

Koo Command Line Interface

User Guide

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1 Configuration Management

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1.1 Configuration Commands

Koo Command Line Interface (KooCLI) configuration commands are used to initialize configurations, and add, delete, modify, and query profiles. The following table lists the commands.

System Command	Function
hcloud configure init	Initialize configurations.
hcloud configure set	Add or modify a profile.
hcloud configure list	Query the profile list.
hcloud configure show	Query a specific profile.
hcloud configure delete	Delete a specific profile.
hcloud configure test	Check the configuration file format.
hcloud configure clear	Delete all profiles.

1.2 Initializing Configurations

The KooCLI initialization command is used to store the **permanent** AK/SK and region information you often use in the configuration file, eliminating the need for frequently entering the information during operations. Run the following command to initialize configurations:

hcloud configure init

After you type in the preceding command and press **Enter**, the system prompts you to enter the **access key ID** (required), **secret access key** (required), and default or common **region** (optional).

```
hcloud configure init
Starting initialization. 'Secret Access Key' is anonymized. To obtain the parameter, see 'https://
support.huaweicloud.com/eu/usermanual-hcli/hcli_09.html'.
Access Key ID [required]: H9NNF*****SG65MXW
Secret Access Key [required]: ****
Secret Access Key (again): ****
Region: eu-west-101

*****
****                               ****
****      Initialization successful      ****
****                               ****
*****
```

1.3 Adding or Modifying a Profile

1.3.1 Introduction

To manage resources in multiple regions or projects or use multiple accounts, add profiles to store fixed information in different scenarios. If you have configured multiple profiles, use **--cli-profile** to specify the name of the profile to be configured or used.

The following table lists the KooCLI profile parameters that can be modified.

Table 1-1 Profile parameters

Parameter	Description
cli-profile	Name of a profile. When you modify a profile without specifying this parameter, the default profile will be modified. To view the content of the default profile, run the hcloud configure show command.

Parameter	Description
cli-mode	Authentication mode. Options: <ul style="list-style-type: none">● AKSK: permanent AK/SK (access key) or temporary AK/SK and SecurityToken (security credentials).● token: A token has a validity period, and must be reconfigured when it expires.● ecsAgency: Temporary authentication information is automatically obtained when you use KooCLI to call cloud service APIs on an Elastic Cloud Server (ECS).● agency: After a trust relationship is established between two accounts, the delegated party can be authenticated using the agency to manage cloud services and resources of the delegating party.
cli-region	Region.
cli-access-key	Access key ID (AK). It must be modified together with SK.
cli-secret-key	Secret access key (SK). It must be modified together with AK.
cli-x-auth-token	The access token issued to an IAM user. It must be reconfigured when it expires. Otherwise, the authentication cannot be completed when you call cloud service APIs.
cli-security-token	Temporary security credential. It is required when a temporary AK/SK is used for identity authentication. It must be reconfigured when it expires. Otherwise, the authentication cannot be completed when you call cloud service APIs.
cli-lang	Language of KooCLI. Options: <ul style="list-style-type: none">● cn: Chinese● en: English
cli-offline	Specifies whether to use KooCLI offline mode. Options: <ul style="list-style-type: none">● true (default value; use offline mode)● false (use online mode)
cli-project-id	Project ID.
cli-domain-id	ID of the account to which an IAM user belongs. This parameter is required when you call APIs of global services in AK/SK mode.
cli-custom	Specifies whether to configure custom parameters. Options: <ul style="list-style-type: none">● true: Configure the custom parameters in the profile.● false: Default value, which means to configure the system parameters in the profile.
cli-read-timeout	I/O timeout, in seconds. The default value is 10 , and the minimum value is 1 .

Parameter	Description
cli-connect-timeout	Request connection timeout, in seconds. The default value is 5 , and the minimum value is 1 .
cli-retry-count	Number of connection attempts. The value ranges from 0 to 5, and the default value is 0 .
cli-skip-secure-verify	Specifies whether to skip HTTPS certificate verification (not recommended). Options: <ul style="list-style-type: none">● true: HTTPS certificate verification is skipped. This is not recommended for security purposes.● false: Default value, which means that HTTPS certificate verification is required.
cli-agency-domain-name	Account name of a delegating party. This parameter must be used together with cli-agency-name .
cli-agency-domain-id	Account ID of the delegating party. This parameter must be used together with cli-agency-name .
cli-agency-name	Agency name. It must be used together with cli-agency-domain-id or cli-agency-domain-name .
cli-source-profile	The profile that stores the authentication information of the delegated party. The value of cli-source-profile cannot be the current profile.
cli-agree-privacy-statement	Whether to agree to the privacy statement. Options: <ul style="list-style-type: none">● true: Yes● false: No

 NOTE

- The value of **--cli-custom** indicates the type of the parameter to be set in the profile. If **--cli-custom** is set to **false**, the system parameters will be set. If **--cli-custom** is set to **true**, the custom parameters will be set.
- When you set a system parameter for a profile that does not exist, the profile is created; if you do so for an existing profile, the profile is modified.
- You cannot set custom parameters for a profile that does not exist. You cannot set both system parameters and custom parameters in the same command.
- After you set system parameters or custom parameters for a profile, the profile then becomes **the default**.

Command for adding or modifying a profile:

```
hcloud configure set --param1=paramValue1 --param2=paramValue2 ...
```

1.3.2 Setting System Parameters in a Profile

The following are examples of setting system parameters in a profile.

- Adding a profile

When adding a profile, use **--cli-profile** to declare the profile name. For example:

- Add a profile with AK/SK authentication mode. Authentication parameters: permanent AK (**cli-access-key**) and SK (**cli-secret-key**).

```
hcloud configure set --cli-profile=testAKSK --cli-mode=AKSK --cli-region=eu-west-101 --cli-access-key=8NVT*****KIOV --cli-secret-key=VHMqjoc*****lSk3cGf --cli-project-id=068119468*****af89d2e --cli-domain-id=094518e46*****cfbc4c0 --cli-read-timeout=10 --cli-connect-timeout=5
```

- Add a profile with AK/SK authentication mode. Authentication parameters: temporary AK (**cli-access-key**), SK (**cli-secret-key**), and SecurityToken (**cli-security-token**).

```
hcloud configure set --cli-profile=testAKSKST --cli-mode=AKSK --cli-region=eu-west-101 --cli-access-key=5FSU*****607T --cli-secret-key=VoyjgLh*****qRc8pSq --cli-security-token=***** --cli-project-id=068119468*****af89d2e --cli-domain-id=094518e46*****cfbc4c0 --cli-read-timeout=10 --cli-connect-timeout=5
```

For a profile with AK/SK authentication mode, if the **cli-security-token** parameter is configured in the profile, **cli-access-key** and **cli-secret-key** are temporary AK/SK. Otherwise, they are permanent AK/SK.

- Add a profile with token authentication mode. Authentication parameter: access token (**cli-x-auth-token**).

```
hcloud configure set --cli-profile=testToken --cli-mode=token --cli-region=eu-west-101 --cli-x-auth-token=***** --cli-project-id=068119468*****af89d2e --cli-domain-id=094518e46*****cfbc4c0 --cli-read-timeout=10 --cli-connect-timeout=5
```

When you use a command prompt tool (such as **cmd.exe**) to run the preceding command, the command line may be incomplete if the value of **cli-x-auth-token** is too long. Therefore, check whether the command line content is complete before executing a command.

- Add a profile with ecsAgency authentication mode. No authentication parameters are required.

```
hcloud configure set --cli-profile=testEcsAgency --cli-mode=ecsAgency --cli-region=eu-west-101 --cli-read-timeout=10 --cli-connect-timeout=5
```

When you use KooCLI to call cloud service APIs on an ECS, the CLI automatically obtains temporary authentication information based on the ECS agency.

- Add a profile with agency authentication mode. Authentication parameters: delegating account name (**cli-agency-domain-name**) or ID (**cli-agency-domain-id**), agency name (**cli-agency-name**), and the profile (**cli-source-profile**) that stores the authentication information of the delegated account.

- i. Create a profile or use an existing one to store the authentication information of the delegated account. The profile uses AK/SK or token authentication.

```
hcloud configure set --cli-profile=testAKSK --cli-mode=AKSK --cli-region=eu-west-101 --cli-access-key=8NVT*****KIOV --cli-secret-key=VHMqjoc*****lSk3cGf
```

- ii. Create another profile that uses agency authentication. Use the profile configured in the previous step as the value of **cli-source-profile**.

```
hcloud configure set --cli-profile=testAgency --cli-mode=agency --cli-region=eu-west-101 --cli-agency-domain-id=13534326*****5cf67b --cli-agency-name=***** --cli-source-profile=testAKSK --cli-read-timeout=10 --cli-connect-timeout=5
```

When you add a profile with agency authentication mode, both **cli-agency-domain-id** (or **cli-agency-domain-name**) and **cli-agency-name** must be configured. The value of **cli-profile** cannot be the same as that

of **cli-source-profile** in the command. The profile specified by **cli-source-profile** must exist.

- Changing the **default profile**

If you have configured multiple profiles, you can run the following command to change the default profile:

```
hcloud configure set --cli-profile=test
```

- Changing the language

This change will take effect for all profiles. Run the following command to change the language:

```
hcloud configure set --cli-lang=cn
```

- Switching between online and offline modes

This change will take effect for all profiles. Run the following command to switch to the online mode:

```
hcloud configure set --cli-offline=false
```

- Agreeing to the privacy statement

This change will take effect for all profiles. When using KooCLI for the first time, you will be prompted to read and agree to the privacy statement. In some special scenarios such as command execution with automation scripts, run the following command to agree to the privacy statement:

```
hcloud configure set --cli-agree-privacy-statement=true
```

- Changing the authentication mode of a profile

You can configure an AK/SK, token, and **agency** in a profile. Run the following command to specify an authentication mode for a profile:

```
hcloud configure set --cli-profile=test --cli-mode=token
```

- Changing the region of a profile

```
hcloud configure set --cli-profile=test --cli-region=eu-west-101
```

- Modifying the **AK/SK** of a profile

AK and SK must be modified at the same time.

```
hcloud configure set --cli-profile=test --cli-access-key=8NVT*****KIOV --cli-secret-key=VHMqjoc*****lsk3cGf
```

- Changing the project ID of a profile

A project ID must be specified when you call the APIs of certain cloud services. To call these APIs, **obtain project IDs** and add those you will often use to a profile.

```
hcloud configure set --cli-profile=test --cli-project-id=068119468*****af89d2e
```

- Modifying the request connection timeout of a profile

```
hcloud configure set --cli-profile=test --cli-connect-timeout=5
```

- Modifying the I/O timeout of a profile

```
hcloud configure set --cli-profile=test --cli-read-timeout=10
```

- Modifying the maximum number of connection attempts of a profile

```
hcloud configure set --cli-profile=test --cli-retry-count=3
```



Setting the retry count with **--cli-retry-count** may cause idempotence and cyclic API calls. Exercise caution when using this option for resource creation APIs.

- Changing the configuration of skipping HTTPS certificate verification in a profile

```
hcloud configure set --cli-profile=test --cli-skip-secure-verify=true
```

NOTE

You can modify multiple parameters of a profile at a time. For example, to modify **cli-project-id** and **cli-region**, run the following command:

```
hcloud configure set --cli-profile=test --cli-project-id=0681194*****f89d2e --cli-region=eu-west-101
```

1.3.3 Setting Custom Parameters in a Profile

KooCLI allows you to set custom parameters in a profile. This helps you manage parameters that are frequently used in commands, have long values, or have values to be encrypted. Run the following command to enter the interactive mode and add or modify custom parameters in a profile:

```
hcloud configure set [--cli-profile=${profileName}] --cli-custom=true
```

```
hcloud configure set --cli-profile=test --cli-custom=true
1. Enter the custom parameter name: projectId
2. Encrypt the custom parameter for storage? (y/N): n
3. Enter the parameter value: 068100000000000000000000f89d2e
Custom parameter saved. To stop setting more custom parameters, press `Ctrl+C`.
1. Enter the custom parameter name: password
2. Encrypt the custom parameter for storage? (y/N): y
3. Enter the parameter value: ****
Custom parameter saved. To stop setting more custom parameters, press `Ctrl+C`.
```

A custom parameter cannot exceed 128 characters. During interactive setting, determine whether to encrypt the custom parameter for storage according to your requirements. To ensure the security of your custom parameters that need to be encrypted for storage, the system **anonymizes** the parameter values you enter. The entered characters are displayed as asterisks (****) after you press **Enter**.

To use a custom parameter, replace the original value in the command with **custom.{\$Name of the custom parameter}**. For example:

```
hcloud ECS NovaListServers --cli-profile=test --project_id="custom.projectId"
```

When you use an encrypted custom parameter, KooCLI **anonymizes** the parameter value in places where the value may be displayed, for example, in the printed request URL of debugging information or in printed body parameters in dryrun mode.

1.4 Querying the Profile List

1.4.1 Querying System Parameters in the Profile List

KooCLI supports multiple profiles. Run the following command to query system parameters in the profile list. The query result can be output in a table or in JSON or TSV format. By default, the query result is output in JSON format.

```
hcloud configure list
```

```
hcloud configure list
{
  "language": "cn",
```

```
"offline": "true",
"agreePrivacy": "true",
"current": "test",
"profiles": [
  {
    "name": "default",
    "mode": "AKSK",
    "accessKeyId": "H9N****MXW",
    "secretAccessKey": "*****",
    "securityToken": "",
    "xAuthToken": "",
    "expiresAt": "",
    "region": "eu-west-101",
    "projectId": "060576*****134588f135",
    "domainId": "",
    "skipSecureVerify": "false",
    "readTimeout": 10,
    "connectTimeout": 5,
    "retryCount": 0,
    "agencyDomainId": "",
    "agencyDomainName": "",
    "agencyName": "",
    "sourceProfile": ""
  },
  {
    "name": "test",
    "mode": "AKSK",
    "accessKeyId": "8NV****IOV",
    "secretAccessKey": "*****",
    "securityToken": "",
    "xAuthToken": "",
    "expiresAt": "",
    "region": "eu-west-101",
    "projectId": "",
    "domainId": "",
    "skipSecureVerify": "false",
    "readTimeout": 10,
    "connectTimeout": 5,
    "retryCount": 0,
    "agencyDomainId": "",
    "agencyDomainName": "",
    "agencyName": "",
    "sourceProfile": ""
  }
]
}
```

The values of sensitive parameters are **anonymized**.

Use **--cli-query** to filter the query result, and use **--cli-output** to specify the output format. The default output format is JSON. For example, output the query result in JSON format and filter the AK/SK in each profile:

```
hcloud configure list --cli-output=json --cli-query="profiles[]".
{Name:name,AK:accessKeyId,SK:secretAccessKey}"
[
  {
    "AK": "H9N****MXW",
    "Name": "default",
    "SK": "*****"
  },
  {
    "AK": "8NV****IOV",
    "Name": "test",
    "SK": "*****"
  }
]
```

To output the query result in a table, add **--cli-output=table** in the command.

```
hcloud configure list --cli-output=table --cli-query="profiles[].[name,accessKeyId,secretAccessKey,projectId]"
```

```
C:\cli>hcloud configure list --cli-output=table --cli-query="profiles[].[name,accessKeyId,secretAccessKey,projectId]"
+-----+-----+-----+-----+
| default | H9N***MXW | **** | 060576[REDACTED] | 135 |
+-----+-----+-----+-----+
| test   | 8NV***IOV | **** |                   |     |
+-----+-----+-----+-----+
C:\cli>_
```

To output the query result in TSV format, add `--cli-output=tsv` in the command.

```
hcloud configure list --cli-output=tsv --cli-query="profiles[0].[name,accessKeyId,secretAccessKey,projectId]"
```

```
C:\cli>hcloud configure list --cli-output=tsv --cli-query="profiles[0].[name,accessKeyId,secretAccessKey,projectId]"
default H9N***MXW      ****      060576[REDACTED]135
C:\cli>_
```

1.4.2 Querying Custom Parameters in the Profile List

Run the following command to query custom parameters in the profile list of KooCLI. The query result can be output in a table or in JSON or TSV format. By default, the query result is output in JSON format.

```
hcloud configure list --cli-custom=true
```

```
hcloud configure list --cli-custom=true
{
  "current": "test",
  "profiles": [
    {
      "name": "default",
      "custom": null
    },
    {
      "name": "test",
      "custom": {
        "password": {
          "value": "****",
          "isEncrypted": true
        },
        "projectId": {
          "value": "06810000000000000000000000000000f89d2e",
          "isEncrypted": false
        }
      }
    }
  ]
}
```

Encrypted custom parameter values are **anonymized**.

Use `--cli-query` to filter the query result, and use `--cli-output` to specify the output format. The default output format is JSON. In the following example, all custom parameters of a profile named **test** are queried, and the query result is output in JSON format:

```
hcloud configure list --cli-custom=true --cli-query="profiles[?name=='test'].custom" --cli-output=json
[
  {
    "password": {
```

```
"isEncrypted": true,
"value": "*****"
},
"projectId": {
  "isEncrypted": false,
  "value": "06810000000000000000000000000000f89d2e"
}
}
]
```

1.5 Querying a Profile

1.5.1 Querying System Parameters in a Profile

Use **--cli-profile** to specify the name of the profile to be queried. If no profile is specified, the **default profile** is queried. The query result can be output in a table or in JSON or TSV format. By default, the query result is output in JSON format. The command for querying system parameters in a profile is as follows:

hcloud configure show [--cli-profile=\${profileName}]

```
hcloud configure show --cli-profile=test
{
  "name": "test",
  "mode": "AKSK",
  "accessKeyId": "8NV****IOV",
  "secretAccessKey": "*****",
  "securityToken": "",
  "xAuthToken": "",
  "expiresAt": "",
  "region": "eu-west-101",
  "projectId": "",
  "domainId": "",
  "skipSecureVerify": "false",
  "readTimeout": 10,
  "connectTimeout": 5,
  "retryCount": 0,
  "agencyDomainId": "",
  "agencyDomainName": "",
  "agencyName": "",
  "sourceProfile": ""
}
```

1.5.2 Querying Custom Parameters in a Profile

Use **--cli-profile** to specify the name of the profile to be queried. The query result can be output in a table or in JSON or TSV format. By default, the query result is output in JSON format. The command for querying custom parameters in a profile is as follows:

hcloud configure show [--cli-profile=\${profileName}] --cli-custom=true

```
hcloud configure show --cli-profile=test --cli-custom=true
{
  "password": {
    "value": "*****",
    "isEncrypted": true
  },
  "projectId": {
    "value": "06810000000000000000000000000000f89d2e",
    "isEncrypted": false
  }
}
```

1.6 Deleting a Profile

1.6.1 Deleting a Profile and Its Custom Parameters

Use **--cli-profile** to specify the name of the profile to be deleted. The command for deleting a profile is as follows:

```
hcloud configure delete --cli-profile=${profileName}
```

```
hcloud configure delete --cli-profile=test  
Profile test deleted. The default profile is default.
```

Deleting a profile will also delete its system parameters and custom parameters.

1.6.2 Deleting Custom Parameters in a Profile

Use **--cli-profile** to specify the name of the profile to be deleted. The command for deleting custom parameters in a profile is as follows:

- Deleting a **specific** custom parameter in a profile

```
hcloud configure delete --cli-profile=${profileName} [--cli-custom=true]  
--cli-custom-key=${customName}
```

```
hcloud configure delete --cli-profile=test --cli-custom-key=projectId  
From profile test, custom parameter projectId is deleted.
```

- Deleting **all** custom parameters in a profile

```
hcloud configure delete --cli-profile=${profileName} --cli-custom=true
```

```
hcloud configure delete --cli-profile=test --cli-custom=true  
All custom parameters in profile test are deleted.
```

1.7 Checking the Configuration File Format

To check the format of your local configuration file, run the following command:

```
hcloud configure test
```

```
hcloud configure test  
The configuration file has the correct format.
```

1.8 Deleting All Profiles

Run the following command to delete all profiles:

```
hcloud configure clear
```

```
hcloud configure clear  
Delete all profiles? (y/N): y  
Profiles deleted.
```

2 HTTP Proxy

[2.1 Configuring the HTTP Proxy](#)

[2.2 Resolving the x509 Certificate Error](#)

2.1 Configuring the HTTP Proxy

When you use KooCLI to manage and access cloud resources, cloud service APIs may fail to be called due to the intranet access restriction of your company. In this case, you can use the HTTP proxy by configuring the environment variables **http_proxy** and **https_proxy**.

Configuring the Environment Variable **http_proxy**

Run the command that matches your OS, to configure the environment variable **http_proxy**.

- Linux or macOS
 - Temporary environment variable

Run the following command to configure **http_proxy**:

```
export http_proxy="http://username:password@proxyServer:port"
```

In the preceding command, **proxyServer** indicates the domain name (if resolvable) or IP address of the proxy server, and **port** indicates the port number. Enter a username and password if required, or run the following command:

```
export http_proxy="http://proxyServer:port"
```

- Permanent environment variable

To permanently configure **http_proxy** in an environment variable that takes effect only for the current user, add the following content to the **~/.bashrc** file:

```
export http_proxy="http://username:password@proxyServer:port"
```

In the preceding command, **proxyServer** indicates the domain name (if resolvable) or IP address of the proxy server, and **port** indicates the port number. Enter a username and password if required, or run the following command:

```
export http_proxy="http://proxyServer:port"
```


After configuring the permanent environment variable, log out and log in again for the variable to take effect.

- Windows

- Using Command Prompt

- Temporary environment variable

Run the following command to configure **http_proxy**:

```
set http_proxy=http://username:password@proxyServer:port
```

In the preceding command, **proxyServer** indicates the domain name (if resolvable) or IP address of the proxy server, and **port** indicates the port number. Enter a username and password if required, or run the following command:

```
set http_proxy=http://proxyServer:port
```

- Permanent environment variable

Run the following command to permanently configure **http_proxy** in an environment variable that takes effect only for the current user:

```
setx "http_proxy" "http://username:password@proxyServer:port"
```

In the preceding command, **proxyServer** indicates the domain name (if resolvable) or IP address of the proxy server, and **port** indicates the port number. Enter a username and password if required, or run the following command:

```
setx "http_proxy" "http://proxyServer:port"
```

The permanent environment variable will take effect on the clients opened later.

- Using PowerShell

- Temporary environment variable

Run the following command to configure **http_proxy**:

```
$env:http_proxy="http://username:password@proxyServer:port"
```

In the preceding command, **proxyServer** indicates the domain name (if resolvable) or IP address of the proxy server, and **port** indicates the port number. Enter a username and password if required, or run the following command:

```
$env:http_proxy="http://proxyServer:port"
```

- Permanent environment variable

Run the following command to permanently configure **http_proxy** in an environment variable that takes effect only for the current user:

```
[environment]::SetEnvironmentvariable("http_proxy", "http://username:password@proxyServer:port", "User")
```

In the preceding command, **proxyServer** indicates the domain name (if resolvable) or IP address of the proxy server, and **port** indicates the port number. Enter a username and password if required, or run the following command:

```
[environment]::SetEnvironmentvariable("http_proxy", "http://proxyServer:port", "User")
```

The permanent environment variable will take effect on the clients opened later.

Configuring the Environment Variable `https_proxy`

Run the command that matches your OS, to configure the environment variable `https_proxy`.

- Linux or macOS

- Temporary environment variable

Run the following command to configure `https_proxy`:

```
export https_proxy="https://username:password@proxyServer:port"
```

In the preceding command, **proxyServer** indicates the domain name (if resolvable) or IP address of the proxy server, and **port** indicates the port number. Enter a username and password if required, or run the following command:

```
export https_proxy="https://proxyServer:port"
```

- Permanent environment variable

To permanently configure `https_proxy` in an environment variable that takes effect only for the current user, add the following content to the `~/.bashrc` file:

```
export https_proxy="https://username:password@proxyServer:port"
```

In the preceding command, **proxyServer** indicates the domain name (if resolvable) or IP address of the proxy server, and **port** indicates the port number. Enter a username and password if required, or run the following command:

```
export https_proxy="https://proxyServer:port"
```

After configuring the permanent environment variable, log out and log in again for the variable to take effect.

- Windows

- Using Command Prompt

- Temporary environment variable

Run the following command to configure `https_proxy`:

```
set https_proxy=https://username:password@proxyServer:port
```

In the preceding command, **proxyServer** indicates the domain name (if resolvable) or IP address of the proxy server, and **port** indicates the port number. Enter a username and password if required, or run the following command:

```
set https_proxy=https://proxyServer:port
```

- Permanent environment variable

Run the following command to permanently configure `https_proxy` in an environment variable that takes effect only for the current user:

```
setx "https_proxy" "https://username:password@proxyServer:port"
```

In the preceding command, **proxyServer** indicates the domain name (if resolvable) or IP address of the proxy server, and **port** indicates the port number. Enter a username and password if required, or run the following command:

```
setx "https_proxy" "https://proxyServer:port"
```

The permanent environment variable will take effect on the clients opened later.

- Using PowerShell

- Temporary environment variable

Run the following command to configure **https_proxy**:

```
$env:https_proxy="https://username:password@proxyServer:port"
```

In the preceding command, **proxyServer** indicates the domain name (if resolvable) or IP address of the proxy server, and **port** indicates the port number. Enter a username and password if required, or run the following command:

```
$env:https_proxy="https://proxyServer:port"
```

- Permanent environment variable

Run the following command to permanently configure **https_proxy** in an environment variable that takes effect only for the current user:

```
[environment]::SetEnvironmentvariable("https_proxy", "https://  
username:password@proxyServer:port", "User")
```

In the preceding command, **proxyServer** indicates the domain name (if resolvable) or IP address of the proxy server, and **port** indicates the port number. Enter a username and password if required, or run the following command:

```
[environment]::SetEnvironmentvariable("https_proxy", "https://proxyServer:port", "User")
```

The permanent environment variable will take effect on the clients opened later.

2.2 Resolving the x509 Certificate Error

When you use KooCLI to manage and access cloud resources after configuring the HTTP proxy, the x509 error may occur when you call a cloud service API. The reason is that your proxy has modified the root certificate issued by the HTTPS website. As a result, the certificate becomes invalid when you access HTTPS resources on external networks.

To resolve this problem, import the certificate issued by your company to the trusted CA certificate of the OS. Alternatively, add **--cli-skip-secure-verify=true** to your command to **skip certificate verification** (not recommended).

3 Commonly Used Commands

- [3.1 Viewing Help Information](#)
- [3.2 Turning On/Off Autocomplete](#)
- [3.3 Using Interactive Prompts](#)
- [3.4 Managing Metadata](#)
- [3.5 Querying the Current Version](#)
- [3.6 Upgrading the Version](#)
- [3.7 Managing Logs](#)

3.1 Viewing Help Information

Add the **--help** parameter to a command to view help information. For example:

- `hcloud --help`
View the instructions for using KooCLI and the supported cloud services.
- `hcloud <service> --help`
View the operation list of a cloud service. For example, to view the operation list of ECS, run **hcloud ECS --help**.
- `hcloud <service> <operation> --help`
View details about a cloud service API. For example, to view details about the ECS API with operation **ShowServer**, run **hcloud ECS ShowServer --help**.

3.2 Turning On/Off Autocomplete

After you turn on autocomplete for KooCLI, if you press **Tab** when entering a command, a prompt will appear to help you autocomplete the command.

To turn on autocomplete, run the following command:

hcloud auto-complete on

```
hcloud auto-complete on
Autocomplete (bash only) turned on. If it does not work, run the `bash` command.
```

To turn off autocomplete, run the following command:

hcloud auto-complete off

```
hcloud auto-complete off
Autocomplete turned off. If it does not work, run the `bash` command.
```

NOTE

- Autocomplete is supported only in Bash.
- If the prompted parameter name contains **[N]**, which indicates an index, replace it with a number. If the prompted parameter name contains **{*}**, which indicates a custom parameter name, replace it with a string that does not contain periods (.).

3.3 Using Interactive Prompts

KooCLI provides powerful interactive prompts to facilitate command building on different platforms. Add **--interactive** in a command to enter the interactive mode. In this mode, the system displays cloud service names, API operations, parameters, and descriptions based on the information you enter. In addition, the system autocompletes the values of some parameters.

- Use the interactive mode as follows:
 - Use the **Tab** key or the up and down arrows to select the content to be autocompleted.
 - Press the space bar to add the selected content to the current command.
 - After entering the interactive mode, press **Ctrl+C** to switch to a new command line. To exit the interactive mode, press **Ctrl+D**.
- The following contents will be prompted and autocompleted in the interactive mode:

- Cloud services

When you enter the interactive mode for the first time, the list of cloud services and system commands is automatically displayed.

Figure 3-1 List of cloud services and system commands

```
C:\cli>hcloud --interactive
Press `Ctrl+C` for new command line. Press `Ctrl+D` to exit interactive mode.
> hcloud
CBR          Cloud Backup and Recovery
auto-complete Turn on or off autocomplete.
configure    Configuration management (adding, deleting, modifying profiles).
log          Configure or query log parameters.
meta         Cache files management (downloading, clearing metadata cache files).
update       Upgrade KooCLI to the latest version.
version      Print current version.
```

In the cloud service list, the left column displays cloud service abbreviations or system commands, and the right column displays the full service names or system command descriptions.

- APIs

After you enter a valid cloud service name or system command, the API list of the service or the subcommands (or parameters) of the system command are displayed.

In the system command list, the left column displays the subcommands (or parameters) of the system command, and the right column displays the descriptions of the subcommands (or parameters).

Figure 3-2 Cloud service API list

```
C:\cli>hcloud --interactive
Press `Ctrl+C` for new command line. Press `Ctrl+D` to exit interactive mode.
> hcloud CBR AddMember
AddMember Adding a Share Member
AddVaultResource Associating Resources
AssociateVaultPolicy Binding a Policy to a Vault
BatchCreateAndDeleteVaultTags Batch Adding or Deleting Tags of a Vault
CopyBackup Replicating a Backup
CopyCheckpoint Replicating a Restore Point
CreateCheckpoint Creating a Restore Point
CreatePolicy Creating a Policy
CreateVault Creating a Vault
CreateVaultTags Adding a Tag to an Associated Resource
```

In the cloud service API list, the left column displays API operation names, and the right column displays API descriptions.

Figure 3-3 Subcommands of a system command

```
C:\cli>hcloud --interactive
Press `Ctrl+C` for new command line. Press `Ctrl+D` to exit interactive mode.
> hcloud configure set
set Modify profile attributes or add a new profile.
list List all profiles.
show Query specific profile.
delete Delete specific profile.
test Check configuration file format.
clear Delete all profiles.
```

Figure 3-4 System command parameters

```
C:\cli>hcloud --interactive
Press `Ctrl+C` for new command line. Press `Ctrl+D` to exit interactive mode.
> hcloud update --cli-skip-secure-verify
--cli-skip-secure-verify Skip HTTPS certificate verification (not recommended).
--cli-profile Profile. If not specified, the default one is used.
--cli-read-timeout I/O timeout (s). Min.: 1; default: 10.
--cli-connect-timeout Request connection timeout (s). Min.: 1; default: 5.
```

If the entered cloud service name or system command is invalid, no prompt is displayed.

- Parameters

After you enter a valid cloud service name and API operation, or a valid system command and subcommand, the parameter list of the API or subcommand is displayed.

Figure 3-5 Cloud service API parameter list

```
C:\cli>hcloud --interactive
Press `Ctrl+C` for new command line. Press `Ctrl+D` to exit interactive mode.
> hcloud CBR AddMember --cli-region=eu-west-101 --backup-id
--backup-id (required) [string] Backup ID
--members (required) [array:string] Project IDs of the backup share members to be added
--project-id (required) [string] If no project ID is specified in the command, either the parent project ID of the specified region in the authenti...
```

Figure 3-6 Subcommand parameter list of a system command

```
C:\cli>hcloud --interactive
Press `Ctrl+C` for new command line. Press `Ctrl+D` to exit interactive mode.
> hcloud configure set --cli-profile
--cli-profile Profile name, use the default profile by default.
--cli-mode Authentication mode[AKSK|token|agency|ecsAgency].
--cli-region Region
--cli-access-key Access key ID required for the AKSK mode. Configure it by running `hcloud...
--cli-secret-key Secret access key required for the AKSK mode. Configure it by running `hc...
--cli-x-auth-token Access credential issued to an IAM user as the user's identity and permis...
--cli-security-token Temporary token, which must be used with temporary AK/SK.
--cli-lang Language[en|en].
--cli-project-id Project ID
--cli-domain-id Account ID
```

In the parameter list, the left column displays parameter names, and the right column displays their descriptions.

If the entered API operation or subcommand is invalid, or the entered parameter name is invalid, no prompt is displayed.

- Values

In interactive mode, if you enter an equal sign (=) after a parameter name, the allowed values or the default value of the parameter is displayed. This value prompt is available only for certain parameters. For example, if you enter `--cli-region=` in an API calling command, the regions where the API is available are displayed.

Figure 3-7 Regions where an API is available

```
C:\cli>hcloud --interactive
Press `Ctrl+C` for new command line. Press `Ctrl+D` to exit interactive mode.
> hcloud CBR AddMember --cli-region="eu-west-101"
--cli-region="eu-west-101"
```

- Shortcut keys in interactive mode
 - **Ctrl+W**: Delete the word before the cursor.
 - **Ctrl+K**: Delete the content after the cursor.
 - **Ctrl+U**: Delete the content before the cursor.
 - **Ctrl+L**: Clear the screen.

NOTE

- If no profile is added, or the region specified in the **default profile** is not supported by the API in the command, select a region from the **cli-region** list prompted for the API. Then, KooCLI continues to display the parameter list of the API.
- In interactive prompts, parameters except custom map type parameters (containing **{*}** in their names) will not be prompted again once entered. If a parameter name contains **[N]**, which indicates an index, replace the character with a number. If a parameter name contains **{*}**, which indicates a custom parameter name, replace the character with a string that does not contain periods (.).
- After switching to a new command line, you can use the up and down arrows to browse the records of executed commands.

3.4 Managing Metadata

- Clearing metadata caches

KooCLI caches local metadata files obtained during API calling and stores the files in the following directory:

- Online mode
 - Windows: `C:\Users\{Your Windows username}\.hcloud\metaRepo\`
 - Linux: `/home/{Current username}\.hcloud/metaRepo/`
 - macOS: `/Users/{Current username}\.hcloud/metaRepo/`
- Offline mode
 - Windows: `C:\Users\{Your Windows username}\.hcloud\metaOrigin\`
 - Linux: `/home/{Current username}\.hcloud/metaOrigin/`
 - macOS: `/Users/{Current username}\.hcloud/metaOrigin/`

Run the following commands to clear metadata cache files:

- Online mode
hcloud meta clear

```
hcloud meta clear
Cache cleared.
```

- Offline mode

Run the **hcloud meta clear** command to clear the metadata cache files parsed from the downloaded offline metadata package. The package will remain. During API calling, this package will be parsed again and new metadata cache files will be written into it. To completely delete the offline metadata package and the contained metadata cache files, delete the **directory** where these files are located, according to the OS you use.

- Downloading metadata

A downloaded offline metadata package will be stored in the preceding **directories for the offline mode**. Run the following command to download the offline metadata package:

hcloud meta download

```
hcloud meta download
Download successful.
```

3.5 Querying the Current Version

To query the version of KooCLI, run the following command:

hcloud version

```
hcloud version
Current KooCLI version: 3.2.8
```

3.6 Upgrading the Version

KooCLI supports local upgrade. Run the following command to upgrade it to the latest version:

hcloud update


```
hcloud update
KooCLI will be upgraded to the latest version. Continue? (y/N): y
Upgrade successful.
```

To skip the confirmation for entering the interactive mode, add **-y** to the command.

```
hcloud update -y
Upgrade successful.
```

3.7 Managing Logs

KooCLI provides log recording and management to cache the logs generated during API calling. Log files are stored in the following directories:

- Windows: **C:\Users\{Your Windows username}\hcloud\log**
- Linux: **/home/{Current username}/hcloud/log/**
- macOS: **/Users/{Current username}/hcloud/log/**

Parameters related to log management:

- **level**: log level, which can be **info**, **warning**, or **error**.
- **max-file-size**: maximum size (MB) of a single log file. Range: 1 to 100. Default value: **20**.
- **max-file-num**: the number of retained log files. The value **0** indicates that all log files are retained.
- **retention-period**: the number of days for retaining log files. The value **0** indicates that log files are retained permanently.

If none of the parameters are specified, the default log level is error, the maximum size of a single log file is 20 MB, and the log retention period is 90 days.

Run the following command to set log-related parameters:

```
hcloud log set --key1=value1 --key2=value2 ...
```

```
hcloud log set --level=error --max-file-size=20 --max-file-num=3 --retention-period=30
Configuration successful.
```

Run the following command to view log-related parameters:

```
hcloud log show
```

```
hcloud log show
{
  "maxFileSize": 20,
  "maxFileNum": 3,
  "logLevel": "error",
  "logRetentionPeriod": 30
}
```

4 Options

- [4.1 Option Overview](#)
- [4.2 Printing Help Information](#)
- [4.3 Printing Debugging Information](#)
- [4.4 Checking Command](#)
- [4.5 Specifying Region](#)
- [4.6 Calling APIs with an Account in Non-configuration Mode](#)
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- [4.10 Specifying Account ID](#)
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- [4.18 Specifying a Domain Name](#)

4.1 Option Overview

KooCLI options are system parameters that can be added to commands for calling APIs. The following table describes the options supported by KooCLI. Any option except **help**, **debug**, **dryrun**, **cli-username**, **cli-password**, **cli-domain**, **cli-output**, **cli-query**, **cli-output-num**, **cli-jsonInput**, and **cli-endpoint** can be set in profiles.

When a command is executed, the value of a parameter in the command takes precedence over that in the profile.

Table 4-1 KooCLI options

Option	Description	Example
help	Prints help information.	<code>hcloud RDS ListCollations --cli-region="eu-west-101" --help</code>
debug	Prints debugging information during command invocation. For example, the steps of API calling and the complete request URL.	<code>hcloud VPC ShowVpc/v3 --cli-region="eu-west-101" --project_id="0dd8cb*****19b5a84546" --vpc_id="0bbe****_****_****_****_****235be6e7" --debug</code>
dryrun	Checks a command. The system prints the request message after verification. It does not call the target API.	<code>hcloud RDS CreateConfiguration --cli-region="eu-west-101" --project_id="4ff018c*****df31948" --datastore.type="MySQL" --datastore.version="5.7" --values.max_connections="10" --name="test-001" --description="test create configuration" --dryrun</code>
cli-region	Region where the cloud service resources to be managed are located.	<code>hcloud EVS DeleteVolume --cli-region="eu-west-101" --volume_id="aed9****_****_****_****_****0e3219cf" --project_id="0dd8cb*****19b5a84546"</code>
cli-username, cli-password, cli-domain	<ul style="list-style-type: none"> • cli-username: IAM user name • cli-password: IAM user password • cli-domain: the name of the account to which the IAM user belongs <p>These options are used to call cloud service APIs using an account in non-configuration mode.</p>	<code>hcloud EVS UpdateVolume --cli-region="eu-west-101" --volume_id="aed9****_****_****_****_****0e3219cf" --project_id="0dd8cb*****19b5a84546" --volume.name="ecs-abcd" --volume.description="volume test" --cli-username=s*****1 --cli-password=***** --cli-domain=s*****1</code>

Option	Description	Example
<p>cli-access-key, cli-secret-key, cli-security-token</p>	<ul style="list-style-type: none"> • cli-access-key: access key ID (AK). This parameter must be used together with SK. • cli-secret-key: secret access key (SK). This parameter must be used together with AK. • cli-security-token: temporary security credential. This parameter is required when you use a temporary AK/SK for identity authentication. <p>These options are used to call cloud service APIs using an AK/SK in non-configuration mode.</p>	<p>Call cloud service APIs using an AK/SK in non-configuration mode.</p> <ul style="list-style-type: none"> • Use an access key (permanent AK/SK): <pre>hcloud RDS ListApiVersion --cli-region="eu-west-101" --cli-access-key=8NVT*****KIOV --cli-secret-key=VHMQjoC*****lSk3cGf</pre> • Use temporary security credentials (temporary AK/SK and SecurityToken): <pre>hcloud RDS ListApiVersion --cli-region="eu-west-101" --cli-access-key=5FSU*****607T --cli-secret-key=VoyjgLh*****qRc8pSq --cli-security-token=*****</pre>
<p>cli-x-auth-token</p>	<p>The access token issued to an IAM user. This option is used to call cloud service APIs using a token in non-configuration mode.</p>	<pre>hcloud ECS ListServersDetails --cli-region="eu-west-101" --project_id="2cc60f5*****efa5019ef" --enterprise_project_id="441d5677-****-****-****-ef7fd6336666" --cli-x-auth-token=*****</pre>

Option	Description	Example
<p>cli-agency-domain-id/cli-agency-domain-name, cli-agency-name, cli-source-profile</p>	<ul style="list-style-type: none"> ● cli-agency-domain-name: Account name of a delegating party. This parameter must be used together with cli-agency-name. ● cli-agency-domain-id: Account ID of the delegating party. This parameter must be used together with cli-agency-name. ● cli-agency-name: Agency name. It must be used together with cli-agency-domain-id or cli-agency-domain-name. ● cli-source-profile: The profile that stores the authentication information of the delegated party. The value of this option cannot be the current profile. <p>These options are used to call cloud service APIs using an agency in non-configuration mode.</p>	<pre>hcloud VPC ListAddressGroup/v3 --cli-region="eu-west-101" -- project_id="2cc60*****caefa5019ef" --cli- agency-domain-id=13534326*****5cf67b -- cli-agency-name=***** --cli-source-profile=test</pre>
<p>cli-domain-id</p>	<p>ID of the account to which the IAM user belongs. This option is required when global service APIs are called in AK/SK authentication mode. In this case, KooCLI automatically obtains this parameter from your authentication information.</p>	<pre>hcloud CDN ListDomains --cli-region="eu-west-101" --cli-domain-id="08e09a6e*****1bb800"</pre>

Option	Description	Example
cli-profile	Name of a KooCLI profile. A profile stores a group of common information (such as the AK/SK, region, and project ID) required for calling cloud service APIs.	<pre>hcloud EVS ListSnapshots --cli-profile=test</pre>
cli-mode	<p>Authentication mode of a profile. Options:</p> <ul style="list-style-type: none"> • AKSK • token • ecsAgency • agency <p>If a profile contains different authentication parameters (such as AK/SK and token), the mode specified by cli-mode is used. Use --cli-mode in a command to specify the authentication mode for a profile.</p>	<ul style="list-style-type: none"> • Set cli-mode to AKSK. <pre>hcloud CCE ListNodes --cluster_id="f288****-****-****-****ac101534" --project_id="0dd8cb*****19b5a84546" --cli-profile=test --cli-mode=AKSK</pre> • Set cli-mode to token. <pre>hcloud CCE ListNodes --cluster_id="f288****-****-****-****ac101534" --project_id="0dd8cb*****19b5a84546" --cli-profile=test --cli-mode=token</pre>
cli-output, cli-query, cli-output-num	<p>Output format.</p> <ul style="list-style-type: none"> • cli-output Output format of the response data. The options include: <ul style="list-style-type: none"> – json – table – tsv • cli-query JMESPath for filtering response data. • cli-output-num Indicates whether to print the row numbers during table output. The value can be true or false. 	<ul style="list-style-type: none"> • When the value of cli-output is json: <ul style="list-style-type: none"> – Call a cloud service API <pre>hcloud CCE ListClusters --cli-region="eu-west-101" --type="VirtualMachine" --project_id="0dd8cb*****19b5a84546" --cli-query="items[0]"</pre> – Call a CLI system command <pre>hcloud configure list --cli-output=json --cli-query="profiles[0].{Name:name,Mode:mode,Ak:accessKeyId,SK:secretAccessKey}"</pre> • When the value of cli-output is table: <pre>hcloud configure list --cli-output=table --cli-query="profiles[0].{Name:name,Mode:mode,Ak:accessKeyId,SK:secretAccessKey}"</pre> • When the value of cli-output is tsv: <pre>hcloud configure list --cli-output=tsv --cli-query="profiles[0].{Name:name,Mode:mode,Ak:accessKeyId,SK:secretAccessKey}"</pre>

Option	Description	Example
cli-jsonInput	Specifies a JSON file to pass API parameters. If a cloud service API has too many parameters, you can define the parameters in a JSON file. KooCLI then parses the parameters in the file.	<pre>hcloud ECS CreateServers --cli-region="eu-west-101" --cli-read-timeout=60 --cli-jsonInput=C:\cli \Ecs_CreateServers.json</pre>
cli-connect-timeout and cli-read-timeout	<p>Request timeouts.</p> <ul style="list-style-type: none"> • cli-connect-timeout: request connection timeout, in seconds. The default value is 5, and the minimum value is 1. • cli-read-timeout: I/O timeout, in seconds. The default value is 10, and the minimum value is 1. 	<pre>hcloud ECS DeleteServerPassword --cli-region="eu- west-101" -- project_id="2cc60f5*****efa5019ef" -- server_id="e6b99563-****_****_1820d4fd2a67" -- cli-connect-timeout=10 --cli-read-timeout=15</pre>
cli-retry-count	Number of connection attempts. The system retries automatically if the connection times out. The value ranges from 0 to 5, and the default value is 0 .	<pre>hcloud RDS ListInstances --cli-region="eu-west-101" --Content-Type="application/json" -- project_id="2cc60*****caefa5019ef" --cli- retry-count=3</pre>
cli-skip-secure-verify	Specifies whether to skip HTTPS certificate verification (not recommended). The value can be true or false . The default value is false . Skipping certificate verification has security risks. If you set this parameter to true , KooCLI will display a message asking for your confirmation.	<pre>hcloud ECS NovaListServers --cli-region="eu- west-101" -- project_id="2cc6*****6caefa5019ef" --cli-skip- secure-verify=true</pre>

Option	Description	Example
cli-endpoint	Custom domain name. By default, requests are sent to the target cloud service in the relevant region. You can also specify an endpoint of this cloud service.	<code>hcloud IoTDA UpdateDevice --cli-region="eu-west-101" --description="test update device" --device_id="testz*****0802" --cli-endpoint="iot-mqttps.eu-west-101.myhuaweicloud.eu"</code>

4.2 Printing Help Information

View the command help information. For example, view the help information of an RDS API whose operation is **ListCollations**:

```
hcloud RDS ListCollations --cli-region="eu-west-101" --help
```

4.3 Printing Debugging Information

Print debugging information during command execution. To do so, add **--debug** in the command:

```
hcloud VPC ShowVpc/v3 --cli-region="eu-west-101" --project_id="0dd8cb*****19b5a84546" --vpc_id="0bbe****_****_****_****_****235be6e7" --debug
[debug info] 2022/06/21 19:59:25 Read and connection timeouts are 40s and 30s respectively.
[debug info] 2022/06/21 19:59:25 URL: https://vpc.eu-west-101.myhuaweicloud.eu/v3/0dd8cb*****19b5a84546/vpc/vpcs/0bbe****_****_****_****_****235be6e7
[debug info] 2022/06/21 19:59:26 API response status code is 200.
[debug info] 2022/06/21 19:59:26 API response X-Request-Id is f9fd68*****2e48ec7f88.
{
  "vpc": {
    "id": "0bbe****_****_****_****_****235be6e7",
    "name": "CCI-VPC-*****",
    "description": "",
    "cidr": "192.*.*/*",
    "extend_cidrs": [],
    "status": "ACTIVE",
    "project_id": "0dd8cb*****19b5a84546",
    "enterprise_project_id": "0",
    "tags": [],
    "created_at": "2022-05-10T02:53:42Z",
    "updated_at": "2022-05-10T02:53:43Z",
    "cloud_resources": [
      {
        "resource_type": "routetable",
        "resource_count": 1
      },
      {
        "resource_type": "virsubnet",
        "resource_count": 1
      }
    ]
  },
  "request_id": "f9fd68*****2e48ec7f88"
}
```


4.4 Checking Command

The **dryrun** option is used to check the correctness of a command. Add **--dryrun** in a command. The system prints the request message after verification. It does not call the target API.

```
hcloud RDS CreateConfiguration --cli-region="eu-west-101" --project_id="0dd8cb*****19b5a84546"
--datastore.type="MySQL" --datastore.version="5.7" --values.max_connections="10" --name="test-001" --
description="test create configuration" --dryrun
----- The execution is eliminated in dry-run mode. Current request: -----
POST https://rds.eu-west-101.myhuaweicloud.eu/v3/0dd8cb*****19b5a84546/configurations
Content-Type: application/json
X-Project-Id: 0dd8cb*****19b5a84546
X-Sdk-Date: 20220621T103331Z
Authorization: ****

{
  "datastore": {
    "type": "MySQL",
    "version": "5.7"
  },
  "description": "test create configuration",
  "name": "test-001",
  "values": {
    "max_connections": "10"
  }
}
```

4.5 Specifying Region

In addition to reading region information from the profile, KooCLI can also read the value of **cli-region** you enter in a command, as shown below:

```
hcloud EVS DeleteVolume --cli-region="eu-west-101" --volume_id="aed9****_****_****_****_****0e3219cf" --
project_id="0dd8cb*****19b5a84546"
{
  "job_id": "70a5****_****_****_****_****441e862b"
}
```

NOTE

Projects vary according to regions. Therefore, you need to specify the project ID when specifying a region.

4.6 Calling APIs with an Account in Non-configuration Mode

Add the **--cli-username**, **--cli-password**, and **--cli-domain** options in a command to call a cloud service API with an account **in non-configuration mode**.

```
hcloud EVS UpdateVolume --cli-region="eu-west-101" --volume_id="aed9****_****_****_****_****0e3219cf" --
project_id="0dd8cb*****19b5a84546" --volume.name="ecs-abcd" --volume.description="volume
test" --cli-username=s*****1 --cli-password=***** --cli-domain=s*****1
{
  "id": "aed9****_****_****_****_****0e3219cf",
  "links": [
    {
      "href": "https://evs.eu-west-101.myhuaweicloud.eu/v2/0dd8cb*****19b5a84546/volumes/
aed9****_****_****_****_****0e3219cf",
```

```
"rel": "self"
},
{
  "href": "https://evs.eu-west-101.myhuaweicloud.eu/Odd8cb*****19b5a84546/volumes/aed9****-
****_****_****_****0e3219cf",
  "rel": "bookmark"
}
],
"name": "ecs-abcd",
"status": "in-use",
"attachments": [
  {
    "server_id": "4f06****_****_****_****_****04dd856a",
    "attachment_id": "773d****_****_****_****_****e4f3b6f0",
    "attached_at": "2022-05-11T02:27:44.453029",
    "host_name": null,
    "volume_id": "aed9****_****_****_****_****0e3219cf",
    "device": "/dev/vda",
    "id": "aed9****_****_****_****_****0e3219cf"
  }
],
"description": "volume test",
"size": 40,
"metadata": {
  "billing": "1",
  "readonly": "False",
  "attached_mode": "rw"
},
"bootable": "true",
"availability_zone": "",
"os-vol-host-attr:host": null,
"source_vol_id": null,
"snapshot_id": null,
"created_at": "2022-05-11T02:27:09.279069",
"volume_type": "SAS",
"shareable": "false",
"multiattach": false,
"os-vol-tenant-attr:tenant_id": null,
"os-volume-replication:extended_status": null,
"volume_image_metadata": null
}
```

NOTE

To call a cloud service API in this mode, [use a custom parameter](#) to pass the username and password in the command. This ensures account security and prevents peeping when you input your password.

4.7 Calling APIs with AK/SK in Non-configuration Mode

Add the `--cli-access-key`, `--cli-secret-key`, and `--cli-security-token` options in a command to call a cloud service API with an AK/SK [in non-configuration mode](#).

By default, if only `--cli-access-key` and `--cli-secret-key` are used in a command, the AK/SK are taken as permanent ones.

```
hcloud RDS ListApiVersion --cli-region="eu-west-101" --cli-access-key=8NVT*****KIOV --cli-secret-
key=VHMQjoc*****lsk3cGf
{
  "versions": [
    {
      "id": "v3",
      "links": [],
      "status": "CURRENT",
      "updated": "2019-01-15T12:00:00Z"
    }
  ]
}
```

```
{
  "id": "v1",
  "links": [],
  "status": "DEPRECATED",
  "updated": "2017-02-07T17:34:02Z"
}
```

By default, if **--cli-access-key**, **--cli-secret-key**, and **--cli-security-token** are used in a command, the AK/SK are taken as temporary ones.

```
hcloud RDS ListApiVersion --cli-region="eu-west-101" --cli-access-key=5FSU*****607T --cli-secret-key=VoyjgLh*****qRc8pSq --cli-security-token=*****
{
  "versions": [
    {
      "id": "v3",
      "links": [],
      "status": "CURRENT",
      "updated": "2019-01-15T12:00:00Z"
    },
    {
      "id": "v1",
      "links": [],
      "status": "DEPRECATED",
      "updated": "2017-02-07T17:34:02Z"
    }
  ]
}
```

4.8 Calling APIs with a Token in Non-configuration Mode

Add **--cli-x-auth-token** in a command to call a cloud service API with a token in **non-configuration mode**. When you use a command prompt tool (such as **cmd.exe**) to run the following command, the command line may be incomplete if the value of **cli-x-auth-token** is too long. Therefore, check whether the command line content is complete before executing a command.

```
hcloud ECS ListServersDetails --cli-region="eu-west-101" --project_id="2cc60f5*****efa5019ef" --enterprise_project_id="441d5677-****-****-ef7fd6336666" --cli-x-auth-token=*****
{
  "count": 0,
  "servers": []
}
```

4.9 Calling APIs Using an Agency in Non-configuration Mode

After a delegating party creates an agency to delegate another account to manage its resources, the delegated party can add **--cli-agency-domain-id/--cli-agency-domain-name**, **--cli-agency-name**, and **--cli-source-profile** to a command to call cloud service APIs **using an agency in non-configuration mode**, and manage resources of the delegating party.

```
hcloud VPC ListAddressGroup/v3 --cli-region="eu-west-101" --project_id="2cc60*****caefa5019ef" --cli-agency-domain-id=13534326*****5cf67b --cli-agency-name=***** --cli-source-profile=test
{
  "request_id": "29ec21*****6d6b4cdd82",
}
```

```
"address_groups": [],
"page_info": {
  "current_count": 0
}
}
```

NOTE

Among the preceding parameters, use **--cli-agency-domain-id/--cli-agency-domain-name** and **--cli-agency-name** at the same time. Use **--cli-source-profile** to specify the profile that stores the authentication information of the delegated party. The value of **--cli-source-profile** cannot be the current profile.

4.10 Specifying Account ID

When calling APIs of global services in AK/SK mode, an account ID (**cli-domain-id**) is required. During API calling, KooCLI automatically obtains the account ID based on the user authentication information. You can also add the **--cli-domain-id** option in the command, as shown below:

```
hcloud CDN ListDomains --cli-region="eu-west-101" --cli-domain-id="08e09a6e*****1bb800"
{
  "total": 0,
  "domains": null
}
```

4.11 Specifying Profile

KooCLI supports multiple profiles. You can save common information (such as the AK/SK and region) in a profile and use the information by specifying the profile name through **--cli-profile**. For example:

```
hcloud EVS ListSnapshots --cli-profile=test
```

4.12 Specifying Authentication Mode

KooCLI allows you to set the authentication mode to **AKSK**, **token**, **ecsAgency**, or **agency** in a profile. **AKSK** is recommended. If the profile you use contains [parameters related to different authentication modes](#) such as AK/SK and token, use **--cli-mode** to specify the mode that will be used.

```
hcloud CCE ListNodes --cluster_id="f288****_****_****_****ac101534" --
project_id="0dd8cb*****19b5a84546" --cli-profile=test --cli-mode=AKSK
```

NOTE

When configuring a profile, use **--cli-profile** to specify the profile name and add authentication parameters corresponding to **--cli-mode**.

- If **--cli-mode** is **AKSK**, set both **--cli-access-key** and **--cli-secret-key**.
- If **--cli-mode** is **token**, set **--cli-x-auth-token**.
- If **--cli-mode** is **ecsAgency**, set **--cli-mode=ecsAgency**.
- If **--cli-mode** is **agency**, set **--cli-agency-domain-id/--cli-agency-domain-name**, **--cli-agency-name**, and **--cli-source-profile**.

4.13 Specifying Output Format

Use the `--cli-query` option in a command to pass a [JMESPath expression](#) so that you can extract key information from the return result. Use `--cli-output` to specify the output format of the response data and use `--cli-output-num` to specify whether to print the row numbers during table output.

Output Order

The sequence of parameters in the output result varies according to the JMESPath expression specified by `--cli-query`. The output result queried by some expressions does not contain the attribute names (parameter keys) of the output data. If you use these expressions, understand the sequence of the output data to facilitate data processing. The following table describes the output sequence of different types of JMESPath expressions.

Table 4-2 Data output sequence of different JMESPath expressions

JMESPath Expression Type	Example JMESPath Expression	Attribute Names Contained in JSON or Table Output	Attribute Names Contained in TSV Output	Data Output Sequence	Example Output
Object-level expression	<code>--cli-query="items[0]"</code>	Yes	No	In alphabetical order of the attribute names of the object	Example 1
Attribute-level expression without changing the attribute names	<code>--cli-query="items[0].items[0].spec.flavor,metadata.uid"</code>	No	No	In the attribute name order specified in the JMESPath expression	Example 2
Attribute-level expression with the attribute names changed	<code>--cli-query="items[0].{Flavor:spec.flavor,ClusterID:metadata.uid}"</code>	Yes	No	In alphabetical order of the new attribute names	Example 3

The following examples show the sequence of data output in JSON format through different JMESPath expressions:

- Example 1

When an object is specified, KooCLI outputs the attribute values in alphabetical order of the attribute names of the object. In this example, the object **items[0]** is specified. The attributes of the object are sorted in alphabetical order as follows: **apiVersion**, **kind**, **metadata**, **spec**, **status**. The output result is as follows:

```
hcloud CCE ListClusters --cli-region="eu-west-101" --type="VirtualMachine" --
project_id="0dd8cb*****19b5a84546" --cli-query="items[0]"
{
  "apiVersion": "v3",
  "kind": "Cluster",
  "metadata": {
    "creationTimestamp": "2022-05-13 08:51:58.252509 +0000 UTC",
    "labels": {
      "FeatureGates": "elbv3,"
    },
    "name": "github_****_****",
    "uid": "f288****_****_****_****ac101534",
    "updateTimestamp": "2022-05-13 09:10:06.395875 +0000 UTC"
  },
  "spec": {
    "authentication": {
      "authenticatingProxy": {},
      "mode": "rbac"
    },
    "az": "multi_az",
    "billingMode": 0,
    "category": "CCE",
    "containerNetwork": {
      "cidr": "10.*.*/*",
      "mode": "vpc-router"
    },
    "eniNetwork": {},
    "extendParam": {
      "alpha.cce/fixPoolMask": "25",
      "kubernetes.io/cpuManagerPolicy": "",
      "upgradeFrom": ""
    },
    "flavor": "cce.s2.small",
    "hostNetwork": {
      "securityGroup": "653e****_****_****_****6a23eb7e",
      "subnet": "d5df****_****_****_****4955c724",
      "vpc": "c865****_****_****_****efe7e8d8"
    },
    "kubeProxyMode": "iptables",
    "kubernetesSvcIpRange": "10.*.*.*/*",
    "masters": [
      {
        "availabilityZone": ""
      }
    ],
    "supportIstio": true,
    "type": "VirtualMachine",
    "version": "v1.19.10-r0"
  },
  "status": {
    "endpoints": [
      {
        "type": "Internal",
        "url": "https://192.*.*.*:5443"
      },
      {
        "type": "External",
        "url": "https://121.*.*.*:5443"
      }
    ],
    "phase": "Available"
  }
}
```

- Example 2

When specific attributes of an object are specified without changing the attribute names, KooCLI outputs the attribute values in the order that the attribute names are specified. In this example, the expression **items[0].spec.flavor,metadata.uid** specifies the child attribute **flavor** of **spec** and **uid** of **metadata** under the object **items[0]**. In the output result, the value of **spec.flavor** is displayed prior to that of **metadata.uid**.

```
hcloud CCE ListClusters --cli-region="eu-west-101" --type="VirtualMachine" --
project_id="Odd8cb*****19b5a84546" --cli-query="items[0].spec.flavor,metadata.uid"
[
  "cce.s2.small",
  "f288****_****_****_****_****ac101534"
]
```

- Example 3

When specific attributes of an object are specified with the attribute names changed, KooCLI outputs the attribute values in alphabetical order of the new attribute names. In this example, the child attributes of two attributes under the object **items[0]** are specified. The expression **items[0]**.

{Flavor:spec.flavor,ClusterID:metadata.uid} renames the **flavor** attribute of **spec Flavor** and renames the **uid** attribute of **metadata ClusterID**. The new attributes are sorted in alphabetical order as follows: **ClusterID, Flavor**.

Therefore, the output result is as follows:

```
hcloud CCE ListClusters --cli-region="eu-west-101" --type="VirtualMachine" --
project_id="Odd8cb*****19b5a84546" --cli-query="items[0].
{Flavor:spec.flavor,ClusterID:metadata.uid}"
{
  "ClusterID": "f288****_****_****_****_****ac101534",
  "Flavor": "cce.s2.small"
}
```

Output Format

Use **--cli-output** to specify the output format. The value can be **json**, **table**, or **tsv**.

- When the value of **--cli-output** is **json**:

The result is output in JSON format as follows:

```
hcloud configure list --cli-output=json --cli-query="profiles[]"
{Name:name,Mode:mode,Ak:accessKeyId,SK:secretAccessKey}"
[
  {
    "Ak": "8NV****IOV",
    "Mode": "AKSK",
    "Name": "test",
    "SK": "*****"
  },
  {
    "Ak": "H9N****MXW",
    "Mode": "AKSK",
    "Name": "default",
    "SK": "*****"
  }
]
```

- When the value of **--cli-output** is **table**:

The result is output in a table as follows:

```
C:\cli>hcloud configure list --cli-output=table --cli-query="profiles[]. {Name:name, Mode:mode, AK:accessKeyId, SK:secretAccessKey}"
```

No.	AK	Mode	Name	SK
1	H9N***MXW	AKSK	default	****
2	8NV***IOV	AKSK	test	****

```
C:\cli>_
```

In the meantime, you can use `--cli-output-num` to specify whether to print the row numbers.

```
C:\cli>hcloud configure list --cli-output=table --cli-query="profiles[]. {Name:name, Mode:mode, AK:accessKeyId, SK:secretAccessKey}" --cli-output-num=false
```

AK	Mode	Name	SK
H9N***MXW	AKSK	default	****
8NV***IOV	AKSK	test	****

```
C:\cli>
```

- When the value of `--cli-output` is `tsv`:

The result is output in TSV format as follows:

```
C:\cli>hcloud configure list --cli-output=tsv --cli-query="profiles[]. {Name:name, Mode:mode, AK:accessKeyId, SK:secretAccessKey}"
```

H9N***MXW	AKSK	default	****
8NV***IOV	AKSK	test	****

```
C:\cli>
```

In TSV format output, data values are separated by tab characters and line breaks, and no extra symbols are included. You can use the output result for other commands. The TSV output result does not contain table headers. To prevent confusion when using the data for other commands, you need to understand the data output sequence of different types of JMESPath expressions. For details, see [Output Order](#).

If multiple attributes are specified but not renamed in a JMESPath expression for TSV format output, attributes enclosed in square brackets ([]) will be displayed in new lines. The following is an example:

```
C:\cli>hcloud configure list --cli-output=tsv --cli-query="profiles[]. [[name], mode, accessKeyId, secretAccessKey]"
```

AKSK	H9N***MXW	****	
default			
AKSK	8NV***IOV	****	name
test			

```
C:\cli>_
```

In this example, the attributes `name`, `mode`, `accessKeyId`, and `secretAccessKey` are specified. Attribute `name` is output in a new line. The attributes are output in the order that they appear in the command. The first line displays the values of `mode`, `accessKeyId`, and `secretAccessKey`, and the second line displays the value of `name`.

NOTE

For details about other precautions for using `--cli-query`, `--cli-output`, and `--cli-output-num`, see [FAQs](#).

4.14 Passing API Parameters with JSON File

When calling a cloud service API that has too many parameters, use **--cli-jsonInput** to input some or all parameters of the API through a JSON file rather than directly entering the parameters in the command. Enter other parameters, such as **KooCLI system parameters** and API parameters that are not included in the JSON file, in the command. Example:

```
hcloud ECS CreateServers --cli-region="eu-west-101" --cli-read-timeout=60 --cli-jsonInput=C:\cli
\Ecs_CreateServers.json
{
  "job_id": "ff808082*****ae0646",
  "serverIds": [
    "dd86****_****_****_****_****91527651"
  ]
}
```

To pass API parameters through **--cli-jsonInput**, compile a JSON file and place each API parameter in the corresponding key based on its location in the request.

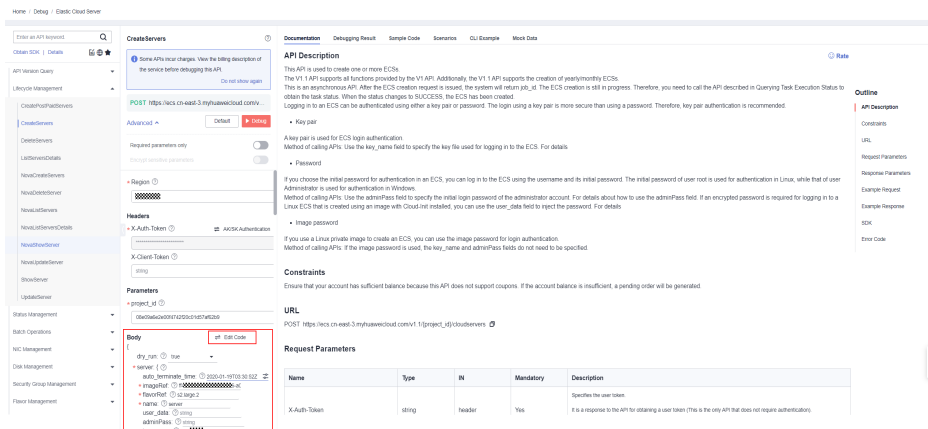
To construct a JSON file, perform the following steps:

- Step 1** Add **--help** to the end of the original command and run the command. Then view the location of each API parameter in **Params** of the command output.
- Step 2** Create a JSON file and name it in the format *`\${Service name}_\${API name}.json`*. Add the following content to the file:

```
{
  "header": {},
  "path": {},
  "query": {},
  "formData": {},
  "cookie": {},
  "body": {}
}
```

- Step 3** Set parameters based on the key order in the JSON file.
 - For **non-body** parameters, add **parameter-value** pairs in the relevant curly brackets ({}), and separate them with commas (,). Do not add any commas between the last pair and the right bracket (}).
 - For **body** parameters, set them in **API Explorer** and then click **Edit Code**, as shown in **the following figure**. Copy the JSON format parameters to the **body** key in the JSON file while **keeping only one pair of brackets**.

Figure 4-1 Obtaining body parameters for cli-jsonInput



Step 4 If there is no parameter next to a key, **delete the entire row where the key locates**. When deleting the last key, delete the comma (,) between the outermost and previous right brackets (}).

Step 5 In your KooCLI command, use `--cli-jsonInput=${JSON file location}` to pass API parameters, and run the command.

----End

For more precautions, see [FAQs](#).

In the preceding example, the `Ecs_CreateServers.json` file passed by `--cli-jsonInput=C:\cli\Ecs_CreateServers.json` is as follows:

```
{
  "path": {
    "project_id": "Odd8cb41*****a84546"
  },
  "body": {
    "server": {
      "adminPass": "wh*****",
      "auto_terminate_time": "2022-01-19T03:30:52Z",
      "availability_zone": "",
      "data_volumes": [
        {
          "multiattach": true,
          "shareable": true,
          "size": 100,
          "volumetype": "SATA"
        }
      ],
      "flavorRef": "2d53****_****_****_****_****257bf163",
      "imageRef": "7059****_****_****_****_****0b5e9e4c",
      "name": "ecs_server_01",
      "nics": [
        {
          "ipv6_enable": true,
          "subnet_id": "4eb2****_****_****_****_****ff9a042d"
        }
      ],
      "publicip": {
        "eip": {
          "bandwidth": {
            "sharetype": "PER",
            "size": 30
          },
          "iptype": "5_sbgp"
        }
      }
    }
  }
}
```

```
    },
    "root_volume": {
      "volumetype": "SATA"
    },
    "server_tags": [
      {
        "key": "date",
        "value": "211102"
      }
    ],
    "vpcid": "5aa5****-****-****-****-****1df05a3a"
  }
}
```

4.15 Specifying Request Timeouts

The **cli-connect-timeout** and **cli-read-timeout** options are used to set request timeouts. For the request connection timeout (**--cli-connect-timeout**), the default value is 5s. For the I/O timeout (**--cli-read-timeout**), the default value is 10s.

```
hcloud ECS DeleteServerPassword --cli-region="eu-west-101" --project_id="2cc60f5*****efa5019ef"
--server_id="e6b99563-****-****-1820d4fd2a67" --cli-connect-timeout=10 --cli-read-timeout=15
```

You can use either **--cli-connect-timeout** or **--cli-read-timeout** or use both options in a command.

4.16 Specifying Retry Count

The **cli-retry-count** option specifies the number of connection attempts. The system retries automatically if a request times out due to a network connection problem. The value range of **--cli-retry-count** is 0 to 5, and the default value is **0**.

- If a request fails due to abnormal network connection, the following information is displayed on KooCLI:

```
hcloud RDS ListInstances --cli-region="eu-west-101" --Content-Type="application/json" --
project_id="2cc60*****caefa5019ef" --cli-retry-count=3
[NETWORK_ERROR] Connection timed out 4 consecutive times (reconnection attempts: 3). Check
network connectivity.
```

- If the network connection is normal, the following information is displayed:

```
hcloud RDS ListInstances --cli-region="eu-west-101" --Content-Type="application/json" --
project_id="2cc60*****caefa5019ef" --cli-retry-count=3
{
  "instances": [],
  "total_count": 0
}
```

CAUTION

Setting the retry count with **--cli-retry-count** may cause idempotence and cyclic API calls. Exercise caution when using this option for resource creation APIs.

4.17 Skipping HTTPS Request Certificate Verification

The **cli-skip-secure-verify** option specifies whether to skip HTTPS certificate verification (**skipping is not recommended**). When you use KooCLI to call a cloud

service API after [configuring the HTTP proxy](#), the error x509 may occur due to a certificate verification failure. To prevent this from happening, add `--cli-skip-secure-verify=true` to a command and then run the command. During the command execution, you will be prompted to confirm whether to skip HTTPS certificate verification.

```
hcloud ECS NovaListServers --cli-region="eu-west-101" --project_id="2cc6*****6caefa5019ef" --cli-skip-secure-verify=true
Using `--cli-skip-secure-verify=true` will expose your private data to the public network and cause interception risks. Continue? (y/N): y
{
  "servers": []
}
```

NOTE

However, using `--cli-skip-secure-verify=true` to skip HTTPS certificate verification will cause your private data to be exposed to the public network and a risk of theft. Therefore, you are **not advised** to use this option. To resolve this problem, **you are advised to** import the certificate issued by your company to the trusted CA certificate of the OS.

4.18 Specifying a Domain Name

Use `cli-endpoint` to specify a domain name of the target cloud service. By default, KooCLI sends requests to the target cloud service in the relevant region. You can also specify an endpoint of this cloud service.

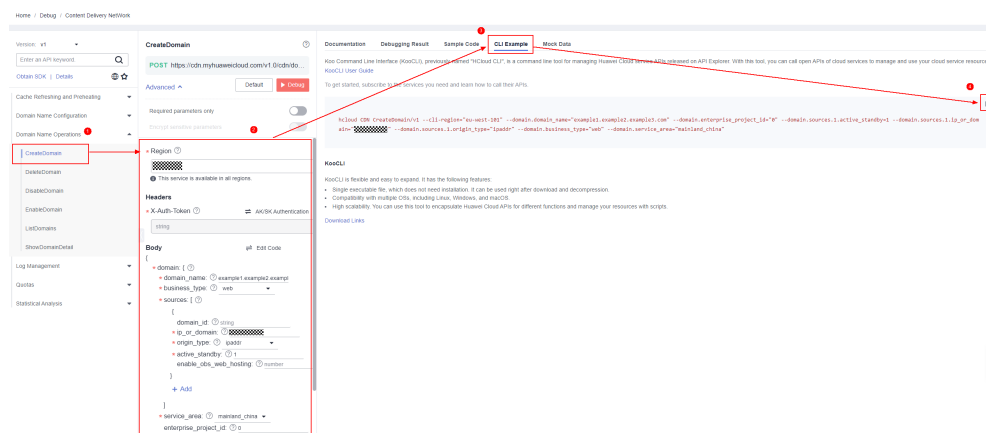
```
hcloud IoTDA UpdateDevice --cli-region="eu-west-101" --description="test update device" --device_id="testz*****0802" --cli-endpoint="iot-mqtts.eu-west-101.myhuaweicloud.eu"
{
  "app_id" : "103b*****6202",
  "app_name" : "DefaultApp *****",
  "device_id" : "testz*****0802",
  "node_id" : "testz*****0802",
  "gateway_id" : "testz*****0802",
  "device_name" : "test*****0802",
  "node_type" : "CATEWAY",
  "description" : "test update device",
  "fw_version" : null,
  "sw_version" : null,
  "device_sdk_version" : null,
  "auth_info" : {
    "auth_type" : "CERTIFICATES"
    "secret" : null,
    "fingerprint" : "e30db21*****b1772929c",
    "secure_access" : true,
    "timeout" : 0
  }
  "product_id" : "50c1*****588e",
  "product_name" : "50c1*****588e",
  "status" : "INACTIVE",
  "create time" : "20220801T085024z",
  "tags" : [],
  "extension_info" : {
    "sha1_fingerprint" : "82cd23e2*****e089d59d",
    "sha256_fingerprint" : "396ldb*****4a5f88ccb7"
  }
}
```

5 Obtaining CLI Examples on API Explorer

API Explorer supports online API debugging and generates KooCLI examples for cloud service APIs. After configuring the parameters of an API on API Explorer, you can copy and use the relevant **CLI Example**.

The following figure shows the CDN API for creating an acceleration domain name on API Explorer. After you set the request parameters, the CLI example will be updated accordingly. You can save the command with the set request parameters. Later, you can directly invoke this command in KooCLI or integrate it into a script.

Figure 5-1 Obtaining a CLI example on API Explorer



NOTE

- On the **API Explorer** console, only the parameters with values specified are displayed in the CLI example.
- A CLI example carries information such as a project ID and region. To use the example in another project or region, replace the project ID and region with the corresponding values.

6 Using KooCLI in Non-configuration Mode

- [6.1 Introduction](#)
- [6.2 AK/SK Authentication](#)
- [6.3 Account Authentication](#)
- [6.4 Token Authentication](#)
- [6.5 ecsAgency Authentication](#)
- [6.6 Agency Authentication](#)

6.1 Introduction

In KooCLI, you can call cloud service APIs using a profile or do so in non-configuration mode. When using KooCLI in non-configuration mode, you do not need to pass your authentication information through a profile. Instead, directly pass your authentication parameters in commands without adding any profiles. You can call cloud service APIs using any of the following authentication modes:

- [6.2 AK/SK Authentication](#)
- [6.3 Account Authentication](#)
- [6.4 Token Authentication](#)
- [6.5 ecsAgency Authentication](#)
- [6.6 Agency Authentication](#)

When using KooCLI in non-configuration mode, note the [precautions](#) and understand the [priority of each authentication mode](#).

6.2 AK/SK Authentication

- Access key (permanent AK/SK)
Enter a permanent AK (**cli-access-key**) and SK (**cli-secret-key**) in a command to call a cloud service API.

```
hcloud ECS NovaListServers --cli-region="eu-west-101" --project_id="4ff018c3*****f31948" --cli-access-key=8NVT*****KIOV --cli-secret-key=VHMQjoC*****lSk3cGf
```

- Temporary security credentials (temporary AK/SK and SecurityToken)
Enter a temporary AK (**cli-access-key**), SK (**cli-secret-key**), and SecurityToken (**cli-security-token**) in a command to call a cloud service API.

```
hcloud ECS NovaListServers --cli-region="eu-west-101" --project_id="4ff018c3*****f31948" --cli-access-key=5FSU*****607T --cli-secret-key=VoyjgLh*****qRc8pSq --cli-security-token=*****
```

6.3 Account Authentication

Enter an IAM user name (**cli-username**), password (**cli-password**), and **account name** (**cli-domain**) in a command to call a cloud service API.

```
hcloud ECS NovaListServers --cli-region="eu-west-101" --project_id="4ff018c3*****f31948" --cli-username=s*****1 --cli-password=***** --cli-domain=s*****1
```

NOTE

To call a cloud service API in this mode, **use a custom parameter** to pass the username and password in the command. This ensures account security and prevents password leakage.

6.4 Token Authentication

Enter a token (**cli-x-auth-token**) in a command to call a cloud service API.

```
hcloud ECS NovaListServers --cli-region="eu-west-101" --project_id="4ff018c3*****f31948" --cli-x-auth-token=*****
```

6.5 ecsAgency Authentication

Assume that you have created an ECS agency. When using KooCLI on an ECS, add **--cli-mode=ecsAgency** in a command so that KooCLI can use the ECS agency to automatically obtain a temporary AK/SK and SecurityToken for authentication.

To use this authentication mode, ensure that you have created an ECS agency. If no ECS agency is available, create one in IAM. For details, see **Cloud Service Delegation**. Then add the agency in the **Management Information > Agency** area of the ECS details page.

6.6 Agency Authentication

By creating an agency, you can delegate another account to manage your resources based on assigned permissions. After a trust relationship is established, the delegated party can use the delegating account name (**cli-agency-domain-name**)/ID (**cli-agency-domain-id**), agency name (**cli-agency-name**), and the delegated party's authentication information (token or AK/SK) to get authenticated when calling APIs to manage and use resources of the delegating party.

To use this authentication mode, the delegating party must create an agency for the delegated party. If you are the delegating party, create an agency on the IAM

console by referring to [Account Delegation](#). If you are the delegated party, only you and users in the **admin** group can manage the delegated resources. To assign a common IAM user to manage the resources, authorize the user by referring to [Assigning Permissions to an IAM User \(by a Delegated Party\)](#).

As the delegated party, when calling APIs to manage and use the cloud services and resources of the delegating party, use an AK/SK (access key or temporary security credentials) or a token for authentication.

- AK/SK (delegated party's) authentication

- Access key (permanent AK/SK)

```
hcloud ECS NovaListServers --cli-region="eu-west-101" --  
project_id="4ff018c3*****f31948" --cli-agency-domain-  
id=13534326*****5cf67b --cli-agency-name=***** --cli-access-key=8NVT*****KIOV  
--cli-secret-key=VHMQjoC*****lsk3cGf
```

- Temporary security credentials (temporary AK/SK and SecurityToken)

```
hcloud ECS NovaListServers --cli-region="eu-west-101" --  
project_id="4ff018c3*****f31948" --cli-agency-domain-  
id=13534326*****5cf67b --cli-agency-name=***** --cli-access-key=5FSU*****607T  
--cli-secret-key=VoyjgLh*****qRc8pSq --cli-security-token=*****
```

- Token (**cli-x-auth-token**) authentication

```
hcloud ECS NovaListServers --cli-region="eu-west-101" --project_id="4ff018c3*****f31948" --  
cli-agency-domain-id=13534326*****5cf67b --cli-agency-name=***** --cli-x-auth-token=*****
```

- Account (**cli-username**, **cli-password**, and **cli-domain**) authentication

```
hcloud ECS NovaListServers --cli-region="eu-west-101" --project_id="4ff018c3*****f31948" --  
cli-agency-domain-name=q*****2 --cli-agency-name=***** --cli-username=s*****1 --cli-  
password=***** --cli-domain=s*****1
```


7 Obtaining Authentication Information

[7.1 Obtaining a Permanent AK/SK](#)

[7.2 Obtaining an Account Name, Account ID, and Project ID](#)

[7.3 Obtaining a Region](#)

[7.4 Obtaining a Token](#)

[7.5 Obtaining a Temporary AK/SK and SecurityToken](#)

7.1 Obtaining a Permanent AK/SK

If you have already created and downloaded an AK/SK, skip this step. Find the downloaded AK/SK file, which is usually named **credentials.csv**.

As shown in the following figure, the file contains a username, AK, and SK.

Figure 7-1 Content of the credential.csv file

	A	B	C
1	User Name	Access Key Id	Secret Access Key
2	██████████	CI/██████████PI	zr17██████████5uCy

If no AK/SK has been created or the local AK/SK file cannot be found, [obtain an AK/SK](#)

7.2 Obtaining an Account Name, Account ID, and Project ID

A project ID is required in most cases when you call a cloud service API. To obtain a project ID, perform the following operations:

Step 1 Log in to the management console.

Step 2 Click the username in the upper right corner, choose **My Credentials** from the drop-down list, and view **Account Name (cli-domain)**, **Account ID (cli-domain-id)**, and **Project ID (cli-project-id)** on the displayed page.


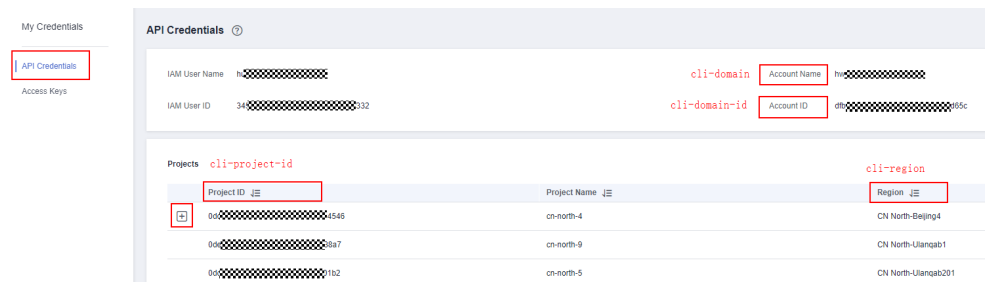
Projects physically isolate cloud server resources by region, and multiple projects can be created in the same region for more fine-grained isolation. As shown in the following figure, find the region where your server locates, obtain the corresponding project ID in the **Project ID** column, and click  on the left to obtain a subproject ID.

Figure 7-2 Viewing the account name, account ID, and project ID



NOTE

During API calling, KooCLI automatically obtains the account ID and project ID from the request header based on the authentication information of the current user. Therefore, you do not need to enter them in a command.

----End

7.3 Obtaining a Region

See [Region and AZ](#). The region ID of **EU-Dublin** is **eu-west-101**.

7.4 Obtaining a Token

A token is an access credential issued to an IAM user to bear the user's identity and permissions. The validity period of a token is 24 hours. Cache the token to prevent frequent API calling. The original token will be valid till it expires regardless of whether a new token has been obtained. Ensure that the token is valid when you use it. Using a token that will soon expire may cause API calling failures. You can obtain a token using any of the following methods:

Debugging an API in API Explorer

Set parameters on the page of the IAM API **KeystoneCreateUserTokenByPassword** on API Explorer, and click **Debug**. The value of **X-Subject-Token** in **Response** is a token.

Using Postman

[Use Postman to obtain a token](#). If **201** is returned after you send a request, click **Header**. The value of **X-Subject-Token** is a token.

Using KooCLI

```
hcloud IAM KeystoneCreateUserTokenByPassword --cli-region=${regionName} --auth.identity.methods.  
1="password" --auth.identity.password.user.name=${IAM user name} --
```

```
auth.identity.password.user.password=${IAM user password} --auth.identity.password.user.domain.name=${  
Name of the account to which the IAM user belongs} --auth.scope.domain.name=${Name of the account  
to which the IAM user belongs} --cli-output=tsv --cli-query="response_header.X-Subject-Token[0]"
```

If the invocation is successful, the returned result is a token.

7.5 Obtaining a Temporary AK/SK and SecurityToken

A temporary AK/SK and SecurityToken are issued by the system to IAM users and are valid for 15 minutes to 24 hours. The temporary AK/SK and SecurityToken follow the principle of least privilege. For details, see [Obtaining a Temporary Access Key and SecurityToken Through a Token](#).