Alibaba Cloud CLI

User Guide

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User Guide

Product introduction

Alibaba Cloud CLI (Alibaba Cloud Command Line Interface) is a management tool created based on Alibaba Cloud Open APIs. With this tool, you can call Alibaba Cloud Open APIs to manage your Alibaba Cloud products. Alibaba Cloud CLI commands correspond to Alibaba Cloud open APIs in a one-to-one manner, and the tool features high flexibility and scalability. Based on Alibaba Cloud CLI, you can encapsulate Alibaba Cloud Native APIs to obtain your desired functions.

Product functions

Alibaba Cloud CLI provides the following functions:

> Alibaba Cloud CLI contains functions of nearly all products of Alibaba Cloud platform . Configure once, and then you can complete the configuration and management of all the products of Alibaba Cloud platform by using a same command line. Thus Alibaba Cloud CLI achieves real multi-product integration.

> Alibaba Cloud CLI is fully compatible with different Open API versions of various products. You can easily switch between versions by using Alibaba Cloud CLI.

> Alibaba Cloud CLI provides multi-account support. You can configure and manage multiple access keys, and manage resources under different accounts by using one tool.

> Alibaba Cloud CLI supports advanced encapsulations of the Open APIs for the functions frequently used by developers, which allows users to complete functions by simple calls but not through a series of complex commands.

> For Linux/UNIX and Mac OS environment, Alibaba Cloud CLI provides an automatic command line filling function, allowing you to complete operations without the hassle of memorizing complex product commands.

> Alibaba Cloud CLI provides online help information. You can use the help command to obtain available operations and available parameters of current operations.

Alibaba Cloud CLI provides active online update check, reminding you to make upgrade.

Alibaba Cloud CLI provides multiple output formats, including text, json, and table. You can choose your desired output formats flexibly.

Alibaba Cloud CLI can be installed on arious operating systems, including Windows, Mac OS, Linux, and UNIX.

Alibaba Cloud CLI can be installed through pip, making the installation and upgrade more quickly and easily.

Alibaba Cloud CLI installation guide (Windows)

Installation instructions

Alibaba Cloud CLI is compiled based on Python and needs to run in Python environment. Pip is an application installation and upgrade tool developed based on Python. By using pip, you can easily install, upgrade, and delete Python program packages. It is recommended to install Alibaba Cloud CLI using pip, which can be applied to Windows, Linux, and Mac OS.

For more information about Python, go to https://www.python.org/.

For more information about pip, go to https://pip.pypa.io/.

The Python installation package has integrated pip already. When you install Python, pip is installed by default.

Online installaltion of Alibaba Cloud CLI and SDK

Pip is an automated management tool. So we recommend that you use pip to install Alibaba Cloud

CLI when your device is connected to the Internet, in order to avoid many installation errors. In addition, Alibaba Cloud CLI needs to run in Python environment. To ensure the correct installation of Alibaba Cloud CLI and Alibaba Cloud SDK, you need to install Python, pip, Alibaba Cloud CLI and Alibaba Cloud SDK in sequence according to the following instructions.

Prerequisites

Operating system: Windows.

Operating environment: Python 2.7.x.

Install Python

If Python 2.7.x is installed on your device, skip this instruction.

If you have not installed Python, go to the official website of Python (https://www.python.org/downloads/), download the installation package of Python 2.7.x for Windows, and then install it in accordance with the installation wizard.

Notice: When you install Python, ensure to enable pip (see the following screenshot). Otherwise, you can't use pip to install Alibaba Cloud CLI.

Install Alibaba Cloud CLI

If pip version 7.x or later is installed on your device, skip this step.

If the version of pip installed on your device is older than 7.x, the installation of Alibaba Cloud CLI will fail. You can use the following command to upgrade pip first.

Run the following command to upgrade pip.

```
cd C:\Python27
python -m pip install -U pip
```

If the following information is displayed, it indicates that pip was successfully upgraded.

```
Successfully uninstalled pip-7.1.2
Successfully installed pip-8.1.2
```

Run the following command to install Alibaba Cloud CLI.

```
cd C:\Python27\Scripts
pip install aliyuncli
```

If the following information is displayed, it indicates that Alibaba Cloud CLI was successfully installed.

```
Successfully installed aliyuncli-2.1.2 colorama-0.3.3 jmespath-0.7.1
```

Install SDK

Alibaba Cloud CLI must be used along with the SDKs of Alibaba Cloud products. For ease of use, the installation of Alibaba Cloud CLI is separated from the installation of SDKs. You do not need to download all SDKs, but just select the SDKs of your desired products.

Taking the product RDS as an example, run the following command to install the RDS SDK.

```
cd C:\Python27\Scripts
pip install aliyun-python-sdk-rds
```

If the following information is displayed, it indicates that the RDS SDK was successfully installed.

> Successfully installed aliyun-python-sdk-rds-2.0.3

For more information about the SDKs of Alibaba Cloud products, refer to **Alibaba Cloud Python SDK list**.

Offline installation of Alibaba Cloud CLI and SDK

If you need to install Alibaba Cloud CLI on a device that cannot be connected to the Internet, use the installation package of Alibaba Cloud CLI. Firstly download the Alibaba Cloud CLI installation package on a device that can be connected to the Internet according to the following instruction. In addition, the Alibaba Cloud CLI installation package has integrated the SDKs of Alibaba Cloud products already, so you don't need to separately install SDKs in this case.

Notice: This installation method doesn't support the auto-upgrade of Alibaba Cloud CLI. When the new version of Alibaba Cloud CLI is released, to upgrade your existing Alibaba Cloud CLI, uninstall the old version first, then download and install the new version.

Prerequisites

You have downloaded the intallation package of CLI and uploaded it to the PC that needs to install CLI.

Downloading address:

64-bit Windows: **Download Now**

32-bit Windows: **Download Now**

You have installed Python 2.7.x。
   - Downloading address: **https://www.python.org/downloads/**

Install Alibaba Cloud CLI

Double-click the installation package and enter the setup wizard.

Click **Next** to continue.

Choose the installation path and click **Next**. It is recommended that you keep the default path.

Click **Install**.

Click **Finish** to exit the setup wizard.

Alibaba Cloud CLI installation guide (Linux/UNIX/Mac OS)

Installation instructions

Alibaba Cloud CLI is compiled based on Python and needs to run in Python environment. Pip is an application installation and upgrade tool developed based on Python. By using pip, you can easily install, upgrade, and delete Python program packages. It is recommended to install Alibaba Cloud CLI using pip, which can be applied to Windows, Linux, and Mac OS.

For more information about Python, go to **https://www.python.org/**.

For more information about pip, go to **https://pip.pypa.io/**.

Online installaltion of Alibaba Cloud CLI and SDK

Notice: Use root account to log on to your system, because you need root permission to run all the installation commands.

Pip is an automated management tool. So we recommend that you use pip to install Alibaba Cloud CLI when your device is connected to the Internet, in order to avoid many installation errors. In addition, Alibaba Cloud CLI needs to run in Python environment. To ensure the correct installation of Alibaba Cloud CLI and Alibaba Cloud SDK, you need to install Python, pip, Alibaba Cloud CLI and Alibaba Cloud SDK in sequence according to the following instructions.

Prerequisites

Operating system: Linux/UNIX or Mac OS.

Operating environment: Python 2.7.x.

Install Python

If Python 2.7.x is installed on your device, skip this instruction.

If you have not installed Python 2.7.x, run the following command to install Python.

Notice: Ensure your device is installed with wget.

```
wget https://www.python.org/ftp/python/2.7.8/Python-2.7.8.tgz (or download the Python installation package
through other method and store it in a folder)
tar -zxvf Python-2.7.8.tgz
cd Python-2.7.8
./configure
make
sudo make install
```

Install pip

If pip is installed on your device, skip this instruction.

If you have not installed pip, run the following command to install pip.

```
curl "https://bootstrap.pypa.io/get-pip.py" -o "pip-install.py"
sudo python pip-install.py
```

If the following information is displayed, it indicates that pip was successfully installed.

```
Successfully installed pip-7.1.2   setuptools-18.7 wheel-0.26.0
```

Install Alibaba Cloud CLI

If pip version 7.x or later is installed on your device, skip this step.

If the version of pip installed on your device is older than 7.x, the installation of Alibaba Cloud CLI will fail. You can use the following command to upgrade pip first.

Run the following command to upgrade pip.

```
sudo pip install -U pip
```

If the following information is displayed, it indicates that pip was successfully upgraded.

```
Successfully uninstalled pip-7.1.2
Successfully installed pip-8.1.2
```

Run the following command to install Alibaba Cloud CLI.

```
sudo pip install aliyuncli
```

If the following information is displayed, it indicates that Alibaba Cloud CLI was successfully installed.

```
Successfully installed aliyuncli-2.1.2 colorama-0.3.3 jmespath-0.7.1
```

Install SDK

Alibaba Cloud CLI must be used along with the SDKs of Alibaba Cloud products. For ease of use, the installation of Alibaba Cloud CLI is separated from the installation of SDKs. You do not need to download all SDKs, but just select the SDKs of your desired products.

Taking the product RDS as an example, run the following command to install the RDS SDK.

```shell
sudo pip install aliyun-python-sdk-rds
```

If the following information is displayed, it indicates that the RDS SDK was successfully installed.

```shell
Successfully installed aliyun-python-sdk-core-2.0.35 aliyun-python-sdk-rds-2.0.3
```

For more information about the SDKs of Alibaba Cloud products, refer to Alibaba Cloud Python SDK list.

Offline installaltion of Aliyuncli and SDK

If you need to install Aliyuncli on a device that can't be connected to internet, please use the Aliyuncli installation package to install. Please firstly download the Aliyuncli installation package on a device that can be connected to internet according to the following instruction. In addition, the Aliyuncli installation package has integrated the SDKs of Alibaba Cloud products already, so you don't need to separately install SDKs in this condition.

Notice: This installation method doesn't support the auto-upgrade of Aliyuncli. When the new version of Aliyuncli is released, to upgrade your existing Aliyuncli, please uninstall the old version first, then download and install the new version.

Download the Aliyuncli installation package

Directly download the installation package of Aliyuncli for Windows at corresponding links. Please select a version suitable for your system.

Linux/UNIX & Mac OS: Download Now

Install Aliyuncli

Preconditions:

Python is installed on your device already. If not, please download the installation package of Python 2.7.x on a device that is connected to internet and install Python to your device first. The official website of Python is https://www.python.org/downloads/.

Find the path of cli.tar.gz in the cmd window.

Run the following command to install Aliyuncli.

```
 $ tar –zxvf cli.tar.gz
$ cd cli
$ sudo sh install.sh
```

If the following information is displayed, it indicates that Aliyuncli was successfully installed.

```
New aliyuncli version has been installed successfully!
```

Command auto-completion function

On Linux/UNIX and Mac OS systems, Alibaba Cloud CLI includes a command prompt and auto-completion function. This enables you to use the **Tab** key to execute partially typed commands and produces command-related prompts. This function is not installed automatically. You need to configure it manually.

The following information is required to complete the configuration:

> The name of your Shell in use.

> The path of alicloud_completer script.

Identify Shell

If you do not know your Shell in use, you can identify it using one of the following commands. Currently, automatic completion of bash and zsh is supported.

Method 1: Display the installation directory of Shell

Run the following command to display the installation directory of Shell. This usually matches your Shell in use unless you start another Shell after login.

```
echo $SHELL
```

Method 2: Display the running processes of the current user

Run the following command to display the running processes of the current user. Among them, you can find Shell.

```
ps
```

Find the alicloud-completer script

Run the following command to find the path aliyun_completer.

```
which aliyun_completer
```

Enable command auto-completion

Shell type – bash

Run the following command to enable command auto-completion by using the the internal command complete.

The complete command is a bash auto-completion command. It adds the specified completion script to the executable file, so that a prompt is displayed and the automatic completion is enabled upon pressing **Tab**.

```
complete -C '<path of aliyun_completer, like /usr/local/bin/aliyun_completer>' aliyuncli
```

After the command is entered, check whether the input is correct. Enter complete, and check whether the above information is filled.

```
complete
```

If the following information is displayed, it indicates that the input is correct.

```
complete -C <path of aliyun_completer, like /usr/local/bin/aliyun_completer > aliyuncli
```

To ensure that command auto-completion is enabled every time when you launch bash, you need to add the auto-completion command to the Shell configuration file.

Run the following command to add the command in Step 1 to the file named.bash_profile.

```
vim ~/.bash_profile
Add complete -C '<aliyun_completer的存放路径，如/usr/local/bin/aliyun_completer>' aliyuncli to the
end of file.
```

Shell type – zsh

Run the following command to use alicloud_zsh_complete.sh to implement automatic completion.

```
source /usr/local/bin/aliyun_zsh_complete.sh
```

Configuration of Alibaba Cloud CLI and SDK

For Alibaba Cloud users

After Alibaba Cloud CLI is installed, you need to configure it before use. Open APIs of all Alibaba Cloud products must be accessed via access key and secret. Therefore, you need to create an access key first on a device that is connected to the Internet.
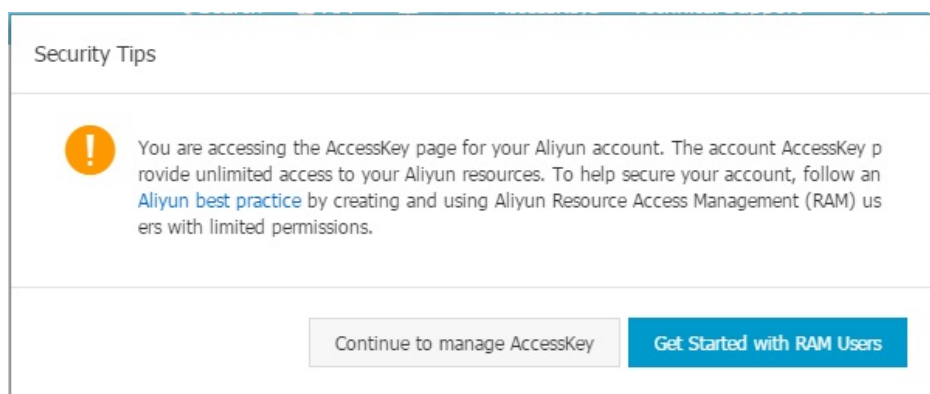
Besides access key and secret, you can also configure the RegionId of your Alibaba Cloud product and the output format of Alibaba Cloud CLI, such as text, table or json.

Create an access key

Log on to the console of Alibaba Cloud at https://www.aliyun.com/.

Click **AccessKeys**。

Notice: If the following information is displayed, click **Continue to manage AccessKey**.

Click **Create Access Key** and then click **Agree and create**.

Enter the captcha and click **OK**. Then the access key and secrete are successfully created.

Configure Alibaba Cloud CLI

On Windows system, run the following command and enter the values of the parameters.

```
cd C:\Python27\Scripts
aliyuncli configure
Aliyun Access Key ID [None]: <Enter Access Key ID>
```

```
Aliyun Access Key Secret [None]: <Enter Access Key Secret>
Default Region Id [None]: <Enter the RegionId of your instance>
Default output format [None]: <Enter your desired output format>
```

On Linux/UNIX and Mac OS systems, run the following command and enter the values of the parameters.

```
$ sudo aliyuncli configure
Aliyun Access Key ID [None]: <Enter Access Key ID>
Aliyun Access Key Secret [None]: <Enter Access Key Secret>
Default Region Id [None]: <Enter the RegionId of your instance>
Default output format [None]: <Enter your desired output format>
```

Modify values of Alibaba Cloud CLI global parameters

If you need to modify any of the Alibaba Cloud CLI global parameters, run the command aliyuncli configure. For the parameter you don't need to modify, directly press **Enter**. Otherwise, enter the new value for the parameter. See the following example.

On Windows system, run the following command:

```
cd C:\Python27\Scripts
aliyuncli configure
Aliyun Access Key ID [************jkf]: <Press Enter>
Aliyun Access Key Secret [**************Okl]: <Press Enter>
Default Region Id [cn-qingdao]: cn-hangzhou
Default output format [table]: <Press Enter>
```

On Linux/UNIX and Mac OS systems, run the following command:

```
$ sudo aliyuncli configure
Aliyun Access Key ID [************jkf]: <Press Enter>
Aliyun Access Key Secret [**************Okl]: <Press Enter>
Default Region Id [cn-qingdao]: cn-hangzhou
Default output format [table]: <Press Enter>
```

Configuration of global SDK version

You can install and use SDKs of Alibaba Cloud products according to your needs. Also, you can select SDK versions (corresponding to different open APIs).

You can easily configure your desired product version in Alibaba Cloud CLI. If you do not configure the product version, the latest version will apply by default.

Configure the SDK version

Taking the ECS product as an example, run the following command to configure its SDK version.

```
aliyuncli ecs ConfigVersion --version v20140526
```

Query the SDK versions of a single product

Run the following command to query the SDK versions of a single product, such as all ECS SDK versions installed on the system.

```
aliyuncli ecs ShowVersions
* v20140526 ← The default version in use. If not configured, the latest version will apply by default.
v20150304 ← The SDK version currently installed on the system.
v20140526
```

Query the SDK versions of all products

If you want to query the SDK versions of all the products installed on the system, you can check sdk_version. sdk_version stores the default SDK version used in Alibaba Cloud CLI, which is grouped by product. On Linux/UNIX and Mac OS system, the path of sdk_version is ~/.alicloudcli/sdk_version; on Windows system, its path is C:\Users\USERNAME. alicloudcli\sdk_version.

Run the following command to query the SDK versions of all products.

```
$ vim sdk_version
ecs = v20140526
rds = v20150405
...
```

Specify an SDK version for the current command

During command execution, you can use version plus version information as a temporary parameter to specify an open API version to be used for the current command, provided that the version is correct, which is that the version has been correctly installed on the system. If the version has not been installed, an error will be reported.

Taking the ECS product as an example, run the following command.

```
aliyuncli ecs DescribeRegions --version v20140526
```

This indicates that ECS v20140526 is used. If you do not know which versions are available, run the

following command for query.

```
alicloud ecs ShowVersions
```

Uninstall Alibaba Cloud CLI

Run the following command to uninstall the existing Alibaba Cloud CLI.

On Windows system, run the following command:

```
cd C:\Python27\Scripts
pip uninstall aliyuncli
```

On Linux/UNIX and Mac OS systems, run the following command:

```
$ sudo pip uninstall aliyuncli
```

If the following information appears, it indicates that Alibaba Cloud CLI is successfully uninstalled.

```
Successfully uninstalled aliyuncli-2.1.2
```

Alibaba Cloud Python SDK list

The Python SDKs of different Alibaba Cloud products are listed as follows:

Product	SDK
AAS	aliyun-python-sdk-aas
Alidns	aliyun-python-sdk-alidns
BatchCompute	aliyun-python-sdk-batchcompute
Bsn	aliyun-python-sdk-bsn
Bss	aliyun-python-sdk-bss
Cdn	aliyun-python-sdk-cdn
Cf	aliyun-python-sdk-cf
Cms	aliyun-python-sdk-cms

Core	aliyun-python-sdk-core
Crm	aliyun-python-sdk-crm
Cs	aliyun-python-sdk-cs
Domain	aliyun-python-sdk-domain
Drds	aliyun-python-sdk-drds
ECS	aliyun-python-sdk-ecs
ESS	aliyun-python-sdk-ess
Ft	aliyun-python-sdk-ft
Green	aliyun-python-sdk-green
hpc	aliyun-python-sdk-hpc
httpdns	aliyun-python-sdk-httpdns
Iot	aliyun-python-sdk-iot
Kms	aliyun-python-sdk-kms
Mts	aliyun-python-sdk-mts
Ocs	aliyun-python-sdk-ocs
Oms	aliyun-python-sdk-oms
OssAdmin	aliyun-python-sdk-ossadmin
Push	aliyun-python-sdk-push
Ram	aliyun-python-sdk-ram
RDS	aliyun-python-sdk-rds
Risk	aliyun-python-sdk-risk
Ros	aliyun-python-sdk-ros
Slb	aliyun-python-sdk-slb
Sts	aliyun-python-sdk-sts
Ubsms	aliyun-python-sdk-ubsms
Yundun	aliyun-python-sdk-yundun

Scripts usage samples

Simple Shell script of Alibaba Cloud CLI

Alibaba Cloud CLI is a tool for the unified management and configuration of Alibaba Cloud assets. After a simple installation and configuration process, you can use Alibaba Cloud CLI to manage multiple Alibaba Cloud products and services simultaneously and with ease, helping you migrate your data and services to the cloud. However, to use Alibaba Cloud CLI you must remember many API interfaces and parameters. To facilitate your use of Alibaba Cloud CLI, we have compiled a script integrating common operation modes, including executing a single task or executing tasks in a batch. The following describes how to use this script and taking the usage method on Linux system as an example.
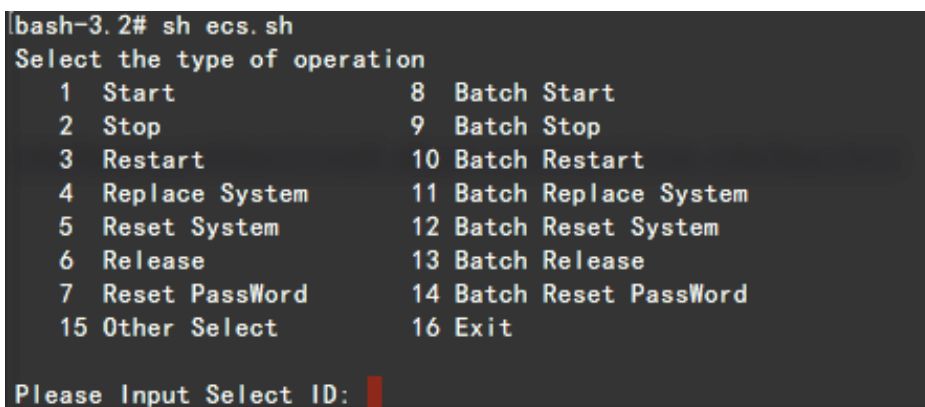
Install and configure Alibaba Cloud CLI. For details about the installation and configuration procedures, refer to Alibaba Cloud CLI installation guide (Linux/UNIX/Mac OS) and Configuration of Alibaba Cloud CLI.

Click to download the file: ecs.tar.gz

Run the following commands:

```
tar zxvf ecs.tar.gz
sh ecs.sh
```

The following figure shows the level-one directories (for executing a single task or executing tasks in a batch, including start, stop, restart, replacing the system, resetting the system, release, and resetting password):


```
[bash-3.2# sh ecs.sh
Select the type of operation
    1  Start                  8  Batch Start
    2  Stop                   9  Batch Stop
    3  Restart               10 Batch Restart
    4  Replace System        11 Batch Replace System
    5  Reset System          12 Batch Reset System
    6  Release               13 Batch Release
    7  Reset PassWord        14 Batch Reset PassWord
    15 Other Select          16 Exit

Please Input Select ID:
```

The following figure shows level-two directories (for querying a single disk ID or image ID, querying disk IDs or image IDs in a batch, and exporting snapshot files in a batch):

Query information of the subscribed image market images

You can run the script below in Alibaba Cloud CLI to query information (image IDs and names) of all subscribed image market images. You can choose to download or edit the script.

Click to download the script: querySubscribedImageId.zip

The script is as follows:

```
`#!/bin/bash
tcount=`aliyuncli ecs DescribeImages --ImageOwnerAlias marketplace --output json --filter TotalCount`
pageNum=1
cat /dev/null >/tmp/imageids.txt
while ((tcount>0))
do
aliyuncli ecs DescribeImages --ImageOwnerAlias marketplace --filter Images.Image[*].ImageId --PageSize 100 --
PageNumber $pageNum --output json --filter Images.Image[*].ImageId | sed '1d' | sed '$d' | sed 's/ , //g' | sed
's/"//g'| sed 's/ //g'>>/tmp/imageids.txt
let pageNum++
let tcount-=100
done

cat /tmp/imageids.txt | while read line
do
isSubscribed=`aliyuncli ecs DescribeImages --ImageOwnerAlias marketplace --ImageId $line --filter
ImageIds.Image[*] --filter Images.Image[*].IsSubscribed --output json | sed '1d' | sed '$d' | sed 's/ //g'`
if [[ $isSubscribed = "true" ]];then
echo $line `aliyuncli ecs DescribeImages --ImageOwnerAlias marketplace --ImageId $line --filter ImageIds.Image[*]
--filter Images.Image[*].ImageName --output json | sed '1d' | sed '$d' | sed 's/ //g'` >>imagesInfo.txt
fi
done
native2ascii -encoding UTF-8 -reverse imagesInfo.txt imagesInfoCN.txt
rm -rf imagesInfo.txt
cat imagesInfoCN.txt`
```

After editing or downloading the script and granting the permission (by running the chmod + x command), you can run the script in the following format to generate an imagesInfoCN.txt file containing information of subscribed image market images in the directory storing the script.

Example:

```
./querySubscribedImageId.sh
```

Sample output:

```
# ./querySubscribedImageId.sh
m-23917oqoi "ASP/.NET runtime environment (Windows 2008 64-bit|IIS7.0) V1.0"
m-23n2589vc "Java runtime environment (Centos 64-bit|OpenJDK1.7) V1.0"
m-23u9mjjtk "PW website construction system (Centos 64-bit) V1.0"
```

Query all instance IDs in a specified region and export them to a file

You can run the script below in Alibaba Cloud CLI to query all instance IDs in a specified region and export them to a file. You can choose to download or edit the script.

Click to download the script: getVmList.zip

The script is as follows:

```
#!/bin/bash

tcount=`aliyuncli ecs DescribeInstances --RegionId $1 --output json --filter TotalCount`
pageNum=1
cat /dev/null >vmList.txt
while ((tcount>0))
do
aliyuncli ecs DescribeInstances --RegionId $1 --PageSize 100 --PageNumber $pageNum --output json --filter
Instances.Instance[*].InstanceId | sed '1d' | sed '$d' | sed 's/ , //g' | sed 's/"//g'| sed 's/ //g'>>vmList.txt
let pageNum++
let tcount-=100
done
cat vmList.txt
```

After editing or downloading the script and granting the permission (by running the chmod + x command), you can run the script in the following format to generate a vmList.txt file containing required instance IDs in the directory storing the script.

Format:

```
./getVmList.sh <Region ID>
```

Note: You can obtain the Region ID through the DescribeRegions interface.

Example:

```
./getVmList.sh cn-hangzhou
```

Sample output:

```
#./getVmList.sh cn-hangzhou
cn-hangzhou sg-227f611ss
cn-hangzhou sg-22esa2s7s
```

Query the VPC instance ID list with no VSwitch created in all regions

You can run the script below in Alibaba Cloud CLI to query the VPC instance ID list with no VSwitch created in all regions. You can choose to download or edit the script.

Click to download the script: getNoVSWitchVpcIds.zip

The script is as follows:

```
#!/bin/bash
for RegionId in `aliyuncli ecs DescribeRegions --filter Regions.Region[*].RegionId --output json | sed '1d' | sed '$d' |
sed 's/ , //g' | sed 's/"//g'| sed 's/ //g'`
do
cat /dev/null >/tmp/vpcIDs.txt
pageNum=1
tcount=`aliyuncli ecs DescribeVpcs --RegionId $RegionId --output json --filter TotalCount`
while ((tcount>0))
do
aliyuncli ecs DescribeVpcs --RegionId $RegionId --filter Vpcs.Vpc[*].VpcId --PageSize 50 --PageNumber $pageNum
--output json | sed '1d' | sed '$d' | sed 's/ , //g' | sed 's/"//g'| sed 's/ //g'>>/tmp/vpcIDs.txt
let pageNum++
let tcount-=50
done

cat /tmp/vpcIDs.txt | while read line
do
vSwitchCount=`aliyuncli ecs DescribeVSwitches --VpcId $line --output json --filter TotalCount`
if [[ $vSwitchCount -eq 0 ]];then
echo $RegionId $line
fi
done
done
```

After editing or downloading the script and granting the permission (by running the chmod + x command), you can run the script in the following format to export the VPC instance IDs (in pairs) with no VSwitch created in all regions in the Region ID VpcId format by region.

Format:

```
./getNoVSWitchVpcIds.sh
```

Sample output:

```
[root@AliyunTest]# ./getNoVSWitchVpcIds.sh
cn-hangzhou vpc-23vyarrss
```

Query IDs of security groups not associated with any instances in all regions

You can run the script below in Alibaba Cloud CLI to query security groups not associated with any instances in all regions and perform operations (such as DELETE) on the security groups. You can choose to download or edit the script.

Click to download the script: getUnUsedSecurityGroupId.zip

The script is as follows:

```
#!/bin/bash
for RegionId in `aliyuncli ecs DescribeRegions --filter Regions.Region[*].RegionId --output json | sed '1d' | sed '$d' |
sed 's/ , //g' | sed 's/"//g'| sed 's/ //g'`
do
cat /dev/null >/tmp/UnUsedSecurityGroupIds.txt
pageNum=1
tcount=`aliyuncli ecs DescribeSecurityGroups --RegionId $RegionId --output json --filter TotalCount`
while ((tcount>0))
do
aliyuncli ecs DescribeSecurityGroups --RegionId $RegionId --filter SecurityGroups.SecurityGroup[*].SecurityGroupId
--PageSize 100 --PageNumber $pageNum --output json | sed '1d' | sed '$d' | sed 's/ , //g' | sed 's/"//g'| sed 's/
//g'>>/tmp/UnUsedSecurityGroupIds.txt
let pageNum++
let tcount-=100
done

cat /tmp/UnUsedSecurityGroupIds.txt | while read line
do
usedVMCount=`aliyuncli ecs DescribeInstances --RegionId $RegionId --SecurityGroupId $line --output json --filter
TotalCount`
if [[ $usedVMCount -eq 0 ]];then
echo $RegionId " " $line
fi
done
done
```

After editing or downloading the script and granting the permission (by running the chmod + x command), you can run the script in the following format to export IDs of security groups (in pairs)

not associated with any instances in all regions by region and security group.

Format:

```
./getUnUsedSGInfo.sh                                    22
```

Sample output:

```
[root@AliyunTest]# ./getUnUsedSGInfo.sh
cn-qingdao sg-227f61lts
cn-shenzhen sg-22esa0f7s
```

Structure and parameters of the command line

Online help command

For ease of use, Alibaba Cloud CLI provides the online help command. You can use the help command to query the valid operations supported by an Alibaba Cloud product.

For instance, if you want to query all the operations supported by ECS, run aliyuncli ecs help command and the query result is shown as follows.

```
-bash-4.1$ aliyuncli ecs help
usage: aliyuncli <command> <operation> [options and parameters]
[ecs] valid operations as follows:

AbsConfigService                    | AllocateEipAddress
AllocatePublicIpAddress             | AssociateEipAddress
AttachDisk                          | AuthorizeSecurityGroup
BindIpRange                         | CreateDisk
CreateImage                         | CreateInstance
CreateRouteEntry                    | CreateSecurityGroup
CreateSnapshot                      | CreateVSwitch
CreateVpc                           | DeleteDisk
DeleteImage                         | DeleteInstance
DeleteRouteEntry                    | DeleteSecurityGroup
DeleteSnapshot                      | DeleteVSwitch
DeleteVpc                           | DescribeAutoSnapshotPolicy
DescribeDisks                       | DescribeEipAddresses
DescribeEipMonitorData              | DescribeImages
DescribeInstanceAttribute           | DescribeInstanceMonitorData
DescribeInstanceStatus              | DescribeInstanceTypes
DescribeInstances                   | DescribeRegions
DescribeRouteTables                 | DescribeSecurityGroupAttribute
DescribeSecurityGroups              | DescribeSnapshots
DescribeVRouters                    | DescribeVSwitches
DescribeVpcs                        | DescribeZones
DetachDisk                          | JoinSecurityGroup
LeaveSecurityGroup                  | ModifyAutoSnapshotPolicy
ModifyDiskAttribute                 | ModifyEipAddressAttribute
ModifyInstanceAttribute             | ModifyInstanceNetworkSpec
ModifyInstanceVpcAttribute          | ModifySecurityGroupAttribute
ModifyVRouterAttribute              | ModifyVSwitchAttribute
ModifyVpcAttribute                  | ReInitDisk
RebootInstance                      | ReleaseEipAddress
ReplaceSystemDisk                   | ResetDisk
RevokeSecurityGroup                 | StartInstance
StopInstance                        | UnassociateEipAddress
```

If you want to query the parameters of an ECS operation, run aliyuncli ecs <operation name> help. Taking the DescribeRegions operation as an example, the query result is shown as follows.

```
-bash-4.1$ aliyuncli ecs DescribeRegions help
usage: aliyuncli <command> <operation> [options and parameters]
[ecs.DescribeRegions]: current operation can uses parameters as follow :

--AccessKeyId                       | --AccessKeySecret
--Endpoint                          | --OwnerAccount
--OwnerId                           | --ResourceOwnerAccount
--output
```

Alibaba Cloud CLI command structure

The Alibaba Cloud CLI command structure is shown as follows.

```
aliyuncli <command> <subcommand> [options and parameters]
```

aliyuncli: Alibaba Coud CLI, The tool name of Alibaba Cloud.

command: A top-layer command. 1) Usually represents an Alibaba Cloud basic service supported by Alibaba Cloud CLI (such as ECS/RDS/SLB/OSS); 2) or a command of Alibaba Cloud CLI (such as "help" and "configure").

subcommand: A subcommand that specifies an operation to be executed, that is, a specific operation.

options and parameters: The parameter list corresponding to the operation specified in

subcommand. The ordering of the parameters has no impact on the command usage. Various types of input values can be used, such as numbers, strings, lists, mappings, and JSON structures.

Examples:

```
aliyuncli rds DescribeDBInstances --PageSize 50


aliyuncli ecs DescribeRegions


aliyuncli rds DescribeDBInstanceAttribute --DBInstanceId xxxxxx
```

Parameter value input requirements

Values may need to be passed to Alibaba Cloud CLI during a call. When using Alibaba Cloud CLI, handle your input values according to the following instructions to avoid errors.

In most cases, you will input a value of string or numeric value to Alibaba Cloud CLI. In this case, you just need to enter the value.

Example:

```
$ aliyuncli ecs DescribeInstanceAttribute --InstanceId myInstanceId
```

If your input contains spaces, use single quotation mark (') to include the value. This manner is applicable to Windows PowerShell, Mac OS, and Linux.

Example:

```
  $ aliyuncli ecs DescribeInstanceAttribute --InstanceId 'my instance id'
```

For Windows Command Processer, use double quotation marks (") to include the value.

Example:

```
> aliyuncli ecs DescribeInstanceAttribute --InstanceId "my instance id"
```

Use JSON format to input parameters. JSON format is allowed in Alibaba Cloud CLI. Especially, when you need to query information of multiple instances or multiple disks, you can input multiple id values in JsonArray format. JSON format requires that you strictly edit data in JSON format and perform special processing on double quotation marks ("") in JSON format.

To query information of multiple instances, you can input values using ["my-intances-id1", "my-instances-id2"]. However, in Python, the double quotation marks ("") will be filtered out by default, so special processing is needed.

On Linux and Mac OS systems, use single quotation mark (') to include the entire JSON value.

Example:

```
$ aliyuncli ecs DescribeInstances --InstanceIds '["my-intances-id1", "my-instances-id2"]'
```

In Windows Command Processer, use a backslash () to represent the double quotation mark ("), and then use double quotation marks ("") to include the entire JSON value.

Example:

```
> aliyuncli ecs DescribeInstances --InstanceIds "[\"my-intances-id1\", \"my-instances-id2\"]"
```

In Windows PowerShell, use a backslash () to represent the double quotation mark ("), and then use single quotation mark (') to include the entire JSON value.

Example:

```
> aliyuncli ecs DescribeInstances --InstanceIds '[\"my-intances-id1\", \"my-instances-id2\"]'
```

Command output format

Output format

To meet different output format requirements of different users, Alibaba Cloud CLI supports three

output formats.

JSON (json)

JSON format is the default output format of Alibaba Cloud CLI. Most languages have the internal function or open JSON parser library to parse JSON strings easily. JSON format is mainly used with other scripts or any programming language to facilitate developers' parsing and use. An example is shown as follows.

```
-bash-4.1$ aliyuncli ecs DescribeRegions --output json
{
    "Regions": {
        "Region": [
            {
                "LocalName": "\u6df1\u5733",
                "RegionId": "cn-shenzhen"
            },
            {
                "LocalName": "\u9752\u5c9b",
                "RegionId": "cn-qingdao"
            },
            {
                "LocalName": "\u5317\u4eac",
                "RegionId": "cn-beijing"
            },
            {
                "LocalName": "\u9999\u6e2f",
                "RegionId": "cn-hongkong"
            },
            {
                "LocalName": "\u676d\u5dde",
                "RegionId": "cn-hangzhou"
            },
            {
                "LocalName": "\u7f8e\u56fd\u7845\u8c37",
                "RegionId": "us-west-1"
            }
        ]
    },
    "RequestId": "B0626530-F8F2-47E6-A786-BFF3F93EF766"
}
```

Text separated by Tab (text)

In text format, outputs of Alibaba Cloud CLI are arranged into lines separated by **Tab**. This format is appropriate for traditional UNIX text tools (such as sed, grep, and awk) and Windows PowerShell. The text output format complies with the basic structure shown below. The columns are sorted alphabetically by key names of bottom-layer JSON objects.

```
-bash-4.1$ aliyuncli ecs DescribeRegions --output text
A612E1D4-5768-4280-9E87-03466DD4B0FF
REGION  深圳      cn-shenzhen
REGION  青岛      cn-qingdao
REGION  北京      cn-beijing
REGION  香港      cn-hongkong
REGION  杭州      cn-hangzhou
REGION  美国硅谷           us-west-1
```

ASCII table (table)

In table format, data is arranged in an easy-to-read manner. An example is shown as follows.

Set the output format

The output format can be specified in two ways.

Method 1: Modify the config file

Use the output option in the config file. The following example shows how to set the output format to text.

```
[default]     output=text
```

Method 2: Use command line

Use the output option in Alibaba Cloud CLI. The following example shows how to set the output format to table.

```
$ aliyuncli ecs DescribeInstanceAttribute --InstanceId i-23rjh06vf --output table
```

Global parameter description

During the execution of Alibaba Cloud CLI, temporary setting of global parameters is supported. You can adjust the parameters as needed. Currently, the supported global parameters are shown as follows:

AccessKeyId: Specifies the Access Key Id in the API request for executing the current

command. If no value is specified or the value is null, the default global Access Key Id will apply.

AccessKeySecret: Specifies the Access Key Secret in the API request for executing the current command. If no value is specified or the value is null, the default global Access Key Secret will apply.

RegionId: Specifies the region corresponding to the API request for executing the current command. If no value is specified, the global RegionId will apply.

output: Specifies the display format for executing the current command.

profile: Specifies the account used for executing the current command. If the specified account does not exist, the default account will not be selected. In addition, if profile appears together with other global parameters, its priority is lower. For example, if profile appears together with AccessKeyId, AccessKeyId is selected as the access key preferentially.

version : Specifies the open API version used for executing the current command. If no value is specified, the latest version installed in the system will be selected.

Notice: If the parameter directly follows Alibaba Cloud CLI, the current version of Alibaba Cloud CLI will be displayed.

Multi-account use

Notices: This feature is useful for users who need to manage many accoutns and many devices. If you only need to manage an accout, ignore this feature.

Alibaba Cloud CLI supports multi-account systems. You can configure multiple access keys and secret values, region and output as needed, to meet your different requirements more flexibly. For the information about how to configure accouts in Alibaba Cloud CLI, refer to **Configuration of Alibaba Cloud CLI (for Alibaba Cloud users)**.

Basic command structure

The basic command structure of multi-accout management is shown as follows:

```
aliyuncli configure [set/get/list] --profile profilename --key value --key1 value1
```

configure: Manage configurations.

set: Set a configuration value. Optional.

get: Display a configuration value. Optional.

list: List all values of a profile. Optional.

profile: Profile used in the current operation, which is a global parameter. For details, refer to the description of profile in Global parameter description. If this option is not included, a default account is used.

key: Specific key for configuring a profile.

Value: Value being configured, which is behind key.

Accout type

There are two kinds of accounts in the config file: [default] account and [profile profilename] account. In Alibaba Cloud CLI, if the option profile is not included, the [default] account is used; if the option profile profilename is included, [profile profilename] is used.

The following shows the examples of profile:

```
aliyuncli configure ←Configure [default] account quickly


aliyuncli configure --profile test ←Configure [profile test] account quickly
```

The following shows the examples of set:

```
aliyuncli configure set --output table --region cn-qingdao ←Set [default] account, output=table, region=cn-
qingdao


aliyuncli configure set --output json --region cn-hangzhou --profile test1 ←Set [profile test1] account, output =
json, region = cn-hangzhou
```

The following shows the examples of get:

```
aliyuncli configure get region ←Get the region of [default] account
```

Output: region = cn-hangzhou

    aliyuncli configure get output region ←Get the output and region values of [default] account

Output:

output = json

region = cn-hangzhou

    aliyuncli configure get region --profile profile1 ←Get the region under [profile profile1] account

The following shows the examples of list:

    aliyuncli configure list ←List information under [default] account

    aliyuncli configure list --profile profile1 ←List information under [profile profile1] account

The output is as follows:

```
-bash-4.1$ aliyuncli configure list
    Name              Value           Type           Location
    ----              -----           ----           --------
   Profile             None           None              None
Access_Key ****************wQ7v    credentials   /home/xixi.xxx/.aliyuncli/credentials
Secret_Key ****************fxGu    credentials   /home/xixi.xxx/.aliyuncli/credentials
    Region          cn-qingdao       configure   /home/xixi.xxx/.aliyuncli/configure
    Output               json        configure   /home/xixi.xxx/.aliyuncli/configure
-bash-4.1$
```

Advanced filter function

Notice: This feature is used for users who have many instances. If you only have an instance, ignore this feature.

Data returned upon Alibaba Cloud open API calls can be presented in different formats, but it is still complex. Alibaba Cloud CLI further provides the data filter function, allowing you to filter data using filters. The filter function can directly obtain the desired value from the result, and can be used to handle results easily and quickly in use or secondary development.

Data returned in open API calls is in "JSON" format by default. Therefore, when using Alibaba Cloud CLI, you can use the filter function according to JSON characteristics to directly obtain your desired results.

Taking ECS DecribeRegions for example, run the following command and the original JSON format output is shown as follows.

```
aliyuncli ecs DescribeRegions --output json
```

```
-bash-4.1$ aliyuncli ecs DescribeRegions --output json
{
    "Regions": {
        "Region": [
            {
                "LocalName": "\u6df1\u5733",
                "RegionId": "cn-shenzhen"
            },
            {
                "LocalName": "\u9752\u5c9b",
                "RegionId": "cn-qingdao"
            },
            {
                "LocalName": "\u5317\u4eac",
                "RegionId": "cn-beijing"
            },
            {
                "LocalName": "\u9999\u6e2f",
                "RegionId": "cn-hongkong"
            },
            {
                "LocalName": "\u676d\u5dde",
                "RegionId": "cn-hangzhou"
            },
            {
                "LocalName": "\u7f8e\u56fd\u7845\u8c37",
                "RegionId": "us-west-1"
            }
        ]
    },
    "RequestId": "B0E4042E-A543-4DEB-88C4-7D769C460D54"
}
```

Filter 1

You can directly input a key value for filtering. Run the following command and the filter output is
shown as follows.

```
aliyuncli ecs DescribeRegions –output json –filter Regions
```

```
}
-bash-4.1$ aliyuncli ecs DescribeRegions --output json --filter Regions
{
    "Region": [
        {
            "LocalName": "\u6df1\u5733",
            "RegionId": "cn-shenzhen"
        },
        {
            "LocalName": "\u9752\u5c9b",
            "RegionId": "cn-qingdao"
        },
        {
            "LocalName": "\u5317\u4eac",
            "RegionId": "cn-beijing"
        },
        {
            "LocalName": "\u9999\u6e2f",
            "RegionId": "cn-hongkong"
        },
        {
            "LocalName": "\u676d\u5dde",
            "RegionId": "cn-hangzhou"
        },
        {
            "LocalName": "\u7f8e\u56fd\u7845\u8c37",
            "RegionId": "us-west-1"
        }
    ]
}
```

Filter 2

If the JSON value is an array, the array subscript format is supported. Run the following command and the filter output is shown as follows.

```
aliyuncli ecs DescribeRegions –output json –filter Regions.Region[0]
```

```
}
-bash-4.1$ aliyuncli ecs DescribeRegions --output json --filter Regions.Region[0]
{
    "LocalName": "\u6df1\u5733",
    "RegionId": "cn-shenzhen"
}
```

Especially, Alibaba Cloud CLI also supports '*' , representing the set of all results. When there are multiple filter results, they are returned as an array. Run the following command and the filter output is shown as follows.

```
aliyuncli ecs DescribeRegions –output json –filter Regions.Region[*].RegionId
```

```
}
-bash-4.1$ aliyuncli ecs DescribeRegions --output json --filter Regions.Region[*].RegionId
[
    "cn-shenzhen",
    "cn-qingdao",
    "cn-beijing",
    "cn-hongkong",
    "cn-hangzhou",
    "us-west-1"
]
-bash-4.1$
```

Filter 3

You can even filter one value from the returned data. Run the following command and the filter

output is shown as follows.

```
aliyuncli ecs DescribeRegions –output json –filter Regions.Region[3].RegionId
```

```
]
-bash-4.1$ aliyuncli ecs DescribeRegions --output json --filter Regions.Region[3].RegionId
"cn-hongkong"
-bash-4.1$
```