

Alibaba Cloud

Apsara Stack Enterprise

Data Management Developer Guide

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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>

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1. Getting started

1.1. Usage notes on development documentation

This topic describes how to view the desired product development documentation when you use Apsara Stack API (ASAPI).

Prerequisites

The Apsara Stack version is obtained from an O&M personnel or operations administrator.

Procedure

You can go to the Apsara Stack documentation center and view the desired product documentation.

1. Go to the [Apsara Stack Documentation Center](#) page by using a browser.
2. Click the **Enterprise**, **Agility**, or **All-in-one** tab based on the Apsara Stack version that you use.
3. Select an Apsara Stack version from the drop-down list.
4. In the left-side navigation pane, select the name of the product that you want to view.
5. In the upper-right corner of the product documentation section, click **View Details** or **Download PDF**.

1.2. Call an API operation

Apsara Stack allows you to call API operations by using the Portable OpenAPI Proxy (POP) gateway or the Apsara Stack API (ASAPI) gateway. To ensure that Apsara Stack provides the same experience as the public cloud, API operations in Apsara Stack are called by using the POP gateway by default starting Apsara Stack Enterprise V3.16.0. This topic describes how to call API operations in Apsara Stack by using the POP gateway.

Note

You can still use the ASAPI gateway to call API operations. For more information, see [Process of API calls by using the ASAPI gateway](#), [Generate an endpoint for ASAPI](#), and [Obtain an ASAPI SDK](#).

Flowchart



Procedure

1. Obtain AccessKey credentials.

Obtain the AccessKey credentials that are required when you call an API operation. For more information, see [Obtain an AccessKey pair](#) or [Obtain an STS AccessKey 3-tuple](#).

 Note

We recommend that you use the AccessKey pair of a personal account assigned by Resource Access Management (RAM) or a Security Token Service (STS) AccessKey 3-tuple to call the API operations of the Apsara Uni-manager Management Console and cloud services.

2. Obtain the region ID.

For more information, see [Obtain the values of common header parameters](#).

3. Obtain the organization ID and resource set ID.

You must call an API operation to obtain the resource set ID. For more information about how to obtain resource set IDs, see the *ListResourceGroup* section in *Apsara Uni-manager Management Console Developer Guide*.

 Note

When you call an API operation, set the `<x-acs-organizationid>` parameter to the organization ID that you obtained, and set the `<x-acs-resourcegroupid>` parameter to the resource set ID that you obtained. This way, you can query resources in the specified organization and resource set.

- 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, this parameter is left empty by default. If you specify a resource set ID, you must also specify an organization ID.

4. Obtain the API references.

Obtain the developer guide of the cloud 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 [Usage notes on development documentation](#).

5. Obtain the endpoint of the cloud service.

6. Obtain an SDK of the cloud service and call an API operation.

2. Preparations

2.1. 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 staff.
- 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 the Enter key.
2. Enter your username and password.

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

 **Note** The first time that you log on to the Apsara Uni-manager Management Console, 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, including exclamation points (!), at signs (@), number signs (#), dollar signs (\$), and percent signs (%)

3. Click **Log On**.
4. In the top navigation bar, choose **Products > Others > API Tool**.

2.2. View the information about an API operation

This topic describes how to view the information about API operations. Before you use SDKs, you need to obtain service names, API operation names, and API versions.

Context

The API operations on the API Directory page are only for reference. For information about how to call API operations, see developer guide of the corresponding cloud service. If the information on the API Directory page is inconsistent with that in the developer guide of the corresponding cloud service, the information in the developer guide prevails.

Procedure

1. [Log on to the API Tool console.](#)
2. In the left-side navigation pane, click **API Directory**.
3. On the **API Directory** page, select the required service from the drop-down list, enter a keyword of an operation name in the search box, and then click Search.
4. View and record the service name, API operation name, and API version.

2.3. Obtain an AccessKey pair

AccessKey credentials are assigned by RAM or STS. You can use one type of AccessKey credential for authentication when you make an API request. This topic describes how to obtain an AccessKey pair that is assigned by RAM.

Context

An AccessKey pair is used to verify the identity of the 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.

AccessKey credentials can be assigned by RAM or STS:

- 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 for 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 can occur.

 **Warning** The AccessKey pair of a personal account is managed and controlled 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 authorized 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 the <i>GetOrganizationList</i> section in <i>Apsara Uni-manager Management Console Developer Guide</i> .

Parameter	Description
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 the <i>ListResourceGroup</i> section 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. Click the profile picture in the upper-right corner of the page and click **User Information**.
3. In the **AccessKey Pair** section, view the AccessKey pair of the personal account.

AccessKey Create AccessKey Pair				
The AccessKey ID and AccessKey Secret are the keys used to access the cloud service resources. They have full permissions on the account. Please keep them properly.				
AccessKey ID	AccessKey Secret	Status	Created At	Actions
W1YRFvKH*****	*****	Enable	Sep 18, 2021, 11:05:57	Disable Delete
IsjsAUyX*****	*****	Enable	Sep 10, 2021, 12:28:35	Disable Delete

Note An AccessKey pair consists of an AccessKey ID and an AccessKey secret. These credentials provide full permissions on cloud resources within the current 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 dialog box that appears, view the AccessKey pair of the organization.

2.4. Obtain an STS AccessKey 3-tuple

This topic describes how to use STS to call 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 API operations in Apsara Stack.

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

Procedure

1. Obtain the `RAM role`.
 - i. Log on to the Apsara Uni-manager Management Console.
 - ii. Click the profile picture in the upper-right corner of the page and click **User Information**.
 - iii. Click **View Current Role Policy**.

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

2. Obtain an STS AccessKey 3-tuple.

Note

In the following sample code, replace the parameters with the actual information. Delete the angle brackets (<>) in the final code.

The following section describes the parameters:

- <yourRegionID>: Replace the parameter with the region ID.
- <yourAccessKeyID>: Replace the parameter with your AccessKey ID.
- <yourAccessKeySecret>: Replace the parameter with your AccessKey secret.
- <yourRoleSessionName>: Replace the parameter with the name of the current session.
- <yourRoleArn>: Replace the parameter with the Alibaba Cloud Resource Name (ARN) of your RAM role.
- <sts.aliyuns.com>: Replace the parameter with the STS endpoint.

```

public static void main(String[] args) {
    // Create and initialize a DefaultAcsClient instance.
    // Specify the 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 an 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 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 ARN that you obtain in the previous step for the
    // RAM role.
    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

`DescribeZones` operation of ECS:

 Note

In the following sample code, replace the parameters with your actual information. Delete the angle brackets (<>) in the final code.

The following section describes the parameters:

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


```
public static void main(String[] args) {
    // Replace <yourRegionID> with the region ID.
    // Replace <yourStsAccessKeyID> and <yourStsAccessKeySecret> with the AccessKey ID
    and AccessKey secret of the 3-tuple obtained in the previous step.
    DefaultProfile profile = DefaultProfile.getProfile("<yourRegionID>", "<yourStsAccessKeyID>", "<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 region ID.
    request.putHeadParameter("x-acs-regionid", "<yourRegionID>");
    // Replace <yourStsToken> with the security token of the 3-tuple obtained in the previous step.
    request.putQueryParameter("SecurityToken", "<yourStsToken>");
    // Optional. Replace the parameter with the resource set ID.
    // request.putHeadParameter("x-acs-resourcegroupid", "<yourResourceGroupID>");
    // Required. Replace the parameter with 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());
    }
}
```

2.5. Obtain the endpoint of DMS

This topic describes how to obtain the endpoint of Data Management (DMS).

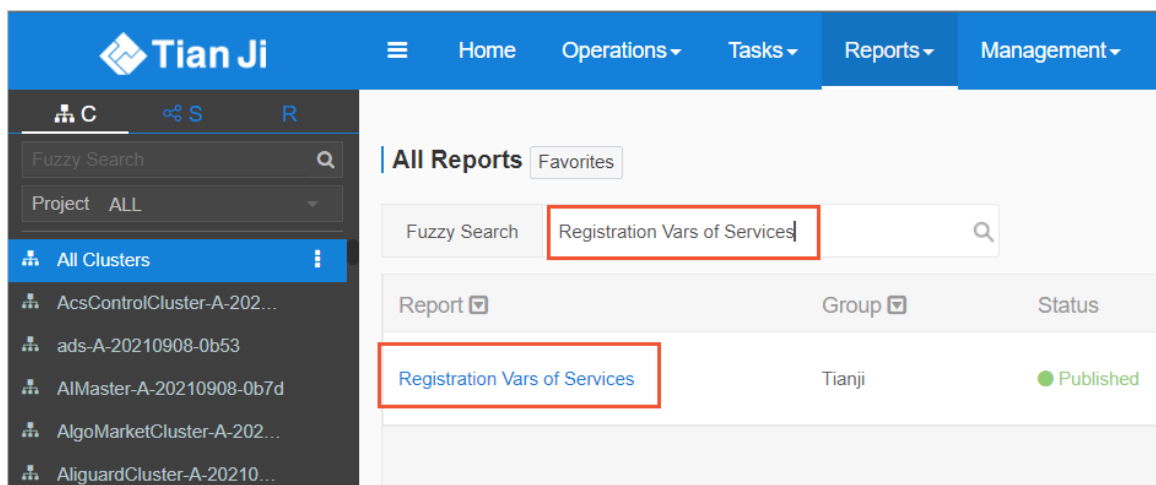
Background information

To use the POP gateway to call API operations of a service in Apsara Stack, you must obtain endpoint of the service. You can obtain an endpoint from onsite Apsara Stack O&M engineers. You can also perform the following steps to obtain the endpoint.

Procedure

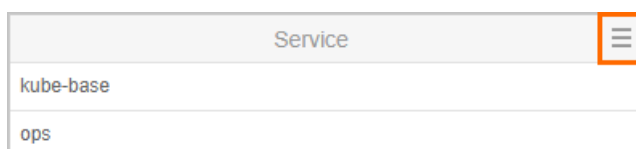
1. Log on to the Apsara Infrastructure Management console.
2. In the left-side navigation pane, click **Reports**.

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 search for

`dts-dtm`.



5. Find the `dts-dtm` service, right-click in the **Service Registration** column, and then select **Show More** from the short cut menu.

In the **Details** dialog box, view the value of `dms_open_api_domain`. The value indicates the endpoint of DMS.

2.6. Obtain an SDK installation package of DMS

To call API operations of DMS in Apsara Stack by using the POP gateway, you must use an SDK. This topic provides links for you to download Alibaba Cloud SDKs.

Language	Download URL	Reference
Alibaba Cloud SDK for Java	DMS SDK for Java  Note We recommend that you download DMS SDK for Java V1.18.0.	Get started with DMS SDK for Java

Language	Download URL	Reference
Alibaba Cloud SDK for Python	DMS SDK for Python	Get started with DMS SDK for Python
Alibaba Cloud SDK for Go	DMS SDK for Go	Get started with DMS SDK for Go

 Note

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

3. Call examples for SDK for Java

3.1. Get started with DMS SDK for Java

This topic describes how to obtain and use DMS SDK for Java.

Prerequisites

- An Apsara Stack tenant account that has the required permissions and an AccessKey pair that consists of an AccessKey ID and an AccessKey secret are obtained. You can obtain an AccessKey pair in the Apsara Uni-manager Management Console. For more information, see [Obtain an AccessKey pair](#).
- The endpoint of DMS is obtained. For more information, see [Obtain the endpoint of DMS](#).
- Java Development Kit (JDK) 1.8 or later is installed.

Install the SDK

If you use Apache Maven to manage your Java project, you need to only import the JAR file to the pom.xml file of the project.

To use DMS SDK for Java, you must install the SDK core library and the SDK. We recommend that you use the core library version 4.5.17 or later and use the SDK version 1.18.0.

Use the SDK

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

1. Create and initialize a DefaultAcsClient instance.
2. Create an API request and set the required parameters.
3. Initiate the API request and process the response or exception.

Note

In the following sample code, replace the parameters with the actual information. Delete the angle brackets (<>) in the final code.

The following section describes the parameters:

- <yourRegionID>: Replace the parameter with the region ID.
- <yourAccessKeyID>: Replace the parameter with your AccessKey ID.
- <yourAccessKeySecret>: Replace the parameter with your AccessKey secret.
- <DMSProductCode>: Replace the parameter with the service code of DMS in Apsara Stack.
- <DMSProductEndpoint>: Replace the parameter with the endpoint of DMS in Apsara Stack.

```
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.dms_enterprise.model.v20181101.GetOpLogRequest;
import com.aliyuncs.dms_enterprise.model.v20181101.GetOpLogResponse;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.profile.DefaultProfile;

public class GetOpLogSampleTest {

    public static void main(String[] args) {

        String regionId = "<yourRegionID>";
        String accessKey = "<yourAccessKeyID>";
        String secretKey = "<yourAccessKeySecret>";
        String product = "<DMSProductCode>";
        String endpoint = "<DMSProductEndpoint>";

        DefaultProfile.addEndpoint(regionId, product, endpoint);
        DefaultProfile profile = DefaultProfile.getProfile(regionId, accessKey, secretKey);

        IAcsClient client = new DefaultAcsClient(profile);
        GetOpLogRequest request = new GetOpLogRequest();
        request.setStartTime("2022-01-01 00:00:00");
        request.setEndTime("2022-01-02 00:00:00");
        request.setPageNumber(1);
        request.setPageSize(100);

        try {
            GetOpLogResponse response = client.getAcsResponse(request);
            System.out.println("RequestId: " + response.getRequestId());
            System.out.println("OpLogCount: " + response.getTotalCount());
        } catch (ServerException e) {
            e.printStackTrace();
        } catch (ClientException e) {
            System.out.println("ErrCode:" + e.getErrCode());
            System.out.println("ErrMsg:" + e.getErrMsg());
            System.out.println("RequestId:" + e.getRequestId());
        }

    }

}
```

3.2. Use SDK

3.2.1. Install DMS SDK for Java

This topic describes how to install and use DMS SDK for Java.

Alibaba Cloud SDK for Java supports JDK 1.8 or later. You can install SDKs for Java by adding Maven dependencies or downloading [Alibaba Cloud SDKs](#).

To use DMS SDK for Java, you must install the core library of Alibaba Cloud SDK for Java and DMS SDK for Java. We recommend that you use the core library version 4.5.17 or later and use the SDK version 1.18.0.

To use DMS SDK for Java, you must also add the following dependency to the pom.xml file. For information about the SDK version, see [Obtain an SDK installation package of DMS](#).

```
<!-- Alibaba Cloud SDK for Java -->
<dependency>
  <groupId>com.aliyun</groupId>
  <artifactId>aliyun-java-sdk-core</artifactId>
  <version>4.5.17</version>
</dependency>
<!-- dms-enterprise java sdk -->
<dependency>
  <groupId>com.aliyun</groupId>
  <artifactId>aliyun-java-sdk-dms-enterprise</artifactId>
  <version>1.18.0</version>
</dependency>
```

3.2.2. Configure authentication credentials

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

DMS SDK for Java allows you to complete the authentication process by using an AccessKey pair. 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 credentials when you initialize a client instance.

Note

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

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

Note

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

3.2.3. 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);
```

3.2.4. Initiate a request

This topic describes how to use DMS 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 format of `${apiName}Request`, where `${apiName}` indicates the API operation name, such as `GetOpLog`.

If multiple service SDKs are used, different requests may have the same name. You can differentiate the requests based on package names.

```
GetOpLogRequest request = new GetOpLogRequest();
request.setStartTime("2022-01-01 00:00:00");
request.setEndTime("2022-01-02 00:00:00");
request.setPageNumber(1);
request.setPageSize(100);
```

3. Initiate the request and handle the response.

```
GetOpLogResponse response = client.getAcsResponse(request);
```

In normal cases, all returned fields are deserialized into the response. You can directly call `response.getXXX()` to obtain the response fields.

```
OpLogCount := response.getTotalCount();
```

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

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

3.2.5. Handle errors

If an error occurs on the server side or SDK side, the Apsara Stack Java 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 Apsara Stack Java 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.

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

To handle the errors returned by the Apsara Stack Java SDK, see the following code example for reference:


```
try {
    FooResponse response = client.getAcsResponse(request);
    // Handle the response.
    // ...
} catch (ServerException e) {
    // Add your own error handling logic here.
    // For example, print the detailed error message.
    System.out.println("ErrorCode=" + e.getErrCode());
    System.out.println("ErrorMessage=" + e.getErrMsg());
    // If the problem is tricky, open a ticket and provide the RequestId for us.
    System.out.println("ResponseId=" + e.getRequestId());
} catch (ClientException e) {
    // Add your own error handling logic here.
    // For example, print the detailed error message.
    System.out.println("ErrorCode=" + e.getErrCode());
    System.out.println("ErrorMessage=" + e.getErrMsg());
}
```

4. Call examples for SDK for Python

4.1. Get started with DMS SDK for Python

This topic describes how to obtain and use DMS SDK for Python.

Prerequisites

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

Install DMS SDK for Python

1. Install the SDK core library.

- If you use Python 2.x, run the following command to install the SDK core library:

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

- If you use Python 3.x, run the following command to install the SDK core library:

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

2. Install DMS SDK for Python.

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

```
pip install aliyun-python-sdk-dms-enterprise
```

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

```
pip3 install aliyun-python-sdk-dms-enterprise
```

Use DMS SDK for Python

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

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

 **Note** In the following sample code, replace the parameters with the actual information. Delete the angle brackets (<>) in the final code.

The following section describes the parameters:

- <yourRegionID>: Replace the parameter with the region ID.
- <yourAccessKeyID>: Replace the parameter with your AccessKey ID.
- <yourAccessKeySecret>: Replace the parameter with your AccessKey secret.
- <DMSProductCode>: Replace the parameter with the service code of DMS in Apsara Stack.
- <DMSProductEndpoint>: Replace the parameter with the endpoint of DMS in Apsara Stack.

```
#!/usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkcore.auth.credentials import AccessKeyCredential
from aliyunsdkcore.auth.credentials import StsTokenCredential
from aliyunsdkdms_enterprise.request.v20181101.GetOpLogRequest import GetOpLogRequest
credentials = AccessKeyCredential('<yourAccessKeyID>', '<yourAccessKeySecret>')
client = AcsClient(region_id='<yourRegionID>', credential=credentials)
request = GetOpLogRequest()
request.set_accept_format('json')
request.set_endpoint('<DMSProductEndpoint>')
response = client.do_action_with_exception(request)
# python2: print(response)
print(str(response, encoding='utf-8'))
```

4.2. Use SDK

4.2.1. Install DMS SDK for Python

This topic describes how to install and use DMS SDK for Python.

Alibaba Cloud SDK for Python supports Python 2.6.x, Python 2.7.x, Python 3.x, and later versions. You can install Alibaba Cloud SDK for Python by using pip.

 **Note** To use the SDK for Python of a cloud service, you must install the core library of Alibaba Cloud SDK for Python. For example, if you want to use DMS SDK for Python, you must install the core library of Alibaba Cloud SDK for Python and DMS SDK for Python.

- If you use Python 2.x, run the following command to install the SDK core library:

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

- If you use Python 3.x, run the following command to install the SDK core library:

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

The following commands are used to install DMS SDK for Python.

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

```
pip install aliyun-python-sdk-dms-enterprise
```

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

```
pip3 install aliyun-python-sdk-dms-enterprise
```

4.2.2. Configure authentication credentials

When you use Alibaba Cloud SDK to access Apsara Stack services, you must provide an Apsara Stack tenant account for authentication.

DMS SDK for Python allows you to complete the authentication process by using an AccessKey pair. 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 credentials when you initialize a client instance.

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

```
clt = client.AcsClient(secret_id, secret_key, region_id)
```

4.2.3. Set HTTPS requests

The Python SDK supports using HTTP and HTTPS to initiate API requests.

When using the Python SDK, you can specify a protocol (HTTP or HTTPS) for a specific request to use, or set a global default protocol for all requests to use.

 **Note** The default protocol (HTTP or HTTPS) of a product takes precedence over the global default protocol you set.

Add OpenSSL dependency

HTTPS of the Python SDK depends on the OpenSSL support in Python. To use Alibaba Cloud SDK to send HTTPS requests, you must add OpenSSL support in Python.

Run the `python -c "import ssl"` command to check if the Python environment supports OpenSSL. If the `ImportError: No module named ssl` error message does not appear, OpenSSL is supported in Python.

If Python does not support OpenSSL, run the following command to install OpenSSL:

```
pip install pyopenssl
```

Set HTTP/HTTPS for a request

See the following code example for reference to set the HTTPS call for an API:

```
request = CreateInstanceRequest.CreateInstanceRequest()
request.set_protocol_type("https")
# Value: "https" or "http"
```

Set global default protocol for all requests

See the following code example for reference to set the global default protocol for all requests:

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

4.2.4. Initiate a request

This topic describes how to use DMS SDK for Python to initiate a request.

Procedure

1. Import DMS SDK for Python.

```
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkcore.auth.credentials import AccessKeyCredential
from aliyunsdkcore.auth.credentials import StsTokenCredential
from aliyunsdkdms_enterprise.request.v20181101.GetOpLogRequest import GetOpLogRequest
```

2. Create an AcsClient instance.

```
credentials = AccessKeyCredential('<yourAccessKeyID>', '<yourAccessKeySecret>')
client = AcsClient(region_id='<yourRegionID>', credential=credentials)
```

3. Create a request.

```
request = GetOpLogRequest()
request.set_accept_format('json')
request.set_endpoint('<DMSProductEndpoint>')
```

4. Initiate the request and process the response.

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

4.2.5. 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()
```

5. Call examples for SDK for Go

5.1. Get started with DMS SDK for Go

Alibaba Cloud SDK for Go allows you to access services without complex coding. This topic describes how to obtain and use DMS SDK for Go.

Prerequisites

- An Apsara Stack tenant account that has the required permissions and an AccessKey pair that consists of an AccessKey ID and an AccessKey secret are obtained. For more information about how to obtain an AccessKey pair in the Apsara Uni-manager Management Console, see [Obtain an AccessKey pair](#).
- The endpoint of DMS is obtained. For more information, see [Obtain the endpoint of DMS](#).

Install the core package of Alibaba Cloud SDK for Go

Alibaba Cloud 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 the SDK for Go

To use the SDK for Go, perform the following steps:

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

 **Note** In the following sample code, replace the parameters with the actual information. Delete the angle brackets (<>) in the final code.

The following section describes the parameters:

- <yourRegionID>: Replace the parameter with the region ID.
- <yourAccessKeyID>: Replace the parameter with your AccessKey ID.
- <yourAccessKeySecret>: Replace the parameter with your AccessKey secret.
- <DMSProductCode>: Replace the parameter with the service code of DMS in Apsara Stack.
- <DMSProductEndpoint>: Replace the parameter with the endpoint of DMS in Apsara Stack.

```
package main
import (
    "fmt"
    dms_enterprise "github.com/aliyun/alibaba-cloud-sdk-go/services/dms-enterprise"
)
func main() {
    client, err := dms_enterprise.NewClientWithAccessKey("<yourRegionID>", "<yourAccessKeyID>", "<yourAccessKeySecret>")
    request := dms_enterprise.CreateGetOpLogRequest()
    request.Scheme = "https"
    request.Domain = "<DMSProductEndpoint>"
    response, err := client.GetOpLog(request)
    if err != nil {
        fmt.Print(err.Error())
    }
    fmt.Printf("response is %#v\n", response)
}
```

4. Optional. Switch to HTTP or HTTPS.

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

5.2. Use SDK

5.2.1. Install Go SDK

This topic describes how to install the Go SDK.

The Alibaba Cloud Go SDK supports Go 1.7 or later versions. Install the Go SDK manually.

1. Download the source code of the Go SDK from the [official site of Apsara Stack](#).
2. Extract the package to the directory where the `GO_PATH` file of the current user resides.

5.2.2. Configure authentication credentials

When you use Alibaba Cloud SDK to access Apsara Stack services, you must provide an Apsara Stack tenant account for authentication.

DMS SDK for Go allows you to complete the authentication process by using an AccessKey pair. 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 credentials when you initialize a client instance.

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

The following code provides an example on how to initialize a DMS client instance:


```
// Initialize a client instance.
Client, err := dms-enterprise.NewClientWithAccessKey(
    "<yourRegionID>",           // Replace the parameter with the region ID.
    "<yourAccessKeyID>",        // Replace the parameter with your AccessKey ID.
    "<yourAccessKeySecret>")    // Replace the parameter with your AccessKey secret
.
```

 **Note** In the preceding sample code, replace the parameters with the actual information. Delete the angle brackets (<>) in the final code.

5.2.3. Initiate a request

This topic describes how to use DMS SDK for Go to initiate a request.

To use DMS SDK for Go to initiate a request, perform the following steps:

1. Import DMS SDK for Go.

```
import github.com/aliyun/alibaba-cloud-sdk-go/services/dms-enterprise
```

2. Create a client instance that contains all API operations of DMS.

 **Note** In the following sample code, replace the parameters with the actual information. Delete the angle brackets (<>) in the final code.

```
Client,err := dms_enterprise.NewClientWithAccessKey( // Replace the parameter with the
service name.
    "<yourRegionID>", // Replace the parameter with the region ID.
    "<yourAccessKeyID>", // Replace the parameter with your AccessKey ID.

    "<yourAccessKeySecret>") // Replace the parameter with your AccessKey secret.
```

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

Specify the method name in the `${service}.Create${apiName}Request` format.

- o `${service}` specifies the service name in lowercase. Example: `dms_enterprise`.
- o `${apiName}` specifies the name of the API operation. Example: `GetOpLog`.

```
request := dms_enterprise.CreateGetOpLogRequest()
request.Scheme = "https"
request.Domain = "<DMSProductEndpoint>"
```

4. Initiate the request.

```
response, err := client.GetOpLog(request)
```

5.2.4. Handle errors

When you use Alibaba Cloud SDK for Go, a `ClientError` or a `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 way as standard Go errors.

Troubleshooting

You can use the following code to troubleshoot an error:

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

ClientError

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

The following code shows how to determine and obtain the error message in a `ClientError` of DMS SDK for Go:



Notice 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/dms-enterprise"
    "github.com/aliyun/alibaba-cloud-sdk-go/sdk/requests"
    // The error package that you want to add.
    "github.com/aliyun/alibaba-cloud-sdk-go/sdk/errors"
    "fmt"
)
```

```
response, err := Client.ListInstances(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

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

The following code shows how to determine and obtain the error message in a `ServerError` and `Response` of DMS SDK for Go:



Notice 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/dms-enterprise" // Replace dms with the name of the service.
    "github.com/aliyun/alibaba-cloud-sdk-go/sdk/requests"
    // The error package that you want to add.
    "github.com/aliyun/alibaba-cloud-sdk-go/sdk/errors"
    "fmt"
)
```

```
response, err := Client.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()
}
```

6. API Reference

6.1. List of operations by function

The following tables describe the API operations available for use in Data Management (DMS).

User management

API	Description
RegisterUser	Adds a user.
DisableUser	Disables a user.
EnableUser	Enables a user.
UpdateUser	Updates the information about a user.
DeleteUser	Deletes a user.
ListUsers	Queries the details about users.
ListUserTenants	Queries tenants.
GetUserActiveTenant	Queries the details about a tenant.
GetUser	Queries the details about a user.

Instance management

API	Description
RegisterInstance	Adds a database instance.
ListInstances	Queries the details about instances.
GetInstance	Queries the details about an instance.
UpdateInstance	Updates the information about an instance and checks the connectivity of the instance.
DeleteInstance	Deletes instances that are managed by DMS.

Operation logs

API	Description
GetOpLog	Queries the details about operation logs that are generated in a specified period of time.

Approval processes

API	Description
ListWorkFlowTemplates	Queries approval templates.
ListWorkFlowNodes	Queries approval nodes.

Metadata of databases and tables

API	Description
SearchDatabase	Queries the details about a database.
SearchTable	Queries the details about a table.
ListDatabases	Queries the details about databases in an instance.
ListLogicDatabases	Queries the details about logical databases.
ListTables	Queries the details about tables in a database.
ListLogicTables	Queries the details about logical tables in a logical database.
ListColumns	Queries the details about columns in a table.
ListIndexes	Queries the details about indexes in a table.
GetDatabase	Queries the details about a database.
GetLogicDatabase	Queries the details about a logic database.
GetMetaTableDetailInfo	Queries the details about fields and indexes in a table.
GetTableDBTopology	Queries the topology of a table.
GetMetaTableColumn	Queries the details about fields in a table.
SyncDatabaseMeta	Synchronizes the metadata of a database dictionary.
SyncInstanceMeta	Synchronizes the metadata of all database dictionaries in an instance.

Ticket operations

Category	API	Description
General	ApproveOrder	Reviews a ticket.
	CloseOrder	Closes a ticket.
	GetApprovalDetail	Queries the details about an approval process for a ticket.
	GetOrderBaseInfo	Queries the basic information about a ticket.

Category	API	Description
	ListOrders	Queries the details about tickets.
	SubmitOrderApproval	Submits a ticket for approval.
	CreateOrder	Creates a ticket.
Data change	ExecuteDataCorrect	Executes a ticket that is used to modify data.
	GetDataCorrectBackupFiles	Queries the download URL of an attachment that includes the backup files of data changes.
	GetDataCorrectOrderDetail	Queries the details about a ticket that is used to modify data.
Schema design	CreatePublishGroupTask	Executes a ticket that is used to modify the schema design of a database.
Data export	ExecuteDataExport	Executes a ticket that is used to export data.
	GetDataExportDownloadURL	Queries the download URL of an attachment that includes the exported data.
	GetDataExportOrderDetail	Queries the details about a ticket that is used to export data.

Permission management

API	Description
RevokeUserPermission	Revokes the permissions of a user.
ListDatabaseUserPermissions	Queries the details about user permissions on the resources of a database.
SetOwners	Sets the owners of a database or table.
ListUserPermissions	Queries the permissions of a user on databases and tables.
GrantUserPermission	Grants a user the permissions on a database or table.

Security management

API	Description
ListSensitiveColumns	Queries sensitive columns.
ListSensitiveColumnsDetail	Queries the details about sensitive columns.

Data query

API	Description
<code>ExecuteScript</code>	Executes an SQL script.

6.2. User management

6.2.1. RegisterUser

Adds a user to your enterprise.

The **administrator** of Data Management (DMS) Enterprise can call this operation to add users to DMS Enterprise. To check the users that assume the administrator role, perform the following steps: Log on to the DMS Enterprise console and choose System Management > User Management.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RegisterUser	The operation that you want to perform. Set the value to RegisterUser .
Tid	Long	Yes	-1	The ID of the tenant.
Uid	String	Yes	12345678	The ID of the Apsara Stack tenant account of the user that you want to add.
UserNick	String	No	dmstest	The name of the user.
RoleNames	String	No	USER,DBA	The roles that the user assumes. Valid values: • USER: a common user • DBA: a database administrator (DBA) • ADMIN: an administrator • SECURITY_ADMIN: a security administrator  Note Default value: USER. You can specify one or more roles for the user. Separate multiple roles with commas (,).

Parameter	Type	Required	Example	Description
Mobile	String	No	130000000xx	The contact number of the user.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	403	The returned error code.
ErrorMessage	String	The specified user already exists.	The returned error message.
RequestId	String	34E01EDD-6A16-4CF0-9541-C644D1BE01AA	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=RegisterUser
&Tid=-1
&Uid=12345678
&UserNick=dmstest
&<Common request parameters>
```

Sample success responses

XML format

```
<RegisterUserResponse>
  <RequestId>ADE24A7C-DB8B-4D32-94AD-E50E3B921197</RequestId>
  <Success>true</Success>
</RegisterUserResponse>
```

JSON format

```
{
  "RequestId": "34E01EDD-6A16-4CF0-9541-C644D1BE01AA",
  "Success": true
}
```


6.2.2. DisableUser

Disables an Apsara Stack tenant account.

This operation is related to the disable user feature of Data Management (DMS). To use this feature, perform the following steps: Log on to the DMS console, choose System Management > User Management. The administrator of DMS Enterprise can call this operation to disable an Apsara Stack tenant account that is temporarily not used in DMS Enterprise. After an Apsara Stack tenant account is disabled, the permissions that are granted to the Apsara Stack tenant account are revoked. The data owner configurations and database administrator (DBA) configurations are also disabled.

 **Note** This operation only stops an Apsara Stack tenant account from logging on to your DMS Enterprise console. The Apsara Stack tenant account is not disabled. After an Apsara Stack tenant account is disabled, you cannot use the account to log on to your DMS Enterprise console until the account is enabled again. However, the disabled account still exists in DMS Enterprise.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DisableUser	The operation that you want to perform. Set the value to DisableUser .
Tid	Long	Yes	-1	The ID of the tenant.
Uid	String	Yes	12345	The ID of the Apsara Stack tenant account.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	403	The error code that is returned.
ErrorMessage	String	The specified user not exists.	The error message that is returned.
RequestId	String	34E01EDD-6A16-4CF0-9541-C644D1BE01AA	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeds.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DisableUser
&Tid=-1
&Uid=12345
&<Common request parameters>
```

Sample success responses

XML format

```
<DisableUserResponse>
  <RequestId>ADE24A7C-DB8B-4D32-94AD-E50E3B921197</RequestId>
  <Success>true</Success>
</DisableUserResponse>
```

JSON format

```
{
  "RequestId": "34E01EDD-6A16-4CF0-9541-C644D1BE01AA",
  "Success": true
}
```

6.2.3. EnableUser

Enables a disabled Apsara Stack tenant account.

This operation is related to the enable user feature of Data Management (DMS) Enterprise. To use this feature, perform the following steps: Log on to the DMS Enterprise console, choose System Management > User Management. The administrator of DMS Enterprise can call this operation to enable an Apsara Stack tenant account that is disabled in DMS Enterprise. After an Apsara Stack tenant account is enabled, you can use the account to log on to the DMS Enterprise console and perform the required operations.

 **Note** This operation only removes the limit of a disabled Apsara Stack tenant account that cannot be used to log on to the DMS Enterprise console. Other operations that can be performed by the Apsara Stack tenant account are not affected.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	EnableUser	The operation that you want to perform. Set the value to EnableUser .
Tid	Long	Yes	-1	The ID of the tenant.

Parameter	Type	Required	Example	Description
Uid	String	Yes	12345	The ID of the Apsara Stack tenant account.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	403	The returned error code.
ErrorMessage	String	The specified user not exists.	The returned error message.
RequestId	String	34E01EDD-6A16-4CF0-9541-C644D1BE01AA	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=EnableUser
&Tid=-1
&Uid=12345
&<Common request parameters>
```

Sample success responses

XML format

```
<EnableUserResponse>
  <RequestId>ADE24A7C-DB8B-4D32-94AD-E50E3B921197</RequestId>
  <Success>true</Success>
</EnableUserResponse>
```

JSON format

```
{
  "RequestId": "34E01EDD-6A16-4CF0-9541-C644D1BE01AA",
  "Success": true
}
```

6.2.4. UpdateUser

Updates the information of a user.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UpdateUser	The operation that you want to perform. Set the value to UpdateUser .
Tid	Long	Yes	-1	The ID of the tenant.
Uid	Long	Yes	123456789	The ID of the user.
UserNick	String	No	test	The name of the user.
RoleNames	String	No	ADMIN,DBA	The roles that the user assumes. For more information about the valid values, see the RegisterUser operation.
Mobile	String	No	188xxxxxxx	The DingTalk ID or mobile number of the user.
MaxExecuteCount	Long	No	1000	The maximum number of queries that can be performed each day.
MaxResultCount	Long	No	1000	The maximum number of rows that can be queried each day.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The error code that is returned.
ErrorMessage	String	UnknownError	The error message that is returned.

Parameter	Type	Example	Description
RequestId	String	E9BEBF41-4F69-4605-A5D5-A67955173941	The ID of the request.
Success	Boolean	false	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=UpdateUser
&Tid=-1
&Uid=123456789
&UserNick=test
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>E9BEBF41-4F69-4605-A5D5-A67955173941</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "RequestId": "E9BEBF41-4F69-4605-A5D5-A67955173941",
  "Success": true
}
```

6.2.5. DeleteUser

Deletes an Apsara Stack tenant account.

This operation is related to the delete user feature of Data Management (DMS). To use this feature, perform the following steps: Log on to the DMS console, choose System Management > User Management. The administrator of DMS Enterprise can call this operation to delete an Apsara Stack tenant account that is no longer used in DMS Enterprise. After an Apsara Stack tenant account is deleted, the permissions that are granted to the Apsara Stack tenant account are revoked. The data owner configurations and database administrator (DBA) configurations are disabled.

 **Note** This operation only removes the relationship between an Apsara Stack tenant account and your DMS Enterprise. The Apsara Stack tenant account is not deleted. After you delete an Apsara Stack tenant account, you cannot use this account to log on to DMS Enterprise until the account is recreated.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteUser	The operation that you want to perform. Set the value to DeleteUser .
Tid	Long	Yes	-1	The ID of the tenant.
Uid	String	Yes	12345	The ID of the Apsara Stack tenant account.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	403	The error code that is returned.
ErrorMessage	String	The specified user not exists.	The error message that is returned.
RequestId	String	34E01EDD-6A16-4CF0-9541-C644D1BE01AA	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeds.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteUser
&Tid=-1
&Uid=12345
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteUserResponse>
  <RequestId>ADE24A7C-DB8B-4D32-94AD-E50E3B921197</RequestId>
  <Success>true</Success>
</DeleteUserResponse>
```

JSON format

```
{
  "RequestId": "34E01EDD-6A16-4CF0-9541-C644D1BE01AA",
  "Success": true
}
```

6.2.6. ListUsers

Queries the details about users.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListUsers	The operation that you want to perform. Set the value to ListUsers .
Tid	Long	Yes	-1	The ID of the tenant.
Role	String	No	DBA	The role of users. For more information, see the description of the RegisterUser operation.
UserState	String	No	NORMAL	The status of users. Valid values: - NORMAL: Users are normal. - DISABLE: Users are disabled. - DELETE: Uses are deleted.
SearchKey	String	No	test	The keyword that is used to search for users.
PageNumber	Integer	No	1	The number of the page to return.
PageSize	Integer	No	50	The number of entries to return on each page.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.

Parameter	Type	Example	Description
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	98D35416-2B92-4CE5-8FD2-B1E61E165536	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.
TotalCount	Long	1	The total number of entries that are returned.
UserList	Array of User		The details about users.
User			
CurExecuteCount	Long	0	The number of queries that are performed on the current day.
CurResultCount	Long	0	The number of rows that are queried on the current day.
LastLoginTime	String	2020-02-02 00:00:00	The last logon time.
MaxExecuteCount	Long	1000	The maximum number of queries that can be performed on the current day.
MaxResultCount	Long	1000	The maximum number of rows that can be queried on the current day.
Mobile	String	188xxxxx	The DingTalk ID or mobile phone number of the user.
NickName	String	test	The name of the user.
ParentUid	String	143214352	The ID of the parent Apsara Stack tenant account of the user.
RoleIdList	List	1	The IDs of roles.

Parameter	Type	Example	Description
RoleNameList	List	ADMIN	The names of roles.
State	String	NORMAL	The status of the user.
Uid	String	14324321533	The ID of the Apsara Stack tenant account of the user.
UserId	String	1	The ID of the user.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListUsers
&Tid=-1
&<Common request parameters>
```

Sample success responses

`XML` format

```
<UserList>
  <User>
    <RoleIdList>
      <RoleIds>3</RoleIds>
      <RoleIds>1</RoleIds>
    </RoleIdList>
    <State>NORMAL</State>
    <RoleNameList>
      <RoleNames>ADMIN</RoleNames>
      <RoleNames>USER</RoleNames>
    </RoleNameList>
    <NickName>xxx</NickName>
    <UserId>2</UserId>
    <Uid>111</Uid>
  </User>
  <User>
    <RoleIdList>
      <RoleIds>1</RoleIds>
      <RoleIds>3</RoleIds>
    </RoleIdList>
    <State>NORMAL</State>
    <RoleNameList>
      <RoleNames>USER</RoleNames>
      <RoleNames>ADMIN</RoleNames>
    </RoleNameList>
    <NickName>xxx[RAM user]</NickName>
    <ParentUid>111</ParentUid>
    <UserId>1</UserId>
    <Uid>111</Uid>
  </User>
</UserList>
<TotalCount>2</TotalCount>
<RequestId>2D346B20-BF4A-4C96-8295-DE8EB9BF5B90</RequestId>
<Success>true</Success>
```

JSON **format**

```
{
  "UserList": {
    "User": [
      {
        "RoleIdList": {
          "RoleIds": [
            3,
            1
          ]
        },
        "State": "NORMAL",
        "RoleNameList": {
          "RoleNames": [
            "ADMIN",
            "USER"
          ]
        },
        "NickName": "xxx",
        "UserId": 2,
        "Uid": "111"
      },
      {
        "RoleIdList": {
          "RoleIds": [
            1,
            3
          ]
        },
        "State": "NORMAL",
        "RoleNameList": {
          "RoleNames": [
            "USER",
            "ADMIN"
          ]
        },
        "NickName": "xxx[RAM user]",
        "ParentUid": "111",
        "UserId": 1,
        "Uid": "111"
      }
    ]
  },
  "TotalCount": 2,
  "RequestId": "2D346B20-BF4A-4C96-8295-DE8EB9BF5B90",
  "Success": true
}
```

6.2.7. ListUserTenants

Queries tenants.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListUserTenants	The operation that you want to perform. Set the value to ListUserTenants .
RegionId	String	Yes	cn-hangzhou	The ID of the region where DMS resides. This parameter is used to call the operation.  Note Set this parameter to the ID of the region that is in proximity to your applications.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	CA1F4A4D-EE49-472F-8DF9-F537101E263A	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.
TenantList	Array of Tenant		The tenants.
Status	String	ACTIVE	The status of the tenant. Valid values: - ACTIVE: active. All users belong to this tenant. - IN_ACTIVE: inactive
TenantName	String	test	The name of the tenant.
Tid	Long	-1	The ID of the tenant.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListUserTenants
&RegionId=cn-hangzhou
&<Common Request Parameters>
```

Sample success responses

XML format

```
<RequestId>CA1F4A4D-EE49-472F-8DF9-F537101E263A</RequestId>
<TenantList>
  <Status>ACTIVE</Status>
  <TenantName>test1</TenantName>
  <Tid>-1</Tid>
</TenantList>
<TenantList>
  <Status>IN_ACTIVE</Status>
  <TenantName>test2</TenantName>
  <Tid>-2</Tid>
</TenantList>
<TenantList>
  <Status>IN_ACTIVE</Status>
  <TenantName>tes</TenantName>
  <Tid>-3</Tid>
</TenantList>
```

JSON format

```
{
  "RequestId": "CA1F4A4D-EE49-472F-8DF9-F537101E263A",
  "TenantList": [
    {
      "Status": "ACTIVE",
      "TenantName": "test1",
      "Tid": -1
    },
    {
      "Status": "IN_ACTIVE",
      "TenantName": "test2",
      "Tid": -2
    },
    {
      "Status": "IN_ACTIVE",
      "TenantName": "tes",
      "Tid": -3
    }
  ]
}
```

6.2.8. GetUserActiveTenant

Queries the details about a tenant.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetUserActiveTenant	The operation that you want to perform. Set the value to GetUserActiveTenant .
RegionId	String	No	cn-hangzhou	The ID of the region where Data Management (DMS) resides.  Note Set this parameter to the ID of the region that is in proximity to your applications.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	E20EAB9F-A3DB-42EC-BD0C-102A886340F5	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.
Tenant	Struct		The details about the tenant.
Status	String	ACTIVE	The status of the tenant. Valid values: - ACTIVE: active - IN_ACTIVE: inactive
TenantName	String	test	The name of the tenant.
Tid	Long	-1	The ID of the tenant.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GetUserActiveTenant
&<Common request parameters>
```

Sample success responses

XML format

```
<Tenant>
  <Status>ACTIVE</Status>
  <TenantName>test</TenantName>
  <Tid>-1</Tid>
</Tenant>
<RequestId>E20EAB9F-A3DB-42EC-BD0C-102A886340F5</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "Tenant": {
    "Status": "ACTIVE",
    "TenantName": "test",
    "Tid": -1
  },
  "RequestId": "E20EAB9F-A3DB-42EC-BD0C-102A886340F5",
  "Success": true
}
```

6.2.9. GetUser

Queries the details of a user.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetUser	The operation that you want to perform. Set the value to GetUser .
Tid	Long	Yes	-1	The ID of the tenant.
Uid	String	No	123344235	The ID of the Apsara Stack tenant account of the user.
UserId	String	No	1343	The ID of the user.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	CFF30064-5985-4ACB-B3F9-9557596913C8	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.
User	Struct		The information about the user.
CurExecuteCount	Long	0	The number of queries that were issued on the current day.
CurResultCount	Long	0	The number of rows that were queried on the current day.
LastLoginTime	String	2020-02-02 00:00:00	The last logon time.
MaxExecuteCount	Long	1000	The maximum number of queries that can be performed on the current day.
MaxResultCount	Long	1000	The maximum number of rows that can be queried on the current day.
Mobile	String	138xxxxxxx	The mobile phone number of the user.
NickName	String	nickName	The name of the user.
ParentUid	Long	12345352	The ID of the Apsara Stack tenant account.
RoleIdList	List	1	The IDs of the roles.
RoleNameList	List	Common user	The names of the roles.

Parameter	Type	Example	Description
State	String	NORMAL	The status of the user.
Uid	String	1243215435	The ID of the Apsara Stack tenant account of the user.
UserId	String	122	The ID of the user.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GetUser
&Tid=-1
&<Common request parameters>
```

Sample success responses

XML format

```
<User>
  <RoleIdList>
    <RoleIds>1</RoleIds>
    <RoleIds>4</RoleIds>
    <RoleIds>3</RoleIds>
    <RoleIds>2</RoleIds>
  </RoleIdList>
  <State>NORMAL</State>
  <RoleNameList>
    <RoleNames>Common user</RoleNames>
    <RoleNames>Security administrator</RoleNames>
    <AccountDescription>Administrator</AccountDescription>
    <RoleNames>DBA</RoleNames>
  </RoleNameList>
  <NickName>xxx</NickName>
  <ParentUid>114324325</ParentUid>
  <UserId>432143</UserId>
  <Uid>41234234324</Uid>
</User>
<RequestId>CFF30064-5985-4ACB-B3F9-9557596913C8</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "User": {
    "RoleIdList": {
      "RoleIds": [
        1,
        4,
        3,
        2
      ]
    },
    "State": "NORMAL",
    "RoleNameList": {
      "RoleNames": [
        "Common user",
        "Security administrator",
        "Administrator",
        "DBA"
      ]
    },
    "NickName": "xxx",
    "ParentUid": "114324325",
    "UserId": 432143,
    "Uid": "41234234324"
  },
  "RequestId": "CFF30064-5985-4ACB-B3F9-9557596913C8",
  "Success": true
}
```

6.3. Instance management

6.3.1. RegisterInstance

Adds a database instance to your enterprise.

The **administrator and database administrator (DBA)** of Data Management (DMS) Enterprise can call this operation to add database instances to DMS Enterprise. To check users who assume the administrator or DBA role, perform the following steps: Log on to the DMS Enterprise console and choose System Management > User Management.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RegisterInstance	The operation that you want to perform. Set the value to RegisterInstance .
Tid	Long	Yes	-1	The ID of the tenant.

Parameter	Type	Required	Example	Description
InstanceType	String	Yes	MySQL	The type of the database instance. Valid values: - MySQL - SQLServer - PostgreSQL - Oracle - DRDS - OceanBase - Mongo - Redis
InstanceSource	String	Yes	RDS	The source of the database instance. Valid values: PUBLIC_OWN: a self-managed database that is created in the public network. RDS: an ApsaraDB RDS instance. ECS_OWN: a self-managed database that is created on an Elastic Compute Service (ECS) instance. VPC_IDC: a self-managed database that is created in the Internet data center (IDC) of a virtual private cloud (VPC).
NetworkType	String	Yes	VPC	The type of the network.
EnvType	String	Yes	product	The type of the environment. Valid values: - product: production environment - dev: development environment - pre: staging environment - test: test environment - sit: SIT environment - uat: UAT environment - pet: stress testing environment - stag: STAG environment
Host	String	Yes	dmstest.rds.aliyun.com	The host address of the required database.

Parameter	Type	Required	Example	Description
Port	Integer	Yes	3306	The number of the port that is used to connect to the required database.
DatabaseUser	String	Yes	dmstest	The username of the account that is used to log on to the database.
DatabasePassword	String	Yes	password	The password of the account.
InstanceAlias	String	Yes	Test instance	The name of the instance. Specify a name that can help you identify and locate the instance.
Dbaid	Long	Yes	12345678	The ID of the Apsara Stack tenant account for the database administrator (DBA) of the instance.
SafeRule	String	Yes	Test	The name of the security rule that belongs to your enterprise.
QueryTimeout	Integer	Yes	60	The timeout period for the query. Unit: seconds.
ExportTimeout	Integer	Yes	600	The timeout period for the export. Unit: seconds.
EcsInstanceId	String	No	i-xxxxxxx	The ID of the ECS instance.  Note This parameter is required if the InstanceSource parameter is set to ECS_OWN.
VpcId	String	No	vpc-xxxxxxxxxxxxxxx	The ID of the VPC.  Note This parameter is required if the InstanceSource parameter is set to VPC_IDC.

Parameter	Type	Required	Example	Description
EcsRegion	String	No	cn-hangzhou	The region where the instance resides.  Note This parameter is required if the InstanceSource parameter is set to RDS, ECS_OWN, or VPC_IDC.
Sid	String	No	dmstest	The system identifier (SID) of the database.  Note This parameter is required if the InstanceType parameter is set to PostgreSQL or Oracle.
DataLinkName	String	No	dblink_test	The name of the data link for cross-database queries.
DdlOnline	Integer	No	2	Specifies whether to enable the online data description language (DDL) service. This service is available only for the MySQL and PolarDB databases. 0: The service is disabled. 1: The native online DDL service takes precedence. 2: Data changes for the schema of lock-free DMS tables take precedence.
UseDsql	Integer	No	1	Specifies whether to enable the cross-database query feature for the instance. Valid values: 0: Disable the feature. 1: Enable the feature.
SkipTest	Boolean	No	true	Specifies whether to skip the connection test. Valid values: true: Skip the connection test. false: Perform the connection test.

Parameter	Type	Required	Example	Description
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	404	The returned error code.
ErrorMessage	String	The specified instance already exists.	The returned error message.
RequestId	String	F4E2A94B-604F-43FF-93E7-F4EE3DCF412E	The ID of the request. Each request has a unique ID.
Success	Boolean	true	true: The request succeeded. false: The request failed.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=RegisterInstance
&Tid=-1
&InstanceType=MySQL
&InstanceSource=RDS
&NetworkType=VPC
&EnvType=product
&Host=dmstest.rds.aliyun.com
&Port=3306
&DatabaseUser=dmstest
&DatabasePassword=password
&InstanceAlias=Test instance
&DbUid=12345678
&SafeRule=Test
&QueryTimeout=60
&ExportTimeout=600
&<Common request parameters>
```

Sample success responses

XML format

```
<RegisterInstanceResponse>
  <RequestId>D4F02899-CE79-4DFD-9893-5217DA70B363</RequestId>
  <Success>true</Success>
</RegisterInstanceResponse>
```

JSON **format**

```
{
  "RequestId": "F4E2A94B-604F-43FF-93E7-F4EE3DCF412E",
  "Success": true
}
```

SDK for Python example

The following example shows how to add an instance that resides in VPC.

```

#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkdms_enterprise.request.v20181101.RegisterInstanceRequest import RegisterInstanceRequest
client = AcsClient(
    "<your-access-key-id>",
    "<your-access-key-secret>",
    "<your-region-id>"
)
# Example
request = RegisterInstanceRequest()
# The ID of the tenant.
request.set_Tid(1)
# The endpoint of the instance.
request.set_Host("192.168.16.113")
# The number of the port that is used to connect to the instance.
request.set_Port(3314)
# The type of the database, for example, MySQL.
request.set_InstanceType("MySQL")
# The source of the instance, for example, VPC_IDC.
request.set_InstanceSource("VPC_IDC")
# The network type, for example, VPC.
request.set_NetworkType("VPC")
request.set_EnvType("PRODUCT")
# request.set_EcsInstanceId()
# The ID of the VPC to which the instance belongs.
request.set_VpcId("VPC ID of the instance")
# The region ID of the ECS instance in which the database resides, for example, cn-hangzhou.
request.set_EcsRegion("Region ID of the ECS instance")
# request.set_Sid();
# The username of the account that is used to log on to the database.
request.set_DatabaseUser("Logon username of the database")
# The password of the account.
request.set_DatabasePassword("Logon password of the database")
# The alias of the instance. Specify an alias that helps you identify the related instance in DMS Enterprise.
request.set_InstanceAlias("Alias of the instance")
# The ID of the Apsara Stack tenant account for the database administrator (DBA) of the instance. The user must first be added to DMS Enterprise by using the console or the required API operation.
request.set_DbaUid(-1)
request.set_SafeRule("Name of the security rule that is configured in DMS Enterprise")
request.set_QueryTimeout(60)
request.set_ExportTimeout(600)
response = client.do_action_with_exception(request)
print response

```

6.3.2. ListInstances

Queries the details about instances.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListInstances	The operation that you want to perform. Set the value to ListInstances .
Tid	Long	No	-1	The ID of the tenant.
SearchKey	String	No	test	The keyword that is used to search for instances.
DbType	String	No	MySQL	The type of databases.
EnvType	String	No	product	The type of the environment to which instances belong.
InstanceSource	String	No	RDS	The source of instances.
NetType	String	No	VPC	The network environment of instances. For more information, see the description of the RegisterInstance operation.
InstanceState	String	No	NORMAL	The status of instances. Valid values: - NORMAL: Instances functions as expected. - DISABLE: Instances are disabled.
PageNumber	Integer	No	1	The number of the page to return.
PageSize	Integer	No	50	The number of entries to return on each page. Maximum value: 100.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
-----------	------	---------	-------------

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The error code that is returned.
ErrorMessage	String	UnknownError	The error message that is returned.
InstanceList	Array of Instance		The instances.
Instance			
DataLinkName	String	dblink_test	The name of the data link for the instance.
DatabasePassword	String	*****	The password of the account that is used to log on to the database.
DatabaseUser	String	dbUser	The username of the account that is used to log on to the database.
Dbald	String	1	The ID of the database administrator (DBA) for the instance.
DbaNickName	String	dbaName	The name of the DBA.
DdlOnline	Integer	1	The configuration of the online data description language (DDL) feature for the instance.
EcsInstanceId	String	xxx	The ID of the ECS instance.
EcsRegion	String	cn-hangzhou	The region to which the ECS instance belongs.
EnvType	String	product	The type of the environment to which the instance belongs.
ExportTimeout	Integer	600	The timeout period to export the instance.
Host	String	xxx.xxx.xxx.xxx	The endpoint of the instance.
InstanceAlias	String	test	The alias of the instance.

Parameter	Type	Example	Description
InstanceId	String	1	The ID of the instance.
InstanceSource	String	RDS	The source of the instance.
InstanceType	String	mysql	The type of the database for the instance.
OwnerIdList	List	1	The IDs of the owners of the database.
OwnerNameList	List	11	The names of the owners of the database.
Port	Integer	3306	The number of the port that is used to connect to the instance.
QueryTimeout	Integer	60	The timeout period to query the instance.
SafeRuleId	String	1	The ID of the security rule for the instance.
Sid	String	test	The system identifier (SID) of the instance.
State	String	NORMAL	The status of the instance.
UseDsql	Integer	1	Indicates whether the cross-database query feature is enabled for the instance.
VpcId	String	xxx	The ID of the virtual private cloud (VPC) to which the instance belongs.
RequestId	String	B4B07137-F6AE-4756-8474-7F92BB6C4E04	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.
TotalCount	Long	0	The total number of entries that are returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListInstances
&<Common request parameters>
```

Sample success responses

XML format

```
<TotalCount>7</TotalCount>
<RequestId>98D35416-2B92-4CE5-8FD2-B1E61E165536</RequestId>
<Success>true</Success>
<InstanceList>
</InstanceList>
```

JSON format

```
{
  "TotalCount": 7,
  "RequestId": "98D35416-2B92-4CE5-8FD2-B1E61E165536",
  "Success": true,
  "InstanceList": {
    "Instance": [
    ]
  }
}
```

6.3.3. GetInstance

Queries the details about an instance.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetInstance	The operation that you want to perform. Set the value to GetInstance .
Host	String	Yes	xxx.mysql.rds.aliyuncs.com	The endpoint of the instance.
Port	Integer	Yes	3306	The number of the port that is used to connect to the instance.
Tid	Long	Yes	-1	The ID of the tenant.
Sid	String	No	test	The system identifier (SID) of the instance.

Parameter	Type	Required	Example	Description
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The error code that is returned.
ErrorMessage	String	UnknownError	The error message that is returned.
Instance	Struct		The details about the instance.
DataLinkName	String	test	The name of the data link for the instance.
DatabasePassword	String	*****	The logon password of the instance.
DatabaseUser	String	dbuser	The logon username of the instance.
DbId	String	1	The ID of the database administrator (DBA) for the instance. You can call the ListUsers operation to obtain the ID.
DbNickName	String	dbaname	The name of the DBA for the instance.
DdlOnline	Integer	1	Indicates whether the online data description language (DDL) service is enabled for the instance.
EcsInstanceId	String	xxx	The ID of the ECS instance.
EcsRegion	String	cn-hangzhou	The ID of the region in which the instance resides.
EnvType	String	test	The type of the environment to which the instance belongs.
ExportTimeout	Integer	600	The timeout period to export the instance.

Parameter	Type	Example	Description
Host	String	xxx.rwlb.rds.aliyuncs.com	The endpoint of the instance.
InstanceAlias	String	test	The alias of the instance.
InstanceId	String	1	The ID of the instance.
InstanceSource	String	RDS	The source of the instance.
InstanceType	String	polardb	The database type of the instance.
OwnerIdList	List	88656	The IDs of the owners of the instance.
OwnerNameList	List	xxx	The names of the owners of the instance.
Port	Integer	3306	The number of the port that is used to connect to the instance.
QueryTimeout	Integer	60	The timeout period to query the instance.
SafeRuleId	String	1	The ID of the security rule of the instance.
Sid	String	test	The SID of the instance.
State	String	NORMAL	The status of the instance.
UseDsql	Integer	1	Indicates whether the cross-database query feature is enabled for the instance.
VpcId	String	xxx	The ID of the VPC to which the instance belongs.
RequestId	String	8BE73E78-76E2-46AA-970D-A4579A16CD4A	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GetInstance
&Host=xxxx.mysql.rds.aliyuncs.com
&Port=3306
&Tid=-1
&<Common request parameters>
```

Sample success responses

XML format

```
<Instance>
  <SafeRuleId>1037</SafeRuleId>
  <UseDsql>1</UseDsql>
  <EcsInstanceId>pc-xxx</EcsInstanceId>
  <QueryTimeout>80</QueryTimeout>
  <Host>xxx.rwlb.rds.aliyuncs.com</Host>
  <InstanceAlias>test</InstanceAlias>
  <InstanceSource>RDS</InstanceSource>
  <InstanceId>24710</InstanceId>
  <DataLinkName>dblink_test</DataLinkName>
  <EnvType>dev</EnvType>
  <DdlOnline>0</DdlOnline>
  <VpcId>vpc-xxx</VpcId>
  <InstanceType>polardb</InstanceType>
  <DbId>104442</DbId>
  <Port>3306</Port>
  <DbNickName>test[RAM user]</DbNickName>
  <State>NORMAL</State>
  <DatabaseUser>dmstest</DatabaseUser>
  <DatabasePassword>*****</DatabasePassword>
  <EcsRegion>cn-hangzhou</EcsRegion>
  <ExportTimeout>300</ExportTimeout>
</Instance>
<RequestId>8BE73E78-76E2-46AA-970D-A4579A16CD4A</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "Instance": {
    "SafeRuleId": 1037,
    "UseDsql": "1",
    "EcsInstanceId": "pc-xxx",
    "QueryTimeout": 80,
    "Host": "xxx.rwlb.rds.aliyuncs.com",
    "InstanceAlias": "test",
    "InstanceSource": "RDS",
    "InstanceId": 24710,
    "DataLinkName": "dblink_test",
    "EnvType": "dev",
    "DdlOnline": 0,
    "VpcId": "vpc-xxx",
    "InstanceType": "polardb",
    "Dbaid": 104442,
    "Port": 3306,
    "DbaNickName": <DbaNickName>test[RAM user]</DbaNickName>
    "State": "NORMAL",
    "DatabaseUser": "dmstest",
    "DatabasePassword": "*****",
    "EcsRegion": "cn-hangzhou",
    "ExportTimeout": 300
  },
  "RequestId": "8BE73E78-76E2-46AA-970D-A4579A16CD4A",
  "Success": true
}
```

6.3.4. UpdateInstance

Updates the information about a database instance and checks the connectivity of the instance.

Before you call this operation to update the information about an instance, we recommend that you call the `GetInstance` operation to obtain the complete information about the instance. Then, you can set the required parameters based on the information that you obtain.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UpdateInstance	The operation that you want to perform. Set the value to UpdateInstance .
DatabasePassword	String	Yes	*****	The password of the database account.

Parameter	Type	Required	Example	Description
DatabaseUser	String	Yes	dbuser	The username of the database account.
Dbald	String	Yes	1	The ID of the database administrator (DBA) for the instance. You can call the ListUsers operation to query the ID.
EnvType	String	Yes	test	The type of the environment to which the instance belongs.
ExportTimeout	Integer	Yes	600	The timeout period to export of the instance.
Host	String	Yes	xxxx.mysql.rds.aliyuncs.com	The endpoint of the instance.
InstanceAlias	String	Yes	test	The alias of the instance.
InstanceId	String	Yes	1	The ID of the instance. You can call the GetInstance operation to query the ID.
InstanceSource	String	Yes	RDS	The source of the instance. You can call the RegisterInstance operation to query the source.
InstanceType	String	Yes	MySQL	The type of the instance. You can call the RegisterInstance operation to query the type.
Port	Integer	Yes	3306	The port of the instance.
QueryTimeout	Integer	Yes	60	The timeout period to query the instance.
SafeRuleId	String	Yes	1	The ID of the security rule of the instance.
Tid	Long	Yes	-1	The ID of the tenant.

Parameter	Type	Required	Example	Description
EcsInstanceId	String	No	xxx	The ID of the ECS instance.
VpcId	String	No	xxx	The ID of the VPC to which the instance belongs.
EcsRegion	String	No	cn-hangzhou	The ID of the region in which the instance resides.
Sid	String	No	xxx	The system identifier (SID) of the instance.
DataLinkName	String	No	datalink_test	The name of the data link for the instance.
DdlOnline	Integer	No	1	Specifies whether to enable the online data description language (DDL) service for the instance. For more information about the valid values, see the description of the RegisterInstance operation.
UseDsql	Integer	No	1	Specifies whether to enable the cross-database query feature for the instance.
SkipTest	Boolean	No	true	Specifies whether to skip the connectivity check. Valid values: - true: Skip the connectivity check. - false: Perform the connectivity check.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The error code that is returned.

Parameter	Type	Example	Description
ErrorMessage	String	UnknownError	The error message that is returned.
RequestId	String	E9BEBF41-4F69-4605-A5D5-A67955173941	The ID of the request.
Success	Boolean	false	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=UpdateInstance
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>E9BEBF41-4F69-4605-A5D5-A67955173941</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "RequestId": "E9BEBF41-4F69-4605-A5D5-A67955173941",
  "Success": true
}
```

6.3.5. DeleteInstance

Removes a database instance from Data Management (DMS) Enterprise.

This operation only removes a database instance from the DMS Enterprise console. The database instance is not disabled.

Request parameters

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

Parameter	Type	Required	Example	Description
Host	String	Yes	xxx.mysql.rds.aliyuncs.com	The endpoint of the database instance to be removed.
Port	Integer	Yes	3306	The connection port of the database instance to be removed.
Tid	Long	Yes	-1	The ID of the tenant.
Sid	String	No	testSid	The SID of the database instance to be removed.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	B4B07137-F6AE-4756-8474-7F92BB6C4E04	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteInstance
&Host=xxx.mysql.rds.aliyuncs.com
&Port=3306
&Tid=-1
&<Common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>B4B07137-F6AE-4756-8474-7F92BB6C4E04</RequestId>
<ErrorCode>UnknownError</ErrorCode>
<ErrorMessage>UnknownError</ErrorMessage>
<Success>true</Success>
```

JSON **format**

```
{"RequestId": "B4B07137-F6AE-4756-8474-7F92BB6C4E04", "ErrorCode": "UnknownError", "ErrorMessage": "UnknownError", "Success": "true"}
```

6.4. Operation logs

6.4.1. GetOpLog

Queries the details about operation logs that are generated in a specified period.

The **administrator** and **security administrator** roles of an account can all this operation. For more information about account roles, see [User management](#).

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetOpLog	The operation that you want to perform. Set the value to GetOpLog .
Tid	Long	Yes	-1	The ID of the tenant.
StartTime	String	Yes	2018-11-01 10:00:00	The start of the time range to query. The time must be specified in the yyyy-MM-ddTHH:mm:ssZ format.
EndTime	String	Yes	2018-11-01 11:00:00	The end of the time range to query. The time must be specified in the yyyy-MM-ddTHH:mm:ssZ format.
PageNumber	Integer	Yes	3	The number of the page to return. Pages start from page 1.
PageSize	Integer	Yes	30	The number of entries to return on each page. Valid values: • 30 • 50 • 100

Parameter	Type	Required	Example	Description
Module	String	No	PERMISSION	The function module that specifies the type of operation logs that you want to return. If you do not set this parameter, all operation logs that are generated in the specified time range are returned. Valid values: • PERMISSION: permissions • OWNER: data owner • SQL_CONSOLE: data query • SQL_CONSOLE_EXPORT: query result export • DATA_CHANGE: data change • DATA_EXPORT: data export • SQL_REVIEW: SQL review • DT_SYNC: database and table synchronization • DT_DETAIL: database and table details • DB_TASK: task management • INSTANCE_MANAGE: instance management • USER_MANAGE: user management • SECURITY_RULE: security rules • CONFIG_MANAGE: configuration management • RESOURCE_AUTH: resource authorization • ACCESS_WHITE_IP: access to IP whitelists
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	403	The returned error code.
ErrorMessage	String	The specified request parameter is invalid.	The error message that is returned.

Parameter	Type	Example	Description
OpLogDetails	Array of OpLogDetail		The details about operation logs.
OpLogDetail			
Database	String	dmstest_prod_data base@dmstest.rds.. [Test instance]	The endpoint of the database. A value is returned for this parameter only when the database type is set to LocalInstance .  Note
Module	String	PERMISSION	The function module.
OpContent	String	Apply for permissions	The details about the operation.
OpTime	String	2018-11-01 10:00:00	The time when the operation was performed.
OrderId	Long	1	The ID of the ticket or task.  Note
UserId	Long	12345678	The ID of the Apsara Stack tenant account.
UserNick	String	dmstest	The name of the user.
RequestId	String	47D56208-DB1D- 4FD3-BE32- 300E43185488	The ID of the request. Each request has a unique ID.
Success	Boolean	true	Indicates whether the request succeeded.
TotalCount	Long	22	The total number of operation logs.

Examples

Sample requests

```

http(s)://[Endpoint]/?Action=GetOpLog
&Tid=-1
&StartTime=2018-11-01 10:00:00
&EndTime=2018-11-01 11:00:00
&PageNumber=3
&PageSize=30
&<Common request parameters>

```

Sample success response

XML format

```

<OpLogDetails>
  <OpLogDetail>
    <OpContent>(Successful. Number of rows: 1.)SELECT (data_length + index_length) AS s
tore_capacity FROM information_schema.tables WHERE table_type = &#39;BASE TABLE&#39
; AND `table_schema` = &#39;dmstest_database&#39; AND `table_name` = &#39;multi
_db_multi_tbl&#39;</OpContent>
    <UserNick>dmstest</UserNick>
    <Database>dmstest_database@dmstest.rds...(test)</Database>
    <UserId>12345678</UserId>
    <OpTime>2018-11-22 20:04:10</OpTime>
    <Module>Data query</Module>
  </OpLogDetail>
  <OpLogDetail>
    <OpContent>(Successful. Number of rows: 1.)SELECT (data_length + index_length) AS s
tore_capacity FROM information_schema.tables WHERE table_type = &#39;BASE TABLE&#39
; AND `table_schema` = &#39;dmstest_database&#39; AND `table_name` = &#39;multi
_db_multi_tbl&#39;</OpContent>
    <UserNick>dmstest</UserNick>
    <Database>dmstest_database@dmstest.rds...(test)</Database>
    <UserId>12345678</UserId>
    <OpTime>2018-11-22 20:04:06</OpTime>
    <Module>Data query</Module>
  </OpLogDetail>
  <OpLogDetail>
    <OpContent>(Successful. Number of rows: 24.)show topology FROM multi_db_multi_tbl</
OpContent>
    <UserNick>dmstest</UserNick>
    <Database>dmstest_database@dmstest.rds...(test)</Database>
    <UserId>12345678</UserId>
    <OpTime>2018-11-22 20:03:55</OpTime>
    <Module>Data query</Module>
  </OpLogDetail>
  <OpLogDetail>
    <OpContent>(Successful. Number of rows: 1.)SELECT (data_length + index_length) AS s
tore_capacity FROM information_schema.tables WHERE table_type = &#39;BASE TABLE&#39
; AND `table_schema` = &#39;dmstest_database&#39; AND `table_name` = &#39;user_
log3&#39;</OpContent>
    <UserNick>dmstest</UserNick>
    <Database>dmstest_database@dmstest.rds...(test)</Database>
    <UserId>12345678</UserId>
    <OpTime>2018-11-22 20:02:59</OpTime>
    <Module>Data query</Module>

```



```

    </OpLogDetail>
    <OpLogDetail>
        <OpContent>(Successful. Number of rows: 1.)SELECT (data_length + index_length) AS s
tore_capacity FROM information_schema.tables WHERE table_type = &#39;BASE TABLE&#39
; AND `table_schema` = &#39;dmstest_database&#39; AND `table_name` = &#39;user_
log3&#39;</OpContent>
        <UserNick>dmstest</UserNick>
        <Database>dmstest_database@dmstest.rds...(test)</Database>
        <UserId>12345678</UserId>
        <OpTime>2018-11-22 20:02:49</OpTime>
        <Module>Data query</Module>
    </OpLogDetail>
    <OpLogDetail>
        <OpContent>(Successful. Number of rows: 1.)show CREATE TABLE user_log3</OpContent>
        <UserNick>dmstest</UserNick>
        <Database>dmstest_database@dmstest.rds...(test)</Database>
        <UserId>12345678</UserId>
        <OpTime>2018-11-22 14:34:05</OpTime>
        <Module>Data query</Module>
    </OpLogDetail>
    <OpLogDetail>
        <OpContent>(Successful. Number of rows: 9.)SELECT `TABLE_NAME` FROM information_sch
ema.tables WHERE TABLE_TYPE = &#39;BASE TABLE&#39; AND table_schema = &#39;dmst
est_database&#39;</OpContent>
        <UserNick>dmstest</UserNick>
        <Database>dmstest_database@dmstest.rds...(test)</Database>
        <UserId>12345678</UserId>
        <OpTime>2018-11-22 14:33:54</OpTime>
        <Module>Data query</Module>
    </OpLogDetail>
    <OpLogDetail>
        <OpContent>Creates an SQL task. Task ID: 5486.</OpContent>
        <UserNick>dmstest</UserNick>
        <Database>dmstest_database@dmstest.rds...(test)</Database>
        <UserId>12345678</UserId>
        <OpTime>2018-11-22 14:26:57</OpTime>
        <Module>Task management</Module>
    </OpLogDetail>
    <OpLogDetail>
        <OpContent>Creates an SQL task. Task ID: 5485.</OpContent>
        <UserNick>dmstest</UserNick>
        <Database>dmstest_database@dmstest.rds...(test)</Database>
        <UserId>12345678</UserId>
        <OpTime>2018-11-22 14:23:55</OpTime>
        <Module>Task management</Module>
    </OpLogDetail>
    <OpLogDetail>
        <OpContent>Creates an SQL task. Task ID: 5484.</OpContent>
        <UserNick>dmstest</UserNick>
        <Database>dmstest_database@dmstest.rds...(test)</Database>
        <UserId>12345678</UserId>
        <OpTime>2018-11-22 14:23:30</OpTime>
        <Module>Task management</Module>
    </OpLogDetail>

```

```

<OpLogDetail>
  <OpContent>Creates an SQL task. Task ID: 5483.</OpContent>
  <UserNick>dmstest</UserNick>
  <Database>dmstest_database@dmstest.rds...(test)</Database>
  <UserId>12345678</UserId>
  <OpTime>2018-11-22 14:23:11</OpTime>
  <Module>Task management</Module>
</OpLogDetail>
<OpLogDetail>
  <OpContent>(Successful. Number of rows: 1.)show CREATE TABLE multi_db_single_tbl</OpContent>
  <UserNick>dmstest</UserNick>
  <Database>dmstest_database@dmstest.rds...(test)</Database>
  <UserId>12345678</UserId>
  <OpTime>2018-11-22 14:22:30</OpTime>
  <Module>SQL_CONSOLE</Module>
</OpLogDetail>
<OpLogDetail>
  <OpContent>(Successful. Number of rows: 2.)SELECT `TABLE_NAME` FROM information_schema.tables WHERE TABLE_TYPE = &#39;BASE TABLE&#39; AND table_schema = &#39;dmstest_database&#39;</OpContent>
  <UserNick>dmstest</UserNick>
  <Database>dmstest_database@dmstest.rds...(test)</Database>
  <UserId>12345678</UserId>
  <OpTime>2018-11-22 14:22:15</OpTime>
  <Module>Data query</Module>
</OpLogDetail>
<OpLogDetail>
  <OpContent>(Successful. Number of rows: 2.)SELECT `TABLE_NAME` FROM information_schema.tables WHERE TABLE_TYPE = &#39;BASE TABLE&#39; AND table_schema = &#39;dmstest_database&#39;</OpContent>
  <UserNick>dmstest</UserNick>
  <Database>dmstest_database@dmstest.rds...(test)</Database>
  <UserId>12345678</UserId>
  <OpTime>2018-11-22 14:19:31</OpTime>
  <Module>Data query</Module>
</OpLogDetail>
<OpLogDetail>
  <OpContent>Creates an SQL task. Task ID: 5482.</OpContent>
  <UserNick>dmstest</UserNick>
  <Database>dmstest_database@dmstest.rds...(test)</Database>
  <UserId>12345678</UserId>
  <OpTime>2018-11-22 14:19:25</OpTime>
  <Module>Task management</Module>
</OpLogDetail>
<OpLogDetail>
  <OpContent>(Successful. Number of rows: 1.)SELECT `TABLE_NAME` FROM information_schema.tables WHERE TABLE_TYPE = &#39;BASE TABLE&#39; AND table_schema = &#39;dmstest_database&#39;</OpContent>
  <UserNick>dmstest</UserNick>
  <Database>dmstest_database@dmstest.rds...(test)</Database>
  <UserId>12345678</UserId>
  <OpTime>2018-11-22 14:18:57</OpTime>
  <Module>Data query</Module>

```

```

</OpLogDetail>
<OpLogDetail>
  <OpContent>Creates an SQL task. Task ID: 5481.</OpContent>
  <UserNick>dmstest</UserNick>
  <Database>dmstest_database@dmstest.rds...(test)</Database>
  <UserId>12345678</UserId>
  <OpTime>2018-11-22 14:18:46</OpTime>
  <Module>Task management</Module>
</OpLogDetail>
<OpLogDetail>
  <OpContent>(Successful. Number of rows: 0.)SELECT `TABLE_NAME` FROM information_sch
ema.tables WHERE TABLE_TYPE = &#39;BASE TABLE&#39; AND table_schema = &#39;dmst
est_database&#39;</OpContent>
  <UserNick>dmstest</UserNick>
  <Database>dmstest_database@dmstest.rds...(test)</Database>
  <UserId>12345678</UserId>
  <OpTime>2018-11-22 14:04:13</OpTime>
  <Module>Data query</Module>
</OpLogDetail>
<OpLogDetail>
  <OpContent>(Successful. Number of rows: 0.)SELECT `TABLE_NAME` FROM information_sch
ema.tables WHERE TABLE_TYPE = &#39;BASE TABLE&#39; AND table_schema = &#39;dmst
est_database&#39;</OpContent>
  <UserNick>dmstest</UserNick>
  <Database>dmstest_database@dmstest.rds...(test)</Database>
  <UserId>12345678</UserId>
  <OpTime>2018-11-22 14:04:08</OpTime>
  <Module>Data query</Module>
</OpLogDetail>
<OpLogDetail>
  <OpContent>(Successful. Number of rows: 0.)SELECT `TABLE_NAME` FROM information_sch
ema.tables WHERE TABLE_TYPE = &#39;BASE TABLE&#39; AND table_schema = &#39;dmst
est_database&#39;</OpContent>
  <UserNick>dmstest</UserNick>
  <Database>dmstest_database@dmstest.rds...(test)</Database>
  <UserId>12345678</UserId>
  <OpTime>2018-11-22 12:11:41</OpTime>
  <Module>Data query</Module>
</OpLogDetail>
<OpLogDetail>
  <OpContent>The administrator or DBA changes the owner of a database. Database name:
dmstest_database@dmstest.rds...(test)</OpContent>
  <UserNick>dmstest</UserNick>
  <Database>dmstest_database@dmstest.rds...(test)</Database>
  <UserId>12345678</UserId>
  <OpTime>2018-11-22 12:11:14</OpTime>
  <Module>Data owner</Module>
</OpLogDetail>
<OpLogDetail>
  <OpContent>The administrator or DBA changes the owner of a database. Database name:
dmstest_prod_database@dmstest.rds...(test)</OpContent>
  <UserNick>dmstest</UserNick>
  <Database>dmstest_prod_database@dmstest.rds...(test)</Database>
  <UserId>12345678</UserId>

```

```

        <OpTime>2018-11-22 12:11:07</OpTime>
        <Module>Data owner</Module>
    </OpLogDetail>
</OpLogDetails>
<TotalCount>22</TotalCount>
<RequestId>47D56208-DB1D-4FD3-BE32-300E43185488</RequestId>
<Success>true</Success>

```

JSON format

```

{
  "OpLogDetails": {
    "OpLogDetail": [{
      "OpContent": "(Successful. Number of rows: 1.)SELECT (data_length + index_length) AS store_capacity FROM information_schema.tables WHERE table_type = 'BASE TABLE' AND `table_schema` = 'dmstest_database' AND `table_name` = 'multi_db_multi_tbl'",
      "UserNick": "dmstest",
      "Database": "dmstest_database@dmstest.rds...(test)",
      "UserId": 12345678,
      "OpTime": "2018-11-22 20:04:10",
      "Module": "Data query"
    }, {
      "OpContent": "(Successful. Number of rows: 1.)SELECT (data_length + index_length) AS store_capacity FROM information_schema.tables WHERE table_type = 'BASE TABLE' AND `table_schema` = 'dmstest_database' AND `table_name` = 'multi_db_multi_tbl'",
      "UserNick": "dmstest",
      "Database": "dmstest_database@dmstest.rds...(test)",
      "UserId": 12345678,
      "OpTime": "2018-11-22 20:04:06",
      "Module": "Data query"
    }, {
      "OpContent": "(Successful. Number of rows: 24.)show topology FROM multi_db_multi_tbl",
      "UserNick": "dmstest",
      "Database": "dmstest_database@dmstest.rds...(test)",
      "UserId": 12345678,
      "OpTime": "2018-11-22 20:03:55",
      "Module": "Data query"
    }, {
      "OpContent": "(Successful. Number of rows: 1.)SELECT (data_length + index_length) AS store_capacity FROM information_schema.tables WHERE table_type = 'BASE TABLE' AND `table_schema` = 'dmstest_database' AND `table_name` = 'user_log3'",
      "UserNick": "dmstest",
      "Database": "dmstest_database@dmstest.rds...(test)",
      "UserId": 12345678,
      "OpTime": "2018-11-22 20:02:59",
      "Module": "Data query"
    }, {
      "OpContent": "(Successful. Number of rows: 1.)SELECT (data_length + index_length) AS store_capacity FROM information_schema.tables WHERE table_type = 'BASE TABLE' AND `table_schema` = 'dmstest_database' AND `table_name` = 'user_log3'",
      "UserNick": "dmstest",
      "Database": "dmstest_database@dmstest.rds...(test)",
      "UserId": 12345678,
      "OpTime": "2018-11-22 20:02:49",

```

```

    "Module": "Data query"
  }, {
    "OpContent": "(Successful. Number of rows: 1.)show CREATE TABLE user_log3",
    "UserNick": "dmstest",
    "Database": "dmstest_database@dmstest.rds...(test)",
    "UserId": 12345678,
    "OpTime": "2018-11-22 14:34:05",
    "Module": "Data query"
  }, {
    "OpContent": "(Successful. Number of rows: 9.)SELECT `TABLE_NAME` FROM information_schem
a.tables WHERE TABLE_TYPE = &#39;BASE TABLE&#39; AND table_schema = &#39;dmstest_database&#
39;",
    "UserNick": "dmstest",
    "Database": "dmstest_database@dmstest.rds...(test)",
    "UserId": 12345678,
    "OpTime": "2018-11-22 14:33:54",
    "Module": "Data query"
  }, {
    "OpContent": "Creates an SQL task. Task ID: 5486.",
    "UserNick": "dmstest",
    "Database": "dmstest_database@dmstest.rds...(test)",
    "UserId": 12345678,
    "OpTime": "2018-11-22 14:26:57",
    "Module": "Task management"
  }, {
    "OpContent": "Creates an SQL task. Task ID: 5485.",
    "UserNick": "dmstest",
    "Database": "dmstest_database@dmstest.rds...(test)",
    "UserId": 12345678,
    "OpTime": "2018-11-22 14:23:55",
    "Module": "Task management"
  }, {
    "OpContent": "Creates an SQL task. Task ID: 5484.",
    "UserNick": "dmstest",
    "Database": "dmstest_database@dmstest.rds...(test)",
    "UserId": 12345678,
    "OpTime": "2018-11-22 14:23:30",
    "Module": "Task management"
  }, {
    "OpContent": "Creates an SQL task. Task ID: 5483.",
    "UserNick": "dmstest",
    "Database": "dmstest_database@dmstest.rds...(test)",
    "UserId": 12345678,
    "OpTime": "2018-11-22 14:23:11",
    "Module": "Task management"
  }, {
    "OpContent": "(Successful. Number of rows:1)show CREATE TABLE multi_db_single_tbl",
    "UserNick": "dmstest",
    "Database": "dmstest_database@dmstest.rds...(test)",
    "UserId": 12345678,
    "OpTime": "2018-11-22 14:22:30",
    "Module": "Data query"
  }, {
    "OpContent": "(Successful. Number of rows: 2.)SELECT `TABLE_NAME` FROM information_schem

```

```
a.tables WHERE TABLE_TYPE = &#39;BASE TABLE&#39; AND table_schema = &#39;dmstest_database&#39;";
  "UserNick": "dmstest",
  "Database": "dmstest_database@dmstest.rds...(test)",
  "UserId": 12345678,
  "OpTime": "2018-11-22 14:22:15",
  "Module": "Data query"
}, {
  "OpContent": "(Successful. Number of rows: 2.)SELECT `TABLE_NAME` FROM information_schem
a.tables WHERE TABLE_TYPE = &#39;BASE TABLE&#39; AND table_schema = &#39;dmstest_database&#39;";
  "UserNick": "dmstest",
  "Database": "dmstest_database@dmstest.rds...(test)",
  "UserId": 12345678,
  "OpTime": "2018-11-22 14:19:31",
  "Module": "Data query"
}, {
  "OpContent": "Creates an SQL task. Task ID: 5482.",
  "UserNick": "dmstest",
  "Database": "dmstest_database@dmstest.rds...(test)",
  "UserId": 12345678,
  "OpTime": "2018-11-22 14:19:25",
  "Module": "Task management"
}, {
  "OpContent": "(Successful. Number of rows: 1.)SELECT `TABLE_NAME` FROM information_schem
a.tables WHERE TABLE_TYPE = &#39;BASE TABLE&#39; AND table_schema = &#39;dmstest_database&#39;";
  "UserNick": "dmstest",
  "Database": "dmstest_database@dmstest.rds...(test)",
  "UserId": 12345678,
  "OpTime": "2018-11-22 14:18:57",
  "Module": "Data query"
}, {
  "OpContent": "Creates an SQL task. Task ID: 5481.",
  "UserNick": "dmstest",
  "Database": "dmstest_database@dmstest.rds...(test)",
  "UserId": 12345678,
  "OpTime": "2018-11-22 14:18:46",
  "Module": "Task management"
}, {
  "OpContent": "(Successful. Number of rows: 0.)SELECT `TABLE_NAME` FROM information_schem
a.tables WHERE TABLE_TYPE = &#39;BASE TABLE&#39; AND table_schema = &#39;dmstest_database&#39;";
  "UserNick": "dmstest",
  "Database": "dmstest_database@dmstest.rds...(test)",
  "UserId": 12345678,
  "OpTime": "2018-11-22 14:04:13",
  "Module": "Data query"
}, {
  "OpContent": "(Successful. Number of rows: 0.)SELECT `TABLE_NAME` FROM information_schem
a.tables WHERE TABLE_TYPE = &#39;BASE TABLE&#39; AND table_schema = &#39;dmstest_database&#39;";
  "UserNick": "dmstest",
  "Database": "dmstest_database@dmstest.rds...(test)",
```

```

    "UserId": 12345678,
    "OpTime": "2018-11-22 14:04:08",
    "Module": "Data query"
  }, {
    "OpContent": "(Successful. Number of rows: 0.)SELECT `TABLE_NAME` FROM information_schem
a.tables WHERE TABLE_TYPE = &#39;BASE TABLE&#39; AND table_schema = &#39;dmstest_database&#
39;",
    "UserNick": "dmstest",
    "Database": "dmstest_database@dmstest.rds...(test)",
    "UserId": 12345678,
    "OpTime": "2018-11-22 12:11:41",
    "Module": "Data query"
  }, {
    "OpContent": "The administrator or DBA edits the database owner. Database name: dmstest_
prod_database@dmstest.rds...",
    "UserNick": "dmstest",
    "Database": "dmstest_database@dmstest.rds...(test)",
    "UserId": 12345678,
    "OpTime": "2018-11-22 12:11:14",
    "Module": "Data owner"
  }, {
    "OpContent": "The administrator or DBA edits the database owner. Database name: dmstest_
prod_database@dmstest.rds...",
    "UserNick": "dmstest",
    "Database": "dmstest_prod_database@dmstest.rds...(test)",
    "UserId": 12345678,
    "OpTime": "2018-11-22 12:11:07",
    "Module": "Data owner"
  }]
},
"TotalCount": 22,
"RequestId": "47D56208-DB1D-4FD3-BE32-300E43185488",
"Success": true
}

```

SDK example

For more information about how to use the SDK, see the [Alibaba Cloud SDK for Python](#).

Example:

```
from aliyunsdkcore.client import AcsClient
from aliyunsdkdms_enterprise.request.v20181101.GetOpLogRequest import GetOpLogRequest
client = AcsClient(
    "<your-access-key-id>",
    "<your-access-key-secret>",
    "<your-region-id>"
)
request = GetOpLogRequest()
request.set_Tid("Enter the tenant ID of your enterprise")
request.set_StartTime("2018-11-20 00:00:00")
request.set_EndTime("2018-11-23 00:00:00")
request.set_PageNumber(1)
request.set_PageSize(50)
response = client.do_action_with_exception(request)
print response
```

6.5. Approval processes

6.5.1. ListWorkFlowTemplates

Queries the details about approval templates.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListWorkFlowTemplates	The operation that you want to perform. Set the value to ListWorkFlowTemplates .
Tid	Long	Yes	-1	The ID of the tenant.
SearchName	String	No	Admin	The name that is used to search for approval templates.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.

Parameter	Type	Example	Description
RequestId	String	41067071-0243-4AAB-B3CF-4DE6D54F53B4	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.
WorkflowTemplates	Array of WorkflowTemplate		The approval templates.
WorkflowTemplate			
Comment	String	test	The remarks.
CreateUserId	Long	1234	The ID of the creator.
Enabled	String	Y	Indicates whether the approval template is enabled. Valid values: - Y: enabled - N: disabled
IsSystem	Integer	1	Indicates whether the approval template is predefined by the system. Valid values: 1: The approval template is predefined by the system. 0: The approval template is not predefined by the system.
TemplateId	Long	12345	The ID of the approval template.
TemplateName	String	Admin	The name of the approval template.
WorkflowNodes	Array of WorkflowNode		The details about approval nodes.
WorkflowNode			
Comment	String	test	The remarks.

Parameter	Type	Example	Description
CreateUserId	Long	1234	The ID of the creator.
NodeId	Long	123	The ID of the approval node.
NodeName	String	test	The name of the approval node.
NodeType	String	SYS	The type of the approval node. Valid values: - SYS: The approval node is predefined by the system. - USER_LIST: The approval node is created by a user.
Position	Integer	1	The order.
TemplateId	Long	12345	The ID of the approval template.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListWorkFlowTemplates
&Tid=-1
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>41067071-0243-4AAB-B3CF-4DE6D54F53B4</RequestId>
<Success>true</Success>
<WorkFlowTemplates>
  <WorkFlowTemplate>
    <Comment>The system-defined approval workflow. Only an administrator is included in
the approval workflow to review requests.</Comment>
    <WorkFlowNodes>
      <WorkFlowNode>
        <Comment>The system-defined node that is dynamically generated. Requests ar
e reviewed by an administrator.</Comment>
        <NodeName>Admin</NodeName>
        <Position>0</Position>
        <NodeType>SYS</NodeType>
        <NodeId>3763</NodeId>
        <TemplateId>6243</TemplateId>
      </WorkFlowNode>
    </WorkFlowNodes>
```

```

    <TemplateName>Admin</TemplateName>
    <Enabled>Y</Enabled>
    <IsSystem>1</IsSystem>
    <TemplateId>6243</TemplateId>
  </WorkflowTemplate>
</WorkflowTemplate>
  <Comment>The system-defined approval workflow. Each request must be reviewed by the
data owner, DBA, and admin in sequence.</Comment>
  <WorkflowNodes>
    <WorkflowNode>
      <Comment>The system-defined node that is dynamically generated. The owner o
f the resources that you want to manage is required to review the related requests.</Commen
t>
      <NodeName>Owner</NodeName>
      <Position>0</Position>
      <NodeType>SYS</NodeType>
      <NodeId>3762</NodeId>
      <TemplateId>6244</TemplateId>
    </WorkflowNode>
    <WorkflowNode>
      <Comment>The system-defined node that is dynamically generated. The DBA of
the resources that you want to manage is required to review the related requests.</Comment>
      <NodeName>DBA</NodeName>
      <Position>0</Position>
      <NodeType>SYS</NodeType>
      <NodeId>3761</NodeId>
      <TemplateId>6244</TemplateId>
    </WorkflowNode>
    <WorkflowNode>
      <Comment>The system-defined node that is dynamically generated. Requests ar
e reviewed by an administrator.</Comment>
      <NodeName>Admin</NodeName>
      <Position>0</Position>
      <NodeType>SYS</NodeType>
      <NodeId>3763</NodeId>
      <TemplateId>6244</TemplateId>
    </WorkflowNode>
  </WorkflowNodes>
  <TemplateName>Owner--&gt;DBA--&gt;Admin</TemplateName>
  <Enabled>Y</Enabled>
  <IsSystem>1</IsSystem>
  <TemplateId>6244</TemplateId>
</WorkflowTemplate>
</WorkflowTemplates>

```

JSON format

```

{
  "RequestId": "41067071-0243-4AAB-B3CF-4DE6D54F53B4",
  "Success": true,
  "WorkflowTemplates": {
    "WorkflowTemplate": [
      {
        "Comment": "The system-defined approval workflow. Only an administrator is included

```

```

in the approval workflow to review requests.",
  "WorkflowNodes": {
    "WorkflowNode": [
      {
        "Comment": "The system-defined node that is dynamically generated. Requests are reviewed by an administrator.",
        "NodeName": "Admin",
        "Position": 0,
        "NodeType": "SYS",
        "NodeId": 3763,
        "TemplateId": 6243
      }
    ],
    "TemplateName": "Admin",
    "Enabled": "Y",
    "IsSystem": 1,
    "TemplateId": 6243
  },
  {
    "Comment": "The system-defined approval workflow. Each request must be reviewed by the data owner, DBA, and admin in sequence.",
    "WorkflowNodes": {
      "WorkflowNode": [
        {
          "Comment": ">The system-defined node that is dynamically generated. The owner of the resources that you want to manage is required to review the related requests.",
          "NodeName": "Owner",
          "Position": 0,
          "NodeType": "SYS",
          "NodeId": 3762,
          "TemplateId": 6244
        },
        {
          "Comment": "The system-defined node that is dynamically generated. The DBA of the resources that you want to manage is required to review the related requests.",
          "NodeName": "DBA",
          "Position": 0,
          "NodeType": "SYS",
          "NodeId": 3761,
          "TemplateId": 6244
        },
        {
          "Comment": "The system-defined node that is dynamically generated. Requests are reviewed by an administrator.",
          "NodeName": "Admin",
          "Position": 0,
          "NodeType": "SYS",
          "NodeId": 3763,
          "TemplateId": 6244
        }
      ]
    },
    "TemplateName": "Owner-->DBA-->Admin",
  }
}

```

```
        "Enabled": "Y",
        "IsSystem": 1,
        "TemplateId": 6244
      }
    ]
  }
}
```

6.5.2. ListWorkflowNodes

Queries the details about approval nodes.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListWorkflowNodes	The operation that you want to perform. Set the value to ListWorkflowNodes .
Tid	Long	Yes	-1	The ID of the tenant.
SearchName	String	No	admin	The name that is used to search for approval nodes.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	CFD8FE00-36D9-4C1B-940D-65A7B73D9066	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.
WorkflowNodes	Array of WorkflowNode		The details about approval nodes.
WorkflowNode			

Parameter	Type	Example	Description
AuditUsers	Array of AuditUser		The details about approvers.
AuditUser			
NickName	String	test	The name of the approver.
RealName	String	test	The real name of the approver.
UserId	Long	123	The ID of the approver. The ID is different from the ID of the Apsara Stack tenant account of the approver.
Comment	String	test	The remarks.
CreateUserId	Long	123	The ID of the creator. The ID is different from the ID of the Apsara Stack tenant account of the creator.
CreateUserNick Name	String	test	The name of the creator.
NodeId	Long	123	The ID of the node.
NodeName	String	test	The name of the node.
NodeType	String	SYS	The type of the node. Valid values: • SYS: The node is pre-defined by the system. • USER_LIST: The node is created by a user.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListWorkFlowNodes
&Tid=-1
&<Common request parameters>
```

Sample success responses

XML format

```
<WorkflowNodes>
  <WorkflowNode>
    <Comment>This is a system-defined node that is dynamically generated. All requests
are reviewed by an administrator.</Comment>
    <NodeName>Admin</NodeName>
    <NodeType>SYS</NodeType>
    <NodeId>3763</NodeId>
    <AuditUsers>
    </AuditUsers>
  </WorkflowNode>
</WorkflowNodes>
<RequestId>CFD8FE00-36D9-4C1B-940D-65A7B73D9066</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "WorkflowNodes": {
    "WorkflowNode": [
      {
        "Comment": "This is a system-defined node that is dynamically generated. All requests are reviewed by an administrator.",
        "NodeName": "Admin",
        "NodeType": "SYS",
        "NodeId": 3763,
        "AuditUsers": {
          "AuditUser": []
        }
      }
    ]
  },
  "RequestId": "CFD8FE00-36D9-4C1B-940D-65A7B73D9066",
  "Success": true
}
```

6.6. Metadata of databases and tables

6.6.1. SearchDatabase

Queries the details about databases.

Request parameters

Parameter	Type	Required	Example	Description
-----------	------	----------	---------	-------------

Parameter	Type	Required	Example	Description
Action	String	Yes	SearchDatabase	The operation that you want to perform. Set the value to SearchDatabase .
PageNumber	Integer	Yes	1	The number of the page to return.
SearchKey	String	Yes	testdb	The keyword that is used to search for databases.
Tid	Long	Yes	1	The ID of the tenant.
PageSize	Integer	No	10	The number of entries to return on each page.
EnvType	String	No	product	The environment of the database.
SearchRange	String	No	HAS_PERMSSION	The range of databases. Valid values: • HAS_PERMSSION: databases on which the current user has permissions • OWNER: databases that are owned by the current user • MY_FOCUS: databases that are followed by the current user • UNKNOWN: all databases
SearchTarget	String	No	SINGLE_DB	The category of databases. Valid values: • DB: all databases. • SINGLE_DB: single databases. • LOGIC_DB: logical databases.

Parameter	Type	Required	Example	Description
DbType	String	No	MySQL	The type of databases. Valid values: • MySQL • SQLServer • PostgreSQL • Oracle • DRDS • OceanBase • Mongo • Redis
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	E0D21075-CD3E-4D98-8264-FD8AD04A63B6	The ID of the request.
SearchDatabaseList	Array of SearchDatabase		The details about databases.
SearchDatabase			
Alias	String	test	The alias of the database.
DatabaseId	String	1	The ID of the database.
DataLinkName	String	datalink_name	The name of the data link for the database.

Parameter	Type	Example	Description
DbType	String	mysql	The type of the database. Valid values: • MySQL • SQLServer • PostgreSQL • Oracle • DRDS • OceanBase • Mongo • Redis
DbId	String	1	The ID of the database administrator (DBA) for the database.
Encoding	String	utf8	The encoding of the database.
EnvType	String	product	The type of the environment to which the database belongs.
Host	String	xxx.xxx.xxx.xxx	The endpoint of the instance to which the database belongs.
Logic	Boolean	false	Indicates whether the database is a logical database. Valid values: • true: The database is a logical database. • false: The database is not a logical database.
OwnerIdList	List	1	The IDs of the owners of the database.
OwnerNameList	List	user1	The names of the owners of the database.
Port	Integer	3306	The port number of the instance to which the database belongs.
SchemaName	String	test	The name of the database.
SearchName	String	test@xxx.xxx.xxx.xxx:3306	The name that is used to search for the database.

Parameter	Type	Example	Description
Sid	String	testSid	The system identifier (SID) of the instance to which the database belongs.
TotalCount	Long	1	The total number of entries that are returned.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=SearchDatabase
&PageNumber=1
&SearchKey=testdb
&Tid=-1
&<Common request parameters>
```

Sample success responses

`XML` format

```
<TotalCount>1</TotalCount>
<RequestId>E0D21075-CD3E-4D98-8264-FD8AD04A63B6</RequestId>
<SearchDatabaseList>
  <SearchDatabase>
    <Encoding>utf8mb4</Encoding>
    <Host>pc-xxx.mysql.polardb.rds.aliyuncs.com</Host>
    <DbType>polardb</DbType>
    <EnvType>dev</EnvType>
    <OwnerIdList>
      <OwnerIds>88653</OwnerIds>
      <OwnerIds>88656</OwnerIds>
      <OwnerIds>104442</OwnerIds>
    </OwnerIdList>
    <Logic>false</Logic>
    <DbId>88653</DbId>
    <OwnerNameList>
      <OwnerNames>dmstest</OwnerNames>
      <OwnerNames>xx</OwnerNames>
      <OwnerNames>xx[RAM user]</OwnerNames>
    </OwnerNameList>
    <Port>3306</Port>
    <DatabaseId>117567</DatabaseId>
    <Alias>xx offline database</Alias>
    <SearchName>xxx@pc-xxx.mysql.polardb.rds.aliyuncs.com:3306[xx offline database]</SearchName>
    <DataLinkName>dblink_38</DataLinkName>
    <SchemaName>xxx_0000</SchemaName>
  </SearchDatabase>
</SearchDatabaseList>
<Success>true</Success>
```

JSON **format**

```
{
  "TotalCount": 1,
  "RequestId": "E0D21075-CD3E-4D98-8264-FD8AD04A63B6",
  "SearchDatabaseList": {
    "SearchDatabase": [
      {
        "Encoding": "utf8mb4",
        "Host": "pc-xxx.mysql.polardb.rds.aliyuncs.com",
        "DbType": "polardb",
        "EnvType": "dev",
        "OwnerIdList": {
          "OwnerIds": [
            88653,
            88656,
            104442
          ]
        },
        "Logic": false,
        "DbId": 88653,
        "OwnerNameList": {
          "OwnerNames": [
            "dmstest",
            "xx",
            "xx[RAM user]"
          ]
        },
        "Port": 3306,
        "DatabaseId": 117567,
        "Alias": "xx offline database",
        "SearchName": "xxx@pc-xxx.mysql.polardb.rds.aliyuncs.com:3306[xx offline database]"
      },
      {
        "DatalinkName": "dblink_38",
        "SchemaName": "xxx_0000"
      }
    ]
  },
  "Success": true
}
```

6.6.2. SearchTable

Queries the details about tables.

Request parameters

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

Parameter	Type	Required	Example	Description
Tid	Long	No	1	The ID of the tenant.
SearchKey	String	No	test	The keyword that is used to search for tables.
PageNumber	Integer	No	1	The number of the page to return.
PageSize	Integer	No	10	The number of entries to return on each page.
EnvType	String	No	PRODUCT	The type of the environment to which the database belongs.
SearchTarget	String	No	LOGIC_TABLE	The type of tables to be queried. Valid values: • TABLE: all tables • SINGLE_TABLE: physical tables • LOGIC_TABLE: logical tables
SearchRange	String	No	OWNER	The permission that is required on tables to be queried. Valid values: • HAS_PERMISSION: tables on which the current user has permissions. • OWNER: tables that are owned by the current user. • MY_FOCUS: tables that are followed by the current user. • UNKNOWN: all tables.
DbType	String	No	MySQL	The type of the database. Valid values: • MySQL • SQLServer • PostgreSQL • Oracle • DRDS • OceanBase • Mongo • Redis

Parameter	Type	Required	Example	Description
ReturnGuid	Boolean	No	false	Specifies whether to return the globally unique identifier (GUID) of each table.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	1489257F-1B5D-4B5B-89EF-923C12CEEBD1	The ID of the request.
SearchTableList	Array of SearchTable		The details about the tables.
SearchTable			
DBSearchName	String	test	The name that is used to search for the database to which the table belongs.
Databaseld	String	1	The ID of the database to which the table belongs.
DbName	String	test	The name of the database.
DbType	String	mysql	The type of the database. Valid values: • MySQL • SQLServer • PostgreSQL • Oracle • DRDS • OceanBase • Mongo • Redis

Parameter	Type	Example	Description
Description	String	test	The description.
Encoding	String	utf8	The encoding of the table.
Engine	String	innodb	The engine of the table.
EnvType	String	test	The type of the environment.
Logic	Boolean	false	Indicates whether the table is a logical table. Valid values: • true: The table is a logical table. • false: The table is not a logical table.
OwnerIdList	List	1	The IDs of the owners of the table.
OwnerNameList	List	user	The names of the owners of the table.
TableGuid	String	IDB_L_9032.db-test.yuyang_test	The GUID of the table.
TableId	String	1	The ID of the table.
TableName	String	test_table	The name of the table.
TableSchemaName	String	test@xxx.xxx.xxx.xxx:3306	The name of the database to which the table belongs.
Success	Boolean	true	Indicates whether the request succeeded.
TotalCount	Long	1	The total number of entries that are returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=SearchTable
&<Common request parameters>
```


Sample success responses

XML format

```
<SearchTableList>
  <SearchTable>
    <TableGuid>IDB_L_9032.db-test.yuyang_test</TableGuid>
    <Logic>false</Logic>
    <TableSchemaName>xxx_0000</TableSchemaName>
    <OwnerNameList>
      <OwnerNames>xxx</OwnerNames>
      <OwnerNames>xxx</OwnerNames>
      <OwnerNames>xxx</OwnerNames>
    </OwnerNameList>
    <DBSearchName>xxx_0000@pc-xxx.mysql.polardb.rds.aliyuncs.com:3306[xxx offline database]</DBSearchName>
    <DatabaseId>117567</DatabaseId>
    <Encoding>utf8mb4</Encoding>
    <TableName>test_aaaa</TableName>
    <OwnerIdList>
      <OwnerIds>88653</OwnerIds>
      <OwnerIds>88656</OwnerIds>
      <OwnerIds>104442</OwnerIds>
    </OwnerIdList>
    <EnvType>dev</EnvType>
    <Engine>InnoDB</Engine>
    <TableId>18396767</TableId>
  </SearchTable>
</SearchTableList>
<TotalCount>1</TotalCount>
<RequestId>1489257F-1B5D-4B5B-89EF-923C12CEEED1</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "SearchTableList": {
    "SearchTable": [
      {
        "TableGuid" : "IDB_L_9032.db-test.yuyang_test",
        "Logic": false,
        "TableSchemaName": "xxx_0000",
        "OwnerNameList": {
          "OwnerNames": [
            "xxx",
            "xxx",
            "xxx"
          ]
        },
        "DBSearchName": "xxx_0000@pc-xxx.mysql.polardb.rds.aliyuncs.com:3306[xxx offline database]",
        "DatabaseId": 117567,
        "Encoding": "utf8mb4",
        "TableName": "test_aaaa",
        "OwnerIdList": {
          "OwnerIds": [
            88653,
            88656,
            104442
          ]
        },
        "EnvType": "dev",
        "Engine": "InnoDB",
        "TableId": 18396767
      }
    ]
  },
  "TotalCount": 1,
  "RequestId": "1489257F-1B5D-4B5B-89EF-923C12CEEED1",
  "Success": true
}
```

6.6.3. ListDatabases

Queries the details of databases in an instance.

Request parameters

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

Parameter	Type	Required	Example	Description
InstanceId	String	Yes	1	The instance ID. You can obtain the instance ID from the instance information that is returned by the ListInstances operation. The instance ID is different from the ID of an ApsaraDB RDS instance.
PageNumber	Integer	Yes	1	The number of the page to return.
Tid	Long	Yes	-1	The ID of the tenant.
PageSize	Integer	No	10	The number of entries to return on each page.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
DatabaseList	Array of Database		The details of databases.
Database			
CatalogName	String	1	The name of the database catalog.  Note If the database type is PostgreSQL, the value indicates the name of the PostgreSQL database.
DatabaseId	String	1	The ID of the database.
DbType	String	mysql	The type of the database.
DbId	String	1	The ID of the DBA to which the database belongs.
DbName	String	dba_user	The name of the DBA to which the database belongs.

Parameter	Type	Example	Description
Encoding	String	utf-8	The encoding of the database.
EnvType	String	dev	The type of the environment to which the database belongs.
Host	String	xxx.xxx.xxx.xxx	The endpoint of the instance.
InstanceId	String	1	The ID of the instance to which the database belongs.
OwnerIdList	List	1	The IDs of database owners.
OwnerNameList	List	owner_name	The names of database owners.
Port	Integer	3306	The connection port of the instance.
SchemaName	String	test	The name of the database.
SearchName	String	test@xxx.xxx.xxx.xxx:3306	The name that is used to search for the database.
Sid	String	test	The ID of the instance to which the database belongs.
State	String	NORMAL	The status of the database. Valid values: • NORMAL: The database is normal. • DISABLE: The database is disabled. • OFFLINE: The database is unpublished. • NOT_EXIST: The database does not exist.
ErrorCode	String	UnknownError	The error code that is returned.
ErrorMessage	String	UnknownError	The error message that is returned.
RequestId	String	5541CDA6-F674-435C-81BD-40C2FB926CE3	The ID of the request.

Parameter	Type	Example	Description
Success	Boolean	true	Indicates whether the request succeeds.
TotalCount	Long	1	The total number of databases that belong to the instance.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListDatabases
&InstanceId=1
&PageNumber=1
&Tid=-1
&<Common request parameters>
```

Sample success responses

XML format

```
<TotalCount>1</TotalCount>
<RequestId>5541CDA6-F674-435C-81BD-40C2FB926CE3</RequestId>
<Success>true</Success>
<DatabaseList>
  <Database>
    <Encoding>utf8</Encoding>
    <Host>pc-xxx.rwlb.rds.aliyuncs.com</Host>
    <InstanceId>24710</InstanceId>
    <DbType>polardb</DbType>
    <EnvType>product</EnvType>
    <OwnerIdList>
      <OwnerIds>88653</OwnerIds>
    </OwnerIdList>
    <DbId>104442</DbId>
    <OwnerNameList>
      <OwnerNames>dmstest</OwnerNames>
    </OwnerNameList>
    <Port>3306</Port>
    <DatabaseId>116366</DatabaseId>
    <State>NORMAL</State>
    <SearchName>xxx_test@pc-xxx.rwlb.rds.aliyuncs.com:3306【xxx_test】</SearchName>
    <DbName>xxx[RAM user]</DbName>
    <SchemaName>xxx_test</SchemaName>
  </Database>
</DatabaseList>
```

JSON format

```
{
  "TotalCount": 1,
  "RequestId": "5541CDA6-F674-435C-81BD-40C2FB926CE3",
  "Success": true,
  "DatabaseList": {
    "Database": [
      {
        "Encoding": "utf8",
        "Host": "pc-xxx.rwlb.rds.aliyuncs.com",
        "InstanceId": 24710,
        "DbType": "polardb",
        "EnvType": "product",
        "OwnerIdList": {
          "OwnerIds": [
            88653
          ]
        },
        "DbaId": 104442,
        "OwnerNameList": {
          "OwnerNames": [
            "dmstest"
          ]
        },
        "Port": 3306,
        "DatabaseId": 116366,
        "State": "NORMAL",
        "SearchName": "xxx_test@pc-xxx.rwlb.rds.aliyuncs.com:3306 【xxx_test】 ",
        "DbaName": "xxx[RAM user]",
        "SchemaName": "xxx_test"
      }
    ]
  }
}
```

6.6.4. ListLogicDatabases

Queries the details about logical databases.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListLogicDatabases	The operation that you want to perform. Set the value to ListLogicDatabases .
PageNumber	Integer	Yes	1	The number of the page to return.

Parameter	Type	Required	Example	Description
Tid	Long	Yes	-1	The ID of the tenant.
PageSize	Integer	No	50	The number of entries to return on each page.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The error code that is returned.
ErrorMessage	String	UnknownError	The error message that is returned.
LogicDatabaseList	Array of LogicDatabase		The details about logical databases.
LogicDatabase			
Databaseld	String	1	The ID of the logical database.
DbType	String	mysql	The type of the logical database.
EnvType	String	test	The type of the environment to which the logical database belongs.
Logic	Boolean	true	Indicates whether the database is a logical database. The value is set to true.
OwnerIdList	List	1	The IDs of the owners of the logical database.
OwnerNameList	List	owner_name	The names of the owners of the logical database.
SchemaName	String	logic_db	The name of the logical database.

Parameter	Type	Example	Description
SearchName	String	loigc_db	The name that is used to search for the logical database.
RequestId	String	BAD154C0-DA38-48FA-97AB-E72912EEAA24	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.
TotalCount	Long	13	The total number of logical databases.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListLogicDatabases
&PageNumber=1
&Tid=-1
&<Common request parameters>
```

Sample success responses

XML format


```
<TotalCount>13</TotalCount>
<RequestId>BAD154C0-DA38-48FA-97AB-E72912EEAA24</RequestId>
<LogicDatabaseList>
  <LogicDatabase>
    <Logic>true</Logic>
    <OwnerNameList>
      <OwnerNames>xxx</OwnerNames>
    </OwnerNameList>
    <DatabaseId>257</DatabaseId>
    <SearchName>test_db(This is a logical database.)</SearchName>
    <DbType>mysql</DbType>
    <OwnerIdList>
      <OwnerIds>88653</OwnerIds>
    </OwnerIdList>
    <EnvType>dev</EnvType>
    <SchemaName>test_db</SchemaName>
  </LogicDatabase>
  <LogicDatabase>
    <Logic>true</Logic>
    <OwnerNameList>
      <OwnerNames>xxx</OwnerNames>
      <OwnerNames>xxx</OwnerNames>
      <OwnerNames>xxx</OwnerNames>
    </OwnerNameList>
    <DatabaseId>258</DatabaseId>
    <SearchName>xxx_test(This is a logical database.)</SearchName>
    <DbType>mysql</DbType>
    <OwnerIdList>
      <OwnerIds>88656</OwnerIds>
      <OwnerIds>88653</OwnerIds>
      <OwnerIds>101252</OwnerIds>
    </OwnerIdList>
    <EnvType>product</EnvType>
    <SchemaName>idb_test</SchemaName>
  </LogicDatabase>
</LogicDatabaseList>
<Success>true</Success>
```

JSON **format**

```
{
  "TotalCount": 13,
  "RequestId": "BAD154C0-DA38-48FA-97AB-E72912EEAA24",
  "LogicDatabaseList": {
    "LogicDatabase": [
      {
        "Logic": true,
        "OwnerNameList": {
          "OwnerNames": [
            "xxx"
          ]
        },
        "DatabaseId": 257,
        "SearchName": "test_db(This is a logical database)",
        "DbType": "mysql",
        "OwnerIdList": {
          "OwnerIds": [
            88653
          ]
        },
        "EnvType": "dev",
        "SchemaName": "test_db"
      },
      {
        "Logic": true,
        "OwnerNameList": {
          "OwnerNames": [
            "xxx",
            "xxx",
            "xxx"
          ]
        },
        "DatabaseId": 258,
        "SearchName": "xxx_test(This is a logical database)",
        "DbType": "mysql",
        "OwnerIdList": {
          "OwnerIds": [
            88656,
            88653,
            101252
          ]
        },
        "EnvType": "product",
        "SchemaName": "idb_test"
      }
    ]
  },
  "Success": true
}
```

6.6.5. ListTables

Queries the details of tables in a database.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListTables	The operation that you want to perform. Set the value to ListTables .
DatabaseId	String	Yes	1	The ID of the database.
PageNumber	Integer	Yes	1	The number of the page to return.
Tid	Long	Yes	-1	The ID of the tenant.
PageSize	Integer	No	10	The number of entries to return on each page.
SearchName	String	No	test	The keyword that is used to query tables. Prefix match is used.
ReturnGuid	Boolean	No	true	Specifies whether to return the GUID of the table.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	B16FB618-5E96-4FFD-BB0D-490C890A4030	The ID of the request.
Success	Boolean	true	Indicates whether the call succeeded.
TableList	Array of Table		The details about the tables.

Parameter	Type	Example	Description
Table			
DatabaseId	String	1	The ID of the database.
Description	String	test	The description of the table.
Encoding	String	utf8	The encoding of the table.
Engine	String	innodb	The engine of the table.
NumRows	Long	1	The number of rows in the table. This is a statistical value and does not indicate the actual number of rows.
OwnerIdList	List	1	The IDs of the table owners.
OwnerNameList	List	owner_name	The nicknames of the table owners.
StoreCapacity	Long	1024	The storage space that is occupied by the table. This is a statistical value and does not indicate the accurate storage space.
TableGuid	String	IDB_308302.yuyang_test.test_ch	The GUID of the table.
TableId	String	1	The ID of the table.
TableName	String	test	The name of the table.
TableSchemaName	String	test_db	The name of the database to which the table belongs.
TableType	String	NORMAL	The type of the table. Default value: NORMAL.
TotalCount	Long	12	The total number of tables that meet the query conditions.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListTables
&DatabaseId=1
&PageNumber=1
&Tid=-1
&<Common request parameters>
```

Sample success responses

`XML` format

```

<TableList>
  <Table>
    <TableSchemaName>yuyang_test</TableSchemaName>
    <OwnerNameList>
      <OwnerNames>xxx</OwnerNames>
      <OwnerNames>xxx</OwnerNames>
    </OwnerNameList>
    <DatabaseId>116367</DatabaseId>
    <Encoding>utf8mb4</Encoding>
    <NumRows>3</NumRows>
    <StoreCapacity>1</StoreCapacity>
    <TableName>base_user</TableName>
    <TableGuid>IDB_18396363.yuyang_test.base_user</TableGuid>
    <TableType>NORMAL</TableType>
    <OwnerIdList>
      <OwnerIds>88653</OwnerIds>
      <OwnerIds>104442</OwnerIds>
    </OwnerIdList>
    <Engine>InnoDB</Engine>
    <TableId>18396363</TableId>
  </Table>
  <Table>
    <TableSchemaName>yuyang_test</TableSchemaName>
    <OwnerNameList>
      <OwnerNames>xxx</OwnerNames>
      <OwnerNames>xxx</OwnerNames>
    </OwnerNameList>
    <DatabaseId>116367</DatabaseId>
    <Encoding>utf8mb4</Encoding>
    <NumRows>2</NumRows>
    <StoreCapacity>1</StoreCapacity>
    <TableName>biz_orders</TableName>
    <TableType>NORMAL</TableType>
    <OwnerIdList>
      <OwnerIds>88653</OwnerIds>
      <OwnerIds>104442</OwnerIds>
    </OwnerIdList>
    <Engine>InnoDB</Engine>
    <TableId>18390459</TableId>
  </Table>
</TableList>
<TotalCount>12</TotalCount>
<RequestId>B16FB618-5E96-4FFD-BB0D-490C890A4030</RequestId>
<Success>true</Success>

```

JSON **format**

```

{
  "TableList": {
    "Table": [
      {
        "TableSchemaName": "yuyang_test",
        "OwnerNameList": {

```

```

        "OwnerNames": [
            "xxx",
            "xxx"
        ]
    },
    "DatabaseId": 116367,
    "Encoding": "utf8mb4",
    "NumRows": 3,
    "StoreCapacity": 1,
    "TableName": "base_user",
    "TableGuid": "IDB_18396363.yuyang_test.base_user",
    "TableType": "NORMAL",
    "OwnerIdList": {
        "OwnerIds": [
            88653,
            104442
        ]
    },
    "Engine": "InnoDB",
    "TableId": 18396363
},
{
    "TableSchemaName": "yuyang_test",
    "OwnerNameList": {
        "OwnerNames": [
            "xxx",
            "xxx"
        ]
    },
    "DatabaseId": 116367,
    "Encoding": "utf8mb4",
    "NumRows": 2,
    "StoreCapacity": 1,
    "TableName": "biz_orders",
    "TableType": "NORMAL",
    "OwnerIdList": {
        "OwnerIds": [
            88653,
            104442
        ]
    },
    "Engine": "InnoDB",
    "TableId": 18390459
}
]
},
"TotalCount": 12,
"RequestId": "B16FB618-5E96-4FFD-BB0D-490C890A4030",
"Success": true
}

```

6.6.6. ListLogicTables

Queries the details of logical tables in a logical database.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListLogicTables	The operation that you want to perform. Set the value to ListLogicTables .
Databaseld	String	Yes	1	The ID of the logical database.
PageNumber	Integer	Yes	1	The number of the page to return.
Tid	Long	Yes	-1	The ID of the tenant.
PageSize	Integer	No	10	The number of entries to return on each page.
SearchName	String	No	test	The keyword that is used to query logical tables. Prefix match is used.
ReturnGuid	Boolean	No	true	Specifies whether to return the GUID of the table.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
LogicTableList	Array of LogicTable		The details of logical tables.
LogicTable			
Databaseld	String	1	The ID of the logical database.

Parameter	Type	Example	Description
Logic	Boolean	true	Indicates whether the table is a logical table. Default value: true.
OwnerIdList	List	1	The IDs of owners for the logical table.
OwnerNameList	List	owner_name	The nicknames of owners for the logical table.
SchemaName	String	yuyang_test	The logical database to which the logical table belongs.
TableCount	String	4	The number of subtables.
TableExpr	String	test[1-4]	The expression of the logical table.
TableGuid	String	IDB_L_308302.yuyang_test.test_ch	The GUID of the logical table.
TableId	String	1	The ID of the logical table.
TableName	String	test	The name of the logical table.
RequestId	String	F1E6484F-9DF1-4406-9BDE-0861C4629B69	The ID of the request.
Success	Boolean	true	Indicates whether the call succeeded.
TotalCount	Long	1	The total number of logical tables that meet the query conditions.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListLogicTables
&DatabaseId=1
&PageNumber=1
&Tid=-1
&<Common request parameters>
```

Sample success responses

XML format

```
<TotalCount>1</TotalCount>
<RequestId>F1E6484F-9DF1-4406-9BDE-0861C4629B69</RequestId>
<LogicTableList>
  <LogicTable>
    <Logic>true</Logic>
    <OwnerNameList>
      <OwnerNames>xxx</OwnerNames>
      <OwnerNames>xxx</OwnerNames>
    </OwnerNameList>
    <TableExpr>t[1-4]</TableExpr>
    <DatabaseId>267</DatabaseId>
    <SchemaName>yuyang_test</SchemaName>
    <TableName>t</TableName>
    <TableGuid>IDB_L_3057.yuyang_test.t</TableGuid>
    <TableCount>4</TableCount>
    <OwnerIdList>
      <OwnerIds>88653</OwnerIds>
      <OwnerIds>104442</OwnerIds>
    </OwnerIdList>
    <TableId>3057</TableId>
  </LogicTable>
</LogicTableList>
<Success>true</Success>
```

JSON format

```
{
  "TotalCount": 1,
  "RequestId": "F1E6484F-9DF1-4406-9BDE-0861C4629B69",
  "LogicTableList": {
    "LogicTable": [
      {
        "Logic": true,
        "OwnerNameList": {
          "OwnerNames": [
            "xxx",
            "xxx"
          ]
        },
        "TableExpr": "t[1-4]",
        "DatabaseId": 267,
        "SchemaName": "yuyang_test",
        "TableName": "t",
        "TableGuid": "IDB_L_3057.yuyang_test.t",
        "TableCount": 4,
        "OwnerIdList": {
          "OwnerIds": [
            88653,
            104442
          ]
        },
        "TableId": 3057
      }
    ]
  },
  "Success": true
}
```

6.6.7. ListColumns

Queries the details about columns in a table.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListColumns	The operation that you want to perform. Set the value to ListColumns .
Logic	Boolean	Yes	false	Specifies whether the table is a logical table.

Parameter	Type	Required	Example	Description
TableId	String	Yes	1	The ID of the table.
Tid	Long	Yes	0	The ID of the tenant.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ColumnList	Array of Column		The details about columns.
Column			
AutoIncrement	Boolean	false	Indicates whether the column is an auto-increment column. Valid values: - true: The column is an auto-increment column. - false: The column is not an auto-increment column.
ColumnId	String	1	The ID of the column.
ColumnName	String	name	The name of the column.
ColumnType	String	varchar	The type of the column.
DataLength	Long	32	The length of the column.
DataPrecision	Integer	0	The precision of the column.
DataScale	Integer	0	The scale of the column.
DefaultValue	String	def_value	The default value of the column.
Description	String	test	The description of the column.

Parameter	Type	Example	Description
FunctionType	String	default	The type of the masking algorithm that is used for the column. Valid values: • null: No masking algorithm is used. • DEFAULT: A full masking algorithm is used. • FIX_POS: The fixed position is masked. • FIX_CHAR: The fixed characters are replaced.
Nullable	Boolean	true	Indicates whether the column can be null.
SecurityLevel	String	INNER	The security level of the field. Valid values: • INNER • SENSITIVE • CONFIDENTIAL
Sensitive	Boolean	false	Indicates whether the field is a sensitive field.
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	0AD9AC55-5873-474A-9F33-4285806A3619	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListColumns
&Logic=false
&TableId=1
&Tid=0
&<Common request parameters>
```

Sample success responses

XML format

```

<ColumnList>
  <Column>
    <ColumnId>314036829</ColumnId>
    <DataScale>0</DataScale>
    <Sensitive>>false</Sensitive>
    <Description>Primary key ID</Description>
    <DataPrecision>20</DataPrecision>
    <ColumnType>bigint(20) unsigned</ColumnType>
    <ColumnName>id</ColumnName>
    <SecurityLevel>INNER</SecurityLevel>
    <AutoIncrement>>true</AutoIncrement>
    <Nullable>>false</Nullable>
  </Column>
  <Column>
    <ColumnId>314036830</ColumnId>
    <Sensitive>>false</Sensitive>
    <Description>Creation time</Description>
    <DefaultValue>CURRENT_TIMESTAMP</DefaultValue>
    <ColumnType>datetime</ColumnType>
    <ColumnName>gmt_create</ColumnName>
    <SecurityLevel>INNER</SecurityLevel>
    <AutoIncrement>>false</AutoIncrement>
    <Nullable>>false</Nullable>
  </Column>
  <Column>
    <ColumnId>314036831</ColumnId>
    <Sensitive>>false</Sensitive>
    <Description>Modification time</Description>
    <DefaultValue>CURRENT_TIMESTAMP</DefaultValue>
    <ColumnType>datetime</ColumnType>
    <ColumnName>gmt_modified</ColumnName>
    <SecurityLevel>INNER</SecurityLevel>
    <AutoIncrement>>false</AutoIncrement>
    <Nullable>>false</Nullable>
  </Column>
  <Column>
    <ColumnId>314036832</ColumnId>
    <Sensitive>>false</Sensitive>
    <Description>base_user</Description>
    <ColumnType>varchar(64)</ColumnType>
    <DataLength>64</DataLength>
    <ColumnName>user_name</ColumnName>
    <SecurityLevel>INNER</SecurityLevel>
    <AutoIncrement>>false</AutoIncrement>
    <Nullable>>true</Nullable>
  </Column>
</ColumnList>
<RequestId>0AD9AC55-5873-474A-9F33-4285806A3619</RequestId>
<Success>>true</Success>

```

JSON **format**

```
{
  "ColumnList": {
    "Column": [
      {
        "ColumnId": 314036829,
        "DataScale": 0,
        "Sensitive": false,
        "Description": "Primary key ID",
        "DataPrecision": 20,
        "ColumnType": "bigint(20) unsigned",
        "ColumnName": "id",
        "SecurityLevel": "INNER",
        "AutoIncrement": true,
        "Nullable": false
      },
      {
        "ColumnId": 314036830,
        "Sensitive": false,
        "Description": "Creation time",
        "DefaultValue": "CURRENT_TIMESTAMP",
        "ColumnType": "datetime",
        "ColumnName": "gmt_create",
        "SecurityLevel": "INNER",
        "AutoIncrement": false,
        "Nullable": false
      },
      {
        "ColumnId": 314036831,
        "Sensitive": false,
        "Description": "Modification time",
        "DefaultValue": "CURRENT_TIMESTAMP",
        "ColumnType": "datetime",
        "ColumnName": "gmt_modified",
        "SecurityLevel": "INNER",
        "AutoIncrement": false,
        "Nullable": false
      },
      {
        "ColumnId": 314036832,
        "Sensitive": false,
        "Description": "base_user",
        "ColumnType": "varchar(64)",
        "DataLength": 64,
        "ColumnName": "user_name",
        "SecurityLevel": "INNER",
        "AutoIncrement": false,
        "Nullable": true
      }
    ]
  },
  "RequestId": "0AD9AC55-5873-474A-9F33-4285806A3619",
  "Success": true
}
```

6.6.8. ListIndexes

Queries the details of indexes for a table.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListIndexes	The operation that you want to perform. Set the value to ListIndexes .
Logic	Boolean	Yes	false	Specifies whether the table is a logical table.
TableId	String	Yes	1	The ID of the table.
Tid	Long	Yes	0	The ID of the tenant.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The error code that is returned.
ErrorMessage	String	UnknownError	The error message that is returned.
IndexList	Array of Index		The details of indexes.
Index			
IndexComment	String	test	The description of each index.
IndexId	String	1	The ID of the index.
IndexName	String	idx_test	The name of the index.

Parameter	Type	Example	Description
IndexType	String	Primary	The type of the index. Valid values: • Primary • Unique • Normal • FullText • Spatial
TableId	String	1	The ID of the table.
RequestId	String	1F4DE2F1-5B47-462A-A973-E02EB7AF386B	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeds.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListIndexes
&Logic=false
&TableId=1
&Tid=0
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>1F4DE2F1-5B47-462A-A973-E02EB7AF386B</RequestId>
<IndexList>
  <Index>
    <IndexComment/>
    <IndexType>Primary</IndexType>
    <IndexName>PRIMARY</IndexName>
    <IndexId>49331416</IndexId>
    <TableId>18396274</TableId>
  </Index>
</IndexList>
<Success>true</Success>
```

JSON format

```
{
  "RequestId": "1F4DE2F1-5B47-462A-A973-E02EB7AF386B",
  "IndexList": {
    "Index": [
      {
        "IndexComment": "",
        "IndexType": "Primary",
        "IndexName": "PRIMARY",
        "IndexId": 49331416,
        "TableId": 18396274
      }
    ]
  },
  "Success": true
}
```

6.6.9. GetDatabase

Queries the details about a database.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetDatabase	The operation that you want to perform. Set the value to GetDatabase .
Host	String	Yes	xxx.xxx.xxx.xxx	The endpoint of the instance.
Port	Integer	Yes	3306	The port that is used to connect to the instance.
SchemaName	String	Yes	test_db	The name of the database.
Tid	Long	Yes	-1	The ID of the tenant.
Sid	String	No	test_sid	The system identifier (SID) of the instance.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
Database	Struct		The details about the database.
CatalogName	String	def	The name of the database catalog.  Note If the database type is PostgreSQL, the value indicates the name of the PostgreSQL database.
Databaseld	String	1	The ID of the database.
DbType	String	mysql	The type of the database.
Dbald	String	1	The ID of the database administrator (DBA).
DbaName	String	dba_name	The name of the DBA.
Encoding	String	utf8mb4	The encoding of the database.
EnvType	String	test	The type of the environment to which the database belongs.
Host	String	xxx.xxx.xxx.xxx	The endpoint of the instance.
Instanceld	String	1	The ID of the instance.
OwnerIdList	List	1	The IDs of the owners of the database.
OwnerNameList	List	test	The names of the owners of the database.
Port	Integer	3306	The number of the port that is used to connect to the instance.
SchemaName	String	test_db	The name of the schema.

Parameter	Type	Example	Description
SearchName	String	test_db@xxx.xxx.xxx.xxx:3306	The name that is used to search for the database.
Sid	String	test_sid	The system identifier (SID) of the instance.
State	String	NORMAL	The status of the database. For more information about the valid values, see the ListDatabases operation.
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	3CDB8601-AD74-4A47-8114-08E08CD6319D	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GetDatabase
&Host=xxx.xxx.xxx.xxx
&Port=3306
&SchemaName=test_db
&Tid=-1
&<Common request parameters>
```

Sample success responses

`XML` format

```
<Database>
  <Encoding>utf8mb4</Encoding>
  <Host>pc-xxx.rwlb.rds.aliyuncs.com</Host>
  <InstanceId>24710</InstanceId>
  <DbType>polardb</DbType>
  <OwnerIdList>
    <OwnerIds>88653</OwnerIds>
    <OwnerIds>104442</OwnerIds>
  </OwnerIdList>
  <EnvType>product</EnvType>
  <DbId>104442</DbId>
  <OwnerNameList>
    <OwnerNames>xxx</OwnerNames>
    <OwnerNames>xxx[RAM user]</OwnerNames>
  </OwnerNameList>
  <Port>3306</Port>
  <DatabaseId>116367</DatabaseId>
  <State>NORMAL</State>
  <SearchName>xxx_test@pc-xxx.rwlb.rds.aliyuncs.com:3306[xxx_test]</SearchName>
  <DbName>xxx[RAM user]</DbName>
  <SchemaName>xxx_test</SchemaName>
</Database>
<RequestId>3CDB8601-AD74-4A47-8114-08E08CD6319D</RequestId>
<Success>true</Success>
```

JSON **format**

```
{
  "Database": {
    "Encoding": "utf8mb4",
    "Host": "pc-xxx.rwlb.rds.aliyuncs.com",
    "InstanceId": 24710,
    "DbType": "polardb",
    "OwnerIdList": {
      "OwnerIds": [
        88653,
        104442
      ]
    },
    "EnvType": "product",
    "DbId": 104442,
    "OwnerNameList": {
      "OwnerNames": [
        "xxx",
        "xxx[RAM user]"
      ]
    },
    "Port": 3306,
    "DatabaseId": 116367,
    "State": "NORMAL",
    "SearchName": "<SearchName>xxx_test@pc-xxx.rwlb.rds.aliyuncs.com:3306[xxx_test]</SearchName>"
  },
  "DbName": "xxx[RAM user]",
  "SchemaName": "xxx_test"
},
"RequestId": "3CDB8601-AD74-4A47-8114-08E08CD6319D",
"Success": true
}
```

6.6.10. GetLogicDatabase

Queries the details about a logical database.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetLogicDatabase	The operation that you want to perform. Set the value to GetLogicDatabase .
DbId	String	Yes	1	The ID of the logical database.

Parameter	Type	Required	Example	Description
Tid	Long	Yes	0	The ID of the tenant.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
LogicDatabase	Struct		The details about the logical database.
Databaseld	String	1	The ID of the logical database.
DbType	String	mysql	The type of the database.
EnvType	String	dev	The type of the environment to which the database belongs.
Logic	Boolean	true	Indicates whether the database is a logical database. The value is fixed to true.
OwnerIdList	List	1	The IDs of the owners of the database.
OwnerNameList	List	owner_name	The names of the owners of the database.
SchemaName	String	test_logic_db	The name of the logical database.
SearchName	String	test_logic_db[xxx]	The name that is used to search for the logical database.
RequestId	String	90260530-565C-42B9-A6E8-893481FE6AB6	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GetLogicDatabase
&DbId=1
&Tid=0
&<Common request parameters>
```

Sample success responses

XML format

```
<LogicDatabase>
  <Logic>true</Logic>
  <OwnerNameList>
    <OwnerNames>xxx</OwnerNames>
    <OwnerNames>xxx</OwnerNames>
    <OwnerNames>xxx</OwnerNames>
  </OwnerNameList>
  <DatabaseId>265</DatabaseId>
  <SearchName>test_logic_db(xxx)</SearchName>
  <DbType>mysql</DbType>
  <OwnerIdList>
    <OwnerIds>88653</OwnerIds>
    <OwnerIds>97787</OwnerIds>
    <OwnerIds>88654</OwnerIds>
  </OwnerIdList>
  <EnvType>dev</EnvType>
  <SchemaName>test_logic_db</SchemaName>
</LogicDatabase>
<RequestId>90260530-565C-42B9-A6E8-893481FE6AB6</RequestId>
<Success>true</Success>
```

JSON format


```
{
  "LogicDatabase": {
    "Logic": true,
    "OwnerNameList": {
      "OwnerNames": [
        "xxx",
        "xxx",
        "xxx"
      ]
    },
    "DatabaseId": 265,
    "SearchName": "test_logic_db(xxx)",
    "DbType": "mysql",
    "OwnerIdList": {
      "OwnerIds": [
        88653,
        97787,
        88654
      ]
    },
    "EnvType": "dev",
    "SchemaName": "test_logic_db"
  },
  "RequestId": "90260530-565C-42B9-A6E8-893481FE6AB6",
  "Success": true
}
```

6.6.11. GetMetaTableDetailInfo

Queries the details of a table. These details include columns and indexes.

Request parameters

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

Parameter	Type	Required	Example	Description
TableGuid	String	Yes	IDB_L_9032.db-test.yuyang_test	The globally unique identifier (GUID) of the table in DMS.  Note - To obtain the GUID of a logical database, set the ReturnGuid parameter to true when you call the ListLogicTables operation. - To obtain the GUID of a logical database, set the ReturnGuid parameter to true when you call the ListTables operation.
Tid	Long	No	123	The ID of the tenant.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
DetailInfo	Struct		The details of the table.
ColumnList	Array of Column		The columns.
AutoIncrement	Boolean	true	Indicates whether the column is an auto-increment column. Valid values: - true: The column is an auto-increment column. - false: The column is not an auto-increment column.
ColumnId	String	191234849	The ID of the column.
ColumnName	String	id	The name of the column.

Parameter	Type	Example	Description
ColumnType	String	bigint(20) unsigned	The data type of the column. Example: Bigint , Int , or Varchar .
DataLength	Integer	0	The length of the column.
DataPrecision	Integer	0	The precision of the column.
DataScale	Integer	0	The scale of the column.
Description	String	test	The description of the column.
Nullable	Boolean	false	Indicates whether the column is nullable. Valid values: • true: The column is nullable. • false: The column is not nullable.
Position	String	1	The position of the column in the table.
IndexList	Array of Index		The indexes.
IndexColumns	List	id,name	The indexed columns.
IndexId	String	123	The ID of the index.
IndexName	String	PRIMARY	The name of the index.
IndexType	String	Primary	The type of the index. Example: Primary , Unique , or Normal .
Unique	Boolean	false	Indicates whether the index is unique. Valid values: • true: The index is unique. • false: The index is not unique.
ErrorCode	String	UnknownError	The error code that is returned.

Parameter	Type	Example	Description
ErrorMessage	String	UnknownError	The error message that is returned.
RequestId	String	E881CB2F-DE42-42E5-90EB-8B3173DCB9B9	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeds.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GetMetaTableDetailInfo
&TableGuid=IDB_L_9032.db-test.yuyang_test
&<Common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>E881CB2F-DE42-42E5-90EB-8B3173DCB9B9</RequestId>
<DetailInfo>
  <ColumnList>
    <ColumnId>191234849</ColumnId>
    <ColumnName>id</ColumnName>
    <Description>test</Description>
    <ColumnType>bigint(20) unsigned</ColumnType>
    <Position>1</Position>
    <AutoIncrement>true</AutoIncrement>
    <DataScale>0</DataScale>
    <DataPrecision>20</DataPrecision>
    <Nullable>false</Nullable>
  </ColumnList>
  <ColumnList>
    <ColumnId>191234850</ColumnId>
    <ColumnName>gmt_create</ColumnName>
    <Description>test</Description>
    <ColumnType>datetime</ColumnType>
    <Position>2</Position>
    <AutoIncrement>false</AutoIncrement>
    <Nullable>false</Nullable>
  </ColumnList>
  <ColumnList>
    <ColumnId>191234851</ColumnId>
    <ColumnName>gmt_modified</ColumnName>
    <Description>test</Description>
    <ColumnType>datetime</ColumnType>
    <Position>3</Position>
    <AutoIncrement>false</AutoIncrement>
    <Nullable>false</Nullable>
  </ColumnList>
  <IndexList>
    <IndexName>PRIMARY</IndexName>
    <IndexId>33008763</IndexId>
    <IndexColumns>id</IndexColumns>
    <Unique>false</Unique>
    <IndexType>Primary</IndexType>
  </IndexList>
</DetailInfo>
<Success>true</Success>
```

JSON **format**

```

{
  "RequestId": "E881CB2F-DE42-42E5-90EB-8B3173DCB9B9",
  "DetailInfo": {
    "ColumnList": [
      {
        "ColumnId": 191234849,
        "ColumnName": "id",
        "Description": "test",
        "ColumnType": "bigint(20) unsigned",
        "Position": 1,
        "AutoIncrement": true,
        "DataScale": 0,
        "DataPrecision": 20,
        "Nullable": false
      },
      {
        "ColumnId": 191234850,
        "ColumnName": "gmt_create",
        "Description": "test",
        "ColumnType": "datetime",
        "Position": 2,
        "AutoIncrement": false,
        "Nullable": false
      },
      {
        "ColumnId": 191234851,
        "ColumnName": "gmt_modified",
        "Description": "test",
        "ColumnType": "datetime",
        "Position": 3,
        "AutoIncrement": false,
        "Nullable": false
      }
    ],
    "IndexList": [
      {
        "IndexName": "PRIMARY",
        "IndexId": 33008763,
        "IndexColumns": [
          "id"
        ],
        "Unique": false,
        "IndexType": "Primary"
      }
    ]
  },
  "Success": true
}

```

6.6.12. GetTableDBTopology

Queries the topology of a table.

This operation is available only for **logical databases**.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetTableDBTopology	The operation that you want to perform. Set the value to GetTableDBTopology .
TableGuid	String	Yes	IDB_L_9032.db-test.yuyang_test	The globally unique identifier (GUID) of a table in Data Management (DMS).  Note - To obtain the GUID of a table in a logical database, set the ReturnGuid parameter to true when you call the ListLogicTables operation. - To obtain the GUID of a table in a physical database, set the ReturnGuid parameter to true when you call the ListTables operation.
Tid	Long	No	123	The ID of the tenant.
RegionId	String	No	cn-hangzhou	The ID of the region where Data Management (DMS) resides.  Note Set this parameter to the ID of the region that is in proximity to your applications.

Response parameters

Parameter	Type	Example	Description
DBTopology	Struct		The topology information about the database.
DataSourceList	Array of DataSource		The data sources.

Parameter	Type	Example	Description
DatabaseList	Array of Database		The physical databases.
DbId	String	489347	The ID of the database.
DbName	String	db-test	The name of the database.
DbType	String	mysql	The type of the database.
EnvType	String	pre	The type of the environment. Valid values: • product: production environment • dev: development environment • pre: staging environment • test: test environment • sit: SIT environment • uat: UAT environment • pet: stress testing environment • stag: STAG environment
TableList	Array of Table		The physical tables.
TableId	String	151977812	The ID of the table.
TableName	String	yuyang_test_0000	The name of the table.
TableType	String	NORMAL	The type of the table. This is a reserved parameter.
DbType	String	mysql	The type of the database.
Host	String	xxx.mysql.polardb.rds.aliyuncs.com	The endpoint of the data source.
Port	Integer	3306	The port that is used to connect to the data source.
Sid	String	def	The system identifier (SID) of the data source.

Parameter	Type	Example	Description
TableGuid	String	IDB_L_9032.db-test.yuyang_test	The GUID of the table in DMS.
TableName	String	yuyang_test	The name of the table.  Note • If a logical table is queried, the name of the logical table is returned. • If a physical table is queried, the name of the physical table is returned.
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	853F7FD4-D922-4EFB-931C-D253EF159E06	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GetTableDBTopology
&TableGuid=IDB_L_9032.db-test.yuyang_test
&<Common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>55B7CF50-4610-4707-B2B2-5EF2BE000367</RequestId>
<DBTopology>
  <TableName>yuyang_test</TableName>
  <TableGuid>IDB_L_9032.db-test.yuyang_test</TableGuid>
  <DataSourceList>
    <DatabaseList>
      <DbId>489347</DbId>
      <DbName>db-test</DbName>
      <TableList>
        <TableId>151977811</TableId>
        <TableName>yuyang_test_0000</TableName>
      </TableList>
      <TableList>
        <TableId>151977812</TableId>
        <TableName>yuyang_test_0001</TableName>
      </TableList>
      <TableList>
        <TableId>151977813</TableId>
        <TableName>yuyang_test_0002</TableName>
      </TableList>
      <TableList>
        <TableId>151977814</TableId>
        <TableName>yuyang_test_0003</TableName>
      </TableList>
      <TableList>
        <TableId>151977815</TableId>
        <TableName>yuyang_test_0004</TableName>
      </TableList>
      <EnvType>dev</EnvType>
      <DbType>polardb</DbType>
    </DatabaseList>
    <Port>3306</Port>
    <Host>xxx.mysql.polardb.rds.aliyuncs.com</Host>
    <DbType>polardb</DbType>
  </DataSourceList>
</DBTopology>
<Success>true</Success>
```

JSON format

```
{
  "RequestId": "55B7CF50-4610-4707-B2B2-5EF2BE000367",
  "DBTopology": {
    "TableName": "yuyang_test",
    "TableGuid": "IDB_L_9032.db-test.yuyang_test",
    "DataSourceList": [
      {
        "DatabaseList": [
          {
            "DbId": 489347,
            "DbName": "db-test",
            "TableList": [
              {
                "TableId": 151977811,
                "TableName": "yuyang_test_0000"
              },
              {
                "TableId": 151977812,
                "TableName": "yuyang_test_0001"
              },
              {
                "TableId": 151977813,
                "TableName": "yuyang_test_0002"
              },
              {
                "TableId": 151977814,
                "TableName": "yuyang_test_0003"
              },
              {
                "TableId": 151977815,
                "TableName": "yuyang_test_0004"
              }
            ],
            "EnvType": "dev",
            "DbType": "polardb"
          }
        ],
        "Port": 3306,
        "Host": "xxx.mysql.polardb.rds.aliyuncs.com",
        "DbType": "polardb"
      }
    ],
    "Success": true
  }
}
```

6.6.13. GetMetaTableColumn

Queries the details about columns in a table.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetMetaTableColumn	The operation that you want to perform. Set the value to GetMetaTableColumn .
TableGuid	String	Yes	IDB_L_11345.yuyang_test.base_user	The globally unique identifier (GUID) of a table in Data Management (DMS).  Note - To obtain the GUID of a table in a logical database, set the ReturnGuid parameter to true when you call the ListLogicTables operation. - To obtain the GUID of a table in a physical database, set the ReturnGuid parameter to true when you call the ListTables operation.
Tid	Long	No	123	The ID of the tenant.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ColumnList	Array of Column		The columns.
AutoIncrement	Boolean	true	Indicates whether the column is an auto-increment column. Valid values: true: The column is an auto-increment column. false: The column is not an auto-increment column.
ColumnId	String	191234849	The ID of the column.

Parameter	Type	Example	Description
ColumnName	String	id	The name of the column.
ColumnType	String	bigint(20) unsigned	The data type of the column. Examples: Bigint , Int , and Varchar .
DataLength	Integer	0	The length of the column.
DataPrecision	Integer	0	The precision of data in the column.
DataScale	Integer	0	The scale of data in the column.
Description	String	test	The description of the column.
Nullable	Boolean	false	Indicates whether the column is empty. Valid values: • true: The column is empty. • false: The column is not empty.
Position	Integer	1	The order of the column in the table.
PrimaryKey	String	true	Indicates whether the column is the primary key. • true: The column is the primary key. • false: The column is not the primary key.
SecurityLevel	String	INNER	The sensitivity level of the column. Valid values: • INNER • SENSITIVE • CONFIDENTIAL
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	2B581A5E-D4FE-4F77-BADE-DD944D7BEBE2	The ID of the request.

Parameter	Type	Example	Description
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GetMetaTableColumn
&TableGuid=IDB_L_11345.yuyang_test.base_user
&<Common request parameters>
```

Sample success responses

XML format

```
<GetMetaTableColumnResponse>
  <RequestId>2B581A5E-D4FE-4F77-BADE-DD944D7BEBE2</RequestId>
  <ErrorCode>UnknownError</ErrorCode>
  <ColumnList>
    <ColumnId>191234849</ColumnId>
    <ColumnName>id</ColumnName>
    <Description>test</Description>
    <ColumnType>bigint(20) unsigned</ColumnType>
    <Position>1</Position>
    <AutoIncrement>true</AutoIncrement>
    <SecurityLevel>INNER</SecurityLevel>
    <DataScale>0</DataScale>
    <DataLength>0</DataLength>
    <DataPrecision>0</DataPrecision>
    <PrimaryKey>true</PrimaryKey>
    <Nullable>false</Nullable>
  </ColumnList>
  <ErrorMessage>UnknownError</ErrorMessage>
  <Success>true</Success>
</GetMetaTableColumnResponse>
```

JSON format

```
{
  "RequestId": "2B581A5E-D4FE-4F77-BADE-DD944D7BEBE2",
  "ErrorCode": "UnknownError",
  "ColumnList": [{
    "ColumnId": "191234849",
    "ColumnName": "id",
    "Description": "test",
    "ColumnType": "bigint(20) unsigned",
    "Position": "1",
    "AutoIncrement": "true",
    "SecurityLevel": "INNER",
    "DataScale": "0",
    "DataLength": "0",
    "DataPrecision": "0",
    "PrimaryKey": "true",
    "Nullable": "false"
  }],
  "ErrorMessage": "UnknownError",
  "Success": "true"
}
```

6.6.14. SyncDatabaseMeta

Synchronizes the metadata of a database dictionary.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	SyncDatabaseMeta	The operation that you want to perform. Set the value to SyncDatabaseMeta .
DbId	String	Yes	123	The ID of the database.
Tid	Long	Yes	-1	The ID of the tenant.
Logic	Boolean	No	false	Specifies whether the database is a logical database.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The error code that is returned.
ErrorMessage	String	UnknownError	The error message that is returned.
RequestId	String	A99CD576-1E18-4E86-931E-C3CCE56DC030	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=SyncDatabaseMeta
&DbId=123
&Tid=-1
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>A99CD576-1E18-4E86-931E-C3CCE56DC030</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "RequestId": "A99CD576-1E18-4E86-931E-C3CCE56DC030",
  "Success": true
}
```

6.6.15. SyncInstanceMeta

Synchronizes the metadata of all database dictionaries in an instance.

Request parameters

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

Parameter	Type	Required	Example	Description
InstanceId	String	Yes	1234	The ID of the instance.
Tid	Long	Yes	-1	The ID of the tenant.
IgnoreTable	Boolean	No	true	Specifies whether to skip synchronization for the metadata of table dictionaries. Valid values: - true - false
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	A99CD576-1E18-4E86-931E-C3CCE56DC030	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=SyncInstanceMeta
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>A99CD576-1E18-4E86-931E-C3CCE56DC030</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "RequestId": "A99CD576-1E18-4E86-931E-C3CCE56DC030",
  "Success": true
}
```

6.7. Ticket operations

6.7.1. General

6.7.1.1. ApproveOrder

Reviews a ticket.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ApproveOrder	The operation that you want to perform. Set the value to ApproveOrder .
ApprovalType	String	Yes	agree	The action that you want to perform on the ticket. Valid values: • AGREE • CANCEL • REJECT
Tid	Long	Yes	-1	The ID of the tenant.  Note To view the ID of the tenant, perform the following steps: Log on to the Data Management (DMS) console. Move the pointer over the profile picture in the upper-right corner of the page.
WorkflowInstanceId	Long	Yes	1234	The ID of the approval process. You can call the GetOrderBaseInfo operation to obtain the ID. The ID is available only for a ticket that is pending approval. The value of this parameter is an integer that is greater than zero.

Parameter	Type	Required	Example	Description
RegionId	String	No	cn-hangzhou	The region ID.
Comment	String	No	test	The remarks.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	427688B8-ADFB-4C4E-9D45-EF5C1FD6E23D	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ApproveOrder
&ApprovalType=agree
&Tid=-1
&WorkflowInstanceId=1234
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>427688B8-ADFB-4C4E-9D45-EF5C1FD6E23D</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "RequestId": "427688B8-ADFB-4C4E-9D45-EF5C1FD6E23D",
  "Success": true
}
```

6.7.1.2. CloseOrder

Closes a ticket.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CloseOrder	The operation that you want to perform. Set the value to CloseOrder .
CloseReason	String	Yes	close reason	The reason why the ticket is closed.
OrderId	Long	Yes	1343	The ID of the ticket.
Tid	Long	Yes	-1	The ID of the tenant.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The error code that is returned.
ErrorMessage	String	UnknownError	The error message that is returned.
RequestId	String	427688B8-ADFB-4C4E-9D45-EF5C1FD6E23D	The ID of the request.
Success	Boolean	true	Indicates whether the call succeeds.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CloseOrder
&CloseReason=close reason
&OrderId=1343
&Tid=-1
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>427688B8-ADFB-4C4E-9D45-EF5C1FD6E23D</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "RequestId": "427688B8-ADFB-4C4E-9D45-EF5C1FD6E23D",
  "Success": true
}
```

6.7.1.3. GetApprovalDetail

Queries the approval details of a ticket.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetApprovalDetail	The operation that you want to perform. Set the value to GetApprovalDetail .
Tid	Long	Yes	-1	The ID of the tenant.
WorkflowInstanceId	Long	Yes	12345	The ID of the approval process. You can call the GetOrderBaseInfo operation to obtain the ID. The ID is available only for a ticket that is pending approval. The value of this parameter is an integer that is greater than zero.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ApprovalDetail	Struct		The details of the approval process.
AuditId	Long	277	The ID of the approval process.
CurrentHandlers	Array of CurrentHandler		The information of the reviewer.

Parameter	Type	Example	Description
CurrentHandler			
Id	Long	1	The ID of the user.
NickName	String	nickName	The name of the user.
Description	String	test	The description of the approval process.
OrderId	Long	1234	The ID of the ticket.
OrderType	String	DATA_EXPORT	The type of the ticket.
ReasonList	List	["reason1"]	The reason for the review result.
Title	String	Data export ticket-1234	The title of the approval process.
WorkflowInsCode	String	APPROVED	The status code of the approval process.
WorkflowNodes	Array of WorkflowNode		The details of approval nodes.
WorkflowNode			
AuditUserIdList	List	104442	The IDs of reviewers.
NodeName	String	DBA	The name of the approval node.
OperateComment	String	Reason: approved	The remarks of the review.
OperateTime	String	2019-10-15 13:47:54	The time when the ticket was reviewed.
OperatorId	Long	13434	The ID of the reviewer.
WorkflowInsCode	String	APPROVED	The status code of the approval process.
ErrorCode	String	UnknownError	The returned error code.

Parameter	Type	Example	Description
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	427688B8-ADFB-4C4E-9D45-EF5C1FD6E23D	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GetApprovalDetail
&Tid=-1
&WorkflowInstanceId=12345
&<Common request parameters>
```

Sample success responses

XML format

```
<ApprovalDetail>
  <Description>xxx</Description>
  <WorkflowInsCode>APPROVED</WorkflowInsCode>
  <CurrentHandlers>
  </CurrentHandlers>
  <OrderId>737047</OrderId>
  <OrderType>DATA_EXPORT</OrderType>
  <ReasonList>
    <Reasons>xxx</Reasons>
  </ReasonList>
  <AuditId>277</AuditId>
  <Title>Data export ticket-737047</Title>
  <WorkflowNodes>
    <WorkflowNode>
      <OperatorId>104442</OperatorId>
      <WorkflowInsCode>APPROVED</WorkflowInsCode>
      <OperateComment>Reason: approved</OperateComment>
      <AuditUserIdList>
        <AuditUserIds>104442</AuditUserIds>
      </AuditUserIdList>
      <OperateTime>2019-10-15 13:47:54</OperateTime>
      <NodeName>DBA</NodeName>
    </WorkflowNode>
  </WorkflowNodes>
</ApprovalDetail>
<RequestId>FE8EE2F1-4880-46BC-A704-5CF63EAF9A04</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "ApprovalDetail": {
    "Description": "xxx",
    "WorkflowInsCode": "APPROVED",
    "CurrentHandlers": {
      "CurrentHandler": []
    },
  },
  "OrderId": 737047,
  "OrderType": "DATA_EXPORT",
  "ReasonList": {
    "Reasons": [
      "xxx"
    ]
  },
  "AuditId": 277,
  "Title": "Data export ticket-737047",
  "WorkflowNodes": {
    "WorkflowNode": [
      {
        "OperatorId": 104442,
        "WorkflowInsCode": "APPROVED",
        "OperateComment": "Reason: approved",
        "AuditUserIdList": {
          "AuditUserIds": [
            104442
          ]
        },
        "OperateTime": "2019-10-15 13:47:54",
        "NodeName": "DBA"
      }
    ]
  },
  "RequestId": "FE8EE2F1-4880-46BC-A704-5CF63EAF9A04",
  "Success": true
}
```

6.7.1.4. GetOrderBaseInfo

Queries the basic information about a ticket.

Request parameters

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

Parameter	Type	Required	Example	Description
OrderId	Long	Yes	12345	The ID of the ticket.
Tid	Long	Yes	-1	The ID of the tenant.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
OrderBaseInfo	Struct		The basic information about the ticket.
Comment	String	test	The remarks.
Committer	String	xxx	The applicant.
CommitterId	Long	1	The ID of the applicant. Note: The ID is different from the Apsara Stack tenant account ID of the applicant.
CreateTime	String	2019-10-10 00:00:00	The time when the ticket was created.
LastModifyTime	String	2019-10-10 00:00:00	The last time when the ticket was modified.
OrderId	Long	12345	The ID of the ticket.
PluginType	String	DC_COMMON	The type of the ticket. For more information, see the "Request parameters" section of the CreateOrder topic.
RelatedUserList	List	1,2,3	The IDs of the operators that are related to the ticket.

Parameter	Type	Example	Description
RelatedUserNickList	List	a,b,c	The names of the operators that are related to the ticket.
StatusCode	String	success	The status code of the ticket. Valid values: • new: The ticket is created. • toaudit: The ticket is being reviewed. • Approved: The ticket is approved. • reject: The ticket is rejected. • processing: The request to create the ticket is being processed. • success: The request to create the ticket is processed. • closed: The ticket is closed.
StatusDesc	String	success	The description of the status.
WorkflowInstanceId	Long	1	The ID of the approval process.
WorkflowStatusDesc	String	approved	The description of the approval process.
RequestId	String	7133DF67-5B25-460F-8285-C4CC93472C2F	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GetOrderBaseInfo
&OrderId=12345
&Tid=-1
&<Common request parameters>
```

Sample success responses

XML format

```
<OrderBaseInfo>
  <Comment>test</Comment>
  <CreateTime>2019-10-10 00:00:00</CreateTime>
  <LastModifyTime>2019-10-10 00:00:00</LastModifyTime>
  <OrderId>12345</OrderId>
  <CommitterId>1</CommitterId>
  <PluginType>DC_COMMON</PluginType>
  <StatusCode>success</StatusCode>
  <RelatedUserNickList>
    <UserNicks>a,b,c</UserNicks>
  </RelatedUserNickList>
  <StatusDesc>success</StatusDesc>
  <WorkflowStatusDesc>approved</WorkflowStatusDesc>
  <WorkflowInstanceId>1</WorkflowInstanceId>
  <Committer>xxx</Committer>
  <RelatedUserList>
    <UserIds>1,2,3</UserIds>
  </RelatedUserList>
</OrderBaseInfo>
<RequestId>7133DF67-5B25-460F-8285-C4CC93472C2F</RequestId>
<ErrorCode>UnknownError</ErrorCode>
<ErrorMessage>UnknownError</ErrorMessage>
<Success>true</Success>
```

JSON format

```
{ "OrderBaseInfo": { "Comment": "test", "CreateTime": "2019-10-10 00:00:00", "LastModifyTime": "2019-10-10 00:00:00", "OrderId": "12345", "CommitterId": "1", "PluginType": "DC_COMMON", "StatusCode": "success", "RelatedUserNickList": { "UserNicks": "a,b,c" }, "StatusDesc": "success", "WorkflowStatusDesc": "approved", "WorkflowInstanceId": "1", "Committer": "xxx", "RelatedUserList": { "UserIds": "1,2,3" } }, "RequestId": "7133DF67-5B25-460F-8285-C4CC93472C2F", "ErrorCode": "UnknownError", "ErrorMessage": "UnknownError", "Success": "true" }
```

6.7.1.5. ListOrders

Queries the details of tickets.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListOrders	The operation that you want to perform. Set the value to ListOrders .
Tid	Long	No	-1	The ID of the tenant.

Parameter	Type	Required	Example	Description
PluginType	String	No	DC_COMMON	The type of tickets. Valid values: • PERM_APPLY: the tickets that are used to apply for permissions. • OWNER_APPLY: the tickets that are used to assume the ownership of resources. • DATA_CORRECT: the tickets that are used to change data. • NDDL: the tickets that are used to change the schema design of databases. • DATA_TRACK: the tickets that are used to trace data. • TABLE_SYNC: the tickets that are used to synchronize databases or tables. • DATA_EXPORT: the tickets that are used to export data. • SENSITIVITY: the tickets that are used to change the level of sensitive columns.
OrderResultType	String	No	AS_ADMIN	The range of tickets to be queried. Valid values: • AS_ADMIN: all tickets. • AS_COMMITTER: the tickets that are submitted by the current user. • AS_HANDLER: the tickets to be processed by the current user. • AS_OWNER: the tickets that are processed by the current user. • AS_Related: the tickets that are related to the current user.
SearchDateType	String	No	CREATE_TIME	The time condition. Valid values: • CREATE_TIME: the time when tickets are created. • MODIFY_TIME: the time when tickets are modified.
StartTime	String	No	2019-10-10 00:00:00	The start of the time range.
EndTime	String	No	2019-10-10 00:00:00	The end of the time range.

Parameter	Type	Required	Example	Description
SearchContent	String	No	test	The keyword that is used to search for tickets.
OrderStatus	String	No	ALL	The status of tickets. Valid values: • ALL: The tickets of all statuses are included. • FINISHED: The tickets are completed. • RUNNING: The tickets are being processed.
PageSize	Integer	No	10	The number of entries to return on each page.
PageNumber	Integer	No	1	The number of the page to return.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
Orders	Array of Order		The details about the tickets.
Order			
Comment	String	test	The remarks of the ticket.
Committer	String	test	The user who submitted the ticket.
CommitterId	Long	1	The ID of the user who submitted the ticket.
CreateTime	String	2019-10-10 00:00:00	The time when the ticket was created.
LastModifyTime	String	2019-10-10 00:00:00	The last time when the ticket was modified.

Parameter	Type	Example	Description
OrderId	Long	1432	The ID of the ticket.
PluginType	String	DC_COMMON	The type of the ticket.
StatusCode	String	success	The status of the ticket.
StatusDesc	String	success	The status description of the ticket.
RequestId	String	427688B8-ADFB-4C4E-9D45-EF5C1FD6E23D	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.
TotalCount	Long	100	The total number of entries that are returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListOrders
&<Common request parameters>
```

Sample success responses

XML format

```
<TotalCount>5</TotalCount>
<RequestId>7AC17A86-9E6F-484B-AE8D-F9416986A108</RequestId>
<Orders>
  <Order>
    <StatusCode>success</StatusCode>
    <PluginType>DC_COMMON</PluginType>
    <Committer>xxx[RAM user]</Committer>
    <StatusDesc>Data is changed.</StatusDesc>
    <LastModifyTime>2019-11-19 13:53:05</LastModifyTime>
    <CreateTime>2019-11-19 13:52:36</CreateTime>
    <OrderId>737160</OrderId>
    <Comment>A test ticket that is used to change data</Comment>
    <CommitterId>104442</CommitterId>
  </Order>
  <Order>
    <StatusCode>new</StatusCode>
    <PluginType>DC_COMMON</PluginType>
    <Committer>xxx[RAM user]</Committer>
    <StatusDesc>Data is changed.</StatusDesc>
    <LastModifyTime>2019-11-19 13:53:05</LastModifyTime>
    <CreateTime>2019-11-19 13:52:36</CreateTime>
    <OrderId>737160</OrderId>
    <Comment>A test ticket that is used to change data</Comment>
    <CommitterId>104442</CommitterId>
  </Order>
</Orders>
```

```

    <StatusDesc>The ticket is to be submitted for approval.</StatusDesc>
    <LastModifyTime>2019-10-29 20:51:37</LastModifyTime>
    <CreateTime>2019-10-29 20:51:36</CreateTime>
    <OrderId>737116</OrderId>
    <Comment>Create a test ticket to change data</Comment>
    <CommitterId>104442</CommitterId>
  </Order>
  <Order>
    <StatusCode>closed</StatusCode>
    <PluginType>DC_COMMON</PluginType>
    <Committer>xxx[RAM user]</Committer>
    <StatusDesc>The ticket is closed: Database-level operations are not supported.</Sta
tusDesc>
    <LastModifyTime>2019-10-20 22:09:38</LastModifyTime>
    <CreateTime>2019-10-20 22:08:19</CreateTime>
    <OrderId>737089</OrderId>
    <Comment>The test ticket that is used to create a database</Comment>
    <CommitterId>104442</CommitterId>
  </Order>
  <Order>
    <StatusCode>new</StatusCode>
    <PluginType>DC_COMMON</PluginType>
    <Committer>xxx[RAM user]</Committer>
    <StatusDesc>Failed to perform the pre-check.</StatusDesc>
    <LastModifyTime>2019-09-30 16:58:35</LastModifyTime>
    <CreateTime>2019-09-30 16:58:34</CreateTime>
    <OrderId>737016</OrderId>
    <Comment>Test</Comment>
    <CommitterId>104442</CommitterId>
  </Order>
  <Order>
    <StatusCode>success</StatusCode>
    <PluginType>DC_COMMON</PluginType>
    <Committer>xxx[RAM user]</Committer>
    <StatusDesc>Data is changed.</StatusDesc>
    <LastModifyTime>2019-08-17 14:07:54</LastModifyTime>
    <CreateTime>2019-08-17 14:07:42</CreateTime>
    <OrderId>736774</OrderId>
    <Comment>The ticket that is used to change common data</Comment>
    <CommitterId>104442</CommitterId>
  </Order>
</Orders>
<Success>true</Success>

```

JSON format

```

{
  "TotalCount": 5,
  "RequestId": "7AC17A86-9E6F-484B-AE8D-F9416986A108",
  "Orders": {
    "Order": [
      {
        "StatusCode": "success",
        "PluginType": "DC_COMMON",

```

```

    "Committer": "xxx[RAM user]"
    "StatusDesc": "Data is changed.",
    "LastModifyTime": "2019-11-19 13:53:05",
    "CreateTime": "2019-11-19 13:52:36",
    "OrderId": 737160,
    "Comment": "The test ticket that is used to change data",
    "CommitterId": 104442
  },
  {
    "StatusCode": "new",
    "PluginType": "DC_COMMON",
    "Committer": "xxx[RAM user]"
    "StatusDesc": "The ticket is to be submitted for approval.",
    "LastModifyTime": "2019-10-29 20:51:37",
    "CreateTime": "2019-10-29 20:51:36",
    "OrderId": 737116,
    "Comment": "Create a test ticket to change data",
    "CommitterId": 104442
  },
  {
    "StatusCode": "closed",
    "PluginType": "DC_COMMON",
    "Committer": "xxx[RAM user]"
    "StatusDesc": "The ticket is closed: Database-level operations are not supported.",
    "LastModifyTime": "2019-10-20 22:09:38",
    "CreateTime": "2019-10-20 22:08:19",
    "OrderId": 737089,
    "Comment": "A test ticket that is used to create a database",
    "CommitterId": 104442
  },
  {
    "StatusCode": "new",
    "PluginType": "DC_COMMON",
    "Committer": "xxx[RAM user]"
    "StatusDesc": "Failed to perform the pre-check.",
    "LastModifyTime": "2019-09-30 16:58:35",
    "CreateTime": "2019-09-30 16:58:34",
    "OrderId": 737016,
    "Comment": "Test",
    "CommitterId": 104442
  },
  {
    "StatusCode": "success",
    "PluginType": "DC_COMMON",
    "Committer": "xxx[RAM user]"
    "StatusDesc": "Data is changed.",
    "LastModifyTime": "2019-08-17 14:07:54",
    "CreateTime": "2019-08-17 14:07:42",
    "OrderId": 736774,
    "Comment": "The ticket that is used to change common data",
    "CommitterId": 104442
  }
]
},

```



```
"Success": true
}
```

6.7.1.6. SubmitOrderApproval

Submits a ticket for approval.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	SubmitOrderApproval	The operation that you want to perform. Set the value to SubmitOrderApproval .
OrderId	Long	Yes	12345	The ID of the ticket.
Tid	Long	Yes	-1	The ID of the tenant.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The error code that is returned.
ErrorMessage	String	UnknownError	The error message that is returned.
RequestId	String	427688B8-ADFB-4C4E-9D45-EF5C1FD6E23D	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=SubmitOrderApproval
&OrderId=12345
&Tid=-1
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>7AC17A86-9E6F-484B-AE8D-F9416986A108</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "RequestId": "7AC17A86-9E6F-484B-AE8D-F9416986A108",
  "Success": true
}
```

6.7.1.7. CreateOrder

Creates a ticket.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateOrder	The operation that you want to perform. Set the value to CreateOrder .
Comment	String	Yes	test	The description of the ticket.
PluginParam	Json	Yes	{}	The parameter that is used to create a ticket. This parameter consists of a set of parameters that are included in a JSON string. The settings of these parameters are subject to the type of the ticket. For more information, see the "Instructions for the PluginParam parameter" section.

Parameter	Type	Required	Example	Description
PluginType	String	Yes	DATA_EXPORT	The type of the ticket. Valid values: • DC_COMMON: a ticket that is used to change common data. • DC_CHUNK: a ticket that is used to change lock-free data. • DC_CRON_CLEAR: a ticket that is used to change historical data. • NDDL: a ticket that is used to change the schema design. • DATA_EXPORT: a ticket that is used to export data. • PERM_APPLY: a ticket that is used to request a permission. • OWNER_APPLY: a ticket that is used to request the ownership of a resource.
RelatedUserList	String	Yes	1,2,3	The IDs of the operators that are related to the ticket. Separate multiple IDs with commas (,).
Tid	Long	No	-1	The ID of the tenant.
RegionId	String	No	cn-hangzhou	The region ID.

Instructions for the PluginParam parameter

```

json
# Change common data
"pluginParam" : {
    "classify" : "Test", // The classification of the reason.
    "estimateAffectRows" : 1, // The estimated number of affected rows.
    "execSql" : "update base_op_log set id=1 where id=1;", // The SQL statement to be executed.
    "dbItemList" : [ { // The details of databases on which the operation is performed.
        "dbId" : 179694,
        "logic" : false
    } ],
    "rbSQL" : "update base_op_log set id=1 where id=1;", // The SQL statement to run for rollback.
    "rbAttachmentName" : null, // The attachment of the SQL statement to run for rollback.
    "sqlType" : "TEXT", // The type of the SQL file to run for data change. Valid values: TEXT and ATTACHMENT.
    "rbSQLType" : "TEXT", // The type of the SQL file to run for rollback. Valid values: TEXT and ATTACHMENT.
    "attachmentName" : // The attachment of the SQL statement to run for data change.
}
# Change lock-free data
"pluginParam" : {
    "Classify": "Test"
    "execSQL" : "update base_op_log set op_type=op_type where 1=1;", // The SQL statement to be executed.
    "dbItemList" : [ {
        "dbId": 179719, // The ID of the database from which data is exported.
        "logic" : false
    } ]
}
# Clear historical data
"pluginParam" : {
    "duration" : 10, // The duration. Unit: hours. Default value: 0.
    "specifyDuration" : true, // Specifies whether to set a duration. Valid values: true (yes) and false (no). Default value: false.
    "Classify": "Test"
    "cronFormat" : "0 1 21 * * ?", // The expression that is used to schedule the execution of the operation.
    "execSql" : null,
    "dbItemList" : [ {
        "dbId": 179719, // The ID of the database on which the operation is performed.
        "logic" : false
    } ],
    "cronClearItemList" : [ {
        "filterSQL" : null, // The filter conditions.
        "columnName" : "gmt_create", // The time field.
        "remainDays" : 60, // The retention period.
        "tableName" : "base_app" // The table name.
    } ]
}

```

```
json
# Change the schema design
"pluginParam": {
  "title": "test", // The title.
  "description": "test", // The description.
  "dbId": 118989, // The ID of the required database.
  "logic": false, // Specifies whether the database is a logical database.
  "relatedIds": [], // The IDs of operators that are related to the change.
}
```

```
json
# Export data
"pluginParam" : {
  "classify": "Classification of the reason", // The classification of the reason.
  "dbId": 179719, // The ID of the database from which data is exported.
  "exeSQL": "select 1", // Export data by using the SQL statement.
  "logic": false, // Specifies whether the database is a logical database.
  "ignoreAffectRows": false, // Specifies whether to ignore the affected rows.
  "affectRows": 1, // The estimated number of affected rows.
  "ignoreAffectRowsReason": "" // Specifies whether to ignore the affected rows.
}
```

Response parameters

Parameter	Type	Example	Description
CreateOrderResult	List	123	The ID of the ticket that is created.
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	427688B8-ADFB-4C4E-9D45-EF5C1FD6E23D	The ID of the request.
Success	Boolean	true	Indicates whether the call succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateOrder
&Comment=test
&PluginParam={}
&PluginType=DATA_EXPORT
&RelatedUserList=1,2,3
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>427688B8-ADFB-4C4E-9D45-EF5C1FD6E23D</RequestId>
<CreateOrderResult>
  <OrderIds>123</OrderIds>
</CreateOrderResult>
<Success>true</Success>
```

JSON format

```
{
  "RequestId": "427688B8-ADFB-4C4E-9D45-EF5C1FD6E23D",
  "CreateOrderResult": {
    "OrderIds": [123]
  },
  "Success": true
}
```

6.7.2. Data changes

6.7.2.1. ExecuteDataCorrect

Creates a ticket to modify data.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ExecuteDataCorrect	The operation that you want to perform. Set the value to ExecuteDataCorrect .
OrderId	Long	Yes	123	The ID of the ticket.
Tid	String	No	-1	The ID of the tenant.

Parameter	Type	Required	Example	Description
ActionDetail	Json	No	<pre>{ "startTime" : null, "endTime" : null, "transaction" : false, "backupData" : true }</pre>	The parameters that are required to perform the operation. <pre>json "actionDetail" : { "startTime" : null, // The start of the required time range. If you want to immediately modify data , you do not need to set the parameter. "endTime" : null, // The end of the required time range. If you want to immediately modify data , you do not need to set the parameter. "transaction" : false, // Specifies whether to run the modification task as a transaction. "backupData" : true // Specifies whether to back up data. }</pre>
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The error code that is returned.
ErrorMessage	String	UnknownError	The error message that is returned.
RequestId	String	427688B8-ADFB-4C4E-9D45-EF5C1FD6E23D	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ExecuteDataCorrect
&OrderId=123
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>7133DF67-5B25-460F-8285-C4CC93472C2F</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "RequestId": "7133DF67-5B25-460F-8285-C4CC93472C2F",
  "Success": true
}
```

6.7.2.2. GetDataCorrectBackupFiles

Queries the download URL of an attachment that includes the backup files of data changes.

Request parameters

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

Parameter	Type	Required	Example	Description
OrderId	Long	Yes	12345	The ID of the ticket.
Tid	Long	No	-1	The ID of the tenant.
ActionDetail	Json	No	{}	The parameters that are required to perform the operation. You do not need to specify this parameter.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
DataCorrectBackupFiles	List	xxx	The download URL of the attachment that includes backup files.
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	427688B8-ADFB-4C4E-9D45-EF5C1FD6E23D	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GetDataCorrectBackupFiles
&OrderId=12345
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DataCorrectBackupFiles>
  <FileUrl>https://xxx.oss-cn-hangzhou.aliyuncs.com/xxx.zip?Expires=1574382979&OSSAccessKeyId=wSa97B52GzF4fGqu&Signature=ykWSysajKcQjXjG0X4ApOQvlIXQ%3D</FileUrl>
</DataCorrectBackupFiles>
<RequestId>4AFF4109-FEFB-44E8-96A3-923B1FA8C46E</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "DataCorrectBackupFiles": {
    "FileUrl": [
      "https://xxx.oss-cn-hangzhou.aliyuncs.com/xxx.zip?Expires=1574382979&OSSAccessKeyId=wSa97B52GzF4fGqu&Signature=ykWSysajKcQjXjG0X4ApOQvlIXQ%3D"
    ]
  },
  "RequestId": "4AFF4109-FEFB-44E8-96A3-923B1FA8C46E",
  "Success": true
}
```

6.7.2.3. GetDataCorrectOrderDetail

Queries the details about a ticket that is used to modify data.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetDataCorrectOrderDetail	The operation that you want to perform. Set the value to GetDataCorrectOrderDetail .
OrderId	Long	Yes	12345	The ID of the ticket.
Tid	Long	No	-1	The ID of the tenant.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
DataCorrectOrderDetail	Struct		The details about the ticket.

Parameter	Type	Example	Description
DatabaseList	Array of Database		The details about the database whose data is modified.
Database			
DbId	Integer	123456	The ID of the database.
DbType	String	mysql	The type of the database.
EnvType	String	product	The type of the environment to which the database belongs.
Logic	Boolean	false	Indicates whether the database is a logical database.
SearchName	String	xxx@xxx:3306	The name that is used to search for the logical database.
OrderDetail	Struct		The details about the ticket.
ActualAffectRows	Long	100	The number of rows that are affected by the system check.
AttachmentName	String	xxx	The attachment that includes the executed SQL statement.
Classify	String	test	The category of the reason for the data change.
EstimateAffectRows	Long	100	The estimated number of affected rows.
ExeSQL	String	update t1 set name = 'xxx' where id <= 100	The SQL statement that is executed.
IgnoreAffectRows	Boolean	false	Indicates whether the pre-check is ignored.
IgnoreAffectRowsReason	String	test	The reason why the pre-check is ignored.

Parameter	Type	Example	Description
RbAttachmentName	String	test	The attachment that includes the SQL statement used to roll back the updated data.
RbSQL	String	empty	The SQL statement that is specified to roll back the updated data.
RbSQLType	String	text	The type of the attachment file. Valid values: - TEXT - ATTACHMENT
SqlType	String	text	The type of the SQL statement. Valid values: - TEXT - ATTACHMENT
PreCheckDetail	Array of TaskCheckDO		The details about the precheck task.
TaskCheckDO			
CheckStatus	String	SUCCESS	The status of the precheck task. Valid values: - WAITING: The ticket is pending check. - RUNNING: The ticket is being checked. - SUCCESS: The ticket is checked. - FAIL: The ticket fails to be checked.
CheckStep	String	PERMISSION_CHECK	The check step. Valid values: - SQL_PARSE: The system parses the SQL statement. - SQL_TYPE_CHECK: The system checks the type of the SQL statement. - PERMISSION_CHECK: The system checks the permissions of the SQL statement. - ROW_CHECK: The system checks the number of rows.
UserTip	String	tip message	The message that appears when a check step is executed.

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	427688B8-ADFB-4C4E-9D45-EF5C1FD6E23D	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GetDataCorrectOrderDetail
&OrderId=12345
&<Common request parameters>
```

Sample success responses

`XML` format

```

<RequestId>ACE263E5-CF5F-44DD-A7B1-42C5E78E9650</RequestId>
<DataCorrectOrderDetail>
  <PreCheckDetail>
    <TaskCheckDO>
      <CheckStatus>SUCCESS</CheckStatus>
      <CheckStep>SQL_PARSE</CheckStep>
    </TaskCheckDO>
    <TaskCheckDO>
      <CheckStatus>SUCCESS</CheckStatus>
      <CheckStep>SQL_TYPE_CHECK</CheckStep>
    </TaskCheckDO>
    <TaskCheckDO>
      <CheckStatus>SUCCESS</CheckStatus>
      <CheckStep>PERMISSION_CHECK</CheckStep>
    </TaskCheckDO>
    <TaskCheckDO>
      <CheckStatus>SUCCESS</CheckStatus>
      <UserTip>This is a statistical value that is generated by the system. The actual number of affected rows is subject to the SQL statement that is executed.</UserTip>
      <CheckStep>ROW_CHECK</CheckStep>
    </TaskCheckDO>
  </PreCheckDetail>
  <OrderDetail>
    <ActualAffectRows>0</ActualAffectRows>
    <RbSQLType>TEXT</RbSQLType>
    <ExeSQL>update base_user set id = 1 where id = 1;</ExeSQL>
    <EstimateAffectRows>1</EstimateAffectRows>
    <SqlType>TEXT</SqlType>
    <Classify>test</Classify>
    <IgnoreAffectRowsReason/>
  </OrderDetail>
</DataCorrectOrderDetail>
<Success>true</Success>

```

JSON **format**

```
{
  "RequestId": "ACE263E5-CF5F-44DD-A7B1-42C5E78E9650",
  "DataCorrectOrderDetail": {
    "PreCheckDetail": {
      "TaskCheckDO": [
        {
          "CheckStatus": "SUCCESS",
          "CheckStep": "SQL_PARSE"
        },
        {
          "CheckStatus": "SUCCESS",
          "CheckStep": "SQL_TYPE_CHECK"
        },
        {
          "CheckStatus": "SUCCESS",
          "CheckStep": "PERMISSION_CHECK"
        },
        {
          "CheckStatus": "SUCCESS",
          "UserTip": "This is a statistical value that is generated by the system. The actual number of affected rows is subject to the SQL statement that is executed.",
          "CheckStep": "ROW_CHECK"
        }
      ]
    },
    "OrderDetail": {
      "ActualAffectRows": 0,
      "RbSQLType": "TEXT",
      "ExeSQL": "update base_user set id = 1 where id = 1;",
      "EstimateAffectRows": 1,
      "SqlType": "TEXT",
      "Classify": "test",
      "IgnoreAffectRowsReason": ""
    }
  },
  "Success": true
}
```

6.7.3. Schema design

6.7.3.1. CreatePublishGroupTask

Creates a ticket to modify the schema design of a database.

Request parameters

Parameter	Type	Required	Example	Description
-----------	------	----------	---------	-------------

Parameter	Type	Required	Example	Description
Action	String	Yes	CreatePublishGroupTask	The operation that you want to perform. Set the value to CreatePublishGroupTask .
DbId	Integer	Yes	12345	The ID of the database for which you want to modify the schema design.
Logic	Boolean	Yes	false	Specifies whether the database is a logical database.
OrderId	Long	Yes	142435	The ID of the ticket.
PublishStrategy	String	Yes	IMMEDIATELY	The policy to modify the schema design. Valid values: • IMMEDIATELY: immediately modifies the schema design. • REGULARLY: modifies the schema design at a scheduled time.
Tid	Long	Yes	-1	The ID of the tenant.
PlanTime	String	No	2019-10-10 00:00:00	The time to modify the schema design.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The error code that is returned.
ErrorMessage	String	UnknownError	The error message that is returned.
RequestId	String	427688B8-ADFB-4C4E-9D45-EF5C1FD6E23D	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Parameter	Type	Example	Description
TaskId	Long	413452	The ID of the task.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreatePublishGroupTask
&DbId=12345
&Logic=false
&OrderId=142435
&PublishStrategy=IMMEDIATELY
&Tid=-1
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>78C93646-D9B1-4E6E-B5FD-C69F94A7905A</RequestId>
<Success>true</Success>
<TaskId>13424</TaskId>
```

JSON format

```
{
  "RequestId": "78C93646-D9B1-4E6E-B5FD-C69F94A7905A",
  "Success": true,
  "TaskId": 13424
}
```

6.7.4. Data export

6.7.4.1. ExecuteDataExport

Executes a ticket to export data.

Request parameters

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

Parameter	Type	Required	Example	Description
ActionDetail	Json	Yes	{ "fileType": "CSV", "encoding": "" }	The parameters that are required to perform the operation: <pre>json { "fileType": "CSV", // The format of the file to which the data is exported. "encoding": "" // The encoding of the file. }</pre>
OrderId	Long	Yes	1234	The ID of the ticket.
Tid	Long	Yes	-1	The ID of the tenant.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	FE8EE2F1-4880-46BC-A704-5CF63EAF9A04	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?ActionDetail={  "fileType": "CSV",    "encoding": ""  }
&OrderId=1234
&Tid=-1
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>FE8EE2F1-4880-46BC-A704-5CF63EAF9A04</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "RequestId": "FE8EE2F1-4880-46BC-A704-5CF63EAF9A04",
  "Success": true
}
```

6.7.4.2. GetDataExportDownloadURL

Queries the download URL of the file that includes export results for a data export ticket.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetDataExportDownloadURL	The operation that you want to perform. Set the value to GetDataExportDownloadURL .
OrderId	Long	Yes	12345	The ID of the ticket.
Tid	Long	Yes	-1	The ID of the tenant.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
DownloadURLResult	Struct		The details about the file that includes export results.
HasResult	Boolean	true	Indicates whether a file is available for download.
TipMessage	String	tip message	The message that indicates an exception.
URL	String	xxx	The download URL of the file that includes export results.

Parameter	Type	Example	Description
-----------	------	---------	-------------

ErrorCode	String	UnknownError	The error code that is returned.
ErrorMessage	String	UnknownError	The error message that is returned.
RequestId	String	427688B8-ADFB-4C4E-9D45-EF5C1FD6E23D	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GetDataExportDownloadURL
&OrderId=12345
&Tid=-1
&<Common request parameters>
```

Sample success responses

XML format

```
<DownloadURLResult>
  <URL>https://dms-idb-hangzhou.oss-cn-hangzhou.aliyuncs.com/xxx.zip?Expires=1574384313&am
  p;OSSAccessKeyId=wSa97B52GzF4fGqu&Signature=HQQWBRKiVV6cupugh1/eAVSqXg%3D</URL>
  <HasResult>true</HasResult>
</DownloadURLResult>
<RequestId>4BF24EA5-9013-4C85-AE68-6C23AF5E0097</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "DownloadURLResult": {
    "URL": "https://dms-idb-hangzhou.oss-cn-hangzhou.aliyuncs.com/xxx.zip?Expires=157438431
    3&OSSAccessKeyId=wSa97B52GzF4fGqu&Signature=HQQWBRKiVV6cupugh1/eAVSqXg%3D",
    "HasResult": true
  },
  "RequestId": "4BF24EA5-9013-4C85-AE68-6C23AF5E0097",
  "Success": true
}
```

6.7.4.3. GetDataExportOrderDetail

Queries the details about a ticket that is used to export data.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetDataExportOrderDetail	The operation that you want to perform. Set the value to GetDataExportOrderDetail .
OrderId	Long	Yes	123456	The ID of the ticket.
Tid	Long	Yes	-1	The ID of the tenant.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
DataExportOrderDetail	Struct		The details about the ticket.
KeyInfo	Struct		The status information.

Parameter	Type	Example	Description
JobStatus	String	EXPORT_SUCCESS	The status of the ticket. Valid values: - PRE_CHECKING: The ticket is being pre-checked. - PRE_CHECK_SUCCESS: The ticket is pre-checked. - PRE_CHECK_FAIL: The ticket fails to be pre-checked. - WAITING_APPLY_AUDIT: The ticket is being submitted for approval. - APPLY_AUDIT_SUCCESS: The ticket is submitted for approval. - ENABLE_EXPORT: The ticket is approved. Data can be exported. - WAITING_EXPORT: The data is pending export. - DOING_EXPORT: The data is being exported. - EXPORT_FAIL: The data fails to be exported. - EXPORT_SUCCESS: The data is exported.
PreCheckId	Long	123	The ID of the precheck task.
OrderDetail	Struct		The details about the ticket.
ActualAffectRows	Long	1	The number of rows that are affected by the system check.
Classify	String	text	The category of the reason for the data export.
Database	String	xxx@xxx:3306	The database from which data is exported.
DbId	Integer	123	The ID of the database.
EnvType	String	test	The type of the environment to which the database belongs.
ExeSQL	String	select 1	The SQL statement that is executed to export data.

Parameter	Type	Example	Description
IgnoreAffectedRows	Boolean	false	Indicates whether the affected rows are skipped.
IgnoreAffectedRowsReason	String	empty	The reason why the pre-check is skipped.
Logic	Boolean	false	Indicates whether the database is a logical database.
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	427688B8-ADFB-4C4E-9D45-EF5C1FD6E23D	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GetDataExportOrderDetail
&OrderId=123456
&Tid=-1
&<Common request parameters>
```

Sample success responses

`XML` format

```

<DataExportOrderDetail>
  <KeyInfo>
    <PreCheckId>15544</PreCheckId>
    <JobStatus>EXPORT_SUCCESS</JobStatus>
  </KeyInfo>
  <OrderDetail>
    <Logic>false</Logic>
    <ActualAffectRows>1</ActualAffectRows>
    <ExeSQL>select 1;</ExeSQL>
    <Database>yuyang_test@xxx:3306[yuyang_test_xxx]China (Hangzhou) non-modular database</Database>
    <IgnoreAffectRows>false</IgnoreAffectRows>
    <DbId>116367</DbId>
    <Classify>Test</Classify>
    <EnvType>product</EnvType>
  </OrderDetail>
</DataExportOrderDetail>
<RequestId>78C93646-D9B1-4E6E-B5FD-C69F94A7905A</RequestId>
<Success>true</Success>

```

JSON **format**

```

{
  "DataExportOrderDetail": {
    "KeyInfo": {
      "PreCheckId": 15544,
      "JobStatus": "EXPORT_SUCCESS"
    },
    "OrderDetail": {
      "Logic": false,
      "ActualAffectRows": 1,
      "ExeSQL": "select 1;",
      "Database": "<Database>yuyang_test@xxx:3306[yuyang_test_xxx]China (Hangzhou) non-modular database</Database>",
      "IgnoreAffectRows": false,
      "DbId": 116367,
      "Classify": "Test",
      "EnvType": "product"
    }
  },
  "RequestId": "78C93646-D9B1-4E6E-B5FD-C69F94A7905A",
  "Success": true
}

```

6.8. Permission management

6.8.1. RevokeUserPermission

Revokes the permissions on a specified resource from a user.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RevokeUserPermission	The operation that you want to perform. Set the value to RevokeUserPermission .
DbId	String	Yes	142345	The ID of the database.
DsType	String	Yes	DATABASE	The type of resources. For more information, see the description of the GrantUserPermission operation.
PermTypes	String	Yes	QUERY	The type of permissions. For more information, see the description of the GrantUserPermission operation.
Tid	Long	Yes	-1	The ID of the tenant.
UserAccessId	String	Yes	123	The ID of the user permission.
UserId	String	Yes	1234	The ID of the user. You can call the GetUser operation to obtain the ID.  Note The ID is different from the ID of the Apsara Stack tenant account of the user.
Logic	Boolean	No	false	Specifies whether the database is a logical database. Valid values: - true - false
TableId	String	No	1342345	The ID of the table. This parameter is required if you grant permissions on a table to a user.
TableName	String	No	table_name	The name of the table. This parameter is required if you grant permissions on a table to a user.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The error code that is returned.
ErrorMessage	String	UnknownError	The error message that is returned.
RequestId	String	A99CD576-1E18-4E86-931E-C3CCE56DC030	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=RevokeUserPermission
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>A99CD576-1E18-4E86-931E-C3CCE56DC030</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "RequestId": "A99CD576-1E18-4E86-931E-C3CCE56DC030",
  "Success": true
}
```

6.8.2. ListDatabaseUserPermssions

Queries the permissions of users on a database.

Request parameters

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

Parameter	Type	Required	Example	Description
DbId	String	Yes	123	The ID of the database.
PermType	String	Yes	DATABASE	The type of the permission. Valid values: - DATABASE: permissions on databases. - TABLE: permissions on tables. - COLUMN: permissions on columns.
Tid	Long	Yes	-1	The ID of the tenant.
Logic	Boolean	No	false	Specifies whether the database is a logical database.
UserName	String	No	search_user_name	The nickname of the user.
PageNumber	Integer	No	1	The number of the page to return.
PageSize	Integer	No	10	The number of entries to return on each page.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The error code that is returned.
ErrorMessage	String	UnknownError	The error message that is returned.
RequestId	String	68075D06-7406-4887-83A7-F558A4D28C13	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeds.

Parameter	Type	Example	Description
TotalCount	Long	1	The total number of entries that meet the query conditions.
UserPermissions	Array of UserPermission		The details of user permissions.
UserPermission			
Alias	String	instance_alias	The alias of the instance.
ColumnName	String	column_name	The name of the field.
DbId	String	1234	The ID of the database.
DbType	String	mysql	The type of the database.
DsType	String	DATABASE	The type of resources on which the user has permissions.
EnvType	String	product	The type of the environment to which the database belongs.
InstancelId	String	1443	The ID of the instance.
Logic	Boolean	false	Specifies whether the database is a logical database.
PermDetails	Array of PermDetail		The details of permissions.
PermDetail			
CreateDate	String	2019-12-12 00:00:00	The time when the permission was created.
ExpireDate	String	2020-12-12 00:00:00	The time when the permission expires.
ExtraData	String	DEFAULT	The extra information. This parameter is reserved.
OriginFrom	String	xxx grant	The entity that authorizes the permission.

Parameter	Type	Example	Description
PermType	String	QUERY	The type of the permission. Valid values: • QUERY: the query permission. • EXPORT: the export permission. • CORRECT: the change permission.
UserAccessId	String	13434	The ID of the authorization record.
SchemaName	String	xxx@xxx:3306	The name of the schema.
SearchName	String	xxx	The name that is used to search for the database.
TableId	String	42345	The ID of the table.
TableName	String	table_name	The name of the table.
UserId	String	14324	The ID of the user.
UserNickName	String	user_nick_name	The name of the user.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListDatabaseUserPermissions
&DbId=123
&PermType=DATABASE
&Tid=-1
&<Common request parameters>
```

Sample success responses

XML format

```

<UserPermissions>
  <UserPermission>
    <Logic>false</Logic>
    <UserNickName>xxx</UserNickName>
    <DsType>DATABASE</DsType>
    <Alias>beihe_ent_prod</Alias>
    <PermDetails>
      <PermDetail>
        <ExpireDate>2020-10-31 00:00:00</ExpireDate>
        <UserAccessId>390915</UserAccessId>
        <PermType>QUERY</PermType>
        <OriginFrom>xxx</OriginFrom>
        <CreateDate>2019-11-21 15:07:45</CreateDate>
      </PermDetail>
      <PermDetail>
        <ExpireDate>2020-10-31 00:00:00</ExpireDate>
        <UserAccessId>390916</UserAccessId>
        <PermType>EXPORT</PermType>
        <OriginFrom>xxx</OriginFrom>
        <CreateDate>2019-11-21 15:07:45</CreateDate>
      </PermDetail>
      <PermDetail>
        <ExpireDate>2020-10-31 00:00:00</ExpireDate>
        <UserAccessId>390917</UserAccessId>
        <PermType>CORRECT</PermType>
        <OriginFrom>xxx</OriginFrom>
        <CreateDate>2019-11-21 15:07:45</CreateDate>
      </PermDetail>
    </PermDetails>
    <InstanceId>1434</InstanceId>
    <SearchName>xxx@xxxx:3306</SearchName>
    <DbId>123434</DbId>
    <UserId>432423</UserId>
    <DbType>drds</DbType>
    <EnvType>product</EnvType>
    <SchemaName>xxx</SchemaName>
  </UserPermission>
</UserPermissions>
<TotalCount>1</TotalCount>
<RequestId>68075D06-7406-4887-83A7-F558A4D28C13</RequestId>
<Success>true</Success>

```

JSON **format**

```

{
  "UserPermissions": {
    "UserPermission": [
      {
        "Logic": false,
        "UserNickName": "xxx",
        "DsType": "DATABASE",
        "Alias": "beihe_ent_prod",
        "PermDetails": {
          "PermDetail": [
            {
              "ExpireDate": "2020-10-31 00:00:00",
              "UserAccessId": "390915",
              "PermType": "QUERY",
              "OriginFrom": "xxx",
              "CreateDate": "2019-11-21 15:07:45"
            },
            {
              "ExpireDate": "2020-10-31 00:00:00",
              "UserAccessId": "390916",
              "PermType": "EXPORT",
              "OriginFrom": "xxx",
              "CreateDate": "2019-11-21 15:07:45"
            },
            {
              "ExpireDate": "2020-10-31 00:00:00",
              "UserAccessId": "390917",
              "PermType": "CORRECT",
              "OriginFrom": "xxx",
              "CreateDate": "2019-11-21 15:07:45"
            }
          ]
        },
        "InstanceId": 1434,
        "SearchName": "xxx@xxxx:3306",
        "DbId": 123434,
        "UserId": 432423,
        "DbType": "drds",
        "EnvType": "product",
        "SchemaName": "xxx"
      }
    ],
    "TotalCount": 1,
    "RequestId": "68075D06-7406-4887-83A7-F558A4D28C13",
    "Success": true
  }
}

```

6.8.3. SetOwners

Sets the owners of a database or a table.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	SetOwners	The operation that you want to perform. Set the value to SetOwners .
OwnerIds	String	Yes	123, 456	The IDs of the owners. Separate multiple IDs with commas (,).
OwnerType	String	Yes	DATABASE	The type of the owner. Valid values: - DATABASE: an owner of physical databases. - LOGIC_DATABASE: an owner of logical databases. - TABLE: an owner of physical tables. - LOGIC_TABLE: an owner of logical tables.
ResourceId	String	Yes	123	The ID of the resource. The ID is based on the value of the OwnerType parameter. Valid values for the OwnerType parameter: - DATABASE: physical databases. - LOGIC_DATABASE: logical databases. - TABLE: physical tables. - LOGIC_TABLE: logical tables.
Tid	Long	Yes	-1	The ID of the tenant.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	A99CD576-1E18-4E86-931E-C3CCE56DC030	The ID of the request.

Parameter	Type	Example	Description
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=SetOwners
&OwnerIds=123, 456
&OwnerType=DATABASE
&ResourceId=123
&Tid=-1
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>A99CD576-1E18-4E86-931E-C3CCE56DC030</RequestId>
<Success>true</Success>
```

JSON format

```
{
  "RequestId": "A99CD576-1E18-4E86-931E-C3CCE56DC030",
  "Success": true
}
```

6.8.4. ListUserPermissions

Queries the permissions of a user on databases and tables.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListUserPermissions	The operation that you want to perform. Set the value to ListUserPermissions .
PermType	String	Yes	DATABASE	The type of resources on which the user has permissions. For more information, see ListDatabaseUserPermissions .
Tid	Long	Yes	-1	The ID of the tenant.

Parameter	Type	Required	Example	Description
UserId	String	Yes	13435	The ID of the user. The user ID is the same as the user ID that is specified in the GetUser operation. The user ID is different from the ID of your Apsara Stack tenant account.
DatabaseName	String	No	db_name	The name of the database.
Logic	Boolean	No	false	Specifies whether the database is a logical database. Valid values: - true - false
EnvType	String	No	dev	The type of the environment to which the database belongs.
DbType	String	No	MySQL	The type of the database.
PageNumber	Integer	No	1	The number of the page to return
PageSize	Integer	No	1	The number of entries to return on each page.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	C51420E3-144A-4A94-B473-8662FCF4AD10	The ID of the request.
Success	Boolean	true	Indicates whether the call succeeded.

Parameter	Type	Example	Description
TotalCount	Long	6	The total number of entries that meet the query conditions.
UserPermissions	Array of UserPermission		The details of user permissions.
UserPermission			
Alias	String	instance_alias	The alias of the instance.
ColumnName	String	column_name	The name of the field.
DbId	String	1324	The ID of the database.
DbType	String	mysql	The type of the database.
DsType	String	DATABASE	The type of resources on which the user has permissions.
EnvType	String	dev	The type of the environment to which the database belongs.
InstancelId	String	134	The ID of the instance.
Logic	Boolean	false	Indicates whether the database is a logical database. Valid values: - true - false
PermDetails	Array of PermDetail		The details of permissions.
PermDetail			
CreateDate	String	2019-12-12 00:00:00	The time when the permission was authorized.
ExpireDate	String	2020-12-12 00:00:00	The time when the permission expires.

Parameter	Type	Example	Description
ExtraData	String	xxx	The additional data. This parameter is reserved.
OriginFrom	String	xxx	The entity that authorizes the permission.
PermType	String	QUERY	The type of the permission.
UserAccessId	String	1345	The ID of the authorization record.
SchemaName	String	test_db	The name of a database.
SearchName	String	test_db@xxx:3306	The name that is used to search for the database.
TableId	String	13434	The ID of the table.
TableName	String	test_table	The name of the table.
UserId	String	423245	The ID of the user.
UserNickName	String	nick_name	The name of the user.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListUserPermissions
&PermType=DATABASE
&Tid=-1
&UserId=13435
&<Common request parameters>
```

Sample success responses

XML format

```
<UserPermissions>
  <UserPermission>
    <Logic>false</Logic>
    <UserNickName>xxx</UserNickName>
    <DsType>DATABASE</DsType>
    <Alias>xxx_ent_dev</Alias>
    <PermDetails>
      <PermDetail>
        <ExpireDate>2020-10-31 00:00:00</ExpireDate>
        <UserAccessId>390913</UserAccessId>
        <PermType>EXPORT</PermType>
        <OriginFrom>xxx</OriginFrom>
        <CreateDate>2019-11-21 15:07:45</CreateDate>
      </PermDetail>
      <PermDetail>
        <ExpireDate>2020-10-31 00:00:00</ExpireDate>
        <UserAccessId>390914</UserAccessId>
        <PermType>CORRECT</PermType>
        <OriginFrom>xxx</OriginFrom>
        <CreateDate>2019-11-21 15:07:45</CreateDate>
      </PermDetail>
    </PermDetails>
    <InstanceId>24671</InstanceId>
    <SearchName>xxx@xxx:3306</SearchName>
    <DbId>111369</DbId>
    <UserId>88658</UserId>
    <DbType>drds</DbType>
    <EnvType>dev</EnvType>
    <SchemaName>xxx_ent_dev</SchemaName>
  </UserPermission>
</UserPermissions>
<TotalCount>6</TotalCount>
<RequestId>C51420E3-144A-4A94-B473-8662FCF4AD10</RequestId>
<Success>true</Success>
```

JSON **format**

```

{
  "UserPermissions": {
    "UserPermission": [
      {
        "Logic": false,
        "UserNickName": "xxx",
        "DsType": "DATABASE",
        "Alias": "xxx_ent_dev",
        "PermDetails": {
          "PermDetail": [
            {
              "ExpireDate": "2020-10-31 00:00:00",
              "UserAccessId": "390913",
              "PermType": "EXPORT",
              "OriginFrom": "xxx",
              "CreateDate": "2019-11-21 15:07:45"
            },
            {
              "ExpireDate": "2020-10-31 00:00:00",
              "UserAccessId": "390914",
              "PermType": "CORRECT",
              "OriginFrom": "xxx",
              "CreateDate": "2019-11-21 15:07:45"
            }
          ]
        },
        "InstanceId": 24671,
        "SearchName": "xxx@xxx:3306",
        "DbId": 111369,
        "UserId": 88658,
        "DbType": "drds",
        "EnvType": "dev",
        "SchemaName": "xxx_ent_dev"
      }
    ],
    "TotalCount": 6,
    "RequestId": "C51420E3-144A-4A94-B473-8662FCF4AD10",
    "Success": true
  }
}

```

6.8.5. GrantUserPermission

Grants permissions on a database or a table to a user.

Request parameters

Parameter	Type	Required	Example	Description
-----------	------	----------	---------	-------------

Parameter	Type	Required	Example	Description
Action	String	Yes	GrantUserPermission	The operation that you want to perform. Set the value to GrantUserPermission .
DbId	String	Yes	1234	The ID of the database.
DsType	String	Yes	DATABASE	The type of the permissions. Valid values: - DATABASE: permissions on physical databases - LOGIC_DATABASE: permissions on logical databases - TABLE: permissions on physical databases - LOGIC_TABLE: permissions on logical tables
ExpireDate	String	Yes	2019-12-12 00:00:00	The time when the permissions expire.
PermTypes	String	Yes	QUERY, EXPORT, CORRECT	The type of the permission. Separate multiple permission types with commas (,). Valid values: - QUERY: the query permission - EXPORT: the export permission - CORRECT: the change permission
Tid	Long	Yes	-1	The ID of the tenant.
UserId	String	Yes	12345	The ID of the user. You can call the GetUser operation to obtain the user ID. The user ID is different from the Apsara Stack tenant account ID of the user.
Logic	Boolean	No	false	Specifies whether the database is a logical database.
TableId	String	No	1324245	The ID of the table. This parameter is required when you grant permissions on a table.

Parameter	Type	Required	Example	Description
TableName	String	No	table_name	The name of the table. This parameter is required when you grant permissions on a table.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	A99CD576-1E18-4E86-931E-C3CCE56DC030	The ID of the request.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GrantUserPermission
&DbId=1234
&DsType=DATABASE
&ExpireDate=2019-12-12 00:00:00
&PermTypes=QUERY, EXPORT, CORRECT
&Tid=-1
&UserId=12345
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>A99CD576-1E18-4E86-931E-C3CCE56DC030</RequestId>
<Success>true</Success>
```

JSON format


```
{
  "RequestId": "A99CD576-1E18-4E86-931E-C3CCE56DC030",
  "Success": true
}
```

6.9. Security management

6.9.1. ListSensitiveColumns

Queries sensitive columns.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListSensitiveColumns	The operation that you want to perform. Set the value to ListSensitiveColumns .
Tid	Long	Yes	-1	The ID of the tenant.
SchemaName	String	No	test	The name of the database.
TableName	String	No	test	The name of the table.
ColumnName	String	No	test	The name of the column.
SecurityLevel	String	No	SENSITIVE	The sensitivity level of the column. Valid values: - INNER - SENSITIVE - CONFIDENTIAL
PageNumber	Integer	No	1	The number of the page to return.
PageSize	Integer	No	10	The number of entries to return on each page.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	0E714EF1-E617-4BBC-A3D2-9552063BA942	The ID of the request.
SensitiveColumnList	Array of SensitiveColumn		The sensitive columns.
SensitiveColumn			
ColumnCount	Long	1	The number of columns.
ColumnName	String	test	The name of the column.
FunctionType	String	DEFAULT	The type of the desensitization algorithm. Valid values: • DEFAULT: All characters are masked. This is the default value. • FIX_POS: The fixed position is masked. • FIX_CHAR: The fixed characters are masked.
SchemaName	String	test	The name of the database.
SecurityLevel	String	SENSITIVE	The sensitivity level of the column.
TableName	String	test	The name of the table.
Success	Boolean	true	Indicates whether the request succeeded.
TotalCount	Long	10	The total number of entries that are returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListSensitiveColumns
&Tid=-1
&<Common request parameters>
```

Sample success responses

XML **format**

```
<TotalCount>5</TotalCount>
<RequestId>0E714EF1-E617-4BBC-A3D2-9552063BA942</RequestId>
<SensitiveColumnList>
  <SensitiveColumn>
    <TableName>yuyang_test</TableName>
    <ColumnName>c1</ColumnName>
    <ColumnCount>0</ColumnCount>
    <SecurityLevel>SENSITIVE</SecurityLevel>
    <SchemaName>testdb</SchemaName>
  </SensitiveColumn>
  <SensitiveColumn>
    <TableName>yuyang_test_luanma</TableName>
    <ColumnName>c1</ColumnName>
    <ColumnCount>0</ColumnCount>
    <SecurityLevel>SENSITIVE</SecurityLevel>
    <SchemaName>testdb</SchemaName>
  </SensitiveColumn>
  <SensitiveColumn>
    <TableName>yuyang_test</TableName>
    <ColumnName>id</ColumnName>
    <ColumnCount>0</ColumnCount>
    <SecurityLevel>SENSITIVE</SecurityLevel>
    <SchemaName>testdb</SchemaName>
  </SensitiveColumn>
  <SensitiveColumn>
    <TableName>yuyang_test_luanma</TableName>
    <ColumnName>id</ColumnName>
    <ColumnCount>0</ColumnCount>
    <SecurityLevel>SENSITIVE</SecurityLevel>
    <SchemaName>testdb</SchemaName>
  </SensitiveColumn>
  <SensitiveColumn>
    <TableName>yuyang_test_json</TableName>
    <ColumnName>id</ColumnName>
    <ColumnCount>0</ColumnCount>
    <SecurityLevel>CONFIDENTIAL</SecurityLevel>
    <SchemaName>test_demo</SchemaName>
  </SensitiveColumn>
</SensitiveColumnList>
<Success>true</Success>
```

JSON **format**

```
{
  "TotalCount": 5,
  "RequestId": "0E714EF1-E617-4BBC-A3D2-9552063BA942",
  "SensitiveColumnList": {
    "SensitiveColumn": [
      {
        "TableName": "yuyang_test",
        "ColumnName": "c1",
        "ColumnCount": 0,
        "SecurityLevel": "SENSITIVE",
        "SchemaName": "testdb"
      },
      {
        "TableName": "yuyang_test_luanma",
        "ColumnName": "c1",
        "ColumnCount": 0,
        "SecurityLevel": "SENSITIVE",
        "SchemaName": "testdb"
      },
      {
        "TableName": "yuyang_test",
        "ColumnName": "id",
        "ColumnCount": 0,
        "SecurityLevel": "SENSITIVE",
        "SchemaName": "testdb"
      },
      {
        "TableName": "yuyang_test_luanma",
        "ColumnName": "id",
        "ColumnCount": 0,
        "SecurityLevel": "SENSITIVE",
        "SchemaName": "testdb"
      },
      {
        "TableName": "yuyang_test_json",
        "ColumnName": "id",
        "ColumnCount": 0,
        "SecurityLevel": "CONFIDENTIAL",
        "SchemaName": "test_demo"
      }
    ]
  },
  "Success": true
}
```

6.9.2. ListSensitiveColumnsDetail

Queries the details of sensitive fields.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListSensitiveColumnsDetail	The operation that you want to perform. Set the value to ListSensitiveColumnsDetail .
ColumnName	String	Yes	test	The name of the field.
SchemaName	String	Yes	test	The name of the database.
TableName	String	Yes	test	The name of the table.
Tid	Long	Yes	1	The ID of the tenant.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The returned error code.
ErrorMessage	String	UnknownError	The returned error message.
RequestId	String	7629888F-C9FB-4D16-A7D3-B443FE06FBD4	The ID of the request.
SensitiveColumnsDetailList	Array of SensitiveColumnsDetail		The details about the sensitive fields.
SensitiveColumnsDetail			
ColumnDescription	String	test	The description of the field.
ColumnName	String	test	The name of the field.
ColumnType	String	varchar(32)	The data type of the field.
DbId	Long	124	The ID of the database.

Parameter	Type	Example	Description
DbType	String	mysql	The type of the database.
EnvType	String	product	The type of the environment to which the database belongs.
Logic	Boolean	false	Indicates whether the database is a logical database.
SchemaName	String	test	The name of the database.
SearchName	String	test@xxx:3306	The name that is used to search for the database.
TableName	String	test	The name of the table.
Success	Boolean	true	Indicates whether the request succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListSensitiveColumnsDetail
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>7629888F-C9FB-4D16-A7D3-B443FE06FBD4</RequestId>
<SensitiveColumnsDetailList>
  <SensitiveColumnsDetail>
    <TableName>king_info</TableName>
    <ColumnName>mobile</ColumnName>
    <ColumnType>varchar(64)</ColumnType>
    <SearchName>poc_prod@xxx.mysql.rds.aliyuncs.com:3306【xxx】</SearchName>
    <ColumnDescription>mobile</ColumnDescription>
    <DbId>8511149</DbId>
    <Logic>false</Logic>
    <SchemaName>poc_prod</SchemaName>
    <EnvType>product</EnvType>
    <DbType>mysql</DbType>
  </SensitiveColumnsDetail>
</SensitiveColumnsDetailList>
<Success>true</Success>
```

JSON format

```
{
  "RequestId": "7629888F-C9FB-4D16-A7D3-B443FE06FBD4",
  "SensitiveColumnsDetailList": {
    "SensitiveColumnsDetail": [
      {
        "TableName": "king_info",
        "ColumnName": "mobile",
        "ColumnType": "varchar(64)",
        "SearchName": "poc_prod@xxx.mysql.rds.aliyuncs.com:3306【xxx】",
        "ColumnDescription": "mobile",
        "DbId": 8511149,
        "Logic": false,
        "SchemaName": "poc_prod",
        "EnvType": "product",
        "DbType": "mysql"
      }
    ]
  },
  "Success": true
}
```

6.10. Data query

6.10.1. ExecuteScript

Executes SQL statements.

This operation is available only for instances that are managed in the security collaboration mode.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ExecuteScript	The operation that you want to perform. Set the value to ExecuteScript .
DbId	Integer	Yes	123	The ID of the database.  Note You can obtain the database ID from the DatabaseId parameter that is returned by the GetDatabase operation.

Parameter	Type	Required	Example	Description
Logic	Boolean	Yes	false	A Boolean value that indicates whether the database to be affected is a logical database.
Script	String	Yes	select dt from report_daily	The SQL statements to be executed. Data query language (DQL) statements, data definition language (DDL) statements, and data manipulation language (DML) statements are supported. The control mode of the instance that you want to query determines whether you can execute DDL and DML statements.
Tid	Long	No	234	The ID of the tenant.
RegionId	String	No	cn-hangzhou	The region ID.

Response parameters

Parameter	Type	Example	Description
ErrorCode	String	UnknownError	The error code that is returned.
ErrorMessage	String	UnknownError	The error message that is returned.
RequestId	String	FE8EE2F1-4880-46BC-A704-5CF63EAF9A04	The ID of the request.
Results	Array of Result		The results that are returned by the SQL statements in the format of an array. Each entry in the array indicates the result of an SQL statement.
ColumnNames	List	["col1", "col2"]	The fields that are returned by the SQL statement.
Message	String	UnknownError	The error message that is returned if the call fails.

Parameter	Type	Example	Description
RowCount	Long	1	The total number of entries that are returned.
Rows	List	[{"col1": "value1", "col2": "value2"}]	The rows that are returned by the SQL statement.
Success	Boolean	true	Indicates whether the SQL statement is executed.
Success	Boolean	true	Indicates whether the call succeeded.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ExecuteScript
&DbId=123
&Logic=false
&Script=select dt from report_daily
&<Common request parameters>
```

Sample success responses

XML format

```
<RequestId>FE8EE2F1-4880-46BC-A704-5CF63EAF9A04</RequestId>
<Results>
  <Message>UnknownError</Message>
  <RowCount>1</RowCount>
  <Success>true</Success>
</Results>
<Results>
  <ColumnNames>["col1", "col2"]</ColumnNames>
  <Rows>[{"col1": "value1", "col2": "value2"}]</Rows>
</Results>
<ErrorCode>UnknownError</ErrorCode>
<ErrorMessage>UnknownError</ErrorMessage>
<Success>true</Success>
```

JSON format

```
{ "RequestId": "FE8EE2F1-4880-46BC-A704-5CF63EAF9A04", "Results": [{"Message": "UnknownError", "Row
rowCount": "1", "Success": "true"}, {"ColumnNames": "[\"col1\", \"col2\"]", "Rows": "[{\"col1\": \"
value1\", \"col2\": \"value2\"}]", "ErrorCode": "UnknownError", "ErrorMessage": "UnknownError"
, "Success": "true"}
```

7. Appendixes

7.1. Process of API calls by using the ASAPI gateway

You can use the 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.

Flowchart



Procedure

1. Obtain an ASAPI SDK.

Before you use ASAPI to call an API operation, you must obtain ASAPI SDK for Java or ASAPI SDK for Python. For more information, see [Obtain an ASAPI SDK](#).

2. Obtain the endpoint of ASAPI. For more information, see [Generate an endpoint for ASAPI](#).
3. Obtain AccessKey credentials.

Obtain AccessKey credentials that are required when you call an API operation.

Note

We recommend that you use the AccessKey pair of your Apsara Stack tenant 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 when you call an API operation.

5. Obtain the organization ID and resource set ID.

You must call an API operation to obtain the resource set ID. For more information about how to obtain resource set IDs, see the *ListResourceGroup* section 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 way, you can 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, the parameter is left empty. 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 cloud 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 [Usage notes on development documentation](#).

7. Use the obtained 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 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", "dms-enterprise");// The POP code, which is the same as the POP code in the corresponding API directory.

    parameters.put("Action", "GetOpLog"); // The name of the API operation. The name is case-sensitive and must be the same as that in the API directory.

    parameters.put("Version", "2014-05-26");// 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 relevant API reference. 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), SerializerFeature.PrettyFormat));
}
```

7.2. Use the ASAPI gateway to make API calls

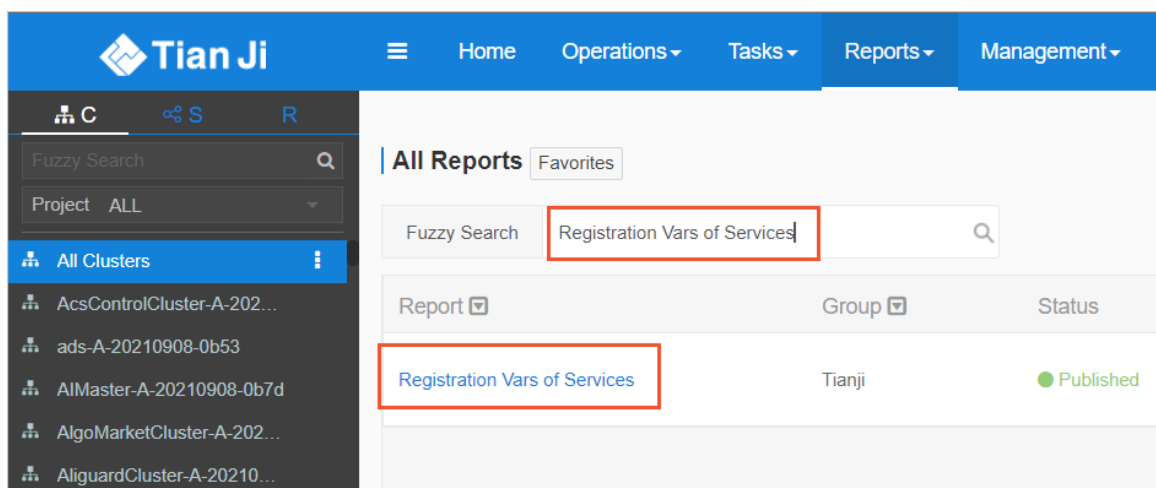
7.2.1. Obtain an endpoint of ASAPI

This topic describes three methods that you can use to obtain an endpoint of Apsara Stack API (ASAPI) and how to verify the endpoint.

Methods

Method 1: Use Registration Vars of Services to obtain an endpoint

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, click **Products**.
 - iii. Choose **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 `asapi`.
5. Find the `asapi` service, right-click in the **Service Registration** column, and then select **Show More** from the shortcut menu.
In the **Details** dialog box, obtain the value of `asapi.public.endpoint`.
6. Generate an endpoint of ASAPI based on 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.
 - i. Log on to the Apsara Uni-manager Operations Console.
 - ii. In the top navigation bar, click **Products**.
 - iii. Choose **Platforms > Apsara Infrastructure Management Framework**.
2. Go to the **Clusters** 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, search for `asapi_dns_public`.
 - iii. Click **Details** in the **Application Parameter** column.

In the **Application Parameter** message, obtain the value of the **domain** parameter.

```
{
  "domain": "public.asapi.<region>.<internet-domain>.com",
  "ha_apply_type": "active-active",
  "name": "asapi_dns_public",
  "vip": "10.10.10.10"
}
```

4. Generate an endpoint of ASAPI based on the following format:

```
https://<domain>/asapi/v3
```

Method 3: Concatenate strings to generate an endpoint

You can also concatenate strings to generate an endpoint based on 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 personnel. 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 endpoint is used:

```
https://public.asapi.cn-****-****-d01.inter.****.****.com/asapi/v3
```

Verify the 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.

Available endpoint example:

```
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@ ~
```

Unavailable endpoint example:

```
[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 operations:

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 the deployment personnel or an administrator.

When 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, your password must meet 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**.
 4. In the top navigation bar, choose **Products > Platforms > Apsara Infrastructure Management Framework** to go to Apsara Infrastructure Management.
 5. In the left-side navigation pane, choose **Operations > Cluster Operations**.
 6. On the **Clusters** page, enter **ascm-A** in the Cluster search box to find the cluster. Click the cluster name.
 7. On the **Cluster Dashboard** page, click **Operations Menu > Configuration Files**.
 8. In the **File List** window on the left side of the **Cluster Configuration** page, click **kv.conf**, click the file content in the right window, and then press Ctrl + F. Search for region, internet-domain, and intranet-domain.

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.

7.2.2. Generate an endpoint for ASAPI

This topic describes how to generate an endpoint for ASAPI.

1. Log on to the OPS1 server.
2. Run the following command to obtain three different domain names:

```
kubectl get ingress -n ascm |grep asapiserver
```

3. Record the domain name that starts with `public` and use the domain name as the value of `domain` in the next step.

```
[root@a56c02006 ~]# kubectl get ingress -n ascm |grep asapiserver
asapiserver-nginx-ingress public.asapi-... .com server.asapi-... .com,internal.asapi-... .com
```

4. Generate an endpoint for ASAPI in the following format:

```
https://<domain>/asapi/v3
```

7.2.3. 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
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

Package	Version
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.

7.3. STS overview

7.3.1. What is STS?

STS allows you to manage temporary credentials to your Apsara Stack resources. RAM provides RAM users and roles. A RAM role does not have permanent identity credentials. A RAM role can be assumed to access Apsara Stack resources by using an STS token. When an STS token is issued, you can specify a validity period and access permissions for the STS token.

Use an STS token to assume a RAM role

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 use the STS token to access Apsara Stack resources.

Benefits

- STS tokens 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 a validity period for an STS token. The token automatically becomes invalid when it expires. You do not need to rotate STS tokens on a regular basis.
- You can attach custom policies to STS tokens for flexible and fine-grained authorization.

7.3.2. 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.

Parameter	Type	Required	Example	Description
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.
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": "Allow", "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.

Parameter	Type	Example	Description
AccessKeyId	String	STS.L4aBSCSJVMuKg5U1****	The AccessKey ID.
AccessKeySecret	String	wyLT SmsyPGP1ohvvw8xYgB29dIGi8KMiH2pK****	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::123456789012****:role/adminrole/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.alivuncs.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;
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.aliyuncs.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.aliyuncs.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 (_).

HttpCode	Error code	Error message	Description
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.
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.