (-). It cannot start with <code>auto</code> because snapshots whose names start with <code>auto</code> are recognized as automatic snapshots.
Description	String	No	testDescription	The description of the snapshot. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> .

Parameter	Type	Required	Example	Description
DisableInstantAccess	Boolean	No	false	Specifies whether to disable the instant access feature. Valid values: - true: disables the instant access feature. - false: enables the instant access feature. Default value: false.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ModifySnapshotAttribute
&SnapshotId=s-bp1991yny9bb47pa****
&SnapshotName=testSnapshotName
&Description=testDescription
&DisableInstantAccess=false
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifySnapshotAttributeResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F596****</RequestId>
</ModifySnapshotAttributeResponse>
```

JSON format

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F596****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidSnapshotName.Malformed	The specified SnapshotName is wrongly formed.	The error message returned because the specified Name parameter is invalid.
400	NoAttributeToModify	No attribute to be modified in this request.	The error message returned because no properties of the specified snapshot are modified.
404	InvalidSnapshotId.NotFound	The specified SnapshotId does not exist.	The error message returned because the specified snapshot does not exist. Check whether the snapshot ID is correct.

5.1.9.11. DescribeAutoSnapshotPolicyEX

You can call this operation to query the automatic snapshot policies that you have created.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeAutoSnapshotPolicyEx	The operation that you want to perform. Set the value to DescribeAutoSnapshotPolicyEx.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the automatic snapshot policy. You can call the DescribeRegions operation to query the most recent region list.
AutoSnapshotPolicyId	String	No	sp-bp67acfmxyzb4p****	The ID of the automatic snapshot policy.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1

Parameter	Type	Required	Example	Description
PageSize	Integer	No	1	The number of entries to return on each page. Valid values: 1 to 100 Default value: 10
Tag.N.Key	String	No	TestKey	The key of tag N of the automatic snapshot policy. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.
Tag.N.Value	String	No	TestValue	The value of tag N of the automatic snapshot policy. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length. It cannot start with acs: or contain http:// or https://.

Response parameters

Parameter	Type	Example	Description
AutoSnapshotPolicies	Array		The collection of details about automatic snapshot policies.
AutoSnapshotPolicy			
AutoSnapshotPolicyId	String	sp-bp67acfmazb4p***	The ID of the automatic snapshot policy.
AutoSnapshotPolicyName	String	test-AutoSnapshotPolicyName	The name of the automatic snapshot policy.
CopiedSnapshotsRetentionDays	Integer	0	 Note This parameter is not supported.

Parameter	Type	Example	Description
CreationTime	String	2014-04-21T12:08:52Z	The time when the automatic snapshot policy was created. The time follows the ISO 8601 standard in the yyyy-MM-ddThh:mm:ssZ format. The time is displayed in UTC.
DiskNums	Integer	1	The number of disks to which the automatic snapshot policy was applied.
EnableCrossRegionCopy	Boolean	false	 Note This parameter is not supported.
RegionId	String	cn-qingdao-env17-d01	The region ID of the automatic snapshot policy.
RepeatWeekdays	String	["6"]	The days of the week on which to create automatic snapshots. Valid values: 1 to 7, which correspond to the days of the week. 1 indicates Monday. One or more days can be specified.
RetentionDays	Integer	30	The number of days for which to retain an automatic snapshot. Valid values: -1: The automatic snapshot is retained permanently. 1 to 65536: The automatic snapshot is retained for the specified number of days.
Status	String	Normal	The status of the automatic snapshot policy. Valid values: - Normal - Expire
Tags	Array		The tags of the automatic snapshot policy.
Tag			
TagKey	String	TestKey	The tag key of the automatic snapshot policy.

Parameter	Type	Example	Description
TagValue	String	TestValue	The tag value of the automatic snapshot policy.
TargetCopyRegions	String	test	 Note This parameter is not supported.
TimePoints	String	["4", "19"]	The points in time at which to create automatic snapshots. The least interval at which snapshots can be created is one hour. Valid values: 0 to 23, which correspond to the hours of the day from 00:00 to 23:00. 1 indicates 01:00. The value is a JSON array that consists of multiple points in time. Example: <code>["0", "1", ... "23"]</code>. You can specify a maximum of 24 points in time. Separate the points in time with commas (,).
VolumeNums	Integer	2	The number of extended volumes to which this policy is applied.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	2	The total number of automatic snapshot policies.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeAutoSnapshotPolicyEx
&RegionId=cn-qingdao-env17-d01
&AutoSnapshotPolicyId=sp-bp67acfmazb4p****
&PageNumber=1
&PageSize=1
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeAutoSnapshotPolicyResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>2</TotalCount>
  <AutoSnapshotPolicies>
    <AutoSnapshotPolicy>
      <CreationTime>2019-01-22 11:38:08</CreationTime>
      <Status>Normal</Status>
      <DiskNums>1</DiskNums>
      <AutoSnapshotPolicyName>test-AutoSnapshotPolicyName</AutoSnapshotPolicyName>
      <RegionId>cn-qingdao-env17-d01</RegionId>
      <VolumeNums>2</VolumeNums>
      <RetentionDays>30</RetentionDays>
      <TimePoints>["0"]</TimePoints>
      <AutoSnapshotPolicyId>sp-bp67acfmazb4p****</AutoSnapshotPolicyId>
      <RepeatWeekdays>["7"]</RepeatWeekdays>
      <Tags>
        <Tag>
          <TagKey>Test</TagKey>
          <TagValue>Test</TagValue>
        </Tag>
      </Tags>
    </AutoSnapshotPolicy>
  </AutoSnapshotPolicies>
  <PageSize>1</PageSize>
  <RequestId>CC323EDF-BBB7-420F-BCD1-D9B9D2E9D424</RequestId>
</DescribeAutoSnapshotPolicyResponse>
```

JSON format

```

{
  "PageNumber": 1,
  "TotalCount": 2,
  "AutoSnapshotPolicies": {
    "AutoSnapshotPolicy": [
      {
        "CreationTime": "2019-01-22 11:38:08",
        "Status": "Normal",
        "DiskNums": 1,
        "AutoSnapshotPolicyName": "test-AutoSnapshotPolicyName",
        "RegionId": "cn-qingdao-env17-d01",
        "VolumeNums": 2,
        "RetentionDays": 30,
        "TimePoints": "[\"0\"]",
        "AutoSnapshotPolicyId": "sp-bp67acfmxazb4p****",
        "RepeatWeekdays": "[\"7\"]",
        "Tags": {
          "Tag": [
            {
              "TagKey": "Test",
              "TagValue": "Test"
            }
          ]
        }
      }
    ]
  },
  "PageSize": 1,
  "RequestId": "CC323EDF-BBB7-420F-BCD1-D9B9D2E9D424"
}

```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not match.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags exceeds the upper limit.

5.1.9.12. ApplyAutoSnapshotPolicy

Applies an automatic snapshot policy to one or more disks. If you apply an automatic snapshot policy to a disk that already has an automatic snapshot policy, the new policy replaces the original policy to take effect on the disk.

Description

- Each disk can have only one automatic snapshot policy applied.
- A single automatic snapshot policy can be applied to multiple disks.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ApplyAutoSnapshotPolicy	The operation that you want to perform. Set the value to ApplyAutoSnapshotPolicy.
regionId	String	Yes	cn-qingdao-****-d01	The region ID of the automatic snapshot policy and the disks. You can call the DescribeRegions operation to query the most recent region list.
autoSnapshotPolicyId	String	Yes	sp-bp12m37ccmxvbm5****	The ID of the automatic snapshot policy to apply.
diskIds	String	Yes	["d-bp198f7xn673w2rw****", "d-bp12te2l9m0170wc****", "d-bp1btgnlb4lgdzoi****"]	The IDs of one or more disks. The value is a JSON array that consists of disk IDs. Separate multiple disk IDs with commas (,).

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ApplyAutoSnapshotPolicy
&autoSnapshotPolicyId=sp-bp12m37ccmxvbm5****
&diskIds=["d-bp198f7xn673w2rw****", "d-bp12te2l9m0170wc****", "d-bp1btgnlb4lgdzoi****"]
&regionId=cn-qingdao-****-d01
&<Common request parameters>
```

Sample success responses

XML format

```
<ApplyAutoSnapshotPolicyResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3*****</RequestId>
</ApplyAutoSnapshotPolicyResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3*****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	ParameterInvalid	The specified automatic snapshot policy does not exist.	The error message returned because the specified autoSnapshotPolicyId parameter does not exist.
404	ParameterInvalid	The specified automatic snapshot policy does not exist in the region.	The error message returned because the specified autoSnapshotPolicyId parameter does not exist.
404	InvalidDiskId.NotFound	The specified disk does not exist in the region.	The error message returned because the specified disk does not exist in the current region.
403	ParameterInvalid	The specified RegionId parameter is invalid.	The error message returned because the specified regionId parameter is invalid.
403	ParameterInvalid	The specified AutoSnapshotPolicyId parameter is invalid.	The error message returned because the specified autoSnapshotPolicyId parameter is invalid.
403	ParameterInvalid	The specified DiskIds are invalid.	The error message returned because the specified diskIds parameter is invalid.
400	DiskCategory.OperationNotSupported	The type of the specified disk does not support creating a snapshot.	The error message returned because the operation is not supported by the current disk category.

HTTP status code	Error code	Error message	Description
400	PartOfDiskCategory.OperationNotSupported	The types of some disks in the disk list do not support creating snapshots.	The error message returned because some of the specified disks do not support this operation.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.

5.1.9.13. CancelAutoSnapshotPolicy

You can call this operation to disable the automatic snapshot policy for one or more disks.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CancelAutoSnapshotPolicy	The operation that you want to perform. Set the value to CancelAutoSnapshotPolicy.
diskIds	String	Yes	["d-bp198f7xn673w2rw****", "d-bp12te2l9m0170wc****", "d-bp1btgnlb4lgdzoj****"]	The IDs of disks. To disable an automatic snapshot policy for multiple disks, you can set this parameter to a JSON array that consists of multiple disk IDs in the format of ["dxxxxxxx", "dyyyyyyy", ... "dzzzzzzzz"]. Separate multiple disk IDs with commas (,).
regionId	String	Yes	cn-qingdao-env17-d01	The ID of the region to which the automatic snapshot policy and the disks belong. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request. Every response returns a unique request ID regardless of whether the call is successful.

Examples

Sample requests

```
https://ecs.example.com/?Action=CancelAutoSnapshotPolicy
&diskIds=["d-bp198f7xn673w2rw****", "d-bp12te219m0170wc****", "d-bp1btgnlb4lgdzoi****"]
&regionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

XML format

```
<CancelAutoSnapshotPolicyResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</CancelAutoSnapshotPolicyResponse>
```

JSON format

```
{
  "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	ParameterInvalid	The specified RegionId parameter is invalid.	The error message returned because the specified regionId parameter is invalid.
403	ParameterInvalid	The specified DiskIds are invalid.	The error message returned because the specified diskIds parameter is invalid.
404	InvalidDiskId.NotFound	The specified DiskIds are not found.	The error message returned because the specified diskIds parameter does not exist.

5.1.9.14. CreateSnapshotGroup

Creates a snapshot-consistent group for the disks in an Elastic Compute Service (ECS) instance. A snapshot-consistent group can contain snapshots of one or more disks.

Description

When you call this operation, take note of the following items:

- The disk for which you want to create a snapshot must be in the **Running** (`Running`) or **Unattached** (`Available`) state.
 - If the disk is in the **Running** (`Running`) state, the instance to which the disk is attached must be in the **Running** (`Running`) or **Stopped** (`Stopped`) state.
 - If the disk is in the **Unattached** (`Available`) state, make sure that the disk has been attached to an ECS instance. Snapshots cannot be created for disks that have never been attached to ECS instances.
- The snapshot-consistent group feature can be used to create snapshots only for premium performance disks and standard performance disks.
- A single snapshot-consistent group can contain snapshots of up to 16 disks including system disks and data disks and cannot exceed 32 TiB in size.
- Snapshots that you created are retained until they are deleted. We recommend that you delete unnecessary snapshots on a regular basis to prevent the number of snapshots from exceeding the quota.
- Snapshot-consistent groups cannot be created for disks that have the multi-attach feature enabled. If disks that have the multi-attach feature enabled are attached to an instance, you must set the `ExcludeDiskId.N` parameter to exclude these disks.

For more information about the snapshot-consistent group feature, see *Creating a snapshot-consistent group* in *ECS User Guide*.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateSnapshotGroup	The operation that you want to perform. Set the value to CreateSnapshotGroup.
InstanceId	String	Yes	i-q1a01ac6ae3gcb11****	The ID of the instance.
RegionId	String	Yes	cn-qingdao-****	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list. For more information, see <i>DescribeRegions</i> in <i>ECS Developer Guide</i> .

Parameter	Type	Required	Example	Description
ExcludeDiskId.N	RepeatList	No	d-q1a0113yyonhqbgu****	The ID of disk N for which you do not need to create snapshots. After this parameter is specified, the created snapshot-consistent group does not contain snapshots of the disk. Valid values of N: 1 to 16. This parameter is empty by default, which indicates that snapshots are created for all disks in the instance.
InstantAccess	Boolean	No	false	Specifies whether to enable the instant access feature. Valid values: - true: enables the instant access feature. - false: disables the instant access feature. Default value: false.
InstantAccessRetentionDays	Integer	No	1	The number of days for which the instant access feature is available. Unit: days. Valid values: 1 to 65535. This parameter takes effect only when <code>InstantAccess</code> is set to true. The instant access feature is automatically disabled when the specified duration of instant access expires. This parameter is empty by default, which indicates that the expiration time of the instant access feature is determined by the time when snapshots are released.
Name	String	No	testName	The name of the snapshot-consistent group. The name must be 2 to 128 characters in length, and can contain letters, digits, periods (.), underscores (_), hyphens (-), and colons (:). It must start with a letter or a digit and cannot start with <code>http://</code> or <code>https://</code>.

Parameter	Type	Required	Example	Description
Description	String	No	This is description.	The description of the snapshot-consistent group. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> .

Response parameters

Parameter	Type	Example	Description
RequestId	String	ssg-j6ciyh3k52qp7ovm** **	The ID of the snapshot-consistent group.
SnapshotGroupId	String	01ABBD93-1ABB-4D92-B496-1A3D20EC****	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.example.com/?Action=CreateSnapshotGroup
&InstanceId=i-qla01ac6ae3gcb11****
&RegionId=cn-qingdao-****
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateSnapshotGroupResponse>
  <RequestId>ssg-j6ciyh3k52qp7ovm****</RequestId>
  <SnapshotGroupId>01ABBD93-1ABB-4D92-B496-1A3D20EC****</SnapshotGroupId>
</CreateSnapshotGroupResponse>
```

JSON format

```
{
  "RequestId": "ssg-j6ciyh3k52qp7ovm****",
  "SnapshotGroupId": "01ABBD93-1ABB-4D92-B496-1A3D20EC****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The specified DiskId does not exist.	The error message returned because the specified disk does not exist. Check whether the disk ID is correct.
400	InvalidSnapshotName.Malformed	The specified SnapshotName is wrongly formed.	The error message returned because the specified Name parameter is invalid.
404	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	IncorrectDiskStatus.CreatingSnapshot	A previous snapshot creation is in process.	The error message returned because another snapshot is being created for the disk. Wait until the snapshot is created and try again.
403	InstanceLockedForSecurity	The disk attached instance is locked due to security.	The error message returned because the instance to which the disk is attached is locked for security reasons.
403	IncorrectDiskStatus.NeverAttached	The specified disk has never been attached to any instance.	The error message returned because the removable disk has never been attached to instances and its data remains unchanged.
403	QuotaExceed.Snapshot	The snapshot quota exceeds.	The error message returned because the maximum number of snapshots has been reached. To create new snapshots, delete snapshots that are no longer needed.
403	IncorrectDiskStatus.NeverUsed	The specified disk has never been used after creating.	The error message returned because the specified disk has never been used and its data remains unchanged.

HTTP status code	Error code	Error message	Description
403	CreateSnapshot.Failed	The process of creating snapshot is failed.	The error message returned because the snapshot cannot be created.
403	DiskInArrears	The specified operation is denied as your disk has expired.	The error message returned because the disk has expired due to an overdue payment.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	DiskId.ValueNotSupported	The specified parameter diskid is not supported.	The error message returned because the category of the specified Elastic Block Storage (EBS) device does not support this operation.
400	DiskCategory.OperationNotSupported	The operation is not supported to the specified disk due to its disk category	The error message returned because the specified disk category does not support this operation.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is usable and you have no overdue payments for it.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance does not exist. Check whether the instance ID is correct.
403	IncorrectVolumeStatus	The current volume status does not support this operation.	The error message returned because the operation is not supported while the Shared Block Storage device is in the current state.

HTTP status code	Error code	Error message	Description
404	InvalidVolumeId.NotFound	The specified volume does not exist.	The error message returned because the specified Shared Block Storage device does not exist. Check whether the Shared Block Storage device ID is correct.
403	IdempotentParameterMismatch	The specified clientToken is used.	The error message returned because the specified client token is already in use.
403	IncorrectDiskType.NotSupport	The specified device type is not supported.	The error message returned because the specified disk type does not support the operation.
403	IncorrectDiskStatus.Transferring	The specified device is transferring, you can retry after the process is finished.	The error message returned because the specified disk is being migrated. Wait until the disk is migrated and try again.
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a Key Management Service (KMS) key ID is specified for the disk. You can call the DescribeKey operation of KMS to query information about the specified CMK.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified tag key-related parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified tag value-related parameter is invalid.

HTTP status code	Error code	Error message	Description
403	IdempotentProcessing	The previous idempotent request(s) is still processing.	The error message returned because a previous idempotent request is being processed. Try again later.
400	InvalidRetentionDays.Malformed	The specified RetentionDays is not valid.	The error message returned because the specified RetentionDays parameter is invalid. Check whether the specified InstantAccessRetentionDays parameter is correct.
403	QuotaExceed.Tags	%s	The error message returned because the number of specified tags exceeds the upper limit. %s is a variable. An error message is dynamically returned based on call conditions.
403	InvalidSnapshotCategory.Malformed	The specified Category is not valid.	The error message returned because the specified snapshot category is invalid. Check whether the specified Category parameter is valid.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	InvalidParameter.Name	The specified Name is invalid.	The error message returned because the specified Name parameter is invalid.
403	NumberExceed.TooManyDisks	The number of all disks in the request exceeds.	The error message returned because the number of disks exceeds the limit.

5.1.9.15. DescribeSnapshotGroups

Queries the details of one or more snapshot-consistent groups.

Description

You can specify multiple request parameters such as `InstanceId`, `SnapshotGroupId.N`, and `Status.N` in the request. The specified parameters have logical AND relations. Only the specified parameters are included in the filter conditions.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSnapshotGroups	The operation that you want to perform. Set the value to DescribeSnapshotGroups.
RegionId	String	Yes	cn-qingdao-****	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list. For more information, see <i>DescribeRegions</i> in <i>ECS Developer Guide</i> .
InstanceId	String	No	i-q1a01ac6ae3gcb11****	The ID of the instance. You can call the DescribeInstances operation to query the instance ID.
SnapshotGroupId.N	RepeatList	No	ssg-j6ciyh3k52qp7ovm****	The ID of snapshot-consistent group N. Valid values of N: 1 to 10.
Status.N	RepeatList	No	accomplished	The state of snapshot-consistent group N. Valid values of N: 1 to 3. Valid values: - progressing: The snapshot-consistent group is being created. - accomplished: The snapshot-consistent group is created. - failed: The snapshot-consistent group fails to be created.
Name	String	No	testName	The name of the snapshot-consistent group.
AdditionalAttributes.N	RepeatList	No	META_OPTIONS	The value of attribute N. Valid values of N: 1 to 20. Valid values: - META_OPTIONS: instance metadata - DDH_CLUSTER: dedicated host cluster - NETWORK_PRIMARY_ENI_IP: secondary IP address of the primary elastic network interface (ENI)

Parameter	Type	Required	Example	Description
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The query token. Set the value to the NextToken value that is returned in the last call to the DescribeSnapshotGroups operation.
MaxResults	Integer	No	10	The maximum number of entries to return on each page. Maximum value: 100. Default value: 10.

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the next query.  Note If this parameter is empty, no more data is returned.
RequestId	String	3F9A4CC4-362F-469A-B9EF-B3204EF8AA3A	The ID of the request.
SnapshotGroups	Array of SnapshotGroup		Details of the snapshot-consistent groups.
SnapshotGroup			
CreationTime	String	2021-03-23T10:58:48Z	The time when the snapshot-consistent group was created.
Description	String	This is description.	The description of the snapshot-consistent group.
InstanceId	String	i-q1a01ac6ae3gcb11***	The ID of the instance to which the snapshot-consistent group belongs. This parameter has a value only when all disk snapshots in the snapshot-consistent group belong to the same instance.
Name	String	testName	The name of the snapshot-consistent group.

Parameter	Type	Example	Description
ProgressStatus	String	null	 Note This parameter is unavailable.
SnapshotGroupId	String	ssg-j6ciyh3k52qp7ovm**	The ID of the snapshot-consistent group.
Snapshots	Array of Snapshot		Details of the snapshots in the snapshot-consistent group.
Snapshot			
InstantAccess	Boolean	true	Indicates whether the instant access feature is enabled. Valid values: • true: The instant access feature is enabled. This feature can be enabled only for premium performance disks and standard performance disks. • false: The instant access feature is disabled. The snapshot is a normal snapshot for which the instant access feature is disabled.
InstantAccessRetentionDays	Integer	1	The retention period of the instant access feature. After the retention period ends, the snapshot is automatically released.
Progress	String	100%	The progress of the snapshot creation task. Unit: percent (%).
SnapshotId	String	s-j6cbzmrlbf09w72q**	The ID of the snapshot.
SourceDiskId	String	d-j6c3ogynmvpi6wy7***	The ID of the source disk. This parameter is retained even after the source disk of the snapshot is released.
SourceDiskType	String	system	The type of the source disk. Valid values: • system: system disk • data: data disk

Parameter	Type	Example	Description
Status	String	accomplished	The state of the snapshot-consistent group. Valid values: - progressing: The snapshot-consistent group is being created. - accomplished: The snapshot-consistent group is created. - failed: The snapshot-consistent group fails to be created.

Examples

Sample requests

```
http(s)://ecs.example.com/?Action=DescribeSnapshotGroups
&RegionId=cn-qingdao-****
&SnapshotGroupId.1=ssg-j6ciyh3k52qp7ovm****
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeSnapshotGroupsResponse>
  <NextToken>caeba0bbb2be03f84eb48b699f0a4883</NextToken>
  <RequestId>3F9A4CC4-362F-469A-B9EF-B3204EF8AA3A </RequestId>
  <SnapshotGroups>
    <Status>accomplished</Status>
    <ProgressStatus>null</ProgressStatus>
    <Description>This is description. </Description>
    <InstanceId>i-qla0lac6ae3gcb11****</InstanceId>
    <CreationTime>2021-03-23T10:58:48Z </CreationTime>
    <SnapshotGroupId>ssg-j6ciyh3k52qp7ovm**** </SnapshotGroupId>
    <Name>testName </Name>
    <Snapshots>
      <InstantAccess>true</InstantAccess>
      <SnapshotId>s-j6cbzmrlbf09w72q**** </SnapshotId>
      <Progress>100% </Progress>
      <SourceDiskType>system</SourceDiskType>
      <InstantAccessRetentionDays>1</InstantAccessRetentionDays>
      <SourceDiskId>d-j6c3ogynmvp16wy7**** </SourceDiskId>
    </Snapshots>
  </SnapshotGroups>
</DescribeSnapshotGroupsResponse>
```

JSON format

```
{
  "NextToken": "caeba0bbb2be03f84eb48b699f0a4883",
  "RequestId": "3F9A4CC4-362F-469A-B9EF-B3204EF8AA3A",
  "SnapshotGroups": {
    "Status": "accomplished",
    "ProgressStatus": "null",
    "Description": "This is description.",
    "InstanceId": "i-qla0lac6ae3gcb1l****",
    "CreationTime": "2021-03-23T10:58:48Z",
    "SnapshotGroupId": "ssg-j6ciyh3k52qp7ovm****",
    "Name": "testName",
    "Snapshots": {
      "InstantAccess": true,
      "SnapshotId": "s-j6cbzmrlbf09w72q****",
      "Progress": "100%",
      "SourceDiskType": "system",
      "InstantAccessRetentionDays": 1,
      "SourceDiskId": "d-j6c3ogynmvpi6wy7****"
    }
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidStatus.ValueNotSupported	%s	The error message returned because the operation is not supported while the resource is in the current state.

5.1.9.16. DeleteSnapshotGroup

Deletes a snapshot-consistent group.

Description

If you have custom images that were created from a disk snapshot contained in a snapshot-consistent group, the disk snapshot is retained when the snapshot-consistent group is deleted. Before you can delete the disk snapshot, you must call the `DeleteImage` operation to delete the custom images. Then, you can call the `DeleteSnapshot` operation to delete the disk snapshot.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteSnapshotGroup	The operation that you want to perform. Set the value to DeleteSnapshotGroup.
RegionId	String	Yes	cn-qingdao-****	The region ID of the snapshot-consistent group. You can call the DescribeRegions operation to query the most recent region list.
SnapshotGroupId	String	Yes	ssg-j6ciyh3k52qp7ovm****	The ID of the snapshot-consistent group. You can call the DescribeSnapshotGroups operation to query the IDs of snapshot-consistent groups.

Response parameters

Parameter	Type	Example	Description
OperationProgressSet	Array of OperationProgress		Details about the delete operation.
OperationProgress			
ErrorCode	String	400	The error code. This parameter is empty when the operation was successful.
ErrorMsg	String	testErrorMsg	The error message. This parameter is empty when the operation was successful.
OperationStatus	String	Success	Indicates whether the operation was successful. If the operation was successful, a value of Success is returned. If the operation failed, an error code and an error message are returned.
RelatedItemSet	Array of RelatedItem		Details about the resources.
RelatedItem			
Name	String	SnapshotId	The name of the resource.

Parameter	Type	Example	Description
Value	String	5- j6c9lpuyxo2uxxn*** *	The ID of the resource.
RequestId	String	6EDE885A-FDC1- 4FAE-BC44- 6EACAEA6****	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.example.com/?Action=DeleteSnapshotGroup
&RegionId=cn-qingdao-****
&SnapshotGroupId=ssg-j6ciyh3k52qp7ovm****
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteSnapshotGroupResponse>
  <RequestId>6EDE885A-FDC1-4FAE-BC44-6EACAEA6****</RequestId>
  <OperationProgressSet>
    <OperationStatus>Success</OperationStatus>
    <ErrorMsg>testErrorMsg</ErrorMsg>
    <ErrorCode>400 </ErrorCode>
    <RelatedItemSet>
      <Value></Value>
      <Name></Name>
    </RelatedItemSet>
  </OperationProgressSet>
</DeleteSnapshotGroupResponse>
```

JSON format

```
{
  "RequestId": "6EDE885A-FDC1-4FAE-BC44-6EACAEA6****",
  "OperationProgressSet": {
    "OperationStatus": "Success",
    "ErrorMsg": "testErrorMsg",
    "ErrorCode": 400,
    "RelatedItemSet": {
      "Value": "",
      "Name": ""
    }
  }
}
```

5.1.9.17. ModifySnapshotGroup

Modifies the name or description of a snapshot-consistent group.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifySnapshotGroup	The operation that you want to perform. Set the value to <code>ModifySnapshotGroup</code> .
RegionId	String	Yes	cn-qingdao-****	The region ID of the snapshot-consistent group. You can call the <code>DescribeRegions</code> operation to query the most recent region list. For more information, see <i>DescribeRegions</i> in <i>ECS Developer Guide</i> .
SnapshotGroupId	String	Yes	ssg-j6ciyh3k52qp7ovm****	The ID of the snapshot-consistent group. You can call the <code>DescribeSnapshotGroups</code> operation to query the IDs of one or more snapshot-consistent groups.
Name	String	No	testName02	The new name of the snapshot-consistent group. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), hyphens (-), and colons (:). It must start with a letter and cannot start with <code>http://</code> or <code>https://</code> .
Description	String	No	This is new description	The new description of the snapshot-consistent group. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> .

Response parameters

Parameter	Type	Example	Description
RequestId	String	A00B5E55-76B7-42C8-8A80-AF10E980****	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.example.com/?Action=ModifySnapshotGroup
&RegionId=cn-qingdao-****
&SnapshotGroupId=ssg-j6ciyh3k52qp7ovm****
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifySnapshotGroupResponse>
  <RequestId>A00B5E55-76B7-42C8-8A80-AF10E980****</RequestId>
</ModifySnapshotGroupResponse>
```

JSON format

```
{
  "RequestId": "A00B5E55-76B7-42C8-8A80-AF10E980****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidParameter.Name	The specified Name is invalid.	The error message returned because the specified Name parameter is invalid.

5.1.10. Images

5.1.10.1. CreateImage

You can call this operation to create a custom image. The created custom image can be used to create ECS instances (RunInstances) and replace system disks (ReplaceSystemDisk).

Description

When you call this operation, take note of the following items:

- The created custom image can be used only when it is in the Available (Available) state.
- If the API response contains `{"OperationLocks": {"LockReason" : "security"}}` when you query information of an instance, the instance is locked for security reasons and all operations are prohibited on it.

You can call the `CreateImage` operation to create a custom image by using one of the following methods. The request parameters have the following priorities: `InstanceId` > `DiskDeviceMapping` > `SnapshotId`. If your request contains two or more parameters, the custom image is created based on the parameter with a higher priority by default.

- **Method 1:** Create a custom image from an instance. You only need to specify the instance ID (`InstanceId`). The instance must be in the `Running` (`Running`) or `Stopped` (`Stopped`) state. After the `CreateImage` operation is called, a new snapshot is created for each disk of the instance.
- **Method 2:** Create a custom image from the system disk snapshot of an ECS instance. You only need to specify the ID of the system disk snapshot (`SnapshotId`). The specified snapshot cannot be created on or before July 15, 2013.
- **Method 3:** Create a custom image from multiple disk snapshots. You must specify the data mapping between the disks corresponding to the snapshots (`DiskDeviceMapping` parameters).

When you use method 3 to create a custom image, take note of the following items:

- You can specify only one system disk snapshot. The device name of the system disk must be `/dev/xvda`.
- You can specify multiple data disk snapshots. The device names of the data disks are automatically allocated by the system. The device names are unique and ascend from `/dev/xvdb` to `/dev/xvdz`.
- `SnapshotId` may not be specified. In this case, an empty data disk with a specific size is created.
- The specified snapshot cannot be created on or before July 15, 2013.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateImage	The operation that you want to perform. Set the value to <code>CreateImage</code> .
RegionId	String	Yes	cn-qingdao-env17-d01	The ID of the region in which to create the custom image. You can call the <code>DescribeRegions</code> operation to query the most recent region list.
DiskDeviceMapping.N.SnapshotId	String	No	s-bp17441ohwkdca0****	The ID of snapshot N that is used to create disk N specified by <code>DiskDeviceMapping.N.Size</code> in the custom image.

Parameter	Type	Required	Example	Description
DiskDeviceMapping.N.Size	Integer	No	2000	The size of disk N in the custom image. Unit: GiB. The valid values and default value of DiskDeviceMapping.N.Size depend on DiskDeviceMapping.N.SnapshotId. - If no corresponding snapshot IDs are specified in the DiskDeviceMapping.N.SnapshotId value, the following valid values and default value are available for DiskDeviceMapping.N.Size: - For basic disks, the valid values are 5 to 2000, and the default value is 5. - For other disk categories, the valid values are 20 to 32768, and the default value is 20. - If a corresponding snapshot ID is specified in the DiskDeviceMapping.N.SnapshotId value, the value of DiskDeviceMapping.N.Size must be greater than or equal to the size of the specified snapshot. The default value of DiskDeviceMapping.N.Size is the size of the specified snapshot.
DiskDeviceMapping.N.Device	String	No	/dev/vdb	The device name of disk N in the custom image. Valid values: - For disk categories other than basic disks, such as standard SSDs, ultra disks, and enhanced SSDs: /dev/vda to /dev/vdz - For basic disks: /dev/xvda to /dev/xvdz
DiskDeviceMapping.N.DiskType	String	No	system	The type of disk N in the custom image. You can set this parameter to create the system disk of the custom image from a data disk snapshot. If you do not set this parameter, the disk type is determined by the corresponding snapshot. Valid values: - system: system disk - data: data disk

Parameter	Type	Required	Example	Description
SnapshotId	String	No	s-bp17441ohwkdca0****	The ID of the snapshot that is used to create the custom image.
InstanceId	String	No	i-bp1g6zv0ce8oghu7****	The ID of the instance.
ImageName	String	No	TestCentOS	The name of the image. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://. This parameter is empty by default.
Description	String	No	ImageTestDescription	The description of the image. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.
Platform	String	No	CentOS	The distribution of the operating system for the system disk in the custom image. If you specify a data disk snapshot to create the system disk of the custom image, you must use the Platform parameter to determine the distribution of the operating system for the system disk. Default value: Others Linux. Valid values: - CentOS - Ubuntu - SUSE - OpenSUSE - RedHat - Debian - CoreOS - Aliyun Linux - Windows Server 2012 - Windows 7 - Customized Linux - Others Linux

Parameter	Type	Required	Example	Description
Architecture	String	No	x86_64	The system architecture of the system disk. If you specify a data disk snapshot to create the system disk of the custom image, you must use the Architecture parameter to determine the system architecture of the system disk. Default value: x86_64. Valid values: - i386 - x86_64
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence in ECS Developer Guide.
Tag.N.value	String	No	null	The value of tag N of the custom image.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure future compatibility.
Tag.N.key	String	No	null	The key of tag N of the custom image.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	No	KeyTest	The key of tag N of the custom image. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.

Parameter	Type	Required	Example	Description
Tag.N.Value	String	No	ValueTest	The value of tag N of the custom image. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length. It cannot start with <code>acs:</code> or contain <code>http://</code> or <code>https://</code> .
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which to assign the custom image.

Response parameters

Parameter	Type	Example	Description
ImageId	String	m-bp146shijn7hujku****	The ID of the image.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=CreateImage
&RegionId=cn-qingdao-env17-d01
&SnapshotId=s-bp17441ohwkdca0****
&ImageName=TestCentOS
&<Common request parameters>
```

Sample success responses

XML **format**

```
<CreateImageResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
  <ImageId>m-bp146shijn7hujku****</ImageId>
</CreateImageResponse>
```

JSON **format**

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9",
  "ImageId": "m-bp146shijn7hujku****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSnapshotId.NotFound	The specified SnapshotId does not exist.	The error message returned because the specified snapshot ID does not exist. Check whether the snapshot ID is correct.
400	InvalidImageName.Malformed	The specified Image name is wrongly formed.	The error message returned because the specified ImageName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
400	InvalidImageName.Duplicated	The specified Image name has already been used.	The error message returned because the specified image name already exists.
400	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidImageVersion.Malformed	The specified ImageVersion is wrongly formed.	The error message returned because the specified image version is invalid or you are not authorized to use the snapshot.
403	InvalidSnapshotId.NotReady	The current status of the DiskDeviceMapping.n.SnapshotId or SnapshotId does not support this operation.	The error message returned because the operation is not supported while the specified snapshot is in the current state.
403	InvalidSnapshot.TooOld	This operation is denied because the specified snapshot by DiskDeviceMapping.n.SnapshotId or SnapshotId is created before 2013-07-15.	The error message returned because the operation is not supported while the snapshot specified by the DiskDeviceMapping.N.SnapshotId or SnapshotId parameter was created before July 15, 2013.
403	OperationDenied	The specified snapshot is not allowed to create image.	The error message returned because the specified snapshot cannot be used to create images.

HTTP status code	Error code	Error message	Description
403	QuotaExceed.Image	The Image Quota exceeds.	The error message returned because the maximum number of custom images has been reached.
403	OperationDenied	The specified snapshot is not from system disk.	The error message returned because the specified snapshot was not created from a system disk.
403	InvalidParamter.Conflict	The specified same token is trying to make requests with different parameters.	The error message returned because the same token is used to make requests with different parameters.
404	InvalidInstanceid.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
400	IncorrectInstanceState	The current status of the instance does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
400	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
400	InvalidDevice.Malformed	The specified parameter DiskDeviceMapping.n.Device is not valid.	The error message returned because the specified DiskDeviceMapping.N.Device parameter is invalid.
400	MissingParameter	The input parameter SnapshotId or InstanceId or DiskDeviceMapping that is mandatory for processing this request is not supplied.	The error message returned because SnapshotId, InstanceId or parameters that contain DiskDeviceMapping are not specified.
400	InvalidSize.ValueNotSupported	The specified parameter DiskDeviceMapping.n.Size beyond the permitted range.	The error message returned because the specified DiskDeviceMapping.N.Size parameter is not within the permitted range.
400	InvalidDevice.InUse	The specified parameter DiskDeviceMapping.n.Device has been occupied.	The error message returned because device names specified in the DiskDeviceMapping.N.Device value already exists.

HTTP status code	Error code	Error message	Description
400	OperationDenied	The specified parameter DiskDeviceMapping.n.SnapshotId does not contain system disk snapshot.	The error message returned because the specified DiskDeviceMapping.N.SnapshotID parameter does not contain a system disk snapshot ID.
400	OperationDenied	The specified parameter DiskDeviceMapping.n.SnapshotId contains two or more system disk snapshots.	The error message returned because the specified DiskDeviceMapping.N.SnapshotID parameter already contains system disk snapshot IDs.
400	InvalidDiskCategory.CreateImage	The specified diskCategory is not allowed to create image.	The error message returned because the operation is not supported by the specified disk category.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.
403	UserNotInTheWhiteList	The user is not in the white list of create image by data disk snapshot.	The error message returned because you are not authorized to create an image from data disk snapshots. Try again when you are authorized to do so.
400	InvalidArchitecture.Malformed	The specified Architecture is wrongly formed.	The error message returned because the specified Architecture parameter is invalid.
400	InvalidPlatform.Malformed	The specified Platform is wrongly formed.	The error message returned because the specified Platform parameter is invalid.
400	OperationDenied	Not support creating system image from an encrypted snapshot/disk.	The error message returned because an encrypted disk or snapshot cannot be used to create custom images.
400	InvalidParameter.AllEmpty	%s	The error message returned because no parameters are specified. Specify required parameters.

HTTP status code	Error code	Error message	Description
403	IncorrectDiskStatus.Invalid	Device status is invalid, please restart instance and try again.	The error message returned because the device status is invalid. Restart the instance and try again.
403	OperationDenied.InvalidSnapshotCategory	%s	The error message returned because the operation is not supported by the snapshot type.
403	QuotaExceed.Snapshot	The snapshot quota exceeds.	The error message returned because the maximum number of snapshots has been reached. To store new snapshots, delete snapshots that are no longer needed.
403	IncorrectDiskStatus.Transferring	The specified device is transferring, you can retry after the process is finished.	The error message returned because the specified disk is being migrated. Wait until the disk is migrated and try again.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Ensure that the disk is available and you have no overdue payment for it.
403	IncorrectDiskStatus.CreatingSnapshot	A previous snapshot creation is in process.	The error message returned because another snapshot is being created. Wait until the snapshot is created and try again.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.
500	InternalError	The process of creating snapshot has failed due to some unknown error.	The error message returned because the snapshot has failed to be created.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	QuotaExceed.Tags	%s	The error message returned because the number of specified tags exceeds the upper limit.

5.1.10.2. DescribeImages

Queries available images.

Description

- You can query your custom images, public images provided by Apsara Stack, and images shared from other Apsara Stack tenant accounts.
- This operation supports paged query. The response contains the total number of available images and the images on the returned page. By default, ten entries are displayed on each page.

When you call an API operation by using Alibaba Cloud CLI, you must specify request parameter values of different data types in the required formats.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeImages	The operation that you want to perform. Set the value to DescribeImages.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the image. You can call the DescribeRegions operation to query the most recent region list.
Status	String	No	Available	The state of the image. Default value: Available. Valid values: - Creating: The image is being created. - Waiting: The image is waiting to be processed. - Available: The image is available. - UnAvailable: The image is unavailable. - CreateFailed: The image failed to be created. You can specify multiple values. Separate multiple values with commas (,).
ImageId	String	No	m-bp1g7004ksh0euc3***	The ID of the image.
ShowExpired	Boolean	No	false	Specifies whether the subscription image has expired.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
SnapshotId	String	No	s-bp17ot2q7x72ggtwr***	The ID of the snapshot used to create the custom image.
ImageName	String	No	Test	The name of the image.

Parameter	Type	Required	Example	Description
ImageOwnerAlias	String	No	self	The source of the image. Valid values: - system: public images provided by Apsara Stack. - self: your custom images. - others: shared images from other Apsara Stack tenant accounts. This parameter is empty by default, which indicates that the results that match system, self, and others are returned.
InstanceType	String	No	ecs.g5.large	The instance type for which the image can be used.
IsSupportIoOptimized	Boolean	No	true	Specifies whether the image can be used on I/O optimized instances.
IsSupportCloudinit	Boolean	No	true	Specifies whether the image supports cloud-init.
OSType	String	No	linux	The operating system type of the image. Valid values: - windows - linux
Architecture	String	No	i386	The image architecture. Valid values: - i386 - x86_64
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	1	The number of entries to return on each page. Maximum value: 100. Default value: 10.

Parameter	Type	Required	Example	Description
Usage	String	No	instance	Specifies whether the image is running on an Elastic Compute Service (ECS) instance. Valid values: - instance: The image is already in use and running on an ECS instance. - none: The image is not in use.
Tag.N.value	String	No	null	The value of tag N of the image.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure compatibility.
Tag.N.key	String	No	null	The key of tag N of the image.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	No	Test	The key of tag N for the image. Valid values of N: 1 to 20.
Tag.N.Value	String	No	Test	The value of tag N of the image. Valid values of N: 1 to 20.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether RAM users are authorized, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, the DryRunOperation error code is returned. • false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned, and the request is made. Default value: false.
ActionType	String	No	CreateEcs	The scenario in which the image is used. Default value: CreateEcs. Valid values: • CreateEcs: instance creation • ChangeOS: replacement of the system disk or operating system
Filter.N.Key	String	No	CreationStartTime	The key of filter N.
Filter.N.Value	String	No	2017-12-05T22:40:00Z	The value of filter N.
ResourceGroupId	String	No	rg-bp67acfmxazb4p-h***	The ID of the resource group to which the custom images belong.

Response parameters

Parameter	Type	Example	Description
Images	Array of Image		Details about the images.
Image			

Parameter	Type	Example	Description
Architecture	String	x86_64	The image architecture. Valid values: - i386 - x86_64
CreationTime	String	2018-01-10T01:01:10Z	The time when the image was created.
Description	String	Archive log for Oracle	The description of the image.
DiskDeviceMappings	Array of DiskDeviceMapping		The mappings between disks and snapshots under the image.
DiskDeviceMapping			
Device	String	/dev/xvdb	The device name of the disk. Example: /dev/xvdb.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.
Format	String	qcow2	The format of the image.
ImportOSSBucket	String	testEcsImport	The Object Storage Service (OSS) bucket where the imported image was stored.
ImportOSSObject	String	imageImport	The OSS object that corresponds to the imported image.
Progress	String	32%	The progress of an image copy task.
RemainTime	Integer	213	The remaining time for an image copy task. Unit: seconds.
Size	String	80	The size of the disk.
SnapshotId	String	s-bp17ot2q7x72ggtw-r***	The ID of the snapshot.

Parameter	Type	Example	Description
Type	String	custom	The type of the image.
ImageFamily	String	as-hangzhou-game-01	 Note This parameter is not supported.
ImageId	String	m-bp1g7004ksh0euc3***	The ID of the image.
ImageName	String	Test	The name of the image.
ImageOwnerAlias	String	self	The source of the image. Valid values: - system: public images - self: your custom images - others: shared images from other Apsara Stack tenant accounts - marketplace: Alibaba Cloud Marketplace images
ImageVersion	String	2	The version of the image.
IsCopied	Boolean	false	Indicates whether the image is a copy of another image.
IsSelfShared	String	true	Indicates whether the image was shared to other Apsara Stack tenant accounts.
IsSubscribed	Boolean	false	Indicates whether you have subscribed to the image that corresponds to the specified product code.
IsSupportCloudinit	Boolean	true	Indicates whether the image supports cloud-init.
IsSupportIoOptimized	Boolean	true	Indicates whether the image can be used on I/O optimized instances.
OSName	String	Aliyun Linux 2.1903	The Chinese name of the operating system.

Parameter	Type	Example	Description
OSNameEn	String	Aliyun Linux 2.1903	The English name of the operating system.
OSType	String	Linux	The type of the operating system. Valid values: • windows • linux
Platform	String	Aliyun Linux	The platform of the operating system.
ProductCode	String	jxsc000204	 Note This parameter is not supported.
Progress	String	100	The image creation progress. Unit: percent (%).
ResourceGroupId	String	rg-bp67acfmazb4ph** *	The ID of the resource group to which the image belongs.
Size	Integer	80	The size of the image. Unit: GiB.
Status	String	Available	The state of the image. Valid values: • UnAvailable: The image is unavailable. • Available: The image is available. • Creating: The image is being created. • CreateFailed: The image failed to be created.
Tags	Array of Tag		The tags of the image.
Tag			
TagKey	String	Test	The tag key of the image.
TagValue	String	Test	The tag value of the image.

Parameter	Type	Example	Description
Usage	String	none	Indicates whether the image has been used to create ECS instances. Valid values: - instance: The image has been used to create one or more ECS instances. - none: The image has not been used to create ECS instances.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RegionId	String	cn-qingdao-env17-d01	The region ID of the image.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	24	The total number of images.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeImages
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

`XML` format

```

<DescribeImagesResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>61</TotalCount>
  <PageSize>1</PageSize>
  <RegionId>cn-qingdao-env17-d01</RegionId>
  <RequestId>66189103-EDB2-43E2-BB60-BFF2B62F4EB8</RequestId>
  <Images>
    <Image>
      <ImageId>m-bp1g7004ksh0oeuc3***</ImageId>
      <Description>Archive log for Oracle</Description>
      <OSNameEn>Windows Server 2016 Data Center Edition 64bit Chinese Edition<
/OSNameEn>
      <ResourceGroupId></ResourceGroupId>
      <OSType>windows</OSType>
      <Architecture>x86_64</Architecture>
      <OSName>Windows Server 2016 Datacenter 64-bit (Simplified Chinese)</OSNa
me>
      <DiskDeviceMappings>
        <DiskDeviceMapping>
          <ImportOSSObject></ImportOSSObject>
          <Format></Format>
          <Device>/dev/xvda</Device>
          <Type>system</Type>
          <SnapshotId>s-bp17ot2q7x72ggtwr***</SnapshotId>
          <ImportOSSBucket></ImportOSSBucket>
          <Progress></Progress>
          <Size>60</Size>
        </DiskDeviceMapping>
      </DiskDeviceMappings>
      <ImageOwnerAlias>self</ImageOwnerAlias>
      <Progress>100%</Progress>
      <IsSupportCloudinit>true</IsSupportCloudinit>
      <Usage>none</Usage>
      <CreationTime>2019-11-15T06:07:05Z</CreationTime>
      <ImageVersion></ImageVersion>
      <Tags>
        <Tag>
          <TagValue>Oracle</TagValue>
          <TagKey>DTS</TagKey>
        </Tag>
      </Tags>
      <Status>Available</Status>
      <ImageName>Oracle_DTS</ImageName>
      <IsSupportIoOptimized>true</IsSupportIoOptimized>
      <IsSelfShared>False</IsSelfShared>
      <IsCopied>false</IsCopied>
      <IsSubscribed>false</IsSubscribed>
      <Platform>Windows Server 2016</Platform>
      <Size>60</Size>
    </Image>
  </Images>
</DescribeImagesResponse>

```

JSON format

```

{
  "PageNumber": 1,
  "TotalCount": 61,
  "PageSize": 1,
  "RegionId": "cn-qingdao-env17-d01",
  "RequestId": "66189103-EDB2-43E2-BB60-BFF2B62F4EB8",
  "Images": {
    "Image": [
      {
        "ImageId": "m-bplg7004ksh0oeuc3***",
        "Description": "Archive log for Oracle",
        "OSNameEn": "Windows Server 2016 Data Center Edition 64bit Chinese Edition",
        "ResourceGroupId": "",
        "OSType": "windows",
        "Architecture": "x86_64",
        "OSName": "Windows Server 2016 Datacenter 64-bit (Simplified Chinese)",
        "DiskDeviceMappings": {
          "DiskDeviceMapping": [
            {
              "ImportOSSObject": "",
              "Format": "",
              "Device": "/dev/xvda",
              "Type": "system",
              "SnapshotId": "s-bp17ot2q7x72ggtwr***",
              "ImportOSSBucket": "",
              "Progress": "",
              "Size": "60"
            }
          ]
        },
        "ImageOwnerAlias": "self",
        "Progress": "100%",
        "IsSupportCloudinit": true,
        "Usage": "none",
        "CreationTime": "2019-11-15T06:07:05Z",
        "ImageVersion": "",
        "Tags": {
          "Tag": [
            {
              "TagValue": "Oracle",
              "TagKey": "DTS"
            }
          ]
        },
        "Status": "Available",
        "ImageName": "Oracle_DTS",
        "IsSupportIoOptimized": true,
        "IsSelfShared": "False",
        "IsCopied": false,
        "IsSubscribed": false,
        "Platform": "Windows Server 2016",

```

```

        "Size": 60
      }
    ]
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidImageOwnerAlias.ValueNotSupported	The specified ImageOwnerAlias value is not supported.	The error message returned because the specified ImageOwnerAlias parameter is invalid.
400	InvalidParamter	Invalid Parameter	The error message returned because a specified parameter is invalid.
404	InvalidUsage	The specified Usage is not valid	The error message returned because the specified Usage parameter is invalid.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not correspond to each other.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags has reached the upper limit.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified InstanceType parameter does not exist or because you are not authorized to manage instances of the specified instance type.
404	InvalidOSType	The specified OSType is not valid	The error message returned because the specified OSType parameter is invalid.
404	InvalidArchitecture	The specified Architecture is not valid	The error message returned because the specified Architecture parameter does not exist.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

5.1.10.3. ModifyImageAttribute

Modifies the name or description of a custom image.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyImageAttribute	The operation that you want to perform. Set the value to ModifyImageAttribute.
ImageId	String	Yes	m-imageid1	The ID of the custom image.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the custom image. You can call the DescribeRegions operation to query the most recent region list.
ImageName	String	No	Test	The new name of the custom image. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://. This parameter is empty by default, which indicates that the original name is retained.

Parameter	Type	Required	Example	Description
Description	String	No	FinanceDept	The new description of the custom image. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default, which indicates that the original description is retained.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ModifyImageAttribute
&ImageId=m-imageid1
&RegionId=cn-qingdao-env17-d01
&ImageName=Test
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyImageAttributeResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
</ModifyImageAttributeResponse>
```

JSON format

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9"
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
400	InvalidImageName.Malformed	The specified Image name is wrongly formed.	The error message returned because the specified ImageName parameter is invalid. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with acs: or aliyun. It cannot contain http:// or https://. It can contain letters, digits, periods (.), colons (:), underscores (_), and hyphens (-).
400	MissingParameter	The input parameter "RegionId" that is mandatory for processing this request is not supplied.	The error message returned because the required RegionId parameter is not specified.
400	InvalidImageName.Duplicated	The specified Image name has already been used.	The error message returned because the specified image name already exists.
400	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist within this account. Check whether the image ID is correct.

5.1.10.4. DeleteImage

You can call this operation to delete a custom image.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteImage	The operation that you want to perform. Set the value to DeleteImage.

Parameter	Type	Required	Example	Description
ImageId	String	Yes	m-bp67acfmxazb4ph***	The ID of the image. If the specified custom image does not exist, the request will be ignored.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the custom image. You can call the DescribeRegions operation to query the most recent region list.
Force	Boolean	No	false	Specifies whether to forcibly delete the custom image. Valid values: • true: forcibly deletes the custom image, regardless of whether the image is in use by other instances. • false: verifies that the image is not in use by other instances before the image is deleted. Default value: false.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=DeleteImage
&ImageId=m-bp67acfmxazb4ph***
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

`XML` `format`

```
<DeleteImageResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</DeleteImageResponse>
```

`JSON` `format`

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	ImageUsingByInstance	The specified image has been used to create instances.	The error message returned because the specified image has been used to create instances and cannot be deleted.
403	ImageUseShared	The specified image has been shared to others.	The error message returned because the specified image is shared to other accounts.
403	OperationDenied.ImageCopying	The Image is coping.	The error message returned because the specified image is being copied. Try again later.
403	ImagesCreating	The specified image is being created.	The error message returned because the specified image is being created.
403	ImagesImporting	The specified Image is importing.	The error message returned because the specified image is being imported and cannot be deleted.
403	ImagesExporting	The specified Image is exporting. Please cancel task first.	The error message returned because the specified image is being exported. Cancel the export task first.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account. Check whether the image ID is correct.

5.1.10.5. CopyImage

You can call this operation to copy a custom image from one region to another. You can deploy or copy instances across regions by copying images.

Description

You can use the image copy to create ECS instances (RunInstances) or replace system disks of instances (ReplaceSystemDisk) in the destination region.

When you call this operation, take note of the following items:

- Only custom images that are in the Available (`Available`) state can be copied.
- You can copy only the images in your Apsara Stack tenant account. Images cannot be copied across accounts.
- When an image is being copied, you cannot delete the image copy by calling the `DeleteImage` operation, but you can cancel the copy task by calling the `CancelCopyImage` operation.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CopyImage	The operation that you want to perform. Set the value to CopyImage.
ImageId	String	Yes	m-bp1h46wfpjsjastc****	The ID of the source custom image (custom image to be copied).
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the source custom image. You can call the DescribeRegions operation to query the most recent region list.
DestinationRegionId	String	No	cn-shanghai-env17-d02	The ID of the destination region to which to copy the source custom image.
DestinationImageName	String	No	YourImageName	The name of the image copy. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. The name can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.
DestinationDescription	String	No	This is a description example.	The description of the image copy. It must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.
Encrypted	Boolean	No	false	Specifies whether to encrypt the image copy. Default value: false.

Parameter	Type	Required	Example	Description
KMSKeyId	String	No	e522b26d-abf6-4e0d-b5da-04b7*****3c	The ID of the key used to encrypt the image copy.

Response parameters

Parameter	Type	Example	Description
ImageId	String	m-bp1h46wfpjsjastd**	The ID of the image copy.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=CopyImage
&ImageId=m-bp1h46wfpjsjastc****
&RegionId=cn-qingdao-env17-d01
&DestinationRegionId=cn-shanghai-env17-d01
&<Common request parameters>
```

Sample success responses

XML **format**

```
<CopyImageResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
  <ImageId>m-bp1h46wfpjsjastd****</ImageId>
</CopyImageResponse>
```

JSON **format**

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9",
  "ImageId": "m-bp1h46wfpjsjastd****"
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
401	InvalidAliUid.IsNull	The aliUid must not be null	The error message returned because the required aliUid parameter is not specified.
400	InvalidImageName.Malformed	The specified Image name is wrongly formed.	The error message returned because the specified DestinationImageName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). The name must start with a letter and cannot start with http:// or https://.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are not authorized to access the specified resource.
400	InvalidImageName.Malformed	The specified destination Image name is wrongly formed.	The error message returned because the specified DestinationImageName parameter is invalid. For more information, see the description of the DestinationImageName parameter.
400	InvalidDescription.Malformed	The specified destination description is wrongly formed.	The error message returned because the specified DestinationDescription parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified DestinationDescription parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	SourceRegion.NotFound	The source region not found	The error message returned because the specified RegionId parameter does not exist.

HTTP status code	Error code	Error message	Description
400	DestinationRegion.NotFound	The destination region not found	The error message returned because the specified DestinationRegionId parameter does not exist.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account. Check whether the image ID is correct.
400	IncorrectImageStatus	The image not available.	The error message returned because the specified image is unavailable.
400	InvalidSnapshotId.NotFound	The specified SnapshotId does not exist.	The error message returned because the specified snapshot does not exist. Check whether the snapshot ID is correct.
400	InvalidImageName.Duplicated	The destination image is exist.	The error message returned because the specified image name already exists.
403	QuotaExceed.Image	The Image Quota exceeds.	The error message returned because the custom image quota has been used up.
403	QuotaExceed.Snapshot	The snapshot quota exceeds.	The error message returned because the maximum number of snapshots has been reached. To store new snapshots, delete snapshots that are no longer needed.
403	OperationDenied.ImageCopying	The Image are coping.	The error message returned because the source image is being copied. Try again later.
403	RegionNotSupportCopy	The region not support copy.	The error message returned because the specified source or destination region does not support image copying.
403	InvalidSnapshot.TooOld	This operation is denied because the specified snapshot is created before 2013-07-15.	The error message returned because the operation is rejected while the specified snapshot was created before July 15, 2013.

HTTP status code	Error code	Error message	Description
403	OperationDenied	The specified snapshot is not allowed to create image.	The error message returned because the specified snapshot cannot be used to create images.
403	IncorrectDestinationRegion	The destination region is not equal the target region.	The error message returned because the source region is the same as the destination region.
403	SizeExceed.Image	The image exceeds the maximum size. Please open a ticket to add the account to the white list.	The error message returned because the size of the image exceeds the upper limit. Contact customer service to request a quota increase.
403	OperationDeined.EncryptedSnapshot	The image contains encrypted snapshots, which do not support copying.	The error message returned because the specified image contains encrypted snapshots and cannot be copied.
403	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	OperationDenied.SameRegionOnly	The image shared from others can not be copied to another region directly.	The error message returned because you cannot copy images shared by other Apsara Stack tenant accounts to another region.
403	OperationDenied.NotPublished	The operation is denied because corresponding marketplace image is not published in destination region.	The error message returned because the image type is not supported in the destination region and the operation is rejected.
404	InvalidParameter.KMSKeyId.NotFound	The specified KMSKeyId does not exist.	The error message returned because the specified KMS key ID does not exist.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

HTTP status code	Error code	Error message	Description
403	InvalidRegion.NotSupport	The specified region does not support byok.	The error message returned because the bring your own key (BYOK) feature is not supported in this region.
403	UserNotInTheWhiteList	The user is not in byok white list.	The error message returned because you are not in the BYOK whitelist. Try again when you are in the whitelist.
400	InvalidParameter.EncryptedIllegal	The specified parameter Encrypted must be true when kmsKeyId is not empty.	The error message returned because the encryption feature is not enabled after a KMS key ID is specified.

5.1.10.6. CancelCopyImage

You can call this operation to cancel an ongoing image copy (CopyImage) task.

Description

When you call this operation, take note of the following items:

- After you cancel the image copy task, the image copy created in the destination region is deleted, and the source image remains unchanged.
- If the image copy task is complete, the CancelCopyImage operation fails and an error is returned.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CancelCopyImage	The operation that you want to perform. Set the value to CancelCopyImage.
ImageId	String	Yes	m-imageid1	The ID of the image being copied.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the image copy. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=CancelCopyImage
&ImageId=m-imageid1
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

XML format

```
<CancelCopyImageResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
</CancelCopyImageResponse>
```

JSON format

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account.
400	ImageCreatedNotFromCopy	The specified image is not the target image of a copy action.	The error message returned because the specified image ID is not the ID of an image that is being copied.
400	IncorrectImageStatus	The image is copied finished.	The error message returned because the image copy task is complete.

HTTP status code	Error code	Error message	Description
400	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified description is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	IncorrectImageStatus	The specified snapshot is not coping.	The error message returned because the specified snapshot is not being copied.
400	IncorrectImageStatus	The specified image is not coping.	The error message returned because the specified image is not being copied.
400	IncorrectImageStatus	The image has completed copy.	The error message returned because the image copy task is complete.
400	IncorrectImageStatus	The Image copy has been failed.	The error message returned because the specified image failed to be copied.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	CancelNotSupported	The specified image coping can not be cancelled.	The error message returned because the specified image copy task cannot be canceled.

5.1.10.7. ModifyImageSharePermission

Manages the share permission on a custom image. After you share a custom image to another Apsara Stack tenant account, the account can use the shared image to create Elastic Compute Service (ECS) instances (RunInstances) or replace the system disks of ECS instances (ReplaceSystemDisk).

Description

When you call this operation, take note of the following items:

- You can share only your own custom images to other Apsara Stack tenant accounts.
- A custom image can be shared to up to 10 Apsara Stack tenant accounts at a time. You can specify up to 10 Apsara Stack tenant account IDs in the AddAccount.N or RemoveAccount.N parameter. If you specify more than 10 account IDs, the parameter is ignored.
- A single custom image can be shared to up to 50 Apsara Stack tenant accounts.
- If an instance was created (RunInstances) from a shared image, the system disk of this instance

cannot be re-initialized (ReInitDisk) after the image owner unshares or deletes the image (DeleteImage).

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyImageSharePermission	The operation that you want to perform. Set the value to ModifyImageSharePermission.
ImageId	String	Yes	m-imageid1	The ID of the custom image.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the custom image. You can call the DescribeRegions operation to query the most recent region list.
AddAccount.N	RepeatList	No	155780923***	The ID of Apsara Stack tenant account N to which to share the custom image. Valid values of N: 1 to 10. If the value of N is greater than 10, this parameter is ignored.
RemoveAccount.N	RepeatList	No	155780923***	The ID of Apsara Stack tenant account N to which to unshare the custom image. Valid values of N: 1 to 10. If the value of N is greater than 10, this parameter is ignored.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ModifyImageSharePermission
&ImageId=m-imageid1
&RegionId=cn-qingdao-env17-d01
&AddAccount.1=155780923***
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyImageSharePermissionResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
</ModifyImageSharePermissionResponse>
```

JSON format

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter "RegionId" that is mandatory for processing this request is not supplied.	The error message returned because the required RegionId parameter is not specified.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist within this account. Check whether the image ID is correct.
404	InvalidAccount.NotFound	The specified parameter "AddAccount.n" or "RemoveAccount.n" does not exist.	The error message returned because the specified AddAccount.N or RemoveAccount.N parameter does not exist.
404	InvalidAccount.Forbidden	The specified Account does not yourself.	The error message returned because you are attempting to share the image to your own account.
403	QuotaExceed.ShareImage	The shared Image Quota exceeds.	The error message returned because the maximum number of custom images that can be shared has been reached.
403	QuotaExceed.ShareImageUser	The shared Image user Quota exceeds.	The error message returned because the maximum number of Apsara Stack tenant accounts to which a single image can be shared has been reached.
400	InvalidGroup.Malformed	The specified Group is wrongly formed.	The error message returned because the specified group does not exist.

HTTP status code	Error code	Error message	Description
403	InvalidImageId.BidMismatch	Cannot share image with other bid user.	The error message returned because images cannot be shared among users of different carriers.
403	OperationDenied.EncryptedSnapshot	The image contains encrypted snapshots, which do not support share.	The error message returned because the specified image contains encrypted snapshots and cannot be shared.

5.1.10.8. DescribeImageSharePermission

You can call this operation to query the accounts to which a custom image is shared. The response can be displayed by page. By default, ten entries are displayed on each page.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeImageSharePermission	The operation that you want to perform. Set the value to DescribeImageSharePermission.
ImageId	String	Yes	m-282dz****	The ID of the custom image.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the custom image. You can call the DescribeRegions operation to query the most recent region list.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10

Response parameters

Parameter	Type	Example	Description
Accounts	Array		The Apsara Stack tenant accounts.
Account			
AliyunId	String	123456****	The ID of the Apsara Stack tenant account.
ImageId	String	m-282dz****	The ID of the custom image.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RegionId	String	cn-qingdao-env17-d01	The region ID of the image.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
ShareGroups	Array		The shared groups.
ShareGroup			
Group	String	all	The name of the shared group.
TotalCount	Integer	1	The total number of entries returned.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeImageSharePermission
&ImageId=m-282dz****
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeImageSharePermissionResponse>
  <ImageId>m-282dz****</ImageId>
  <PageNumber>1</PageNumber>
  <PageSize>10</PageSize>
  <RegionId>cn-qingdao-env17-d01</RegionId>
  <TotalCount>1</TotalCount>
  <RequestId>441CF898-42FF-47CF-9348-3C3BFF557278</RequestId>
  <ShareGroups>
    <ShareGroup>
      <Group>all</Group>
    </ShareGroup>
  </ShareGroups>
  <Accounts>
    <Account>
      <AliyunId>123456****</AliyunId>
    </Account>
  </Accounts>
</DescribeImageSharePermissionResponse>
```

JSON format

```
{
  "ShareGroups": {
    "ShareGroup": [
      {
        "Group": "all"
      }
    ]
  },
  "Accounts": {
    "Account": [
      {
        "AliyunId": "123456****"
      }
    ]
  },
  "ImageId": "m-282dz****",
  "PageNumber": 1,
  "PageSize": 10,
  "RegionId": "cn-qingdao-env17-d01",
  "TotalCount": 1,
  "RequestId": "9AD96F49-0BE5-4868-A66A-224352549CEC"
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter "RegionId" that is mandatory for processing this request is not supplied.	The error message returned because the RegionId parameter is not specified.
400	MissingParameter	The input parameter "ImageId" that is mandatory for processing this request is not supplied.	The error message returned because the ImageId parameter is not specified.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account.

5.1.10.9. ImportImage

You can call this operation to import a local image to ECS. The imported local image appears as a custom image in the corresponding region. You can use the imported image to create ECS instances (RunInstances) or replace system disks of instances (ReplaceSystemDisk).

Description

When you call this operation, take note of the following items:

- You must upload an image to an Object Storage Service (OSS) bucket before you can import the image.
- You must use Resource Access Management (RAM) to authorize ECS to access your OSS buckets before you upload an image for the first time. If ECS is not authorized to access your OSS buckets, the `NoSetRoletoECSServiceAccount` error code is returned when you call the ImportImage operation. The following example shows some steps in the authorization procedure:

1. Create a role named `AliyunECSImageImportDefaultRole`. You must use this exact name. Otherwise, the image will fail to be imported. Configure the following trust policy for the role:

```
{
  "Statement": [
    {
      "Action": "sts:AssumeRole",
      "Effect": "Allow",
      "Principal": {
        "Service": [
          "ecs.example.com"
        ]
      }
    }
  ],
  "Version": "1"
}
```

2. Attach the `AliyunECSImageImportRolePolicy` system policy to the role. Alternatively, you can create a custom policy that contains the following content and attach the policy to the role:

```
{
  "Version": "1",
  "Statement": [
    {
      "Action": [
        "oss:GetObject",
        "oss:GetBucketLocation",
        "oss:GetBucketInfo"
      ],
      "Resource": "*",
      "Effect": "Allow"
    }
  ]
}
```

- You cannot delete an image that is being imported. However, you can call the `CancelTask` operation to cancel the image import task.
- You can import an image only to the same region as the OSS bucket to which the image is uploaded.
- Valid values of N in the `DiskDeviceMapping.N` parameter: 1 to 17. When N is 1, the disk is a system disk. When N ranges from 2 to 17, the disk is a data disk.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ImportImage	The operation that you want to perform. Set the value to ImportImage.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the image to be imported. You can call the DescribeRegions operation to query the most recent region list.
DiskDeviceMapping.N.Format	String	No	qcow2	The format of the image. Valid values: • RAW • VHD • qcow2 This parameter is empty by default, which indicates that the system automatically checks the format of the image and uses the check result as the value of this parameter.

Parameter	Type	Required	Example	Description
DiskDeviceMapping.N.OSSBucket	String	No	ecsimageos	The OSS bucket where the image is stored. Note Before you upload an image to an OSS bucket for the first time, see the "Description" section in this topic to authorize ECS to access your OSS buckets. If ECS is not authorized to access your OSS buckets, the <code>NoSetRoletoECSServiceAccount</code> error code is returned when you call the <code>ImportImage</code> operation.
DiskDeviceMapping.N.OSSObject	String	No	CentOS_5.4_32.raw	The OSS object that corresponds to the image.
DiskDeviceMapping.N.DiskImageSize	Integer	No	80	The size of the image. Note This parameter will be removed in the future. We recommend that you use the <code>DiskDeviceMapping.N.DiskImageSize</code> parameter to ensure future compatibility.

Parameter	Type	Required	Example	Description
DiskDeviceMapping.N.DiskImageSize	Integer	No	80	The size of disk N in the image. The capacity of the system disk must be greater than or equal to the actual space used by file systems. Valid values: - When N is set to 1, the disk is a system disk and its size ranges from 5 GiB to 500 GiB. - When N is set to a value from 2 to 17, the disk is a data disk and its size ranges from 5 GiB to 1,000 GiB. When you import an image, the system automatically checks the sizes of disks contained in the image and uses the check results as the values of this parameter.
DiskDeviceMapping.N.Device	String	No	null	The device name of disk N in the custom image.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
ImageName	String	No	ImageTestName	The name of the image. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://. This parameter is empty by default.
Description	String	No	TestDescription	The description of the image. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.

Parameter	Type	Required	Example	Description
Architecture	String	No	x86_64	The system architecture. Default value: x86_64. Valid values: - i386 - x86_64
OSType	String	No	linux	The type of the operating system. Default value: linux. Valid values: - windows - linux
Platform	String	No	Aliyun	The distribution of the operating system. Default value: Others Linux. Valid values: - CentOS - Ubuntu - SUSE - OpenSUSE - Debian - CoreOS - Aliyun - Windows Server 2003 - Windows Server 2008 - Windows Server 2012 - Others Linux - Customized Linux
RoleName	String	No	AliyunECSImageImportDefaultRole	The name of the RAM role used to import the image.

Parameter	Type	Required	Example	Description
LicenseType	String	No	Auto	The type of the license used to activate the operating system after the image is imported. Default value: Auto. Valid values: - Auto: ECS checks the operating system of the imported image and allocates a license to the operating system. Specifically, ECS first checks whether the operating system distribution specified by <code>Platform</code> has a license allocated through an official Alibaba Cloud channel. If yes, ECS allocates that license to the imported image. If no, the license that comes with the source operating system is used. - Aliyun: The license allocated through an official Alibaba Cloud channel is used for the operating system distribution specified by <code>Platform</code>. - BYOL: The license that comes with the source operating system is used. In this case, ensure that your license key can be used in Apsara Stack.

Response parameters

Parameter	Type	Example	Description
ImageId	String	m-bp67acfmazb4p***	The ID of the image.
RegionId	String	cn-qingdao-env17-d01	The ID of the region.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TaskId	String	t-bp67acfmazb4p***	The ID of the image import task.

Examples

Sample requests

```
https://ecs.example.com/?Action=ImportImage
&RegionId=cn-qingdao-env17-d01
&DiskDeviceMapping.1.Format=qcow2
&DiskDeviceMapping.1.OSSBucket=ecsimageos
&DiskDeviceMapping.1.OSSObject=CentOS_5.4_32.raw
&DiskDeviceMapping.1.DiskImageSize=80
&ImageName=Test
&Description=Test
&Architecture=x86_64
&OSType=linux
&Platform=Aliyun
&LicenseType=Aliyun
&<Common request parameters>
```

Sample success responses

XML **format**

```
<ImportImageResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
  <ImageId>m-bp67acfmazb4p****</ImageId>
  <RegionId>cn-qingdao-env17-d01</RegionId>
  <TaskId>t-bp67acfmazb4p****</TaskId>
</ImportImageResponse>
```

JSON **format**

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9",
  "ImageId": "m-bp67acfmazb4p****",
  "RegionId": "cn-qingdao-env17-d01",
  "TaskId": "t-bp67acfmazb4p****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	An input parameter "RegionId" that is mandatory for processing the request is not supplied.	The error message returned because the required RegionId parameter is not specified.
400	MissingParameter	An input parameter "DiskDeviceMapping.1.OSSBucket" that is mandatory for processing the request is not supplied.	The error message returned because the DiskDeviceMapping.N.OSSBucket parameter is not specified.

HTTP status code	Error code	Error message	Description
400	MissingParameter	An input parameter "DiskDeviceMapping.1.OSSObject" that is mandatory for processing the request is not supplied.	The error message returned because the DiskDeviceMapping.N.OSSObject parameter is not specified.
400	InvalidImageName.Malformed	The specified Image name is wrongly formed.	The error message returned because the specified ImageName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
400	InvalidOSSObject.Malformed	The specified OSS object is wrongly formed.	The error message returned because the specified DiskDeviceMapping.N.OSSObject parameter is invalid.
400	InvalidDescription.Malformed	The specified Image description is wrongly formed.	The error message returned because the specified Description parameter is invalid.
400	InvalidArchitecture.Malformed	The specified Architecture is wrongly formed.	The error message returned because the specified Architecture parameter is invalid.
400	InvalidPlatform.Malformed	The specified Platform is wrongly formed.	The error message returned because the specified Platform parameter is invalid.
400	InvalidOSType.Malformed	The specified OSType is wrongly formed.	The error message returned because the specified OSType parameter is invalid.
400	InvalidImageName.Duplicated	The destination image is exist.	The error message returned because the specified image name already exists.
400	InvalidImageSize	%s	The error message returned because the specified image size is invalid.
400	InvalidDataDiskSize	The specified DiskDeviceMapping.N.DiskImSize should be in the specified range.	The error message returned because the specified DiskDeviceMapping.N.DiskImSize parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidImageFormat.Malformed	The specified Image Format is wrongly formed.	The error message returned because the specified image format is invalid.
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	InvalidRegion.NotSupported	The specified region does not support image import or export.	The error message returned because the specified region does not support this operation.
403	ImagesImporting	The specified Image is importing.	The error message returned because the specified image is being imported and cannot be operated.
403	QuotaExceed.Image	The Image Quota exceeds.	The error message returned because the maximum number of custom images has been reached.
403	ImportImageFailed	Importing image is failed, Please contact the administrator.	The error message returned because the image failed to be imported. Contact a system administrator.
403	UserNotInTheWhiteList	The user is not in the white list of importing image.	The error message returned because you are not authorized to import images.
403	NoSetRoletoECSServiceAccount	ECS service account Have no right to access your OSS, please attach a role of access your oss to ECS service account.	The error message returned because ECS is not authorized to access the specified OSS bucket and object.
400	InvalidOSSBucket.NotFound	The specified OSS bucket does not exist in this region.	The error message returned because the specified OSS bucket does not exist.
403	InvalidParameter.Malformed	The specified parameter "DiskDeviceMapping.n.Device " is not valid.	The error message returned because the specified DiskDeviceMapping.N.Device parameter is invalid.
403	MissingParameter.DiskDeviceMapping	The specified parameter DiskDeviceMapping is not supplied.	The error message returned because a parameter that starts with DiskDeviceMapping is not specified.

HTTP status code	Error code	Error message	Description
400	InvalidOSSObject.NotFound	The specified OSS object does not exist in this region.	The error message returned because the specified OSS object does not exist.
400	InvalidOSSObject.NotFound	The specified OSS object cannot be retrieved.	The error message returned because the specified OSS object does not exist.
400	InvalidLicenseType.NotSupported	The specified LicenseType is not supported	The error message returned because the specified LicenseType parameter is invalid.
400	InvalidLicenseType.BYOLOnly	Only BYOL LicenseType is supported for the current platform provided	The error message returned because the current platform supports only BYOL licenses.

5.1.10.10. ExportImage

You can call this operation to export a custom image to an OSS bucket in the same region.

Description

- A custom image cannot be exported if it contains more than four data disk snapshots or if one of the data disk snapshots exceeds 500 GiB in size.
- Before you export a custom image, you must use Resource Access Management (RAM) to create a RAM role for ECS and authorize ECS to write data to OSS.

1. Create a role named `AliyunECSImageExportDefaultRole`. Any other role names are invalid.

Configure the following trust policy for the role:

```
{
  "Statement": [
    {
      "Action": "sts:AssumeRole",
      "Effect": "Allow",
      "Principal": {
        "Service": [
          "ecs.aliyuncs.com"
        ]
      }
    }
  ],
  "Version": "1"
}
```

2. Attach the `AliyunECSImageExportRolePolicy` system policy to the `AliyunECSImageExportDefaultRole` role. This policy is the default policy used for ECS to export images. Alternatively, you can create a custom policy that contains the following content and attach the policy to the role:

```

{
  "Version": "1",
  "Statement": [
    {
      "Action": [
        "oss:GetObject",
        "oss:PutObject",
        "oss:DeleteObject",
        "oss:GetBucketLocation",
        "oss:GetBucketInfo",
        "oss:AbortMultipartUpload",
        "oss:ListMultipartUploads",
        "oss:ListParts"
      ],
      "Resource": "*",
      "Effect": "Allow"
    }
  ]
}

```

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ExportImage	The operation that you want to perform. Set the value to ExportImage.
ImageId	String	Yes	m-bp67acfmxazb4p****	The ID of the custom image.
OSSBucket	String	Yes	testexportImage	The OSS bucket to which to export the custom image.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the custom image. You can call the DescribeRegions operation to query the most recent region list.
OSSPrefix	String	No	EcsExport	The prefix of the object as which to store the custom image in the OSS bucket. It must be 1 to 30 characters in length and can contain digits and letters.

Parameter	Type	Required	Example	Description
ImageFormat	String	No	raw	The format in which to export the custom image. Valid values: • raw • vhd • qcow2 • vmdk • vdi Default value: raw.
RoleName	String	No	EcsServiceRole-EcsDocGuideTest	The name of the RAM role used to export the custom image.

Response parameters

Parameter	Type	Example	Description
RegionId	String	cn-qingdao-env17-d01	The ID of the region.
RequestId	String	C8B26B44-0189-443E-9816-D951F59623A9	The ID of the request.
TaskId	String	tsk-bp67acfmxazb4p*** *	The ID of the image export task.

Examples

Sample requests

```
https://ecs.example.com/?Action=ExportImage
&ImageId=m-bp67acfmxazb4p***
&OSSBucket=testexportImage
&RegionId=cn-qingdao-env17-d01
&OSSPrefix=EcsExport
&ImageFormat=raw
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ExportImageResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
  <TaskId>tsk-bp67acfmxazb4p****</TaskId>
  <RegionId>cn-qingdao-env17-d01</RegionId>
</ExportImageResponse>
```

JSON **format**

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9",
  "TaskId": "tsk-bp67acfmxazb4p****",
  "RegionId": "cn-qingdao-env17-d01"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	An input parameter "RegionId" that is mandatory for processing the request is not supplied.	The error message returned because the RegionId parameter is not specified.
400	MissingParameter	An input parameter "ImageId" that is mandatory for processing the request is not supplied.	The error message returned because the ImageId parameter is not specified.
400	MissingParameter	An input parameter "OSSBucket" that is mandatory for processing the request is not supplied.	The error message returned because the OSSBucket parameter is not specified.
400	InvalidImageName.Malformed	The specified Image name is wrongly formed.	The error message returned because the specified image name is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
400	InvalidOSSPrefix.Malformed	The specified OSSPrefix format is wrongly formed.	The error message returned because the specified OSSPrefix parameter is invalid.
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	InvalidRegion.NotSupported	The specified region does not support image import or export.	The error message returned because the specified region does not support the operation.

HTTP status code	Error code	Error message	Description
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account. Check whether the image ID is correct.
400	IncorrectImageStatus	The specified Image is not available.	The error message returned because the status of the specified image is invalid.
403	ImageNotSupported	The specified image from the image market, do not support export image.	The error message returned because the specified image is an Alibaba Cloud Marketplace image and cannot be exported.
400	InvalidImageFormat.Malformed	The specified Image Format is wrongly formed.	The error message returned because the specified ImageFormat parameter is invalid.
403	ImagesExporting	The specified Image is exporting.	The error message returned because the specified image is being exported.
403	ExportImageFailed	Exporting image is failed, Please contact the administrator.	The error message returned because the image failed to be exported. Contact a system administrator.
403	UserNotInTheWhiteList	The user is not in the white list of exporting image.	The error message returned because you are not authorized to export images.
403	NoSetRoletoECSServiceAccount	ECS service account Have no right to access your OSS, please attach a role of access your oss to ECS service account.	The error message returned because ECS is not authorized to access the specified OSS bucket and object.
400	InvalidOSSBucket.NotFound	The specified OSS bucket does not exist in this region.	The error message returned because the specified OSSBucket parameter does not exist.
400	OperationDenied	The specified image contains the snapshot of the data disk, does not support this operation.	The error message returned because the operation is not supported while the image contains data disk snapshots.

HTTP status code	Error code	Error message	Description
400	InvalidImage.DiskAmountOrSize	%s	The error message returned because the image contains more than four data disk snapshots or one of the data disk snapshot exceeds 500 GiB in size.
400	ImageNotSupported	The specified Image contains encrypted snapshots, do not support export.	The error message returned because the specified image contains encrypted snapshots and cannot be exported.
400	ImageNotSupported	Image from image market does not support exporting.	The error message returned because the specified image is an Alibaba Cloud Marketplace image and cannot be exported.
403	ConcurrentQuotaExceed.ExportImage	%s	The error message returned because the maximum number of concurrent ongoing tasks has been reached. Try again later.
403	WeeklyQuotaExceed.ExportImage	%s	The error message returned because the weekly quota for exported images of this week has been used up. Retry when the quota becomes available again.

5.1.10.11. DescribeImageSupportInstanceTypes

You can call this operation to query the instance types supported by an image.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeImageSupportInstanceTypes	The operation that you want to perform. Set the value to DescribeImageSupportInstanceTypes.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the image. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
ImageId	String	No	m-o6w3gy99qf89rkga****	The ID of the image.
ActionType	String	No	CreateEcs	The scenario in which the instance type is used. Default value: CreateEcs. Valid values: - CreateEcs: instance creation - Upgrade: instance type upgrade - Downgrade: instance type downgrade
Filter.N.Key	String	No	imageId	The key of filter N. Valid values: - imageId: image ID - filter: image ID
Filter.N.Value	String	No	m-o6w3gy99qf89rkga****	The value of filter N.

Response parameters

Parameter	Type	Example	Description
ImageId	String	m-o6w3gy99qf89rkga****	The ID of the image.
InstanceTypes	Array		The collection of details about instance types that are supported by the image.
InstanceType			
CpuCoreCount	Integer	1	The number of vCPUs of the instance type.
InstanceTypeFamily	String	ecs.t1	The instance family.
InstanceTypeId	String	ecs.t1.xsmall	The ID of the instance type.
MemorySize	Float	1024	The memory size of the instance type. Unit: GiB.
RegionId	String	cn-qingdao-env17-d01	The region ID of the image.

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeImageSupportInstanceTypes
&RegionId=cn-qingdao-env17-d01
&ImageId=m-o6w3gy99qf89rkga****
&<Common request parameters>
```

Sample success responses

XML **format**

```
<DescribeImageSupportInstanceTypesResponse>
  <RequestId>CF661E2D-4AFE-4BCD-959A-A65E14416B44</RequestId>
  <RegionId>cn-qingdao-env17-d01</RegionId>
  <ImageId>ubuntu_16_0402_64_20G_alibase_20180409.vhd</ImageId>
  <InstanceTypes>
    <InstanceType>
      <InstanceTypeId>ecs.t1.xsmall</InstanceTypeId>
      <CpuCoreCount>1</CpuCoreCount>
      <MemorySize>0.5</MemorySize>
      <InstanceTypeFamily>ecs.t1</InstanceTypeFamily>
    </InstanceType>
    <InstanceType>
      <InstanceTypeId>ecs.t1.small</InstanceTypeId>
      <CpuCoreCount>1</CpuCoreCount>
      <MemorySize>1</MemorySize>
      <InstanceTypeFamily>ecs.t1</InstanceTypeFamily>
    </InstanceType>
  </InstanceTypes>
</DescribeImageSupportInstanceTypesResponse>
```

JSON **format**

```
{
  "RequestId": "CF661E2D-4AFE-4BCD-959A-A65E14416B44",
  "RegionId": "cn-qingdao-env17-d01",
  "ImageId": "ubuntu_16_0402_64_20G_alibase_20180409.vhd",
  "InstanceTypes": {
    "InstanceType": [{
      "InstanceTypeId": "ecs.t1.xsmall",
      "CpuCoreCount": 1,
      "MemorySize": 0.5,
      "InstanceTypeFamily": "ecs.t1"
    },
    {
      "InstanceTypeId": "ecs.t1.small",
      "CpuCoreCount": 1,
      "MemorySize": 1,
      "InstanceTypeFamily": "ecs.t1"
    }
  ]
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidParamter	Invalid Parameter	The error message returned because a specified parameter is invalid.
404	InvalidUsage	The specified Usage is not valid	The error message returned because the specified referenced resource type (image, disk, image_disk, or none) is invalid.
400	InvalidInstanceType. ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified instance type does not exist or you are not authorized to manage instances of this instance type.

5.1.11. Networks

5.1.11.1. ModifyInstanceNetworkSpec

You can call this operation to modify the bandwidth configurations of an instance. You can modify the bandwidth configurations of an instance to improve network performance.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceNetworkSpec	The operation that you want to perform. Set the value to <code>ModifyInstanceNetworkSpec</code> .
InstanceId	String	Yes	i-bp67acfmxazb4ph***	The ID of the instance for which you want to modify bandwidth configurations.
InternetMaxBandwidthOut	Integer	No	10	The maximum outbound network bandwidth. Unit: Mbit/s. Valid values: 0 to 100.
InternetMaxBandwidthIn	Integer	No	10	The maximum inbound bandwidth. Unit: Mbit/s. Valid values: - When the maximum outbound bandwidth is less than or equal to 10 Mbit/s, the valid values of <code>InternetMaxBandwidthIn</code> are 1 to 10 and the default value is 10. - When the maximum outbound bandwidth is greater than 10 Mbit/s, the valid values of <code>InternetMaxBandwidthIn</code> are 1 to the <code>InternetMaxBandwidthOut</code> value and the default value is the <code>InternetMaxBandwidthOut</code> value.
AllocatePublicIp	Boolean	No	false	 Note This parameter is not supported.
StartTime	String	No	2017-12-05T22:40Z	The start time of the temporary bandwidth upgrade. Specify the time in the ISO 8601 standard in the yyyy-MM-ddThh:mmZ format. The time must be in UTC and accurate to minutes (mm).
EndTime	String	No	2017-12-06T22Z	The end time of the temporary bandwidth upgrade. Specify the time in the ISO 8601 standard in the yyyy-MM-ddThhZ format. The time must be in UTC and accurate to hours (hh).

Parameter	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client token to generate the value, but you must make sure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence in ECS Developer Guide .

Response parameters

Parameter	Type	Example	Description
OrderId	String	0	 Note This parameter is not supported.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ModifyInstanceNetworkSpec
&InstanceId=i-bp67acfmazb4ph****
&InternetMaxBandwidthOut=10
&ClientToken=123e4567-e89b-12d3-a456-426655440000
```

Sample success responses

XML format

```
<ModifyInstanceNetworkSpecResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</ModifyInstanceNetworkSpecResponse>
```

JSON format

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

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
400	InvalidInternetMaxBandwidthIn.ValueNotSupported	The specified InternetMaxBandwidthIn is beyond the permitted range.	The error message returned because the specified InternetMaxBandwidthIn parameter is not within the permitted range.
400	InvalidInternetMaxBandwidthOut.ValueNotSupported	The specified InternetMaxBandwidthOut is beyond the permitted range.	The error message returned because the specified InternetMaxBandwidthOut parameter is not within the permitted range.
403	IncorrectInstanceState	The current status of the instance does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance and try again.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	ChargeTypeViolation	The operation is not permitted due to billing method of the instance.	The error message returned because the billing method of the instance does not support the operation.
403	OperationDenied	The operation is denied due to the instance is PrePaid.	The error message returned because the instance is a subscription instance and does not support the operation.
400	OperationDenied	Specified instance is in VPC.	The error message returned because the instance resides in a VPC.

HTTP status code	Error code	Error message	Description
400	InvalidParameter.Bandwidth	%s	The error message returned because the specified bandwidth is invalid.
400	InvalidParameter.Conflict	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
400	InvalidStartTime.ValueNotSupported	%s	The error message returned because the end time is earlier than the start time.
400	Account.Arrearage	Your account has an outstanding payment.	The error message returned because you have overdue payments in your account.
400	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is invalid.	The error message returned because the specified InternetChargeType parameter is invalid.
400	DecreasedBandwidthNotAllowed	%s	The error message returned because the bandwidth cannot be downgraded.
400	BandwidthUpgradedDenied.EipBoundInstance	The specified VPC instance has bound EIP, temporary bandwidth upgrade is denied.	The error message returned because the instance is associated with an elastic IP address and cannot have its bandwidth temporarily upgraded.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified client token is invalid.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidInstance.UnpaidOrder	The specified Instance has unpaid order.	The error message returned because you have unpaid orders for the specified instance. Pay for the orders and try again.
400	Throttling	Request was denied due to request throttling, please try again after 5 minutes.	The error message returned because your request is denied due to throttling. Try again 5 minutes later.

HTTP status code	Error code	Error message	Description
400	InvalidAction	Specified action is not valid.	The error message returned because this operation is invalid.
400	IpAllocationError	Allocate public ip failed.	The error message returned because a public IP address failed to be assigned.
400	InvalidParam.AllocatePublicIp	The specified param AllocatePublicIp is invalid.	The error message returned because the specified AllocatePublicIp parameter is invalid.
400	InstanceDowngrade.QuotaExceed	Quota of instance downgrade is exceed.	The error message returned because the maximum number of configuration downgrades allowed for the instance has been reached.
400	InvalidBandwidth.ValueNotSupported	Instance upgrade bandwidth of temporary not allow less then existed.	The error message returned because the new bandwidth specified for the temporary bandwidth upgrade is lower than the current bandwidth.
403	InvalidInstance.InstanceNotSupported	The special vpc instance with eip not need bandwidth.	The error message returned because the instance is located in a VPC and associated with an elastic IP address and you cannot specify a public bandwidth for the instance.
400	InvalidInstanceState	The specified instance status does not support this action.	The error message returned because the operation is not supported while the instance is in the current state.
403	InvalidInstanceState	The current status of the instance does not support this operation.	The error message returned because this operation is not supported while the instance is in the current state.
400	InvalidInstance.UnPaidOrder	Unpaid order exists in your account, please complete or cancel the payment in the expense center.	The error message returned because you have unpaid orders in your account. Pay for the orders and try again.

HTTP status code	Error code	Error message	Description
400	OperationDenied	After downgrade, you cannot upgrade or downgrade your instances again in the remaining time of the current billing cycle.	The error message returned because you have downgraded the configurations of the instance and cannot upgrade or downgrade the configurations again until a new billing cycle starts.
400	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned because the specified InternetChargeType parameter is invalid.
400	LastOrderProcessing	The previous order is still processing, please try again later.	The error message returned because the order is being processed. Try again later.
400	OperationDenied	The current user does not support this operation.	The error message returned because your account does not support the operation.
403	NAT_PUBLIC_IP_BINDING_FAILED	Binding nat public ip failed	The error message returned because the public IP address failed to be associated with the gateway.
403	InvalidInstance.EipNotSupport	The specified instance with eip is not supported, please unassociate eip first.	The error message returned because the operation is not supported while an elastic IP address is associated with the instance. Disassociate the elastic IP address first.
403	InvalidNetworkType.ValueNotSupported	The specified parameter NetworkType is not valid.	The error message returned because the specified network type is invalid.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.

5.1.11.2. AttachClassicLinkVpc

Links an instance that is deployed in the classic network to a virtual private cloud (VPC) by establishing a ClassicLink connection between the classic network and the VPC. This way, the instance can communicate with cloud resources in the VPC over the internal network.

Description

When you call this operation, take note of the following items:

- The instance that you want to connect to a VPC must be in the **Running** or **Stopped** state.
- The instance and the VPC must reside in the same region.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AttachClassicLinkVpc	The operation that you want to perform. Set the value to AttachClassicLinkVpc.
InstanceId	String	Yes	i-test	The ID of the instance that is deployed in the classic network. You can call the DescribeInstances operation to query all the available instances.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
VpcId	String	Yes	vpc-test	The ID of the VPC for which the ClassicLink feature is enabled. You can call the DescribeVpcs operation to query all the available VPCs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=AttachClassicLinkVpc
&RegionId=cn-qingdao-env17-d01
&InstanceId=i-test
&VpcId=vpc-test
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3****</RequestId>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidInstanceId.NotFound	The InstanceId provided does not exist in our records.	The error message returned because the specified instance does not exist. Check whether the instance ID is correct.
403	InvalidRegionId.Malformed	The specified parameter ?RegionId? is not valid.	The error message returned because the specified RegionId parameter is invalid.
403	InvalidVpcId.Malformed	The specified parameter ?VpcId? is not valid.	The error message returned because the specified VpcId parameter is invalid.
403	InvalidInstanceId.Malformed	The specified instance is not a classic network instance.	The error message returned because the specified instance is not deployed in the classic network.
403	OperationDenied	The instance does not allow link to vpc.	The error message returned because the instance is linked to another VPC.
403	InvalidParameter.InvalidInstanceIdAndVpcId	The parameter InstanceId and VpcId are not allowed to be empty at the same time.	The error message returned because the InstanceId and VpcId parameters are not specified. You must specify at least one of the parameters.
403	OperationDenied	The specified vpc is disabled attach classic link.	The error message returned because ClassicLink cannot be enabled for the specified VPC.
403	InvalidInstanceId.NotFound	The specified instance does not exist.	The error message returned because the specified instance does not exist. Check whether the instance ID is correct.

HTTP status code	Error code	Error message	Description
403	InvalidStatus.InstanceStatus	The specified instance status is not support this operation ,expect status is running or shutted.	The error message returned because the operation is not supported while the instance is in its current state. The instance must be in the Running or Stopped state.
403	InvalidStatus.InstanceStatus	The specified instance status is not support this operation, expect status is running or shutted.	The error message returned because the operation is not supported while the instance is in its current state. The instance must be in the Running or Stopped state.
403	InvalidInstanceId.NotBelong	The specified instance is not belong to you.	The error message returned because the specified instance does not exist in your account.
403	QuotaExceeded	The link quota exceeded in this vpc.	The error message returned because the maximum number of links that can be created in the specified VPC has been reached.
403	InvalidStatus.InstanceLocked	The specified instance is locked,please wait more.	The error message returned because the specified instance is locked. Try again after the instance is unlocked.
403	InvalidInstanceId.LimitedRegion	The specified instance does not support this operation due to the limitation of its region.	The error message returned because ClassicLink connections cannot be established in the specified region due to lack of support.
403	Forbidden.SubUser	User not authorized to operate on the specified resource.	The error message returned because the RAM user is not authorized to manage the specified resource.

5.1.11.3. ModifyInstanceSpec

Changes the instance type and network bandwidth of an Elastic Compute Service (ECS) instance.

Description

When you call this operation, take note of the following items:

- You can adjust the network bandwidth of an instance only when the instance is in the **Running** (`Running`) or **Stopped** (`Stopped`) state.

- Before you change the instance type of an instance, you can call the `DescribeResourcesModification` operation to query the instance types to which you can change.
- You can change the instance type of an instance only when the instance is in the **Stopped** (`Stopped`) state.
- You can only change either the instance type or the network bandwidth each time.
- After you change the instance type or the network bandwidth of an instance, you cannot initiate another change for this instance within 5 minutes.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceSpec	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the <code>Action</code> parameter. Set the value to <code>ModifyInstanceSpec</code> .
InstanceId	String	Yes	i-bp67acfmxazb4ph***	The ID of the instance.
InstanceType	String	No	ecs.g5.large	The new instance type. You can call the <code>DescribeInstanceTypes</code> operation to query the most recent instance type list.
InternetMaxBandwidthOut	Integer	No	10	The maximum outbound network bandwidth. Unit: Mbit/s. Valid values: 0 to 100.
InternetMaxBandwidthIn	Integer	No	10	The maximum inbound network bandwidth. Unit: Mbit/s. Valid values: • When the maximum outbound public bandwidth is less than or equal to 10 Mbit/s, the valid values of this parameter are 1 to 10 and the default value is 10. • When the maximum outbound public bandwidth is greater than 10 Mbit/s, the valid values of this parameter are 1 to the <code>InternetMaxBandwidthOut</code> value and the default value is the <code>InternetMaxBandwidthOut</code> value.

Parameter	Type	Required	Example	Description
Temporary.StartTime	String	No	2017-12-05T22:40:00Z	The start time of the temporary bandwidth upgrade period. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
Temporary.EndTime	String	No	2017-12-05T22:40:00Z	The end time of the temporary bandwidth upgrade period. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
Temporary.InternetMaxBandwidthOut	Integer	No	50	The maximum outbound network bandwidth after the temporary bandwidth upgrade. Valid values: 1 to 100.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
Async	Boolean	No	false	Specifies whether to submit an asynchronous request. Default value: false.

Parameter	Type	Required	Example	Description
AllowMigrateAcrossZone	Boolean	No	false	Specifies whether to allow cross-cluster instance type upgrade. Default value: false. When <code>AllowMigrateAcrossZone</code> is set to true and you upgrade the instance configurations based on the returned information, take note of the following items: Instances of the classic network type: - For retired instance types, when a non-I/O optimized instance is changed into an I/O optimized instance, instance information (including the private IP addresses, disk device names, and software authorization codes) is changed. For Linux instances, basic disks (<code>cloud</code>) are identified as <code>xvd*</code> such as <code>xvda</code> and <code>xvdb</code>, and ultra disks (<code>cloud_efficiency</code>) and standard SSDs (<code>cloud_ssd</code>) are identified as <code>vd*</code> such as <code>vda</code> and <code>vdb</code>. - For instance families available for purchase, when the instance type of an instance is changed, the private IP address of the instance is also changed. Instances of the Virtual Private Cloud (VPC) type: For retired instance types, when a non-I/O optimized instance is changed into an I/O optimized instance, instance information (including the disk device names and software authorization codes) is changed. For Linux instances, basic disks (<code>cloud</code>) are identified as <code>xvd*</code> such as <code>xvda</code> and <code>xvdb</code>, and ultra disks (<code>cloud_efficiency</code>) and standard SSDs (<code>cloud_ssd</code>) are identified as <code>vd*</code> such as <code>vda</code> and <code>vdb</code>.

Parameter	Type	Required	Example	Description
SystemDisk.Category	String	No	cloud_ssd	The new category of the system disk. This parameter takes effect only when you upgrade a non-I/O optimized instance of a retired instance type to an I/O optimized instance of an instance type available for purchase. Valid values: - cloud_efficiency: ultra disk - cloud_ssd: standard SSD
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe6*****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that the value is unique among different requests. The ClientToken value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence in ECS Developer Guide.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE*****	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ModifyInstanceSpec
&InstanceId=i-bp67acfmazb4ph****
&InstanceType=ecs.s1.large
&InternetMaxBandwidthOut=10
&ClientToken=0c593ea1-3bea-11e9-b96b-88e9fe6*****
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE*****</RequestId>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE*****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is not valid.	The error message returned because the specified instance billing method for network usage is invalid.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified InstanceType parameter does not exist or because you are not authorized to manage instances of the specified instance type.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified InstanceType parameter does not exist or because you are not authorized to manage instances of the specified instance type.
400	InvalidParameter	The specified parameter "InternetMaxBandwidthOut" is not valid.	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.
400	InvalidParameter.Mismatch	Too many parameters in one request.	The error message returned because the request contains invalid parameters.
403	CategoryViolation	The specified instance does not support this operation because of its disk category.	The error message returned because the configurations of instances that have local disks attached cannot be changed.

HTTP status code	Error code	Error message	Description
403	InvalidStatus.ValueNotSupported	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned because the operation is not supported while the instance uses the current billing method.
403	OperationDenied	The specified instance is out of usage.	The error message returned because the resources of the specified instance type are insufficient.
400	BandwidthUpgradedDenied.EipBoundInstance	The specified VPC instance has bound EIP, temporary bandwidth upgrade is denied.	The error message returned because the instance is associated with an elastic IP address and cannot have its bandwidth temporarily upgraded.
404	MissingTemporary.StartTime	Temporary.StartTime is not specified.	The error message returned because the Temporary.StartTime parameter is not specified.
404	MissingTemporary.EndTime	Temporary.EndTime is not specified.	The error message returned because the Temporary.EndTime parameter is not specified.
400	InvalidTemporary.StartTime	The specified Temporary.StartTime is not valid.	The error message because the specified Temporary.StartTime parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidTemporary.EndTime	The specified Temporary.EndTime is not valid.	The error message returned because the specified Temporary.EndTime parameter is invalid.
403	LastTokenProcessing	The last token request is processing.	The error message returned because the last token request is being processed. Try again later.
400	Downgrade.NotSupported	Downgrade operation is not supported.	The error message returned because the downgrade operation is not supported.
403	InstanceSpecModification.NotEffective	The specified instance has been reserved for making a spec modification and not taken effective in the current contract period.	The error message returned because the instance is reserved due to an instance type change. Changes made to it cannot take effect during the current contract period.
400	DependencyViolation.InstanceType	The current InstanceType cannot be changed to the specified InstanceType.	The error message returned because the current instance type cannot be changed to the specified instance type.
403	InvalidInstanceType.ValueNotSupported	The specified zone does not offer the specifiedinstancetype.	The error message returned because the specified instance type is unavailable in the specified region.
403	ImageNotSupportInstanceType	The specified image do not support the InstanceType instance.	The error message returned because the specified image does not support the instance type.
400	Account.Arrearage	Your account has an outstanding payment.	The error message returned because you have unpaid orders in your account.
400	InvalidParameter.Bandwidth	The specified parameter Bandwidth is not valid.	The error message returned because the specified bandwidth is invalid.
400	InvalidParameter.Conflict	The specified image does not support the specified instance type.	The error message returned because the specified image cannot be used for instances of the specified instance type.

HTTP status code	Error code	Error message	Description
400	InvalidParameter.AllowMigrateAcrossZone	The specified parameter CanMigrateAcrossZone is not valid.	The error message returned because the specified AllowMigrateAcrossZone parameter is invalid.
400	InvalidParam.SystemDiskCategory	The specified param SystemDisk.Category is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	Throttling	Request was denied due to request throttling, please try again after 5 minutes.	The error message returned because your request is throttled. Try again 5 minutes later.
400	InvalidInstanceStatus.NotStopped	The specified Instance status is not stopped.	The error message returned because the specified instance is not in the Stopped state.
403	InstanceType.Offline	The specified InstanceType has been offline	The error message returned because the specified instance type is retired. Select another instance type and try again.
400	InvalidAction	Specified action is not valid.	The error message returned because the operation is invalid.
400	IdempotenceParamNotMatch	There is a idempotence signature mismatch between this and last request.	The error message returned because this request and the previous request contain the same client token but different parameters.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.
400	Price.PricePlanResultNotFound	The internetMaxBandwidthIn or internetMaxBandwidthOut provided is invalid.	The error message returned because specified InternetMaxBandwidthIn or InternetMaxBandwidthOut parameter is invalid.
403	InvalidParameter.NotMatch	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.

HTTP status code	Error code	Error message	Description
403	InvalidInstance.EipNotSupport	The specified instance with eip is not supported, please unassociate eip first.	The error message returned because the operation is not supported while an elastic IP address is associated with the instance. Disassociate the elastic IP address first.
400	InvalidAction.NotSupport	The ecs on dedicatedHost not support modify instanceType.	The error message returned because you cannot change the instance types of instances hosted on dedicated hosts.
400	InvalidMarketImageStatus.NotSupported	The status of specified market image does not support this operation.	The error message returned because the operation is not supported while the specified Alibaba Cloud Marketplace image is in the current state.
403	OperationDenied.NoStock	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the specified operation is valid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	OperationDenied.UnpaidOrder	The specified instance has unpaid order.	The error message returned because you have unpaid orders for the specified instance. You can log on to the ECS console to pay for the orders.
403	OperationDenied	%s	The error message returned because the operation is denied.
403	InvalidOperation.Ipv4CountExceeded	%s	The error message returned because the maximum number of IPv4 addresses has been reached.
403	InvalidOperation.Ipv6CountExceeded	%s	The error message returned because the maximum number of IPv6 addresses has been reached.
403	InvalidOperation.Ipv6NotSupport	%s	The error message returned because IPv6 addresses do not support this operation.

HTTP status code	Error code	Error message	Description
403	InvalidOperation.InstanceWithEipNotSupport	The special instance with eip not support operate, please unassociate eip first.	The error message returned because the operation is not supported while an elastic IP address (EIP) is associated with this instance. Disassociate the EIP first.
403	SecurityRisk.3DVerification	We have detected a security risk with your default credit or debit card. Please proceed with verification via the link in your email.	The error message returned because risks are detected in your default credit card or debit card. Click the URL in the email for verification.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified InstanceChargeType parameter does not exist.
403	InvalidInstance.NotFoundSystemDisk	The specified instance has no system disk.	The error message returned because the specified instance has no system disk attached. Make sure that the specified instance has a system disk attached. You can call the DescribeInstances operation to query the details of the specified instance.
403	InvalidInstanceType.NotSupportDiskCategory	The instanceType of the specified instance does not support this disk category.	The error message returned because the instance type specified by the InstanceType parameter does not support the disk category of the instance. Try another instance type. For information about the disk categories supported by instance types, see the instance family documentation.
403	QuotaExceed.ElasticQuota	No additional quota is available for the specified ECS instance type.	The error message returned because the maximum number of instances of the specified instance type in the region has been reached. You can try another region or instance type, or reduce the number of instances that you want to purchase. Alternatively, you can go to the ECS console or Quota Center to request a quota increase.

HTTP status code	Error code	Error message	Description
403	QuotaExceed.ElasticQuota	The number of the specified ECS instances has exceeded the quota of the specified instance type.	The error message returned because the maximum number of instances of the specified instance type in the region has been reached. You can try another region or instance type, or reduce the number of instances that you want to purchase. Alternatively, you can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of vCPUs assigned to the ECS instances has exceeded the quota in the zone.	The error message returned because the maximum number of vCPUs for all instance types has been reached in the zone. You can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of the specified ECS instances has exceeded the quota of the specified instance type, or the number of vCPUs assigned to the ECS instances has exceeded the quota in the zone.	The error message returned because the maximum number of instances of the specified instance type in the region has been reached or because the maximum number of vCPUs for all instance types has been reached. You can go to the ECS console or Quota Center to request a quota increase.
400	InvalidOperation.VpcHasEnabledAdvancedNetworkFeature	The specified vpc has enabled advanced network feature.	The error message returned because advanced features are enabled for the specified VPC. You cannot create low-specification instances in the VPC.
403	InvalidOperation.InstanceTypeNotSupportEniTrunking	%s	The error message returned because this operation is not supported. For more information, see the return value of the %s placeholder in the error message.

HTTP status code	Error code	Error message	Description
403	InvalidOperation.MaxEniQueueNumberExceeded	%s	The error message returned because the maximum number of queues per ENI has been reached. For more information, see the return value of the %s placeholder in the error message.
403	InvalidOperation.ExceedInstanceTypeQueueNumber	%s	The error message returned because the maximum number of queues for all ENIs on an instance has been reached. For more information, see the return value of the %s placeholder in the error message.
403	InvalidParameter.InvalidEniQueueNumber	%s	The error message returned because the specified number of queues per ENI is invalid. For more information, see the return value of the %s placeholder in the error message.
400	Invalid.PrivatePoolOptions.MatchCriteria	Target mode does not support this operation.	The error message returned because the operation does not support targeted private pools.

5.1.11.4. DescribeClassicLinkInstances

You can call this operation to query one or more classic network-type instances that are linked to VPCs.

Description

When you call this operation, take note of the following items:

- This operation applies only to instances in the classic network.
- You can query a maximum of 100 classic network-type instances each time.
- At least one of VpcId and InstanceId must be specified.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeClassicLinkInstances	The operation that you want to perform. Set the value to DescribeClassicLinkInstances.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
VpcId	String	No	vpc-tes****	The ID of the VPC. ClassicLink must be enabled for the VPC.
InstanceId	String	No	i-tes****	The ID of the instance. You can specify a maximum of 100 instance IDs in a single request. Separate multiple IDs with commas (,).
PageNumber	String	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	String	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10

Response parameters

Parameter	Type	Example	Description
Links	Array		The details about the ClassicLink connections between the classic network-type instances and the VPC.
Link			
InstanceId	String	i-tes****	The ID of the instance.
VpcId	String	vpc-tes****	The ID of the VPC.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	2	The total number of connections.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeClassicLinkInstances
&RegionId=cn-qingdao-env17-d01
&VpcId=vpc-tes****
&InstanceId=i-tes****, i-tes****
&<Common request parameters>
```

Sample success responses

XML **format**

```
<DescribeClassicLinkInstancesResponse>
  <RequestId>B154D309-F3E1-4AB7-BA94-FEFC8B89001</RequestId>
  <TotalCount>2</TotalCount>
  <PageNumber>1</PageNumber>
  <PageSize>10</PageSize>
  <Links>
    <Link>
      <InstanceId>i-tes****</InstanceId>
      <VpcId>vpc-test</VpcId>
    </Link>
    <Link>
      <InstanceId>i-tes****</InstanceId>
      <VpcId>vpc-tes****</VpcId>
    </Link>
  </Links>
</DescribeClassicLinkInstancesResponse>
```

JSON **format**

```
{
  "PageNumber":1,
  "Links":{
    "Link":[{
      "InstanceId":"i-tes****",
      "VpcId":"vpc-tes****"
    },
    {
      "InstanceId": "i-tes****",
      "VpcId": "vpc-tes****"
    }
  ],
  "TotalCount":2,
  "PageSize":10,
  "RequestId":"B154D309-F3E1-4AB7-BA94-FEFC8B89001"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidInstanceId.NotFound	The InstanceId provided does not exist in our records.	The error message returned because the specified InstanceId parameter does not exist.
403	InvalidParameter.ToManyInstanceIds	No more than 100 InstanceIds can be specified.	The error message returned because more than 100 instance IDs are specified.
403	InvalidParameter.InvalidInstanceIdAndVpcId	The parameter InstanceId and VpcId are not allowed to be empty at the same time.	The error message returned because neither InstanceId nor VpcId is specified.
403	InvalidInstanceId.NotBelong	The specified instance is not belong to you.	The error message returned because the specified instance does not exist in your account.
403	InvalidVpc.NotBelong	The specified vpc is not belong to you.	The error message returned because the specified VPC does not exist in your account.

5.1.11.5. DetachClassicLinkVpc

You can call this operation to unlink a classic network-type instance from a virtual private cloud (VPC) by removing the ClassicLink connection between them. After the instance is unlinked from the VPC, they can no longer communicate with each other.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DetachClassicLinkVpc	The operation that you want to perform. Set the value to DetachClassicLinkVpc.
InstanceId	String	Yes	i-bp67acfmxazb4p****	The ID of the classic network-type instance.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the classic network-type instance. You can call the DescribeRegions operation to query the most recent region list.
VpcId	String	Yes	vpc-bp67acfmxazb4p****	The ID of the VPC to which the instance is linked.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=DetachClassicLinkVpc
&RegionId=cn-qingdao-env17-d01
&VpcId=vpc-bp67acfmxazb4p****
&InstanceId=i-bp67acfmxazb4p****
&<Common request parameters>
```

Sample success responses

XML **format**

```
<DetachClassicLinkVpcResponse>
  <RequestId>C0003E8B-B930-4F59-ADC0-0E209A9012A8</RequestId>
</DetachClassicLinkVpcResponse>
```

JSON **format**

```
{
  "RequestId": "C0003E8B-B930-4F59-ADC0-0E209A9012A8"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidInstanceid.NotFound	The Instanceid provided does not exist in our records.	The error message returned because the specified Instanceid parameter does not exist.
403	InvalidInstanceid.MalFormed	The specified instance is not a classic network instance.	The error returned because the specified instance is not in the classic network.
403	OperationDenied	The instances are not allowed to detach from the linked vpc.	The error message returned because the instance cannot be unlinked from the VPC.
403	InvalidParameter.InvalidInstanceidAndVpcid	The parameter Instanceid and Vpcid are not allowed to be empty at the same time.	The error message returned because neither Instanceid nor Vpcid is specified.
403	InvalidInstanceid.NotFound	The specified instance does not exist.	The error message returned because the specified Instanceid parameter does not exist.
403	InvalidStatus.InstanceStatus	The specified instance status is not support this operation ,expect status is running or shutted.	The error message returned because the operation is not supported while the instance is in the current state. The instance must be in the Running or Stopped state.
403	InvalidInstanceid.NotBelong	The specified instance is not belong to you.	The error message returned because the specified instance does not exist in your account.
403	Forbidden.SubUser	User not authorized to operate on the specified resource.	The error message returned because the RAM user is not authorized to manage this resource.
403	InvalidStatus.InstanceStatus	The specified instance status does not support this operation, expected status is Running or Stopped.	The error message returned because the operation is not supported while the instance is in the current state. The instance must be in the Running or Stopped state.

5.1.12. Security groups

5.1.12.1. CreateSecurityGroup

You can call this operation to create a security group. For a new security group, only instances in the security group can access each other by default. Access requests to the security group from outside are denied. If you want to accept requests from resources on the Internet or requests from instances in other security groups, you can call the `AuthorizeSecurityGroup` operation to grant access permissions to those resources or instances.

Description

When you call this operation, take note of the following items:

- You can create a maximum of 100 security groups within a single region.
- To create a security group of the VPC type, you must specify the `VpcId` parameter.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateSecurityGroup	The operation that you want to perform. Set the value to <code>CreateSecurityGroup</code> .
RegionId	String	Yes	cn-qingdao-env17-d01	The ID of the region in which to create the security group. You can call the <code>DescribeRegions</code> operation to query the most recent region list.
VpcId	String	No	vpc-bp1opxu1zkh00gzv****	The ID of the VPC in which to create the security group.
Description	String	No	SecurityGroupTestDescription	The description of the security group. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> . This parameter is empty by default.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence in ECS Developer Guide .

Parameter	Type	Required	Example	Description
SecurityGroupName	String	No	SecurityGroupTestName	The name of the security group. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code> . The name can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.
SecurityGroupType	String	No	enterprise	The type of the security group. Valid values: - normal: basic security group - enterprise: advanced security group
Tag.N.value	String	No	null	The value of tag N to be bound to the security group.  Note We recommend that you use the Tag.N.Value parameter to ensure future compatibility.
Tag.N.key	String	No	null	The key of tag N to be bound to the security group.  Note We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	No	Test	The key of tag N to be bound to the security group. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with <code>acs:</code> or <code>aliyun</code> . It cannot contain <code>http://</code> or <code>https://</code> .

Parameter	Type	Required	Example	Description
Tag.N.Value	String	No	Test	The value of tag N to be bound to the security group. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length. It cannot start with <code>acs:</code> or contain <code>http://</code> or <code>https://</code> .
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which to assign the security group.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SecurityGroupId	String	sg-bp1fg655nh68xyz9****	The ID of the security group.

Examples

Sample requests

```
https://ecs.example.com/?Action=CreateSecurityGroup
&RegionId=cn-qingdao-env17-d01
&Description=SecurityGroupTestDescription
&VpcId=vpc-bp1opxulzkh00gzv****
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateSecurityGroupResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
  <SecurityGroupId>sg-bp1fg655nh68xyz9****</SecurityGroupId>
</CreateSecurityGroupResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984",
  "SecurityGroupId": "sg-bp1fg655nh68xyz9****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidDescription.Malformed	The specified parameter "Description" is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
403	QuotaExceed.SecurityGroup	The maximum number of security groups is reached.	The error message returned because the maximum number of security groups has been reached. Submit a ticket to request a quota increase.
404	InvalidVpcId.NotFound	Specified VPC does not exist.	The error message returned because the specified VpcId parameter does not exist.
400	InvalidSecurityGroupName.Malformed	Specified security group name is not valid.	The error message returned because the specified SecurityGroupName parameter is invalid. By default, the SecurityGroupName parameter is empty. If this parameter is specified, the specified name is displayed in the ECS console. The name must be 2 to 128 characters in length. It must start with a letter and can contain letters, digits, periods (.), underscores (_), and hyphens (-). The name cannot start with http:// or https://.
400	InvalidSecurityGroupDescription.Malformed	Specified security group description is not valid.	The error message returned because the specified Description parameter is invalid.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InvalidVpcId.NotFound	vpc id must not empty when only support vpc vm.	The error message returned because the VpcId parameter is not specified.

HTTP status code	Error code	Error message	Description
400	IncorrectVpcStatus	Current VPC status does not support this operation.	The error message returned because the operation is not supported while the VPC is in the current state.
400	InvalidTagKey.Malformed	Specified tag key is not valid.	The error message returned because the specified tag key is invalid.
400	InvalidTagValue.Malformed	Specified tag value is not valid.	The error message returned because the specified tag value is invalid.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupid parameter does not exist.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	IdempotentProcessing	The previous idempotent request(s) is still processing.	The error message returned because the previous idempotent request is being processed. Try again later.
403	QuotaExceed.Tags	%s	The error message returned because the number of specified tags exceeds the upper limit.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

5.1.12.2. AuthorizeSecurityGroup

You can call this operation to create an inbound security group rule. The created rule allows or denies the inbound traffic from other devices to the ECS instances in the security group to which the rule belongs.

Description

In the security group-related API documents, inbound traffic refers to the traffic sent by the source device and received at the destination device.

When you call this operation, take note of the following items:

- The total number of outbound and inbound security group rules in each security group cannot exceed 200.
- The priority (`Priority`) of a security group rule ranges from 1 to 100. A smaller value indicates a higher priority.
- When multiple security group rules have the same priority, drop (`drop`) rules take precedence.
- The source devices can belong to a specified range of IP addresses (SourceCidrIp) or can be ECS instances in another security group (SourceGroupId).
- If the rule to be created matches an existing rule, the AuthorizeSecurityGroup operation succeeds but no rule is created.
- You can determine a security group rule by specifying one of the following groups of parameters. You cannot determine a security group rule by specifying a single parameter.
 - Parameters used to determine an inbound security group rule that controls access from a specified range of IP addresses: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, and SourceCidrIp. For a security group of the classic network type, you can set the NicType parameter to internet or intranet. For a security group of the VPC type, you can set the NicType parameter only to intranet. Sample request:

```
https://ecs.example.com/?Action=AuthorizeSecurityGroup
&SecurityGroupId=sg-F876FF7**
&SourceCidrIp=10.0.0.0/8
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
&Policy=accept
&<Common request parameters>
```

- Parameters used to determine an inbound security group rule that controls access from another security group: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, SourceGroupOwnerAccount, and SourceGroupId. To create an inbound security group rule to control access from another security group, you can set the NicType parameter only to intranet. For mutual access between security groups of the classic network type, you can allow or deny another security group in the same region access to your security group. The security group that is allowed access to your security group can belong to your own Apsara Stack tenant account or another Apsara Stack tenant specified by the SourceGroupOwnerAccount parameter. For mutual access between security groups of the VPC type, you can allow or deny another security group in the same VPC access to your security group. Sample request:

```
https://ecs.example.com/?Action=AuthorizeSecurityGroup
&SecurityGroupId=sg-F876FF7**
&SourceGroupId=sg-1651FBB**
&SourceGroupOwnerAccount=test@aliyun.com
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
&Policy=drop
&<Common request parameters>
```

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AuthorizeSecurityGroup	The operation that you want to perform. Set the value to AuthorizeSecurityGroup.
IpProtocol	String	Yes	all	The transport layer protocol. The values of this parameter are case-sensitive. Valid values: - tcp - udp - icmp - gre - all: All protocols are supported.  Note IpProtocol can be set to icmp only for IPv4 addresses.

Parameter	Type	Required	Example	Description
PortRange	String	Yes	22/22	The range of destination ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the valid port numbers are 1 to 65535. Specify a port range in the format of <start port number>/<end port number>. Correct example: 1/200. Incorrect example: 200/1. - When the IpProtocol parameter is set to icmp, the port range is -1/-1, which indicates all ports. - When the IpProtocol parameter is set to gre, the port range is -1/-1, which indicates all ports. - When the IpProtocol parameter is set to all, the port range is -1/-1, which indicates all ports.
RegionId	String	Yes	cn-qingdao-env17-d01	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmxb4ph***	The ID of the destination security group.
SourceGroupId	String	No	sg-bp67acfmxb4pj***	The ID of the source security group. At least one of SourceGroupId and SourceCidrIp must be specified. - If SourceGroupId is specified but SourceCidrIp is not, the NicType parameter can be set only to intranet. - If both SourceGroupId and SourceCidrIp are specified, SourceCidrIp takes precedence.

Parameter	Type	Required	Example	Description
SourceGroupOwnerId	Long	No	155780923770	The ID of the Apsara Stack tenant account that manages the source security group when you create a security group rule across accounts. - If both SourceGroupOwnerId and SourceGroupOwnerAccount are empty, access permissions are configured for another security group managed by your account. - If SourceCidrIp is specified, the SourceGroupOwnerId parameter is ignored.
SourceGroupOwnerAccount	String	No	test@aliyun.com	The Apsara Stack tenant account that manages the source security group when you create a security group rule across accounts. - If both SourceGroupOwnerId and SourceGroupOwnerAccount are empty, access permissions are configured for another security group managed by your account. - If SourceCidrIp is specified, the SourceGroupOwnerAccount parameter is ignored.
SourceCidrIp	String	No	10.0.0.0/8	The range of source IPv4 addresses. IPv4 addresses and CIDR blocks are supported. This parameter is empty by default.
Ipv6SourceCidrIp	String	No	2001:250:6000::**	The range of source IPv6 addresses. IPv6 addresses and CIDR blocks are supported.  Note Only IPv6 addresses of VPC-type instances are supported. This parameter is empty by default.

Parameter	Type	Required	Example	Description
SourcePortRange	String	No	22/22	The range of source ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the valid port numbers are 1 to 65535. Specify a port range in the format of <start port number>/<end port number>. Correct example: 1/200. Incorrect example: 200/1. - When the IpProtocol parameter is set to icmp, the port range is -1/-1, which indicates all ports. - When the IpProtocol parameter is set to gre, the port range is -1/-1, which indicates all ports. - When the IpProtocol parameter is set to all, the port range is -1/-1, which indicates all ports.
DestCidrIp	String	No	10.0.0.0/8	The range of destination IPv4 addresses. IPv4 addresses and CIDR blocks are supported. This parameter is empty by default.
Ipv6DestCidrIp	String	No	2001:250:6000::**	The range of destination IPv6 addresses. IPv6 addresses and CIDR blocks are supported.  Note Only IPv6 addresses of VPC-type instances are supported. This parameter is empty by default.
Policy	String	No	accept	The access control policy. Default value: accept. Valid values: - accept: allows access. - drop: denies access without returning a rejection response. In this case, the request times out or the connection fails to be established.

Parameter	Type	Required	Example	Description
Priority	String	No	1	The priority of the security group rule. A smaller value indicates a higher priority. Valid values: 1 to 100. Default value: 1.
NicType	String	No	intranet	The NIC type of the security group rule when the security group is in the classic network. Valid values: - internet: public NIC - intranet: internal NIC - If the security group is in a VPC, the parameter is set to intranet by default and cannot be modified. - If DestGroupId is specified but DestCidrIp is not, this parameter can be set only to intranet. Default value: internet.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence in ECS Developer Guide.
Description	String	No	Manually authorize SSH port 22 - RuleDemo	The description of the security group rule. The description must be 1 to 512 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=AuthorizeSecurityGroup
&SecurityGroupId=sg-bp67acfmazb4ph***
&SourceCidrIp=10.0.0.0/8
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
&Policy=accept
&<Common request parameters>
```

Sample success responses

XML format

```
<AuthorizeSecurityGroupResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</AuthorizeSecurityGroupResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist in this account. Check whether the security group ID is correct.
404	InvalidSourceGroupId.NotFound	The SourceGroupId provided does not exist in our records.	The error message returned because the specified SourceGroupId parameter does not exist.
400	OperationDenied	The specified IpProtocol does not exist or IpProtocol and PortRange do not match.	The error message returned because the specified IpProtocol parameter does not exist or does not match the specified port range.
400	InvalidIpProtocol.Malformed	The specified parameter "PortRange" is not valid.	The error message returned because the specified IpProtocol or PortRange parameter is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidSourceGroupId.Mismatch	NicType is required or NicType expects intranet.	The error message returned because the NicType parameter is not specified or is not set to intranet.
400	InvalidSourceCidrIp.Malformed	The specified parameter "SourceCidrIp" is not valid.	The error message returned because the specified SourceCidrIp parameter is invalid.
403	MissingParameter	The input parameter "SourceGroupId" or "SourceCidrIp" cannot be both blank.	The error message returned because both the SourceGroupId and SourceCidrIp parameters are empty.
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned because the specified Policy parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist.
400	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned because the specified NIC type conflicts with the authorization record.
403	AuthorizationLimitExceed	The limit of authorization records in the security group reaches.	The error message returned because the maximum number of rules in the security group has been reached.
403	InvalidParamter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned because the destination security group is the same as the source security group.
400	InvalidSourceGroupId.Mismatch	Specified security group and source group are not in the same VPC.	The error message returned because the destination security group and the source security group do not belong to the same VPC.
400	InvalidSourceGroup.NotFound	Specified source security group does not exist.	The error message returned because the specified inbound security group rule does not exist or relevant parameters are not specified.

HTTP status code	Error code	Error message	Description
400	VPCDisabled	Can't use the SecurityGroup in VPC.	The error message returned because the VPC does not support security groups.
400	InvalidPriority.Malformed	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InvalidNetworkType.Mismatch	The specified SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned because the network type of the destination security group is different from that of the source security group.
403	InvalidNetworkType.Conflict	The specified SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned because the network type of the destination security group is different from that of the source security group.
400	InvalidNicType.ValueNotSupported	The specified NicType is not valid.	The error message returned because the specified NicType parameter does not exist.
400	InvalidSecurityGroupDescription.Malformed	The specified security group rule description is not valid.	The error message returned because the specified Description parameter is invalid.
400	InvalidSecurityGroup.InvalidNetworkType	The specified security group network type is not support this operation, please check the security group network types. For VPC security groups, ClassicLink must be enabled.	The error message returned because the operation is not supported while the security group is of the current network type. If the network type is VPC, ClassicLink must be enabled.
400	MissingParameter.Source	Either SourceCidrIp or SourceGroupId must be specified.	The error message returned because both the SourceCidrIp and SourceGroupId parameters are empty.

HTTP status code	Error code	Error message	Description
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP, ICMP, GRE or All.	The error message returned because the specified IpProtocol parameter is invalid. The valid values of this parameter are tcp, udp, icmp, gre, and all.
400	InvalidSecurityGroupId.Malformed	The specified parameter "SecurityGroupId" is not valid.	The error message returned because the specified SecurityGroupId parameter is invalid.
400	InvalidParamter.Conflict	The specified SourceCidrIp should be different from the DestCidrIp.	The error message returned because the value of SourceCidrIp is the same as that of DestCidrIp.
500	InvalidGressFlow.Malformed	The specified parameter GressFlow is not valid,it cause by internal,try calling again.	The error message returned because the specified GressFlow parameter is invalid.
400	InvalidSourcePortRange.Malformed	The specified parameter "SourcePortRange" is not valid.	The error message returned because the specified SourcePortRange parameter is invalid.
400	InvalidParam.SourceCidrIp	%s	The error message returned because the specified SourceCidrIp parameter is invalid.
400	InvalidParam.DestIp	%s	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv6 address under an IPv4 protocol by mistake.

HTTP status code	Error code	Error message	Description
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv4 address under an IPv6 protocol by mistake.
400	ILLEGAL_IPV6_CIDR	%s	The error message returned because the specified IPv6 address is invalid.
400	InvalidDestCidrIp.Malformed	The specified parameter DestCidrIp is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.

5.1.12.3. AuthorizeSecurityGroupEgress

You can call this operation to create an outbound security group rule in a specific security group. The created rule allows or denies outbound traffic from the instances in the security group to other devices.

Description

In the security group-related API documents, inbound traffic refers to the traffic sent by the source device and received at the destination device.

When you call this operation, take note of the following items:

- The total number of outbound and inbound security group rules in each security group cannot exceed 200.
- You can set Policy to accept or drop for each security group rule to grant or deny access.
- The value of Priority ranges from 1 to 100. A smaller value indicates a higher priority.
- When several security group rules have the same priority, drop rules take precedence.
- The destination devices can be a specified range of IP addresses (DestCidrIp) or ECS instances in another security group (DestGroupId).
- If the rule to be created matches an existing rule, the AuthorizeSecurityGroupEgress operation succeeds but no rule is created.
- You can determine a security group rule by specifying one of the following groups of parameters. You cannot determine a security group rule by specifying a single parameter.

- Parameters used to determine an out bound bound security group rule that controls access to a specified range of IP addresses: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, and DestCidrIp. Sample request:

```
https://ecs.example.com/?Action=AuthorizeSecurityGroupEgress
&SecurityGroupId=sg-bp67acfmazb4ph***
&IpProtocol=icmp
&DestCidrIp=10.0.0.0/8
&PortRange=-1/-1
&NicType=intranet
&Policy=Allow
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

- Parameters used to determine an out bound security group rule that controls access to another security group: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestGroupOwnerId, and DestGroupId. Sample request:

```
https://ecs.example.com/?Action=AuthorizeSecurityGroupEgress
&SecurityGroupId=sg-bp67acfmazb4ph***
&DestGroupId=sg-bp67acfmazb4pi***
&DestGroupOwnerId=Test@aliyun.com
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
&Policy=Drop
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AuthorizeSecurityGroupEgress	The operation that you want to perform. Set the value to AuthorizeSecurityGroupEgress.
IpProtocol	String	Yes	all	The transport layer protocol. The values are case-sensitive. Valid values: - icmp - gre - tcp - udp - all: All protocols are supported.

Parameter	Type	Required	Example	Description
PortRange	String	Yes	80/80	The range of destination ports that correspond to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the valid port numbers are 1 to 65535. Specify a port range in the format of <start port number>/<end port number>. Correct example: 1/200. Incorrect example: 200/1. - When the IpProtocol parameter is set to icmp, the port range is -1/-1, which indicates all ports. - When the IpProtocol parameter is set to gre, the port range is -1/-1, which indicates all ports. - When IpProtocol is set to all, the port range is -1/-1, which indicates all ports.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the source security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmxazb4p-h***	The ID of the source security group.
DestGroupId	String	No	sg-bp67acfmxazb4p-j***	The ID of the destination security group. - You must specify at least one of the DestGroupId and DestCidrIp parameters. - If DestGroupId is specified but DestCidrIp is not, the NicType parameter can be set only to intranet. - If both DestGroupId and DestCidrIp are specified, DestCidrIp takes precedence.

Parameter	Type	Required	Example	Description
DestGroupOwnerId	Long	No	12345678910	The ID of the Apsara Stack tenant account that manages the destination security group when you create a security group rule across accounts. - If both DestGroupOwnerId and DestGroupOwnerAccount are empty, the rule is created to control access to another security group in your Apsara Stack tenant account. - If DestCidrIp is specified, DestGroupOwnerId is ignored.
DestGroupOwnerAccount	String	No	Test@aliyun.com	The Apsara Stack tenant account that manages the destination security group when you create a security group rule across accounts. - If both DestGroupOwnerAccount and DestGroupOwnerId are empty, the rule is created to control access to another security group in your Apsara Stack tenant account. - If DestCidrIp is specified, DestGroupOwnerAccount is ignored.
DestCidrIp	String	No	10.0.0.0/8	The range of destination IPv4 addresses. IPv4 addresses and CIDR blocks are supported. This parameter is empty by default.
Ipv6DestCidrIp	String	No	2001:db8:1233:1a00::***	The range of destination IPv6 addresses. IPv6 addresses and CIDR blocks are supported. This parameter is empty by default.  Note Only IP addresses in VPCs can be specified.
SourceCidrIp	String	No	10.0.0.0/8	The range of source IPv4 addresses. IPv4 addresses and CIDR blocks are supported. This parameter is empty by default.

Parameter	Type	Required	Example	Description
Ipv6SourceCidrIp	String	No	2001:db8:1234:1a00::***	The range of source IPv6 addresses. IPv6 addresses and CIDR blocks are supported. This parameter is empty by default.  Note Only IP addresses in VPCs can be specified.
SourcePortRange	String	No	80/80	The range of source ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the valid port numbers are 1 to 65535. Specify a port range in the format of <start port number>/<end port number>. Correct example: 1/200. Incorrect example: 200/1. - When the IpProtocol parameter is set to icmp, the port range is -1/-1, which indicates all ports. - When the IpProtocol parameter is set to gre, the port range is -1/-1, which indicates all ports. - When IpProtocol is set to all, the port range is -1/-1, which indicates all ports.
Policy	String	No	accept	The access control policy. Valid values: - accept: grants access. - drop: denies access without returning a rejection response. Default value: accept.
Priority	String	No	1	The priority of the security group rule. Valid values: 1 to 100. Default value: 1.

Parameter	Type	Required	Example	Description
NicType	String	No	intranet	The NIC type of the security group rule when the security group is in the classic network. Valid values: • internet • intranet ◦ If the security group is in a VPC, the parameter is set to intranet by default and cannot be modified. ◦ If DestGroupId is specified but DestCidrIp is not, this parameter can be set only to intranet. Default value: internet.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence in ECS Developer Guide.
Description	String	No	Manually authorize SSH port 22 - RuleDemo	The description of the security group rule. The description must be 1 to 512 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=AuthorizeSecurityGroupEgress
&IpProtocol=tcp
&PortRange=80/80
&RegionId=cn-qingdao-env17-d01
&SecurityGroupId=sg-bp67acfmazb4ph***
&<Common request parameters>
```

Sample success responses

XML format

```
<AuthorizeSecurityGroupEgressResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</AuthorizeSecurityGroupEgressResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist in this account. Check whether the security group ID is correct.
404	InvalidDestGroupId.NotFound	The DestGroupId provided does not exist in our records.	The error message returned because the specified DestGroupId parameter does not exist.
400	OperationDenied	The specified IpProtocol does not exist or IpProtocol and PortRange do not match.	The error message returned because the specified IpProtocol parameter does not exist or does not match the specified port range.
400	InvalidIpProtocol.Malformed	The specified parameter "PortRange" is not valid.	The error message returned because the specified IpProtocol or PortRange parameter is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidDestGroupId.Mismatch	NicType is required or NicType expects intranet.	The error message returned because the NicType parameter is not specified or is not set to intranet.
400	InvalidDestCidrIp.Malformed	The specified parameter "DestCidrIp" is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
403	MissingParameter	The input parameter "DestGroupId" or "DestCidrIp" cannot be both blank.	The error message returned because both the DestGroupId and DestCidrIp parameters are empty.
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned because the specified Policy parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist.
400	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned because the specified NIC type conflicts with the authorization record.
403	AuthorizationLimitExceed	The limit of authorization records in the security group reaches.	The error message returned because the maximum number of rules in the security group has been reached.
403	InvalidParamter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned because the source security group is the same as the destination security group.
400	InvalidDestGroupId.Mismatch	Specified security group and destination group are not in the same VPC.	The error message returned because the specified source and destination security groups do not belong to the same VPC.
400	InvalidDestGroup.NotFound	Specified destination security group does not exist.	The error message returned because the specified DestGroupId parameter does not exist.
400	VPCDisabled	Can't use the SecurityGroup in VPC.	The error message returned because the VPC does not support security groups.

HTTP status code	Error code	Error message	Description
400	InvalidPriority.Malformed	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidDestCidrIp.Malformed	The specified parameter DestCidrIp is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InvalidNetworkType.Conflict	The specified SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned because the network type of the destination security group is different from that of the source security group.
403	InvalidSecurityGroupId.IsSame	The authorized SecurityGroupId should be different from the DestGroupId.	The error message returned because the ID of the source security group is the same as that of the destination security group.
400	InvalidDestCidrIp.Malformed	The parameter DestCidrIp is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
403	InvalidNetworkType.Conflict	The parameter SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned because the network type of the specified security group is different from that of the source group.
400	InvalidNicType.ValueNotSupported	The parameter NicType is not valid.	The error message returned because the specified NicType parameter is invalid.
400	InvalidSecurityGroupDiscription.Malformed	The specified security group rule description is not valid.	The error message returned because the specified Description parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidSecurityGroup.InvalidNetworkType	The specified security group network type is not support this operation, please check the security group network types. For VPC security groups, ClassicLink must be enabled.	The error message returned because the operation is not supported while the security group is of the current network type. You must enable ClassicLink for security groups in VPCs.
400	MissingParameter.Dest	Either DestCidrIp or DestGroupId must be specified.	The error message returned because both the DestCidrIp and DestGroupId parameters are empty.
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP, ICMP, GRE or All.	The error message returned because the specified IpProtocol parameter is invalid. The valid values of this parameter are tcp, udp, icmp, gre, and all.
400	InvalidSecurityGroupId.Malformed	The specified parameter "SecurityGroupId" is not valid.	The error message returned because the specified SecurityGroupId parameter is invalid.
400	InvalidParameter.Conflict	The specified SourceCidrIp should be different from the DestCidrIp.	The error message returned because the value of SourceCidrIp is the same as that of DestCidrIp.
500	InvalidGressFlow.Malformed	The specified parameter GressFlow is not valid,it cause by internal,try calling again.	The error message returned because the specified GressFlow parameter is invalid.
400	InvalidSourcePortRange.Malformed	The specified parameter "SourcePortRange" is not valid.	The error message returned because the specified SourcePortRange parameter is invalid.
400	InvalidParam.SourceCidrIp	%s	The error message returned because the specified SourceCidrIp parameter is invalid.
400	InvalidParam.DestIp	%s	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned because the specified Ipv6DestCidrIp parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv6 address under an IPv4 protocol by mistake.
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv4 address under an IPv6 protocol by mistake.
400	ILLEGAL_IPV6_CIDR	%s	The error message returned because the specified IPv6 address is invalid.

5.1.12.4. RevokeSecurityGroup

You can call this operation to delete an inbound security group rule. After the rule is deleted, the access control implemented by it is removed.

Description

In the security group-related API documents, traffic is sent by the source device and received at the destination device.

- You can determine an inbound rule by specifying one of the following groups of parameters. You cannot determine a security group rule by specifying only one parameter.
 - Parameters used to specify an inbound security group rule that controls access from specified ranges of IP addresses: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp, and SourceCidrIp (optional).
 - Parameters used to specify an inbound security group rule that controls access from a specified security group: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), DestGroupOwnerAccount, and DestGroupId.
- If the security group rule to be deleted does not exist, the RevokeSecurityGroup operation succeeds but no rule is deleted.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RevokeSecurityGroup	The operation that you want to perform. Set the value to RevokeSecurityGroup.
IpProtocol	String	Yes	all	The transport layer protocol. The values are case-sensitive. Valid values: - icmp - icmpv6 - gre - tcp - udp - all: All protocols are supported.
PortRange	String	Yes	1/200	The range of destination ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the valid port numbers are 1 to 65535. Specify a port range in the format of <start port number>/<end port number>. Correct example: 1/200. Incorrect example: 200/1. - When the IpProtocol parameter is set to icmp, the port range is -1/-1, which indicates all ports. - When the IpProtocol parameter is set to gre, the port range is -1/-1, which indicates all ports. - When IpProtocol is set to all, the port range is -1/-1, which indicates all ports.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the destination security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmazb4p****	The ID of the destination security group.

Parameter	Type	Required	Example	Description
DestCidrIp	String	No	10.0.0.0/8	The range of destination IPv4 addresses. IPv4 addresses and CIDR blocks are supported. Default value: 0.0.0.0/0.
Ipv6DestCidrIp	String	No	2001:db8:1233:1a00::***	The range of destination IPv6 addresses. IPv6 addresses and CIDR blocks are supported.  Note Only IPv6 addresses in VPCs are supported. This parameter is empty by default.
SourceGroupId	String	No	sg-bp67acfmxb4p****	The ID of the source security group. - You must specify at least one of the SourceGroupId and SourceCidrIp parameters. - If SourceGroupId is specified and SourceCidrIp is not, the value of NicType can be set only to intranet. - If both SourceGroupId and SourceCidrIp are specified, SourceCidrIp takes precedence.
SourceGroupOwnerId	Long	No	12345678910	The ID of the Apsara Stack tenant account that manages the source security group when you delete a security group rule across accounts. - If both SourceGroupOwnerId and SourceGroupOwnerAccount are empty, access control on another security group under your account is revoked. - If SourceCidrIp is specified, the SourceGroupOwnerId parameter is ignored.

Parameter	Type	Required	Example	Description
SourceGroupOwnerAccount	String	No	Test@aliyun.com	The Apsara Stack tenant account that manages the source security group when you delete a security group rule across accounts. - If both SourceGroupOwnerId and SourceGroupOwnerAccount are empty, access control on another security group under your account is revoked. - If SourceCidrIp is specified, the SourceGroupOwnerAccount parameter is ignored.
SourceCidrIp	String	No	10.0.0.0/8	The range of source IPv4 addresses. IPv4 addresses and CIDR blocks are supported. Default value: 0.0.0.0/0.
Ipv6SourceCidrIp	String	No	2001:db8:1234:1a00::***	The range of source IPv6 addresses. IPv6 addresses and CIDR blocks are supported.  Note Only IPv6 addresses in VPCs are supported. This parameter is empty by default.
SourcePortRange	String	No	80/80	The range of source ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the valid port numbers are 1 to 65535. Specify a port range in the format of <start port number>/<end port number>. Correct example: 1/200. Incorrect example: 200/1. - When the IpProtocol parameter is set to icmp, the port range is -1/-1, which indicates all ports. - When the IpProtocol parameter is set to gre, the port range is -1/-1, which indicates all ports. - When IpProtocol is set to all, the port range is -1/-1, which indicates all ports.

Parameter	Type	Required	Example	Description
Policy	String	No	accept	The access control policy. Valid values: - accept: grants access. - drop: denies access without returning a rejection response. Default value: accept.
Priority	String	No	1	The priority of the security group rule. Valid values: 1 to 100. Default value: 1.
NicType	String	No	intranet	The NIC type of the security group rule when the security group is in the classic network. Valid values: - internet - intranet - If the security group is in a VPC, the parameter is set to intranet by default and cannot be modified. - If DestGroupId is specified but DestCidrIp is not, the NicType parameter can be set only to intranet. Default value: internet.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence in ECS Developer Guide.
Description	String	No	TestDescription	The description of the security group rule.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=RevokeSecurityGroup
&SecurityGroupId=sg-bp67acfmazb4p****
&SourceGroupId=sg-bp67acfmazb4p****
&SourceGroupOwnerAccount=Test@aliyun.com
&IpProtocol=tcp
&PortRange=80/80
&Priority=1
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

XML format

```
<RevokeSecurityGroupResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</RevokeSecurityGroupResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist in this account. Check whether the security group ID is correct.
400	InvalidSecurityGroupId.Malformed	The specified SecurityGroupId is not valid.	The error message returned because the specified SecurityGroupId parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidIpProtocol.ValueNotSupported	The specified IpProtocol does not exist.	The error message returned because the specified IpProtocol parameter is invalid.
400	InvalidIpPortRange.Malformed	The specified parameter "PortRange" is not valid.	The error message returned because the specified PortRange parameter is invalid.
404	InvalidSourceGroupId.NotFound	The SourceGroupId provided does not exist in our records.	The error message returned because the specified SourceGroupId parameter does not exist.
403	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned because the specified NIC type conflicts with the authorization record.
403	InvalidGroupAuthorizedItem.NotFound	Specified group authorized item does not exist in our records.	The error message returned because the specified authorized security group does not exist.
400	InvalidSourceCidrIp.Malformed	The specified parameter "SourceCidrIp" is not valid.	The error message returned because the specified SourceCidrIp parameter is invalid.
400	MissingParameter	The input parameter "SourceGroupId" or "SourceCidrIp" cannot be both blank.	The error message returned because both the SourceGroupId and SourceCidrIp parameters are empty.
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned because the specified Policy parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist.
400	InvalidSourceGroupId.Mismatch	Specified security group and source group are not in the same VPC.	The error message returned because the destination security group and the source security group do not belong to the same VPC.
400	VPCDisabled	Can't use the SecurityGroup in VPC.	The error message returned because the VPC does not support security groups.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	MissingParameter.Source	Either SourceCidrIp or SourceGroupId must be specified.	The error message returned because both the SourceCidrIp and SourceGroupId parameters are empty.
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP, ICMP, GRE or ALL.	The error message returned because the specified IpProtocol parameter is invalid. The valid values of this parameter are tcp, udp, icmp, gre, and all.
400	InvalidPriority.Malformed	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidParameter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned because the destination security group is the same as the source security group.
400	InvalidDestCidrIp.Malformed	The specified parameter DestCidrIp is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.SourceCidrIp	%s	The error message returned because the specified SourceCidrIp parameter is invalid.
400	InvalidParam.DestIp	%s	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned because the specified Ipv6DestCidrIp parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv6 address under an IPv4 protocol by mistake.
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv4 address under an IPv6 protocol by mistake.
400	ILLEGAL_IPV6_CIDR	%s	The error message returned because the specified IPv6 address is invalid.
400	InvalidSourcePortRange.Malformed	The specified parameter "SourcePortRange" is not valid.	The error message returned because the specified SourcePortRange parameter is invalid.
400	InvalidSecurityGroupDescription.Malformed	The specified security group rule description is not valid.	The error message returned because the specified Description parameter is invalid.

5.1.12.5. JoinSecurityGroup

You can call this operation to add an ECS instance to a security group.

Description

When you call this operation, take note of the following items:

- Before you add an ECS instance to a security group, make sure that the instance is in the **Stopped** (Stopped) or **Running** (Running) state.
- An instance can belong to a maximum of five security groups.
- You can request to increase the maximum number of security groups to which an instance can belong to up to 16.
- Each security group can contain a maximum of 1,000 instances.
- The specified security group and the instance must belong to the same region.
- The security group and the instance must be of the same network type. If the network type is VPC,

the security group and the instance must belong to the same VPC.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	JoinSecurityGroup	The operation that you want to perform. Set the value to JoinSecurityGroup.
InstanceId	String	Yes	i-bp67acfmxazb4ph***	The ID of the instance.
SecurityGroupId	String	Yes	sg-bp67acfmxazb4ph***	The ID of the security group. You can call the DescribeSecurityGroups operation to query the most recent security group list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=JoinSecurityGroup
&InstanceId=i-bp67acfmxazb4ph***
&SecurityGroupId=sg-bp67acfmxazb4ph***
&<Common request parameters>
```

Sample success responses

XML **format**

```
<JoinSecurityGroupResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</JoinSecurityGroupResponse>
```

JSON **format**

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist in this account. Check whether the security group ID is correct.
400	InstanceSecurityGroupLimitExceeded	Exceeding the allowed amount of security groups that an instance can be in.	The error message returned because the maximum number of security groups to which the instance can belong has been reached.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	SecurityGroupInstanceLimitExceeded	The maximum number of instances in a security group is exceeded.	The error message returned because the maximum number of instances in the specified security group has been reached.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
400	InvalidInstanceId.Mismatch	Specified instance and security group are not in the same VPC.	The error message returned because the specified instance and security group do not belong to the same VPC or one of the following cases occurs: 1. The security group is of the VPC network type but the instance is not. 2. The instance is of the VPC network type but the security group is not.
403	InvalidInstanceId.AlreadyExists	The specified instance already exists in the specified security group.	The error message returned because the specified instance already exists in the specified security group.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	SecurityGroupInstanceLimitExceeded	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	AclLimitExceed	%s	The error message returned because the value of AccessPoint exceeds the upper limit.
403	InstanceSecurityGroupLimitExceeded	%s	The error message returned because the maximum number of security groups to which the instance can belong has been reached.
400	InvalidInstanceID.Malformed	The specified parameter "InstanceID" is not valid.	The error message returned because the specified InstanceID parameter is invalid.

5.1.12.6. LeaveSecurityGroup

You can call this operation to remove an ECS instance from a security group.

Description

When you call this operation, take note of the following items:

- Before you remove an ECS instance from a security group, make sure that the instance is in the **Stopped** (Stopped) or **Running** (Running) state.
- An instance must belong to at least one security group. Therefore, if the instance to be removed belongs to only a single security group, the LeaveSecurityGroup request fails.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	LeaveSecurityGroup	The operation that you want to perform. Set the value to LeaveSecurityGroup.

Parameter	Type	Required	Example	Description
InstanceId	String	Yes	i-bp67acfmxazb4ph***	The ID of the instance.
SecurityGroupId	String	Yes	sg-bp67acfmxazb4ph***	The ID of the security group.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=LeaveSecurityGroup
&InstanceId=i-bp67acfmxazb4ph***
&SecurityGroupId=sg-bp67acfmxazb4ph***
&<Common request parameters>
```

Sample success responses

XML **format**

```
<LeaveSecurityGroupResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</LeaveSecurityGroupResponse>
```

JSON **format**

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist in this account. Check whether the security group ID is correct.
403	InstanceLastSecurityGroup	The specified security group is the last security group for the instance.	The error message returned because the specified security group is the only security group to which the instance belongs.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InstanceNotInSecurityGroup	The instance not in the group.	The error message returned because the specified instance does not belong to the specified security group.
504	RequestTimeout	The request encounters an upstream server timeout.	The error message returned because the request is denied due to a timeout error of the upstream server.
400	InvalidInstanceId.Malformed	The specified parameter "InstanceId" is not valid.	The error message returned because the specified InstanceId parameter is invalid.

5.1.12.7. DeleteSecurityGroup

You can call this operation to delete a security group.

Description

Before you delete a security group, make sure that no instances exist in the security group and that the security group is not referenced by rules of other security groups. Otherwise, the DeleteSecurityGroup request fails. You can call the DescribeSecurityGroupReferences operation to check whether the security group is referenced by rules of other security groups.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteSecurityGroup	The operation that you want to perform. Set the value to DeleteSecurityGroup.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp1fg655nh68xyz9i***	The ID of the security group.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=DeleteSecurityGroup
&RegionId=cn-qingdao-env17-d01
&SecurityGroupId=sg-bp1fg655nh68xyz9i***
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteSecurityGroupResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</DeleteSecurityGroupResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	DependencyViolation	There is still instance(s) in the specified security group.	The error message returned because instances exist in the security group. Remove the instances and then try again.
403	DependencyViolation	The specified security group has been authorized in another one.	The error message returned because the specified security group is referenced by rules of another security group.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

5.1.12.8. DescribeSecurityGroupAttribute

You can call this operation to query the rules of a security group.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSecurityGroupAttribute	The operation that you want to perform. Set the value to DescribeSecurityGroupAttribute.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp1gwx6bznpjvhu3g***	The ID of the security group.

Parameter	Type	Required	Example	Description
NicType	String	No	intranet	The NIC type of the security group rule. - Default value for rules of security groups in the classic network: internet. Valid values for rules of security groups in the classic network: - internet - intranet  Note You can query security group rules of only one NIC type in a single call. To query security group rules of both NIC types, call the operation twice. - Default value for rules of security groups in VPCs: intranet. Valid value for rules of security groups in VPCs: - intranet  Note If you set this parameter to internet or leave this parameter empty, the value of intranet is automatically used.
Direction	String	No	all	The direction in which the security group rule is applied. Valid values: - egress: outbound - ingress: inbound - all: inbound and outbound Default value: all.

Response parameters

Parameter	Type	Example	Description
Description	String	FinanceDept	The description of the security group.

Parameter	Type	Example	Description
InnerAccessPolicy	String	Accept	The access control policy of the security group. Valid values: - Accept: All instances in the security group can communicate with each other. - drop: All instances in the security group are isolated from each other.
Permissions	Array of Permission		Details about the security group rules.
Permission			
CreateTime	String	2018-12-12T07:28:38Z	The time when the security group rule was created. The time is displayed in UTC.
Description	String	FinanceDept	The description of the security group.
DestCidrIp	String	0.0.0.0/0	The range of destination IP addresses for outbound access control
DestGroupId	String	sg-securitygroupid1	The ID of the destination security group for outbound access control.
DestGroupName	String	SecurityGuard	The name of the destination security group.
DestGroupOwnerAccount	String	SecurityGuard	The Apsara Stack tenant account that manages the destination security group.
Direction	String	ingress	The direction in which the security group rule is applied.
IpProtocol	String	TCP	The transport layer protocol.
Ipv6DestCidrIp	String	2001:db8:1233:1a00::***	The range of destination IPv6 addresses.
Ipv6SourceCidrIp	String	2001:db8:1234:1a00::***	The range of source IPv6 addresses.
NicType	String	intranet	The NIC type of the security group rule.

Parameter	Type	Example	Description
Policy	String	Accept	The access control policy.
PortRange	String	80/80	The port range.
Priority	String	1	The priority of the rule.
SourceCidrIp	String	0.0.0.0/0	The range of source IP addresses for inbound access control.
SourceGroupId	String	sg-securitygroupid2	The ID of the source security group for inbound access control.
SourceGroupName	String	FinanceDeptSourceG****	The name of the source security group.
SourceGroupOwnerAccount	String	FinanceGroupO****	The Apsara Stack tenant account that manages the source security group.
SourcePortRange	String	80/80	The source port range.
RegionId	String	cn-qingdao-env17-d01	The ID of the region.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SecurityGroupId	String	sg-bp1gxw6bznpjvhu3g***	The ID of the destination security group.
SecurityGroupName	String	FinanceSecurityG****	The name of the security group.
VpcId	String	vpc-bp1opxu1zkhn00gzv2***	The ID of the VPC. If a VPC ID is returned, the network type of the security group is VPC. If no VPC ID is returned, the network type of the security group is classic network.

Examples

Sample requests


```
https://ecs.example.com/?Action=DescribeSecurityGroupAttribute
&SecurityGroupId=sg-bplgxw6bznjjvhu3g***
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

XML **format**

```
<DescribeSecurityGroupAttributeResponse>
  <SecurityGroupId>sg-bplgxw6bznjjvhu3g***</SecurityGroupId>
  <InnerAccessPolicy>Accept</InnerAccessPolicy>
  <SecurityGroupName>FinanceSecurityG***</SecurityGroupName>
  <Description>FinanceDept</Description>
  <RegionId>cn-qingdao-env17-d01</RegionId>
  <RequestId>A72322C1-47C0-491E-8088-8B17E4EA859F</RequestId>
  <Permissions>
    <Permission>
      <SourceCidrIp>10.0.0.0/8</SourceCidrIp>
      <Description></Description>
      <DestCidrIp></DestCidrIp>
      <NicType>intranet</NicType>
      <DestGroupName></DestGroupName>
      <PortRange>22/22</PortRange>
      <DestGroupId></DestGroupId>
      <Ipv6DestCidrIp></Ipv6DestCidrIp>
      <Direction>ingress</Direction>
      <Priority>1</Priority>
      <IpProtocol>TCP</IpProtocol>
      <SourcePortRange></SourcePortRange>
      <SourceGroupOwnerAccount></SourceGroupOwnerAccount>
      <Policy>Accept</Policy>
      <CreateTime>2018-12-12T07:28:38Z</CreateTime>
      <SourceGroupId></SourceGroupId>
      <DestGroupOwnerAccount></DestGroupOwnerAccount>
      <Ipv6SourceCidrIp></Ipv6SourceCidrIp>
      <SourceGroupName></SourceGroupName>
    </Permission>
    <Permission>
      <SourceCidrIp>0.0.0.0/0</SourceCidrIp>
      <Description></Description>
      <DestCidrIp></DestCidrIp>
      <NicType>intranet</NicType>
      <DestGroupName></DestGroupName>
      <PortRange>443/443</PortRange>
      <DestGroupId></DestGroupId>
      <Ipv6DestCidrIp></Ipv6DestCidrIp>
      <Direction>ingress</Direction>
      <Priority>1</Priority>
      <IpProtocol>TCP</IpProtocol>
      <SourcePortRange></SourcePortRange>
      <SourceGroupOwnerAccount></SourceGroupOwnerAccount>
      <Policy>Accept</Policy>
      <CreateTime>2018-12-12T07:28:38Z</CreateTime>
```

```

        <SourceGroupId></SourceGroupId>
        <DestGroupOwnerAccount></DestGroupOwnerAccount>
        <Ipv6SourceCidrIp></Ipv6SourceCidrIp>
        <SourceGroupName></SourceGroupName>
    </Permission>
    <Permission>
        <SourceCidrIp>10.0.0.0/8</SourceCidrIp>
        <Description></Description>
        <DestCidrIp></DestCidrIp>
        <NicType>intranet</NicType>
        <DestGroupName></DestGroupName>
        <PortRange>80/80</PortRange>
        <DestGroupId></DestGroupId>
        <Ipv6DestCidrIp></Ipv6DestCidrIp>
        <Direction>ingress</Direction>
        <Priority>1</Priority>
        <IpProtocol>TCP</IpProtocol>
        <SourcePortRange></SourcePortRange>
        <SourceGroupOwnerAccount></SourceGroupOwnerAccount>
        <Policy>Accept</Policy>
        <CreateTime>2018-12-12T07:28:38Z</CreateTime>
        <SourceGroupId></SourceGroupId>
        <DestGroupOwnerAccount></DestGroupOwnerAccount>
        <Ipv6SourceCidrIp></Ipv6SourceCidrIp>
        <SourceGroupName></SourceGroupName>
    </Permission>
    <Permission>
        <SourceCidrIp>10.0.0.0/8</SourceCidrIp>
        <Description></Description>
        <DestCidrIp></DestCidrIp>
        <NicType>intranet</NicType>
        <DestGroupName></DestGroupName>
        <PortRange>-1/-1</PortRange>
        <DestGroupId></DestGroupId>
        <Ipv6DestCidrIp></Ipv6DestCidrIp>
        <Direction>ingress</Direction>
        <Priority>1</Priority>
        <IpProtocol>ICMP</IpProtocol>
        <SourcePortRange>-1/-1</SourcePortRange>
        <SourceGroupOwnerAccount></SourceGroupOwnerAccount>
        <Policy>Accept</Policy>
        <CreateTime>2018-12-12T07:28:38Z</CreateTime>
        <SourceGroupId></SourceGroupId>
        <DestGroupOwnerAccount></DestGroupOwnerAccount>
        <Ipv6SourceCidrIp></Ipv6SourceCidrIp>
        <SourceGroupName></SourceGroupName>
    </Permission>
</Permissions>
    <VpcId>vpc-bp1opxulzkhn00gzv2***</VpcId>
</DescribeSecurityGroupAttributeResponse>

```

JSON **format**

```

{
  "SecurityGroupId": "sg-bplgxw6bznjjvhu3g****",
  "InnerAccessPolicy": "Accept",
  "SecurityGroupName": "FinanceSecurityG****",
  "Description": "FinanceDept",
  "RegionId": "cn-qingdao-env17-d01",
  "RequestId": "A72322C1-47C0-491E-8088-8B17E4EA859F",
  "Permissions": {
    "Permission": [
      {
        "SourceCidrIp": "10.0.0.0/8",
        "Description": "",
        "DestCidrIp": "",
        "NicType": "intranet",
        "DestGroupName": "",
        "PortRange": "22/22",
        "DestGroupId": "",
        "Ipv6DestCidrIp": "",
        "Direction": "ingress",
        "Priority": 1,
        "IpProtocol": "TCP",
        "SourcePortRange": "",
        "SourceGroupOwnerAccount": "",
        "Policy": "Accept",
        "CreateTime": "2018-12-12T07:28:38Z",
        "SourceGroupId": "",
        "DestGroupOwnerAccount": "",
        "Ipv6SourceCidrIp": "",
        "SourceGroupName": ""
      },
      {
        "SourceCidrIp": "0.0.0.0/0",
        "Description": "",
        "DestCidrIp": "",
        "NicType": "intranet",
        "DestGroupName": "",
        "PortRange": "443/443",
        "DestGroupId": "",
        "Ipv6DestCidrIp": "",
        "Direction": "ingress",
        "Priority": 1,
        "IpProtocol": "TCP",
        "SourcePortRange": "",
        "SourceGroupOwnerAccount": "",
        "Policy": "Accept",
        "CreateTime": "2018-12-12T07:28:38Z",
        "SourceGroupId": "",
        "DestGroupOwnerAccount": "",
        "Ipv6SourceCidrIp": "",
        "SourceGroupName": ""
      },
      {
        "SourceCidrIp": "0.0.0.0/0",
        "Description": "",
        "DestCidrIp": ""
      }
    ]
  }
}

```

```

        "DestCidrIp": "",
        "NicType": "intranet",
        "DestGroupName": "",
        "PortRange": "80/80",
        "DestGroupId": "",
        "Ipv6DestCidrIp": "",
        "Direction": "ingress",
        "Priority": 1,
        "IpProtocol": "TCP",
        "SourcePortRange": "",
        "SourceGroupOwnerAccount": "",
        "Policy": "Accept",
        "CreateTime": "2018-12-12T07:28:38Z",
        "SourceGroupId": "",
        "DestGroupOwnerAccount": "",
        "Ipv6SourceCidrIp": "",
        "SourceGroupName": ""
    },
    {
        "SourceCidrIp": "10.0.0.0/8",
        "Description": "",
        "DestCidrIp": "",
        "NicType": "intranet",
        "DestGroupName": "",
        "PortRange": "-1/-1",
        "DestGroupId": "",
        "Ipv6DestCidrIp": "",
        "Direction": "ingress",
        "Priority": 1,
        "IpProtocol": "ICMP",
        "SourcePortRange": "-1/-1",
        "SourceGroupOwnerAccount": "",
        "Policy": "Accept",
        "CreateTime": "2018-12-12T07:28:38Z",
        "SourceGroupId": "",
        "DestGroupOwnerAccount": "",
        "Ipv6SourceCidrIp": "",
        "SourceGroupName": ""
    }
]
},
"VpcId": "vpc-bp1opxulzkhn00gzv2***"
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist in this account. Check whether the security group ID is correct.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	InvalidParamter	Invalid Parameter	The error message returned because a specified parameter is invalid.
400	InvalidSecurityGroupId.Malformed	The specified parameter "SecurityGroupId" is not valid.	The error message returned because the specified SecurityGroupId parameter is invalid.

5.1.12.9. DescribeSecurityGroups

Queries the basic information about security groups.

Description

The basic information about security groups includes their IDs and descriptions. In the response, security groups are displayed in descending order of their IDs.

When you use Alibaba Cloud CLI to call an API operation, you must specify request parameters of different data types in required formats.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSecurityGroups	The operation that you want to perform. Set the value to DescribeSecurityGroups.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-qingdao-XXXXX-d01	The region ID of the security group. You can call the DescribeRegions operation to query the most recent region list.
VpcId	String	No	vpc-bp67acfmxb4p****	The ID of the virtual private cloud (VPC) to which the security group belongs.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10.
SecurityGroupIds	String	No	["sg-bp67acfmxb4p****", "sg-bp67acfmxb4p****", "sg-bp67acfmxb4p****", "...]	The IDs of the security groups. Specify this parameter in a JSON array that consists of up to 100 security group IDs. Separate multiple security group IDs with commas (,).
Tag.N.value	String	No	null	The value of tag N of the security group.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure future compatibility.
Tag.N.key	String	No	null	The key of tag N of the security group.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.

Parameter	Type	Required	Example	Description
Tag.N.Key	String	No	TestKey	The key of tag N of the security group. Valid values of N: 1 to 20.
Tag.N.Value	String	No	TestValue	The value of tag N of the security group. Valid values of N: 1 to 20.
NetworkType	String	No	vpc	The network type of the security group. Valid values: - vpc - classic
SecurityGroupId	String	No	sg-bp67acfmxyzb4p****	The ID of the security group.
SecurityGroupName	String	No	SGTestName	The name of the security group.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: - true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether RAM users are granted required permissions, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, the DryRunOperation error code is returned. - false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned, and the request is made. Default value: false.

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The number of the returned page.

Parameter	Type	Example	Description
PageSize	Integer	1	The number of entries returned per page.
RegionId	String	cn-qingdao-XXXXX-d01	The region ID of the security group.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE*****	The ID of the request.
SecurityGroups	Array of SecurityGroup		The details of the security groups.
SecurityGroup			
AvailableInstanceAmount	Integer	880	This parameter is unavailable.
CreationTime	String	2017-12-05T22:40:00Z	The time when the security group was created. The time follows the ISO 8601 standard in the yyyy-MM-ddT hh:mmZ format. The time is displayed in UTC.
Description	String	TestDescription	The description of the security group.
EcsCount	Integer	120	This parameter is unavailable.
ResourceGroupId	String	rg-bp67acfmazb4p***	
SecurityGroupId	String	sg-bp67acfmazb4p***	The ID of the security group.
SecurityGroupName	String	SGTestName	The name of the security group.
SecurityGroupType	String	normal	The type of the security group. Valid values: - normal: basic security group - enterprise: advanced security group
ServiceId	Long	111111111	This parameter is unavailable.
ServiceManaged	Boolean	false	This parameter is unavailable.

Parameter	Type	Example	Description
Tags	Array of Tag		The tags of the security group.
Tag			
TagKey	String	TestKey	The tag key of the security group.
TagValue	String	TestValue	The tag value of the security group.
VpcId	String	vpc-bp67acfmazb4p*** *	The ID of the VPC to which the security group belongs.
TotalCount	Integer	49	The total number of security groups.

Examples

Sample requests

```
http(s)://ecs.example.com/?Action=DescribeSecurityGroups
&RegionId=cn-qingdao-XXXXX-d01
&VpcId=vpc-bp67acfmazb4p****
&PageSize=10
&PageNumber=1
&<Common request parameters>
```

Sample success responses

XML format

```
<SecurityGroups>
  <EcsCount>120</EcsCount>
  <Description>TestDescription</Description>
  <VpcId>vpc-bp67acfmazb4p****</VpcId>
  <SecurityGroupName>SGTestName</SecurityGroupName>
  <SecurityGroupId>sg-bp67acfmazb4p****</SecurityGroupId>
  <SecurityGroupType>normal</SecurityGroupType>
  <CreationTime>2017-12-05T22:40:00Z</CreationTime>
  <Tags>
    <TagKey>TestKey</TagKey>
    <TagValue>TestValue</TagValue>
  </Tags>
</SecurityGroups>
<TotalCount>49</TotalCount>
<PageSize>1</PageSize>
<RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE*****</RequestId>
<PageNumber>1</PageNumber>
<RegionId>cn-qingdao-XXXXX-d01</RegionId>
```

JSON format

```
{
  "SecurityGroups": {
    "EcsCount": 120,
    "Description": "TestDescription",
    "VpcId": "vpc-bp67acfmazb4p****",
    "SecurityGroupName": "SGTestName",
    "SecurityGroupId": "sg-bp67acfmazb4p****",
    "SecurityGroupType": "normal",
    "CreationTime": "2017-12-05T22:40:00Z",
    "Tags": {
      "TagKey": "TestKey",
      "TagValue": "TestValue"
    }
  },
  "TotalCount": 49,
  "PageSize": 1,
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE****",
  "PageNumber": 1,
  "RegionId": "cn-qingdao-XXXXX-d01"
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

5.1.12.10. DescribeSecurityGroupReferences

You can call this operation to query whether one or more security groups are referenced by rules of other security groups.

Description

When you call this operation, take note of the following items:

- Security group-level authorization includes authorization for inbound and outbound traffic.
- A maximum of 100 entries can be returned each time.
- If you fail to delete a security group by calling the `DeleteSecurityGroup` operation, you can call the `DescribeSecurityGroupReferences` operation to check whether the security group is referenced by rules of other security groups. If the security group is referenced by a rule of another security group, you must remove the reference before you can delete the security group.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSecurityGroupReferences	The operation that you want to perform. Set the value to DescribeSecurityGroupReferences.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the security group.
SecurityGroupId.N	RepeatList	Yes	sg-bp1euoep32o6kvrw****	The ID of security group N. Valid values of N: 1 to 10.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SecurityGroupReferences	Array of SecurityGroupReference		Details about the references to the specified security groups.
SecurityGroupReference			
ReferencingSecurityGroups	Array of ReferencingSecurityGroup		Details about the security groups whose rules are referencing the specified security groups.
ReferencingSecurityGroup			
AliUid	String	1557809237**	The ID of the Apsara Stack tenant account to which the security group belongs.
SecurityGroupId	String	sg-bp1euoep32o6kvrw****	The ID of the security group whose rules reference the specified security group
SecurityGroupId	String	sg-bp67acfmxazb4pj**	The ID of the specified security group.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeSecurityGroupReferences
&RegionId=cn-qingdao-env17-d01
&SecurityGroupId.1=sg-bpleuoep32o6kvrw****
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeSecurityGroupReferencesResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
  <SecurityGroupReferences>
    <SecurityGroupReference>
      <SecurityGroupId>sg-bpleuoep32o6kvrw****</SecurityGroupId>
      <ReferencingSecurityGroups>
        <ReferencingSecurityGroup>
          <SecurityGroupId>sg-bp67acfmxazb4pi****</SecurityGroupId>
          <AliUid>155780923770</AliUid>
        </ReferencingSecurityGroup>
        <ReferencingSecurityGroup>
          <SecurityGroupId>sg-bp67acfmxazb4pj****</SecurityGroupId>
          <AliUid>155780923770</AliUid>
        </ReferencingSecurityGroup>
      </ReferencingSecurityGroups>
    </SecurityGroupReference>
  </SecurityGroupReferences>
</DescribeSecurityGroupReferencesResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984",
  "SecurityGroupReferences": [
    {
      "SecurityGroupId": "sg-bpleuoep32o6kvrw****",
      "SecurityReferencingGroups": [
        {
          "AliUid": "1557809237**",
          "SecurityGroupId": "sg-bp67acfmxazb4pi****"
        },
        {
          "AliUid": "1557809237**",
          "SecurityGroupId": "sg-bp67acfmxazb4pj****"
        }
      ]
    }
  ]
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidSecurityGroupId.Malformed	The specified parameter SecurityGroupId is essential and size should less than 10	The error message returned because the SecurityGroupId.N parameter must be specified and the value of N cannot exceed 10.
404	InvalidSecurityGroupId.NotFound	The SecurityGroupId provided does not exist in our records.	The error message returned because the specified security group does not exist in this account. Check whether the security group ID is correct.

5.1.12.11. ModifySecurityGroupAttribute

Modifies the name or description of a security group.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifySecurityGroupAttribute	The operation that you want to perform. Set the value to ModifySecurityGroupAttribute.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmxazb4p****	The ID of the security group.
SecurityGroupName	String	No	SecurityGroupTestName	The new name of the security group. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code>. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.

Parameter	Type	Required	Example	Description
Description	String	No	TestDescription	The new description of the security group. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> . This parameter is empty by default.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DCODE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ModifySecurityGroupAttribute
&SecurityGroupId=sg-bp67acfmxazb4p****
&RegionId=cn-qingdao-env17-d01
&SecurityGroupName=SecurityGroupTestName
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifySecurityGroupAttributeResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</ModifySecurityGroupAttributeResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist within this account. Check whether the security group ID is correct.
400	InvalidSecurityGroupName.Malformed	Specified security group name is not valid.	The error message returned because the specified SecurityGroupName parameter is invalid. The SecurityGroupName parameter is empty by default. If this parameter is specified, the specified name is displayed in the ECS console. The name must be 2 to 128 characters in length. It must start with a letter and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It cannot start with http:// or https://.
400	InvalidSecurityGroupDiscription.Malformed	Specified security group description is not valid.	The error message returned because the specified Description parameter is invalid.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because you cannot modify security groups managed by cloud services.

5.1.12.12. ModifySecurityGroupPolicy

You can call this operation to modify the internal access policy of a basic security group. The internal access policies of advanced security groups cannot be modified.

Description

When you call this operation, take note of the following items:

- When InnerAccessPolicy is set to Accept for a security group, the instances in the security group can communicate with each other. The Accept internal access policy takes precedence over user-created security group rules to keep instances in the security group accessible to each other.
- When InnerAccessPolicy is set to Drop for a security group, the instances in the security group are isolated from each other. User-created security group rules take precedence over the Drop internal access policy and can be used to allow access between the instances. For example, you can call the AuthorizeSecurityGroup operation to create an inbound security group rule that allows the instances in the security group to communicate with each other.
- You can call the DescribeSecurityGroupAttribute operation to query the internal access policy of a security group.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifySecurityGroupPolicy	The operation that you want to perform. Set the value to ModifySecurityGroupPolicy.
InnerAccessPolicy	String	Yes	Drop	The internal access policy of the security group. Valid values: - Accept: All instances in the security group can communicate with each other. - Drop: All instances in the security group are isolated from each other. The values are case-insensitive.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmxb4ph***	The ID of the security group.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence in ECS Developer Guide.

Response parameters

Parameter	Type	Example	Description
RequestId	String	CEF72CEB-54B6-4AE8-B225-F876FF7BA984	The ID of the request.

Examples

Sample requests


```
https://ecs.example.com/?Action=ModifySecurityGroupPolicy
&RegionId=cn-qingdao-env17-d01
&SecurityGroupId=sg-bp67acfmazb4ph***
&InnerAccessPolicy=Drop
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifySecurityGroupPolicyResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876xxxxxxx</RequestId>
</ModifySecurityGroupPolicyResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidSecurityGroupId.Malformed	The SecurityGroupId is invalid. Only letters, numbers and underscores are supported. Maximum length is 100 characters.	The error message returned because the specified SecurityGroupId parameter is invalid. The security group ID can be up to 100 characters in length and can contain only letters, digits, and underscores (_).
400	InvalidPolicy.Malformed	The Policy is invalid. Only 'Accept' and 'Drop' are supported. Ignore case.	The error message returned because the specified InnerAccessPolicy parameter is invalid. The valid values of this parameter are Accept and Drop, and these values are case-insensitive.
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist in this account. Check whether the security group ID is correct.

5.1.12.13. ModifySecurityGroupRule

You can call this operation to modify the description of an inbound rule of a security group. You can call this operation to modify only the description of an inbound security group rule. If you want to modify other attributes such as the policy, port range, and authorization objects of the rule, log on to the ECS console.

Description

In the security group-related API documents, inbound traffic refers to the traffic that is sent from the source device and received at the destination device.

You can determine an inbound rule by specifying one of the following groups of parameters. You cannot determine a security group rule by specifying only one parameter.

- Parameters used to specify an inbound security group rule that controls access from specified ranges of IP addresses: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp, and SourceCidrIp (optional).
- Parameters used to control access from other security groups: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), DestGroupOwnerAccount, and DestGroupId.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifySecurityGroupRule	The operation that you want to perform. Set the value to ModifySecurityGroupRule.
IpProtocol	String	Yes	all	The transport layer protocol. The values are case-insensitive. Valid values: - icmp - icmpv6 - gre - tcp - udp - all: All protocols are supported.

Parameter	Type	Required	Example	Description
PortRange	String	Yes	80/80	The range of destination ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the valid port numbers are 1 to 65535. Specify a port range in the format of <start port number>/<end port number>. Correct example: 1/200. Incorrect example: 200/1. - When the IpProtocol parameter is set to icmp, the port range is -1/-1, which indicates all ports. - When the IpProtocol parameter is set to gre, the port range is -1/-1, which indicates all ports. - When IpProtocol is set to all, the port range is -1/-1, which indicates all ports.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the destination security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmxb4p****	The ID of the destination security group.
SourceGroupId	String	No	sg-bp67acfmxb4p****	The ID of the source security group. You must specify at least one of the SourceGroupId and SourceCidrIp parameters. If SourceGroupId is specified but SourceCidrIp is not, the NicType parameter can be set only to intranet. If both SourceGroupId and SourceCidrIp are specified, SourceCidrIp takes precedence.

Parameter	Type	Required	Example	Description
SourceGroupOwnerId	Long	No	12345678910	The ID of the Apsara Stack tenant account that manages the source security group when you configure a security group rule across accounts. - If both SourceGroupOwnerId and SourceGroupOwnerAccount are empty, access permissions are configured for another security group managed by your account. - If SourceCidrIp is specified, the SourceGroupOwnerId parameter is ignored.
SourceGroupOwnerAccount	String	No	Test@aliyun.com	The Apsara Stack tenant account that manages the source security group when you configure a security group rule across accounts. - If both SourceGroupOwnerId and SourceGroupOwnerAccount are empty, access permissions are configured for another security group managed by your account. - If SourceCidrIp is specified, the SourceGroupOwnerAccount parameter is ignored.
SourceCidrIp	String	No	10.0.0.0/8	The range of source IPv4 addresses. IPv4 addresses and CIDR blocks are supported. This parameter is empty by default.
Ipv6SourceCidrIp	String	No	2001:db8:1233:1a00::***	The range of source IPv6 addresses. IPv6 addresses and CIDR blocks are supported.  Note Only IPv6 addresses in VPCs are supported. This parameter is empty by default.

Parameter	Type	Required	Example	Description
SourcePortRange	String	No	80/80	The range of source ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the valid port numbers are 1 to 65535. Specify a port range in the format of <start port number>/<end port number>. Correct example: 1/200. Incorrect example: 200/1. - When the IpProtocol parameter is set to icmp, the port range is -1/-1, which indicates all ports. - When the IpProtocol parameter is set to gre, the port range is -1/-1, which indicates all ports. - When IpProtocol is set to all, the port range is -1/-1, which indicates all ports.
DestCidrIp	String	No	10.0.0.0/8	The range of destination IPv4 addresses. IPv4 addresses and CIDR blocks are supported. This parameter is empty by default.
Ipv6DestCidrIp	String	No	2001:db8:1234:1a00::***	The range of destination IPv6 addresses. IPv6 addresses and CIDR blocks are supported.  Note Only IPv6 addresses in VPCs are supported. This parameter is empty by default.
Policy	String	No	accept	The access control policy. Valid values: - accept: grants access. - drop: denies access without returning a rejection response. Default value: accept.

Parameter	Type	Required	Example	Description
Priority	String	No	1	The priority of the security group rule. Valid values: 1 to 100. Default value: 1.
NicType	String	No	intranet	The NIC type of the security group rule when the security group is in the classic network. Valid values: - internet - intranet Default value: internet. This parameter can be set only to intranet in the following cases: - For rules of a security group in a VPC, this parameter is set to intranet by default and cannot be modified. - If DestGroupId is specified but DestCidrIp is not, this parameter must be set to intranet.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence in ECS Developer Guide .
Description	String	No	This is a new security group rule.	The description of the security group rule. The description must be 1 to 512 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ModifySecurityGroupRule
&SecurityGroupId=sg-bp67acfmazb4p****
&SourceGroupId=sg-bp67acfmazb4p****
&SourceGroupOwnerAccount=Test@aliyun.com
&IpProtocol=all
&PortRange=80/80
&Policy=accept
&Description=This is a new security group rule.
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

XML **format**

```
<ModifySecurityGroupRuleResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</ModifySecurityGroupRuleResponse>
```

JSON **format**

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist in this account. Check whether the security group ID is correct.
404	InvalidSourceGroupId.NotFound	The SourceGroupId provided does not exist in our records.	The error message returned because the specified SourceGroupId parameter does not exist.
400	OperationDenied	The specified IpProtocol does not exist or IpProtocol and PortRange do not match.	The error message returned because the specified IpProtocol parameter does not exist or does not match the specified port range.
400	InvalidIpProtocol.Malformed	The specified parameter "PortRange" is not valid.	The error message returned because the specified IpProtocol or PortRange parameter is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidSourceGroupId.Mismatch	NicType is required or NicType expects intranet.	The error message returned because the NicType parameter is not specified or is not set to intranet.
400	InvalidSourceCidrIp.Malformed	The specified parameter "SourceCidrIp" is not valid.	The error message returned because the specified SourceCidrIp parameter is invalid.
403	MissingParameter	The input parameter "SourceGroupId" or "SourceCidrIp" cannot be both blank.	The error message returned because both the SourceGroupId and SourceCidrIp parameters are empty.
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned because the specified Policy parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist.
400	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned because the specified NIC type conflicts with the authorization record.
403	AuthorizationLimitExceed	The limit of authorization records in the security group reaches.	The error message returned because the maximum number of rules in the security group has been reached.
403	InvalidParamter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned because the destination security group is the same as the source security group.
400	InvalidSourceGroupId.Mismatch	Specified security group and source group are not in the same VPC.	The error message returned because the destination security group and the source security group do not belong to the same VPC.
400	InvalidSourceGroup.NotFound	Specified source security group does not exist.	The error message returned because the specified inbound security group rule does not exist or relevant parameters are not specified.

HTTP status code	Error code	Error message	Description
400	VPCDisabled	Can't use the SecurityGroup in VPC.	The error message returned because the VPC does not support security groups.
400	InvalidPriority.Malformed	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InvalidNetworkType.Mismatch	The specified SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned because the network type of the destination security group is different from that of the source security group.
400	InvalidSecurityGroupDescription.Malformed	The specified security group rule description is not valid.	The error message returned because the specified Description parameter is invalid.
404	SecurityGroupRule.NotFound	The target security group rule not exist.	The error message returned because the specified security group rule does not exist.
400	MissingParameter.Source	Either SourceCidrIp or SourceGroupId must be specified.	The error message returned because both the SourceCidrIp and SourceGroupId parameters are empty.
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP, ICMP, GRE or All.	The error message returned because the specified IpProtocol parameter is invalid. The valid values of this parameter are tcp, udp, icmp, gre, and all.
400	InvalidParam.SourceCidrIp	%s	The error message returned because the specified SourceCidrIp parameter is invalid.
400	InvalidParam.DestIp	%s	The error message returned because the specified DestCidrIp parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned because the specified Ipv6DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv6 address under an IPv4 protocol by mistake.
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv4 address under an IPv6 protocol by mistake.
400	ILLEGAL_IPV6_CIDR	%s	The error message returned because the specified IPv6 address is invalid.
400	InvalidSourcePortRange.Malformed	The specified parameter "SourcePortRange" is not valid.	The error message returned because the specified SourcePortRange parameter is invalid.
400	InvalidSecurityGroupId.Malformed	The specified parameter "SecurityGroupId" is not valid.	The error message returned because the specified SecurityGroupId parameter is invalid.

5.1.12.14. ModifySecurityGroupEgressRule

You can call this operation to modify the description of outbound rules of a security group. You can modify only the description by calling this operation. If you want to modify the policies, port ranges, and authorization objects of security group rules, log on to the ECS console.

Description

You can determine an outbound rule by specifying one of the following groups of parameters. You cannot determine a security group rule by specifying only one parameter.

- Parameters used to specify an outbound security group rule that controls access to a specified range

of IP addresses: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp, and SourceCidrIp (optional).

- Parameters used to specify an outbound security group rule that controls access to another security group: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), DestGroupOwnerAccount, and DestGroupId.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifySecurityGroupEgressRule	The operation that you want to perform. Set the value to ModifySecurityGroupEgressRule.
IpProtocol	String	Yes	tcp	The transport layer protocol. The values of this parameter are case-insensitive. Valid values: - icmp - icmpv6 - gre - tcp - udp - all: All protocols are supported.
PortRange	String	Yes	80/80	The range of destination ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the valid port numbers are 1 to 65535. Specify a port range in the format of <start port number>/<end port number>. Correct example: 1/200. Incorrect example: 200/1. - When the IpProtocol parameter is set to icmp, the port range is -1/-1, which indicates all ports. - When the IpProtocol parameter is set to gre, the port range is -1/-1, which indicates all ports. - When the IpProtocol parameter is set to all, the port range is -1/-1, which indicates all ports.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the source security group. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
SecurityGroupId	String	Yes	sg-bp67acfmxazb4p h***	The ID of the source security group.
DestGroupId	String	No	sg-bp67acfmxazb4p j***	The ID of the destination security group.
DestGroupOwnerId	Long	No	155780923770	The name of the Apsara Stack tenant account that manages the destination security group.
DestGroupOwnerAccount	String	No	EcsforCloud@Alibaba.com	The ID of the Apsara Stack tenant account that manages the destination security group.
DestCidrIp	String	No	10.0.0.0/8	The range of destination IPv4 addresses. IPv4 addresses and CIDR blocks are supported. This parameter is empty by default.
Ipv6DestCidrIp	String	No	2001:db8:1233:1 a00::***	The range of destination IPv6 addresses. IPv6 addresses and CIDR blocks are supported. This parameter is empty by default.
SourceCidrIp	String	No	10.0.0.0/8	The range of source IPv4 addresses. IPv4 addresses and CIDR blocks are supported. This parameter is empty by default.
Ipv6SourceCidrIp	String	No	2001:db8:1234:1 a00::***	The range of source IPv6 addresses. IPv6 addresses and CIDR blocks are supported. This parameter is empty by default.

Parameter	Type	Required	Example	Description
SourcePortRange	String	No	80/80	The range of source ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the valid port numbers are 1 to 65535. Specify a port range in the format of <start port number>/<end port number>. Correct example: 1/200. Incorrect example: 200/1. - When the IpProtocol parameter is set to icmp, the port range is -1/-1, which indicates all ports. - When the IpProtocol parameter is set to gre, the port range is -1/-1, which indicates all ports. - When the IpProtocol parameter is set to all, the port range is -1/-1, which indicates all ports.
Policy	String	No	accept	The access control policy. Valid values: - accept: grants access. - drop: denies access without returning a rejection response. Default value: accept.
Priority	String	No	1	The priority of the security group rule. Valid values: 1 to 100. Default value: 1.
NicType	String	No	internet	The NIC type of the security group rule when the security group is in the classic network. Valid values: - internet: public NIC - intranet: internal NIC - If the security group is in a VPC, the parameter is set to intranet by default and cannot be modified. - If <code>DestGroupId</code> is specified but <code>DestCidrIp</code> is not, the NicType parameter can be set only to intranet. Default value: internet.

Parameter	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence in ECS Developer Guide.
Description	String	No	Thisisanewsecuritygroup rule	The new description of the security group rule. The description must be 1 to 512 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ModifySecurityGroupEgressRule
&SecurityGroupId=sg-bp67acfmazb4ph***
&DestGroupId=sg-bp67acfmazb4pi***
&SourceGroupOwnerAccount=EcsforCloud@Alibaba.com
&IpProtocol=tcp
&PortRange=80/80
&Policy=allow
&Description=Thisisanewsecuritygroup rule.
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifySecurityGroupEgressRuleResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</ModifySecurityGroupEgressRuleResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist in this account. Check whether the security group ID is correct.
404	InvalidDestGroupId.NotFound	The DestGroupId provided does not exist in our records.	The error message returned because the specified DestGroupId parameter does not exist.
400	OperationDenied	The specified IpProtocol does not exist or IpProtocol and PortRange do not match.	The error message returned because the specified IpProtocol parameter does not exist or does not match the specified port range.
400	InvalidIpProtocol.Malformed	The specified parameter "PortRange" is not valid.	The error message returned because the specified IpProtocol or PortRange parameter is invalid.
403	InvalidDestGroupId.Mismatch	NicType is required or NicType expects intranet.	The error message returned because the NicType parameter is not specified or is not set to intranet.
400	InvalidDestCidrIp.Malformed	The specified parameter "DestCidrIp" is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
403	MissingParameter	The input parameter "DestGroupId" or "DestCidrIp" cannot be both blank.	The error message returned because both the DestGroupId and DestCidrIp parameters are empty.
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned because the specified Policy parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist.

HTTP status code	Error code	Error message	Description
400	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned because the specified NIC type conflicts with the authorization record.
403	AuthorizationLimitExceed	The limit of authorization records in the security group reaches.	The error message returned because the maximum number of rules in the security group has been reached.
403	InvalidParamter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned because the destination security group is the same as the source security group.
400	InvalidDestGroupId.Mismatch	Specified security group and destination group are not in the same VPC.	The error message returned because the specified source and destination security groups do not belong to the same VPC.
400	InvalidDestGroup.NotFound	Specified destination security group does not exist.	The error message returned because the specified DestGroupId parameter does not exist.
400	VPCDisabled	Can't use the SecurityGroup in VPC.	The error message returned because the VPC does not support security groups.
400	InvalidPriority.Malformed	The specified parameter "Priority" is not valid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The specified Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidDestCidrIp.Malformed	The specified parameter DestCidrIp is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

HTTP status code	Error code	Error message	Description
403	InvalidNetworkType.Conflict	The specified SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned because the network type of the destination security group is different from that of the source security group.
403	InvalidSecurityGroupIdSame	The authorized SecurityGroupId should be different from the DestGroupId.	The error message returned because the ID of the destination security group is the same as that of the source security group.
400	InvalidNicType.ValueNotSupported	The specified NicType is not valid.	The error message returned because the specified NicType parameter does not exist.
400	InvalidSecurityGroupDescription.Malformed	The specified security group rule description is not valid.	The error message returned because the specified Description parameter is invalid.
404	SecurityGroupRule.NotFound	The target security group rule do not exist.	The error message returned because the specified security group rule does not exist.
400	InvalidSecurityGroup.InvalidNetworkType	The specified security group network type is not support this operation, please check the security group network types. For VPC security groups, ClassicLink must be enabled.	The error message returned because the operation is not supported while the security group is of the current network type. If the network type is VPC, ClassicLink must be enabled.
400	MissingParameter.Dest	The parameter DestCidrIp or DestGroupId is essential.	The error message returned because both the DestCidrIp and DestGroupId parameters are empty.
400	InvalidParam.PortRange	The specified param PortRange or SourcePortRange is not valid. should be integer and less than 65535, range separator is '/'.	The error message returned because the specified PortRange or SourcePortRange parameter is invalid. The values of PortRange and SourcePortRange must be in the format of <start port number>/<end port number>. The port numbers must be integers ranging from 1 to 65535.

HTTP status code	Error code	Error message	Description
400	InvalidIpProtocol.ValueNotSupported	The specified parameter IpProtocol should not be null and only tcp, udp, icmp, gre or all is supported. Ignore case.	The error message returned because the specified IpProtocol parameter is invalid. The valid values of this parameter are tcp, udp, icmp, gre, and all.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidParam.SourceCidrIp	%s	The error message returned because the specified SourceCidrIp parameter is invalid.
400	InvalidParam.DestIp	%s	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv6 address under an IPv4 protocol by mistake.
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv4 address under an IPv6 protocol by mistake.
400	ILLEGAL_IPV6_CIDR	%s	The error message returned because the specified IPv6 address is invalid.
400	InvalidSourcePortRange.Malformed	The specified parameter "SourcePortRange" is not valid.	The error message returned because the specified SourcePortRange parameter is invalid.

5.1.13. SSH key pairs

5.1.13.1. CreateKeyPair

You can call this operation to create an SSH key pair. Apsara Stack stores the public key and returns the unencrypted private key. The private key is PEM-encoded in the PKCS#8 format. You must securely lock away the private key on your own.

Description

In addition to calling `CreateKeyPair`, you can create a key pair by using other key pair generation tools and call `ImportKeyPair` to upload the key pair to a region.

You have a maximum of 500 key pairs in each region.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateKeyPair	The operation that you want to perform. Set the value to <code>CreateKeyPair</code> .
KeyPairName	String	Yes	TestKeyPairV23	The name of the key pair. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https</code> . The name can contain letters, digits, colons (:), underscores (_), and hyphens (-).
RegionId	String	Yes	cn-qingdao-env17-d01	The ID of the region in which to create the key pair. You can call the <code>DescribeRegions</code> operation to query the most recent region list.
Tag.N.Key	String	No	TestKey	The key of tag N to be bound to the key pair. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with <code>acs:</code> or <code>aliyun</code> . It cannot contain <code>http://</code> or <code>https://</code> .
Tag.N.Value	String	No	TestValue	The value of tag N to be bound to the key pair. Valid values of N: 1 to 20. It can be up to 128 characters in length and cannot start with <code>acs:</code> or contain <code>http://</code> or <code>https://</code> .

Parameter	Type	Required	Example	Description
ResourceGroupId	String	No	rg-bp67acfmxazb4ph***	The ID of the resource group to which to assign the key pair.

Response parameters

Parameter	Type	Example	Description
KeyPairFingerprint	String	89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:**	The fingerprint of the key pair. The fingerprint uses the message-digest algorithm 5 (MD5) based on the public key fingerprint format defined in RFC 4716. For more information, see RFC 4716 .
KeyPairId	String	ssh-bp67acfmxazb4ph** *	The ID of the key pair.
KeyPairName	String	TestKeyPairV23	The name of the key pair.
PrivateKeyBody	String	MIIEpAIBAAKCAQEAtReyMzLlCBH78EV2zj*** *	The private key of the key pair. The private key is PEM-encoded in the PKCS#8 format.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=CreateKeyPair
&RegionId=cn-qingdao-env17-d01
&KeyPairName=TestKeyPairV23
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateKeyPairResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
  <KeyPairName>test</KeyPairName>
  <KeyPairId>ssh-bp67acfmxazb4ph***</KeyPairId>
  <KeyPairFingerprint>89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:**</KeyPairFingerprint>
  <PrivateKeyBody>MIIEpAIBAAKCAQEAtReyMzLlCBH78EV2zj***</PrivateKeyBody>
</CreateKeyPairResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "KeyPairName": "TestKeyPairV23",
  "KeyPairId": "ssh-bp67acfmazb4ph***",
  "KeyPairFingerPrint": "89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:***",
  "PrivateKeyBody": "MIIEpAIBAAKCAQEAtReyMzLIcBH78EV2zj****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidKeyPairName.Malformed	Specified Key Pair name is not valid.	The error message returned because the specified KeyPairName parameter is invalid.
403	QuotaExceed.KeyPair	The key pair quota exceeds.	The error message returned because the maximum number of key pairs has been reached.
400	KeyPair.AlreadyExist	The key pair already exist.	The error message returned because a key pair with the same name already exists. Key pair names must be unique.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	QuotaExceed.Tags	%s	The error message returned because the number of specified tags exceeds the upper limit.

5.1.13.2. ImportKeyPair

Imports the public key of an RSA-encrypted key pair that is generated by a third-party tool. After the key pair is imported, Alibaba Cloud stores the public key. You must securely lock away the private key.

Description

When you call this operation, take note of the following items:

- A maximum of 500 key pairs can be created in each region.
- The key pair to be imported must support one of the following encryption methods:
 - rsa
 - dsa
 - ssh-rsa
 - ssh-dss
 - ecdsa
 - ssh-rsa-cert-v00@openssh.com
 - ssh-dss-cert-v00@openssh.com
 - ssh-rsa-cert-v01@openssh.com
 - ssh-dss-cert-v01@openssh.com
 - ecdsa-sha2-nistp256-cert-v01@openssh.com
 - ecdsa-sha2-nistp384-cert-v01@openssh.com
 - ecdsa-sha2-nistp521-cert-v01@openssh.com

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ImportKeyPair	The operation that you want to perform. Set the value to ImportKeyPair.
KeyPairName	String	Yes	KeyPairV24	The name of the key pair. The name must be globally unique. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
PublicKeyBody	String	Yes	xxxxxxxxxxxxxx	The public key of the key pair.
RegionId	String	Yes	cn-qingdao-XXXX-d01	The region ID of the key pair. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
Tag.N.Key	String	No	TestKey	The key of tag N of the key pair. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.
Tag.N.Value	String	No	TestValue	The value of tag N of the key pair. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with acs: or contain http:// or https://.

Response parameters

Parameter	Type	Example	Description
KeyPairFingerPrint	String	89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:**	The fingerprint of the key pair. The message-digest algorithm 5 (MD5) is used based on the public key fingerprint format defined in RFC 4716.
KeyPairName	String	KeyPairV24	The name of the key pair.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE*****	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ImportKeyPair
&RegionId=cn-qingdao-XXXX-d01
&PublicKeyBody=xxxxxxxxxxxxxxxx
&KeyPairName=test
&<Common request parameters>
```

Sample success responses

XML format

```
<KeyPairFingerPrint>89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:**</KeyPairFingerPrint>
<KeyPairName>KeyPairV24</KeyPairName>
<RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE*****</RequestId>
```

JSON format

```
{
  "KeyPairFingerPrint": "89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:**",
  "KeyPairName": "KeyPairV24",
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE*****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidKeyPairName.Malformed	Specified Key Pair name is not valid.	The error message returned because the specified KeyPairName parameter is invalid.
403	QuotaExceed.KeyPair	The key pair quota exceeds.	The error message returned because the maximum number of key pairs has been reached.
400	InvalidPublicKeyBody.Malformed	The PublicKeyBody format is not supported.	The error message returned because the public key format is not supported.
400	MissingParameter	The input parameter "PublicKeyBody" that is mandatory for processing this request is not supplied.	The error message returned because the required PublicKeyBody parameter is not specified.
400	KeyPair.AlreadyExist	The key pair already exist.	The error message returned because a key pair with the same name already exists. Key pair names must be unique.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified resource group does not exist.

5.1.13.3. AttachKeyPair

You can call this operation to attach an SSH key pair to one or more Linux instances.

Description

When you call this operation, take note of the following items:

- SSH key pairs are not supported on Windows instances.
- If an SSH key pair is attached to an instance, the username and password authentication method is disabled for the instance.
- After you attach an SSH key pair to an instance in the **Running** (Running) state, you must call the `RebootInstance` operation to restart the instance for the key pair to take effect.
- After you attach an SSH key pair to an instance in the **Stopped** (Stopped) state, you must call the `StartInstance` operation to start the instance for the key pair to take effect.
- If an instance already has an SSH key pair attached, the new SSH key pair automatically replaces the original one.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AttachKeyPair	The operation that you want to perform. Set the value to <code>AttachKeyPair</code> .
InstanceIds	String	Yes	["i-xxxxxxx", "i-yyyyyyyy", ... "i-zzzzzzzz"]	The IDs of instances to which you want to attach the SSH key pair. The value can be a JSON array that consists of up to 50 instance IDs. Separate multiple instance IDs with commas (,).
KeyName	String	Yes	KeyPairV25	The name of the SSH key pair.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the SSH key pair. You can call the <code>DescribeRegions</code> operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
FailCount	String	0	The number of instances to which the SSH key pair failed to be attached.
KeyName	String	KeyPairV25	The name of the SSH key pair.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Results	Array		The result set of the attach operation.

Parameter	Type	Example	Description
Result			
Code	String	200	The operation status code returned. 200 indicates that the operation is successful.
InstanceId	String	i-instanc****	The ID of the instance.
Message	String	successful	The operation information returned. When the value of Code is 200, the value of Message is successful.
Success	String	true	Indicates whether the operation was successful.
TotalCount	String	2	The total number of instances to which the SSH key pair was attached.

Examples

Sample requests

```
https://ecs.example.com/?Action=AttachKeyPair
&InstanceIds=["i-xxxxx****", "i-yyyyy****", ... "i-zzzzz****"]
&KeyPairName=KeyPairV25
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

`XML` format

```
<AttachKeyPairResponse>
  <TotalCount>2</TotalCount>
  <RequestId>4ADF7A06-66BD-4FBF-A2ED-2364E41D8C06</RequestId>
  <Results>
    <Result>
      <Message>successful</Message>
      <InstanceId>i-m5eg7be9ndloji64j***</InstanceId>
      <Success>true</Success>
      <Code>200</Code>
    </Result>
    <Result>
      <Message>successful</Message>
      <InstanceId>i-m5e25x2mwr0hk33dw***</InstanceId>
      <Success>true</Success>
      <Code>200</Code>
    </Result>
  </Results>
  <FailCount>0</FailCount>
</AttachKeyPairResponse>
```

JSON **format**

```
{
  "TotalCount": 2,
  "RequestId": "4ADF7A06-66BD-4FBF-A2ED-2364E41D8C06",
  "Results": {
    "Result": [
      {
        "Message": "successful",
        "InstanceId": "i-m5eg7be9ndloji64j***",
        "Success": true,
        "Code": "200"
      },
      {
        "Message": "successful",
        "InstanceId": "i-m5e25x2mwr0hk33dw***",
        "Success": true,
        "Code": "200"
      }
    ]
  },
  "FailCount": 0
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
400	InvalidKeyPairName.NotFound	The specified KeyPairName does not exist in our records.	The error message returned because the specified KeyPairName parameter does not exist.
403	DependencyViolation.WindowsInstance	The instance creating is windows, cannot use ssh key pair to login	The error message returned because the specified instance is a Windows instance and does not support logons with SSH key pairs.
403	InstanceKeyPairLimitExceeded	Exceeding the allowed amount of instance that an key pair can attach.	The error message returned because the number of instances exceeds the maximum number allowed in a single request.
400	InvalidInstanceIds.ValueNotSupported	The specified parameter InstanceIds is not valid.	The error message returned because the specified InstanceIds parameter is invalid.
400	DependencyViolation.IoOptimize	The specified parameter InstanceIds is not valid.	The error message returned because the specified InstanceIds parameter is invalid.

5.1.13.4. DetachKeyPair

You can call this operation to detach an SSH key pair from one or more Linux instances.

Description

When you call this operation, take note of the following items:

- After you detach an SSH key pair from an instance, you must call the RebootInstance operation to restart the instance for the detach operation to take effect.
- By default, the username and password authentication method is used for an instance after you detach an SSH key pair from the instance.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DetachKeyPair	The operation that you want to perform. Set the value to DetachKeyPair.

Parameter	Type	Required	Example	Description
InstanceIds	String	Yes	<code>["i-xxxxx****", "i-yyyyy****", ... "i-zzzzz****"]</code>	The IDs of instances from which you want to detach the SSH key pair. The value can be a JSON array that consists of up to 50 instance IDs. Separate multiple instance IDs with commas (,).
KeyPairName	String	Yes	KeyPairV26	The name of the SSH key pair.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the SSH key pair. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
FailCount	String	0	The number of instances from which the SSH key pair failed to be detached.
KeyPairName	String	KeyPairV26	The name of the SSH key pair.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Results	Array		The result set of the detach operation.
Result			
Code	String	200	The operation status code returned. 200 indicates that the operation is successful.
InstanceId	String	i-instanc****	The ID of the instance.
Message	String	successful	The operation information returned. When the value of Code is 200, the value of Message is successful.
Success	String	true	Indicates whether the operation was successful.

Parameter	Type	Example	Description
TotalCount	String	2	The total number of instances from which the SSH key pair was detached.

Examples

Sample requests

```
https://ecs.example.com/?Action=DetachKeyPair
&RegionId=cn-qingdao-env17-d01
&InstanceIds=["i-xxx****", "i-yyy****"]
&KeyPairName=test
&<Common request parameters>
```

Sample success responses

XML **format**

```
<DetachKeyPairResponse>
  <TotalCount>2</TotalCount>
  <RequestId>834B3E6B-2D1D-482F-81A4-810C327D4735</RequestId>
  <Results>
    <Result>
      <Message>successful</Message>
      <InstanceId>i-m5eg7be9ndloji64j***</InstanceId>
      <Success>true</Success>
      <Code>200</Code>
    </Result>
    <Result>
      <Message>successful</Message>
      <InstanceId>i-m5e25x2mwr0hk33dw***</InstanceId>
      <Success>true</Success>
      <Code>200</Code>
    </Result>
  </Results>
  <FailCount>0</FailCount>
</DetachKeyPairResponse>
```

JSON **format**

```
{
  "TotalCount": 2,
  "RequestId": "834B3E6B-2D1D-482F-81A4-810C327D4735",
  "Results": {
    "Result": [
      {
        "Message": "successful",
        "InstanceId": "i-m5eg7be9ndloji64j***",
        "Success": true,
        "Code": "200"
      },
      {
        "Message": "successful",
        "InstanceId": "i-m5e25x2mwr0hk33dw***",
        "Success": true,
        "Code": "200"
      }
    ]
  },
  "FailCount": 0
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidKeyPairName.NotFound	The specified KeyPairName does not exist in our records.	The error message returned because the specified KeyPairName parameter does not exist.
403	DependencyViolation.WindowsInstance	The instance creating is windows, cannot use ssh key pair to login	The error message returned because the specified instance is a Windows instance and does not support logons with SSH key pairs.
403	InstanceKeyPairLimitExceeded	Exceeding the allowed amount of instance that an key pair can attach.	The error message returned because the number of instances exceeds the maximum number allowed in a single request.
400	InvalidInstanceIds.ValueNotSupported	The specified parameter InstanceIds is not valid.	The error message returned because the specified InstanceIds parameter is invalid.

5.1.13.5. DeleteKeyPairs

You can call this operation to delete one or more SSH key pairs.

Description

After an SSH key pair is deleted:

- You cannot query the key pair by calling the `DescribeKeyPairs` operation.
- If the key pair was bound to one or more ECS instances:
 - The key pair is no longer stored on Apsara Stack but the instances can still use the key pair.
 - When you call the `DescribeInstance` operation to query instance information, the name of the key pair name (`KeyPairNames`) is still returned, but no other information about the key pair.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteKeyPairs	The operation that you want to perform. Set the value to DeleteKeyPairs.
KeyPairNames	String	Yes	["skp-bp67acfmxyzb4ph***", "skp-bp67acfmxyzb4pi***", ... "skp-bp67acfmxyzb4pk***"]	The names of SSH key pairs. The value can be a JSON array that consists of up to 100 key pair names. Separate multiple key pair names with commas (,).
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the key pair. You can call the <code>DescribeRegions</code> operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=DeleteKeyPairs
&RegionId=cn-qingdao-env17-d01
&KeyPairNames=["skp-bp67acfmxyzb4ph***", "skp-bp67acfmxyzb4pi***", ... "skp-bp67acfmxyzb4pk***"]
&<Common request parameters>
```

Sample success responses

`XML` `format`


```
<DeleteKeyPairsResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</DeleteKeyPairsResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter "KeyPairNames" that is mandatory for processing this request is not supplied.	The error message returned because the required KeyPairNames parameter is not specified.
400	InvalidKeyPairNames.ValueNotSupported	The specified parameter "KeyPairNames" is not valid.	The error message returned because the specified KeyPairNames parameter is invalid.
403	InstanceKeyPairLimitExceeded	Exceeding the allowed amount of instance which will be deleted.	The error message returned because the number of specified key pairs exceeds the upper limit.

5.1.13.6. DescribeKeyPairs

You can call this operation to query one or more key pairs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeKeyPairs	The operation that you want to perform. Set the value to DescribeKeyPairs.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the key pair. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
KeyPairName	String	No	*Finance*	The name of the key pair. You can use the asterisk (*) symbol as a wild card in regular expressions to query key pairs by performing a fuzzy search. Sample patterns: <code>*SshKey</code> : queries key pairs whose names end with SshKey, including the key pair named SshKey. <code>SshKey*</code> : queries key pairs whose names start with SshKey, including the key pair named SshKey. <code>*SshKey*</code> : queries key pairs whose names include SshKey, including the key pair named SshKey. <code>SshKey</code> : queries the key pair named SshKey.
KeyPairFingerPrint	String	No	XXXXXXXXXX	The fingerprint of the key pair. The message-digest algorithm 5 (MD5) is used based on the public key fingerprint format defined in RFC 4716. For more information, see RFC 4716.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 50 Default value: 10.
Tag.N.Key	String	No	FinanceDeptKey	The key of tag N of the key pair. Valid values of N: 1 to 20.
Tag.N.Value	String	No	FinanceDeptValue	The value of tag N of the key pair. Valid values of N: 1 to 20.
ResourceGroupId	String	No	rg-resourcegrou****	The ID of the resource group to which the key pair belongs.

Response parameters

Parameter	Type	Example	Description
KeyPairs	Array		The collection of details about key pairs.
KeyPair			
CreationTime	String	2019-12-04T13:35:00Z	The time when the key pair was created.
KeyPairFingerPrint	String	xxxxxxxxxx	The fingerprint of the key pair.
KeyPairName	String	KeyPairV27	The name of the key pair.
ResourceGroupId	String	rg-resourcegroup****	The ID of the resource group to which the key pair belongs.
Tags	Array		The tags of the key pair.
Tag			
TagKey	String	FinanceDeptKey	The tag key of the key pair.
TagValue	String	FinanceDeptValue	The tag value of the key pair.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of key pairs.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeKeyPairs
&RegionId=cn-qingdao-env17-d01
&KeyPairFingerPrint=xxxxxxxxxx
&KeyPairName=test
&PageNumber=1
&PageSize=20
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeKeyPairsResponse>
  <PageNumber>1</PageNumber>
  <PageSize>2</PageSize>
  <TotalCount>1</TotalCount>
  <KeyPairs>
    <KeyPair>
      <CreationTime>2018-10-10T01:00Z</CreationTime>
      <ResourceGroupId></ResourceGroupId>
      <KeyPairName>test</KeyPairName>
      <KeyPairFingerPrint>xxxxxxxxxx</KeyPairFingerPrint>
    </KeyPair>
  </KeyPairs>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</DescribeKeyPairsResponse>
```

JSON format

```
{
  "PageNumber": 1,
  "PageSize": 2,
  "TotalCount": 1,
  "KeyPairs": {
    "KeyPair": [{
      "CreationTime": "2018-10-10T01:00Z",
      "ResourceGroupId": "",
      "KeyPairName": "test",
      "KeyPairFingerPrint": "xxxxxxxxxx"
    }]
  },
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

5.1.14. Elastic network interfaces

5.1.14.1. CreateNetworkInterface

You can call this operation to create an elastic network interface (ENI).

Description

- The newly created ENI is in the Available state.
- An ENI can be bound to a single VPC-type instance in the same zone.
- An ENI can be bound to a single instance. You must unbound an ENI from the instance to which the ENI is bound before you can bind the ENI to another instance.
- After an ENI is bound to another instance, the attributes of the ENI remain unchanged and its data traffic is redirected to the new instance.
- By default, an Apsara Stack tenant account can create a maximum of 100 ENIs in a region.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateNetworkInterface	The operation that you want to perform. Set the value to CreateNetworkInterface.
RegionId	String	Yes	cn-qingdao-env17-d01	The ID of the region in which to create the ENI. You can call the DescribeRegions operation to query the most recent region list.
VSwitchId	String	Yes	vsw-bp1s5fnvk4gn2tws03***	The ID of the VSwitch which to connect to the ENI in the specified VPC. The private IP addresses assigned to the ENI must be available IP addresses in the CIDR block of the VSwitch.
Tag.N.Key	String	No	test	The key of tag N to be bound to the ENI. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.
Tag.N.Value	String	No	api	The value of tag N to be bound to the ENI. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with acs: or contain http:// or https://.
ResourceGroupId	String	No	rg-bp67acfmxb4ph***	The ID of the resource group to which to assign the ENI.

Parameter	Type	Required	Example	Description
PrimaryIpAddress	String	No	172.17.**.***	The primary private IP address of the ENI. The specified IP address must be available within the CIDR block of the VSwitch. If this parameter is not specified, an available IP address is assigned from the VSwitch CIDR block at random.
SecurityGroupId	String	No	sg-bp1fg655nh68xyz9j***	The ID of the security group to which to assign the ENI. The security group and the ENI must belong to the same VPC.
SecurityGroupIds.N	RepeatList	No	sg-bp1fg655nh68xyz9j***	The ID of security group N to which to assign the ENI. The security group and the ENI must belong to the same VPC. The valid values of N depend on the maximum number of security groups to which an ENI can be added.  Note You cannot specify <code>SecurityGroupId</code> and <code>SecurityGroupIds.N</code> at the same time.
NetworkInterfaceName	String	No	eni-eniname	The name of the ENI. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). The name must start with a letter and cannot start with http:// or https://. This parameter is empty by default.
Description	String	No	test	The description of the ENI. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.

Parameter	Type	Required	Example	Description
PrivateIpAddress.N	RepeatList	No	172.***.***.177	The secondary private IP address N of the ENI. This IP address must be an available IP address in the CIDR block of the VSwitch to be connected to the ENI. Valid values of N: 0 to 10. Note To assign secondary private IP addresses to the ENI, you must specify one of the <code>PrivateIpAddress</code> and <code>SecondaryPrivateIpAddressCount</code> parameters but you cannot both of them.
SecondaryPrivateIpAddressCount	Integer	No	1	The number of private IP addresses to be created automatically by ECS.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence in ECS Developer Guide.

Response parameters

Parameter	Type	Example	Description
NetworkInterfaceId	String	eni-bp14v2sdd3v8htlnm***	The ID of the ENI.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=CreateNetworkInterface
&RegionId=cn-qingdao-env17-d01
&SecurityGroupIds.1=sg-bp1fg655nh68xyz9i***
&SecurityGroupIds.2=sg-bp67acfmxazb4ph***
&VSwitchId=vsw-bpls5fnvk4gn2tws03***
&Tag.1.Key=test
&Tag.1.Value=api
&ResourceGroupId=rg-bp67acfmxazb4ph***
&PrimaryIpAddress=172.17. **. ***
&NetworkInterfaceName=enl-eniname1
&Description=test
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateNetworkInterfaceResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxxxx</RequestId>
  <NetworkInterfaceId>eni-bp14v2sdd3v8htlnm***</NetworkInterfaceId>
</CreateNetworkInterfaceResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FExxxxx",
  "NetworkInterfaceId": "eni-bp14v2sdd3v8htlnm***"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Apsara Stack tenant account does not exist or your AccessKey pair has expired.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.

HTTP status code	Error code	Error message	Description
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
400	UnsupportedParameter	%s	The error message returned because a specified parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because your account is not authorized to manage this resource. Contact the owner of the Apsara Stack tenant account for authorization.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because the primary ENI cannot be unbound from the instance.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified ENI ID does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitch ID does not exist.

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be bound to the specified instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because the operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because the operation is invalid. Check whether the VPC in the operation corresponds to other parameters.
403	SecurityGroupInstanceLimitExceeded	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified SecurityGroupId parameter is invalid and the specified security group is not of the VPC type.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the current ENI type does not support this operation.
403	InvalidVSwitchId.IpNotEnough	%s	The error message returned because available IP addresses in the CIDR block of the specified VSwitch are insufficient.
403	InvalidVSwitchId.IpInvalid	%s	The error message returned because the specified private IP address is invalid.

HTTP status code	Error code	Error message	Description
400	Forbidden.RegionId	%s	The error message returned because the service is not available in the current region.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	QuotaExceed.Tags	%s	The error message returned because the number of specified tags exceeds the upper limit.
403	InvalidIp.Address	%s	The error message returned because the specified IPv6 address is invalid.
403	InvalidIp.IpRepeated	%s	The error message returned because the specified IP address already exists.
400	InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	The error message returned because the specified private IP address is already in use. Try another IP address.
400	InvalidParameter.Conflict	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.

5.1.14.2. AttachNetworkInterface

You can call this operation to bind an elastic network interface (ENI) to an ECS instance in a VPC.

Description

When you call this operation, take note of the following items:

- The ENI must be in the **Available** (`Available`) state. Each ENI can be bound to a single instance.
- The instance must be in the **Running** (`Running`) or **Stopped** (`Stopped`). When you bind ENIs to instances of some instance types, the instances must be in the **Stopped** (`Stopped`) state.

 **Note** If the last start time of the instance (including the last start time of the instance if it is newly purchased, the last restart time of the instance, the last reactivation time of the instance) is before April 1, 2018 and the instance stays in the Running state, you must call the `RebootInstance` operation to restart the instance. Otherwise, the ENI cannot be attached to the instance.

- You can bind multiple ENIs to a single instance.
- The instance must be in the same zone and the same VPC as the VSwitch to which the ENI is connected.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AttachNetworkInterface	The operation that you want to perform. Set the value to <code>AttachNetworkInterface</code> .
InstanceId	String	Yes	i-bp16qstyvxj9gpqw****	The ID of the instance.
NetworkInterfaceId	String	Yes	eni-bp17pdijfczax1huji****	The ID of the ENI.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the instance. You can call the <code>DescribeRegions</code> operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=AttachNetworkInterface
&RegionId=cn-qingdao-env17-d01
&InstanceId=i-bp16qstyvxj9gpqw****
&NetworkInterfaceId=eni-bp17pdijfczax1huji****
&<Common request parameters>
```

Sample success responses

XML format

```
<AttachNetworkInterfaceResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</AttachNetworkInterfaceResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Apsara Stack tenant account does not exist or your AccessKey pair has expired.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
400	UnsupportedParameter	%s	The error message returned because a specified parameter is not supported.

HTTP status code	Error code	Error message	Description
403	Forbidden.SubUser	%s	The error message returned because your account is not authorized to manage this resource. Contact the owner of the Apsara Stack tenant account for authorization.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidOperation.InvalidRegion	%s	The error message returned because the specified RegionId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because the primary ENI cannot be unbound from the instance.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified ENI ID does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitch does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.

HTTP status code	Error code	Error message	Description
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be bound to the specified instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because the operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because the operation is invalid. Check whether the VPC in the operation corresponds to other parameters.
403	SecurityGroupInstanceLimitExceeded	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified SecurityGroupId parameter is invalid and the specified security group is not of the VPC type.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the current ENI type does not support this operation.
400	Forbidden.RegionId	%s	The error message returned because the service is not available in the current region.
403	InvalidInstanceId.NotFound	%s	The error message returned because the specified InstanceId parameter does not exist.
400	InvalidOperation.InvalidGeneration	%s	The error message returned because the operation is invalid.
400	InvalidParams.EniId	%s	The error message returned because the specified ENI ID is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidOperation.Ipv4CountExceeded	%s	The error message returned because the maximum number of IPv4 addresses has been reached.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because the operation is invalid.
403	InvalidOperation.Ipv6NotSupport	%s	The error message returned because IPv6 does not support this operation.

5.1.14.3. AssignPrivateIpAddresses

Assigns one or more secondary private IP addresses to an elastic network interface (ENI). You can specify available private IP addresses within the CIDR block of the vSwitch that hosts the ENI. Alternatively, you can specify the number of private IP addresses for Elastic Compute Service (ECS) to automatically assign them.

Description

- The ENI to which you want to assign private IP addresses must be in the Available (Available) or Bound (InUse) state.
- When you perform operations on the primary ENI, the instance to which the ENI is bound must be in the Running or Stopped state.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AssignPrivateIpAddresses	The operation that you want to perform. Set the value to AssignPrivateIpAddresses.
NetworkInterfaceId	String	Yes	eni-bp67acfmxazb4p****	The ID of the ENI.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
<code>PrivateIpAddress.N</code>	RepeatList	No	10.1.2.1	One or more secondary private IP addresses selected from within the CIDR block of the vSwitch that hosts the ENI. Valid values of N: - When the ENI is in the Available (<code>Available</code>) state, the valid values of N are 1 to 10. - When the ENI is in the Bound (<code>InUse</code>) state, the valid values of N are subject to the instance type. For more information, see the <i>Instance types</i> topic in <i>ECS Product Introduction</i>. To assign secondary private IP addresses, you must specify one of the <code>PrivateIpAddress.N</code> and <code>SecondaryPrivateIpAddressCount</code> parameters but you cannot specify both of them.
<code>SecondaryPrivateIpAddressCount</code>	Integer	No	1	The number of private IP addresses to be automatically assigned from within the CIDR block of the vSwitch.

Response parameters

Parameter	Type	Example	Description
<code>AssignedPrivateIpAddressesSet</code>	Struct		The ENIs that are assigned secondary private IP addresses.
<code>NetworkInterfaceId</code>	String	eni-bp67acfmxazb4p***	The ID of the ENI.
<code>PrivateIpSet</code>	List	["192.168.**.*"]	The private IP addresses.
<code>RequestId</code>	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=AssignPrivateIpAddresses
&NetworkInterfaceId=eni-bp67acfmazb4p****
&RegionId=cn-qingdao-env17-d01
&PrivateIpAddress.1=10.1.2.1
&PrivateIpAddress.2=10.1.2.2
&<Common request parameters>
```

Sample success responses

XML format

```
<AssignPrivateIpAddressesResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3****</RequestId>
</AssignPrivateIpAddressesResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Apsara Stack tenant account does not exist or because your AccessKey pair has expired.
403	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
400	UnsupportedParameter	%s	The error message returned because a specific parameter is not supported.

HTTP status code	Error code	Error message	Description
403	Forbidden.SubUser	%s	The error message returned because you are not authorized to manage this resource. Contact the owner of the Apsara Stack tenant account for authorization.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because the primary ENI cannot be unbound from the instance.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified InstanceId parameter does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified NetworkInterfaceId parameter does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitchId parameter does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified SecurityGroupId parameter does not exist.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.

HTTP status code	Error code	Error message	Description
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be bound to the specified instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because the operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because the operation is invalid. Check whether the virtual private cloud (VPC) in the operation corresponds to other parameters.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified SecurityGroupId parameter is invalid and the network type of the security group is not VPC.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the operation is not supported while the ENI is of the current type.
404	InvalidInstanceId.NotFound	%s	The error message returned because the specified InstanceId parameter does not exist.
403	InvalidVSwitchId.IpNotEnough	%s	The error message returned because available IP addresses within the CIDR block of the specified vSwitch are insufficient.
403	InvalidVSwitchId.IpInvalid	%s	The error message returned because the specified private IP address is invalid.
403	InvalidIp.IpAssigned	%s	The error message returned because the specified IP address is already assigned.

HTTP status code	Error code	Error message	Description
403	MaxEniPrivateIpsCountExceeded	%s	The error message returned because the maximum number of secondary private IP addresses that can be assigned to the ENI has been reached. For more information, see the return value of the %s placeholder in the error message.
403	Operation.Conflict	%s	The error message returned because this operation conflicts with another operation in progress. Try again later.
400	Forbidden.RegionId	%s	The error message returned because the service is unavailable in the current region.
400	InvalidAction	%s	The error message returned because the operation is invalid.
403	InvalidOperation.Ipv4CountExceeded	%s	The error message returned because the maximum number of IPv4 addresses has been reached.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because this operation is invalid.
400	InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	The error message returned because the specified private IP address is already in use. Try another IP address.
403	InvalidIp.IpRepeated	%s	The error message returned because the specified IP address already exists.

5.1.14.4. UnassignPrivateIpAddresses

You can call this operation to unassign one or more secondary private IP addresses from an elastic network interface (ENI).

Description

- The ENI from which you want to unassign private IP addresses must be in the **Available** (Available) or **Bound** (InUse) state.
- When you perform operations on the primary ENI, the instance to which the ENI is bound must be in the **Running** (Running) or **Stopped** (Stopped) state.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UnassignPrivateIpAddresses	The operation that you want to perform. Set the value to UnassignPrivateIpAddresses.
NetworkInterfaceId	String	Yes	eni-bp67acfmxazb4ph***	The ID of the ENI from which you want to unassign one or more secondary private IP addresses.
PrivateIpAddress.N	RepeatList	Yes	192.168.**.1	The secondary private IP addresses to be unassigned.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=UnassignPrivateIpAddresses
&NetworkInterfaceId=eni-bp67acfmxazb4ph***
&PrivateIpAddress.1=192.168.**.1
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

XML format

```
<UnassignPrivateIpAddressesResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE70008</RequestId>
</UnassignPrivateIpAddressesResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE70008"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Apsara Stack tenant account does not exist or your AccessKey pair has expired.
403	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
400	UnsupportedParameter	%s	The error message returned because a specified parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because your account is not authorized to manage this resource. Contact the owner of the Apsara Stack tenant account for authorization.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.

HTTP status code	Error code	Error message	Description
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because primary ENIs cannot be unbound from the instance.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified NetworkInterfaceId parameter does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitch ID does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be bound to the specified instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because the operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because the operation is invalid. Check whether the VPC in the operation corresponds to other parameters.

HTTP status code	Error code	Error message	Description
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances that can be added to the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified SecurityGroupId parameter is invalid and the specified security group is not of the VPC type.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the current ENI type does not support this operation.
404	InvalidInstanceId.NotFound	%s	The error message returned because the specified instance does not exist.
403	InvalidVSwitchId.Invalid	%s	The error message returned because the specified private IP address is invalid.
403	InvalidIp.Unassigned	%s	The error message returned because the specified IP address is not assigned.
403	Operation.Conflict	%s	The error message returned because this operation conflicts with another operation in progress. Try again later.
400	Forbidden.RegionId	%s	The error message returned because the service is not available in the current region.
400	InvalidAction	%s	The error message returned because the operation is invalid.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because the operation is invalid.

5.1.14.5. DescribeNetworkInterfaces

You can call this operation to query the list of elastic network interfaces (ENIs).

Description

You can use one of the following methods to check the responses returned by the `DescribeNetworkInterfaces` operation:

- Method 1: Use `NextToken` to configure the query token. Set the value of this parameter to the `NextToken` value returned in the last call to `DescribeNetworkInterfaces`. Then use `MaxResults` to set the maximum number of entries to return on each page.
- Method 2: Use `PageSize` to set the number of entries to return on each page and then use `PageNumber` to set the number of the page to return.

You can use only one of the preceding methods. If a large number of entries are returned, we recommend that you use method 1. If `NextToken` is set, `PageSize` and `PageNumber` will not take effect and `TotalCount` in the response will be invalid.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeNetworkInterfaces	The operation that you want to perform. Set the value to <code>DescribeNetworkInterfaces</code> .
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the ENI. You can call the <code>DescribeRegions</code> operation to query the most recent region list.
Tag.N.Key	String	No	TestKey	The key of tag N that is bound to the ENI. Valid values of N: 1 to 20.
Tag.N.Value	String	No	TestValue	The value of tag N that is bound to the ENI. Valid values of N: 1 to 20.
ResourceGroupId	String	No	rg-bp67acfmxyzb4p****	The ID of the resource group to which the ENI belongs.
VSwitchId	String	No	vsw-bp16usj2p27htro3****	The ID of the VSwitch to which the ENI is connected.
VpcId	String	No	vpc-wz9wh0fywtu5szb****	The ID of the VPC to which the ENI belongs.
PrimaryIpAddress	String	No	192.168.*.*	The primary private IP address of the ENI.
PrivateIpAddress.N	RepeatList	No	192.168.*.*	Secondary private IP address N of the ENI. Valid values of N: 1 to 100.

Parameter	Type	Required	Example	Description
SecurityGroupId	String	No	sg-bp144yr32sx6ndw****	The ID of the security group to which the ENI belongs.
NetworkInterfaceName	String	No	my-eni-name	The name of the ENI.
Type	String	No	Secondary	The type of the ENI. Valid values: - Primary - Secondary This parameter is empty by default, which indicates that both primary and secondary ENIs are queried.
InstanceId	String	No	i-bp1e2l6djknDYuli***	The ID of the instance to which an ENI is bound.
NetworkInterfaceId.N	RepeatList	No	eni-bp125p95hhdhn3ot****	The ID of ENI N. Valid values of N: 1 to 100.
ServiceManaged	Boolean	No	true	Specifies whether the user is an Apsara Stack service or a distributor.
Status	String	No	InUse	The state of the ENI. Valid values: - Creating: The ENI is being created. - Available: The ENI is not bound to any instance. - Attaching: The ENI is being bound to an instance. - InUse: The ENI is bound to an instance. - Detaching: The ENI is being unbound from an instance. - Deleting: The ENI is being deleted. - CreateFailed: The ENI failed to be created. This parameter is empty by default, which indicates that ENIs in all states are queried.

Parameter	Type	Required	Example	Description
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	100	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10. For more information about how to check responses returned by this operation, see the preceding "Description" section.
NextToken	String	No	AAAAAdDWBf2*** *	The query token. Set the value to the <code>NextToken</code> value returned in the last call to <code>DescribeNetworkInterfaces</code> . For more information about how to check responses returned by this operation, see the preceding "Description" section.
MaxResults	Integer	No	50	The maximum number of entries to return on each page. Valid values: 1 to 500 Default value: 10

Response parameters

Parameter	Type	Example	Description
NetworkInterfaceSets	Array		The collection of details about ENIs.
NetworkInterfaceSet			
AssociatedPublicIp	Struct		The public IP address associated with the secondary private IP address of the ENI.
AllocationId	String	eip-2ze88m67qx5z****	The ID of the elastic IP address (EIP).

Parameter	Type	Example	Description
PublicIpAddress	String	116.62.*.*	 Note This parameter is not supported.
Attachment	Struct		The binding state of the ENI.
DeviceIndex	Integer	1	
InstanceId	String	null	
TrunkNetworkInterfaceId	String	null	
CreationTime	String	2017-11-24T06:14:22Z	The time when the ENI was created.
Description	String	DescriptionTest	The description of the ENI.
InstanceId	String	i-bp1e2l6djknidyuli****	The ID of the instance to which the ENI was bound.  Note For the ENIs that are managed and controlled by other Apsara Stack services, no instance IDs are returned.
Ipv6Sets	Array		The IPv6 addresses assigned to the ENI.
Ipv6Set			
Ipv6Address	String	2408:4321:180:1701:94c7:bc38:3bfa:***	The IPv6 address assigned to the ENI.
MacAddress	String	00:16:3e:12:e7:***	The MAC address of the ENI.
NetworkInterfaceId	String	eni-bp125p95hhdhn3ot***	The ID of the ENI.
NetworkInterfaceName	String	my-eni-name	The name of the ENI.
OwnerId	String	123456****	The ID of the account that owns the ENI.

Parameter	Type	Example	Description
PrivateIpAddresses	String	172.17.*.*	The private IP address of the ENI.
PrivateIpSets	Array		The private IP addresses of the ENI.
PrivateIpSet			
AssociatedPublicIp	Struct		The public IP address associated with the ENI.
AllocationId	String	eip-2ze88m67qx5z****	The ID of the EIP.
PublicIpAddress	String	116.62.*.*	 Note This parameter is not supported.
Primary	Boolean	true	Indicates whether the IP address is the primary private IP address.
PrivateIpAddresses	String	172.17.*.*	The private IP address of the instance.
QueueNumber	Integer	2	The queue number of the ENI.
ResourceGroupId	String	rg-2ze88m67qx5z****	The ID of the resource group.
SecurityGroupIds	List	sg-bp18kz60mefsicfg**	The IDs of security groups.
ServiceID	Long	12345678910	The ID of the distributor to which the ENI belongs.
ServiceManaged	Boolean	true	Indicates whether the user is an Apsara Stack service or a distributor.
Status	String	Available	The state of the ENI.
Tags	Array		The tags of the ENI.
Tag			

Parameter	Type	Example	Description
TagKey	String	TestKey	The key of the tag.
TagValue	String	TestValue	The value of the tag.
Type	String	Secondary	The type of the ENI.
VSwitchId	String	vsw- bp16usj2p27htro3** **	The ID of the VSwitch.
VpcId	String	vpc- bp1j7w3gc1cexjqd** **	The ID of the VPC.
ZoneId	String	cn-qingdao-env17- amtest11001-a	The ID of the zone.
NextToken	String	AAAAAdDWBf2****	The query token returned in this call.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	473469C7-AA6F- 4DC5-B3DB- A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	70	The total number of ENIs.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeNetworkInterfaces
&RegionId=cn-qingdao-env17-d01
&PrivateIpAddress.1=192.168.*.*
&PrivateIpAddress.2=192.168.*.*
&NextToken=AAAAAdDWBf2****
&<Common request parameters>
```

Sample success responses

XML format

```

<DescribeNetworkInterfacesResponse>
  <TotalCount>1</TotalCount>
  <RequestId>5C0E2B68-EDB0-421D-B146-E58A04808242</RequestId>
  <PageSize>10</PageSize>
  <NextToken>AAAAAdDWBf2w6Olxc+cMPjUtUMpaCa3hjTbxWpikFyOaihc****/JSvFWO/sGLK3bh****</NextToken>
  <PageNumber>1</PageNumber>
  <NetworkInterfaceSets>
    <NetworkInterfaceSet>
      <Status>InUse</Status>
      <PrivateIpAddress>192.168. *. *</PrivateIpAddress>
      <ResourceGroupId>rg-aek2boynwys****</ResourceGroupId>
      <InstanceId>i-wz9lt9p4j9xsw2pn****</InstanceId>
      <VSwitchId>vsw-wz9vqfgwgkj94ubb1****</VSwitchId>
      <NetworkInterfaceId>eni-wz9iib303as7e5c3****</NetworkInterfaceId>
      <MacAddress>00:16:3e:*:*:c2</MacAddress>
      <SecurityGroupIds>
        <SecurityGroupId>sg-wz9iib303as7e5c7****</SecurityGroupId>
      </SecurityGroupIds>
      <Type>Primary</Type>
      <Ipv6Sets>
        <Ipv6Set>
          <Ipv6Address>2408:4321:180:1701:94c7:bc38:3bfa:***</Ipv6Address>
        </Ipv6Set>
      </Ipv6Sets>
      <VpcId>vpc-wz9wh0fywtu5szszb****</VpcId>
      <OwnerId>140692647406****</OwnerId>
      <AssociatedPublicIp></AssociatedPublicIp>
      <CreationTime>2019-12-25T12:31:31Z</CreationTime>
      <Tags>
        <Tag>
          <TagKey>owner</TagKey>
          <TagValue>lisi</TagValue>
        </Tag>
      </Tags>
      <PrivateIpSets>
        <PrivateIpSet>
          <PrivateIpAddress>192.168. *. *</PrivateIpAddress>
          <AssociatedPublicIp></AssociatedPublicIp>
          <Primary>true</Primary>
        </PrivateIpSet>
      </PrivateIpSets>
    </NetworkInterfaceSet>
  </NetworkInterfaceSets>
</DescribeNetworkInterfacesResponse>

```

JSON **format**


```

{
  "TotalCount": 1,
  "RequestId": "5C0E2B68-EDB0-421D-B146-E58A04808242",
  "PageSize": 10,
  "NextToken": "AAAAAdDWBf2w6Olxc+cMPjUtUMpaCa3hjTbxWpikFyOaihc****/JSvFWO/sGLK3bh****",
  "PageNumber": 1,
  "NetworkInterfaceSets": {
    "NetworkInterfaceSet": [{
      "Status": "InUse",
      "PrivateIpAddress": "192.168. *. *",
      "ResourceGroupId": "rg-aek2boynwys****",
      "InstanceId": "i-wz91t9p4j9xsw2pn****",
      "VSwitchId": "vsw-wz9vqfgwgkj94ubb1****",
      "NetworkInterfaceId": "eni-wz9iib303as7e5c3****",
      "MacAddress": "00:16:3e:*:*:c2",
      "SecurityGroupIds": {
        "SecurityGroupId": [
          "sg-wz9iib303as7e5c7****"
        ]
      },
      "Type": "Primary",
      "Ipv6Sets": {
        "Ipv6Set": [{
          "Ipv6Address": "2408:4321:180:1701:94c7:bc38:3bfa:****"
        }]
      },
      "VpcId": "vpc-wz9wh0fywtu5szszb****",
      "OwnerId": "140692647406****",
      "AssociatedPublicIp": {},
      "CreationTime": "2019-12-25T12:31:31Z",
      "Tags": {
        "Tag": [{
          "TagKey": "owner",
          "TagValue": "lisi"
        }]
      },
      "PrivateIpSets": {
        "PrivateIpSet": [{
          "PrivateIpAddress": "192.168. *. *",
          "AssociatedPublicIp": {},
          "Primary": true
        }]
      }
    }]
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Apsara Stack tenant account does not exist or your AccessKey pair has expired.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
400	UnsupportedParameter	%s	The error message returned because a specified parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because your account is not authorized to manage this resource. Contact the owner of the Apsara Stack tenant account for authorization.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because primary ENIs cannot be unbound from the instance.

HTTP status code	Error code	Error message	Description
404	InvalidEcsId.NotFound	%s	The error message returned because the specified InstanceId parameter does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified NetworkInterfaceId.N parameter does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitchId parameter does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified SecurityGroupId parameter does not exist.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be bound to the specified instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because the operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because the operation is invalid. Check whether the VPC in the operation corresponds to other parameters.
403	SecurityGroupInstanceLimitExceeded	%s	The error message returned because the maximum number of instances that can be added to the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified SecurityGroupId parameter is invalid and the specified security group is not of the VPC type.

HTTP status code	Error code	Error message	Description
403	InvalidOperation.InvalidEniType	%s	The error message returned because the current ENI type does not support this operation.
400	Forbidden.RegionId	%s	The error message returned because the service is not available in the current region.

5.1.14.6. DetachNetworkInterface

You can call this operation to unbind an elastic network interface (ENI) from an ECS instance.

Description

When you call this operation, take note of the following items:

- The primary ENIs of ECS instances cannot be unbound.
- The ENI must be in the Detaching (Detaching) or Bound (InUse) state.
- The instance must be in the Running (Running) or Stopped (Stopped) state.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DetachNetworkInterface	The operation that you want to perform. Set the value to DetachNetworkInterface.
InstanceId	String	Yes	i-bp67acfmxyzb4p****	The ID of the instance from which you want to unbind an ENI.
NetworkInterfaceId	String	Yes	eni-bp67acfmxyzb4p****	The ID of the ENI to be unbound.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=DetachNetworkInterface
&InstanceId=i-bp67acfmazb4p****
&NetworkInterfaceId=eni-bp67acfmazb4p****
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

XML format

```
<DetachNetworkInterfaceResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</DetachNetworkInterfaceResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Apsara Stack tenant account does not exist or your AccessKey pair has expired.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.

HTTP status code	Error code	Error message	Description
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
400	UnsupportedParameter	%s	The error message returned because a specified parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because you are not authorized to manage this resource. Contact the owner of the Apsara Stack tenant account for authorization.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidOperation.InvalidRegion	%s	The error message returned because the specified RegionId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because primary ENIs cannot be unbound from their instances.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified ENI ID does not exist.

HTTP status code	Error code	Error message	Description
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitch ID does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be bound to the specified instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because the operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because the operation is invalid. Check whether the VPC in the operation corresponds to other parameters.
403	SecurityGroupInstanceLimitExceeded	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified security group ID is invalid and the network type of the security group is not VPC.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the current ENI type does not support the operation.
400	Forbidden.RegionId	%s	The error message returned because the service is not available in the current region.

HTTP status code	Error code	Error message	Description
400	InvalidParams.EniId	%s	The error message returned because the specified ENI ID is invalid.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because the operation is invalid.
403	InvalidOperation.EniLinked	%s	The error message returned because the operation is not supported while ENIs are bound to the instance.
403	InvalidInstanceId.NotFound	%s	The error message returned because the specified InstanceId parameter does not exist.

5.1.14.7. DeleteNetworkInterface

You can call this operation to delete an elastic network interface (ENI).

Description

- The ENI must be in the Available (Available) state.
- If the ENI is bound to an ECS instance, you must unbind the ENI from the ECS instance (DetachNetworkInterface) before you can delete the ENI.
- After an ENI is deleted:
 - The primary private IP address of the ENI is automatically released.
 - The ENI is automatically removed from its security groups.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteNetworkInterface	The operation that you want to perform. Set the value to DeleteNetworkInterface.
NetworkInterfaceId	String	Yes	eni-bp14v2sdd3v8htlrm***	The ID of the ENI to be deleted.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	F3CD6886-D8D0-4FEE-B93E-1B73239673DE	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=DeleteNetworkInterface
&NetworkInterfaceId=eni-bp14v2sdd3v8htlnm***
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

XML format

```
<DetachNetworkInterface>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxxxx</RequestId>
</DetachNetworkInterface>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FExxxxx"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Apsara Stack tenant account does not exist or your AccessKey pair has expired.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.

HTTP status code	Error code	Error message	Description
400	UnsupportedParameter	%s	The error message returned because a specified parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because you are not authorized to manage this resource. Contact the owner of the Apsara Stack tenant account for authorization.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the specified instance ID is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because primary ENIs cannot be unbound from their instances.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified ENI ID does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitch ID does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.

HTTP status code	Error code	Error message	Description
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be bound to the specified instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because the operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because the operation is invalid. Check whether the VPC in the operation corresponds to other parameters.
403	SecurityGroupInstanceLimitExceeded	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified security group ID is invalid and the network type of the security group is not VPC.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the current ENI type does not support the operation.
400	Forbidden.RegionId	%s	The error message returned because the service is not available in the current region.
400	InvalidParams.EniId	%s	The error message returned because the specified ENI ID is invalid.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because the operation is invalid.

5.1.14.8. ModifyNetworkInterfaceAttribute

Modifies the attributes of an elastic network interface (ENI), such as its name, description, and security group.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyNetworkInterfaceAttribute	The operation that you want to perform. Set the value to <code>ModifyNetworkInterfaceAttribute</code> .
NetworkInterfaceId	String	Yes	eni-bp67acfmxb4ph***	The ID of the ENI. You can call the <code>DescribeNetworkInterfaces</code> operation to query ENI IDs.
RegionId	String	Yes	cn-qingdao-****-d01	The region ID of the ENI. You can call the <code>DescribeRegions</code> operation to query the most recent region list.
SecurityGroupId.N	RepeatList	No	sg-bp67acfmxb4ph***	The ID of the new security group to which the ENI belongs. If this parameter is specified, the ENI that already belonged to a security group before the <code>ModifyNetworkInterfaceAttribute</code> operation is called is removed from that security group and then added to the new security group specified by this parameter. Valid values of N: 1 to 5.
NetworkInterfaceName	String	No	my-eni-name	The new name of the ENI. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code> . It can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.
Description	String	No	test	The new description of the ENI. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> . This parameter is empty by default.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ModifyNetworkInterfaceAttribute
&NetworkInterfaceId=eni-bp67acfmazb4ph***
&RegionId=cn-qingdao-****-d01
&SecurityGroupId.sg-bp67acfmazb4ph***
&NetworkInterfaceName=my-eni-name
&Description=test
&<Common request parameters>
```

Sample success responses

XML format

```
<DetachNetworkInterfaceResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3****</RequestId>
</DetachNetworkInterfaceResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or because your AccessKey pair has expired.

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
400	UnsupportedParameter	%s	The error message returned because a specific parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because your account is not authorized to manage this resource. Contact the owner of the Alibaba Cloud account for authorization.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because the primary ENI cannot be unbound from the instance.
400	InvalidParams.EniId	%s	The error message returned because the specified NetworkInterfaceId parameter is invalid.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified InstanceId parameter does not exist.

HTTP status code	Error code	Error message	Description
404	InvalidEniId.NotFound	%s	The error message returned because the specified NetworkInterfaceId parameter does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitchId parameter does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be bound to the specified instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because the operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because the operation is invalid. Check whether the virtual private cloud (VPC) in the operation corresponds to other parameters.
403	SecurityGroupInstanceLimitExceeded	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified SecurityGroupId parameter is invalid and the network type of the security group is not VPC.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the operation is not supported while the ENI is of the current type.

HTTP status code	Error code	Error message	Description
400	Forbidden.RegionId	%s	The error message returned because the service is unavailable in the current region.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because the operation is invalid.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because you cannot modify security groups managed by cloud services.

5.1.14.9. AssignIpv6Addresses

Assigns one or more IPv6 addresses to an elastic network interface (ENI).

Description

You can specify IPv6 addresses within the CIDR block of the vSwitch with which the ENI is associated, or specify the number of IPv6 addresses to automatically assign. When you call this operation, take note of the following items:

- The ENI must be in the **Available** (`Available`) or **Bound** (`InUse`) state.
- The Elastic Compute Service (ECS) instance to which the primary ENI is bound must be in the **Running** (`Running`) or **Stopped** (`Stopped`) state.
- The maximum number of IPv6 addresses that can be assigned to an ENI varies per instance type.
 - If the ENI is in the **Available** (`Available`) state, it can be assigned up to 10 IPv6 addresses.
 - If the ENI is already bound to an ECS instance, the maximum number of IPv6 addresses that can be assigned to the ENI depends on the instance type.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AssignIpv6Addresses	The operation that you want to perform. Set the value to AssignIpv6Addresses.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.
NetworkInterfaceId	String	Yes	eni-bp14v2sdd3v8ht* *****	The ID of the ENI.

Parameter	Type	Required	Example	Description
Ipv6Address.N	RepeatList	No	2001:db8:1234:1a00::***	IPv6 address N to assign to the ENI. Valid value of N: 1. Example: Ipv6Address.1=2001:db8:1234:1a00::X XX  Note You cannot specify both Ipv6Addresses.N and Ipv6AddressCount.
Ipv6AddressCount	Integer	No	1	The number of IPv6 addresses to randomly generate for the ENI.  Note You cannot specify both Ipv6Addresses.N and Ipv6AddressCount.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=AssignIpv6Addresses
&NetworkInterfaceId=eni-bp14v2sdd3v8ht*****
&RegionId=cn-qingdao-env17-d01
&Ipv6Address.1=2001:db8:1234:1a00::***
&<Common request parameters>
```

Sample success responses

XML format

```
<AssignIpv6AddressesResponse>
  <RequestId>A94E0C9F-B39E-4A87-BFFC-6DC7840xxxxx</RequestId>
</AssignIpv6AddressesResponse>
```

JSON format

```
{
  "RequestId": "A94E0C9F-B39E-4A87-BFFC-6DC7840xxxxx"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Apsara Stack tenant account does not exist or because your AccessKey pair has expired.
403	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
400	UnsupportedParameter	%s	The error message returned because a specific parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because you are not authorized to manage this resource. Contact the owner of the Apsara Stack tenant account for authorization.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidParams.EniId	%s	The error message returned because the specified NetworkInterfaceId parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
404	InvalidEniId.NotFound	%s	The error message returned because the specified NetworkInterfaceId parameter does not exist.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the operation is not supported while the ENI is of the current type.
403	MaxEniIpv6IpsCountExceeded	%s	The error message returned because the maximum number of IPv6 addresses that can be assigned to the ENI has been reached.
403	InvalidIp.IpUnassigned	%s	The error message returned because the specified IP address is not assigned.
403	InvalidIp.IpRepeated	%s	The error message returned because the specified IP address already exists.
403	InvalidIp.IpAssigned	%s	The error message returned because the specified IP address is already assigned.
403	InvalidIp.Address	%s	The error message returned because the specified IPv6 address is invalid.
403	InvalidOperation.Ipv4CountExceeded	%s	The error message returned because the maximum number of IPv4 addresses has been reached.
403	InvalidOperation.Ipv6CountExceeded	%s	The error message returned because the maximum number of IPv6 addresses has been reached.

HTTP status code	Error code	Error message	Description
403	InvalidOperation.Ipv6NotSupport	%s	The error message returned because IPv6 addresses do not support this operation.
403	InvalidVSwitch.Ipv6NotTurnOn	%s	The error message returned because the IPv6 feature is not enabled for your current vSwitch. Enable the feature and try again.
403	InvalidVSwitchId.IpInvalid	%s	The error message returned because the specified private IP address is invalid.
403	Forbidden.RegionId	%s	The error message returned because the service is unavailable in the current region.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because the operation is invalid.
400	InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	The error message returned because the specified private IP address is already in use. Try another IP address.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances that can be added to the security group has been reached.

5.1.14.10. UnassignIpv6Addresses

You can call this operation to reclaim one or multiple IPv6 addresses assigned to an elastic network interface (ENI).

Description

When you call this operation, take note of the following items:

- The ENI must be in the **Available** (Available) or **Bound** (InUse) state.
- If the ENI is a primary ENI, the ECS instance to which the primary ENI is attached must be in the **Running** (Running) or **Stopped** (Stopped) state.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UnassignIpv6Addresses	The operation that you want to perform. Set the value to UnassignIpv6Addresses.
Ipv6Address.N	RepeatList	Yes	2001:db8:1234:1a00::***	The IPv6 addresses assigned to the ENI. Set the value of N to 1. Example: Ipv6Address.1=2001:db8:1234:1a00::*
NetworkInterfaceId	String	Yes	eni-bp14v2sdd3v8ht*****	The ID of the ENI.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=UnassignIpv6Addresses
&Ipv6Address.1=2001:db8:1234:1a00::***
&NetworkInterfaceId=eni-bp14v2sdd3v8ht*****
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

XML format

```
<UnassignIpv6AddressesResponse>
  <RequestId>48285314-3192-47FE-B4C8-9D51E7Fxxxxx</RequestId>
</UnassignIpv6AddressesResponse>
```

JSON format

```
{
  "RequestId": "48285314-3192-47FE-B4C8-9D51E7Fxxxxx"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Apsara Stack tenant account does not exist or your AccessKey pair has expired.
403	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
400	UnsupportedParameter	%s	The error message returned because a specified parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because you are not authorized to manage this resource. Contact the owner of the Apsara Stack tenant account for authorization.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.

HTTP status code	Error code	Error message	Description
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
404	InvalidEniId.NotFound	%s	The error message returned because the specified NetworkInterfaceId parameter does not exist.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the current ENI type does not support this operation.
403	InvalidIp.IpUnassigned	%s	The error message returned because the specified IP address is not assigned.
403	InvalidIp.IpRepeated	%s	The error message returned because the specified IP addresses are not unique.
403	InvalidIp.Address	%s	The error message returned because a specified IPv6 address is invalid.
403	Forbidden.RegionId	%s	The error message returned because the service is not available in the current region.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because the operation is invalid.

5.1.15. Regions and zones

5.1.15.1. DescribeRegions

You can call this operation to query available regions.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeRegions	The operation that you want to perform. Set the value to DescribeRegions.

Parameter	Type	Required	Example	Description
ResourceType	String	No	instance	The resource type. Valid values: - instance - disk Default value: instance
AcceptLanguage	String	No	zh-CN	The natural language that is used to filter the response. For more information, see RFC 7231 . Valid values: - zh-CN: Chinese - en-US: English - ja: Japanese Default value: zh-CN

Response parameters

Parameter	Type	Example	Description
Regions	Array		The collection of regions.
Region			
LocalName	String	China (Qingdao)	The name of the region.
RegionEndpoint	String	ecs.example.com	The endpoint of the region.
RegionId	String	cn-qingdao-env17-d01	The ID of the region.
Status	String	available	This parameter is not supported.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeRegions
&RegionId=cn-qingdao-env17-d01
&AcceptLanguage=en-US
&<Common request parameters>
```


Sample success responses

XML format

```
<DescribeRegionsResponse>
  <RequestId>38EC7366-F5A9-46B1-BDB1-0FDC2E296397</RequestId>
  <Regions>
    <Region>
      <RegionId>cn-qingdao-et2-b01</RegionId>
      <RegionEndpoint>ecs.example.com</RegionEndpoint>
      <LocalName>China (Qingdao)</LocalName>
    </Region>
    <Region>
      <RegionId>cn-qingdao-nebula</RegionId>
      <RegionEndpoint>ecs.cn-qingdao-nebula.example.com</RegionEndpoint>
      <LocalName>cn-qingdao-nebula</LocalName>
    </Region>
  </Regions>
</DescribeRegionsResponse>
```

JSON format

```
{
  "RequestId": "38EC7366-F5A9-46B1-BDB1-0FDC2E296397",
  "Regions": {
    "Region": [
      {
        "RegionId": "cn-qingdao-et2-b01",
        "RegionEndpoint": "ecs.example.com",
        "LocalName": "China (Qingdao)"
      },
      {
        "RegionId": "cn-qingdao-nebula",
        "RegionEndpoint": "ecs.cn-qingdao-nebula.example.com",
        "LocalName": "cn-qingdao-nebula"
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	Unauthorized.Empty Region	The specified account has no access authority to any region.	The error message returned because you have no access to regions. Apply for permissions and try again.

HTTP status code	Error code	Error message	Description
404	InvalidAcceptLanguage.NotFound	Only Chinese (zh-CN), English (en-US), and Japanese (ja) are allowed.	The error message returned because the specified AcceptLanguage parameter is invalid. Only Chinese, English, and Japanese are supported.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter does not exist.

5.1.15.2. DescribeZones

You can call this operation to query zones in a region.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeZones	The operation that you want to perform. Set the value to DescribeZones.
RegionId	String	Yes	cn-qingdao-env17-d01	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
AcceptLanguage	String	No	zh-CN	The natural language that is used to filter responses. For more information, visit RFC 7231 . Valid values: - zh-CN - en-US - ja Default value: zh-CN.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Parameter	Type	Example	Description
Zones	Array of Zone		Details about the zones.
Zone			
AvailableDedicatedHostTypes	List	Compute optimized	The supported dedicated host types.
AvailableDiskCategories	List	cloud	The supported disk categories.
AvailableInstanceTypes	List	c5	The available instance types.
AvailableResourceCreation	List	DedicatedHost	The types of resources that can be created.
AvailableResources	Array of ResourcesInfo		Details about the resources that can be created.
ResourcesInfo			
DataDiskCategories	List	cloud_ssd	The categories of data disks. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - ephemeral_ssd: local SSD
InstanceGenerations	List	IV	The generation numbers of instance families.
InstanceTypeFamilies	List	["d1", "d1ne"]	The instance families.
InstanceTypes	List	["ecs.g5.large"]	The instance types.
IoOptimized	Boolean	true	Indicates whether the instance type is I/O optimized.
NetworkTypes	List	VPC	The network types. Valid values: - VPC: VPC - Classic: classic network

Parameter	Type	Example	Description
SystemDiskCategories	List	cloud_ssd	The categories of system disks. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSD
AvailableVolumeCategories	List	san_ssd	The categories of available Shared Block Storage devices.
DedicatedHostGenerations	List	I	The generation numbers of dedicated hosts.
LocalName	String	Hangzhou Zone G	The name of the zone in the local language.
Zoneld	String	cn-qingdao-env17-amtest11001-a	The ID of the zone.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeZones
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeZonesResponse>
  <Zones>
    <Zone>
      <AvailableResourceCreation>
        <ResourceTypes>Instance</ResourceTypes>
        <ResourceTypes>Disk</ResourceTypes>
      </AvailableResourceCreation>
      <LocalName></LocalName>
      <ZoneId>cn-qingdao-env17-amtest11001-b</ZoneId>
      <AvailableDiskCategories>
        <DiskCategories>cloud</DiskCategories>
      </AvailableDiskCategories>
    </Zone>
    <Zone>
      <AvailableResourceCreation>
        <ResourceTypes>Instance</ResourceTypes>
        <ResourceTypes>Disk</ResourceTypes>
      </AvailableResourceCreation>
      <LocalName></LocalName>
      <ZoneId>cn-qingdao-env17-amtest11001-a</ZoneId>
      <AvailableDiskCategories>
        <DiskCategories>cloud</DiskCategories>
      </AvailableDiskCategories>
    </Zone>
  </Zones>
  <RequestId>6DB97BCC-92BA-424D-A7C8-3F6486612BAE</RequestId>
</DescribeZonesResponse>
```

JSON **format**

```
{
  "RequestId": "A347EF0E-BBCC-4EFA-BD79-27AA3ACFD1BF",
  "Zones": {
    "Zone": [
      {
        "AvailableDiskCategories": {
          "DiskCategories": [
            "cloud"
          ]
        },
        "AvailableResourceCreation": {
          "ResourceTypes": [
            "Instance",
            "Disk"
          ]
        },
        "LocalName": "",
        "ZoneId": "cn-qingdao-env17-amtest11001-b"
      },
      {
        "AvailableDiskCategories": {
          "DiskCategories": [
            "cloud"
          ]
        },
        "AvailableResourceCreation": {
          "ResourceTypes": [
            "Instance",
            "Disk"
          ]
        },
        "LocalName": "",
        "ZoneId": "cn-qingdao-env17-amtest11001-a"
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified instance billing method does not exist.

HTTP status code	Error code	Error message	Description
400	InvalidSpotStrategy	The specified SpotStrategy is not valid.	The error message returned because the specified SpotStrategy parameter is invalid.
404	InvalidAcceptLanguage.NotFound	Only Chinese (zh-CN), English (en-US), and Japanese (ja) are allowed.	The error message returned because the specified AcceptLanguage parameter is invalid. The valid values of this parameter are Chinese, English, and Japanese.

5.1.15.3. DescribeAvailableResource

Queries resources in a specific zone. You can query the resources available in a zone before you create Elastic Compute Service (ECS) instances by calling the RunInstances operation or before you modify instance types by calling the ModifyInstanceSpec operation.

Description

Values of the `DestinationResource` parameter have dependencies. When you select a value in the following chain for the DestinationResource parameter, the more to the right the selected value is ordered, the more parameters you must specify.

- **Sequence:** `Zone > IoOptimized > InstanceType = Network = ddh > SystemDisk > DataDisk`
- **Example:** If you set `DestinationResource` to `DataDisk`, you must set `InstanceType` to `disk`.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeAvailableResource	The operation that you want to perform. If you use a custom HTTP or HTTPS URL to initiate an API request, you must specify the <code>Action</code> parameter. Set the value to <code>DescribeAvailableResource</code> .

Parameter	Type	Required	Example	Description
DestinationResource	String	Yes	InstanceType	The resource type to query. Valid values: - Zone: zone - IoOptimized: I/O optimized resource - InstanceType: instance type - SystemDisk: system disk - DataDisk: data disk - Network: network type - ddh: dedicated host For more information about how to set the DestinationResource parameter, see the "Description" section in this topic.
RegionId	String	Yes	cn-hangzhou	The ID of the region for which to query resources. You can call the DescribeRegions operation to query the most recent region list.
ZoneId	String	No	cn-hangzhou-a	The ID of the zone for which to query resources. This parameter is empty by default. When this parameter is empty, the system returns resources that match the other criteria in all zones within the region specified by <code>RegionId</code>.
IoOptimized	String	No	optimized	Specifies whether the instance is I/O optimized. Valid values: - none: The instance is non-I/O optimized. - optimized: The instance is I/O optimized. Default value: optimized.
DedicatedHostId	String	No	dh-bp165p6xk2tlw61e****	The ID of the dedicated host.
InstanceType	String	No	ecs.g5.large	 Note This parameter is unavailable.

Parameter	Type	Required	Example	Description
SystemDiskCategory	String	No	cloud_ssd	The category of the system disk. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - ephemeral_ssd: local SSD - cloud_essd: enhanced SSD (ESSD) When DestinationResource is set to SystemDisk, InstanceType, or DataDisk, the SystemDiskCategory parameter is optional. Default value: cloud_efficiency.
DataDiskCategory	String	No	cloud_ssd	The category of the data disk. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - ephemeral_ssd: local SSD - cloud_essd: ESSD
NetworkCategory	String	No	vpc	The network type. Valid values: - vpc - classic
Cores	Integer	No	2	 Note This parameter is unavailable.
Memory	Float	No	8.0	 Note This parameter is unavailable.
ResourceType	String	No	instance	The type of the resource. Valid values: - instance: ECS instance - disk: cloud disk - ddh: dedicated host

Response parameters

Parameter	Type	Example	Description
AvailableZones	Array of AvailableZone		Details about the zones in which resources are available.
AvailableZone			
AvailableResources	Array of AvailableResource		Details about the resources available in the zone.
AvailableResource			
SupportedResources	Array of SupportedResource		Details about the resources.
SupportedResource			
Max	Integer	2	The maximum number of available resources of a specific type. No value is returned when the parameter is empty.
Min	Integer	1	The minimum number of available resources of a specific type. No value is returned when the parameter is empty.
Status	String	Available	The state of the resource. Valid values: - Available - SoldOut
StatusCategory	String	WithStock	The resource category based on stock. Valid values: - WithStock: Resources are in sufficient stock. - ClosedWithStock: Resources are in low stock. We recommend that you use other resources that are in sufficient stock. - WithoutStock: Resources are out of stock and will be replenished. We recommend that you use other resources that are in sufficient stock. - ClosedWithoutStock: Resources are out of stock and will not be replenished. We recommend that you use other resources that are in sufficient stock.

Parameter	Type	Example	Description
Unit	String	null	The unit of the resource type. No value is returned when the parameter is empty.
Value	String	ecs.d1ne.xlarge	The resource type.
Type	String	InstanceType	The type of the resource. Valid values: • Zone: zone • IoOptimized: I/O optimized resource • InstanceType: instance type • SystemDisk: system disk • DataDisk: data disk • Network: network type • ddh: dedicated host
RegionId	String	cn-hangzhou	The ID of the region.
Status	String	Available	The state of the resource. Valid values: • Available • SoldOut
StatusCategory	String	WithStock	The resource category based on the stock. Valid values: • WithStock: Resources are in sufficient stock. • ClosedWithStock: Resources are in low stock. We recommend that you use other resources that are in sufficient stock. • WithoutStock: Resources are out of stock and will be replenished. We recommend that you use other resources that are in sufficient stock. • ClosedWithoutStock: Resources are out of stock and will not be replenished. We recommend that you use other resources that are in sufficient stock.
ZoneId	String	cn-hangzhou-a	The ID of the zone.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.example.com/?Action=DescribeAvailableResource
&DestinationResource=InstanceType
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML **format**

```
<DescribeAvailableResourceResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
  <AvailableZones>
    <Status>Available</Status>
    <StatusCategory>WithStock</StatusCategory>
    <ZoneId>cn-hangzhou-a</ZoneId>
    <RegionId>cn-hangzhou</RegionId>
    <AvailableResources>
      <Type>InstanceType</Type>
      <SupportedResources>
        <Status>Available</Status>
        <Min>1</Min>
        <StatusCategory>WithStock</StatusCategory>
        <Max>2</Max>
        <Value>ecs.d1ne.xlarge</Value>
        <Unit>null</Unit>
      </SupportedResources>
    </AvailableResources>
  </AvailableZones>
</DescribeAvailableResourceResponse>
```

JSON **format**

```

{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "AvailableZones": {
    "Status": "Available",
    "StatusCategory": "WithStock",
    "ZoneId": "cn-hangzhou-a",
    "RegionId": "cn-hangzhou",
    "AvailableResources": {
      "Type": "InstanceType",
      "SupportedResources": {
        "Status": "Available",
        "Min": 1,
        "StatusCategory": "WithStock",
        "Max": 2,
        "Value": "ecs.d1ne.xlarge",
        "Unit": "null"
      }
    }
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	Invalid.RegionId	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter is invalid.
404	Unavailable.Regions	The available regions does not exists	The error message returned because the specified RegionId parameter is invalid.
400	Invalid.InstanceChargeType	The specified InstanceChargeType is not valid.	The error message returned because the specified InstanceChargeType parameter is invalid.
400	Invalid.Param	The input parameter DestinationResource that is mandatory for processing this request is not supplied.	The error message returned because the specified DestinationResource parameter is invalid.
404	Invalid.ResourceType	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter is invalid.

HTTP status code	Error code	Error message	Description
404	Invalid.DestinationResource	The specified DestinationResource is not valid.	The error message returned because the specified DestinationResource parameter is invalid.
404	Invalid.IoOptimized	The specified IoOptimized is not valid.	The error message returned because the specified IoOptimized parameter is invalid.
404	Invalid.NetworkCategory	The specified NetworkCategory is not valid.	The error message returned because the specified NetworkCategory parameter is invalid.
404	Invalid.SpotStrategy	The specified SpotStrategy is not valid.	The error message returned because the specified SpotStrategy parameter is invalid.
403	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified dedicated host does not exist.
404	Invalid.NetworkType	The specified NetworkType is not valid.	The error message returned because the specified NetworkType parameter is invalid.
404	InvalidResourceId.NotFound	The specified ResourceId is not found in our records	The error message returned because the specified ResourceId parameter is invalid. Check whether the resource exists.
403	InvalidParam.TypeAndCpuMem.Conflict	The specified 'InstanceType' and 'Cores', 'Memory' are not blank at the same time.	The error message returned because none of the InstanceType, Cores, and Memory parameters are specified.
403	InvalidParam.Cores	The specified parameter 'Cores' should be empty	The error message returned because the Cores parameter is specified.
403	InvalidParam.Memory	The specified parameter 'Memory' should be empty	The error message returned because the Memory parameter is specified.
400	InvalidRegionId.Malformed	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.

5.1.15.4. DescribeResourcesModification

You can call this operation to query available resources in a zone when you upgrade or downgrade instance types or replace system disks.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeResourcesModification	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the <code>Action</code> parameter. Set the value to <code>DescribeResourcesModification</code> .
DestinationResource	String	Yes	InstanceType	The type of the resource. Valid values: - InstanceType - SystemDisk
RegionId	String	Yes	cn-qingdao-env17-d01	The ID of the region. You can call the <code>DescribeRegions</code> operation to query the most recent region list.
ResourceId	String	Yes	i-bp67acfmxazb4p****	The ID of the resource. For example, when <code>DestinationResource</code> is set to <code>InstanceType</code> , this parameter can be interpreted as <code>InstanceId</code> .
MigrateAcrossZone	Boolean	No	true	Specifies whether to allow cross-cluster instance type upgrades. Valid values: - true - false Default value: false
InstanceType	String	No	ecs.g5.large	The instance type. For more information, see Instance types in ECS User Guide or call the <code>DescribeInstanceTypes</code> operation to query the most recent instance type list. When <code>DestinationResource</code> is set to <code>SystemDisk</code> , you must specify this parameter.

Parameter	Type	Required	Example	Description
Cores	Integer	No	2	The number of vCPUs of the instance type. For more information, see Instance types in ECS User Guide. This parameter is valid only when DestinationResource is set to InstanceType.
Memory	Float	No	8.0	The memory size of the instance type. Unit: GiB. For more information, see Instance types in ECS User Guide. This parameter is valid only when DestinationResource is set to InstanceType.

Response parameters

Parameter	Type	Example	Description
AvailableZones	Array		The collection of zones.
AvailableZone			
AvailableResources	Array		The collection of available resources.
AvailableResource			
SupportedResources	Array		The collection of supported resources.
SupportedResource			
Max	Integer	2	The maximum number of resources of a specific type that can be created. No value is returned when this parameter is empty.
Min	Integer	1	The minimum number of resources of a specific type that can be created. No value is returned when this parameter is empty.

Parameter	Type	Example	Description
Status	String	Available	The status of the resource. Valid values: - Available - SoldOut
StatusCategory	String	WithStock	The stock status of the resource. Valid values: - WithStock: sufficient stock - ClosedWithStock: insufficient stock - WithoutStock: out of stock
Unit	String	null	The unit of the resource type. No value is returned when this parameter is empty.
Value	String	ecs.g5.large	The value of the resource.
Type	String	InstanceType	The type of the resource. Valid values: - Zone - IoOptimized - InstanceType - SystemDisk - DataDisk - Network
RegionId	String	cn-qingdao-env17-d01	The ID of the region.
Status	String	Available	The status of the resource. Valid values: - Available - SoldOut
StatusCategory	String	WithStock	The stock status of the resource. Valid values: - WithStock: sufficient stock - ClosedWithStock: insufficient stock - WithoutStock: out of stock
ZoneId	String	cn-qingdao-env17-amtest11001-a	The ID of the zone.

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeResourcesModification
&DestinationResource=InstanceType
&RegionId=cn-qingdao-env17-d01
&ResourceId=i-bp67acfmazb4p****
&MigrateAcrossZone=true
&OperationType=Upgrade
&InstanceType=ecs.g5.large
&<Common request parameters>
```

Sample success responses

[XML](#) [format](#)

```
<DescribeResourcesModificationResponse>
  <RequestId>994F2B60-B050-49E3-9283-44655FAC7A4X</RequestId>
  <AvailableZones>
    <AvailableZone>
      <Status>Available</Status>
      <RegionId>cn-qingdao-env17-d01</RegionId>
      <AvailableResources>
        <AvailableResource>
          <Type>InstanceType</Type>
          <SupportedResources>
            <SupportedResource>
              <Status>Available</Status>
              <Value>ecs.g5.xlarge</Value>
            </SupportedResource>
            <SupportedResource>
              <Status>Available</Status>
              <Value>ecs.t5-lc1m2.large</Value>
            </SupportedResource>
            <SupportedResource>
              <Status>Available</Status>
              <Value>ecs.t5-c1m4.2xlarge</Value>
            </SupportedResource>
            <SupportedResource>
              <Status>Available</Status>
              <Value>ecs.c5.xlarge</Value>
            </SupportedResource>
          </SupportedResources>
        </AvailableResource>
      </AvailableResources>
      <ZoneId>cn-qingdao-env17-amtest11001-a</ZoneId>
    </AvailableZone>
  </AvailableZones>
</DescribeResourcesModificationResponse>
```

JSON **format**

```
{
  "RequestId": "994F2B60-B050-49E3-9283-44655FAC7A4X",
  "AvailableZones": {
    "AvailableZone": [
      {
        "Status": "Available",
        "RegionId": "cn-qingdao-env17-d01",
        "AvailableResources": {
          "AvailableResource": [
            {
              "Type": "InstanceType",
              "SupportedResources": {
                "SupportedResource": [
                  {
                    "Status": "Available",
                    "Value": "ecs.g5.xlarge"
                  },
                  {
                    "Status": "Available",
                    "Value": "ecs.t5-lc1m2.large"
                  },
                  {
                    "Status": "Available",
                    "Value": "ecs.t5-c1m4.2xlarge"
                  },
                  {
                    "Status": "Available",
                    "Value": "ecs.c5.xlarge"
                  }
                ]
              }
            }
          ]
        }
      }
    ]
  },
  "ZoneId": "cn-qingdao-env17-amtest11001-a"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	Invalid.RegionId	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter is invalid.

HTTP status code	Error code	Error message	Description
404	Unavailable.Regions	The available regions does not exists	The error message returned because the specified RegionId parameter is invalid.
400	Invalid.OperationType	The specified operationType is not valid.	The error message returned because the specified OperationType parameter is invalid.
400	Invalid.Param	The input parameter DestinationResource that is mandatory for processing this request is not supplied.	The error message returned because the required DestinationResource parameter is not specified.
404	Invalid.ResourceType	The ResourceType provided does not exist in our records.	The error message returned because the specified DestinationResource parameter is invalid.
404	Invalid.DestinationResource	The specified DestinationResource is not valid.	The error message returned because the specified DestinationResource parameter is invalid.
404	Invalid.IoOptimized	The specified IoOptimized is not valid.	The error message returned because the specified IoOptimized parameter is invalid.
404	Invalid.NetworkCategory	The specified NetworkCategory is not valid.	The error message returned because the specified NetworkCategory parameter is invalid.
404	Invalid.SpotStrategy	The specified SpotStrategy is not valid.	The error message returned because the specified SpotStrategy parameter is invalid.
400	Invalid.InstanceChargeType	The specified InstanceChargeType is not valid.	The error message returned because the specified InstanceChargeType parameter is invalid.
404	Invalid.ResourceId	The specified ResourceId is not valid.	The error message returned because the specified ResourceId parameter is invalid.
404	Invalid.InstancePayType	The specified InstancePayType is not valid.	The error message returned because the specified InstanceChargeType parameter is invalid.

HTTP status code	Error code	Error message	Description
404	OperationDenied	The specified operation is denied as this instanceType is not support.	The error message returned because the instance type does not support this operation.
403	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist in our records.	The error message returned because the specified dedicated host does not exist in the current region.
404	InvalidInstanceId.NotFound	The specified InstanceId provided does not exist in our records.	The error message returned because the specified instance does not exist.
404	InvalidResourceId.NotFound	The specified ResourceId is not found in our records	The error message returned because the specified ResourceId parameter does not exist.
403	InvalidParam.TypeAndCpuMem.Conflict	The specified 'InstanceType' and 'Cores', 'Memory' are not blank at the same time.	The error message returned because none of the InstanceType, Cores, or Memory parameters is specified.
403	InvalidParam.Cores	The specified parameter 'Cores' should be empty	The error message returned because the Cores parameter is specified.
403	InvalidParam.Memory	The specified parameter 'Memory' should be empty	The error message returned because the Memory parameter is specified.

5.1.16. Operations and monitoring

5.1.16.1. GetInstanceConsoleOutput

You can call this operation to obtain the command output of an instance. The returned command output is encoded in Base64.

Description

- ECS is a virtualized cloud-based service and cannot be connected to display devices. However, the command output for the last start, restart, or shutdown of each instance is cached. You can call `GetInstanceConsoleOutput` to obtain this information.
- You cannot obtain the command output of Windows instances.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetInstanceConsoleOutput	The operation that you want to perform. Set the value to GetInstanceConsoleOutput.
InstanceId	String	Yes	i-bp1c1xhsrac2coiw****	The ID of the instance.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
ConsoleOutput	String	V2VsY29tZSB0byBD ZW50T1MgCgpDaGV ja2luZyBmaWxlc3lz GVtcwpDaGVja2luZy BhbGwgZmlsZSBze XN0ZW1zLgpbL3Nia W4vZnNjay5leHQ0IC gxKSAtLSAvXSBmc2 NrLmV4dDQgLWEgL 2Rldi92ZGExIAovZGV 2L3ZkYTE6IGNsZW uLCAzMjAxNi8yNjlxN DQwIGZpbGVzLCA0 NDc5NzQvMTA0ODU 1MDQgYmxvY2tzCg pFbnRlcmluZyBub24 taW50ZXJhY3Rpdm Ugc3RhcncR1cApDYW xsaW5nIHRobSBzeX N0ZW0gYWN0aXZp dHkgZGF0YSBjb2xsZ WN0b3lgKHNhZGMp Li4uIAoKQnJpbmdpb mcgdXAgW50ZXJm YWNlIGV0aDA6ICA KRGV0ZXJtaW5pbm cgSVAgW5mb3JtYXR pb24gZm9yIGV0aDA uLi4gZG9uZS4KCmFs aXl1bi1zZXJ2aWNlIH N0YXJ0L3J1bm5pbm csIHByb2Nlc3MgMTc zMwpmaW5pc2hlZA oKQ2VudE9TlHJlbGV hc2UgNi44IChGaW5h bCkKS2VybmVsIDluN i4zMj02OTYuMy4yL mVsNi5pNjg2IG9uIGF uIGk2ODYKCmlaMnpl ZDk2ZTQ2MmF5cjBx eioqKioqIGxvZ2luOg ==	The command output of the instance, which is encoded in Base64.
InstanceId	String	i- bp1c1xhsrac2coiw** **	The ID of the instance.
LastUpdateTime	String	2018-03-22 10:04:57	The time when the instance was last started, restarted, or shut down. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
http://ecs.example.com/?Action=GetInstanceConsoleOutput
&InstanceId=i-bp1clxhsrac2coiw****
&RegionId=cn-qingdao-env17-d01
&<Common request parameters>
```

Sample success responses

XML format

```
<GetInstanceConsoleOutputResponse>
  <RequestId>22A1933F-AD02-4560-A6A7-53CF2231D942</RequestId>
  <InstanceId>i-bp1clxhsrac2coiw****</InstanceId>
  <LastUpdateTime>2018-03-22 10:04:57</LastUpdateTime>
  <ConsoleOutput>V2VsY29tZSB0byBDZW50TlMgCgpDaGVja2luZyBmaWxlc3lzdGVtcwpDaGVja2luZyBhbG
wgZmlsZSBzeXN0ZWlwZlgpbL3NiaW4wZnNjay5leHQ0ICgxKSAtLSAvXS BMC2NrLmV4dDQgLWEgL2Rldi92ZGExIAovZ
GV2L3ZkYTE6IGNsZWFuLCAzMjAxNi8yNjIxNDQwIGZpbGVzLCA0NDc5NzQvMTA0ODU1MDQgYmxvY2tzCgpFbnRlcmlu
ZyBub24taW50ZXJhY3Rpdmg3RhcncRlCApDYWxsaW5nIHRob3ZzeXN0ZW0yYWN0aXZpdHkgZGF0YSBjb2xsZWN0b3I
gKHNhZGmpLi4uIAoKQnJpbmdpbmcgdXAgaW50ZXJmYWNlIGV0aDA6ICAKRGV0ZXJtaW5pbmcgSVAgaw5mb3JtYXRpb2
4gZm9yIGV0aDAuLi4gZG9uZS4KCMFsaX11bi1zZXJ2aWNlIHNOYXJ0L3J1bm5pbmcsIHB5b2Nlc3MgMTCzMWpmaW5pc
2hlZAoKQ2VudE9TlHJlbgVhc2UgNi44ICgGaW5hbCkKS2VybmVsIDIuNi4zMi02OTYyMy4yLmVsNi5pNjg2IG9uIGFu
IGk2ODYKCMlaMnplZDk2ZTQ2MmF5CjBxeioqKioqIGxvZ2luOg==</ConsoleOutput>
</GetInstanceConsoleOutputResponse>
```

JSON format

```
{
  "RequestId": "22A1933F-AD02-4560-A6A7-53CF2231D942",
  "InstanceId": "i-bp1clxhsrac2coiw****",
  "LastUpdateTime": "2018-03-22 10:04:57",
  "ConsoleOutput": "V2VsY29tZSB0byBDZW50T1MgCgpDaGVja2luZyBmaWxlc3lzdGVtcwpuDaGVja2luZyBhbGwgZmlsZSBzeXN0ZW1zLgpbL3NiaW4vZnNjay5leHQ0ICgxKSAtLSAvXS BMC2NrLmV4dDQgLWEgLRldi92ZGEuIAovZGV2L3ZkYTE6IGNsZWFuLCAzMjAxNi8yNjIxNDQwIGZpbGVzLCA0NDc5NzQvMTA0ODU1MDQgYmxvY2tzcGpFbnRlcmluZyBub24taW50ZXJhY3RpdmUgc3RhcncRlcApDYWxsaW5nIHRoZSBzeXN0ZW0gYWN0aXZpdHkgZGF0YSBjb2xsZW50b3IgaXNhZGpLi4uIAoKQnJpbmdpbmcgdXAgaw50ZXJmYWNlIGV0aDA6ICAKRGV0ZXJtaW5pbmcgSVAgaw5mb3JtYXRpb24gZm9yIGV0aDAuLi4gZG9uZS4KCMFsaX11bi1zZXJ2aWNlIHN0YXJ0L3Jlbm5pbmcsIHByb2Nlc3MgMTczMwpmaw5pc2hlZAcKQ2VudE9THjlbGVhc2UgNi44IChGaW5hbCkKS2VybmVsIDIuNi4zMj0OTYUmy4yLmVsNi5pNjg2IG9uIGFuIGk2ODYKCMlaMnp1ZDk2ZTQ2MmF5cjbXeiogKioqIGxvZ2luOg=="
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
404	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
405	IncorrectInstanceState	%s	The error message returned because the operation is not supported while the instance is in the current state.
405	NotSupported	%s	The error message returned because the operation is invalid.
429	Throttling	%s	The error message returned because the request is denied due to throttling.

5.1.16.2. GetInstanceScreenshot

You can call this operation to obtain screenshots of an instance.

Description

ECS returns an instance screenshot that is in the JPG format and encoded in Base64. You must decode the screenshot. We recommend that you call this operation for troubleshooting and diagnosis. When you call this operation, take note of the following items:

- The instance must be in the Running state.
- If you call this operation on the same instance for multiple times, the call interval must be at least 10 seconds. Otherwise, the `Throttling` error code is returned.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetInstanceScreenshot	The operation that you want to perform. Set the value to GetInstanceScreenshot.
InstanceId	String	Yes	i-bp1gbz20g229bv u5****	The ID of the instance.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
WakeUp	Boolean	No	false	Specifies whether to wake up the instance that is in sleep mode. Default value: false

Response parameters

Parameter	Type	Example	Description
InstanceId	String	i-bp1gbz20g229bvu5****	The ID of the instance.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Screenshot	String	iVBORw0KGgoA...AAABJRU5ErkJggg==	The JPG-formatted instance screenshot, which is encoded in Base64.

Examples

Sample requests

```
http://ecs.example.com/?Action=GetInstanceScreenshot
&InstanceId=i-bp1gbz20g229bvu5****
&RegionId=cn-qingdao-env17-d01
&WakeUp=false
&<Common request parameters>
```

Sample success responses

XML **format**

```
<GetInstanceScreenshotResponse>
  <RequestId>22A1933F-AD02-4560-A6A7-53CF2231D942</RequestId>
  <InstanceId>i-bp1gbz20g229bvu5****</InstanceId>
  <Screenshot>iVBORw0KGgoA...AAABJRU5ErkJggg==</Screenshot>
</GetInstanceScreenshotResponse>
```

JSON **format**

```
{
  "RequestId": "22A1933F-AD02-4560-A6A7-53CF2231D942",
  "InstanceId": "i-bp1gbz20g229bv5****",
  "Screenshot": "iVBORw0KGgoA...AAABJRU5ErkJggg=="
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
404	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
405	IncorrectInstanceState	%s	The error message returned because the operation is not supported while the instance is in the current state.
405	NotSupported	%s	The error message returned because the operation is invalid.
429	Throttling	%s	The error message returned because the request is denied due to throttling.

5.1.16.3. DescribeDiskMonitorData

You can call this operation to query the monitoring data of a disk over a specific period of time.

Description

The monitoring data includes read IOPS, write IOPS, read bandwidth (byte/s), write bandwidth (byte/s), read latency (μs), and write latency (μs) of the disk.

When you call this operation, take note of the following items:

- Only monitoring data about disks that are in the Running (`In_use`) state can be queried.

 **Note** A portion may be missing from the returned monitoring data. This is because the system cannot obtain the relevant information, such as when a disk is not in the Running (`In_Use`) state.

- Up to 400 monitoring data entries can be returned at a time. An error is returned if the value calculated based on the following formula is greater than 400: $(EndTime - StartTime) / Period$.
- You can query the monitoring data in the past 30 days. If the value of `StartTime` is more than 30

days earlier than the current time, an error is returned.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDiskMonitorData	The operation that you want to perform. Set the value to DescribeDiskMonitorData.
DiskId	String	Yes	d-bp1bq5g3dxxo1x4o****	The ID of the disk.
EndTime	String	Yes	2014-07-23T12:09:00Z	The end of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the value of seconds (ss) is not 00, the time is rounded up to the next minute.
StartTime	String	Yes	2014-07-23T12:07:00Z	The start of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the value of seconds (ss) is not 00, the time is rounded up to the next minute.
Period	Integer	No	60	The interval at which to retrieve monitoring data. Unit: seconds. Valid values: • 60 • 600 • 3600 Default value: 60

Response parameters

Parameter	Type	Example	Description
MonitorData	Array		The collection of monitoring data about the disk.

Parameter	Type	Example	Description
DiskMonitorData			
BPSRead	Integer	0	The read bandwidth of the system disk. Unit: Byte/s.
BPSTotal	Integer	204	The total read and write bandwidth of the system disk. Unit: Byte/s.
BPSWrite	Integer	204	The write bandwidth of the system disk. Unit: Byte/s.
DiskId	String	d-bp1bq5g3dxxo1x4o****	The ID of the disk.
IOPSRead	Integer	0	The number of read I/O operations per second on the system disk.
IOPSTotal	Integer	0	The total number of read and write I/O operations per second on the system disk.
IOPSWrite	Integer	0	The number of write I/O operations per second on the system disk.
LatencyRead	Integer	0	The read latency of the disk. Unit: μ s.
LatencyWrite	Integer	0	The write latency of the disk. Unit: μ s.
TimeStamp	String	2014-07-23T12:07:00Z	The timestamp of the data query. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	3	The total number of returned monitoring data entries.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeDiskMonitorData
&DiskId=d-bplbq5g3dxxolx4o****
&EndTime=2014-07-23T12:09:00Z
&StartTime=2014-07-23T12:07:00Z
&Period=60
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeDiskMonitorDataResponse>
  <MonitorData>
    <DiskMonitorData>
      <BPSRead>0</BPSRead>
      <BPSTotal>0</BPSTotal>
      <BPSWrite>0</BPSWrite>
      <DiskId>d-bplbq5g3dxxolx4o****</DiskId>
      <IOPSRead>0</IOPSRead>
      <IOPSTotal>0</IOPSTotal>
      <IOPSWrite>0</IOPSWrite>
      <TimeStamp>2014-07-23T12:07:00Z</TimeStamp>
    </DiskMonitorData>
    <DiskMonitorData>
      <BPSRead>0</BPSRead>
      <BPSTotal>204</BPSTotal>
      <BPSWrite>204</BPSWrite>
      <DiskId>d-bplbq5g3dxxolx4o****</DiskId>
      <IOPSRead>0</IOPSRead>
      <IOPSTotal>0</IOPSTotal>
      <IOPSWrite>0</IOPSWrite>
      <TimeStamp>2014-07-23T12:08:00Z</TimeStamp>
    </DiskMonitorData>
    <DiskMonitorData>
      <BPSRead>0</BPSRead>
      <BPSTotal>819</BPSTotal>
      <BPSWrite>819</BPSWrite>
      <DiskId>d-bplbq5g3dxxolx4o****</DiskId>
      <IOPSRead>0</IOPSRead>
      <IOPSTotal>0</IOPSTotal>
      <IOPSWrite>0</IOPSWrite>
      <TimeStamp>2014-07-23T12:09:00Z</TimeStamp>
    </DiskMonitorData>
  </MonitorData>
  <RequestId>BF666447-B171-4076-BCBA-48437C18FD76</RequestId>
  <TotalCount>3</TotalCount>
</DescribeDiskMonitorDataResponse>
```

JSON format

```

{
  "MonitorData": {
    "DiskMonitorData": [
      {
        "BPSRead": 0,
        "BPSTotal": 0,
        "BPSWrite": 0,
        "DiskId": "d-bp1bq5g3dxxo1x4o****",
        "IOPSRead": 0,
        "IOPSTotal": 0,
        "IOPSWrite": 0,
        "TimeStamp": "2014-07-23T12:07:00Z"
      },
      {
        "BPSRead": 0,
        "BPSTotal": 204,
        "BPSWrite": 204,
        "DiskId": "d-bp1bq5g3dxxo1x4o****",
        "IOPSRead": 0,
        "IOPSTotal": 0,
        "IOPSWrite": 0,
        "TimeStamp": "2014-07-23T12:08:00Z"
      },
      {
        "BPSRead": 0,
        "BPSTotal": 819,
        "BPSWrite": 819,
        "DiskId": "d-bp1bq5g3dxxo1x4o****",
        "IOPSRead": 0,
        "IOPSTotal": 0,
        "IOPSWrite": 0,
        "TimeStamp": "2014-07-23T12:09:00Z"
      }
    ]
  },
  "RequestId": "A48A0A77-34F5-4C33-9066-9E8D2DA0D8E2",
  "TotalCount": 3
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The DiskId provided does not exist in our records.	The error message returned because the specified DiskId parameter does not exist. Check whether the DiskId parameter is correct.

HTTP status code	Error code	Error message	Description
400	InvalidStartTime.Malformed	The specified parameter "StartTime" is not valid.	The error message returned because the specified StartTime parameter is invalid.
400	InvalidEndTime.Malformed	The specified parameter "EndTime" is not valid.	The error message returned because the specified EndTime parameter is invalid.
400	InvalidPeriod.ValueNotSupported	The specified parameter "Period" is not valid.	The error message returned because the specified Period parameter is invalid.
400	InvalidStartTime.TooEarly	The specified parameter "StartTime" is too early.	The error message returned because the specified StartTime parameter is more than 30 days earlier than the current time.
400	InvalidParameter.TooManyDataQueried	Too many data queried.	The error message returned because the amount of queried monitoring data has reached the upper limit.
400	Throttling	Request was denied due to request throttling.	The error message returned because the request is denied due to throttling. Try again later.
400	InvalidInstanceType.NotSupportCredit	The InstanceType of the specified instance does not support credit.	The error message returned because the instance type does not support burstable instances.
400	InvalidParameter.EndTime	The specified parameter EndTime is earlier than StartTime.	The error message returned because the end time is earlier than the start time.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

5.1.16.4. DescribeInstanceMonitorData

You can call this operation to query all monitoring data about an ECS instance. The monitoring data includes the vCPU utilization, CPU credits of the burstable instance, received data traffic, sent data traffic, and average bandwidth.

Description

When you call this operation, take note of the following items:

- Up to 400 monitoring data entries can be returned at a time. An error is returned if the value calculated based on the following formula is greater than 400: $(\text{EndTime} - \text{StartTime}) / \text{Period}$.
- You can query the monitoring data from up to the past 30 days. If the value of `StartTime` is more than 30 days earlier than the current time, an error is returned.
- A portion may be missing from the returned monitoring data. This is because the system cannot obtain the relevant information, such as when the instance is in the `Stopped` state.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceMonitorData	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the <code>Action</code> parameter. Set the value to <code>DescribeInstanceMonitorData</code> .
InstanceId	String	Yes	i-bp1a36962lrhj4ab****	The ID of the instance.
StartTime	String	Yes	2014-10-29T23:00:00Z	The beginning of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the value of seconds (<code>ss</code>) is not <code>00</code> , the time is rounded up to the next minute.
EndTime	String	Yes	2014-10-30T08:00:00Z	The end of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the value of seconds (<code>ss</code>) is not <code>00</code> , the time is rounded up to the next minute.
Period	Integer	No	60	The interval at which to retrieve monitoring data. Unit: seconds. Valid values: • 60 • 600 • 3600 Default value: 60

Response parameters

Parameter	Type	Example	Description
MonitorData	Array		The collection of monitoring data about the instance.
InstanceMonitorData			
BPSRead	Integer	1000	The read bandwidth of the system disk. Unit: Byte/s.
BPSWrite	Integer	13585	The write bandwidth of the system disk. Unit: Byte/s.
CPU	Integer	2	The vCPU utilization of the instance. Unit: percent (%).
CPUAdvanceCreditBalance	Float	0.4	The overdrawn CPU credits of the burstable instance.
CPUCreditBalance	Float	120	The total CPU credits of the burstable instance.
CPUCreditUsage	Float	30	The number of CPU credits consumed by the burstable instance.
CPUNotpaidSurplusCreditUsage	Float	0.5	This parameter is not supported.
IOPSRead	Integer	1000	The number of read I/O operations per second on the system disk.
IOPSWrite	Integer	200	The number of write I/O operations per second on the system disk.
InstanceId	String	i-bp1a36962lrhj4*****	The ID of the instance.
InternetBandwidth	Integer	10	The public bandwidth of the instance. Unit: Kbit/s.

Parameter	Type	Example	Description
InternetRX	Integer	122	The public data traffic received by the instance at the time of monitoring data query. Unit: Kbit/s.
InternetTX	Integer	343	The public data traffic sent by the instance at the time of monitoring data query. Unit: Kbit/s.
IntranetBandwidth	Integer	10	The internal bandwidth of the instance. Unit: Kbit/s.
IntranetRX	Integer	122	The internal data traffic received by the instance at the time of monitoring data query. Unit: Kbit/s.
IntranetTX	Integer	343	The internal data traffic sent by the instance at the time of monitoring data query. Unit: Kbit/s.
TimeStamp	String	2014-10-30T05:00:00Z	The timestamp of the data query.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeInstanceMonitorData
&EndTime=2014-10-30T08:00:00Z
&InstanceId=i-bp1a36962lrhj4ab****
&StartTime=2014-10-29T23:00:00Z
&Period=3600
&<Common request parameters>
```

Sample success responses

`XML` format

```

<DescribeInstanceMonitorDataResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
  <MonitorData>
    <InstanceMonitorData>
      <InstanceId>i-bpla36962lrhj4ab****</InstanceId>
      <CPU>2</CPU>
      <IntranetRX>122</IntranetRX>
      <IntranetTX>343</IntranetTX>
      <IntranetFlow>675</IntranetFlow>
      <IntranetBandwidth>10</IntranetBandwidth>
      <InternetRX>122</InternetRX>
      <InternetTX>343</InternetTX>
      <InternetFlow>675</InternetFlow>
      <InternetBandwidth>10</InternetBandwidth>
      <IOPSRead>1000</IOPSRead>
      <IOPSWrite>200</IOPSWrite>
      <BPSRead>1000</BPSRead>
      <BPSWrite>13585</BPSWrite>
      <TimeStamp>2014-10-30T05:00:00Z</TimeStamp>
    </InstanceMonitorData>
  </MonitorData>
</DescribeInstanceMonitorDataResponse>

```

JSON **format**

```

{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9",
  "MonitorData": {
    "InstanceMonitorData": [
      {
        "InstanceId": "i-bpla36962lrhj4ab****",
        "CPU": 0,
        "IntranetRX": 122,
        "IntranetTX": 343,
        "IntranetFlow": 675,
        "IntranetBandwidth": 10,
        "InternetRX": 122,
        "InternetTX": 343,
        "InternetFlow": 675,
        "InternetBandwidth": 10,
        "IOPSRead": 1000,
        "IOPSWrite": 13585,
        "BPSRead": 1000,
        "BPSWrite": 200,
        "TimeStamp": "2014-10-30T05:00:00Z"
      }
    ]
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
400	InvalidStartTime.Malformed	The specified parameter "StartTime" is not valid.	The error message returned because the specified StartTime parameter is invalid.
400	InvalidEndTime.Malformed	The specified parameter "EndTime" is not valid.	The error message returned because the specified EndTime parameter is invalid.
400	InvalidPeriod.ValueNotSupported	The specified parameter "Period" is not valid.	The error message returned because the specified Period parameter is invalid.
400	InvalidStartTime.TooEarly	The specified parameter "StartTime" is too early.	The error message returned because the specified StartTime parameter is more than 30 days earlier than the current time.
400	InvalidParameter.TooManyDataQueried	Too many data queried.	The error message returned because the amount of queried monitoring data has reached the upper limit.
400	Throttling	Request was denied due to request throttling.	The error message returned because the request is denied due to throttling. Try again later.
400	InvalidStartTime.ValueNotSupported	The specified parameter StartTime is later than EndTime.	The error message returned because the end time is earlier than the start time.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

5.1.16.5. DescribeSnapshotMonitorData

You can call this operation to query all monitoring data about snapshot size changes in a region over the past 30 days.

Description

When you call this operation, take note of the following items:

- Up to 400 monitoring data entries can be returned at a time. An error is returned if the value calculated based on the following formula is greater than 400: $(\text{EndTime} - \text{StartTime}) / \text{Period}$.
- You can query the monitoring data from up to the past 30 days. If the value of `StartTime` is more than 30 days earlier than the current time, an error is returned.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSnapshotMonitorData	The operation that you want to perform. Set the value to DescribeSnapshotMonitorData.
EndTime	String	Yes	2019-05-10T03:00:00Z	The end of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the value of seconds (ss) is not 00, the time is rounded up to the next minute.
RegionId	String	Yes	cn-qingdao-env17-d01	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
StartTime	String	Yes	2019-05-10T00:00:00Z	The beginning of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the value of seconds (ss) is not 00, the time is rounded up to the next minute.
Period	Integer	No	60	The interval at which to retrieve snapshot size changes. Unit: seconds. Valid values: 60 600 3600 Default value: 60
Category	String	No	Standard	The type of the snapshot. Valid values: - Standard: normal snapshot - Flash: local snapshot Default value: Standard

Response parameters

Parameter	Type	Example	Description
MonitorData	Array		The collection of monitoring data about snapshot size changes.
DataPoint			
Size	Long	243036848128	The total size of the snapshots. Unit: bytes.
TimeStamp	String	2019-05-10T04:00:00Z	The timestamp that corresponds to a snapshot size.
RequestId	String	9F8163A8-F5DE-47A2-A572-4E062D223E09	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?&Action=DescribeSnapshotMonitorData
&RegionId=cn-qingdao-env17-d01
&StartTime=2019-05-10T00:00:00Z
&EndTime=2019-05-10T03:00:00Z
&Period=60
&<Common request parameters>
```

Sample success responses

`XML` format


```
<DescribeSnapshotMonitorDataResponse>
  <MonitorData>
    <DataPoint>
      <element>
        <Size>243036848128</Size>
        <TimeStamp>2019-05-10T01:00:00Z</TimeStamp>
      </element>
      <element>
        <Size>243036848128</Size>
        <TimeStamp>2019-05-10T02:00:00Z</TimeStamp>
      </element>
      <element>
        <Size>243036848128</Size>
        <TimeStamp>2019-05-10T03:00:00Z</TimeStamp>
      </element>
    </DataPoint>
  </MonitorData>
  <RequestId>9F8163A8-F5DE-47A2-A572-4E062D223E09</RequestId>
</DescribeSnapshotMonitorDataResponse>
```

JSON **format**

```
{
  "RequestId": "9F8163A8-F5DE-47A2-A572-4E062D223E09",
  "MonitorData": {
    "DataPoint": [
      {
        "TimeStamp": "2019-05-10T01:00:00Z",
        "Size": 243036848128
      },
      {
        "TimeStamp": "2019-05-10T02:00:00Z",
        "Size": 243036848128
      },
      {
        "TimeStamp": "2019-05-10T03:00:00Z",
        "Size": 243036848128
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidStartTime.Malformed	The specified parameter "StartTime" is not valid.	The error message returned because the specified StartTime parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidEndTime.Malformed	The specified parameter "EndTime" is not valid.	The error message returned because the specified EndTime parameter is invalid.
400	InvalidPeriod.ValueNotSupported	The specified parameter "Period" is not valid.	The error message returned because the specified Period parameter is invalid.
400	InvalidStartTime.TooEarly	The specified parameter "StartTime" is too early.	The error message returned because the specified StartTime parameter is more than 30 days earlier than the current time.
400	InvalidParameter.TooManyDataQueried	Too many data queried.	The error message returned because the amount of queried monitoring data has reached the upper limit.
400	Throttling	Request was denied due to request throttling.	The error message returned because the request is denied due to throttling. Try again later.

5.1.16.6. DescribeEniMonitorData

You can call this operation to query all monitoring data about traffic on a secondary elastic network interface (ENI) over a specific period of time.

Description

The monitoring data includes traffic sent and received over the internal network, the number of packets sent and received by the secondary ENI, and the number of dropped packets sent and received by the secondary ENI. A portion may be missing from the returned monitoring data. This is because the system cannot obtain the relevant information. For example, if the instance to which the secondary ENI is bound is in the Stopped state, or if the secondary ENI is not bound to an instance and in the Available state, monitoring data about traffic on the ENI cannot be obtained. When you call this operation, take note of the following items:

- Up to 400 monitoring data entries can be returned at a time. An error is returned if the value calculated based on the following formula is greater than 400: $(\text{EndTime} - \text{StartTime}) / \text{Period}$.
- You can query monitoring data from up to the past 30 days. If the value of StartTime is more than 30 days earlier than the current time, an error is returned.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeEniMonitorData	The operation that you want to perform. Set the value to DescribeEniMonitorData.
EndTime	String	Yes	2018-05-21T12:22:00Z	The end of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the value of seconds (ss) is not 00, the time is rounded up to the next minute.
InstanceId	String	Yes	i-m5e88p52tbip9r2x****	The ID of the instance to which the secondary ENI is bound.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the secondary ENI. You can call the DescribeRegions operation to query the most recent region list.
StartTime	String	Yes	2018-05-21T12:19:00Z	The beginning of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the value of seconds (ss) is not 00, the time is rounded up to the next minute.
EniId	String	No	eni-m5e0ajic0vbwx7l3****	The ID of the secondary ENI. By default, all secondary ENIs that are bound to the specified instance are queried.
Period	Integer	No	60	The interval at which to retrieve monitoring data. Unit: seconds. Valid values: 60 600 3600 Default value: 60

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
MonitorData	Array		The collection of monitoring data about traffic on the secondary ENI.
EniMonitorData			
DropPacketRx	String	0	The number of inbound internal data packets discarded by the secondary ENI.
DropPacketTx	String	0	The number of outbound internal data packets discarded by the secondary ENI.
EniId	String	eni-m5e0ajic0vbwx7l3** **	The ID of the secondary ENI.
IntranetRx	String	0	The internal data traffic received by the secondary ENI. Unit: Kbit/s.
IntranetTx	String	0	The internal data traffic sent by the secondary ENI. Unit: Kbit/s.
PacketRx	String	0	The number of internal data packets received by the secondary ENI. Unit: packets.
PacketTx	String	0	The number of internal data packets sent by the secondary ENI. Unit: packets.
TimeStamp	String	2018-05-21T03:22:00Z	The timestamp of the data query. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	4	The total number of returned entries.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeEniMonitorData
&EndTime=2018-05-21T12:22:00Z
&InstanceId=i-m5e88p52tbip9r2x****
&RegionId=cn-qingdao-env17-d01
&StartTime=2018-05-21T12:19:00Z
&EniId=eni-m5e0ajic0vbwx7l3****
&Period=60
&<Common request parameters>
```

Sample success responses

[XML](#) [format](#)

```

<DescribeEniMonitorDataResponse>
  <RequestId>5A03C2BA-3BCE-4A87-8076-7DC1629</RequestId>
  <TotalCount>4</TotalCount>
  <MonitorData>
    <EniMonitorData>
      <PacketTx>0</PacketTx>
      <TimeStamp>2018-05-21T03:22:00Z</TimeStamp>
      <IntranetOut>0</IntranetOut>
      <DropPacketRx>0</DropPacketRx>
      <IntranetIn>0</IntranetIn>
      <EniId>eni-m5e0ajic0vbwx7l3****</EniId>
      <DropPacketTx>0</DropPacketTx>
      <PacketRx>0</PacketRx>
    </EniMonitorData>
    <EniMonitorData>
      <PacketTx>0</PacketTx>
      <TimeStamp>2018-05-21T03:21:00Z</TimeStamp>
      <IntranetOut>0</IntranetOut>
      <DropPacketRx>0</DropPacketRx>
      <IntranetIn>0</IntranetIn>
      <EniId>eni-m5e0ajic0vbwx7l3****</EniId>
      <DropPacketTx>0</DropPacketTx>
      <PacketRx>0</PacketRx>
    </EniMonitorData>
    <EniMonitorData>
      <PacketTx>52240</PacketTx>
      <TimeStamp>2018-05-21T03:19:00Z</TimeStamp>
      <IntranetOut>73344</IntranetOut>
      <DropPacketRx>0</DropPacketRx>
      <IntranetIn>467</IntranetIn>
      <EniId>eni-m5e0ajic0vbwx7l3****</EniId>
      <DropPacketTx>0</DropPacketTx>
      <PacketRx>6603</PacketRx>
    </EniMonitorData>
    <EniMonitorData>
      <PacketTx>34925</PacketTx>
      <TimeStamp>2018-05-21T03:20:00Z</TimeStamp>
      <IntranetOut>48871</IntranetOut>
      <DropPacketRx>0</DropPacketRx>
      <IntranetIn>350</IntranetIn>
      <EniId>eni-m5e0ajic0vbwx7l3****</EniId>
      <DropPacketTx>0</DropPacketTx>
      <PacketRx>4888</PacketRx>
    </EniMonitorData>
  </MonitorData>
</DescribeEniMonitorDataResponse>

```

JSON **format**

```
{
  "RequestId": "5A03C2BA-3BCE-4A87-8076-7DC1629",
  "MonitorData": {
    "EniMonitorData": [
      {
        "PacketTx": 0,
        "TimeStamp": "2018-05-21T03:22:00Z",
        "IntranetOut": 0,
        "DropPacketRx": 0,
        "IntranetIn": 0,
        "EniId": "eni-m5e0ajic0vbwx7l3****",
        "DropPacketTx": 0,
        "PacketRx": 0
      },
      {
        "PacketTx": 0,
        "TimeStamp": "2018-05-21T03:21:00Z",
        "IntranetOut": 0,
        "DropPacketRx": 0,
        "IntranetIn": 0,
        "EniId": "eni-m5e0ajic0vbwx7l3****",
        "DropPacketTx": 0,
        "PacketRx": 0
      },
      {
        "PacketTx": 52240,
        "TimeStamp": "2018-05-21T03:19:00Z",
        "IntranetOut": 73344,
        "DropPacketRx": 0,
        "IntranetIn": 467,
        "EniId": "eni-m5e0ajic0vbwx7l3****",
        "DropPacketTx": 0,
        "PacketRx": 6603
      },
      {
        "PacketTx": 34925,
        "TimeStamp": "2018-05-21T03:20:00Z",
        "IntranetOut": 48871,
        "DropPacketRx": 0,
        "IntranetIn": 350,
        "EniId": "eni-m5e0ajic0vbwx7l3****",
        "DropPacketTx": 0,
        "PacketRx": 4888
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The DiskId provided does not exist in our records.	The error message returned because the specified disk does not exist. Check whether the disk ID is correct.
403	InvalidStartTime.Malformed	The specified parameter "StartTime" is not valid.	The error message returned because the specified StartTime parameter is invalid.
403	InvalidEndTime.Malformed	The specified parameter "EndTime" is not valid.	The error message returned because the specified EndTime parameter is invalid.
403	InvalidPeriod.ValueNotSupported	The specified parameter "Period" is not valid.	The error message returned because the specified Period parameter is invalid.
403	InvalidStartTime.TooEarly	The specified parameter "StartTime" is too early.	The error message returned because the specified StartTime parameter is more than 30 days earlier than the current time.
403	InvalidParameter.TooManyDataQueried	Too many data queried.	The error message returned because the amount of queried monitoring data has reached the upper limit.
403	Throttling	Request was denied due to request throttling.	The error message returned because the request is denied due to throttling. Try again later.
403	InvalidInstanceType.NotSupportCredit	The InstanceType of the specified instance does not support credit.	The error message returned because the instance type does not support burstable instances.
403	InvalidParameter.EndTime	The specified parameter EndTime is earlier than StartTime.	The error message returned because the end time is earlier than the start time.
4003	InvalidParam.Malformed	The specified parameter "EnId" and "InstanceId" are not valid	The error message returned because a specified parameter is invalid.

5.1.17. Cloud Assistant

5.1.17.1. CreateCommand

Creates a Cloud Assistant command.

Description

- You can create commands of the following types:
 - Batch commands for Windows instances (RunBatScript)
 - PowerShell commands for Windows instances (RunPowerShellScript)
 - Shell commands for Linux instances (RunShellScript)
- You can specify the `Timeout` parameter to set the maximum timeout period for command executions on Elastic Compute Service (ECS) instances. If a command execution times out, the Cloud Assistant client forcefully terminates the command process by canceling the process ID (PID) of the command.
 - One-time execution: When an execution times out, the state of the execution (`InvokeRecordStatus`) on specific instances becomes `Failed`.
 - Recurring execution:
 - The timeout period takes effect on each execution.
 - When an execution times out, the state of the execution (`InvokeRecordStatus`) becomes `Failed`.
 - The timeout of each execution does not affect the next execution.
- Within each region, you can retain a maximum of 100 Cloud Assistant commands.
- You can use the `WorkingDir` parameter to specify the working directory of a Cloud Assistant command. For Linux instances, the default working directory of a command is the home directory of the root user, which is `/root`. For Windows instances, the default working directory of a command is the directory in which the Cloud Assistant client process resides, such as `C:\Windows\System32`.
- You can enable the custom parameter feature for a Cloud Assistant command by setting `EnableParameter` to `true` when you create the command. When you specify the `CommandContent` parameter, you can define custom parameters in the `{{parameter}}` format. Then, when the `InvokeCommand` operation is called, the key-value pairs of custom parameters can be passed in. For example, if the command content is `echo {{name}}`, the `Parameters` parameter can be used to pass in the `<name, Jack>` key-value pair when the `InvokeCommand` operation is called. The name key of the custom parameter is automatically replaced with the paired Jack value to generate a new command. As a result, the `echo Jack` command is actually run.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateCommand	The operation that you want to perform. Set the value to <code>CreateCommand</code> .

Parameter	Type	Required	Example	Description
CommandContent	String	Yes	ZWNobyAxMjM=	The Base64-encoded content of the command. - The parameter value must be Base64-encoded and cannot exceed 16 KB in size. - The command content can be specified by using custom parameters. To enable the custom parameter feature, set <code>EnableParameter</code> to true. - Custom parameters are defined in the <code>{{}}</code> format. Within <code>{{}}</code>, the spaces and line feeds before and after the parameter names are ignored. - The number of custom parameters cannot exceed 20. - A custom parameter name can contain only letters, digits, underscores (<code>_</code>), and hyphens (<code>-</code>). The name is case-insensitive. - Each custom parameter name cannot exceed 64 bytes in length.
Name	String	Yes	testName	The name of the command. The name supports all character sets and can be up to 128 characters in length.
RegionId	String	Yes	cn-qingdao-****	The region ID of the command. You can call <code>DescribeRegions</code> to query the region ID.
Type	String	Yes	RunShellScript	The command type. Valid values: <code>RunBatScript</code>: batch commands. These commands are applicable to Windows instances. <code>RunPowerShellScript</code>: PowerShell commands. These commands are applicable to Windows instances. <code>RunShellScript</code>: shell commands. These commands are applicable to Linux instances.

Parameter	Type	Required	Example	Description
Description	String	No	testDescription	The description of the command. The description supports all character sets and can be up to 512 characters in length.
WorkingDir	String	No	/root/	The working directory of the command on the instance. Default value: - Linux instance: the home directory of the root user, which is the /root directory. - Windows instance: the directory where the Cloud Assistant client process resides, such as C:\Windows\System32\ .
Timeout	Long	No	60	The maximum timeout period for the command execution on the instance. Unit: seconds. When a command cannot be run, the command execution times out. When a command execution times out, the Cloud Assistant client forcefully terminates the command process by canceling the PID of the command. Default value: 60.
EnableParameter	Boolean	No	false	Specifies whether to use custom parameters in the command to be created. Valid values: - true - false Default value: false.

Response parameters

Parameter	Type	Example	Description
CommandId	String	C-7d2a745b412b4601b2d47f6a768d****	The ID of the command.

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DEC****	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.example.com/?Action=CreateCommand
&CommandContent=ZWNobyAxMjM=
&Name=testName
&RegionId=cn-qingdao-****
&Type=RunShellScript
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateCommandResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DEC****</RequestId>
  <CommandId>c-7d2a745b412b4601b2d47f6a768d****</CommandId>
</CreateCommandResponse>
```

JSON format

```
{
  "RequestId": "E69EF3CC-94CD-42E7-8926-F133B863****",
  "CommandId": "c-7d2a745b412b4601b2d47f6a768d****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the value of the RegionId parameter is valid.

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred while the request was being sent. Try again later.
403	InvalidCmdType.NotFound	The specified command type does not exist.	The error message returned because the specified Type parameter is invalid.
403	CmdContent.ExceedLimit	The length of the command content exceeds the upper limit.	The error message returned because the length of the command content exceeds the upper limit.
403	CmdName.ExceedLimit	The length of the command name exceeds the upper limit.	The error message returned because the command name exceeds 128 characters in length.
403	CmdDesc.ExceedLimit	The length of the command description exceeds the upper limit.	The error message returned because the command description exceeds 512 characters in length.
403	CmdCount.ExceedQuota	The total number of commands in the current region exceeds the quota.	The error message returned because the maximum number of Cloud Assistant commands in the specified region has been reached.
403	CmdParam.EmptyKey	You must specify the parameter names.	The error message returned because some required parameters are not specified.
403	CmdParam.InvalidParamName	Invalid parameter name. The name can contain only lowercase letters (a to z), uppercase letters (A to Z), numbers (0 to 9), hyphens (-), and underscores (_).	The error message returned because the custom parameter name is invalid. A custom parameter name can contain only letters, digits, underscores (_), and hyphens (-).
403	CmdParamCount.ExceedLimit	The maximum number of custom parameters is exceeded	The error message returned because the number of specified custom parameters exceeds the upper limit.
403	CmdParamName.ExceedLimit	The maximum length of a parameter name is exceeded.	The error message returned because the maximum length of the custom parameter name has been reached.

5.1.17.2. InvokeCommand

Triggers a Cloud Assistant command on one or more Elastic Compute Service (ECS) instances.

Description

- You can call the InvokeCommand operation up to 5,000 times per day in a region.
- ECS instances on which to run the Cloud Assistant command must meet the following requirements. If you specify multiple ECS instances and one of the instances does not meet the requirements for running the command, the call fails. Specify instances that meet the requirements and call the InvokeCommand operation again.
 - The ECS instances resides within virtual private clouds (VPCs).
 - The instances are in the Running (`Running`) state.
 - The Cloud Assistant client is installed on the instances. For information about how to install the Cloud Assistant client, see [InstallCloudAssistant](#).
 - Before you run PowerShell commands, make sure that the instances have the PowerShell module configured.
- If `Timed` is set to false, the command is run only once.
- If `Timed` is set to true, the command is run on a periodic basis.
 - The command is periodically run based on the schedule specified by the `Frequency` parameter. The results of each execution of a command do not affect the next execution of the command.
 - The schedule on which a recurring execution of the command takes place on an ECS instance must be specified based on the system time of the instance in UTC. Make sure that the time or time zone of the instance meets your business needs.
- Command executions may fail due to instance status exceptions, network exceptions, or exceptions on the Cloud Assistant client. If an execution fails, no execution information is generated.
- If you enable the custom parameter feature by setting `EnableParameter` to true when you create a command, you must specify custom parameters (`Parameters`) when you run the command.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	InvokeCommand	The operation that you want to perform. Set the value to <code>InvokeCommand</code> .
CommandId	String	Yes	c-e996287206324975b5fbe1d***** *	The ID of the command. You can call the <code>DescribeCommands</code> operation to query all available command IDs.

Parameter	Type	Required	Example	Description
InstanceId.N	RepeatList	Yes	i-bp185dy2o3o6n* *****	The ID of instance N on which to run the command. You can specify up to 50 instance IDs in each request. Valid values of N: 1 to 50.
RegionId	String	Yes	cn-qingdao-****	The region ID of the command. You can call DescribeRegions to query the region ID.
Timed	Boolean	No	true	Specifies whether to periodically run the command. Valid values: - true - false Default value: false.
Frequency	String	No	0 */20 * * * *	The schedule on which the recurring execution of the command takes place. The interval between two consecutive occurrences of the recurring executions must not be less than 10 seconds. When you set <code>Timed</code> to <code>true</code> , you must specify <code>Frequency</code> . The value of the Frequency parameter is a cron expression.

Parameter	Type	Required	Example	Description
Parameters	Json	No	<pre>{"name": "Jack", "accessKey": "LTA Idy*****aRY"}</pre>	The key-value pairs of custom parameters to pass in when the custom parameter feature is enabled. Number of custom parameters: 0 to 10. - Keys in a Map collection can be up to 64 characters in length and cannot be empty strings. - Values in a Map collection can be empty strings. - The size of the command (including custom parameters and original command content) after Base64 encoding cannot exceed 16 KB. - The custom parameter names specified in the value of Parameters must be included in the custom parameters specified when you created the command. You can use empty strings to represent the parameters that are not passed in. You can leave this parameter empty to disable the custom parameter feature.
Username	String	No	root	The username to use to run the command on ECS instances. - For Linux instances, the root username is used. - For Windows instances, the System username is used.

Parameter	Type	Required	Example	Description
WindowsPasswordName	String	No	axtSecretPassword	The name of the password to use to run the command on a Windows instance. If you want to use a username other than the default System username to run the command on the Windows instance, you must specify both the WindowsPasswordName and Username parameters. The password is hosted in plaintext in the parameter repository of Operation Orchestration Service (OOS) to reduce the risk of password leaks. Only the name of the password is passed in by using the WindowsPasswordName parameter.  Note When you use the root username for Linux instances or the System username for Windows instances to run the command, you do not need to specify the WindowsPasswordName parameter.

Response parameters

Parameter	Type	Example	Description
InvokeId	String	t-7d2a745b412b4601b2d47f6a768d3***	The ID of the command execution task.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=InvokeCommand
&CommandId=c-e996287206324975b5fbeld*****
&InstanceId.i1=i-bp185dy2o3o6n*****
&RegionId=cn-qingdao-****
&Timed=true
&Frequency=0 */20 * * * *
&Parameters={"name":"Jack", "accessKey":"LTAIdyv*****aRY"}
&<Common request parameters>
```

Sample success responses

XML format

```
<InvokeCommandResponse>
  <RequestId>E69EF3CC-94CD-42E7-8926-F133B863****</RequestId>
  <InvokeId>t-7d2a745b412b4601b2d47f6a768d3***</InvokeId>
</InvokeCommandResponse>
```

JSON format

```
{
  "RequestId": "E69EF3CC-94CD-42E7-8926-F133B863****",
  "InvokeId": "t-7d2a745b412b4601b2d47f6a768d3***"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
500	InternalServerError	An error occurred when you dispatched the request.	The error message returned because an error occurred while the request was being sent. Try again later.
404	InvalidInstance.NotFound	The specified instance does not exist.	The error message returned because the specified instance does not exist.
403	InvalidInstance.NotMatch	The specified instance type does not match the command.	The error message returned because the specified command cannot be run on the specified ECS instance. Check whether the state of the instance meets the conditions for running the command.

HTTP status code	Error code	Error message	Description
404	InvalidCmdId.NotFound	The specified command ID does not exist.	The error message returned because the specified CommandId parameter is invalid. You can call the DescribeCommands operation to query all available command IDs.
403	MissingParam.Frequency	The frequency must be specified when you create a timed task.	The error message returned because the Frequency parameter is not specified when you set Timed to true.
403	InvalidParam.Frequency	The specified frequency is invalid.	The error message returned because the specified Frequency parameter is invalid. Check whether the specified Frequency parameter is valid.
403	InstanceIds.ExceedLimit	The number of instance IDs exceeds the upper limit.	The error message returned because the number of specified instance IDs exceeds the upper limit.
403	Invocation.ExceedQuota	The invocation quota in the current region has been reached for today.	The error message returned because the daily maximum number of command executions in the specified region has been reached.
404	Parameter.Disabled	Parameters cannot be passed in when the command customization function is disabled.	The error message returned because Parameters is specified when the custom parameter feature is disabled.
403	ParameterCount.ExceedLimit	The maximum number of parameters is exceeded.	The error message returned because the number of specified custom parameters exceeds the upper limit.
403	ParameterKey.ExceedLimit	The maximum length of a parameter name is exceeded.	The error message returned because the key of a custom parameter exceeds 64 characters in length.
403	CmdContent.ExceedLimit	The maximum length of a command is exceeded.	The error message returned because the length of the command exceeds the upper limit. Shorten your command.

HTTP status code	Error code	Error message	Description
403	ParameterKey.Duplicate	Parameter names cannot be duplicated.	The error message returned because a parameter that has the same name already exists. Parameter names must be unique.
403	Parameter.NotMatched	The passed-in parameters do not match the parameters defined when you created the command.	The error message returned because the custom parameters passed in do not match those specified when the command was created.
403	Username.ExceedLimit	The length of the username exceeds the upper limit.	The error message returned because the length of the username exceeds the upper limit.

5.1.17.3. RunCommand

Runs a shell, PowerShell, or bat command on one or more instances.

Description

Unlike the `CreateCommand` and `InvokeCommand` operations, `RunCommand` can be used to create and run a command in a single request.

When you call this operation, take note of the following items:

- The Elastic Compute Service (ECS) instance on which you want to run a command must be an instance that is deployed in a virtual private cloud (VPC).
- The instance must be in the Running (`Running`) state.
- The Cloud Assistant client must be installed on the instance. For more information, see `InstallCloudAssistant`.
- Before you run a PowerShell command, make sure that the Windows instance on which you want to run the command is installed with the PowerShell module.
- The schedule on which a recurring execution of the command takes place on an ECS instance must be specified based on the system time of the instance in UTC. Make sure that the time or time zone of the ECS instance meets your business needs.
- You can specify the `Timeout` parameter to set the timeout period of command executions on an instance. When an execution times out, the command process is forcefully terminated.
 - After a one-time execution times out, the execution state (`InvokeRecordStatus`) of the command becomes `Failed`.
 - For recurring executions, the timeout period takes effect on each execution. The timeout of each execution does not affect the next execution. After an execution times out, the execution state (`InvokeRecordStatus`) of the command becomes `Failed`.
- Command executions may fail due to instance status exceptions, network exceptions, or exceptions

on the Cloud Assistant client. If an execution fails, no execution information is generated.

- When `EnableParameter` is set to true, the custom parameter feature is enabled. When you specify the `CommandContent` parameter, you can define custom parameters in the `{{parameter}}` format. Then, when the command is run, the key-value pairs of the custom parameters are passed in.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RunCommand	The operation that you want to perform. Set the value to RunCommand.
CommandContent	String	Yes	ZWNobyAxMjM=	The content of the command. The command content can be plaintext or Base64-encoded. Take note of the following items: • The Base64-encoded command content cannot exceed 16 KB in size. • If the command content is Base64-encoded, set <code>ContentEncoding</code> to Base64. • When <code>EnableParameter</code> is set to true, the custom parameter feature is enabled and you can configure custom parameters based on the following rules: ◦ Define custom parameters in the <code>{{}}</code> format. Within <code>{{}}</code>, the spaces and line feeds before and after the parameter names are ignored. ◦ The number of custom parameters cannot exceed 20. ◦ A custom parameter name can contain only letters, digits, underscores (<code>_</code>), and hyphens (<code>-</code>). The name is case-insensitive. ◦ Each custom parameter name cannot exceed 64 bytes in length.

Parameter	Type	Required	Example	Description
InstanceId.N	RepeatList	Yes	i-bp185dy2o3o6neg****	The ID of ECS instance N. Valid values of N: 1 to 50. If one of the specified instances does not meet the conditions for running the command, the call fails. To ensure that the call is successful, specify only the IDs of instances that meet the conditions.
RegionId	String	Yes	cn-qingdao-****	The region ID of the command. You can call the DescribeRegions operation to query the region ID.
Type	String	Yes	RunShellScript	The language of the O&M command. Valid values: - RunBatScript: batch command for Windows instances - RunPowerShellScript: PowerShell command for Windows instances - RunShellScript: shell command for Linux instances.
Name	String	No	Test	The name of the command. The name supports all character sets and can be up to 128 characters in length.
Description	String	No	RunCommand-Test	The description of the command. The description supports all character sets and can be up to 512 characters in length.
WorkingDir	String	No	/home/	The working directory of the command on the ECS instance. Default value: - Linux instances: the home directory of the administrator (the root user), which is <code>/root</code>. - Windows instances: the directory in which the Cloud Assistant client process resides, such as <code>C:\Windows\System32</code>.

Parameter	Type	Required	Example	Description
Timeout	Long	No	60	The timeout period for command execution. Unit: seconds. A timeout error occurs when a command cannot be run because the process slows down or because a specific module or the Cloud Assistant client does not exist. When an execution times out, the command process is forcefully terminated. Default value: 60.
EnableParameter	Boolean	No	false	Specifies whether to use custom parameters in the command. Valid values: • true • false Default value: false.
Timed	Boolean	No	true	Specifies whether to periodically run the command. Valid values: • true: periodically runs the command on the schedule specified by <code>Frequency</code>. The results of each execution do not affect the next execution. • false: runs the command only once. Default value: false.

Parameter	Type	Required	Example	Description
Frequency	String	No	0 */20 * * * *	The schedule on which to run the command. Take note of the following items: • The interval between two consecutive executions must be 10 seconds or longer. The minimum interval cannot be less than the timeout period of the execution. The timeout period of the execution is specified by the <code>Timeout</code> parameter of the operation. • You must specify this parameter when you set <code>Timed</code> to <code>true</code>. • The value of this parameter follows the Cron expression format. For more information, see <i>Cron expression</i> in <i>ECS User Guide</i>.

Parameter	Type	Required	Example	Description
Parameters	Json	No	<pre>{"name": "Jack", "accessKey": "LTA IdyvdIqaRY****"}</pre>	The key-value pairs of custom parameters to be passed in when the command includes custom parameters. For example, if the command content is <code>echo {{name}}</code>, the <code>Parameter</code> parameter can be used to pass in the <code>{"name": "Jack"}</code> key-value pair. The <code>name</code> key of the custom parameter is automatically replaced with the paired Jack value to generate a new command. As a result, the <code>echo Jack</code> command is actually run. Number of custom parameters: 0 to 10. Take note of the following items: • The key cannot be an empty string and can be up to 64 characters in length. • The value can be an empty string. • The size of the command (including custom parameters and original command content) after Base64 encoding cannot exceed 16 KB. • The custom parameter names specified in the value of Parameters must all be included in the custom parameters specified when you created the command. You can use empty strings to represent the parameters that are not specified. This parameter is empty by default. You can leave this parameter empty to disable the custom parameter feature.

Parameter	Type	Required	Example	Description
KeepCommand	Boolean	No	false	Specifies whether to retain the command after it is run. Valid values: • true: The command is retained. You can call the <code>InvokeCommand</code> operation to run the command again. The retained command is included in the quota of Cloud Assistant commands. • false: The command is not retained. The command is automatically deleted after it is run and does not count against the quota of Cloud Assistant commands. Default value: false.
ContentEncoding	String	No	Base64	The encoding mode of command content (<code>CommandContent</code>). The valid values are case-insensitive. Valid values: • PlainText: The command content is not encoded. • Base64: The command content is encoded in Base64. Default value: PlainText. If the specified value of this parameter is invalid, PlainText is used by default.
Username	String	No	root	The username used to run the command on ECS instances. • For Linux instances, the root username is used. • For Windows instances, the System username is used.

Parameter	Type	Required	Example	Description
WindowsPasswordName	String	No	actSecretPassword	The name of the password used to run the command on a Windows instance. If you want to use a username other than the default System username to run the command on the Windows instance, you must specify both the WindowsPasswordName and Username parameters. The password is hosted in plaintext in the parameter store of Operation Orchestration Service (OOS) to reduce the risk of password leaks. Only the name of the password is passed in by using the WindowsPasswordName parameter.  Note When you use the root username for Linux instances or the System username for Windows instances to run the command, you do not need to specify this parameter.

Response parameters

Parameter	Type	Example	Description
CommandId	String	C-7d2a745b412b4601b2d47f6a768d****	The ID of the command.
InvokeId	String	t-7d2a745b412b4601b2d47f6a768d****	The ID of the command execution.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RunCommand
&CommandContent='echo hello'
&InstanceId.1=i-bp185dy2o3o6neg****
&InstanceId.2=i-bp541dc26ko6dd5****
&Name=Test
&RegionId=cn-qingdao-****
&Type=RunShellScript
&Username=root
&<Common request parameters>
```

Sample success responses

XML **format**

```
<RunCommandResponse>
  <RequestId>E69EF3CC-94CD-42E7-8926-F133B86387C0</RequestId>
  <CommandId>c-7d2a745b412b4601b2d47f6a768d****</CommandId>
  <InvokeId>t-7d2a745b412b4601b2d47f6a768d****</InvokeId>
</RunCommandResponse>
```

JSON **format**

```
{
  "RequestId": "E69EF3CC-94CD-42E7-8926-F133B863****",
  "CommandId": "c-7d2a745b412b4601b2d47f6a768d****",
  "InvokeId": "t-7d2a745b412b4601b2d47f6a768d****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the value of the RegionId parameter is valid.
500	InternalServerError	An error occurred when you dispatched the request.	The error message returned because an error occurred while the request was being sent. Try again later.

HTTP status code	Error code	Error message	Description
403	InvalidCmdType.NotFound	The specified command type does not exist.	The error message returned because the specified Type parameter is invalid.
403	CmdContent.ExceedLimit	The length of the command content exceeds the upper limit.	The error message returned because the length of the command content exceeds the upper limit.
403	CmdName.ExceedLimit	The length of the command name exceeds the upper limit.	The error message returned because the command name exceeds 128 characters in length.
403	CmdDesc.ExceedLimit	The length of the command description exceeds the upper limit.	The error message returned because the command description exceeds 512 characters in length.
403	CmdCount.ExceedQuota	The total number of commands in the current region exceeds the quota.	The error message returned because the maximum number of Cloud Assistant commands in the specified region has been reached.
403	CmdParam.EmptyKey	Command parameters can not be empty.	The error message returned because the custom parameters are not specified in the command.
403	CmdParam.InvalidParamName	A command parameter name is invalid.	The error message returned because the names of the custom parameters in the command are invalid.
403	CmdParamCount.ExceedLimit	You've reached the limit on the count of command parameters.	The error message returned because the number of specified custom parameters in the command exceeds the upper limit.
403	CmdParamName.ExceedLimit	You've reached the limit on the length of command parameter name.	The error message returned because the length of the custom parameter name in the command exceeds the upper limit.
404	InvalidInstance.NotFound	The specified instance does not exist.	The error message returned because the specified ECS instance does not exist.

HTTP status code	Error code	Error message	Description
403	InvalidInstance.NotMatch	The specified instance type does not match the command.	The error message returned because the specified command cannot be run on the specified ECS instance. Check whether the state of the instance meets the conditions for running the command.
404	InvalidCmdId.NotFound	The specified command ID does not exist.	The error message returned because the specified CommandId parameter is invalid. You can call the DescribeCommands operation to query all available command IDs.
403	MissingParam.Frequency	The frequency must be specified when you create a timed task.	The error message returned because the Frequency parameter is not specified when you set Timed to true.
403	InvalidParam.Frequency	The specified frequency is invalid.	The error message returned because the specified Frequency parameter is invalid.
403	InstanceIds.ExceedLimit	The number of instance IDs exceeds the upper limit.	The error message returned because more than 50 ECS instance IDs are specified.
403	Invocation.ExceedQuota	The invocation quota in the current region has been reached for today.	The error message returned because the daily maximum number of command executions in the specified region has been reached.
403	Username.ExceedLimit	The length of the username exceeds the upper limit.	The error message returned because the length of the username exceeds the upper limit.

5.1.17.4. DescribeCommands

Queries Cloud Assistant commands that you have already created. If you specify only the Action and RegionId parameters, all available commands are queried.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeCommands	The operation that you want to perform. Set the value to DescribeCommands.
RegionId	String	Yes	cn-qingdao-****	The region ID of the command. You can call the DescribeRegions operation to query the region ID.
Provider	String	No	AlibabaCloud	The provider of the common command. Take note of the following items: - If you do not specify this parameter, all the commands that you created are queried. - If you set this parameter to AlibabaCloud, all the common commands provided by Alibaba Cloud are queried. - If you set this parameter to a specific provider, all the common commands provided by the provider are queried. Examples: - If you set Provider to AlibabaCloud.ECS.GuestOS, all the common commands provided by AlibabaCloud.ECS.GuestOS are queried. - If you set Provider to AlibabaCloud.ECS.GuestOSDiagnose, all the common commands provided by AlibabaCloud.ECS.GuestOSDiagnose are queried.
CommandId	String	No	C-7d2a745b412b4601b2d47f6a768d****	The ID of the command.
Name	String	No	Tes****	The name of the command. Partial command names are not supported.
Description	String	No	test	The description of the command.

Parameter	Type	Required	Example	Description
Type	String	No	RunShellScript	The command type. Valid values: - RunBatScript: batch command, applicable to Windows instances - RunPowerShellScript: PowerShell command, applicable to Windows instances - RunShellScript: shell command, applicable to Linux instances
ContentEncoding	String	No	PlainText	The encoding mode of the <code>CommandContent</code> and <code>Output</code> response parameters. Valid values: - PlainText: returns the original command content and command output. - Base64: returns the Base64-encoded command content and command output Default value: Base64.
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Long	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10.

Response parameters

Parameter	Type	Example	Description
Commands	Array of Command		Details about the commands.
Command			
Category	String	""	The category of the common command.
CommandContent	String	Y2QgL3Jvb3Q=	The Base64-encoded command content.

Parameter	Type	Example	Description
CommandId	String	C-7d2a745b412b4601b2d47f6a768d3***	The ID of the command.
CreationTime	String	2018-01-05T15:45:02Z	The time when the command was created.
Description	String	test	The description of the command.
EnableParameter	Boolean	true	Indicates whether the custom parameter feature is enabled for the command.
InvokeTimes	Integer	1	The number of tasks created by using the command.
Latest	Boolean	true	Indicates whether the common command is of the latest version. If multiple common commands from the same provider (<code>Provider</code>) belong to the same category and have the same name, these commands are of different versions of the same command. This parameter is not returned for the Cloud Assistant commands that you created. Valid values: • true • false
Name	String	Test1	The name of the command.
ParameterNames	List	['parameter1','parameter2']	The list of custom parameter names that are parsed from the command specified when the command was being created. If the custom parameter feature is disabled, an empty list is returned.
Provider	String	AlibabaCloud.ECS.GuestOS	The provider of the common command.
Timeout	Long	3600	The timeout period.
Type	String	RunShellScript	The type of the command.

Parameter	Type	Example	Description
Version	Integer	1	The version of the common command. If multiple common commands from the same provider (<code>Provider</code>) belong to the same category and have the same name, these commands are of different versions of the same command. This parameter is not returned for the Cloud Assistant commands that you created.
WorkingDir	String	/home/	The working directory of the command.
PageNumber	Long	1	The number of the returned page.
PageSize	Long	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Long	5	The total number of commands.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeCommands
&RegionId=cn-qingdao-****
&PageNumber=1
&PageSize=10
&<Common request parameters>
```

Sample success responses

`XML` format

```

<DescribeCommands>
  <TotalCount>5</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
  <PageNumber>1</PageNumber>
  <Commands>
    <Description>test</Description>
    <Category>""</Category>
    <Timeout>3600</Timeout>
    <Provider>AlibabaCloud.ECS.GuestOS</Provider>
    <Name>Test1</Name>
    <WorkingDir>/home/</WorkingDir>
    <CommandContent>Y2QgL3Jvb3Q= </CommandContent>
    <Type>RunShellScript</Type>
    <Version>1</Version>
    <InvokeTimes>1</InvokeTimes>
    <CreationTime>2018-01-05T15:45:02Z</CreationTime>
    <EnableParameter>true</EnableParameter>
    <Latest>true</Latest>
    <CommandId>c-7d2a745b412b4601b2d47f6a768d3***</CommandId>
    <ParameterNames>['parameter1','parameter2']</ParameterNames>
  </Commands>
</DescribeCommands>

```

JSON **format**

```

{
  "TotalCount": 5,
  "PageSize": 10,
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "PageNumber": 1,
  "Commands": {
    "Description": "test",
    "Category": "",
    "Timeout": 3600,
    "Provider": "AlibabaCloud.ECS.GuestOS",
    "Name": "Test1",
    "WorkingDir": "/home/",
    "CommandContent": "Y2QgL3Jvb3Q=",
    "Type": "RunShellScript",
    "Version": 1,
    "InvokeTimes": 1,
    "CreationTime": "2018-01-05T15:45:02Z",
    "EnableParameter": true,
    "Latest": true,
    "CommandId": "c-7d2a745b412b4601b2d47f6a768d3***",
    "ParameterNames": ["parameter1","parameter2"]
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the value of the RegionId parameter is valid.
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred while the request was being sent. Try again later.
403	InvalidParam.PageNumber	The specified parameter is invalid.	The error message returned because the specified PageNumber parameter is invalid.
403	InvalidParam.PageSize	The specified parameter is invalid.	The error message returned because the specified PageSize parameter is invalid.

5.1.17.5. ModifyCommand

Modifies the parameters and content of a Cloud Assistant command.

Description

You can modify a command when it is run. After the command is modified, the new command content applies to subsequent executions.

The command type cannot be modified. For example, a shell command (RunShellScript) cannot be changed to a batch command (RunBatScript).

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyCommand	The operation that you want to perform. Set the value to ModifyCommand.
CommandId	String	Yes	C-4d34302d02424c5c8e10281e3a315***	The ID of the command. You can call the DescribeCommands operation to query all available command IDs.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the command. You can call the DescribeRegions operation to query the region ID.
Name	String	No	AlibabaCommand	The name of the command. The name supports all character sets and can be up to 128 characters in length.
Description	String	No	UserGuide	The description of the command. The description supports all character sets and can be up to 512 characters in length.
CommandContent	String	No	c2VydmJjZSB0b21jYXQgc3RhcnQ=	The content of the command. The command content can be plaintext or Base64-encoded. Take note of the following items: - The Base64-encoded command content cannot exceed 16 KB in size. - If the command content is Base64-encoded, set <code>ContentEncoding</code> to Base64. - When <code>EnableParameter</code> is set to true, the custom parameter feature is enabled and you can configure custom parameters based on the following rules: - Define custom parameters in the <code>{{}}</code> format. Within <code>{{}}</code>, the spaces and line feeds before and after the parameter names are ignored. - The number of custom parameters cannot exceed 20. - A custom parameter name can contain only letters, digits, underscores (<code>_</code>), and hyphens (<code>-</code>). The name is case-insensitive. - Each custom parameter name cannot exceed 64 bytes in length.
WorkingDir	String	No	/home/	The working directory of the command on the Elastic Compute Service (ECS) instance.

Parameter	Type	Required	Example	Description
Timeout	Long	No	60	The maximum timeout period for the command execution on the instance. Unit: seconds. When a command cannot run within the specified time range, the command times out. When a command execution times out, the Cloud Assistant client forcefully terminates the command process by canceling the process ID (PID) of the command.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0DE9B41E-EF0D-40A0-BB43-37749C5B****	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=ModifyCommand
&CommandId=c-4d34302d02424c5c8e10281e3a315***
&RegionId=cn-qingdao-env17-d01
&Name=AlibabaCommand
&Description=UserGuide
&CommandContent=c2VydmljZSB0b21jYXQgc3RhcnQ=
&WorkingDir=/home/
&Timeout=60
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyCommandResponse>
  "RequestId": "0DE9B41E-EF0D-40A0-BB43-37749C5B****"
</ModifyCommandResponse>
```

JSON format

```
{
  "RequestId": "0DE9B41E-EF0D-40A0-BB43-37749C5B****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the value of the RegionId parameter is valid.
404	InvalidCmdId.NotFound	The specified command ID does not exist.	The error message returned because the specified CommandId parameter is invalid. You can call the DescribeCommands operation to query all available command IDs.
404	InvalidCmdType.NotFound	The specified command type does not exist.	The error message returned because the specified command type is invalid.
403	CmdContent.ExceedLimit	The length of the command content exceeds the upper limit.	The error message returned because the length of the command content exceeds the upper limit.
403	CmdDesc.ExceedLimit	The length of the command description exceeds the upper limit.	The error message returned because the command description exceeds 512 characters in length.

5.1.17.6. StopInvocation

Stops the process of a Cloud Assistant command that is running on one or more Elastic Compute Service (ECS) instances.

Description

- If you stop the process of a command that runs only once, the executions that have started are not interrupted. The executions that have not started are canceled.
- If you stop the process of a command that runs on a recurring schedule, the executions that have started are not interrupted but subsequent executions are cancelled.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	StopInvocation	The operation that you want to perform. Set the value to StopInvocation.
InvokeId	String	Yes	t-7d2a745b412b4601b2d47f6a768d3***	The ID of the task. You can call the DescribeInvocations operation to query all task IDs.
RegionId	String	Yes	cn-qingdao-****	The region ID of the command. You can call the DescribeRegions operation to query the region ID.
InstanceId.N	RepeatList	No	i-bp67acfmazb4ph***	The ID of instance N on which to stop the process of the command. You can specify up to 20 instance IDs in each request. Valid values of N: 1 to 50.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.example.com/?Action=StopInvocation
&InvokeId=t-7d2a745b412b4601b2d47f6a768d3***
&RegionId=cn-qingdao-****
&<Common request parameters>
```

Sample success responses

XML format

```
<StopInvocationResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</StopInvocationResponse>
```

JSON format


```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred while the request was being sent. Try again later.
404	InvalidInvokeId.NotFound	The specified invoke ID does not exist.	The error message returned because the specified InvokeId parameter does not exist.

5.1.17.7. DescribeInvocationResults

Queries the execution results of one or more Cloud Assistant commands on Elastic Compute Service (ECS) instances.

Description

- After you run a command, the command may not succeed or return the expected results. You can call this operation to query the actual execution results.
- You can query the information about command executions within the last two weeks. A maximum of 100,000 pieces of execution information can be retained.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInvocationResults	The operation that you want to perform. Set the value to DescribeInvocationResults.
RegionId	String	Yes	cn-qingdao-****	The region ID of the command. You can call the DescribeRegions operation to query the most recent region list.
InvokeId	String	No	t-7d2a745b412b4601b2d47f6a768d****	The ID of the task. You can call the DescribeInvocations operation to query the task IDs.

Parameter	Type	Required	Example	Description
InstanceId	String	No	i- bp10ua7jvif75ha8 ****	The ID of the instance.
CommandId	String	No	C- 4d34302d02424c 5c8e10281e3a31* ***	The ID of the command.
InvokeRecordStatus	String	No	Finished	The execution state of the command. Valid values: - Running - Finished - Failed - Stopped
IncludeHistory	Boolean	No	false	Specifies whether to return the results of historical recurring executions. Valid values: - true: returns the results of historical recurring executions. When this parameter is set to true, the <code>InvokeId</code> parameter must be set to the ID of a recurring task. - false: does not return the results of historical recurring executions. Default value: false.
ContentEncoding	String	No	PlainText	The encoding method of the <code>Output</code> response parameter. Valid values: - PlainText: returns the original command content and command output. - Base64: returns the Base64-encoded command content and command output. Default value: Base64.
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1.

Parameter	Type	Required	Example	Description
PageSize	Long	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10

Response parameters

Parameter	Type	Example	Description
Invocation	Struct		Details of the execution result.
InvocationResults	Array of InvocationResult		Details of the execution result.
InvocationResult			
CommandId	String	C-4d34302d02424c5c8e10281e3a31****	The ID of the command.
Dropped	Integer	0	The size of truncated and discarded text when the size of text in the <code>Output</code> response parameter is larger than 24 KB.

Parameter	Type	Example	Description
ErrorCode	String	InstanceNotExists	The error code returned when the command cannot be sent or run. Valid values: • If this parameter is empty, the command is run normally. • InstanceNotExists: The instance does not exist or has been released. • InstanceReleased: The instance is released while the task is being executed. • InstanceNotRunning: The instance is not running when the task is being created. • CommandNotApplicable: The command is not applicable to the specified instance. • AccountNotExists: The specified Alibaba Cloud account does not exist. • DirectoryNotExists: The specified directory does not exist. • BadCronExpression: The specified cron expression for the execution schedule is invalid. • ClientNotRunning: The Cloud Assistant client is not running. • ClientNotResponse: The Cloud Assistant client does not respond. • ClientIsUpgrading: The Cloud Assistant client is being upgraded. • ClientNeedUpgrade: The Cloud Assistant client needs to be upgraded. • DeliveryTimeout: The request to send the command has timed out. • ExecutionTimeout: The execution times out. • ExecutionException: An exception has occurred while the command is being run. • ExecutionInterrupted: The execution is interrupted. • ExitCodeNonzero: The execution is complete, but the exit code is not 0.

Parameter	Type	Example	Description
ErrorInfo	String	the specified instance does not exists	The error message returned when the command cannot be sent or run. Valid values: • If this parameter is empty, the command is run normally. • the specified instance does not exists • the instance has released when create task • the instance is not running when create task • the command is not applicable • the specified account does not exists • the specified directory does not exists • the cron job expression is invalid • the aliyun service is not running on the instance • the aliyun service in the instance does not response • the aliyun service in the instance is upgrading now • the aliyun service in the instance need upgrade • the command delivery has been timeout • the command execution has been timeout • the command execution got an exception • the command execution has been interrupted • the command execution exit code is not zero
ExitCode	Long	0	The exit code of the command execution. • For Linux instances, the value is the exit code of the shell command. • For Windows instances, the value is the exit code of the batch or PowerShell command.
FinishedTime	String	2018-01-05 15:45:02	The completion time of the execution. If an execution times out, the completion time of the execution is subject to the value of the TimedOut parameter specified in the CreateCommand operation.

Parameter	Type	Example	Description
InstanceId	String	i-uf614fhehhzm****	The ID of the instance.

Parameter	Type	Example	Description
InvocationStatus	String	Success	The execution state on a single instance. Valid values: • Pending: The command is being verified or sent. • Invalid: The specified command type or parameter is invalid. • Aborted: The command failed to be sent. To send a command to an instance, make sure that the instance is in the Running state and the command is sent within 1 minute. • Running: The command is being run on the instance. • Success: ◦ Command that is set to run only once: The execution is complete, and the exit code is 0. ◦ Command that is set to periodically run: The last execution succeeds, the exit code is 0, and the specified cycle ends. • Failed: ◦ Command that is set to run only once: The execution is complete, but the exit code is not 0. ◦ Command that is set to periodically run: The last execution is complete, the exit code is not 0, and the specified execution time is about to end. • Error: The execution cannot proceed due to an exception. • Timeout: The execution times out. • Cancelled: The task is canceled, and the command is not run. • Stopping: The task is being stopped. • Terminated: The command is terminated while it is being run. • Scheduled: ◦ Command that is set to run only once: The command is not applicable. ◦ Command that is set to periodically run: The command is waiting to be run.

Parameter	Type	Example	Description
InvokeId	String	t-7d2a745b412b4601b2d47f6a768d****	The ID of the task.
InvokeRecordStatus	String	Finished	The execution state of the command.
Output	String	MTU6MzA6MDEK	The command output, which is Base64-encoded.
Repeats	Integer	0	The number of times that the command was run on the instance. • If the command is set to run only once on the instance, the value is 0 or 1. • If the command is set to periodically run on the instance, the value is the number of times that the command is run.
StartTime	String	2022-04-01T02:36:20Z	The time when the command started to be run on the instance.
StopTime	String	2022-04-01T09:15:47Z	The time when the command stopped being run on the instance. If you call the <code>StopInvocation</code> operation to manually stop the execution, the value is the time when you call the operation.
Username	String	root	The username used to run the command on ECS instances.
PageNumber	Long	1	The page number of the returned page.
PageSize	Long	1	The number of entries returned per page.
TotalCount	Long	1	The total number of commands.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests


```
https://ecs.example.com/?Action=DescribeInvocationResults
&RegionId=cn-qingdao-env17-d01
&InstanceId=i-bp10ua7jvif75ha8****
&PageNumber=1
&PageSize=1
&<Common request parameters>
```

Sample success responses

XML **format**

```
<DescribeInvocationResultsResponse>
  <RequestId>919C8FD6-0BC1-4259-A6EA-5B400365A4AF</RequestId>
  <Invocation>
    <PageNumber>1</PageNumber>
    <TotalCount>1</TotalCount>
    <InvocationResults>
      <InvocationResult>
        <InvokeRecordStatus>Running</InvokeRecordStatus>
        <FinishedTime></FinishedTime>
        <InstanceId>i-bp10ua7jvif75ha8****</InstanceId>
        <Output>MTU6NDU6MDEK</Output>
        <ExitCode>0</ExitCode>
        <InvokeId>t-c6d11006a9374619838af10a2b09****</InvokeId>
        <StartTime>2018-08-01T02:36:20Z</StartTime>
        <CommandId>c-1791e8b850f44949aba6c883ad3****</CommandId>
      </InvocationResult>
    </InvocationResults>
    <PageSize>1</PageSize>
  </Invocation>
</DescribeInvocationResultsResponse>
```

JSON **format**

```

{
  "RequestId": "919C8FD6-0BC1-4259-A6EA-5B400365A4AF",
  "Invocation": {
    "PageNumber": 1,
    "TotalCount": 1,
    "InvocationResults": {
      "InvocationResult": [
        {
          "InvokeRecordStatus": "Running",
          "FinishedTime": "",
          "InstanceId": "i-bp10ua7jvif75ha8****",
          "Output": "MTU6NDU6MDEK",
          "ExitCode": 0,
          "InvokeId": "t-c6d11006a9374619838af10a2b09****",
          "StartTime": "2018-08-01T02:36:20Z",
          "CommandId": "c-1791e8b850f44949aba6c883ad3e****"
        }
      ]
    },
    "PageSize": 1
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
500	InternalServerError	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was being sent. Try again later.
403	InvalidParam.PageNumber	The specified parameter is invalid.	The error message returned because the specified PageNumber parameter is invalid.
403	InvalidParam.PageSize	The specified parameter is invalid.	The error message returned because the specified PageSize parameter is invalid.

5.1.17.8. DescribeInvocations

Queries the execution list and state of Cloud Assistant commands.

Description

- After you run a command, the command may not succeed or deliver the expected results. You can call this operation to query the execution results.
- You can query the information about command executions within the last two weeks. A maximum of 100,000 pieces of execution information can be retained.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInvocations	The operation that you want to perform. Set the value to DescribeInvocations.
RegionId	String	Yes	cn-qingdao-****	The region ID of the command. You can call the DescribeRegions operation to query the most recent region list.
InvokeId	String	No	t-7d2a745b412b4601b2d47f6a76d2****	The ID of the task.
CommandId	String	No	c-4d34302d02424c5c8e10281e3ad2****	The ID of the command. You can call the DescribeCommands operation to query all available command IDs.
CommandName	String	No	test-CommandName	The name of the command.
CommandType	String	No	RunShellScript	The type of the command.

Parameter	Type	Required	Example	Description
Timed	Boolean	No	true	Specifies whether to query the commands to be automatically run. Valid values: • true: queries the commands that meet the following requirements: The commands are run by calling the <code>RunCommand</code> or <code>InvokeCommand</code> operation with <code>RepeatMode</code> set to <code>Period</code>, <code>NextRebootOnly</code>, or <code>EveryReboot</code>. The executions of the commands are either not canceled and not complete or not stopped and not complete. • false: queries commands that meet the following requirements: ◦ The commands are run by calling the <code>RunCommand</code> or <code>InvokeCommand</code> operation and setting the <code>RepeatMode</code> parameter to <code>Once</code>. ◦ The executions of the commands are canceled, stopped, or complete. Default value: false.

Parameter	Type	Required	Example	Description
InvokeStatus	String	No	Finished	The overall execution state of the command. The value of this parameter depends on the execution states on all the involved instances. Valid values: - Running: - Recurring execution: Before you manually stop the execution of the command, the overall execution state is always Running. - One-time execution: If the execution is in progress on one or more instances, the overall execution state is Running. - Finished: - Recurring execution: The overall execution state can never be Finished. - One-time execution: The execution is complete on all instances, or the execution is manually stopped on some instances and is complete on the other instances. - Failed: - Recurring execution: The overall execution state can never be Failed. - One-time execution: The execution fails on all instances. - PartialFailed: - Recurring execution: The overall execution state can never be PartialFailed. - One-time execution: The execution fails on some instances. - Stopped: The execution is stopped. Default value: Running.

Parameter	Type	Required	Example	Description
InstanceId	String	No	i-bp10jvkun5h1ifzq****	The ID of the instance. When you specify this parameter, the system queries all the execution records of all the commands that run on the instance.
ContentEncoding	String	No	PlainText	The encoding mode of the <code>CommandContent</code> and <code>Output</code> response parameters. Valid values: - PlainText: returns the original command content and command outputs. - Base64: returns the Base64-encoded command content and command outputs. Default value: Base64.
IncludeOutput	Boolean	No	false	Specifies whether to return the command outputs in the response. - true: The command outputs are returned. When this parameter is set to true, you must specify <code>InvokeId</code>, <code>InstanceId</code>, or both. - false: The command outputs are not returned. Default value: false.
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Long	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
Invocations	Array of Invocation		Details about the command executions.
Invocation			
CommandContent	String	ZWNobyAiaGVsbG8gd29ybGQiID4vcm9vdC90ZXN0*****==	The Base64-encoded command content.
CommandId	String	c-4d34302d02424c5c8e10281e3ad2****	The ID of the command.
CommandName	String	test-CommandName	The name of the command.
CommandType	String	RunShellScript	The type of the command.
CreationTime	String	2020-01-19T09:15:46Z	The time when the task was created.
Frequency	String	0 */20 * * * *	The schedule on which the command is run. The value specifications are based on the specified cron expression.
			The overall execution state of the command. The value of this parameter depends on the execution states on all the involved instances. Valid values: • Pending: The command is being verified or sent. When the execution state on at least one instance is Pending, the overall execution state is Pending. • Scheduled: The recurring command is sent and waiting to be run. When the execution state on at least one instance is Scheduled, the overall execution state is Scheduled. • Running: The command is being run on the instances. When the execution state on at least one instance is Running, the overall execution state is Running. • Success: When the execution state on at least one instance is Success and the execution state on the other instances is Stopped or Success, the overall execution state is Success.

Parameter	Type	Example	Description
InvocationStatus	String	Pending	◦ Command that is set to run only once: The execution is complete, and the exit code is 0. ◦ Command that is set to periodically run: The last execution succeeds, the exit code is 0, and the specified cycle ends. • Failed: When the execution state on all instances is Stopped or Failed, the overall execution state is Failed. When the execution state on an instance is one of the following values, Failed is returned as the overall execution state: ◦ Invalid: The command is invalid. ◦ Aborted: The command failed to be sent. ◦ Failed: The command execution is complete, but the exit code is not 0. ◦ Timeout: The execution times out. ◦ Error: An error occurs when the command is being run. • Stopping: The execution is being stopped. When the execution state on at least one instance is Stopping, the overall execution state is Stopping. • Stopped: The execution is stopped. When the execution state on all instances is Stopped, the overall execution state is Stopped. When the execution state on an instance is one of the following values, Stopped is returned as the overall execution state: ◦ Cancelled: The task is canceled. ◦ Terminated: The task is terminated. • PartialFailed: The execution succeeds on some instances and fails on the other instances. When the execution state is Success on some instances and is Failed or Stopped on the other instances, the overall execution state is PartialFailed.  Note The value of the <code>InvocationStatus</code> response parameter is similar to that of this parameter, but we recommend that you check this parameter value.
InvokeId	String	t-7d2a745b412b4601b2d47f6a76d2****	The ID of the task.

Parameter	Type	Example	Description
InvokeInstances	Array of InvokeInstance		Details about the instances on which the command is run.
InvokeInstance			
CreationTime	String	2019-12-20T06:15:54Z	The time when the command started to be run on the instance.
Dropped	Integer	0	The size of the text that is truncated and discarded when the Output value exceeds 24 KB in size.

Parameter	Type	Example	Description
ErrorCode	String	InstanceNotExists	The code that indicates why the command failed to be sent or run. Valid values: • If this parameter is empty, the execution is normal. • InstanceNotExists: The instance does not exist or has been released. • InstanceReleased: The instance is released while the command is being run. • InstanceNotRunning: The instance was not in the Running state while the command started to be run. • CommandNotApplicable: The command is not applicable to the specified instance. • AccountNotExists: The specified account does not exist. • DirectoryNotExists: The specified directory does not exist. • BadCronExpression: The specified cron expression for the execution schedule is invalid. • ClientNotRunning: The Cloud Assistant client is not running. • ClientNotResponse: The Cloud Assistant client is not responding. • ClientIsUpgrading: The Cloud Assistant client is being upgraded. • ClientNeedUpgrade: The Cloud Assistant client needs to be upgraded. • DeliveryTimeout: The request to send the command has timed out. • ExecutionTimeout: The execution has timed out. • ExecutionException: An exception occurred while the command was being run. • ExecutionInterrupted: The execution was interrupted. • ExitCodeNonzero: The execution is complete, but the exit code is not 0.

Parameter	Type	Example	Description
ErrorInfo	String	the specified instance does not exists	Details about the reason why the command failed to be sent or run. Valid values: • If this parameter is empty, the execution is normal. • the specified instance does not exists • the instance has released when create task • the instance is not running when create task • the command is not applicable • the specified account does not exists • the specified directory does not exists • the cron job expression is invalid • the aliyun service is not running on the instance • the aliyun service in the instance does not response • the aliyun service in the instance is upgrading now • the aliyun service in the instance need upgrade • the command delivery has been timeout • the command execution has been timeout • the command execution got an exception • the command execution has been interrupted • the command execution exit code is not zero
ExitCode	Long	0	The exit code of the execution. Valid values: • For Linux instances, the exit code is the exit code of the shell process. • For Windows instances, the exit code is the exit code of the batch or PowerShell process.
FinishTime	String	2019-12-20T06:15:56Z	The end time of the execution of the command.
Instanceld	String	i-bp10jvkun5h1ifzq*** *	The ID of the instance.

Parameter	Type	Example	Description
InstanceInvokeStatus	String	Finished	The command execution state on a single instance. Valid values: - Running: - Recurring execution: Before you manually stop the command, the command execution state is always Running. - One-time execution: The execution is in process. - Finished: - Recurring execution: The overall execution state can never be Finished. - One-time execution: The execution is complete. - Failed: - Recurring execution: The overall execution state can never be Failed. - One-time execution: The execution fails. - Stopped: The command execution is stopped. - PartialFailed: - Recurring execution: The overall execution state can never be PartialFailed. - One-time invocation: The command execution fails on some instances.
			The overall execution state of the command. The value of this parameter depends on the overall execution state on all the involved instances. Valid values: - Pending: The command is being verified or sent. When the execution state on at least one instance is Pending, the overall execution state is Pending. - Scheduled: - One-time execution: The command is not applicable.

Parameter	Type	Example	Description
InvocationStatus	String	Success	◦ Recurring execution: The command is sent and waiting to be run. When the execution state on at least one instance is Scheduled, the overall execution state is Scheduled. • Running: The command is being run on the instance. When the execution state on at least one instance is Running, the overall execution state is Running. • Success: When the execution state on all instances is Stopped or Success and the execution state on at least one instance is Success, the overall execution state is Success. ◦ One-time execution: The execution is complete, and the exit code is 0. ◦ Recurring execution: The last execution succeeds, the exit code is 0, and the specified cycle has ended. • Failed: When the execution state on all instances is Stopped or Failed and the execution state on at least one instance is Failed, the overall execution state is Failed. When the execution state on the instances is one of the following values, Failed is returned: ◦ Invalid: The command is invalid. ◦ Aborted: The command failed to be sent. ◦ Failed: The command execution is complete, but the exit code is not 0. ◦ Timeout: The execution times out. ◦ Error: An error occurs when the command is being run. • Stopping: The execution is being stopped. When the execution state on at least one instance is Stopping, the overall execution state is Stopping. • Stopped: The execution is stopped. When the execution state on all instances is Stopped, the overall execution state is Stopped. When the execution state on an instance is one of the following values, Stopped is returned as the overall execution state: ◦ Cancelled: The execution is canceled. ◦ Terminated: The execution is terminated. • PartialFailed: The execution succeeds on some instances and fails on the other

Parameter	Type	Example	Description
Output	String	OutPutTestmsg	The command output.
Repeats	Integer	0	The number of times that the command was run on the instance. • If the command is set to run only once on the instance, the value is 0 or 1. • If the command is set to periodically run on the instance, the value is the number of times that the command is run.
StartTime	String	2019-12-20T06:15:55Z	The time when the command started to be run on the instance.
StopTime	String	2020-01-19T09:15:47Z	The time when the command stopped being run on the instance. If you call the <code>StopInvocation</code> operation to manually stop the execution, the value is the time when you call the operation.
UpdateTime	String	2020-01-19T09:15:47Z	The time when the task state was updated.
InvokeStatus	String	Finished	The overall execution state of the command.  Note We recommend that you ignore this parameter and check the value of the <code>InvocationStatus</code> response parameter for the overall execution state.
Parameters	String	AccessKeyID	The custom parameters in the command.
Timed	Boolean	false	Indicates whether the command is periodically run.
Username	String	root	The username that was used to run the command on the instance.
PageNumber	Long	1	The page number of the returned page.
PageSize	Long	10	The number of entries returned per page.

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Long	2	The total number of the commands.

Examples

Sample requests

```
http(s)://ecs.example.com/?Action=DescribeInvocations
&RegionId=cn-qingdao-****
&InvokeId=t-hz0jdfwd9f****
&CommandId=c-hz0jdfwcsr****
&CommandName=CommandTestName
&CommandType=RunShellScrip
&Timed=true
&InvokeStatus=Finished
&InstanceId=i-bp1i7gg30r52z2em****
&PageNumber=1
&PageSize=10
&<Common request parameters>
```

Sample success responses

XML format

```

<DescribeInvocationsResponse>
  <PageNumber>1</PageNumber>
  <Invocations>
    <Invocation>
      <CreationTime>2020-01-19T09:15:46Z</CreationTime>
      <Parameters>{}</Parameters>
      <CommandContent>ZWNobyAiaGVsbG8gd29ybGQiID4vcml9vdC90ZXN0Ln*****==</Command
Content>
      <CommandName>exec-2dbb68f9584c4aa6****.t0004</CommandName>
      <CommandType>RunShellScript</CommandType>
      <InvokeStatus>Finished</InvokeStatus>
      <InvokeId>t-7d2a745b412b4601b2d47f6a76d2****</InvokeId>
      <InvokeInstances>
        <InvokeInstance>
          <InstanceInvokeStatus>Finished</InstanceInvokeStatus>
          <InvocationStatus>Success</InvocationStatus>
          <ExitCode>0</ExitCode>
          <Dropped>0</Dropped>
          <InstanceId>i-bp10jvkun5hlifzq****</InstanceId>
          <UpdateTime>2020-01-19T09:15:47Z</UpdateTime>
          <Output></Output>
          <Repeats>1</Repeats>
          <ErrorInfo></ErrorInfo>
          <CreationTime>2020-01-19T09:15:46Z</CreationTime>
          <FinishTime>2020-01-19T09:15:47Z</FinishTime>
          <StopTime></StopTime>
          <StartTime>2020-01-19T09:15:47Z</StartTime>
          <ErrorCode></ErrorCode>
        </InvokeInstance>
      </InvokeInstances>
      <Timed>>false</Timed>
      <Frequency></Frequency>
      <CommandId>c-4d34302d02424c5c8e10281e3ad2****</CommandId>
    </Invocation>
  </Invocations>
  <TotalCount>1</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>6CABE05A-68F7-418F-B27C-710929A64F33</RequestId>
</DescribeInvocationsResponse>

```

JSON format


```

{
  "PageNumber": 1,
  "Invocations": {
    "Invocation": [
      {
        "CreationTime": "2020-01-19T09:15:46Z",
        "Parameters": "{}",
        "CommandContent": "ZWNobyAiaGVsbG8gd29ybGQiID4vcm9vdC90ZXN0Ln*****=",
        "CommandName": "exec-2dbb68f9584c4aa6****.t0004",
        "CommandType": "RunShellScript",
        "InvokeStatus": "Finished",
        "InvokeId": "t-7d2a745b412b4601b2d47f6a76d2****",
        "InvokeInstances": {
          "InvokeInstance": [
            {
              "InstanceInvokeStatus": "Finished",
              "InvocationStatus": "Success",
              "ExitCode": 0,
              "Dropped": 0,
              "InstanceId": "i-bp10jvkun5hlifzq****",
              "UpdateTime": "2020-01-19T09:15:47Z",
              "Output": "",
              "Repeats": 1,
              "ErrorInfo": "",
              "CreationTime": "2020-01-19T09:15:46Z",
              "FinishTime": "2020-01-19T09:15:47Z",
              "StopTime": "",
              "StartTime": "2020-01-19T09:15:47Z",
              "ErrorCode": ""
            }
          ]
        },
        "Timed": false,
        "Frequency": "",
        "CommandId": "c-4d34302d02424c5c8e10281e3ad2****"
      }
    ]
  },
  "TotalCount": 1,
  "PageSize": 10,
  "RequestId": "6CABE05A-68F7-418F-B27C-710929A64F33"
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.

HTTP status code	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was being sent. Try again later.
403	InvalidParam.PageNumber	The specified parameter is invalid.	The error message returned because the specified PageNumber parameter is invalid.
403	InvalidParam.PageSize	The specified parameter is invalid.	The error message returned because the specified PageSize parameter is invalid.

5.1.17.9. DescribeCloudAssistantStatus

Queries whether the Cloud Assistant client is installed on one or more Elastic Compute Service (ECS) instances.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeCloudAssistantStatus	The operation that you want to perform. Set the value to DescribeCloudAssistantStatus.
RegionId	String	Yes	cn-qingdao-****	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
OSType	String	No	Windows	The operating system type of the instance. Valid values: - Windows - Linux

Parameter	Type	Required	Example	Description
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Long	No	10	The number of entries to return on each page. Maximum value: 100. Default value: 10.
InstanceId.N	RepeatList	No	i-bp1iudwa5b1tqa*****	The ID of instance N. The ID of instance N. You can specify up to 50 instance IDs in each request. Valid values of N: 1 to 50.

Response parameters

Parameter	Type	Example	Description
InstanceCloudAssistantStatusSet	Array of InstanceCloudAssistantStatus		Details about the installation states of the Cloud Assistant client on the instances.
InstanceCloudAssistantStatus			
ActiveTaskCount	Long	1	The number of commands that are being run.
CloudAssistantStatus	String	true	Indicates whether the Cloud Assistant client was installed on the instance. Valid values: - true: The Cloud Assistant client was installed on the instance. - false: The Cloud Assistant client was not installed on the instance.
CloudAssistantVersion	String	1.0.1.395	The version number of the Cloud Assistant client.
InstanceId	String	i-bp1iudwa5b1tqa***	The ID of the instance.

Parameter	Type	Example	Description
InvocationCount	Long	2	The total number of commands that have been run.
LastInvokedTime	String	2022-03-15T09:00:00Z	The last heartbeat time of Cloud Assistant.
OSType	String	Windows	The operating system type of the instance. Valid values: - Windows - Linux
PageNumber	Long	1	The page number of the returned page.
PageSize	Long	10	The number of entries returned on each page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.
TotalCount	Long	1	The total number of instances.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeCloudAssistantStatus
&InstanceId.1=i-bpliudwa5b1tqa*****
&RegionId=cn-qingdao-****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeCloudAssistantStatusResponse>
  <TotalCount>1</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3****</RequestId>
  <PageNumber>1</PageNumber>
  <InstanceCloudAssistantStatusSet>
    <CloudAssistantVersion>1.0.1.395</CloudAssistantVersion>
    <InstanceId>i-bpliudwa5bltqa*****</InstanceId>
    <InvocationCount>2</InvocationCount>
    <OSType>Windows</OSType>
    <CloudAssistantStatus>true</CloudAssistantStatus>
    <LastInvokedTime>2022-03-15T09:00:00Z</LastInvokedTime>
    <ActiveTaskCount>1</ActiveTaskCount>
  </InstanceCloudAssistantStatusSet>
</DescribeCloudAssistantStatusResponse>
```

JSON format

```
{
  "TotalCount": 1,
  "PageSize": 10,
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3****",
  "PageNumber": 1,
  "InstanceCloudAssistantStatusSet": {
    "CloudAssistantVersion": "1.0.1.395",
    "InstanceId": "i-bpliudwa5bltqa*****",
    "InvocationCount": 2,
    "OSType": "Windows",
    "CloudAssistantStatus": true,
    "LastInvokedTime": "2022-03-15T09:00:00Z",
    "ActiveTaskCount": 1
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the RegionId parameter is valid.

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred while the request was being sent. Try again later.
404	InvalidInstance.NotFound	The specified instance does not exist.	The error message returned because the specified instance does not exist.
403	InstanceIds.ExceedLimit	The number of instance IDs exceeds the upper limit.	The error message returned because more than 50 ECS instance IDs are specified.

5.1.17.10. DeleteCommand

Deletes a Cloud Assistant command.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteCommand	The operation that you want to perform. Set the value to DeleteCommand.
CommandId	String	Yes	c-4d34302d02424c5c8e10281e3a315***	The ID of the command. You can call the DescribeCommands operation to query all available command IDs.
RegionId	String	Yes	cn-qingdao-****	The region ID of the command. You can call the DescribeRegions operation to query the region ID.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=DeleteCommand
&CommandId=c-4d34302d02424c5c8e10281e3a315***
&RegionId=cn-qingdao-****
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteCommandResponse>
  <RequestId>E69EF3CC-94CD-42E7-8926-F133B863****</RequestId>
</DeleteCommandResponse>
```

JSON format

```
{
  "RequestId": "E69EF3CC-94CD-42E7-8926-F133B863****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the specified RegionId parameter is valid.
500	InternalServerError	An error occurred when you dispatched the request.	The error message returned because an error occurred while the request was being sent. Try again later.
404	InvalidCmdId.NotFound	The specified command ID does not exist.	The error message returned because the specified CommandId parameter is invalid. You can call the DescribeCommands operation to query all available command IDs.
403	InvalidStatus.CmdIdInUse	The specified commandId is in use by some running Invocation.	The error message returned because the specified command is being run. Stop the command and try again.

5.1.17.11. SendFile

Sends a file to one or more Elastic Compute Service (ECS) instances.

Description

- The instances to which you want to send a file must be in the Running (`Running`) state.
- The Cloud Assistant client must be installed on the instances.
- Only the Cloud Assistant client versions that are later than the following ones support file sending. If the `ClientNeedUpgrade` error code is returned, update the Cloud Assistant client to the latest version.
- The file to be sent must not exceed 32 KB in size after it is encoded in Base64.
- The file may fail to be sent due to exceptions on the instances, network, or the Cloud Assistance client. Call the `DescribeSendFileResults` operation to troubleshoot the issues.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	SendFile	The operation that you want to perform. Set the value to <code>SendFile</code> .
Content	String	Yes	<pre>#!/bin/bash echo "Current User is : " echo \$(ps grep "\$\$" awk '{print \$2}') ----- oss://bucketName/objectName</pre>	The content of the file. The content must not exceed 32 KB in size after it is encoded in Base64. • If <code>ContentType</code> is set to <code>PlainText</code>, the value of <code>Content</code> is in plaintext. • If <code>ContentType</code> is set to <code>Base64</code>, the value of <code>Content</code> is Base64-encoded.
InstanceId.N	RepeatList	Yes	<pre>i- bp185dy2o3o6n* ***</pre>	The ID of instance N to which you want to send the file. A maximum of 50 instance IDs can be specified. Valid values of N: 1 to 50.
Name	String	Yes	file.txt	The name of the file. The name supports all character sets and can be up to 255 characters in length.
RegionId	String	Yes	cn-qingdao-****	The region ID of the instance to which you want to send the file. You can call the <code>DescribeRegions</code> operation to query the region ID.

Parameter	Type	Required	Example	Description
TargetDir	String	Yes	/home	The destination directory on the instance to which you want to send the file. If the specified directory does not exist, the system creates the directory on the instance.
Description	String	No	This is a test file.	The description of the file. The description supports all character sets and can be up to 512 characters in length.
Timeout	Long	No	60	The timeout period for sending the file. Unit: seconds. - A timeout error occurs when a file cannot be sent because the process slows down or because a specific module or the Cloud Assistant client does not exist. - If the specified timeout period is less than 10 seconds, the system automatically sets the timeout period to 10 seconds to ensure that the file is sent to the instances. Default value: 60.
ContentType	String	No	PlainText	The content type of the file. Valid values: - PlainText: The command content is not encoded. - Base64 Default value: PlainText.
FileOwner	String	No	root	The owner of the file. This parameter takes effect only on Linux instances. Default value: root.
FileGroup	String	No	root	The user group of the file. This parameter takes effect only on Linux instances. Default value: root.

Parameter	Type	Required	Example	Description
FileMode	String	No	0644	The permissions on the file. This parameter takes effect only on Linux instances. You can configure this parameter in the same way as you configure the chmod command. The default value is 0644, which indicates that the owner of the file has read and write permissions on the file and that the user group of the file and other users have only read permissions on the file.
Overwrite	Boolean	No	true	Specifies whether to overwrite a file in the destination directory if the file has the same name as the sent file. • true: overwrites the file. • false: does not overwrite the file. Default value: false.

Response parameters

Parameter	Type	Example	Description
Invokeld	String	f-7d2a745b412b46***	The ID of the execution.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE****	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.example.com/?Action=SendFile
&Content=#!/bin/bash echo "Current User is :" echo $(ps | grep "$$" | awk '{print $2}')
----- oss://bucketName/objectName
&InstanceId=i-bp185dy2o3o6n****
&Name=file.txt
&RegionId=cn-qingdao-****
&TargetDir=/home
&<Common request parameters>
```

Sample success responses

XML format

```
<SendFileResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE****</RequestId>
  <InvokeId>f-7d2a745b412b46****</InvokeId>
</SendFileResponse>
```

JSON **format**

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE****",
  "InvokeId": "f-7d2a745b412b46****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the value of the RegionId parameter is valid.
500	InternalError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred while the request was being sent. Try again later.
403	FileSize.ExceedLimit	The length of file content exceeds limit.	The error message returned because the maximum length of the file content has been reached.
403	FileName.ExceedLimit	The length of file name exceeds limit.	The error message returned because the maximum length of the file name has been reached.
403	FileDesc.ExceedLimit	The length of file description exceeds limit.	The error message returned because the maximum length of the file description has been reached.
403	FileTargetDir.Invalid	The target directory of file is invalid.	The error message returned because the specified TargetDir parameter is invalid.

HTTP status code	Error code	Error message	Description
404	InvalidInstance.NotFound	The specified instances not found.	The error message returned because the specified instance does not exist.
403	InstanceIds.ExceedLimit	The number of instance IDs exceeds the upper limit.	The error message returned because more than 50 ECS instance IDs are specified.
403	FileMode.Invalid	The mode of file is invalid.	The error message returned because the specified FileMode parameter is invalid.
403	FileContent.DecodeError	The Content can not be base64 decoded.	The error message returned because the file content cannot be decoded in Base64.
403	FileContentType.Invalid	The ContentType of file is invalid.	The error message returned because the specified ContentType parameter is invalid.

5.1.17.12. DescribeSendFileResults

Queries the files sent by Cloud Assistant and their status.

Description

- When you send a file, the file may fail to be sent to specified instances. You must call this operation to check the file sending results.
- You can call this operation to query the file sending records of the last two weeks. A maximum of 100,000 file sending records can be retained.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSendFileResults	The operation that you want to perform. Set the value to DescribeSendFileResults.
RegionId	String	Yes	cn-qingdao-****	The ID of the region in which the files that you want to query are located. You can call the DescribeRegions operation to query the region ID.
InvokeId	String	No	f-hz0jdfwd9f****	The ID of the execution.

Parameter	Type	Required	Example	Description
Name	String	No	test.txt	The name of the file whose sending records you want to query.
InstanceId	String	No	i-hz0jdfwd9f****	The ID of the instance for which you want to query file sending results.
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Long	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10.

Response parameters

Parameter	Type	Example	Description
Invocations	Array of Invocation		Details about the file sending records.
Invocation			
Content	String	<pre>#!/bin/bash echo "Current User is : " echo \$(ps grep "\$\$" awk '{print \$2}')</pre>	The content of the file.
ContentType	String	PlainTex	The type of the file content. Valid values: - PlainText - Base64
CreationTime	String	2022-04-10T06:15:54Z	The time when the file sending task was created.
Description	String	This is a test file.	The description of the file.
FileGroup	String	root	The user group of the file.

Parameter	Type	Example	Description
FileMode	String	777	The permissions on the file.
FileOwner	String	root	The owner of the file.
InvocationStatus	String	Success	The overall sending status of the file. The overall sending status of the file depends on its sending status on all destination instances. Valid values: • Pending: The file is being verified or sent. If the sending status of the file on at least one instance is Pending, the overall sending status of the file is Pending. • Running: The file creation task is running on the instances. If the sending status of the file on at least one instance is Running, the overall sending status of the file is Running. • Success: If the sending status of the file on all the instances is Success, the overall sending status of the file is Success. • Failed: If the sending status of the file on all the instances is Failed, the overall sending status of the file is Failed. If the sending status of the file on one or more instances is one of the following values, the overall sending status of the file is Failed: ◦ Invalid: The file is invalid. ◦ Aborted: The file failed to be sent. ◦ Failed: The file failed to be created. ◦ Timeout: The file sending task timed out. ◦ Error: An error occurred while the file is being sent. • PartialFailed: The file was sent to some of the specified instances and failed to be sent to other instances. If the sending status of a file is Success on some instances and Failed on other instances, the overall sending status of the file is PartialFailed.
InvokeId	String	f-hz0jdfwd9f****	The ID of the execution.
InvokeInstances	Array of InvokeInstance		Details about the destination instances.

Parameter	Type	Example	Description
InvokeInstance			
CreationTime	String	2022-04-10T06:15:54Z	The time when the file sending task was created.
ErrorCode	String	InstanceNotExists	The error code returned when the file failed to be sent to the instance. Valid values: • Null: The file is sent to the instance. • InstanceNotExists: The instance does not exist or has been released. • InstanceReleased: The instance is released while the file is being sent. • InstanceNotRunning: The instance is not running when the file sending task is being created. • AccountNotExists: The specified account does not exist. • ClientNotRunning: The Cloud Assistant client is not running. • ClientNotResponse: The Cloud Assistant client does not respond. • ClientIsUpgrading: The Cloud Assistant client is being upgraded. • ClientNeedUpgrade: The Cloud Assistant client needs to be upgraded. • DeliveryTimeout: The file sending task timed out. • FileCreateFail: The file failed to be created. • FileAlreadyExists: A file with the same name already exists in the specified directory. • FileContentInvalid: The file content is invalid. • FileNameInvalid: The file name is invalid. • FilePathInvalid: The specified directory is invalid. • FileAuthorityInvalid: The specified permissions on the file are invalid.

Parameter	Type	Example	Description
ErrorInfo	String	the instance is not running when create task	The error message returned when the file failed to be sent to the instance or the file sending task failed to be executed on the instance. Valid values: • Null: The file is sent to the instance. • the specified instance does not exists • the instance has released when create task • the instance is not running when create task • the specified account does not exists • the aliyun service is not running on the instance • the aliyun service in the instance does not response • the aliyun service in the instance is upgrading now • the aliyun service in the instance need upgrade • the command delivery has been timeout • Unexpected error during creating • File already exists • File content error • File name is invalid • File path is invalid • Owner not exists • Group not exists • Mode is invalid
FinishTime	String	2022-04-12T06:20:00Z	The time when the file sending task was completed.
InstanceId	String	i-uf614fhehz****	The ID of the instance.
InvocationStatus	String	Success	The status of the file sending task.
StartTime	String	2022-04-10T06:20:00Z	The time when the file sending task started to be executed on the instance.
UpdateTime	String	2022-04-10T06:2:00	The time when the task status was updated.

Parameter	Type	Example	Description
Name	String	test.txt	The name of the file.
Overwrite	String	false	Indicates whether a file that has the same name as the sent file in the destination directory is overwritten.
TargetDir	String	/root	The destination directory.
VmCount	Integer	1	The number of instances to which the file is sent.
PageNumber	Long	1	The number of the returned page.
PageSize	Long	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.
TotalCount	Long	2	The total number of commands.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSendFileResults
&RegionId=cn-qingdao-****
&InvokeId=f-hz0vk9****
&Name=test.txt
&InstanceId=i-bplhsglsw****
&PageNumber=1
&PageSize=10
&<Common request parameters>
```

Sample success responses

XML format

```

<DescribeSendFileResultsResponse>
  <TotalCount>2</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3****</RequestId>
  <PageNumber>1</PageNumber>
  <Invocations>
    <FileMode>777</FileMode>
    <InvocationStatus>Success</InvocationStatus>
    <Overwrite>false</Overwrite>
    <Description>This is a test file.    </Description>
    <VmCount>1</VmCount>
    <ContentType>PlainTex</ContentType>
    <Content>#!/bin/bash echo "Current User is :" echo $(ps | grep "$$" | awk '{print $
2}')</Content>
    <CreationTime>2022-04-10T06:15:54Z    </CreationTime>
    <FileGroup>root</FileGroup>
    <TargetDir>/root</TargetDir>
    <FileOwner>root</FileOwner>
    <InvokeId>f-hz0jdfwd9f****</InvokeId>
    <Name>test.txt</Name>
    <InvokeInstances>
      <InvocationStatus>Success</InvocationStatus>
      <FinishTime>2022-04-12T06:20:00Z</FinishTime>
      <InstanceId>i-uf614fhehhz****</InstanceId>
      <ErrorInfo>the instance is not running when create task</ErrorInfo>
      <UpdateTime>2022-04-10T06:2:00</UpdateTime>
      <StartTime>2022-04-10T06:20:00Z</StartTime>
      <CreationTime>2022-04-10T06:15:54Z</CreationTime>
      <ErrorCode>InstanceNotExists</ErrorCode>
    </InvokeInstances>
  </Invocations>
</DescribeSendFileResultsResponse>

```

JSON **format**

```
{
  "TotalCount": 2,
  "PageSize": 10,
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3****",
  "PageNumber": 1,
  "Invocations": {
    "FileMode": 777,
    "InvocationStatus": "Success",
    "Overwrite": false,
    "Description": "This is a test file.",
    "VmCount": 1,
    "ContentType": "PlainTex",
    "Content": "#!/bin/bash echo \"Current User is :\" echo $(ps | grep \"$$\" | awk '{
print $2}')\"",
    "CreationTime": "2022-04-10T06:15:54Z",
    "FileGroup": "root",
    "TargetDir": "/root",
    "FileOwner": "root",
    "InvokeId": "f-hz0jdfwd9f****",
    "Name": "test.txt",
    "InvokeInstances": {
      "InvocationStatus": "Success",
      "FinishTime": "2022-04-12T06:20:00Z",
      "InstanceId": "i-uf614fhehhz****",
      "ErrorInfo": "the instance is not running when create task",
      "UpdateTime": "2022-04-10T06:2:00",
      "StartTime": "2022-04-10T06:20:00Z",
      "CreationTime": "2022-04-10T06:15:54Z",
      "ErrorCode": "InstanceNotExists"
    }
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the value of the RegionId parameter is valid.

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred while the request was being sent. Try again later.
403	InvalidParam.PageNumber	The specified parameter is invalid.	The error message returned because the specified PageNumber parameter is invalid.
403	InvalidParam.PageSize	The specified parameter is invalid.	The error message returned because the specified PageSize parameter is invalid.

5.1.18. Tags

5.1.18.1. AddTags

You can call this operation to add or overwrite one or more tags on your ECS resources. You can add or overwrite tags on instances, disks, snapshots, images, and security groups to facilitate resource management.

Description

When you call this operation, take note of the following items:

- Up to 20 tags can be added to each ECS resource.
- `Tag.N.Key` must match `Tag.N.Value` based on the value of N.
- If you add a tag that has the same key (`Tag.N.Key`) as an existing tag on the specified resource, the new tag value (`Tag.N.Value`) overwrites the original tag value.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AddTags	The operation that you want to perform. Set the value to AddTags.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the resource on which you want to add or overwrite tags. You can call the DescribeRegions operation to query the most recent region list.
ResourceType	String	Yes	instance	The type of the resource. Valid values: - disk - instance - image - securitygroup - snapshot All values must be in lowercase.
ResourceId	String	Yes	i-bp1ecr*****5go2go	The ID of the resource. When the value of the ResourceType parameter is instance, this parameter can be interpreted as InstanceId.
Tag.N.value	String	No	FinanceTagValue	The value of tag N to be bound to the resource.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure future compatibility.
Tag.N.key	String	No	Finance	The key of tag N to be bound to the resource.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.

Parameter	Type	Required	Example	Description
Tag.N.Key	String	No	Finance	The key of tag N to be bound to the resource. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.
Tag.N.Value	String	No	FinanceTagValue	The value of tag N to be bound to the resource. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=AddTags
&RegionId=cn-qingdao-env17-d01
&ResourceType=instance
&ResourceId=i-bp1ecr5g****
&Tag.1.Key=Finance
&Tag.1.Value=FinanceTagValue
&<Common request parameters>
```

Sample success responses

XML **format**

```
<AddTagsResponse>
  <RequestId>C46FF5A8-C5F0-4024-8262-B16B639225A0</RequestId>
</AddTagsResponse>
```

JSON **format**

```
{
  "RequestId": "C46FF5A8-C5F0-4024-8262-B16B639225A0"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
404	InvalidResourceId.NotFound	The specified ResourceId is not found in our records.	The error message returned because the specified ResourceId parameter does not exist.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter does not exist.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	OperationDenied.QuotaExceed	The quota of tags on resource is beyond permitted range.	The error message returned because the maximum number of tags that can be bound to the resource has been reached.
403	InvalidResourceId.NotSupported	The specified ResourceId does not support tagging.	The error message returned because the specified resource does not support tagging.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not match.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags exceeds the upper limit.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
403	QuotaExceed.Tags	%s	The error message returned because the number of tags has reached the quota.

5.1.18.2. RemoveTags

You can call this operation to unbind one or more tags from a resource such as an instance, disk, snapshot, image, or security group.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RemoveTags	The operation that you want to perform. Set the value to RemoveTags.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the resource from which you want to unbind tags. You can call the DescribeRegions operation to query the most recent region list.
ResourceId	String	Yes	s-946ntx4**	The ID of the resource from which you want to unbind tags. When the value of the ResourceType parameter is instance, this parameter can be interpreted as InstanceId.
ResourceType	String	Yes	snapshot	The type of the resource. Valid values: - disk - instance - image - securitygroup - snapshot All values must be in lowercase.
Tag.N.value	String	No	FinanceTagValue	The value of tag N of the resource.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure future compatibility.

Parameter	Type	Required	Example	Description
Tag.N.key	String	No	Finance	The key of tag N of the resource.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	No	Finance	The key of tag N of the resource. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 64 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.
Tag.N.Value	String	No	FinanceTagValue	The value of tag N of the resource. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=RemoveTags
&RegionId=cn-qingdao-env17-d01
&ResourceId=s-946ntx4****
&ResourceType=snapshot
&Tag.1.Key=Finance
&Tag.1.Value=FinanceTagValue
&<Common request parameters>
```

Sample success responses

XML format

```
<RemoveTagsResponse>
  <RequestId>6A2C8AB5-E15D-478C-B56A-CF3DAF060028</RequestId>
</RemoveTagsResponse>
```

JSON **format**

```
{
  "RequestId": "6A2C8AB5-E15D-478C-B56A-CF3DAF060028"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidResourceId.NotFound	The specified ResourceId is not found in our records.	The error message returned because the specified ResourceId parameter does not exist.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter does not exist.
403	InvalidResourceId.NotSupported	The specified ResourceId does not support tagging.	The error message returned because the specified resource does not support tagging.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags exceeds the upper limit.
400	InvalidTagKey.Malformed	The specified Tag.N.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidResourceType.NotFound	The specified ResourceType does not exist.	The error message returned because the specified ResourceType parameter is invalid.

5.1.18.3. DescribeTags

You can call this operation to query available tags. You can query tags by specifying filter conditions such as resource type, resource ID, tag key, and tag value. The specified filter conditions have logical AND relations. Only the tags that meet all the specified filter conditions are returned.

Description

If a tag key is specified and no tag values are specified, all tags that contain the tag key are returned. If a tag key-value pair is specified, only tags that exactly match the key-value pair are returned.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeTags	The operation that you want to perform. Set the value to DescribeTags.
RegionId	String	Yes	cn-qingdao-env17-d01	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
PageSize	Integer	No	50	The number of entries to return on each page. Valid values: 1 to 100 Default value: 50
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1
ResourceType	String	No	snapshot	The type of the resource. Valid values: • disk • instance • image • securitygroup • snapshot All values must be in lowercase.
ResourceId	String	No	s-946ntx4wr	The ID of the resource. When the value of the ResourceType parameter is instance, this parameter can be interpreted as InstanceId.

Parameter	Type	Required	Example	Description
Tag.N.value	String	No	Finance	The value of tag N bound to the resource.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure future compatibility.
Tag.N.key	String	No	Finance	The key of tag N bound to the resource.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	No	Finance	The key of tag N bound to the resource. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 64 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.
Tag.N.Value	String	No	Finance	The value of tag N bound to the resource. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	50	The number of entries returned per page.

Parameter	Type	Example	Description
RequestId	String	B04B8CF3-4489-432D-83BA-6F128E4F2295	The ID of the request.
Tags	Array		The collection of details about tags that match all the filter conditions.
Tag			
ResourceTypeCount	Struct		The number of resource types.
Ddh	Integer	1	The number of dedicated hosts to which the tag is bound.
Disk	Integer	15	The number of disks to which the tag is bound.
Eni	Integer	5	The number of ENIs to which the tag is bound.
Image	Integer	6	The number of images to which the tag is bound.
Instance	Integer	45	The number of instances to which the tag is bound.
KeyPair	Integer	17	The number of key pairs to which the tag is bound.
LaunchTemplate	Integer	6	The number of launch templates to which the tag is bound.
Securitygroup	Integer	4	The number of security groups to which the tag is bound.
Snapshot	Integer	15	The number of snapshots to which the tag is bound.
Volume	Integer	6	The number of extended volumes to which the tag is bound.

Parameter	Type	Example	Description
TagKey	String	test	The tag key.
TagValue	String	api	The tag value.
TotalCount	Integer	1	The total number of tags.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeTags
&RegionId=cn-qingdao-env17-d01
&PageSize=50
&PageNumber=1
&ResourceType=snapshot
&ResourceId=s-946ntx4**
&Tag.1.Key=Finance
&Tag.1.Value=Finance
&<Common request parameters>
```

Sample success responses

XML **format**

```
<DescribeTagsResponse>
  <RequestId>B04B8CF3-4489-432D-83BA-6F128E4F2295</RequestId>
  <PageNumber>1</PageNumber>
  <PageSize>50</PageSize>
  <Tags>
    <Tag>
      <TagKey>test</TagKey>
      <TagValue>api</TagValue>
    </Tag>
  </Tags>
  <TotalCount>1</TotalCount>
</DescribeTagsResponse>
```

JSON **format**

```
{
  "PageNumber": 1,
  "PageSize": 50,
  "RequestId": "B04B8CF3-4489-432D-83BA-6F128E4F2295",
  "Tags": {
    "Tag": [
      {
        "TagKey": "test",
        "TagValue": "api"
      }
    ]
  },
  "TotalCount": 1
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter does not exist.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags exceeds the upper limit.
400	InvalidTagKey.Malformed	The parameter Tag.n.Key is illegal.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The parameter Tag.n.Value is illegal.	The error message returned because the specified Tag.N.Value parameter is invalid.

5.1.18.4. TagResources

You can call this operation to create and bind tags to specified ECS resources.

Description

Before you bind tags to a resource, the system checks the number of existing tags on the resource. An error message is returned if the maximum number of tags is reached.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	TagResources	The operation that you want to perform. Set the value to TagResources.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the resource. You can call the DescribeRegions operation to query the most recent region list.
ResourceId.N	RepeatList	Yes	i-bp67acfmxazb4ph***	The IDs of resources. Valid values of N: 1 to 50.
ResourceType	String	Yes	instance	The type of the resource. Valid values: - instance: ECS instance - disk: disk - snapshot: snapshot - image: image - securitygroup: security group - volume: storage volume - eni: elastic network interface (ENI) - ddh: dedicated host - keypair: SSH key pair
Tag.N.Key	String	No	Test	The key of tag N to be bound to the resource. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.
Tag.N.Value	String	No	Test	The value of tag N to be bound to the resource. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length. It cannot start with acs: or contain http:// or https://.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=TagResources
&RegionId=cn-qingdao-env17-d01
&ResourceId.1=i-bp1j6qtvdm8w0z1o0****
&ResourceId.2=i-bp1j6qtvdm8w0z1oP****
&ResourceType=instance
&Tag.1.Key=Test
&<Common request parameters>
```

Sample success responses

XML format

```
<TagResourcesResponse>
  <RequestId>C46FF5A8-C5F0-4024-8262-B16B639225A0</RequestId>
</TagResourcesResponse>
```

JSON format

```
{
  "RequestId": "C46FF5A8-C5F0-4024-8262-B16B639225A0"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	%s	The error message returned because the specified RegionId parameter does not exist.
404	MissingParameter.TagOwnerId	The parameter - TagOwnerId should not be null	The error message returned because the TagOwnerId parameter is not specified.
404	MissingParameter.TagOwnerBid	The parameter - TagOwnerBid should not be null	The error message returned because the TagOwnerBid parameter is not specified.
404	MissingParameter.ResourceType	The parameter - ResourceType should not be null	The error message returned because the ResourceType parameter is not specified.
404	MissingParameter.Tags	The parameter - Tags should not be null	The error message returned because the tag-related parameters are not specified.

HTTP status code	Error code	Error message	Description
404	MissingParameter.RegionId	The parameter - RegionId should not be null	The error message returned because the RegionId parameter is not specified.
403	PermissionDenied.TagOwnerId	The specified operator not have permission to set TagOwnerId value.	The error message returned because you are not authorized to set the owner of the tag.
403	PermissionDenied.Scope	The specified operator not have permission to set Scope value.	The error message returned because the specified operator is not authorized to specify the Scope parameter.
400	NumberExceed.ResourceIds	The ResourceIds parameter's number is exceed , Valid : 50	The error message returned because more than 50 resource IDs are specified in the ResourceId.N parameter.
400	NumberExceed.Tags	The Tags parameter's number is exceed , Valid : 20	The error message returned because more than 20 tags are specified.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
404	InvalidResourceId.NotFound	The specified ResourceIds are not found in our records.	The error message returned because the specified ResourceId parameter does not exist.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter does not exist.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	OperationDenied.QuotaExceed	The quota of tags on resource is beyond permitted range.	The error message returned because the maximum number of tags that can be bound to the resource has been reached.

HTTP status code	Error code	Error message	Description
403	InvalidResourceId.NotSupported	The specified ResourceId does not support tagging.	The error message returned because the specified resource does not support tagging.
400	InvalidTag.Mismatch	The specified Tag.N.Key and Tag.N.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not match.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags exceeds the upper limit.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	Invalid.Scope	The specified scope is invalid.	The error message returned because the specified scope is invalid.
403	NoPermission.Tag	The operator is not permission for the tag.	The error message returned because you are not authorized to manage the resource tag.
403	QuotaExceed.Tags	%s	The error message returned because the number of tags has reached the quota.

5.1.18.5. ListTagResources

Queries the tags that are added to one or more Elastic Compute Service (ECS) resources and these ECS resources.

Description

- You must specify at least one of the following parameters or parameter pairs in the request to determine a query object: the `ResourceId.N` parameter, the `Tag.N` parameter pair (`Tag.N.Key` and `Tag.N.Value`), and the `TagFilter.N` parameter pair (`TagFilter.N.TagKey` and `TagFilter.N.TagValues.N`).
- If one of the following sets of request parameters is specified as filter conditions, the response contains only ECS resources that meet all these filter conditions:
 - Set 1: `Tag.N.Key`, `Tag.N.Value` , and `ResourceId.N`
 - Set 2: `TagFilter.N.TagKey` and `TagFilter.N.TagValues.N` , and `ResourceId.N`

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListTagResources	The operation that you want to perform. Set the value to ListTagResources.
RegionId	String	Yes	cn-qingdao-env17-d01	The ID of the region to which the resource belongs. You can call the DescribeRegions operation to query the most recent region list.
ResourceType	String	Yes	instance	The type of the resource. Valid values: - instance: ECS instance - disk: Elastic Block Storage device - snapshot: snapshot - image: image - securitygroup: security group - volume: storage volume - eni: elastic network interface (ENI) - ddh: dedicated host - keypair: SSH key pair
				The key of tag N used for fuzzy search of ECS resources. The tag key must be 1 to 128 characters in length. Valid values of N: 1 to 5. The <code>TagFilter.N</code> parameter pair (<code>TagFilter.N.TagKey</code> and <code>TagFilter.N.TagValues.N</code>) is used for fuzzy search of ECS resources that have specified tags added. In the specified tags, a single tag key may correspond to one or more tag values. Fuzzy search may have a latency of 2 seconds. A fuzzy search can return a result set of up to 5,000 resources. - When you use <code>TagFilter.N.TagKey</code> for fuzzy search of ECS resources, you must leave <code>TagFilter.N.TagValues.N</code> empty. For example, to query ECS resources that have the tag with the <code>environment</code> tag key added, you can set <code>TagFilter.1.TagKey</code> to <code>env</code>, but you must leave <code>TagFilter.1.TagValues</code> empty. - When you use <code>TagFilter.N.TagVa</code>

Parameter	Type	Required	Example	Description
<code>TagFilter.N.TagKey</code>	String	Yes	<code>env</code>	For fuzzy search of ECS resources, you must set <code>TagFilter.N.TagKey</code> to an exact value. For example, to query ECS resources that have a tag consisting of the <code>env</code> tag key and the <code>product</code> tag value, you must set <code>TagFilter.1.TagKey</code> to <code>env</code> and can set <code>TagFilter.1.TagValues.1</code> to <code>product</code>. - If you specify multiple tag keys, only the ECS resources whose tags contain all the specified tag keys are returned. - If you specify a tag key that corresponds to multiple tag values, all the ECS resources that have one or more of these tag key-value pairs added are returned. Note The <code>TagFilter.N</code> parameter pair (<code>TagFilter.N.TagKey</code> and <code>TagFilter.N.TagValues.N</code>) cannot be used together with the <code>Tag.N</code> parameter pair (<code>Tag.N.Key</code> and <code>Tag.N.Value</code>). Otherwise, an error message is returned.
<code>ResourceId.N</code>	RepeatList	No	<code>i-bp1j6qtdm8w0z1o0***</code>	The ID of resource N. Valid values of N: 1 to 50.

Parameter	Type	Required	Example	Description
Tag.N.Key	String	No	FinanceDeptKey	The key of tag N used for exact search of ECS resources. The tag key must be 1 to 128 characters in length. Valid values of N: 1 to 20. The <code>Tag.N</code> parameter pair (Tag.N.Key and Tag.N.Value) is used for exact search of ECS resources that have specified tags added. Each tag is a key-value pair. • If you specify only <code>Tag.N.Key</code>, all ECS resources whose tags contain the specified tag key are returned. • If you specify only <code>Tag.N.Value</code>, the <code>InvalidParameter.TagValue</code> error is returned. • If you specify multiple tag key-value pairs, only the ECS resources that have all these tag key-value pairs added are returned.
Tag.N.Value	String	No	FinanceDeptValue	The value of tag N used for exact search of ECS resources. The tag value must be 1 to 128 characters in length. Valid values of N: 1 to 20.
TagFilter.N.TagValues.N	RepeatList	No	product	The value of tag N used for fuzzy search of ECS resources. The tag value must be 1 to 128 characters in length. Valid values of N: 1 to 5.
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the next query.

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the next query.
RequestId	String	484256DA-D816-44D2-9D86-B6EE4D5BA78C	The ID of the request.

Parameter	Type	Example	Description
TagResources	Array of TagResource		Details about resources and tags, including resource IDs, resource types, and tag key-value pairs.
TagResource			
ResourceId	String	i-bp1j6qtvdm8w0z1o0***	The ID of the resource.
ResourceType	String	instance	The type of the resource.
TagKey	String	FinanceDeptKey	The tag key of the resource.
TagValue	String	FinanceDeptValue	The tag value of the resource.

Example

Sample requests

```
https://ecs.example.com/?Action=ListTagResources
&RegionId=cn-qingdao-env17-d01
&ResourceType=instance
&ResourceId.1=i-bp1j6qtvdm8w0z1o0***
&<Common request parameters>
```

Sample success responses

XML format

```
<ListTagResourcesResponse>
  <TagResources>
    <TagResource>
      <ResourceType>instance</ResourceType>
      <TagValue>FinanceTagValue</TagValue>
      <ResourceId>i-bp1j6qtvdm8w0z1o0***</ResourceId>
      <TagKey>FinanceTagKey</TagKey>
    </TagResource>
  </TagResources>
  <RequestId>DE65F6B7-7566-4802-9007-96F2494AC5XX</RequestId>
</ListTagResourcesResponse>
```

JSON format

```

{
  "TagResources": {
    "TagResource": [
      {
        "ResourceType": "instance",
        "TagValue": "FinanceTagValue",
        "ResourceId": "i-bp1j6qtdm8w0z1o0***",
        "TagKey": "FinanceTagKey"
      }
    ]
  },
  "RequestId": "DE65F6B7-7566-4802-9007-96F2494AC512"
}

```

Error codes

HTTP status code	Error codes	Error message	Description
404	InvalidRegionId.NotFound	%s	The error message returned because the specified RegionId parameter does not exist.
404	MissingParameter.TagOwnerId	The parameter - TagOwnerId should not be null	The error message returned because the TagOwnerId parameter is not specified.
404	MissingParameter.TagOwnerBid	The parameter - TagOwnerBid should not be null	The error message returned because the TagOwnerBid parameter is not specified.
404	MissingParameter.ResourceType	The parameter - ResourceType should not be null	The error message returned because the ResourceType parameter is not specified.
404	MissingParameter.Tags	The parameter - Tags should not be null	The error message returned because the tag-related parameters are not specified.
404	MissingParameter.RegionId	The parameter - RegionId should not be null	The error message returned because the RegionId parameter is not specified.
403	PermissionDenied.TagOwnerId	The specified operator not have permission to set TagOwnerId value.	The error message returned because you are not authorized to set the owner of the tag.
403	PermissionDenied.Scope	The specified operator not have permission to set Scope value.	The error message returned because you are not authorized to specify the Scope parameter.

HTTP status code	Error codes	Error message	Description
400	NumberExceed.ResourceIds	The ResourceIds parameter's number is exceed , Valid : 50	The error message returned because more than 50 resource IDs are specified.
400	NumberExceed.Tags	The Tags parameter's number is exceed , Valid : 20	The error message returned because more than 20 tags are specified.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
404	InvalidResourceId.NotFound	The specified ResourceIds are not found in our records.	The error message returned because the specified ResourceId parameter does not exist. Check whether the resource ID is correct.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter does not exist.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	OperationDenied.QuotaExceed	The quota of tags on resource is beyond permitted range.	The error message returned because the maximum number of tags that can be added to the resource has been reached.
403	InvalidResourceId.NotSupported	The specified ResourceId does not support tagging.	The error message returned because the specified resource does not support tags.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not correspond to each other.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags has reached the upper limit.

HTTP status code	Error codes	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	Invalid.Scope	The specified scope is invalid.	The error message returned because the specified Scope parameter is invalid.
403	NoPermission.Tag	The operator is not permission for the tag.	The error message returned because you are not authorized to manage the tag.

5.1.18.6. UntagResources

You can call this operation to unbind tags from specified ECS resources. After a tag is unbound from a resource, it is automatically deleted if it is not bound to any other resources.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UntagResources	The operation that you want to perform. Set the value to UntagResources.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the resource. You can call the DescribeRegions operation to query the most recent region list.
ResourceIds.N	RepeatList	Yes	i-bp67acfmxazb4ph***	The IDs of resources. Valid values of N: 1 to 50.

Parameter	Type	Required	Example	Description
ResourceType	String	Yes	instance	The type of the resource. Valid values: - instance: ECS instance - disk: disk - snapshot: snapshot - image: image - securitygroup: security group - volume: storage volume - eni: elastic network interface (ENI) - ddh: dedicated host - keypair: SSH key pair - launchtemplate: launch template
TagKey.N	RepeatList	No	FinanceDept	The key of tag N bound to the resource. Valid values of N: 1 to 20.
All	Boolean	No	false	Specifies whether to unbind all tags from the resource. This parameter takes effect only when the TagKey.N parameter is not specified. Valid values: - true - false Default value: false

Response parameters

Parameter	Type	Example	Description
RequestId	String	C46FF5A8-C5F0-4024-8262-B16B639225A0	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=UntagResources
&RegionId=cn-qingdao-env17-d01
&ResourceType=instance
&ResourceId.1=i-bp1j6qtvdm8w0z1o0***
&TagKey.1=FinanceDept
&<Common request parameters>
```

Sample success responses

XML format

```
<UntagResourcesResponse>
  <RequestId>C46FF5A8-C5F0-4024-8262-B16B639225A0</RequestId>
</UntagResourcesResponse>
```

JSON format

```
{
  "RequestId": "C46FF5A8-C5F0-4024-8262-B16B639225A0"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	%s	The error message returned because the specified RegionId parameter does not exist.
404	MissingParameter.TagOwnerId	The parameter - TagOwnerId should not be null	The error message returned because the TagOwnerId parameter is not specified.
404	MissingParameter.TagOwnerBid	The parameter - TagOwnerBid should not be null	The error message returned because the TagOwnerBid parameter is not specified.
404	MissingParameter.ResourceType	The parameter - ResourceType should not be null	The error message returned because the ResourceType parameter is not specified.
404	MissingParameter.Tags	The parameter - Tags should not be null	The error message returned because the tag-related parameters are not specified.
404	MissingParameter.RegionId	The parameter - RegionId should not be null	The error message returned because the RegionId parameter is not specified.
403	PermissionDenied.TagOwnerId	The specified operator not have permission to set TagOwnerId value.	The error message returned because you are not authorized to set the owner of the tag.
403	PermissionDenied.Scope	The specified operator not have permission to set Scope value.	The error message returned because the specified operator is not authorized to specify the Scope parameter.

HTTP status code	Error code	Error message	Description
400	NumberExceed.ResourceIds	The ResourceIds parameter's number is exceed , Valid : 50	The error message returned because more than 50 resource IDs are specified in the ResourceId.N parameter.
400	NumberExceed.Tags	The Tags parameter's number is exceed , Valid : 20	The error message returned because more than 20 tags are specified.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
404	InvalidResourceId.NotFound	The specified ResourceIds are not found in our records.	The error message returned because the specified ResourceId.N parameter does not exist.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter does not exist.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	OperationDenied.QuotaExceed	The quota of tags on resource is beyond permitted range.	The error message returned because the maximum number of tags that can be bound to the resource has been reached.
403	InvalidResourceId.NotSupported	The specified ResourceId does not support tagging.	The error message returned because the specified resource does not support tagging.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not match.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags exceeds the upper limit.

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	Invalid.Scope	The specified scope is invalid.	The error message returned because the specified scope is invalid.
403	NoPermission.Tag	The operator is not permission for the tag.	The error message returned because you are not authorized to manage the resource tag.

5.1.19. Other operations

5.1.19.1. DescribeTasks

You can call this operation to query the progress of one or more asynchronous tasks.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeTasks	The operation that you want to perform. Set the value to DescribeTasks.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the task. You can call the DescribeRegions operation to query the most recent region list.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	2	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10.
TaskIds	String	No	t-bp1hvgwromzv32iq****,t-bp179lofu2pv768w****	The IDs of tasks. You can specify up to 100 task IDs at a time. Separate multiple tasks IDs with commas (,).

Parameter	Type	Required	Example	Description
TaskAction	String	No	ImportImage	The name of the operation to which the task corresponds. Valid values: - ImportImage - ExportImage
TaskStatus	String	No	Finished	The status of the task. Valid values: - Finished - Processing - Pending - Deleted - Paused This parameter is empty by default.
StartTime	String	No	2015-11-23T15:10:00Z	The beginning of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
EndTime	String	No	2015-11-23T15:16:00Z	The end of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	2	The number of entries returned per page.
RegionId	String	cn-qingdao-env17-d01	The region ID of the task.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TaskSet	Array of Task		Details about the tasks.

Parameter	Type	Example	Description
Task			
CreationTime	String	2015-11-24T12:50Z	The time when the task was created.
FinishedTime	String	2015-11-24T12:50Z	The time when the task was completed.
SupportCancel	String	true	Indicates whether the task can be canceled.
TaskAction	String	IMPORT_IMAGE	The name of the task.
TaskId	String	t-bp1hvgwromzv32iq****	The ID of the task.
TaskStatus	String	Finished	The status of the task.
TotalCount	Integer	2	The total number of entries returned.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeTasks
&RegionId=cn-qingdao-env17-d01
&PageNumber=1
&PageSize=2
&TaskIds=t-bp1hvgwromzv32iq****
&TaskAction=ImportImage
&TaskStatus=Finished
&StartTime=2015-11-23T15:10:00Z
&EndTime=2015-11-23T15:16:00Z
&<Common request parameters>
```

Sample success responses

`XML` format


```
<DescribeTasksResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>2</TotalCount>
  <PageSize>2</PageSize>
  <RegionId>cn-qingdao-env17-d01</RegionId>
  <RequestId>E5C82807-5588-4661-9A96-350B206A7623</RequestId>
  <TaskSet>
    <Task>
      <CreationTime>2015-11-24T12:50Z</CreationTime>
      <FinishedTime>2015-11-24T12:50Z</FinishedTime>
      <SupportCancel>true</SupportCancel>
      <TaskAction>IMPORT_IMAGE</TaskAction>
      <TaskStatus>Finished</TaskStatus>
      <TaskId>t-bplhvgwromzv32iq****</TaskId>
    </Task>
    <Task>
      <CreationTime>2015-11-23T15:10Z</CreationTime>
      <FinishedTime>2015-11-23T15:16Z</FinishedTime>
      <SupportCancel>true</SupportCancel>
      <TaskAction>IMPORT_IMAGE</TaskAction>
      <TaskStatus>Finished</TaskStatus>
      <TaskId>t-bp179lofu2pv768w****</TaskId>
    </Task>
  </TaskSet>
</DescribeTasksResponse>
```

JSON **format**

```
{
  "PageNumber": 1,
  "TotalCount": 2,
  "PageSize": 2,
  "RegionId": "cn-qingdao-env17-d01",
  "TaskSet": [
    {
      "Task": [
        {
          "CreationTime": "2015-11-24T12:50Z",
          "FinishedTime": "2015-11-24T12:50Z",
          "SupportCancel": true,
          "TaskAction": "ImportImage",
          "TaskStatus": "Finished",
          "TaskId": "t-bp1hvgwromzv32iq****"
        },
        {
          "CreationTime": "2015-11-23T15:10Z",
          "FinishedTime": "2015-11-23T15:16Z",
          "SupportCancel": true,
          "TaskAction": "ImportImage",
          "TaskStatus": "Finished",
          "TaskId": "t-bp179lofu2pv768w****"
        }
      ]
    }
  ],
  "RequestId": "F746C690-D9EA-4F87-AF31-8E1910FAB541"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	An input parameter "RegionId" that is mandatory for processing the request is not supplied.	The error message returned because the RegionId parameter is not specified.
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.

5.1.19.2. DescribeTaskAttribute

You can call this operation to query the details about an asynchronous task.

This operation support the following asynchronous task types:

- Image import (ImportImage)
- Image export (ExportImage)

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeTaskAttribute	The operation that you want to perform. Set the value to DescribeTaskAttribute.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the task. You can call the DescribeRegions operation to query the most recent region list.
TaskId	String	Yes	t-taskid	The ID of the task. You can call the DescribeTasks operation to query the list of task IDs.

Response parameters

Parameter	Type	Example	Description
CreationTime	String	2015-11-23T02:13Z	The time when the task was created.
FailedCount	Integer	0	The number of failed tasks.
FinishedTime	String	2015-11-23T02:19Z	The time when the task was completed.
OperationProgressSet	Array		The collection of task-related data such as the status and information of each subtask.
OperationProgress			
ErrorCode	String	ParameterInvalid	The error code.
ErrorMsg	String	The specified RegionId parameter is invalid.	The error message.
OperationStatus	String	Success	The status of the operation.
RelatedItemSet	Array		The collection of related items.
RelatedItem			

Parameter	Type	Example	Description
Name	String	OSSObject	The name of the related item.
Value	String	MYOSSPRE_m-23f8tcp***_t-23ym6mv***.vhd	The value of the related item.
RegionId	String	cn-qingdao-env17-d01	The ID of the region.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SuccessCount	Integer	1	The number of completed tasks.
SupportCancel	String	true	Indicates whether the task can be canceled. Valid values: - true: The task can be canceled. - false: The task cannot be canceled.
TaskAction	String	ExportImage	The operation name of the task.
TaskId	String	t-taskid	The ID of the task.
TaskProcess	String	100%	The progress of the task.
TaskStatus	String	Finished	The status of the task.
TotalCount	Integer	1	The total number of tasks.

Examples

Sample requests

```
https://ecs.example.com/?Action=DescribeTaskAttribute
&RegionId=cn-qingdao-env17-d01
&TaskId=t-taskid
&<Common request parameters>
```

Sample success responses

`XML` format

```

<DescribeTaskAttributeResponse>
  <CreationTime>2015-11-23T02:13Z</CreationTime>
  <OperationProgressSet>
    <OperationProgress>
      <RelatedItemSet>
        <RelatedItem>
          <Name>OSSBucket</Name>
          <Value>image-temp</Value>
        </RelatedItem>
        <RelatedItem>
          <Name>OSSObject</Name>
          <Value>MYOSSPRE_m-23f8tcp***_t-23ym6mv***.vhd</Value>
        </RelatedItem>
        <RelatedItem>
          <Name>ImageFormat</Name>
          <Value>vhd</Value>
        </RelatedItem>
      </RelatedItemSet>
      <ErrorMsg></ErrorMsg>
      <ErrorCode></ErrorCode>
      <OperationStatus>Success</OperationStatus>
    </OperationProgress>
  </OperationProgressSet>
  <FinishedTime>2015-11-23T02:19Z</FinishedTime>
  <FailedCount>0</FailedCount>
  <SupportCancel>true</SupportCancel>
  <TotalCount>1</TotalCount>
  <SuccessCount>1</SuccessCount>
  <RequestId>EF0C5969-279B-49C8-AD83-BACCC74DD38C</RequestId>
  <RegionId>cn-qingdao-env17-d01</RegionId>
  <TaskAction>ExportImage</TaskAction>
  <TaskStatus>Finished</TaskStatus>
  <TaskProcess>100%</TaskProcess>
  <TaskId>t-23ym6mv***</TaskId>
</DescribeTaskAttributeResponse>

```

JSON **format**

```

{
  "CreationTime": "2015-11-23T02:13Z",
  "OperationProgressSet": {
    "OperationProgress": [
      {
        "RelatedItemSet": {
          "RelatedItem": [
            {
              "Name": "OSSBucket",
              "Value": "image-temp"
            },
            {
              "Name": "OSSObject",
              "Value": "MYOSSPRE_m-23f8tcp***_t-23ym6mv***.vhd"
            },
            {
              "Name": "ImageFormat",
              "Value": "vhd"
            }
          ]
        },
        "ErrorMsg": "",
        "ErrorCode": "",
        "OperationStatus": "Success"
      }
    ]
  },
  "FinishedTime": "2015-11-23T02:19Z",
  "FailedCount": 0,
  "SupportCancel": true,
  "TotalCount": 1,
  "SuccessCount": 1,
  "RequestId": "4BE2C7FE-C7A4-4675-A153-174E032AABFB",
  "RegionId": "cn-qingdao-env17-d01",
  "TaskAction": "ExportImage",
  "TaskStatus": "Finished",
  "TaskProcess": "100%",
  "TaskId": "t-23ym6mv***"
}

```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.

HTTP status code	Error code	Error message	Description
400	MissingParameter	An input parameter "RegionId" that is mandatory for processing the request is not supplied.	The error message returned because the RegionId parameter is not specified.
400	MissingParameter	An input parameter "TaskId" that is mandatory for processing the request is not supplied.	The error message returned because the TaskId parameter is not specified.
400	InvalidTaskId.NotFound	The specified "TaskId" is not found.	The error message returned because the specified TaskId parameter does not exist.

5.1.19.3. CancelTask

You can call this operation to cancel a running task.

Description

You can call this operation to cancel the following tasks:

- Image import (ImportImage)
- Image export (ExportImage)

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CancelTask	The operation that you want to perform. Set the value to CancelTask.
RegionId	String	Yes	cn-qingdao-env17-d01	The region ID of the task. You can call the DescribeRegions operation to query the most recent region list.
TaskId	String	Yes	t-23ym6****	The ID of the task. You can call the DescribeTasks operation to query the list of task IDs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=CancelTask
&RegionId=cn-qingdao-env17-d01
&TaskId=t-23ym6mv****
&<Common request parameters>
```

Sample success responses

XML **format**

```
<CancelTaskResponse>
  <RequestId>4BE2C7FE-C7A4-4675-A153-174E032AABFB</RequestId>
</CancelTaskResponse>
```

JSON **format**

```
{
  "RequestId": "4BE2C7FE-C7A4-4675-A153-174E032AABFB"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	An input parameter "RegionId" that is mandatory for processing the request is not supplied.	The error message returned because the RegionId parameter is not specified.
400	MissingParameter	An input parameter "TaskId" that is mandatory for processing the request is not supplied.	The error message returned because the TaskId parameter is not specified.
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	InvalidTaskId.NotFound	The specified "TaskId" is not found.	The error message returned because the specified TaskId parameter does not exist.
403	InvalidTaskId.TaskActionNotSupport	The specified task action not support.	The error message returned because the specified task operation is not supported.
403	InvalidTaskId.IncorrectTaskStatus	The specified task status is not invalid.	The error message returned because the status of the specified task is invalid.

HTTP status code	Error code	Error message	Description
403	CancelTaskFailed	The task is failed to cancel, Please contact the administrator.	The error message returned because the task cannot be canceled. Contact the administrator.

5.1.19.4. JoinResourceGroup

You can call this operation to add an ECS resource or service to a resource group.

Description

A resource is a cloud service entity created in Apsara Stack, such as an ECS instance, elastic network interface (ENI), or ECS image. A resource group is a collection of infrastructure for projects, environments, or stacks. In a resource group, you can manage resources and monitor and run tasks in a centralized manner without switching between Apsara Stack services.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	JoinResourceGroup	The operation that you want to perform. Set the value to JoinResourceGroup.
ResourceType	String	No	securitygroup	The type of the ECS resource. Valid values: - instance: instance - disk: Block Storage device - snapshot: snapshot - image: image - securitygroup: security group - ddh: dedicated host - eni: elastic network interface (ENI) - keypair: SSH key pair - launchtemplate: launch template These values are case-sensitive.
ResourceId	String	No	sg-bp67acfmxazb4p h***	The ID of the resource. This parameter depends on ResourceType. For example, when ResourceType is set to instance, ResourceId can be interpreted as InstanceId.

Parameter	Type	Required	Example	Description
RegionId	String	No	cn-qingdao-env17-d01	The region ID of the ECS resource. You can call the DescribeRegions operation to query the most recent region list.
ResourceGroupId	String	No	rg-bp67acfmxazb4ph***	The ID of the resource group to which to add the resource.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.example.com/?Action=JoinResourceGroup
&RegionId=cn-qingdao-env17-d01
&ResourceType=securitygroup
&ResourceId=sg-bp67acfmxazb4ph***
&ResourceGroupId=rg-bp67acfmxazb4ph***
&<Common request parameters>
```

Sample success responses

XML format

```
<JoinResourceGroupResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</JoinResourceGroupResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	MissingParameter	The input parameter "ResourceId" that is mandatory for processing this request is not supplied.	The error message returned because the ResourceId parameter is not specified.
403	MissingParameter	The input parameter "ResourceGroupId" that is mandatory for processing this request is not supplied.	The error message returned because the ResourceGroupId parameter is not specified.
403	MissingParameter	The input parameter "RegionId" that is mandatory for processing this request is not supplied.	The error message returned because the RegionId parameter is not specified.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter does not exist.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.
404	InvalidResourceId.NotFound	The ResourceId provided does not exist in our records.	The error message returned because the specified ResourceId parameter does not exist.
403	InvalidResourceGroup.Duplicate	The ResourceId provided has a ResourceGroup in our records.	The error message returned because the specified resource has already been added to another resource group.

5.1.20. Appendix

5.1.20.1. Glossary

This topic describes the terms that you may encounter in ECS API operations.

Terms

Description

Term	Definition	Description
Instance	ECS instance, instance for short	An ECS instance is a virtual computer that is emulated on a physical server.

Term	Definition	Description
Region	Region	A region is the geographic location where resources are located. Each region contains a group of zones.
Zone	Zone	A zone is a physical area that operates an independent network and has its own power supply. The network latency is shorter for communication between ECS instances in the same zone. Zones within the same region can access each other, but faults which occur in one zone are isolated from other zones.
Image	Image file, image for short	An image file contains data for an operating system and applications. You can select an image to initialize an ECS instance. Before you create an instance, ensure that available images exist. All of the system disk contents of a newly created instance, including its OS and software configurations, are copied from the image. To create instances of different operating systems, you must select different image files.
Disk	Disk	A disk is the storage device used by an instance.
Snapshot	Snapshot	A snapshot is a backup copy of data on a disk for a certain point in time. A snapshot can be used to restore disk data and create custom images.
IP	IP address	A public IP address on the Internet.
SecurityGroup	Security group	A security group is a group of instances to which a set of security policies will be applied to. An instance must belong to at least one security group. The security policies of a security group apply to all instances in the group.
CIDR	Classless Inter-Domain Routing (CIDR)	CIDR is an Internet address allocation scheme. Compared with the Class A, B, and C addressing schemes, CIDR is much more efficient. For example, to convert the IP address segment 125.203.96.0 - 125.203.127.255 into CIDR format, find the same first 19 bits: 125.203.0110 0000.0000 0000 to 125.203.0111 1111.1111 1111, which can be represented in 125.203.96.0/19.

Limits

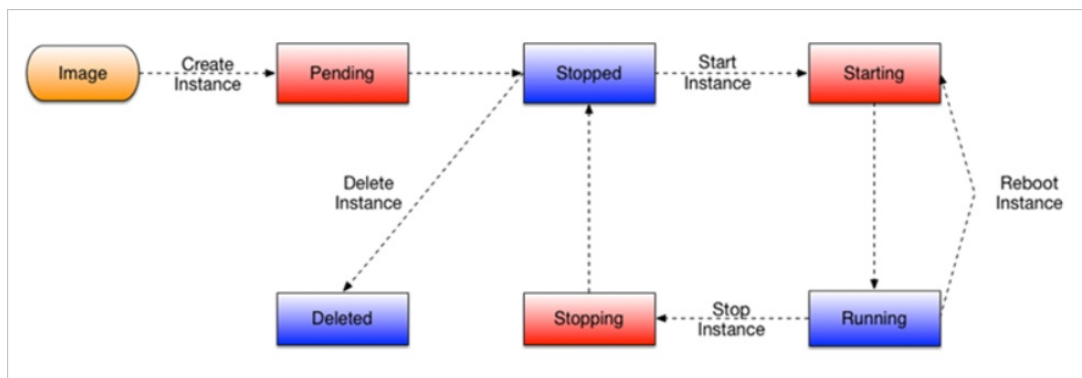
- In ECS, the number of instances, security groups, and other resources that can be used by each user is limited.
- Specifications such as the instance type, number of disks that can be mounted on each instance, disk capacity, and number of disk snapshots are also limited.

5.1.20.2. Instance statuses

Statuses

Status	Description
Pending	The instance is being created.
Stopped	The instance is stopped.
Starting	The instance is starting.
Running	The instance is running.
Stopping	The instance is being stopped.

Instance state diagram



5.1.20.3. Common errors

Error codes

Error code	HTTP status code	Error message
IdempotentParameterMismatch	400	The request is retried with updated parameters.
IllegalTimestamp	400	The input parameter "Timestamp" that is mandatory for processing this request is not supplied.
IncompleteSignature	400	The request signature does not conform to Aliyun standards.
InvalidAccessKeyId.NotFound	400	The Access Key ID provided does not exist in our records.
InvalidOwner	400	OwnerId and OwnerAccount can't be used at one API access.
InvalidOwnerId	400	The specified OwnerId is not valid.
InvalidOwnerAccount	400	The specified OwnerAccount is not valid.

Error code	HTTP status code	Error message
InvalidParamater	400	The specified parameter "SignatureMethod" is not valid.
InvalidParamater	400	The specified parameter "SignatureVersion" is not valid.
InvalidParameter	400	The specified parameter "Action or Version" is not valid.
InvalidParameter	400	The specified parameter is not valid.
InvalidParameter.IsNull	400	The required parameter must be not null.
MissingParameter	400	The input parameter "Action" that is mandatory for processing this request is not supplied.
MissingParameter	400	The input parameter "AccessKeyId" that is mandatory for processing this request is not supplied.
MissingParameter	400	An input parameter "Signature" that is mandatory for processing the request is not supplied.
MissingParameter	400	The input parameter "Timestamp" that is mandatory for processing this request is not supplied. supplied.
MissingParameter	400	The input parameter "Version" that is mandatory for processing this request is not supplied.
SignatureNonceUsed	400	The request signature nonce has been used.
Throttling	400	You have made too many requests within a short time; your request is denied due to request throttling.
UnsupportedParameter	400	The parameter is unsupported.
UnknownError	400	The request processing has failed due to some unknown error.
Forbidden.AccessKeyDisabled	403	The Access Key is disabled.
Forbidden.NotSupportRAM	403	This action does not support accessed by RAM mode.
Forbidden.RAM	403	User not authorized to operate the specified resource, or this API doesn't support RAM.

Error code	HTTP status code	Error message
Forbidden.RiskControl	403	This operation is forbidden by Aliyun Risk Control system.
Forbidden.SubUser	403	The specified action is not available for you.
Forbidden.Unauthorized	403	User not authorized to operate on the specified resource.
InvalidAccount.NotFound	403	The specified Account does not exist.
InvalidAction	403	The specified action is not valid.
InvalidIdempotenceParameter.Mismatch	403	The specified parameters are different from before.
InvalidParameter.OwnerAccount	403	OwnerAccount is Invalid.
InvalidParameter.ResourceOwnerAccount	403	ResourceOwnerAccount is Invalid.
LastTokenProcessing	403	The last token request is processing.
MissingParameter	403	The input parameter OwnerId, OwnerAccount that is mandatory for processing this request is not supplied.
RealNameAuthenticationError	403	Your account has not passed the real-name authentication yet.
UnsupportedHTTPMethod	403	This http method is not supported.
InvalidDiskId.NotFound	404	The specified DiskId does not exist.
InvalidImageId.NotFound	404	The specified ImageId does not exist.
InvalidInstanceId.NotFound	404	The specified InstanceId does not exist.
InvalidRegionId.NotFound	404	The specified RegionId does not exist.
InvalidSecurityGroupId.NotFound	404	The specified SecurityGroupId does not exist.
InvalidSnapshotId.NotFound	404	The specified SnapshotId does not exist.
OperationConflict	409	Request was denied due to conflict with a previous request.
InternalError	500	The request processing has failed due to some unknown error, exception or failure.
ServiceUnavailable	500	The request has failed due to a temporary failure of the server.

Error code	HTTP status code	Error message
ServiceUnavailable.RegionMaintaining	503	System maintenance is in progress on the selected region, please wait a few minutes before trying again.

5.1.20.4. Disk categories

Disk types

Disk type	Category	Maximum capacity of a disk
Basic disk	cloud	2,000 GiB
Ultra disk	cloud_efficiency	32,768 GiB
SSD disk	cloud_ssd	32,768 GiB

5.1.20.5. How to ensure idempotency

If a request timeout or internal server error occurs when you call `CreateInstance` to create an ECS instance, the client may attempt to resend the request. You can specify the `ClientToken` parameter to prevent the server from creating redundant instances in these cases. The `ClientToken` parameter ensures idempotency of the request.

A `ClientToken` is a unique and case-sensitive string generated by the client. It cannot exceed 64 ASCII characters in length.

If you use the same `ClientToken` for multiple `CreateInstance` operations, the server will return identical responses that contain the same `InstanceId` parameter. Therefore, if an error occurs during an instance creation request, you can retry the creation request using the same `ClientToken` as the failed request. This ensures that only one ECS instance is created and that it is assigned to a specific `InstanceId`.

If you specify a `ClientToken` that is in use with different request parameters than previously used, ECS will return the `IdempotentParameterMismatch` error code. You must change the `SignatureNonce`, `Timestamp`, and `Signature` values when calling the operation again. This is because ECS uses `SignatureNonce` to prevent replay attacks and `Timestamp` to mark the time of each request. Each new request must have different `SignatureNonce` and `Timestamp` values, which changes the `Signature` value.

Typically, if a 500 (`InternalServerError`) or 503 (`ServiceUnavailable`) error code is returned or no responses are returned, you must retry operations. If an operation is retried after a response code of 200 is returned, an identical response will be returned but the server status will not be affected. If a 4xx error code is returned and *try it later* does not appear in the error message, attempts to retry the operation will fail.

5.1.20.6. API behavior when an instance is locked for security reasons

When `OperationLocks` in the `DescribeInstances` response contains `LockReason: security` for an instance, the instance is locked for security reasons.

If a disk on the instance is in the `In_use` state, the behavior of API operations related to the disk is subject to the `OperationLocks` settings of the instance. If the disk is in other states, the `OperationLocks` settings can be ignored.

Operations and behavior

Operation	Behavior
<code>AttachDisk</code>	Returns an error.
<code>AuthorizeSecurityGroup</code>	Is called and returns a response based on its normal logic.
<code>CreateDisk</code>	Is called and returns a response based on its normal logic.
<code>CreateImage</code>	Is called and returns a response based on its normal logic.
<code>CreateInstance</code>	-
<code>CreateSecurityGroup</code>	Is called and returns a response based on its normal logic.
<code>CreateSnapshot</code>	Returns an error when the disk is attached to the current instance and is in the <code>In_use</code> state.
<code>DeleteDisk</code>	Is called and returns a response based on its normal logic.
<code>DeleteImage</code>	Is called and returns a response based on its normal logic.
<code>DeleteInstance</code>	Is called and returns a response based on its normal logic.
<code>DeleteSecurityGroup</code>	Is called and returns a response based on its normal logic.
<code>DeleteSnapshot</code>	Is called and returns a response based on its normal logic.
<code>DescribeAutoSnapshotPolicy</code>	Is called and returns a response based on its normal logic.
<code>DescribeDisks</code>	Is called and returns a response based on its normal logic.
<code>DescribeImages</code>	Is called and returns a response based on its normal logic.
<code>DescribeInstanceAttribute</code>	Is called and returns a response based on its normal logic.
<code>DescribeInstanceState</code>	Is called and returns a response based on its normal logic.
<code>DescribeInstanceTypes</code>	Is called and returns a response based on its normal logic.
<code>DescribeInstanceMonitorData</code>	Is called and returns a response based on its normal logic.
<code>DescribeRegions</code>	Is called and returns a response based on its normal logic.
<code>DescribeSecurityGroupAttribute</code>	Is called and returns a response based on its normal logic.
<code>DescribeSecurityGroups</code>	Is called and returns a response based on its normal logic.
<code>DescribeSnapshotAttribute</code>	Is called and returns a response based on its normal logic.

Operation	Behavior
DescribeSnapshots	Is called and returns a response based on its normal logic.
DescribeZones	Is called and returns a response based on its normal logic.
DetachDisk	Returns an error.
JoinSecurityGroup	Returns an error.
LeaveSecurityGroup	Returns an error.
ModifyAutoSnapshotPolicy	Is called and returns a response based on its normal logic.
ModifyDiskAttribute	Is called and returns a response based on its normal logic.
ModifyInstanceAttribute	Returns an error.
RebootInstance	Returns an error.
RelnitDisk	Returns an error when the disk is attached to the current instance and is in the In_use state When the disk is attached to the current instance and is in other states, the operation is called and returns a response based on its normal logic.
ReplaceSystemDisk	Is called and returns a response based on its normal logic.
ResetDisk	Returns an error.
RevokeSecurityGroup	Is called and returns a response based on its normal logic.
StartInstance	Returns an error.
StopInstance	Returns an error.

5.1.20.7. ISO 8601 date and time formats

ISO 8601 Data elements and interchange formats - Information interchange - Representation of dates and times is an international standard covering the exchange of date- and time-related data. It was issued by the International Organization for Standardization (ISO). ECS open APIs adopt the ISO 8601 standard date and time formats.

6. Appendixes

6.1. Use the ASAPI gateway to call API operations

You can use the Apsara Stack API (ASAPI) gateway to call API operations of most Apsara Stack services. This topic describes how to call API operations by using the ASAPI gateway and provides links to references.

Procedure

1. Obtain the ASAPI SDK.

Before you use ASAPI to call an API operation, you must obtain the ASAPI SDK. For more information, see [Obtain the ASAPI SDK](#).

2. Obtain the endpoint of ASAPI. For more information, see [Obtain the endpoint of ASAPI](#).
3. Obtain an AccessKey pair.

Obtain the AccessKey pair that is required for calling an API operation.

Note

We recommend that you use the AccessKey pair of a personal account to call the API operations of the Apsara Uni-manager Management Console and cloud services.

4. Obtain the region ID.

Obtain the region ID that is required for calling an API operation.

5. Obtain the organization ID and resource set ID.

You can call the `GetOrganizationList` operation to obtain the organization ID. For more information, see *GetOrganizationList* in *Apsara Uni-manager Management Console Developer Guide*.

You can call the `ListResourceGroup` operation to obtain the resource set ID. For more information, see *ListResourceGroup* in *Apsara Uni-manager Management Console Developer Guide*.

Note

When you call an API operation, you can specify the organization ID and resource set ID by using the `<x-acs-organizationid>` and `<x-acs-resourcegroupid>` parameters. This allows you to query specified resources.

- If you do not set the `<x-acs-organizationid>` parameter, the organization to which the current user belongs is used by default.
- If you do not set the `<x-acs-resourcegroupid>` parameter, it is empty by default. If you specify a resource set ID, you must also specify an organization ID.

6. Refer to the API reference.

Obtain the developer guide of the Apsara Stack service that you want to use. You can learn the features of API operations and how to call the API operations. For more information, see [Use developer guides](#).

7. Use ASAPI SDK to call API operations.

After you complete the preceding steps, you can use the ASAPI SDK to call API operations. For more information about how to use SDKs for different languages, see the relevant topics.

The following example shows how to call the DescribeInstances operation of Elastic Compute Service (ECS) by using SDK for Java:

```
public static void main(String[] args) {
    ASClient client = new ASClient();
    // Specify the caller. The caller is recorded in logs.
    client.setSdkSource("autoTest");

    // Set request parameters.
    Map<String, Object> parameters = new HashMap<String, Object>();

    parameters.put("Product", "Ecs");// Specify the POP code, which is the same as the
    POP code in the corresponding API directory.

    parameters.put("Action", "DescribeInstances");// Specify the name of the API opera
    tion. Use the same letter case as the corresponding API directory.

    parameters.put("Version", "2014-05-26");// Specify the API version.

    // Specify the region ID that you obtained.
    parameters.put("RegionId", "xxx");

    // Specify your AccessKey ID and AccessKey secret.
    parameters.put("AccessKeyId", "xxx");
    parameters.put("AccessKeySecret", "xxx");

    // Add the parameters based on the API reference. Take note that the parameters are
    case-sensitive.
    parameters.put("PageNumber",1);
    parameters.put("PageSize",10);

    Map<String,String> headers=new HashMap<>();
    // Specify the organization ID in the Apsara Uni-manager Management Console.
    headers.put("x-acs-organizationid","3");
    // Specify the resource set ID in the Apsara Uni-manager Management Console.
    //headers.put("x-acs-resourcegroupid", "<your-resourcegroupid>");

    // Specify the endpoint of ASAPI.
    String endpoint="https://public.asapi.xxx.xxx/asapi/v3";

    // Initiate the request.
    String result = client.doPost(endpoint,headers, parameters);

    // Display the results.
    System.out.println(JSONObject.toJSONString(JSONObject.parseObject(result), Serializ
    erFeature.PrettyFormat));
}
```

6.2. Use the ASAPI gateway to make API calls

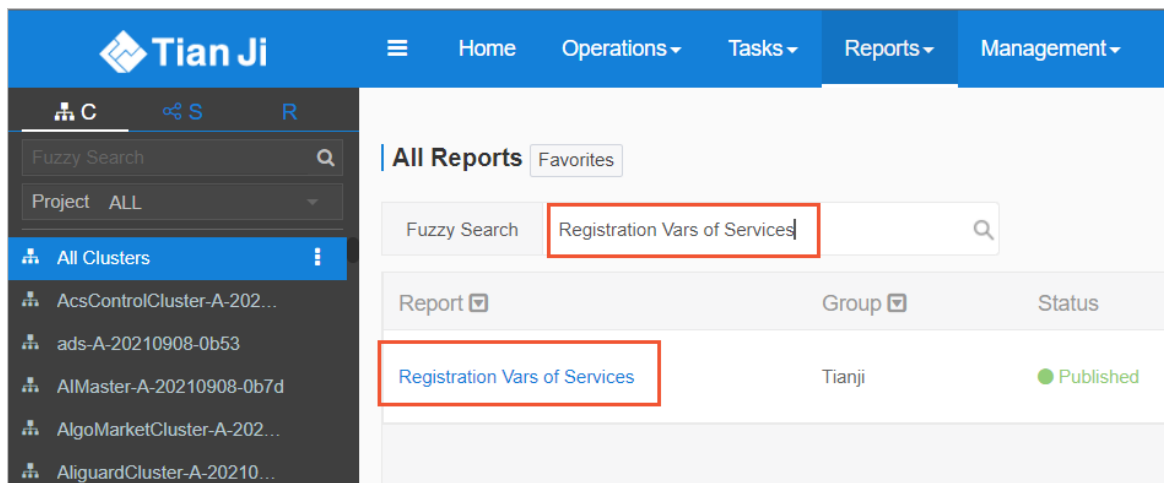
6.2.1. Generate an endpoint for ASAPI

This topic describes three methods that you can use to generate an endpoint for ASAPI. This topic also describes how to verify the endpoint of ASAPI.

Generate an endpoint for ASAPI

Method 1: Use Registration Vars of Services to generate an endpoint

1. Log on to the Apsara Infrastructure Management console.
2. In the left-side navigation pane, click **Reports**.
3. On the **All Reports** page, search for `Registration Vars of Services` and click the report name.



4. On the **Registration Vars of Services** page, click the  icon next to **Service** and enter `asapi` in the search box.



5. Find the `asapi` service, right-click in the **Service Registration** column, and then select **Show More** from the shortcut menu.

In the **Details** message, obtain the value of `asapi.public.endpoint`.

6. Generate an endpoint for ASAPI in the following format:

```
https://<asapi.public.endpoint>/asapi/v3
```

Method 2: Use cluster resources to generate an endpoint

1. Log on to the Apsara Infrastructure Management console.
2. Go to the Cluster Operations page.

- i. In the left-side navigation pane, choose **Operations > Cluster Operations**.
 - ii. In the **Cluster** search box, enter `ascm`.
 - iii. Click **Operations** in the **Actions** column.
3. Obtain the value of the domain parameter.
 - i. Click the **Cluster Resources** tab.
 - ii. In the **Name** field, enter `asapi_dns_public`.
 - iii. Click **Details** in the **Application Parameter** column.

In the **Application Parameter** message, view the value of the **domain** parameter.

```
{
  "domain": "public.asapi.<region>.<internet-domain>.com",
  "ha_apply_type": "active-active",
  "name": "asapi_dns_public",
  "vip": "10.0.0.1"
}
```

4. Generate an endpoint for ASAPI in the following format:

```
https://<domain>/asapi/v3
```

Method 3: Concatenate strings to generate an endpoint

You can also concatenate strings to generate an endpoint in the following format:

```
https://public.asapi.<region>.<internet-domain>/asapi/v3
```

Note

1. Replace `<region>` with the actual region ID.
2. Replace `<internet-domain>` with the root domain of your Apsara Stack service. To obtain the root domain, contact Apsara Stack O&M engineers. Take note of this point: Use the internet-domain parameter instead of the intranet-domain parameter.

If the **region** value is `cn-****-****-d01` and the **internet-domain** value is `inter.****.****.com`,

the following sample endpoint is generated:

```
https://public.asapi.cn-****-****-d01.inter.****.****.com/asapi/v3
```

Verify an endpoint

Enter the following code. If you cannot access the endpoint, the endpoint is unavailable. You can use the historical endpoint.

```
curl https://public.asapi.${global:region}.${global:internet-domain}/api/version -k
```

Note

`${global:region}` and `${global:internet-domain}` are variables. You must replace them with the actual values that you obtained.

Sample available endpoint:

```
root@ ~ # curl https://public.asapi.${global:region}.${global:internet-domain}/api/version -k
{"version":"v3.13","code":"200","apiCount":12379,"desc":"update xml pretty"}root@ ~
```

Sample unavailable endpoint:

```
[root@ ~ # curl https://public.asapi.${global:region}.${global:internet-domain}/api/version -k -i
curl: (35) Peer reports it experienced an internal error.
```

Historical endpoint

Only the HTTP protocol is supported. The historical endpoint is suffixed with `intranet-domain` and in the following format:

```
http://server.asapi.${global:region}.${global:intranet-domain}/asapi/v3
```

Note

`${global:region}` and `${global:intranet-domain}` are variables. You must replace them with the actual values that you obtained.

Procedure

To obtain the actual values of the variables `${global:region}`, `${global:internet-domain}`, and `${global:intranet-domain}`, perform the following steps:

1. In the address bar, enter the `region-id.aso.intranet-domain-id.com` URL and press the Enter key.

Note

You can select a language from the drop-down list in the upper-right corner of the page.

2. Enter your username and password.

Note

Obtain the username and password used to log on to the Apsara Uni-manager Operations Console from deployment engineers or an administrator.

If you log on to the Apsara Uni-manager Operations Console for the first time, you must change the password of your username.

To enhance security, make sure that the password meets the following requirements:

- o The password contains uppercase and lowercase letters.

- The password contains digits.
 - The password contains special characters such as exclamation points (!), at signs (@), number signs (#), dollar signs (\$), and percent signs (%).
 - The password is 10 to 20 characters in length.
3. Click **Log On** to log on to the Apsara Uni-manager Operations Console. In the top navigation bar, choose **Products > Platforms > Apsara Infrastructure Management Framework**.
 4. In the left-side navigation pane, choose **Operations > Cluster Operations**.
 5. On the **Clusters Operations** page, enter **ascm-A** in the **Cluster** search box to find the cluster. Click the cluster name.
 6. On the **Cluster Details** page, click the **Cluster Configuration** tab.
 7. In the left-side file list on the **Cluster Configuration** tab, click **kv.conf**.

Replace `${global:region}` with the obtained region value, `${global:internet-domain}` with the obtained internet-domain value, and `${global:intranet-domain}` with the obtained intranet-domain value.

 Note

`${global:}` is not included in the endpoint of ASAPI that you can use.

6.2.2. Obtain Apsara Stack SDKs

Apsara Stack API (ASAPI) is a unified portal provided by Apsara Stack. You can use ASAPI to connect to all Apsara Stack services. Apsara Stack provides SDKs for API calls.

Public environment

If you are using the public environment, you can go to the [Apsara Stack documentation](#) page and download the Apsara Stack SDKs in the **Other Resources** section at the lower part of the page.

Private environment

If you are using the private environment, you must switch to the public environment and then go to the [Apsara Stack documentation](#) page. At the lower part of the page, download the Apsara Stack SDKs in the **Other Resources** section.

Apsara Stack SDK for Java

groupId	artifactId	Version
com.alibaba	alicrypto-java-aliyun	1.0.4
com.alibaba	fastjson	1.2.68
org.bouncycastle	bcprov-jdk15to18	1.66
org.bouncycastle	bcpkix-jdk15on	1.65

groupId	artifactId	Version
org.bouncycastle	bcprov-jdk15on	1.65
com.aliyun	gmsse	1.1.0
org.apache.commons	commons-lang3	3.0
commons-codec	commons-codec	1.11
commons-logging	commons-logging	1.2
org.apache.httpcomponents	httpcore	4.4.11
org.apache.httpcomponents	httpclient	4.5.7

Apsara Stack SDK for Python

Package	Version
aliyun-python-sdk-core	2.13.35
certifi	2021.5.30
cffi	1.14.6
charset-normalizer	2.0.4
cryptography	3.4.8
idna	3.2
jmespath	0.10.0
pycparser	2.20
requests	2.26.0
urllib3	1.26.6

 **Note** You can use the version for each package listed in the preceding table or a later version.

6.3. STS overview

6.3.1. What is STS?

Security Token Service (STS) allows you to manage temporary credentials to your Apsara Stack resources. Resource Access Management (RAM) provides RAM users and RAM roles. A RAM role does not have permanent identity credentials. A RAM role can be assumed to access Apsara Stack resources by using an issued STS token. When the STS token is issued, you can specify a validity period and access permissions for the STS token.

Use a RAM user to obtain an STS token

An authorized RAM user can use an AccessKey pair to call the **AssumeRole** operation. This way, the RAM user can obtain an STS token of a RAM role and can use the STS token to access Apsara Stack resources.

Benefits

- STS tokens help reduce the risks of AccessKey pair leaks. An AccessKey pair is a long-term credential for a RAM user.
- STS tokens are temporary credentials. You can specify the validity period for STS tokens. After STS tokens expire, they become invalid. Therefore, you do not need to rotate the STS tokens on a regular basis.
- You can attach custom policies to STS tokens for flexible and fine-grained authorization.

6.3.2. AssumeRole

Obtains a Security Token Service (STS) token that is used by a RAM user to assume a RAM role. In this example, an Apsara Stack tenant account is used as the trusted entity of the RAM role.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AssumeRole	The operation that you want to perform. Set the value to AssumeRole.
RoleArn	String	Yes	acs:ram::123456789012****:role/adminrole	The Apsara Stack Resource Name (ARN) of the RAM role. The trusted entity of the RAM role is an Apsara Stack tenant account.

Parameter	Type	Required	Example	Description
RoleSessionName	String	Yes	alice	The name of the role session. Set this parameter based on your business requirements. In most cases, you can set this parameter to the identity of the user who calls the operation. For example, specify a username. In ActionTrail logs, you can distinguish the users who assume the same RAM role to perform operations based on the value of the RoleSessionName parameter. This way, you can perform user-specific auditing. The name must be 2 to 64 characters in length and can contain letters, digits, periods (.), at signs (@), hyphens (-), and underscores (_).
Policy	String	No	<pre>{"Statement": [{"Action": ["*"], "Effect": "Allow", "Resource": ["*"]}], "Version": "1"}</pre>	The policy that specifies the permissions of the STS token. You can use this parameter to grant the STS token fewer permissions than the permissions granted to the RAM role. The policy must be 1 to 1,024 characters in length.

Responses

Parameter	Type	Example	Description
RequestId	String	6894B13B-6D71-4EF5-88FA-F32781734A7F	The ID of the request.
Credentials	None	None	The access credentials.
AccessKeyId	String	STS.L4aBSCSJVMuKg5U1****	The AccessKey ID.

Parameter	Type	Example	Description
AccessKeySecret	String	wyLT5msyPGP1ohvv w8xYgB29dIGl8KMiH2 pK****	The AccessKey secret.
SecurityToken	String	*****	The security token.
Expiration	String	2015-04- 09T11:52:19Z	The time when the STS token expires.
AssumedRoleUser	None	None	The temporary identity that you use to assume the RAM role.
Arn	String	acs:ram::123456789 012****:role/adminr ole/alice	The ARN of the temporary identity that you use to assume the RAM role.
AssumedRoleId	String	34458433936495**** :alice	The ID of the temporary identity that you use to assume the RAM role.

Examples

Add Project Object Model (POM) dependencies

The Alibaba Cloud core library is required. Perform the following steps to add the Alibaba Cloud core library to POM:

```
<dependency>
  <groupId>com.aliyun</groupId>
  <artifactId>aliyun-java-sdk-core</artifactId>
  <version>[4.4.9,5.0.0)</version>
</dependency>
```

Call an API operation to obtain the STS AccessKey 3-tuple.

In the following sample code, the `Sts::AssumeRole::2015-04-01` operation is used to obtain the 3-tuple.

```
package com.aliyuns.test;

import com.alibaba.fastjson.JSONObject;
import com.aliyuncs.CommonRequest;
import com.aliyuncs.CommonResponse;
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
```

```

import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.http.FormatType;
import com.aliyuncs.http.HttpClientConfig;
import com.aliyuncs.http.MethodType;
import com.aliyuncs.http.ProtocolType;
import com.aliyuncs.profile.DefaultProfile;
import org.apache.commons.lang3.StringUtils;

public class STSAccessKeyDemo {
    public static void main(String[] args) {
        // Create and initialize a DefaultAcsClient instance.
        DefaultProfile profile = DefaultProfile.getProfile("<yourRegionID>", "<yourAccessKeyID>", "<yourAccessKeySecret>");
        HttpClientConfig clientConfig = HttpClientConfig.getDefault();
        clientConfig.setIgnoreSSLCerts(true);
        clientConfig.setProtocolType(ProtocolType.HTTPS);
        profile.setHttpClientConfig(clientConfig);
        IAcsClient client = new DefaultAcsClient(profile);
        CommonRequest request = new CommonRequest();
        // Replace "sts.aliyuncs.com" with the actual endpoint of STS. In most cases, the endpoint is in the following format: sts-vpc.${global:region}.${global:internet-domain}.
        request.setSysDomain("sts.aliyuncs.com");
        request.setSysProduct("Sts");
        request.setSysAction("AssumeRole");
        request.setSysVersion("2015-04-01");
        request.setSysMethod(MethodType.POST);
        request.setHttpContentType(FormatType.FORM);
        // Replace "<yourRoleSessionName>" with the alias that you specify for the current role session.
        request.putQueryParameter("RoleSessionName", "<yourRoleSessionName>");
        // Replace "<yourRoleArn>" with the actual ARN that you obtained for the RAM role in the preceding step.
        request.putQueryParameter("RoleArn", "<yourRoleArn>");
        try {
            CommonResponse response = client.getCommonResponse(request);
            String assumeRole = response.getData();
            if (StringUtils.isEmpty(assumeRole)) return;
            JSONObject assumeRoleJson = JSONObject.parseObject(assumeRole);
            JSONObject credentials = assumeRoleJson.getJSONObject("Credentials");
            // Obtain the STS AccessKey 3-tuple.
            String stsAK = credentials.getString("AccessKeyId");
            String stsSK = credentials.getString("AccessKeySecret");
            String stsToken = credentials.getString("SecurityToken");
            System.out.println("stsAk: " + stsAK + "\nstsSk: " + stsSK + "\nstsToken: " + stsToken);
        } catch (ServerException e) {
            System.out.println(e.getErrCode());
            System.out.println(e.getErrMsg());
        } catch (ClientException e) {
            System.out.println(e.getErrCode());
            System.out.println(e.getErrMsg());
        }
    }
}

```

Call examples

In the following sample code, the `DescribeZones` operation in Elastic Compute Service (ECS) is used.

```
package com.aliyuns.test;

import com.aliyuncs.CommonRequest;
import com.aliyuncs.CommonResponse;
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.http.FormatType;
import com.aliyuncs.http.HttpClientConfig;
import com.aliyuncs.http.MethodType;
import com.aliyuncs.http.ProtocolType;
import com.aliyuncs.profile.DefaultProfile;

public class DescribeZonesDemo {
    public static void main(String[] args) {
        // Replace "<yourRegionID>" with the actual region ID.
        // Replace "<yourStsAccesskey>" and "<yourStsAccessKeySecret>" with the AccessKey ID and secret in the 3-tuple that you obtained in the preceding step.
        DefaultProfile profile = DefaultProfile.getProfile("<yourRegionID>", "<yourStsAccessKey>", "<yourStsAccessKeySecret>");
        HttpClientConfig clientConfig = HttpClientConfig.getDefault();
        clientConfig.setIgnoreSSLCerts(true);
        clientConfig.setProtocolType(ProtocolType.HTTPS);
        profile.setHttpClientConfig(clientConfig);
        IAcsClient client = new DefaultAcsClient(profile);
        CommonRequest request = new CommonRequest();
        request.setSysDomain("ecs.aliyuns.com");
        request.setSysProduct("Ecs");
        request.setSysAction("DescribeZones");
        request.setSysVersion("2014-05-26");
        request.setSysMethod(MethodType.POST);
        request.setHttpContentType(FormatType.FORM);
        //Replace "<yourRegionID>" with the actual region ID.
        request.putHeadParameter("x-acs-regionid", "<yourRegionID>");
        // Replace "<yourStsToken>" with the STS token in the 3-tuple that you obtained in the preceding step.
        request.putQueryParameter("SecurityToken", "<yourStsToken>");
        // Optional. Specify the resource set ID.
        // request.putHeadParameter("x-acs-resourcegroupid", "<yourResourceGroupID>");
        // Required. Specify the organization ID.
        request.putHeadParameter("x-acs-organizationid", "<yourOrganizationID>");
        try {
            CommonResponse response = client.getCommonResponse(request);
            System.out.println(response.getData());
        } catch (ServerException e) {
            System.out.println(e.getErrCode());
            System.out.println(e.getErrMsg());
        }
    }
}
```

```

    } catch (ClientException e) {
        System.out.println(e.getErrCode());
        System.out.println(e.getErrMsg());
    }
}
}

```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidParameter	The parameter RoleArn is wrongly formed.	The error message returned because the ARN format of the RAM role is invalid.
400	InvalidParameter.RoleArn	The parameter RoleArn is wrongly formed.	The error message returned because the ARN format of the RAM role is invalid.
400	InvalidParameter.RoleSessionName	The parameter RoleSessionName is wrongly formed.	The error message returned because the value of the RoleSessionName parameter is in an invalid format. The value must be 2 to 64 characters in length and can contain letters, digits, periods (.), at signs (@), hyphens (-), and underscores (_).
400	InvalidParameter.DurationSeconds	The Min/Max value of DurationSeconds is 15min/1hr.	The error message returned because the value of the DurationSeconds parameter is invalid. The minimum value is 900, and the maximum value is equal to the value of the MaxSessionDuration parameter.

HttpCode	Error code	Error message	Description
400	InvalidParameter.PolicyGrammar	The parameter Policy has not passed grammar check.	The error message returned because the syntax of the policy is invalid.
400	InvalidParameter.PolicySize	The size of Policy must be smaller than 1024 bytes.	The error message returned because the length of the specified policy string exceeds the upper limit. The policy string can be up to 1,024 characters in length.
403	NoPermission	You are not authorized to do this action. You should be authorized by RAM.	The error message returned because the STS token does not have the required permissions.
404	EntityNotExist.Role	The specified Role not exists.	The error message returned because the specified RAM role does not exist.
500	InternalServerError	STS Server Internal Error happened.	The error message returned because an internal server error occurred.