

Flexus L Instance

API Reference

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1 Before You Start

Overview

Flexus L Instance (FlexusL) is a next-generation out-of-the-box lightweight cloud server product designed for small- and medium-sized enterprises and developers. FlexusL provides a range of images for you to choose from and is suitable for medium- and light-load scenarios such as website setup, development and testing environment, enterprise applications, website analysis, and audio and video scenarios. It is secure, cost-effective, and easy-to-use.

This document describes the APIs, syntax, parameters, and examples of FlexusL instances.

Before calling an API provided by FlexusL, ensure that you are familiar with this service. For details, see [What Is FlexusL?](#)

API Calling

Huawei Cloud supports Representational State Transfer (REST) APIs, allowing you to call APIs using HTTPS. For details about API calling, see [Calling APIs](#).

Endpoint

An endpoint is the request address for calling an API. Endpoints vary depending on services and regions. For the endpoints of all services, see [Regions and Endpoints](#).

2 API Overview

A FlexusL instance is a package of resources that include cloud servers, EIPs, EVS disks, CBR vaults, and HSS. Cloud servers are servers in a FlexusL instance.

This section describes some common APIs of FlexusL instances. Before using APIs, learn [Calling APIs](#) to use APIs smoothly.

- You can use the APIs according to the sequence from subscribing to a FlexusL instance to logging in to the FlexusL instance according to [Table 1](#).

Table 2-1 APIs used from subscription to login to a FlexusL instance

API	Description
Purchasing a FlexusL Instance	Used to purchase one or more FlexusL instances.
Querying Created FlexusL Instances	Used to query details about a FlexusL instance, including the status, name, and elastic IP address (EIP) of the FlexusL instance.
Resetting Cloud Server Passwords in a Batch	Used to reset the passwords of FlexusL instance management accounts (root or Administrator) in batches.
Remote login	There is no API for remote login. Log in to FlexusL using the following methods: Logging In to a Linux FlexusL Instance Using CloudShell Logging In to a FlexusL Instance Using VNC You can also select other login modes by referring to Login Modes .

- You can use common APIs listed in [Table 2-2](#) to maintain FlexusL instances.

Table 2-2 Common O&M APIs

API	Description
Starting Cloud Servers in a Batch	Used to restart cloud servers in batches based on the specified cloud server IDs.
Restarting Cloud Servers in a Batch	Used to restart cloud servers in batches based on specified cloud server IDs.
Stopping Cloud Servers in a Batch	Used to stop cloud servers in batches based on the specified cloud server IDs.
Modifying the Cloud Server Information of a FlexusL Instance	Used to modify the cloud server information. Currently, the cloud server name, description, and hostname can be modified.
Querying the Remaining Traffic of the Data Package in a FlexusL Instance	Used to query the remaining traffic of the data package in a FlexusL instance.
Renewing a FlexusL Instance	Used to manually renew the subscription to a FlexusL instance.
Unsubscribing from a FlexusL Instance	Used to manually unsubscribe from a FlexusL instance.

3 Calling APIs

3.1 Making an API Request

This section describes the structure of a REST API request, and uses the IAM API for [creating an IAM user](#) as an example to demonstrate how to call an API. The obtained token can then be used to authenticate the calling of other APIs.

Request URI

A request URI is in the following format:

{URI-scheme}://{Endpoint}/{resource-path}?{query-string}

Although a request URI is included in a request header, most programming languages or frameworks require the request URI be transmitted separately.

Table 3-1 URI parameters

Parameter	Description
URI-scheme	Protocol used to transmit requests. All APIs use HTTPS.
Endpoint	Domain name or IP address of the server bearing the REST service. The endpoint varies between services in different regions. It can be obtained from Regions and Endpoints . For example, the endpoint of IAM in the CN-Hong Kong region is iam.ap-southeast-1.myhuaweicloud.com .
resource-path	Access path of an API for performing a specified operation. Obtain the path from the URI of an API. For example, the resource-path of the API used to obtain a user token is /v3/auth/tokens .

Parameter	Description
query-string	Query parameter, which is optional. Ensure that a question mark (?) is included before each query parameter that is in the format of <i>Parameter name=Parameter value</i> . For example, ?limit=10 indicates that a maximum of 10 data records will be displayed.

For example, to create an IAM user in the **CN-Hong Kong** region, obtain the endpoint of IAM (**iam.ap-southeast-1.myhuaweicloud.com**) for this region and the resource-path (**/v3.0/OS-USER/users**) in the URI of the API used for **creating an IAM user**. Then, construct the URI as follows:

```
https://iam.ap-southeast-1.myhuaweicloud.com/v3.0/OS-USER/users
```

Figure 3-1 Example URI



NOTE

To simplify the URI display in this document, each API is provided only with a resource-path and a request method. The **URI-scheme** of all APIs is **HTTPS**, and the endpoints of all APIs in the same region are identical.

Request Methods

The HTTP protocol defines the following request methods that can be used to send a request to the server:

Table 3-2 HTTP methods

Method	Description
GET	Requests the server to return specified resources.
PUT	Requests the server to update specified resources.
POST	Requests a server to add resources or to perform special operations.
DELETE	Requests the server to delete specified resources, for example, an object.
HEAD	Requests the server to return the response header only.

Method	Description
PATCH	Requests the server to update partial content of a specified resource. If the resource does not exist, a new resource will be created.

For example, in the case of the API used to [create an IAM user](#), the request method is **POST**. The request is as follows:

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3.0/OS-USER/users
```

Request Header

You can also add additional header fields to a request, such as the fields required by a specified URI or HTTP method. For example, to request for the authentication information, add **Content-Type**, which specifies the request body type.

[Table 3-3](#) describes common request header fields.

Table 3-3 Common request header fields

Name	Description	Mandatory (Yes/No)	Example Value
Host	Specifies the server domain name and port number of the requested resources. The value can be obtained from the URL of the service API. The value is in the format of <i>Hostname:Port number</i> . If the port number is not specified, the default port is used. The default port number for https is 443 .	No This field is mandatory for AK/SK authentication.	code.test.com or code.test.com:443

Name	Description	Mandatory (Yes/No)	Example Value
Content-Type	Specifies the type (or format) of the message body. The default value application/json is recommended. Other values of this field will be provided for specific APIs if any.	Yes	application/json
Content-Length	Specifies the length of the request body. The unit is byte.	No	3495
X-Project-Id	Specifies the project ID. Obtain the project ID by following the instructions in Obtaining Account, IAM User, Group, Project, Region, and Agency Information .	No This field is mandatory for requests that use AK/SK authentication in the Dedicated Cloud (DeC) scenario or multi-project scenario.	e9993fc787d94b6c886cb aa340f9c0f4
X-Auth-Token	Specifies the user token. It is a response to the API for obtaining a user token . This is the only API that does not require authentication. After the request is processed, the value of X-Subject-Token in the response header is the token value.	No This field is mandatory for token authentication.	The following is part of an example token: MIIPAgYJKoZIhvcNAQc-Co...ggg1BBIIlNPXsidG9rZ

 NOTE

In addition to supporting authentication using tokens, APIs support authentication using AK/SK, which uses SDKs to sign a request. During the signature, the **Authorization** (signature authentication) and **X-Sdk-Date** (time when a request is sent) headers are automatically added in the request.

For more details, see "Authentication Using AK/SK" in [Authentication](#).

The following shows an example request of the API for [creating an IAM user](#) when AK/SK authentication is used:

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3.0/OS-USER/users
Content-Type: application/json
X-Sdk-Date: 20240416T095341Z
Authorization: SDK-HMAC-SHA256 Access=*****, SignedHeaders=content-type;host;x-sdk-date,
Signature=*****
```

(Optional) Request Body

This part is optional. The body of a request is often sent in a structured format (for example, JSON or XML) as specified in the **Content-Type** header field. The request body transfers content except the request header. If the request body contains full-width characters, these characters must be coded in UTF-8.

The request body varies between APIs. Some APIs do not require the request body, such as the APIs requested using the GET and DELETE methods.

In the case of the API used to [create an IAM user](#), the request parameters and parameter description can be obtained from the API request. The following provides an example request with a body included. Replace the bold parameters with the actual values.

- **accountid**: account ID of an IAM user
- **username**: name of an IAM user
- **email**: email of an IAM user
- *********: login password of an IAM user

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3.0/OS-USER/users
Content-Type: application/json
X-Sdk-Date: 20240416T095341Z
Authorization: SDK-HMAC-SHA256 Access=*****, SignedHeaders=content-type;host;x-sdk-date,
Signature=*****

{
  "user": {
    "domain_id": "accountid",
    "name": "username",
    "password": "*****",
    "email": "email",
    "description": "IAM User Description"
  }
}
```

If all data required for the API request is available, you can send the request to call the API through [curl](#), [Postman](#), or coding. In the response to the API used to obtain a user token, **X-Subject-Token** is the desired user token. This token can then be used to authenticate the calling of other APIs.

3.2 Authentication

Requests for calling an API can be authenticated using either of the following methods:

- Token-based authentication: Requests are authenticated using a token.
- AK/SK-based authentication: Requests are authenticated by encrypting the request body using an AK/SK pair. AK/SK authentication is recommended because it is more secure than token authentication.

Token-based Authentication

NOTE

The validity period of a token is 24 hours. When using a token for authentication, cache it to prevent frequently calling the IAM API used to obtain a user token.

A token specifies temporary permissions in a computer system. During API authentication using a token, the token is added to requests to get permissions for calling the API. You can obtain a token by calling the API for [obtaining a user token](#).

This service is a project-level service. When you call the API for [obtaining a user token](#), set **auth.scope** in the request body to **project**.

NOTE

If **auth.scope** is set to **project**, the token can only be used to access services (such as FlexusL) in specific projects. You can specify either **id** or **name**. For details about how to obtain the ID or name, see [Obtaining Account, IAM User, Group, Project, Region, and Agency Information](#).

```
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "username", //IAM user name
          "password": "SADMIN_PASS", //IAM user password. You are advised to store it in ciphertext
in the configuration file or an environment variable and decrypt it when needed to ensure security.
          "domain": {
            "name": "domainname" //Name of the account to which the IAM user belongs
          }
        }
      }
    },
    "scope": {
      "project": {
"name": "ap-southeast-1" //Project name. This is only an example. Change it based on the region where
the resource is located.
      }
    }
  }
}
```

After a token is obtained, the **X-Auth-Token** header field must be added to requests to specify the token when calling other APIs. For example, if the token is

ABCDEFJ...., the request header **X-Auth-Token: ABCDEFJ....** can be added to the request as follows:

 NOTE

The token changes by region. Obtain the token based on the region where the resource is located. After switching the region, you need to obtain the token again.

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/projects
Content-Type: application/json
X-Auth-Token: ABCDEFJ....
```

AK/SK-based Authentication

 NOTE

AK/SK-based authentication supports API requests with a body not larger than 12 MB. For API requests with a larger body, token-based authentication is recommended.

In AK/SK-based authentication, AK/SK is used to sign requests and the signature is then added to the requests for authentication.

- **AK**: access key ID, which is a unique identifier used in conjunction with a secret access key to sign requests cryptographically.
- **SK**: secret access key, which is used in conjunction with an AK to sign requests cryptographically. It identifies a request sender and prevents the request from being modified.

In AK/SK authentication, you can use an AK/SK to sign requests based on the signature algorithm or using the signing SDK. For details about how to sign requests and use the signing SDK, see [AK/SK Signing and Authentication Guide](#).

 NOTE

The signing SDK is only used for signing requests and is different from the SDKs provided by services.

3.3 Response

Status Code

After sending a request, you will receive a response, including a status code, response header, and response body.

A status code is a group of digits, ranging from 1xx to 5xx. It indicates the status of a request. For more information, see [Status Code](#).

For example, if status code **201** is returned for calling the API used to [create an IAM user](#), the request is successful.

Response Header

Similar to a request, a response also has a header, for example, **Content-Type**.

Figure 3-2 shows the response header fields for the API used to [create an IAM user](#). The **X-Subject-Token** header field is the desired user token. This token can then be used to authenticate the calling of other APIs.

 NOTE

For security purposes, you are advised to set the token in ciphertext in configuration files or environment variables and decrypt it when using it.

Figure 3-2 Header fields of the response to the request for creating an IAM user

```
"X-Frame-Options": "SAMEORIGIN",
"X-IAM-ETag-id": "2562365939-d8f6f12921974cb097338ac11fceac8a",
"Transfer-Encoding": "chunked",
"Strict-Transport-Security": "max-age=31536000; includeSubdomains;",
"Server": "api-gateway",
"X-Request-Id": "af2953f2bcc67a42325a69a19e6c32a2",
"X-Content-Type-Options": "nosniff",
"Connection": "keep-alive",
"X-Download-Options": "noopen",
"X-XSS-Protection": "1; mode=block;",
"X-IAM-Trace-Id": "token_ null_af2953f2bcc67a42325a69a19e6c32a2",
"Date": "Tue, 21 May 2024 09:03:40 GMT",
"Content-Type": "application/json; charset=utf8"
```

(Optional) Response Body

This part is optional. The body of a response is often returned in a structured format (for example, JSON or XML) as specified in the **Content-Type** header field. The response body transfers content except the response header.

The following shows part of the response body for the API used to [create an IAM user](#):

```
{
  "user": {
    "id": "c131886aec...",
    "name": "IAMUser",
    "description": "IAM User Description",
    "areacode": "",
    "phone": "",
    "email": "****@***.com",
    "status": null,
    "enabled": true,
    "pwd_status": false,
    "access_mode": "default",
    "is_domain_owner": false,
    "xuser_id": "",
    "xuser_type": "",
    "password_expires_at": null,
    "create_time": "2024-05-21T09:03:41.000000",
    "domain_id": "d78cbac1.....",
    "xdomain_id": "30086000.....",
    "xdomain_type": "",
    "default_project_id": null
  }
}
```

If an error occurs during API calling, an error code and message will be displayed. The following shows an error response body:

```
{
  "error_msg": "The request message format is invalid.",
  "error_code": "IMG.0001"
}
```

In the response body, **error_code** is an error code, and **error_msg** provides information about the error.

4 API

4.1 Purchasing a FlexusL Instance

Function

This API is used to subscribe to one or more FlexusL instances.

This API is an asynchronous API. After a subscription API request is delivered, **order_id** and **instances_ids** are returned. This means the order is created, but the creation of FlexusL instances has not been completed.

Use the **order_id** returned by this API to call the API of [Querying Order Details](#). Check the creation status of the FlexusL instances based on the value of **status** in the response message. If the value of **status** is **5**, the FlexusL instances are created.

Calling Method

See [Calling APIs](#).

Authorization

An account has required permissions to call all APIs by default. To call this API as an IAM user, the IAM user must be granted the required permissions. For details, see [Permissions and Actions](#).

API Gateway Address

<https://hcss.ap-southeast-3.myhuaweicloud.com>

URI

POST /v1/light-instances

Request

Table 4-1 Header parameters

Parameter	Mandatory	Type	Description
Client-Request-Id	Yes	String	Definition Unique request ID specified by a user to locate a request. UUID is recommended. Constraints N/A Range The value can contain 36 to 128 characters, including letters, digits, and hyphens (-). The value is case-sensitive and must start with a digit or a letter. Default Value N/A
X-Auth-Token	Yes	String	Definition User token. This API uses token-based authentication. The value of X-Auth-Token is that of X-Subject-Token in the header of the response returned by the API for obtaining a token . For details about authentication operations, see Authentication . NOTE The token changes by region. Obtain the token based on the region where the resource is located. After switching the region, you need to obtain the token again. Constraints N/A Range Signed token, which is less than 32 KB. Default Value N/A

Table 4-2 Body parameters

Parameter	Mandatory	Type	Description
instance_name	Yes	String	Definition Instance name. Constraints N/A Range The value can contain letters, digits, underscores (_), and hyphens (-). It is case-sensitive and must start with a letter. It can contain 1 to 128 characters. Default Value N/A
description	No	String	Definition Instance description. Constraints N/A Range The value can contain 0 to 1,024 characters. There are no restrictions on the character type. Default Value N/A
plan_spec	Yes	String	Definition Specification code. Constraints N/A Range Different images support different specification codes. For details, see Appendix . Default Value N/A

Parameter	Mandatory	Type	Description
image_ref	No	ImageRef	Definition Image information. Constraints N/A Range For details, see Table 4-3 . Default Value N/A
region	Yes	String	Definition Region. Constraints N/A Range Currently, the following regions are supported: ap-southeast-1 (CN-Hong Kong), ap-southeast-3 (AP-Singapore), ap-southeast-2 (AP-Bangkok), tr-west-1 (TR-Istanbul), sa-brazil-1 (LA-Sao Paulo1), and me-east-1 (ME-Riyadh). Default Value N/A
charging_mode	No	String	Definition Billing mode. Constraints N/A Range prePaid : yearly/monthly billing mode. Default Value prePaid

Parameter	Mandatory	Type	Description
period_type	Yes	String	Definition Subscription type. Constraints N/A Range • month: indicates that the subscription type is month. • year: indicates that the subscription type is year. Default Value N/A
period_num	Yes	String	Definition Subscription term. Constraints N/A Range • If periodType is month, the value ranges from 1 to 9. • If periodType is year, the value ranges from 1 to 3. Default Value N/A
purchase_quantity	No	int	Definition Purchase quantity. Constraints N/A Range 1–200 Default Value 1

Parameter	Mandatory	Type	Description
is_auto_renew	No	boolean	Definition Whether auto-renew is enabled. Constraints N/A Range • true: indicates that auto-renew is enabled. • false: indicates that auto-renew is disabled. Default Value false
is_auto_pay	No	boolean	Definition Whether the payment will be automatically deducted from your account balance when an order is submitted. Constraints N/A Range • true: The order will be automatically paid. • false: You must manually pay the order. Default Value false
ExtraResources	No	Array of ExtraResources	Definition Additional resource information. Constraints N/A Range For details, see Table 4-4 . Default Value N/A

Parameter	Mandatory	Type	Description
tags	No	Array of Tags	Definition Custom tags. Constraints N/A Range For details, see Table 4-5 . Default Value N/A

Table 4-3 ImageRef parameters

Parameter	Mandatory	Type	Description
image_name	No	String	Definition Names of the application images or OS images supported by FlexusL. Constraints This parameter is required when a FlexusL instance is created using application images or OS images. This parameter is not required when a FlexusL instance is created using a private image. Range For details about the supported image names, see Application Images or OS Images . Default Value N/A

Parameter	Mandatory	Type	Description
image_version	No	String	Definition Versions of the application images or OS images supported by FlexusL. Constraints This parameter is required when a FlexusL instance is created using application images or OS images. This parameter is not required when a FlexusL instance is created using a private image. Range For details about the supported image versions, see Application Images or OS Images . Default Value N/A
image_id	No	String	Definition Private image ID. Constraints The image ID of the private image is provided by a user only when a private image is used to create a FlexusL instance. This parameter is not required if an OS image or application image is used to create a FlexusL instance. Range ID of a private image. Default Value N/A

Table 4-4 ExtraResources parameters

Parameter	Mandatory	Type	Description
type	Yes	String	Definition Additional resource type. Constraints N/A Range • evs indicates data disks. • cbr indicates cloud backups. • hss indicates host security. Default Value N/A
size	No	Int	Definition Capacity of the resources whose type is evs or cbr . Constraints This parameter is not involved for the hss resource type. Range The unit is GiB. The value ranges from 10 to 2048. Default Value N/A

Table 4-5 Tags parameters

Parameter	Mandatory	Type	Description
key	Yes	String	Definition Key of a user-defined tag. Constraints N/A Range The value can contain 1 to 32 characters, including letters, digits, underscores (_), and hyphens (-). It is case-sensitive and must start with a letter. Default Value N/A

Parameter	Mandatory	Type	Description
value	Yes	String	Definition Value of a user-defined tag. Constraints N/A Range The value can contain 0 to 2,048 characters. There are no restrictions on the character type. Default Value N/A

Response

Table 4-6 Tags parameters

Parameter	Type	Description
order_id	String	Definition Order number. Range N/A
instance_ids	Array of strings	Definition Instance IDs. Range N/A

NOTE

Use the **order_id** returned by this API to call the API of [Querying Order Details](#). Check the creation status of the FlexusL instances based on the value of **status** in the response message. If the value of **status** is **5**, the FlexusL instances are created.

Example Request

Create two instances in a batch with name set to **test-0620-01**, specification code set to **hf.large.1.30m.linux**, image version set to **BT 6.8.35**, region set to **ap-southeast-3**, required duration set to 1 month, auto-payment and auto-renew enabled. Associate a 20-GB data disk, 20-GB backup vault, and HSS with the instances.

```
https://hcss.ap-southeast-3.myhuaweicloud.com/v1/light-instances
```

```
Client-Request-Id: 85a56f6c-8aee-xxxx-bf76-5d98d1ac023d
```

```
X-Auth-Token: MIlatAYJKoZIhvcNAQc...TCCGqECAQExDTALB // The token changes by region. Obtain the
```

token based on the region where the resource is located. After switching the region, you need to obtain the token again.

```
{
  "instance_name": "test-0620-01",
  "description": "test",
  "plan_spec": "hf.large.1.30m.linux",
  "image_ref": {
    "image_name": "BT",
    "image_version": "6.8.35"
  },
  "region": "ap-southeast-3",
  "charging_mode": "prePaid",
  "period_type": "month",
  "period_num": 1,
  "purchase_quantity": 2,
  "is_auto_renew": true,
  "is_auto_pay": true,
  "extra_resources": [
    {
      "type": "evs",
      "size": 20
    },
    {
      "type": "cbr",
      "size": 20
    },
    {
      "type": "hss"
    }
  ]
}
```

Example Response

```
{
  "order_id": "CS24022811305H1EW",
  "instance_ids": [
    "65dea8d23005da564c78d9d2"
  ]
}
```

Returned Values

Table 4-7 Returned values

Status Code	Description
202	The request is accepted and processed asynchronously.
400	Invalid request.
401	Authentication failed.
403	The user does not have the permission to call this API.
429	There are too many requests.
500	Internal server error.

Error Codes

Table 4-8 Error codes

HTTP Status Code	Error Code	Description
400	HCSS.14000001	Invalid parameter.
400	HCSS.14000002	CORS service request exception.
400	HCSS.14000003	CBC service request exception.
400	HCSS.14000004	ECS service request exception.
400	HCSS.14000005	EVS service request exception.
400	HCSS.14000006	EIP service request exception.
400	HCSS.14000007	ELB service request exception.
400	HCSS.14000008	IMS service request exception.
400	HCSS.14000009	KooGallery image request exception.
400	HCSS.14000010	Insufficient specifications.
400	HCSS.14000011	Insufficient quota.
429	HCSS.14290001	Too many requests. Try again later.
500	HCSS.15000001	Server exception.

Appendix

The following describes the specification codes of images supported by this API.

Application Images

The following table lists the specifications corresponding to the application images and their specification codes supported by the API.

Table 4-9 Application image specification codes

Image Name	Version	Supported Specification Code
BT	6.8.35	hf.large.1.30m.linux hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux

Image Name	Version	Supported Specification Code
CRM	8.0	hf.large.1.30m.linux hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux
Ghost	5.67	hf.large.1.30m.linux hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux
GitLab	16.9.3	hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux
Joomla	5.0.3	hf.large.1.30m.linux hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux
KodBox	1.49	hf.large.1.30m.linux hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux
Matomo	5.0.3	hf.large.1.30m.linux hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux
Moodle	4.3.4	hf.large.1.30m.linux hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux

Image Name	Version	Supported Specification Code
Nextcloud	28.0.3	hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux
Nodejs	21	hf.large.1.30m.linux hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux
Odoo	17.0	hf.large.1.30m.linux hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux
Portainer	2.19.4	hf.large.1.30m.linux hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux
PrestaShop	8.1.5	hf.large.1.30m.linux hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux
Redmine	5.1	hf.large.1.30m.linux hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux
SRS	6.0.101	hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux
Superset	3.1.1	hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux

Image Name	Version	Supported Specification Code
WordPress	6.4	hf.large.1.30m.linux hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux

OS Images

The following table lists the specification versions corresponding to the system images and their specification codes supported by the API.

Table 4-10 OS image specification codes

Image Name	Version	Supported Specification Code
Ubuntu	22.04/20.04/18.04/16.04	hf.large.05.30m.linux hf.large.1.30m.linux hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux
Huawei Cloud EulerOS	2.0	hf.large.025.30m.linux (supported only in the CN-Hong Kong and AP-Singapore regions) hf.large.05.30m.linux hf.large.1.30m.linux hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux

Image Name	Version	Supported Specification Code
CentOS	8.2/8.1/8.0/7.9/7.8/7.7/7.6/7.5/ 7.4/7.3/7.2 NOTE The TR-Istanbul and ME-Riyadh regions do not support 8.2, 8.1, 8.0, 7.3, or 7.2.	hf.large.025.30m.linux (supported only by images of version 7.6 in the CN-Hong Kong and AP-Singapore regions) hf.large.05.30m.linux hf.large.1.30m.linux hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux
Debian	11.1/9.0	hf.large.025.30m.linux (supported only by images of version 11.1 in the CN-Hong Kong and AP-Singapore regions) hf.large.05.30m.linux hf.large.1.30m.linux hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux

Private Images

The following table lists the specifications corresponding to the private images and their specification codes supported by the API.

Table 4-11 Private image specification codes

OS	Specification Code
Linux	hf.large.025.30m.linux hf.large.05.30m.linux hf.large.1.30m.linux hf.large.2.30m.linux hf.large.4.30m.linux hf.xlarge.2.30m.linux hf.xlarge.4.30m.linux

OS	Specification Code
Windows	hf.large.1.30m.byol hf.large.2.30m.byol hf.large.4.30m.byol hf.xlarge.2.30m.byol hf.xlarge.4.30m.byol

The following table lists the specifications corresponding to the specification codes.

Table 4-12 Specifications corresponding to the Linux system specification codes

Specification Code	vCPUs	Memory (GiB)	System Disk (GiB)	Peak Bandwidth (Mbit/s)	Data Package (GB)
hf.large.025.30m.linux	2	0.5	20	30	1024
hf.large.05.30m.linux	2	1	40	30	2048
hf.large.1.30m.linux	2	2	60	30	3072
hf.large.2.30m.linux	2	4	80	30	4096
hf.large.4.30m.linux	2	8	160	30	5120
hf.xlarge.2.30m.linux	4	8	240	30	6144
hf.xlarge.4.30m.linux	4	16	320	30	7168

Table 4-13 Specifications of the Windows system specification codes

Specification Code	vCPUs	Memory (GiB)	System Disk (GiB)	Peak Bandwidth (Mbit/s)	Data Package (GB)
hf.large.1.30m.byol	2	2	60	30	3072
hf.large.2.30m.byol	2	4	80	30	4096
hf.large.4.30m.byol	2	8	160	30	5120

Specification Code	vCPUs	Memory (GiB)	System Disk (GiB)	Peak Bandwidth (Mbit/s)	Data Package (GB)
hf.xlarge.2.30m.byol	4	8	240	30	6144
hf.xlarge.4.30m.byol	4	16	320	30	7168

4.2 Querying Created FlexusL Instances

Function

This API is used to query information about created FlexusL instances, including the instance name, instance ID, and EIP. It is the Config API for querying all resources under an account. This section lists the key information about API usage. For more information about the API, see [Querying All Resources Under an Account](#).

Authorization

An account has required permissions to call all APIs by default. To call this API as an IAM user, the IAM user must be granted the required permissions. For details, see [Permissions Policies and Supported Actions](#).

URI

GET /v1/resource-manager/domains/{domain_id}/all-resources

When querying created FlexusL instances, you only need to pay attention to the **Query** parameters described in the following table.

Table 4-14 Query parameters

Parameter	Mandatory	Description
region_id	No	Definition Region ID. It specifies whether to query created FlexusL instances by region. Constraints N/A Range - If this parameter is specified, the created FlexusL instances are queried by region. - If this parameter is not specified, FlexusL instances created in all regions are queried. Default Value N/A

Parameter	Mandatory	Description
type	Yes	Definition Resource type list. Constraints N/A Range To query FlexusL instances, set this parameter to hcss.l-instance . Default Value N/A
limit	No	Definition limit and marker are both specified for pagination query. Constraints N/A Range N/A Default Value N/A
marker		

Response

The following describes common response parameters of FlexusL instances.

Table 4-15 Common response parameters

Parameter	Type	Description
id	String	Definition ID of a FlexusL instance. Range N/A
name	String	Definition Name of a FlexusL instance. Range N/A

Parameter	Type	Description
region_id	String	Definition Region where a FlexusL instance resides. Range N/A
properties	Map<String,Object>	Definition Resource property details. Range For details about the data structure, see Table 4-16 .

Table 4-16 Data structure of **properties**

Parameter	Type	Description
metadata	Map<String,String>	Definition FlexusL instance metadata. Range For details about the data structure, see Table 4-17 .
resources	Array of objects	Definition Resources packaged in a FlexusL instance. Range For details about the data structure, see Table 4-18 .

Table 4-17 Data structure of **metadata**

Parameter	Type	Description
charging_mode	String	Definition Billing mode. Range prePaid : yearly/monthly billing mode.
order_id	String	Definition Order ID. Range N/A

Parameter	Type	Description
resource_spec_code	String	Definition Specification code. Range For details about specifications, see Table 4-12 .

Table 4-18 Data structure of **resources**

Parameter	Type	Description
logical_resource_type	String	Definition Type of resources packaged in a FlexusL instance. Range huaweicloudinternal_ecs_instance: Cloud servers huaweicloudinternal_cbc_freeresource: Data package
physical_resource_id	String	Definition Resource ID. Range - This field indicates a cloud server ID when logical_resource_type is set to huaweicloudinternal_ecs_instance. - This field indicates a data package ID when logical_resource_type is set to huaweicloudinternal_cbc_freeresource.
physical_resource_name	String	Definition Resource name. Range This field indicates a cloud server name when logical_resource_type is set to huaweicloudinternal_ecs_instance .

Example Request

Query information about all FlexusL instances of the current user.

GET https://{endpoint}/v1/resource-manager/domains/{domain_id}/all-resources?type=hcsl-instance

Example Response

```
"resources": [
  {
    "id": "66e3e9f8b271f8319ef19e86", //FlexusL instance ID
    "name": "BT-cn-north-4-X6p4", //FlexusL instance name
    "provider": "hcss",
    "type": "l-instance",
    "region_id": "cn-north-4", //Region of the FlexusL instance
    "project_id": "067cf8aecf3845d1ad7a5d308322f13b",
    "project_name": "cn-north-4",
    "ep_id": "0",
    "ep_name": "default",
    "checksum": "a9c783ed32927aff443932a9cf43cb8e3dd8a5bf1ddd4ae0495aa182c4e02938",
    "created": "2024-09-13T07:30:00.000Z",
    "updated": "2024-09-13T07:31:11.000Z",
    "provisioning_state": "Succeeded",
    "state": "Normal",
    "tags": {},
    "properties": {
      "metadata": {
        "charging_mode": "prePaid",
        "resource_type": "hws.resource.type.hecsfusion",
        "resource_spec_code": "ahf.large.1.40g.2m.linux", //Specification code
        "order_id": "CS2409131529QL4NJ", //Order ID
        "cloud_service_type": "hws.service.type.hcss"
      },
      "description": ""
    },
    "resources": [
      {
        "physical_resource_type": "hws.resource.type.marketplace",
        "logical_resource_type": "hws.resource.type.marketplace",
        "physical_resource_id": "66e3e9f8b271f8319ef19e86_f267d4ce-0d85-41ce-99c3-f5c4b3ca4640_0",
        "logical_resource_name": "huaweicloudinternal_ecs_instance_image",
        "cloud_service_type": "hws.service.type.marketplace"
      },
      {
        "physical_resource_type": "hws.resource.type.vm",
        "logical_resource_type": "huaweicloudinternal_ecs_instance",
        "physical_resource_id": "72a270de-665a-4f46-8d64-24ad6edccdd2", //Cloud server ID
        "physical_resource_name": "hcss_ecs_ff60", //Cloud server name
        "resource_attributes": [
          {
            "value": "null",
            "key": "admin_pass"
          },
          {
            "value": "cn-north-4g",
            "key": "availability_zone"
          },
          {
            "value": "null",
            "key": "batch_create_in_multi_az"
          },
          {
            "value": "[]",
            "key": "data_volumes"
          },
          {
            "value": "null",
            "key": "description"
          },
          {
            "value": "{\\"chargingMode\\":\\"prePaid\\",\\"imageproductid\\":\\"OFF1890411017782276096\\",\\"orderID\\":\\"CS2409131529QL4NJ\\",\\"productID\\":\\"OFF11017640863722074117\\"}",
            "key": "extendparam"
          },
          {
            "value": "at7.large.1",
            "key": "flavor_id"
          }
        ]
      }
    ]
  }
]
```

```
    },
    {
      "value": "null",
      "key": "frozen"
    },
    {
      "value": "72a270de-665a-4f46-8d64-24ad6edccdd2",
      "key": "id"
    },
    {
      "value": "f267d4ce-0d85-41ce-99c3-f5c4b3ca4640",
      "key": "image_id"
    },
    {
      "value": "null",
      "key": "is_auto_rename"
    },
    {
      "value": "null",
      "key": "key_name"
    },
    {
      "value": "{ \"__support_agent_list\": \"hss,hss-pc,ces\" }",
      "key": "metadata"
    },
    {
      "value": "hcss_ecs_ff60",
      "key": "name"
    },
    {
      "value": "[ { \"ip_address\": \"\", \"ipv6_bandwidth\": [], \"ipv6_enable\": false, \"subnet_id\": \"d99a81d0-4262-4a0b-8258-8ac2357d7bcf\" } ]",
      "key": "nics"
    },
    {
      "value": "null",
      "key": "os_scheduler_hints"
    },
    {
      "value": "db18e1cd-7fea-4e8d-95b0-e31db879b8ee",
      "key": "primary_port_id"
    },
    {
      "value": "[]",
      "key": "publicip"
    },
    {
      "value": "[ { \"cluster_id\": \"\", \"cluster_type\": \"\", \"extendparam\": { \"orderID\": \"CS2409131529QL4NJ\", \"hw_passthrough\": false, \"iops\": 0, \"metadata\": {}, \"size\": 40, \"throughput\": 0, \"volumetype\": \"SAS_for_smb\" } } ]",
      "key": "root_volume"
    },
    {
      "value": "[ { \"id\": \"b88fdd7e-fe03-4e3f-ab64-1e5e1f8de0d9\" } ]",
      "key": "security_groups"
    },
    {
      "value": "[]",
      "key": "server_tags"
    },
    {
      "value": "0",
      "key": "status"
    },
    {
      "value": "2cda750e-d6d8-4153-b4cc-e15fb22e6ea8",
      "key": "system_disk_id"
    },
    {
```

```
"value": "[\"_sys_type_hcss_l\"]",
"key": "tags"
},
{
  "value": "null",
  "key": "timeouts"
},
{
  "value": "null",
  "key": "total_count"
},
{
  "value": "null",
  "key": "user_data"
},
{
  "value": "4022721e-0476-41ea-91f4-1883065a68cc",
  "key": "vpc_id"
},
{
  "value": "2024-09-13T07:31:11Z",
  "key": "cors_crm_updated_at"
}
],
"logical_resource_name": "huaweicloudinternal_ecs_instance_light_server_compute_instance",
"cloud_service_type": "hws.service.type.ec2"
},
{
  "physical_resource_type": "hws.resource.type.volume",
  "logical_resource_type": "hws.resource.type.volume",
  "physical_resource_id": "2cda750e-d6d8-4153-b4cc-e15fb22e6ea8",
  "logical_resource_name": "huaweicloudinternal_ecs_instance_system_disk",
  "cloud_service_type": "hws.service.type.ebs"
},
{
  "physical_resource_type": "hws.resource.type.bandwidth",
  "logical_resource_type": "huaweicloudinternal_cbc_freeresource",
  "physical_resource_id": "4fb5cd67-73f8-4313-bc1b-f76ed15c9d09", //Data package ID
  "resource_attributes": [
    {
      "value": "null",
      "key": "bundle_product_id"
    },
    {
      "value": "3c24f6f8852945a0af194f93ce075fbd",
      "key": "customer_id"
    },
    {
      "value": "2024-10-13 16:00:00",
      "key": "end_time"
    },
    {
      "value": "null",
      "key": "enterprise_project_id"
    },
    {
      "value": "4fb5cd67-73f8-4313-bc1b-f76ed15c9d09",
      "key": "id"
    },
    {
      "value": "CS2409131529QL4NJ",
      "key": "order_id"
    },
    {
      "value": "32bd0fdf-772b-41a8-8495-afbc5a46e00f",
      "key": "oriented_resource_id"
    },
    {
      "value": "OFFI879567668502900737",
```

```
"key": "product_id"
},
{
  "value": "cn-north-4",
  "key": "region_code"
},
{
  "value": "2024-09-13T07:31:11Z",
  "key": "cors_crm_updated_at"
}
],
"logical_resource_name": "huaweicloudinternal_cbc_freeresource_cbc_freeresource",
"cloud_service_type": "hws.service.type.vpc"
},
{
  "physical_resource_type": "hws.resource.type.ip",
  "logical_resource_type": "huaweicloudinternal_eip",
  "physical_resource_id": "ad75ed90-2cd5-4f96-a65c-c4cb0b3690c0",
  "resource_attributes": [
    {
      "value": "hcss_eip_ff60",
      "key": "alias"
    },
    {
      "value": "null",
      "key": "associate_instance_id"
    },
    {
      "value": "null",
      "key": "associate_instance_type"
    },
    {
      "value": "[{\"billing_info\":\"\",\"charge_mode\":\"traffic\",\"id\":\"32bd0fdf-772b-41a8-8495-afbc5a46e00f\",\"name\":\"hcss_bandwidth_ff60\",\"share_type\":\"PER\",\"size\":\"2\",\"status\":\"0\"}]",
      "key": "bandwidth"
    },
    {
      "value": "null",
      "key": "billing_info"
    },
    {
      "value": "null",
      "key": "cascade_delete_by_instance"
    },
    {
      "value": "null",
      "key": "description"
    },
    {
      "value": "null",
      "key": "eip_id"
    },
    {
      "value": "null",
      "key": "enterprise_project_id"
    },
    {
      "value": "ad75ed90-2cd5-4f96-a65c-c4cb0b3690c0",
      "key": "id"
    },
    {
      "value": "4",
      "key": "ip_version"
    },
    {
      "value": "119.3.166.187", //EIP
      "key": "public_ip_address"
    },
    {
```

```
"value": "",
"key": "public_ipv6_address"
},
{
"value": "5_bgp",
"key": "publicip_pool_name"
},
{
"value": "0",
"key": "status"
},
{
"value": "null",
"key": "type"
},
{
"value": "2024-09-13T07:31:11Z",
"key": "cors_crm_updated_at"
}
],
"logical_resource_name": "huaweicloudinternal_eip_light_server_eip",
"cloud_service_type": "hws.service.type.vpc"
},
{
"physical_resource_type": "",
"logical_resource_type": "huaweicloudinternal_eip_attach",
"physical_resource_id": "ad75ed90-2cd5-4f96-a65c-c4cb0b3690c0",
"resource_attributes": [
{
"value": "db18e1cd-7fea-4e8d-95b0-e31db879b8ee",
"key": "associate_instance_id"
},
{
"value": "PORT",
"key": "associate_instance_type"
},
{
"value": "null",
"key": "cascade_delete_by_instance"
},
{
"value": "ad75ed90-2cd5-4f96-a65c-c4cb0b3690c0",
"key": "eip_id"
},
{
"value": "ad75ed90-2cd5-4f96-a65c-c4cb0b3690c0",
"key": "id"
},
{
"value": "2024-09-13T07:31:11Z",
"key": "cors_crm_updated_at"
}
],
"logical_resource_name": "huaweicloudinternal_eip_attach_light_server_eip_attach_ecs",
"cloud_service_type": ""
},
{
"physical_resource_type": "",
"logical_resource_type": "huaweicloudinternal_eip_bandwidth_lock",
"physical_resource_id": "32bd0fdf-772b-41a8-8495-afbc5a46e00f",
"resource_attributes": [
{
"value": "resize,change_charge_mode,delete",
"key": "action"
},
{
"value": "32bd0fdf-772b-41a8-8495-afbc5a46e00f",
"key": "bandwidth_id"
}
],
}
```

```
{
  "value": "32bd0fdf-772b-41a8-8495-afbc5a46e00f",
  "key": "id"
},
{
  "value": "hcss",
  "key": "scene"
},
{
  "value": "72a270de-665a-4f46-8d64-24ad6edccdd2",
  "key": "source_id"
},
{
  "value": "hcss",
  "key": "source_type"
},
{
  "value": "2024-09-13T07:31:11Z",
  "key": "cors_crm_updated_at"
}
],
"logical_resource_name": "huaweicloudinternal_eip_bandwidth_lock_light_server_bandwidth_lock_ecs",
"cloud_service_type": ""
},
{
  "physical_resource_type": "",
  "logical_resource_type": "huaweicloudinternal_eip_lock",
  "physical_resource_id": "ad75ed90-2cd5-4f96-a65c-c4cb0b3690c0",
  "resource_attributes": [
    {
      "value": "associate_instance,disassociate_instance,change_bandwidth,delete,change_charge_mode",
      "key": "action"
    },
    {
      "value": "ad75ed90-2cd5-4f96-a65c-c4cb0b3690c0",
      "key": "eip_id"
    },
    {
      "value": "ad75ed90-2cd5-4f96-a65c-c4cb0b3690c0",
      "key": "id"
    },
    {
      "value": "hcss",
      "key": "scene"
    },
    {
      "value": "72a270de-665a-4f46-8d64-24ad6edccdd2",
      "key": "source_id"
    },
    {
      "value": "hcss",
      "key": "source_type"
    },
    {
      "value": "2024-09-13T07:31:11Z",
      "key": "cors_crm_updated_at"
    }
  ],
  "logical_resource_name": "huaweicloudinternal_eip_lock_light_server_eip_lock_ecs",
  "cloud_service_type": ""
}
],
"product_name": "BT_light_server_8_0",
"platform": "SMB",
"plan_name": "basic_v12",
"product_id": "64c12fefcd938770a92ea433",
"plan_id": "66b03ab8bb1fd66087123683",
"status": "RUNNING"
}
```

```
}  
],  
"page_info": {  
  "current_count": 1,  
  "next_marker": null  
}  
}
```

4.3 Resetting Cloud Server Passwords in a Batch

Function

This API is used to reset the password of the cloud server management accounts (**root** or **Administrator**) in a batch. It is the API for resetting the passwords of ECS management accounts in a batch. This section lists the key information about using the API. For more information about the API, see [Resetting the Passwords for Logging In to ECSs in a Batch](#).

NOTE

This API used by **cloud servers** in the FlexusL instances is the same as that used by **ECSs**. The response parameter description, API usage example, and return values of ECSs also apply to the FlexusL instances.

Constraints

- Before using this API, you must install the password reset plug-in.
By default, the password reset plug-in has been installed in the OS images and application images provided by the FlexusL instances.
If the private image is created from a server on another cloud platform or downloaded from a third party, the image may not have the password reset plug-in installed, so the password reset function is unavailable. Install the plug-in by following the instructions provided in [What Should I Do If the Password Cannot Be Reset After I Use a Private Linux Image to Create a FlexusL Instance or Change the OS of an Existing FlexusL Instance and I Forgot the Initial Password of the Private Image?](#)
- After the request for resetting the password is issued, this API does not report an error if the script failed to be executed.
- A new password takes effect after the cloud server is started or restarted.
- This API allows you to reset passwords when the target cloud servers are running or stopped.

Authorization

An account has required permissions to call all APIs by default. To call this API as an IAM user, the IAM user must be granted the required permissions. For details, see [Permissions and Supported Actions](#).

URI

PUT /v1/{project_id}/cloudservers/os-reset-passwords

Request

For details about the request parameters, see [Resetting the Passwords for Logging In to ECSs in a Batch](#). In the request message, **id** in the **servers** field is the cloud server ID. Obtain the cloud server ID by referring to [Querying Created FlexusL Instances](#).

Example Request

Reset the passwords of the FlexusL instances whose cloud server IDs are **72a270de-665a-4f46-8d64-24ad6edccdd1** or **72a270de-665a-4f46-8d64-24ad6edccdd2** to **password@123**.

```
PUT https://{endpoint}/v1/{project_id}/cloudservers/os-reset-passwords
{
  "new_password": "password@123",
  "servers": [
    {
      "id": "72a270de-665a-4f46-8d64-24ad6edccdd1"
    },
    {
      "id": "72a270de-665a-4f46-8d64-24ad6edccdd2"
    }
  ]
}
```

Example Response

```
{
  "response": [
    {
      "id": "72a270de-665a-4f46-8d64-24ad6edccdd1"
    },
    {
      "id": "72a270de-665a-4f46-8d64-24ad6edccdd2"
    }
  ]
}
```

4.4 General O&M APIs

4.4.1 Querying Details About a FlexusL Cloud Server

Function

This API is used to query details about a cloud server based on the cloud server ID, including the cloud server status, cloud server name, and EIP. It is the API for querying ECS details. The information that can be queried includes the cloud server billing mode and whether the cloud server is frozen. This section lists the key information about using the API. For more information about the API, see [Querying Details About an ECS](#).

NOTE

This API used by **cloud servers** in the FlexusL instances is the same as that used by **ECSs**. The response parameter description, API usage example, and return values of ECSs also apply to the FlexusL instances.

Authorization

An account has required permissions to call all APIs by default. To call this API as an IAM user, the IAM user must be granted the required permissions. For details, see [Permissions and Supported Actions](#).

URI

GET /v1/{project_id}/cloudservers/{server_id}

In the parameter description, **server_id** indicates the cloud server ID. Obtain the cloud server ID by referring to [Querying Created FlexusL Instances](#).

Example Request

Query details about the cloud server whose ID is **72a270de-665a-4f46-8d64-24ad6edccdd2**.

```
GET https://{endpoint}/v1/{project_id}/cloudservers/72a270de-665a-4f46-8d64-24ad6edccdd2
```

Example Response

```
{
  "server": {
    "fault": null,
    "id": "72a270de-665a-4f46-8d64-24ad6edccdd2",
    "name": "hcss_ecs_ff60", //Cloud server name
    "addresses": { //Cloud server network information
      "4022721e-0476-41ea-91f4-1883065a68cc": [
        {
          "version": "4",
          "addr": "192.168.12.151",
          "primary": true,
          "OS-EXT-IPS-MAC:mac_addr": "fa:16:3e:74:d8:63",
          "OS-EXT-IPS:type": "fixed",
          "OS-EXT-IPS:port_id": "db18e1cd-7fea-4e8d-95b0-e31db879b8ee"
        },
        {
          "version": "4",
          "addr": "119.3.166.187",
          "primary": true,
          "OS-EXT-IPS-MAC:mac_addr": "fa:16:3e:74:d8:63",
          "OS-EXT-IPS:type": "floating",
          "OS-EXT-IPS:port_id": "db18e1cd-7fea-4e8d-95b0-e31db879b8ee"
        }
      ]
    },
    "flavor": {
      "disk": "0",
      "vcpus": "2",
      "ram": "2048",
      "id": "at7.large.1",
      "name": "at7.large.1",
      "gpus": [],
      "asic_accelerators": []
    },
    "accessIPv4": "",
    "accessIPv6": "",
    "status": "ACTIVE",
    "progress": 0,
    "hostId": "fc724a7f21982eec27a7c4d3ab33275733834e1d4316cadd2a684387",
    "updated": "2024-09-13T07:31:12Z",
    "created": "2024-09-13T07:30:25Z",
    "metadata": {
      "lockScene":
```

```
"OTHER_SVC_LOCK=changeos,resize,delete,attachvolume,detachvolume,detachnics,attachnics,renewfee",
  "charging_mode": "1",
  "vpc_id": "4022721e-0476-41ea-91f4-1883065a68cc",
  "metering.productcode": "0a1438ad-a2d3-4b89-bed7-f3d261a853a8",
  "metering.product_id": "OFF1017640863722074117",
  "lockSource": "hcss",
  "lockSourceId": "66e3e9f8b271f8319ef19e86",
  "__support_agent_list": "hss,hss-pc,ces",
  "metering.imagetype": "market",
  "metering.order_id": "CS2409131529QL4NJ",
  "image_name": "Linux BT panel 8.0.5",
  "metering.imageproductid": "OFF1890411017782276096",
  "metering.resourcespeccode": "at7.large.1.linux",
  "os_type": "Linux",
  "metering.resourcetype": "1",
  "metering.image_id": "f267d4ce-0d85-41ce-99c3-f5c4b3ca4640",
  "os_bit": "64",
  "lockCheckEndpoint": "",
  "cascaded.instance_extrainfo": "pcibridge:1,virtio_bus_count:8"
},
"tags": [
  "_sys_type_hcss_l"
],
"description": "",
"locked": false,
"config_drive": "",
"tenant_id": "067cf8aecf3845d1ad7a5d308322f13b",
"user_id": "862856742c334c8a801460a39f1f1cfb",
"key_name": null,
"os-extended-volumes:volumes_attached": [
  {
    "id": "2cda750e-d6d8-4153-b4cc-e15fb22e6ea8",
    "delete_on_termination": "false",
    "device": "/dev/vda",
    "bootIndex": "0"
  }
],
"OS-EXT-STS:task_state": null,
"OS-EXT-STS:power_state": 1,
"OS-EXT-STS:vm_state": "active",
"OS-EXT-SRV-ATTR:host": "fc724a7f21982eec27a7c4d3ab33275733834e1d4316cadd2a684387",
"OS-EXT-SRV-ATTR:instance_name": "instance-038ca5e0",
"OS-EXT-SRV-ATTR:hypervisor_hostname":
"fc724a7f21982eec27a7c4d3ab33275733834e1d4316cadd2a684387",
"OS-DCF:diskConfig": "MANUAL",
"OS-EXT-AZ:availability_zone": "cn-north-4g",
"os:scheduler_hints": {},
"OS-EXT-SRV-ATTR:root_device_name": "/dev/vda",
"OS-EXT-SRV-ATTR:ramdisk_id": "",
"enterprise_project_id": "0",
"OS-EXT-SRV-ATTR:user_data": null,
"OS-SRV-USG:launched_at": "2024-09-13T07:30:39.000000",
"OS-EXT-SRV-ATTR:kernel_id": "",
"OS-EXT-SRV-ATTR:launch_index": 0,
"host_status": "UP",
"OS-EXT-SRV-ATTR:reservation_id": "r-hzt0k5xi",
"OS-EXT-SRV-ATTR:hostname": "hcss-ecs-ff60",
"OS-SRV-USG:terminated_at": null,
"sys_tags": [
  {
    "key": "_sys_enterprise_project_id",
    "value": "0"
  }
],
"security_groups": [
  {
    "id": "b88fdd7e-fe03-4e3f-ab64-1e5e1f8de0d9",
    "name": "sg-default-smb"
  }
]
```

```
,
"image": {
  "id": "f267d4ce-0d85-41ce-99c3-f5c4b3ca4640"
},
"hypervisor": null,
"auto_terminate_time": "",
"cpu_options": {
  "hw:cpu_threads": null
},
"enclave_options": {
  "enabled": false
},
"capacity_reservation_id": null,
"capacity_reservation_specification": {
  "id": null,
  "preference": null
},
"security_options": {
  "secure_boot_enabled": null,
  "tpm_enabled": null
},
"spod_id": null
}
```

4.4.2 Modifying the Cloud Server Information of a FlexusL Instance

Function

This API is used to modify cloud server information. Currently, the name, description, and hostname of a cloud server can be modified. The API is the ECS API for modifying an ECS. This section lists the key information about using the API. For more information about the API, see [Modifying ECS Details](#).

NOTE

This API used by **cloud servers** in the FlexusL instances is the same as that used by **ECSs**. The response parameter description, API usage example, and return values of ECSs also apply to the FlexusL instances.

Constraints

After the hostname of a cloud server is changed, you need to restart the cloud server to apply the change.

Authorization

An account has required permissions to call all APIs by default. To call this API as an IAM user, the IAM user must be granted the required permissions. For details, see [Permissions and Supported Actions](#).

URI

PUT /v1/{project_id}/cloudservers/{server_id}

In the parameter description, **server_id** indicates the cloud server ID. Obtain the cloud server ID by referring to [Querying Created FlexusL Instances](#).

Example Request

Change hostname of the cloud server whose ID is **72a270de-665a-4f46-8d64-24ad6edccdd2** to **NameA**.

```
PUT /v1/{project_id}/cloudservers/{72a270de-665a-4f46-8d64-24ad6edccdd2}
{
  "server": {
    "hostname": "NameA"
  }
}
```

Example Response

```
{
  "server": {
    "tenant_id": "067cf8aecf3845d1ad7a5d308322f13b",
    "image": "",
    "accessIPv4": null,
    "metadata": {
      "__support_agent_list": "hss,hss-pc,ces"
    },
    "addresses": {
      "4022721e-0476-41ea-91f4-1883065a68cc": [
        {
          "addr": "192.168.12.151",
          "version": 4
        }
      ]
    },
    "security_options": {
      "secure_boot_enabled": null,
      "tpm_enabled": null
    },
    "accessIPv6": null,
    "created": "2024-09-13T07:30:25Z",
    "OS-EXT-SRV-ATTR:user_data": null,
    "hostId": "fc724a7f21982eec27a7c4d3ab33275733834e1d4316cadd2a684387",
    "description": "",
    "OS-EXT-SRV-ATTR:hostname": "NameA",
    "flavor": {
      "links": [
        {
          "rel": "bookmark",
          "href": "https://ecs.cn-north-4.myhuaweicloud.com/flavors/at7.large.1"
        }
      ],
      "id": "at7.large.1"
    },
    "OS-DCF:diskConfig": "MANUAL",
    "user_id": "862856742c334c8a801460a39f1f1cfb",
    "name": "hcss_ecs_ff60",
    "progress": 0,
    "links": [
      {
        "rel": "self",
        "href": "https://ecs.cn-north-4.myhuaweicloud.com/v1.0/servers/72a270de-665a-4f46-8d64-24ad6edccdd2"
      },
      {
        "rel": "bookmark",
        "href": "https://ecs.cn-north-4.myhuaweicloud.com/servers/72a270de-665a-4f46-8d64-24ad6edccdd2"
      }
    ],
    "id": "72a270de-665a-4f46-8d64-24ad6edccdd2",
    "updated": "2024-09-14T06:20:34Z",
    "status": "ACTIVE"
  }
}
```

4.4.3 Starting Cloud Servers in a Batch

Function

This API is used to start cloud servers in a batch based on the specified cloud server IDs. A maximum of 1,000 cloud servers can be started within 1 minute. The API is the ECS API for starting ECSs in a batch. This section lists the key information about using the API. For more information about the API, see [Starting ECSs in a Batch](#).

This API is an asynchronous API. After the batch start request is successfully delivered, a job ID is returned. This does not mean the batch start is complete. You need to call the API by referring to [Querying Task Execution Status](#) to query the job status. The **SUCCESS** status indicates that the batch start is successful.

NOTE

This API used by **cloud servers** in the FlexusL instances is the same as that used by **ECSs**. The response parameter description, API usage example, and return values of ECSs also apply to the FlexusL instances.

Authorization

An account has required permissions to call all APIs by default. To call this API as an IAM user, the IAM user must be granted the required permissions. For details, see [Permissions and Supported Actions](#).

URI

POST /v1/{project_id}/cloudservers/action

Request

For details about the request parameters, see [Starting ECSs in a Batch](#). In the request message, **id** in the **servers** field is the cloud server ID. Obtain the cloud server ID by referring to [Querying Created FlexusL Instances](#).

Example Request

Start FlexusL instances whose cloud server IDs are **72a270de-665a-4f46-8d64-24ad6edccdd1** and **72a270de-665a-4f46-8d64-24ad6edccdd2** in a batch.

```
POST https://{endpoint}/v1/{project_id}/cloudservers/action
{
  "os-start": {
    "servers": [
      {
        "id": "72a270de-665a-4f46-8d64-24ad6edccdd1"
      },
      {
        "id": "72a270de-665a-4f46-8d64-24ad6edccdd2"
      }
    ]
  }
}
```

Example Response

```
{
  "job_id": "ff80808290c6b7b60191ef4d78411d8d"
}
```

4.4.4 Restarting Cloud Servers in a Batch

Function

This API is used to restart cloud servers in a batch based on the specified cloud server IDs. A maximum of 1,000 cloud servers can be restarted within 1 minute. The API is the ECS API for restarting ECSs in a batch. This section lists the key information about using the API. For more information about the API, see [Restarting ECSs in a Batch](#).

This API is an asynchronous API. After the batch restart request is successfully delivered, a job ID is returned. This does not mean the batch restart is complete. You need to call the API by referring to [Querying Task Execution Status](#) to query the job status. The **SUCCESS** status indicates that the batch restart is successful.

NOTE

This API used by **cloud servers** in the FlexusL instances is the same as that used by **ECSs**. The response parameter description, API usage example, and return values of ECSs also apply to the FlexusL instances.

Authorization

An account has required permissions to call all APIs by default. To call this API as an IAM user, the IAM user must be granted the required permissions. For details, see [Permissions and Supported Actions](#).

URI

POST /v1/{project_id}/cloudservers/action

Request

For details about the request parameters, see [Restarting ECSs in a Batch](#). In the request message, **id** in the **servers** field is the cloud server ID. Obtain the cloud server ID by referring to [Querying Created FlexusL Instances](#).

Example Request

Restart FlexusL instances whose cloud server IDs are **72a270de-665a-4f46-8d64-24ad6edccdd1** and **72a270de-665a-4f46-8d64-24ad6edccdd2** in a batch.

```
POST https://{endpoint}/v1/{project_id}/cloudservers/action
{
  "reboot": {
    "servers": [
      {
        "id": "72a270de-665a-4f46-8d64-24ad6edccdd1"
      },
      {

```

```
"id": "72a270de-665a-4f46-8d64-24ad6edccdd2"
},
"type": "SOFT"
}
```

Example Response

```
{
  "job_id": "ff80808290c6b7b60191ef522de6257b"
}
```

4.4.5 Stopping Cloud Servers in a Batch

Function

This API is used to stop cloud servers in a batch based on the specified cloud server IDs. A maximum of 1,000 cloud servers can be stopped within 1 minute. The API is the ECS API for stopping ECSs in a batch. This section lists the key information about using the API. For more information about the API, see [Stopping ECSs in a Batch](#).

This API is an asynchronous API. After the batch stop request is successfully delivered, a job ID is returned. This does not mean the batch stop is complete. You need to call the API by referring to [Querying Task Execution Status](#) to query the job status. The **SUCCESS** status indicates that the batch stop is successful.

NOTE

This API used by **cloud servers** in the FlexusL instances is the same as that used by **ECSs**. The response parameter description, API usage example, and return values of ECSs also apply to the FlexusL instances.

Authorization

An account has required permissions to call all APIs by default. To call this API as an IAM user, the IAM user must be granted the required permissions. For details, see [Permissions and Supported Actions](#).

URI

POST /v1/{project_id}/cloudservers/action

Request

For details about the request parameters, see [Stopping ECSs in a Batch](#). In the request message, **id** in the **servers** field is the cloud server ID. Obtain the cloud server ID by referring to [Querying Created FlexusL Instances](#).

Example Request

Stop FlexusL instances whose cloud server IDs are **72a270de-665a-4f46-8d64-24ad6edccdd1** and **72a270de-665a-4f46-8d64-24ad6edccdd2** in a batch.

```
POST https://{endpoint}/v1/{project_id}/cloudservers/action
{
```

```
"os-stop": {
  "servers": [
    {
      "id": "72a270de-665a-4f46-8d64-24ad6edccdd1"
    },
    {
      "id": "72a270de-665a-4f46-8d64-24ad6edccdd2"
    }
  ]
}
```

Example Response

```
{
  "job_id": "ff80808290c6b8210191ef4a80e116d3"
}
```

4.4.6 Querying the Remaining Traffic of the Data Package in a FlexusL Instance

Function

This API is used to query the remaining traffic of the data package in a FlexusL instance. This section lists the key information about API usage. For more information, see [Viewing Resource Package Usage](#).

Constraints

This API can be called only by the customer AK/SK or token.

NOTICE

If a data package has expired for more than 18 months, its information cannot be queried.

Debugging

You can debug this API in [API Explorer](#).

Authorization

An account has required permissions to call all APIs by default. To call this API as an IAM user, the IAM user must be granted the required permissions. For details, see [Permissions and Supported Actions](#).

URI

POST /v2/payments/free-resources/usages/details/query

Request

Table 4-19 Request parameters

Parameter	Mandato ry	Type	Value Range	Description
free_resour ce_ids	Yes	List<st ring>	A maximum of 100 records	List of data package IDs of FlexusL instances. Each ID can contain a maximum of 64 bytes. You can obtain the data package IDs by calling the API for querying a created FlexusL instance based on the logical_resource_type value that is huaweicloudinter- nal_cbc_freeresource .

Example Request

Query the remaining traffic of the data package whose ID is **828e2c7c-3c8c-45a2-bebc-98cb3e77d06e**.

```
{
  "free_resource_ids": [
    "828e2c7c-3c8c-45a2-bebc-98cb3e77d06e"
  ]
}
```

Example Response

```
{
  "free_resources": [
    {
      "free_resource_id": "828e2c7c-3c8c-45a2-bebc-98cb3e77d06e",
      "free_resource_type_name": "Lightweight BGP data package",
      "quota_reuse_cycle": 4,
      "quota_reuse_cycle_type": 2,
      "usage_type_name": "Uplink traffic",
      "start_time": "2024-12-25T08:00:00Z",
      "end_time": "2025-01-25T16:00:00Z",
      "amount": 180, //Remaining traffic
      "original_amount": 200, //Original traffic amount
      "measure_id": 10
    }
  ]
}
```

4.5 Renewal and Unsubscription

4.5.1 Renewing a FlexusL Instance

Function

This API is used to renew a yearly/monthly FlexusL instance when it is about to expire. This section lists the key information about API usage. For more information, see [Renewing Subscription to Yearly/Monthly Resources](#).

Constraints

This API can be called only by the customer AK/SK or token.

Debugging

You can debug this API in [API Explorer](#).

Authorization

An account has required permissions to call all APIs by default. To call this API as an IAM user, the IAM user must be granted the required permissions. For details, see [Permissions and Supported Actions](#).

URI

POST /v2/orders/subscriptions/resources/renew

Request

For details about the request parameters, see [Request](#). In the request message, **resource_ids** indicates the FlexusL instance ID, which can be obtained in [Querying Created FlexusL Instances](#).

Example Request

Renew the FlexusL instance whose ID is **6743d0e3708be6007b8c8012** for one month.

```
{
  "resource_ids": [
    "6743d0e3708be6007b8c8012"
  ],
  "period_type": 2,
  "period_num": 1
}
```

Example Response

```
{
  "order_ids": [
    "CS241125185460CZY"
  ],
  "fail_resource_infos": []
}
```

Status Code

For details, see [Returned Values](#).

4.5.2 Unsubscribing from a FlexusL Instance

Function

This API is used to unsubscribe from a yearly/monthly resource that you have subscribed to. The resources include the renewed resources and the resources that are being used. After the unsubscription, the resources can no longer be used. This section lists the key information about API usage. For more information, see [Unsubscribing from Yearly/Monthly Resources](#).

NOTE

- A yearly/monthly resource can be unsubscribed from only after it has been successfully paid and provisioned.
- After this API is called, all resources including the EVS disks, cloud backup vault, HSS, and EIP associated with the FlexusL instance will be unsubscribed from.
- When unsubscribing from an in-use resource, confirm the resource and refund information carefully. If you want to continue using these resources, unsubscribe from the subscription term renewed but not used yet.

Constraints

This API can be called only by the customer AK/SK or token.

Debugging

You can debug this API in [API Explorer](#).

Authorization

An account has required permissions to call all APIs by default. To call this API as an IAM user, the IAM user must be granted the required permissions. For details, see [Permissions and Supported Actions](#).

URI

POST /v2/orders/subscriptions/resources/unsubscribe

Request

For details about the request parameters, see [Request](#). In the request message, **resource_ids** indicates the FlexusL instance ID, which can be obtained in [Querying Created FlexusL Instances](#).

Example Request

Unsubscribe from the FlexusL instance whose ID is **6743d0e3708be6007b8c8012**.

```
{
  "resource_ids": [
    "6743d0e3708be6007b8c8012"
  ],
  "unsubscribe_type": 1
}
```

Example Response

```
{
  "order_ids": [
    "CS241125191112O62"
  ],
  "fail_resource_infos": []
}
```

Status Code

For details, see [Returned Values](#).

5 Permissions and Actions

You can use Identity and Access Management (IAM) for fine-grained permissions management of your FlexusL instances. If your HUAWEI IDaccount does not need individual IAM users, you can skip this section.

New IAM users do not have any permissions assigned by default. You need to first add them to one or more groups and attach policies or roles to these groups. The users then inherit permissions from the groups and can perform specified operations on cloud services based on the permissions they have been assigned.

You can grant users permissions by using [roles](#) and [policies](#). Roles are provided by IAM to define service-based permissions that match users' job responsibilities. Policies define API-based permissions for operations on specific resources under certain conditions, allowing for more fine-grained, secure access control of cloud resources.

NOTE

If you want to allow or deny the access to an API, use policy-based authorization.

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. The required permissions are determined by the actions supported by the API. Only users with the policies allowing for those actions can call the API successfully.

Supported Actions

FlexusL provides system-defined policies that can be directly used in IAM. You can also create custom policies to supplement system-defined policies for more refined access control. Actions supported by policies are specific to APIs. See the following common concepts related to policies:

- Permissions: statements in a policy that allow or deny certain operations
- APIs: REST APIs that can be called by a user who has been granted specific permissions
- Actions: specific operations that are allowed or denied in a custom policy
- Dependencies: actions which a specific action depends on. When allowing an action for a user, you also need to allow any existing action dependencies for that user.

- IAM projects/Enterprise projects: the authorization scope of a custom policy. A custom policy can be applied to IAM projects or enterprise projects or both. Policies that contain actions for both IAM and enterprise projects can be used and applied for both IAM and Enterprise Management. Policies that contain actions only for IAM projects can be used and applied to IAM only. Administrators can check whether an action supports IAM projects or enterprise projects in the action list. For details about the differences between IAM and enterprise management, see [Differences Between IAM and Enterprise Management](#).

FlexusL supports the following actions in custom policies:

Table 5-1 Actions and dependencies supported by FlexusL APIs

Permissi on	API	Action	Dependencie s	IAM Proje ct	Enterpris e Project
Purchasi ng a FlexusL instance	POST /v1/ light- instances	cors:productIns tance:create	• cors:produ ctInstance: subscribe (subscribin g to product instances) • cors:produ ctInstance: createDefa ult (creating default product instances)	Supp orted	Not supported