Cloud Service Engine

API Reference

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1 Before You Start

Cloud Service Engine (CSE) is a cloud middleware used for microservice applications. It supports ServiceComb engines contributed to Apache and open-source enhanced Nacos engines. You can also use other cloud services to quickly build a cloud-native microservice system, implementing quick development and high-availability O&M of microservice applications.

This document describes how to use APIs to perform operations on microservice engines, such as dynamic configuration, engine management, and microservice governance. For details about all supported operations, see **API Overview**.

If you plan to access CSE resources through an API, ensure that you are familiar with CSE concepts. For details, see **Service Overview**.

Service Center Address

The service center address is the request address for calling APIs. Different microservice engine instances have different service center addresses. For details, see **Obtaining the Service Center Address of a ServiceComb Engine**.

Concepts

- Account

  An account is created upon successful registration with the cloud platform. The account has full access permissions for all of its cloud services and resources. It can be used to reset user passwords and grant user permissions. The account is a payment entity and should not be used directly to perform routine management. For security purposes, create Identity and Access Management (IAM) users and grant them permissions for routine management.

- User

  An Identity and Access Management (IAM) user is created using an account to use cloud services. Each IAM user has its own identity credentials (password and access keys).

  To view an account ID and user ID, go to the **My Credentials** page. The domain name, username, and password will be required for API authentication.

- Region

  Regions are divided from the dimensions of geographical location and network latency. Public services, such as Elastic Cloud Server (ECS), Elastic Volume Service (EVS), Virtual Private Cloud (VPC), Elastic IP (EIP), and Image Management Service (IMS), are shared within the same region. Regions are classified into universal and dedicated regions. A universal region provides universal cloud services for common tenants. A dedicated region provides specific services for specific tenants.

  For details, see **Region and AZ**.

- Availability zone

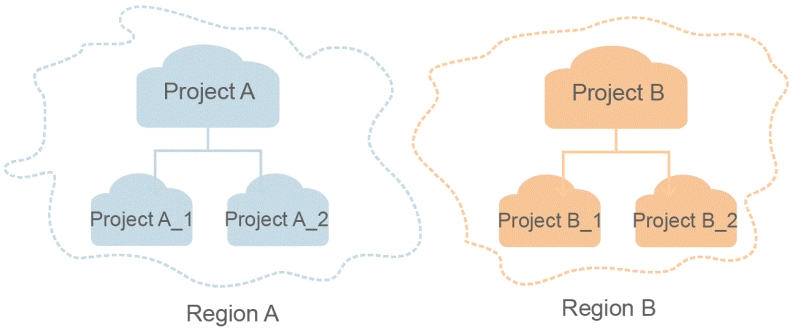
  An availability zone (AZ) comprises one or more physical data centers equipped with independent ventilation, fire, water, and electricity facilities. Compute, network, storage, and other resources in an AZ are logically divided into multiple clusters. AZs within a region are connected using high-speed optical fibers to support cross-AZ high-availability systems.

- Project

  Projects group and isolate resources (including compute, storage, and network resources) across physical regions. A default project is provided for each region, and subprojects can be created under each default project. Users can be granted permissions to access all resources in a specific project. If you need more refined access control, create subprojects under a default project and create resources in subprojects. Then you can assign users the permissions required to access only the resources in the specific subprojects.

  To view a project ID, go to the **My Credentials** page.

  Figure 1-1 Project isolating model

- Enterprise project

  Enterprise projects group and manage resources across regions. Resources in enterprise projects are logically isolated. An enterprise project can contain resources of multiple regions, and resources can be added to or removed from enterprise projects.

  For details about how to obtain the enterprise project ID and features, see ***Enterprise Management User Guide***.

2 API Overview

CSE provides open APIs for microservice development, helping you quickly migrate services to the cloud at low costs and enabling efficient running of microservice applications.

For details about the APIs, see the following table.

Table 2-1 Overview

Type	Subtype	Description
CSE APIs	**Dynamic Configuration**	APIs related to configuration import to and export from the configuration management center.
	Engine Management	APIs related to microservice engine creation, query, and deletion.
	Microservice Governance	APIs related to governance policy creation, modification, query, and deletion.
Nacos APIs	**Nacos API**	APIs related to namespace creation, modification, query, and deletion.
ServiceComb-native APIs	**Authentication**	APIs related to microservice identity authentication.
	Microservice	APIs related to microservice management.
	Schema	APIs related to microservice contract query and upload.
	Microservice Instance	APIs related to microservice instance registry and heartbeat reporting.
	Dependency	APIs related to microservice dependency query.

Type	Subtype	Description
	Configuration Management	APIs related to configuration management of the configuration center.

NOTICE

APIs in **Microservice**, **Schema**, **Microservice Instance**, and **Dependency** are available only in ME-Riyadh, CN-Hong Kong, and AP-Singapore.

3 Calling APIs

3.1 Making an API Request

This section describes the structure of a RESTful API request, and uses the IAM API for **creating an IAM user** as an example to describe how to call an API.

Request URI

A request URI is in the following format:

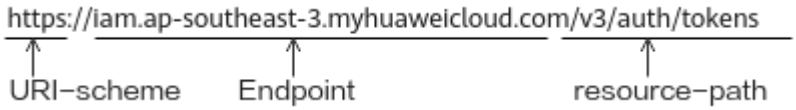
{URI-scheme} :// {Endpoint} / {resource-path} ? {query-string}

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

- **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 CN-Hong Kong is iam.ap-southeast-1.myhuaweicloud.com.
- **resource-path**: Access path of an API for performing a specified operation. Obtain the value from the URI of an API. For example, **resource-path** of the API used to create an IAM user is **/v3.0/OS-USER/users**.
- **query-string**: Query parameter, which is optional. Ensure that a question mark (?) is included before each query parameter that is in the format of "Parameter name=Parameter value". For example, **? limit=10** means to query up to 10 pieces of data.

```
https://iam.ap-southeast-3.myhuaweicloud.com/v3/auth/tokens
```

Figure 3-1 Example URI



NOTE

To simplify the URI display, 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.

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

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

Figure 3-2 Example URI

NOTE

To simplify the URI display, 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:

- **GET**: requests the server to return specified resources.
- **PUT**: requests the server to update specified resources.
- **POST**: requests the server to add resources or perform special operations.
- **DELETE**: requests the server to delete specified resources, for example, an object.
- **HEAD**: requests a server resource header.
- **PATCH**: requests the server to update partial content of a specified resource. If the resource does not exist, a new resource can be created using the PATCH method.

For example, in the URI of the API for **creating an IAM user as an administrator**, 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.

Common request header fields are as follows:

- **Content-Type**: request body type or format. This field is mandatory and its default value is **application/json**. Other values of this field will be provided for specific APIs if any.
- **X-Auth-Token**: A user token only for token-based API authentication. The user token is a response to the API used to **obtain a user token**. This API is the only one that does not require authentication.
- **Authorization**: signature authentication information. This field is optional. When AK/SK-based authentication is enabled, this field is automatically specified when SDK is used to sign the request. For details, see **AK/SK-based Authentication**.
- **X-Sdk-Date**: time when a request is sent. This field is optional. When AK/SK-based authentication is enabled, this field is automatically specified when SDK is used to sign the request. For details, see **AK/SK-based Authentication**.
- **X-Project-ID**: subproject ID. This field is optional and can be used in multi-project scenarios. The **X-Project-ID** field is mandatory in the request header for accessing resources in a subproject through AK/SK-based authentication.
- **X-Domain-ID**: account ID, which is optional. When you call APIs of global services using AK/SK-based authentication, **X-Domain-ID** needs to be configured in the request header.

For the API for **creating an IAM user as an administrator**, if AK/SK-based authentication is enabled, the request with the header is as follows:

```
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=**********
```

Request Body

The body of a request is often sent in a structured format as specified in **Content-Type**. The request body transfers content other than the request header. If the request body contains Chinese characters, set **Content-type** to **utf-8**, for example, Content-Type: application/json; charset=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.

For the API for **creating an IAM user as an administrator**, you can check the required request parameters and their description in the API request. The following provides an example request with a body included. Replace the italic fields in bold with the actual values.

- **accountid**: ID of the account to which the IAM user belongs.
- **username**: IAM username to be created.
- **email**: email address of the IAM user.
- **************: password of the 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"
    }
}
```

By now, all data required for an API request is available. You can send the request to call the API through curl, Postman, or coding.

3.2 Authentication

You can use either of the following authentication methods to call APIs:

- Token-based authentication: Requests are authenticated using a token.
- AK/SK-based authentication: Requests are encrypted using an AK/SK pair

Token-based Authentication

NOTE

- The validity period of a token is 24 hours. If a token is used for authentication, cache it to prevent frequent API calling.
- Ensure that the token is valid when you use it. Using a token that will soon expire may cause API calling failures.

A token specifies temporary permissions in a computer system. During token-based API authentication, the token is added to requests to get permissions for calling the API.

When calling the API for **obtaining a user token**, you must set **auth.scope** in the request body to **project**.

```
{
    "auth": {
        "identity": {
            "methods": [
                "password"
            ],
            "password": {
                "user": {
                    "name": "username",
                    "password": "********",
                    "domain": {
                        "name": "domainname"
                    }
                }
            }
        },
        "scope": {
            "project": {
                "name": "xxxxxxxx"
            }
        }
    }
}
```


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 **ABCDEFG....**, add **X-Auth-Token: ABCDEFG....** to a request as follows:

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3.0/OS-USER/users
Content-Type: application/json
X-Auth-Token: ABCDEFG....
```

AK/SK-based Authentication

NOTE

AK/SK authentication supports API requests with a body not larger than 12 MB. For API requests with a larger body, token 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. It is a unique identifier associated with a secret access key and is used in conjunction with a secret access key to sign requests cryptographically.
- SK: secret access key. It is used together with an AK to identify a sender who initiates a request and to cryptographically sign requests, preventing the request from being modified.

In AK/SK-based authentication, you can sign requests using an AK/SK based on the signature algorithm or using the signing SDK. For details about how to sign requests and use the signing SDK, see **API Request Signing Guide**.

NOTICE

Unlike SDKs provided by services, the signing SDK is only for signing.

3.3 Response

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

Status Code

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 Codes**.

If status code 201 is returned for the API for **creating an IAM user as an administrator**, the request is successful.

Response Header

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

For the API for **creating an IAM user as an administrator**, the message header shown in **Figure 3-3** is returned.

Figure 3-3 Response header

```
"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_[redacted]_null_af2953f2bcc67a42325a69a19e6c32a2",
"Date": "Tue, 21 May 2024 09:03:40 GMT",
"Content-Type": "application/json; charset=utf8"
```

Response Body

The body of a response is often returned in a structured format as specified in **Content-Type**. The response body transfers content except the response header.

For the API for **creating an IAM user as an administrator**, the following message body is returned. The following is part of the response body:

```
{
    "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 a message will be displayed. The following shows an error response body.

```
{
    "error_msg": "Request body is invalid.",
    "error_code": "IAM.0011"
}
```

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

4 Examples

4.1 Registry and Discovery

Scenarios

This section describes how to register and discover microservices by calling APIs. For details about how to call APIs, see **Calling APIs**.

Process

1. Register the my-provider microservice.
2. Register the my-provider microservice instance.
3. Register the my-consumer microservice.
4. The my-consumer microservice discovers the my-provider microservice instance.

NOTE

The preceding microservice names are examples.

Prerequisites

Obtain the registry center address of the ServiceComb engine instance by referring to **Service Center Address**. The following uses **{cse_endpoint}** as an example.

Procedure

Step 1 Register the my-provider microservice.

Call API **Creating Static Information for a Microservice**. The following is a request example:

```
curl -k -H "x-domain-name:default" -XPOST "https://{cse_endpoint}/v4/default/registry/microservices" -d '{
    "service": {
        "serviceName": "my-provider",
        "appId": "default",
        "version": "1.0.0",
        "description": "test",
```



```
        "level": "MIDDLE",
        "status": "UP"
    }
}'
```

Response:

```
{"serviceId":"918282e8562dc5fdc9a8dcd4d1baabb492190aa4"}
```

serviceId will be replaced with **{providerServiceId}** in the following example.

Step 2 Register the my-provider microservice instance.

Call API **Registering a Microservice Instance**. The validity period of the instance is 1 hour. The instance is automatically brought offline when the validity period expires. Assume that the listening address of the my-provider microservice instance is **127.0.0.1:8080**. The following shows an example request.

```
curl -k -H "x-domain-name:default" -XPOST "https://{cse_endpoint}/v4/default/registry/microservices/
{providerServiceId}/instances" -d '{
    "instance": {
        "hostName": "test",
        "endpoints": [
            "rest:127.0.0.1:8080"
        ],
        "status": "UP",
        "healthCheck": {
            "mode": "push",
            "interval": 900,
            "times": 3
        }
    }
}'
```

Response:

```
{"instanceId":"2be605a095ed11eabcbe0255ac100fa3"}
```

Step 3 Register the my-consumer microservice.

Call API **Creating Static Information for a Microservice**. The following is a request example:

```
curl -k -H "x-domain-name:default" -XPOST "https://{cse_endpoint}/v4/default/registry/microservices" -d '{
    "service": {
        "serviceName": "my-consumer",
        "appId": "default",
        "version": "1.0.0",
        "description": "test",
        "level": "MIDDLE",
        "status": "UP"
    }
}'
```

Response:

```
{"serviceId":"9db248934c31fc754d6e922b48ede4a5c004d3c1"}
```

serviceId will be replaced with **{consumerServiceId}** in the following example.

Step 4 The my-consumer microservice discovers the my-provider microservice instance.

Call API **Querying a Microservice Instance by Filter Criteria**. The my-consumer microservice queries information about the my-provider microservice instance from the service center based on its own service ID. The following shows an example request.


```
curl -k -H "x-domain-name:default" -H "X-ConsumerId:{consumerServiceId}" -XGET "https://
{cse_endpoint}/v4/default/registry/instances?appId=default&serviceName=my-provider&version=0.0.0%2B"
```

Response:

```
{
   "instances": [
      {
         "instanceId": "2be605a095ed11eabcbe0255ac100fa3",
         "serviceId": "918282e8562dc5fdc9a8dcd4d1baabb492190aa4",
         "endpoints": [
            "rest:127.0.0.1:8080"
         ],
         "hostName": "test",
         "status": "UP",
         "healthCheck": {
            "mode": "push",
            "interval": 150,
            "times": 3
         },
         "timestamp": "1589465646",
         "modTimestamp": "1589465646",
         "version": "1.0.0"
      }
   ]
}
```

In actual practice, the my-consumer microservice can obtain the address of the my-provider microservice instance from the **endpoint** field in the instance query result and initiate service invoking.

Alternatively, choose **Service Catalog** on the CSE console to view the service registry information.

----End

5 CSE API

5.1 API Calling

CSE provides REST APIs, allowing you to call APIs using HTTPS.

CSE supports APIs of configuration management, engine management, and microservice governance.

To call the CSE APIs of a microservice engine, see **Calling APIs**.

5.2 Dynamic Configuration

5.2.1 Importing kie Configurations

Function

This API is used to import kie configurations.

URI

POST /v1/{project_id}/kie/file

Table 5-1 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.

Table 5-2 Query parameters

Parameter	Mandatory	Type	Description
override	No	String	Overwrite policy. • force: overwrites duplicate keys. • abort: stops the import if duplicate keys are found. • skip: skips duplicate keys. Default value: force Enumerated values: • force • abort • skip
label	No	String	To import a specified label, enter a value in the format of {Label key}:{Label value}. If this parameter is empty, the label of the body is imported.

Request

Table 5-3 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**. Default value: 0
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
Accept	Yes	String	Set it to **application/json**.

Table 5-4 FormData parameter

Parameter	Mandatory	Type	Description
upload_file	Yes	File	Contents in the file must be in key-value pairs, for example, {"data":[{"key1":"value1","key2":"value2"}]}.

Response

Status code: 200

Table 5-5 Response body parameters

Parameter	Type	Description
OK	Array of **GetKieConfigs** objects	List of configuration items that are successfully imported.
failure	Array of **failure** objects	List of configuration items that fail to be imported and their errors.

Table 5-6 GetKieConfigs

Parameter	Type	Description
id	String	ID of a configuration item.
key	String	Key of a configuration item.
labels	Object	Label of a configuration item.
value	String	Value of a configuration item.
value_type	String	Type of a configuration item value.
status	String	Status of a configuration item.
create_time	Integer	Creation time.
update_time	Integer	Update time.
create_revision	Long	Version number of the created configuration.
update_revision	Long	Version number of the updated configuration.

Table 5-7 failure

Parameter	Type	Description
key	String	Key of the configuration item that fails to be imported.
labels	Object	Label of the configuration item that fails to be imported.
error_code	String	Error code displayed for an import failure.
error_message	String	Import failure cause.

Status code: 400

Table 5-8 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-9 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
POST https://{endpoint}/v3/{project_id}/kie/file
{
  }
```

Example Response

Status code: 200

OK

```
{
  "success" : [ {
```



```
    "id" : "8a9e6a5d-8d65-48fb-a40c-5150c8479da8",
    "key" : "string",
    "labels" : {
      "key" : "value"
    },
    "value" : "string",
    "value_type" : "text",
    "status" : "enabled",
    "create_time" : 1623139038,
    "update_time" : 1623139038,
    "create_revision" : 13,
    "update_revision" : 13
  } ],
  "failure" : [ {
    "key" : "string",
    "labels" : {
      "key" : "value"
    },
    "error_code" : "SVCSTG.004xxxxx",
    "error_message" : "Invalid parameters"
  } ]
}
```


Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.2.2 Exporting kie Configurations

Function

This API is used to export kie configurations.

URI

POST /v1/{project_id}/kie/download

Table 5-10 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.

Table 5-11 Query parameters

Parameter	Mandatory	Type	Description
label	No	String	Export data filtered by label. Format: {Label key}:{Label value}.
match	No	String	Matching option of the filtered items. Value **exact** indicates exact matching, including the same number of labels. If the value is null, inclusive matching is used. Enumerated value: • exact

Request

Table 5-12 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**. Default value: 0
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
Accept	Yes	String	Set it to **application/json**.
x_engine_id	Yes	String	ID of an exclusive microservice engine.

Table 5-13 Request body parameter

Parameter	Mandatory	Type	Description
ids	Yes	Array of strings	Set of configuration item IDs.

Response

Status code: 200

Table 5-14 Response body parameters

Parameter	Type	Description
metadata	**metadata** object	Description of the exported file.
data	Array of **CreateKieReq** objects	List of exported configuration items.

Table 5-15 metadata

Parameter	Type	Description
version	String	Version number of the exported data.
annotations	Object	Other information about the exported file.

Table 5-16 CreateKieReq

Parameter	Type	Description
id	String	ID of a configuration item.
key	String	Key of a configuration item. Default value: $random(6)-$date(yyyy-MM-dd-HH-mm-ss)
labels	Object	Label of a configuration item.
value	String	Value of a configuration item. Default value: $random(20)
value_type	String	Type of a configuration item value. Default value: text
status	String	Status of a configuration item. Default value: enabled

Status code: 400

Table 5-17 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Parameter	Type	Description
detail	String	Location details.

Status code: 500

Table 5-18 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
POST https://{endpoint}/v3/{project_id}/kie/download}/jobs/{job_id}

{
  "ids" : [ "8a9e6a5d-8d65-48fb-a40c-5150c8479da8", "8a9e6a5d-8d65-48fb-a40c-5150c8479da8" ]
}
```

Example Response

Status code: 200

Content of the exported file. The file is named based on the value of the environment label. For label=environment:development, the file name is development+timestamp.json. For label=environment:, the file name is default +timestamp.json. If there are no or multiple environments, the file name is custom +timestamp.json.

```
{
  "metadata" : {
    "version" : "1.0.0",
    "annotations" : { }
  },
  "data" : [ {
    "id" : "46f9ae5f0d36c438d5d70392b42a2a1072879e8f7e373af4c021d1155bb5c4ac",
    "key" : "$random(6)-$date(yyyy-MM-dd-HH-mm-ss)",
    "labels" : {
      "key" : "value"
    },
    "value" : "$random(20)",
    "value_type" : "text",
    "status" : "enabled"
  } ]
}
```


Status Code

Status Code	Description
200	Content of the exported file. The file is named based on the value of the environment label. For label=environment:development, the file name is development+timestamp.json. For label=environment:, the file name is default+timestamp.json. If there are no or multiple environments, the file name is custom+timestamp.json.
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.2.3 Deleting the ServiceComb 1.0 Configuration Scope

Function

This API is used to delete the ServiceComb 1.0 configuration scope.

URI

DELETE /v3/{project_id}/govern/configs/{dimension}

Table 5-19 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.
dimension	Yes	String	Configuration scope name.

Request

Table 5-20 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.

Parameter	Mandatory	Type	Description
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**. Default value: 0
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
Accept	Yes	String	Set it to **application/json**.
X-ENVIRONMENT	No	String	Environment name.

Table 5-21 Body parameters

Parameter	Mandatory	Type	Description
dimensionInfo	No	String	Configuration scope information.
flush	No	String	Whether to refresh.
keys	No	Array of String	Key to be deleted.

Response

Status code: 200

Table 5-22 Response body parameters

Parameter	Type	Description
Result	String	Deletion result.

Status code: 400

Table 5-23 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-24 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
DELETE https://{endpoint}/v3/{project_id}/govern/configs/{dimension}

{
  "dimensionInfo": "string",
  "flush": "true",
  "keys": [
    "string"
  ]
}
```

Example Response

Status code: 200

OK

```
{
  "Result": "Success"

}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.3 Engine Management

5.3.1 Querying the Flavor List of a Microservice Engine

Function

This API is used to query the flavor list of a microservice engine, including exclusive ServiceComb engines and registry/configuration centers.

URI

GET /v2/{project_id}/enginemgr/flavors

Table 5-25 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.

Table 5-26 Query parameters

Parameter	Mandatory	Type	Description
specType	No	String	Deployment type of a microservice engine. • To query an exclusive ServiceComb engine, set it to **CSE2**. • To query a registry/configuration center, set it to **Nacos2**.

Request

Table 5-27 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
Accept	Yes	String	Set it to **application/json**.

Response

Status code: 200

Table 5-28 Response body parameters

Parameter	Type	Description
total	Integer	Total number of microservice engine flavors.
data	Array of **FlavorBrief** objects	Microservice engine flavor details.

Table 5-29 FlavorBrief

Parameter	Type	Description
flavor	String	Microservice engine flavor.
description	String	Microservice engine flavor description.
spec	**EngineSpec** object	Parameters about an exclusive microservice engine.

Table 5-30 EngineSpec

Parameter	Type	Description
availableCpuMemory	String	CPU and memory.
linear	String	linear flavor or not.
availablePrefix	String	Prefix of the available node flavor type.

Status code: 400

Table 5-31 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-32 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
GET https://{endpoint}/v2/{project_id}/enginemgr/flavors?specType=CSE2
```

Example Response

Status code: 200

Response struct for querying the flavor list of a microservice engine.

```
{
  "total" : 0,
  "data" : [ {
    "flavor" : "cse.s1.small2",
    "description" : "string",
    "spec" : [ {
      "availableCpuMemory" : "2-4",
      "linear" : false,
      "availablePrefix" : "s,c,t"
    } ]
  } ]
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.3.2 Querying the Microservice Engine List

Function

This API is used to query the microservice engine list.

URI

GET /v2/{project_id}/enginemgr/engines

Table 5-33 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.

Table 5-34 Query parameters

Parameter	Mandatory	Type	Description
offset	Yes	Integer	Page number.
limit	Yes	String	Number of records displayed on each page.
type	No	String	• To query all microservice engines, set it to **ALL**. • To query an exclusive ServiceComb engine, set it to **CSE**. • To query a registry/configuration center, set it to **Nacos**.

Request

Table 5-35 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**.
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
Accept	Yes	String	Set it to **application/json**.

Response

Status code: 200

Table 5-36 Response body parameters

Parameter	Type	Description
total	Integer	Total number of microservice engines that meet the search criteria.
data	Array of **EngineSimpleInfo** objects	Microservice engine details.

Table 5-37 EngineSimpleInfo

Parameter	Type	Description
id	String	Microservice engine ID.
name	String	Microservice engine name.
enterpriseProjectId	String	ID of the enterprise project to which a microservice engine belongs.
enterpriseProjectName	String	Name of the enterprise project to which a microservice engine belongs.
type	String	Microservice engine type. • CSE: exclusive ServiceComb engine. • NACOS: registry/configuration center. Enumerated values: • **CSE** • **NACOS**
description	String	Microservice engine description.

Parameter	Type	Description
flavor	String	Microservice engine flavor. • cse.s1.xxx: flavor of an exclusive ServiceComb engine. • cse.nacos2.xxx: flavor of a registry/ configuration center. Enumerated values: • **cse.s1.small2** • **cse.s1.medium2** • **cse.s1.large2** • **cse.s1.xlarge2** • **cse.nacos2.c1.large.10** • **cse.nacos2.c1.xlarge.20** • **cse.nacos2.c1.xlarge.50** • **cse.nacos2.c1.xlarge.60** • **cse.nacos2.c1.2xlarge.100**
payment	String	Billing mode of a microservice engine. **0** indicates yearly/monthly, **1** indicates pay-per-use, and **2** indicates free of charge.
authType	String	Billing mode of a microservice engine. Value: RBAC or NONE. Enumerated values: • **RBAC** • **NONE**
status	String	Current status of a microservice engine. Enumerated values: • **Creating** • **Available** • **Unavailable** • **Deleting** • **Deleted** • **Upgrading** • **Modifying** • **CreateFailed** • **DeleteFailed** • **UpgradeFailed** • **ModifyFailed** • **Freezed**
externalAddress	String	External IP address of a microservice engine.

Parameter	Type	Description
serviceEndpoint	Map<String,EntrypointItem>	Address for accessing a microservice engine component.
publicAddress	String	Public IP address of a microservice engine.
publicServiceEndpoint	Map<String,EntrypointItem>	Public access address of a microservice engine.
totalInstance	Integer	Total number of instances supported by a microservice engine.
usedInstance	Integer	Total number of used instances.
availableInstance	Integer	Total number of available instances.
version	String	Current version of a microservice engine.
latestVersion	String	Latest version of a microservice engine.
createTime	Long	Creation time of a microservice engine.
dueTo	Long	Expiration time of a microservice engine.
latestJobId	Integer	ID of the latest job of a microservice engine.
engineAdditionalActions	Array of strings	Additional operations allowed by a microservice engine. Enumerated values: • **ForceDelete** • **Rollback** • **Retry**
specType	String	Deployment type of a microservice engine. Enumerated values: • **CCE** • **CSE** • **SpringCloud**
reference	**EngineReference** object	Additional information about a microservice engine.

Table 5-38 EntrypointItem

Parameter	Type	Description
masterEntrypoint	String	Primary IPv4 address for accessing an exclusive microservice engine component.

Parameter	Type	Description
masterEntrypointIpv6	String	Primary IPv6 address for accessing an exclusive microservice engine component.
slaveEntrypoint	String	Secondary IPv4 address for accessing an exclusive microservice engine component.
slaveEntrypointIpv6	String	Secondary IPv6 address for accessing an exclusive microservice engine component.
type	String	Type of an exclusive microservice engine component. Enumerated values: • **REGISTRY** • **SERVICE**

Table 5-39 EngineReference

Parameter	Type	Description
vpc	String	VPC name.
azList	Array of strings	AZ list of a microservice engine.
networkId	String	Subnet network ID of a microservice engine.
subnetCidr	String	IPv4 subnet division of a microservice engine.
subnetCidrV6	String	IPv6 subnet division of a microservice engine.
subnetGateway	String	Subnet gateway of a microservice engine.
publicIpId	String	Public network address ID of a microservice engine.
serviceLimit	Integer	Total number of microservices supported by a microservice engine.
instanceLimit	Integer	Total number of instances supported by a microservice engine.
inputs	Map<String,String>	Additional parameter of a microservice engine.

Status code: 400

Table 5-40 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-41 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
GET https://{endpoint}/v2/{project_id}/enginemgr/engines
```

Example Response

Status code: 200

Response structure for querying the microservice engine list.

```
{
  "total" : 0,
  "data" : [ {
    "id" : "891bf21a-4024-4f47-b38c-bd259ca8f10a",
    "name" : "test",
    "enterpriseProjectId" : "0",
    "enterpriseProjectName" : "default",
    "type" : "CSE",
    "description" : "string",
    "flavor" : "cse.s1.medium2",
    "payment" : "0",
    "authType" : "NONE",
    "status" : "Available",
    "externalAddress" : "192.168.0.169",
    "serviceEndpoint" : {
      "kie" : {
        "masterEntrypoint" : "https://192.168.0.169:30110",
        "masterEntrypointIpv6" : "https://[2407:c080:11f0:11:b11d:675c:97ab:65f6]:30110",
        "slaveEntrypoint" : "string",
        "slaveEntrypointIpv6" : "string",
        "type" : "REGISTRY"
      }
    },
    "publicAddress" : "",
    "publicServiceEndpoint" : {
      "kie" : {
        "masterEntrypoint" : "",
```



```
      "masterEntrypointIpv6" : "",
      "slaveEntrypoint" : "",
      "slaveEntrypointIpv6" : "",
      "type" : "REGISTRY"
    }
  },
  "totalInstance" : 200,
  "usedInstance" : 0,
  "availableInstance" : 200,
  "version" : "2.3.1",
  "latestVersion" : "2.3.4",
  "createTime" : 1635576800332,
  "dueTo" : 4102415999000,
  "latestJobId" : 12339,
  "engineAdditionalActions" : [ "Retry" ],
  "specType" : "CSE2",
  "reference" : {
    "vpc" : "vpc-test",
    "azList" : [ "string" ],
    "networkId" : "88550801-e892-4f8e-b21b-f7147f604f69",
    "subnetCidr" : "192.168.0.0/24",
    "subnetCidrV6" : "2407:c080:11f0:11::/64",
    "subnetGateway" : "192.168.0.2",
    "publicIpId" : "",
    "serviceLimit" : 200,
    "instanceLimit" : 200,
    "inputs" : {
      "is_arm_cluster" : "true",
      "nodeFlavor" : "s6.large.2"
    }
  }
 } ]
}
```


Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.3.3 Creating a Microservice Engine

Function

This API is used to create a microservice engine. You can create an exclusive ServiceComb engine or registry/configuration center.

URI

POST /v2/{project_id}/enginemgr/engines

Table 5-42 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.

Request

Table 5-43 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**. Default value: 0
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
Accept	Yes	String	Set it to **application/json**.

Table 5-44 Request body parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Microservice engine name.
description	No	String	Microservice engine description. Maximum length: 255
payment	Yes	String	Billing mode of a microservice engine. **0** indicates yearly/monthly, **1** indicates pay-per-use, and **2** indicates free of charge. Enumerated values: • 0: yearly/monthly (not supported). • 1: pay-per-use. • 2: free of charge (not supported). Maximum length: 24

Parameter	Mandatory	Type	Description
flavor	Yes	String	Microservice engine flavor. • cse.s1.xxx: flavor of an exclusive ServiceComb engine. • cse.nacos2.xxx: flavor of a registry/configuration center. Enumerated values: • **cse.s1.small2** • cse.s1.medium2 • cse.s1.large2 • cse.s1.xlarge2 • cse.nacos2.c1.large.10 • cse.nacos2.c1.xlarge.20 • cse.nacos2.c1.xlarge.40 • cse.nacos2.c1.xlarge.60 • cse.nacos2.c1.2xlarge.100
azList	No	Array of strings	List of AZs where an exclusive ServiceComb engine is deployed. This parameter is mandatory when you create an exclusive ServiceComb engine. Array length: 1–3
authType	No	String	Authentication type of the engine. This parameter is mandatory when you create an exclusive ServiceComb engine. **RBAC** indicates security authentication, and **NONE** indicates no authentication. Enumerated values: • RBAC • NONE
vpc	Yes	String	VPC name. Maximum length: 64
vpcId	Yes	String	VPC ID. Maximum length: 64

Parameter	Mandatory	Type	Description
networkId	Yes	String	Subnet ID of a microservice engine. Maximum length: 64
subnetCidr	Yes	String	Subnet division of a microservice engine. Maximum length: 24
publicIpId	No	String	Public network address ID of a microservice engine. Currently, the value is **null**. Maximum length: 64
auth_cred	No	**EngineRbacPwd** object	This parameter is mandatory when RBAC authentication is selected for creating an exclusive ServiceComb engine. It contains the engine authentication information.
specType	Yes	String	Deployment type of a microservice engine. Default value: CSE2 Enumerated values: • CSE2 • Nacos2
inputs	No	Map<String,String>	Additional parameter of an engine.
enginestateInfo	No	**enginestateInfo** object	Engine status information.
periodType	No	Integer	Creation period type.
enterpriseProject	No	**enterpriseProject** object	Enterprise project information.
vpcCidr	No	String	Gateway VPC division.
resourceParams	No	**resourceParams** object	Microservice engine resource parameter.
productId	No	String	Product ID.
capacityProductId	No	String	Capacity product ID.
isFree	No	Boolean	Whether the microservice engine is free of charge.

Parameter	Mandatory	Type	Description
subnetName	No	String	Name of the subnet used by a microservice engine.
tags	No	Array of strings	Tag.
elbid	No	String	ID of the ELB used by a microservice engine.

Table 5-45 EngineRbacPwd

Parameter	Mandatory	Type	Description
pwd	No	String	Password of the default user **root** of an exclusive microservice engine with security authentication enabled.

Table 5-46 enginestateInfo

Parameter	Mandatory	Type	Description
cluster	No	Boolean	Cluster.
twinClusters	No	Boolean	Twin cluster.
singleEngine	No	Boolean	Single engine.

Table 5-47 enterpriseProject

Parameter	Mandatory	Type	Description
id	No	String	Enterprise project ID.
name	No	String	Enterprise project name.
description	No	String	Enterprise project description.
status	No	Integer	Enterprise project status.
created_at	No	String	Creation time of an enterprise project.
updated_at	No	String	Update time of an enterprise project.
label	No	String	Enterprise project label.

Table 5-48 resourceParams

Parameter	Mandatory	Type	Description
isAutoRenew	No	Integer	Automatic refresh or not.

Response

Status code: 200

Table 5-49 Response body parameters

Parameter	Type	Description
id	String	Microservice engine ID.
name	String	Microservice engine name.
jobId	Integer	ID of the job executed by a microservice engine.

Status code: 400

Table 5-50 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-51 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
POST https://{endpoint}/v2/{project_id}/enginemgr/engines
```



```
{
  "name" : "string",
  "description" : "string",
  "payment" : "string",
  "flavor" : "cse.s1.small2",
  "azList" : [ "string" ],
  "authType" : "NONE",
  "vpc" : "string",
  "networkId" : "string",
  "subnetCidr" : "string",
  "publicIpId" : "string",
  "specType" : "string",
  "inputs" : {
    "nodeFlavor" : "string"
  }
}
```

Example Response

Status code: 200

Response structure for creating a microservice engine.

```
{
  "id" : "891bf21a-4024-4f47-b38c-bd259ca8f10a",
  "name" : "test",
  "jobId" : 17655
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.3.4 Querying Microservice Engine Details

Function

This API is used to query microservice engine details.

URI

GET /v2/{project_id}/enginemgr/engines/{engine_id}

Table 5-52 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.
engine_id	Yes	String	Microservice engine ID.

Request

Table 5-53 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**.
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
Accept	Yes	String	Set it to **application/json**.

Response

Status code: 200

Table 5-54 Response body parameters

Parameter	Type	Description
id	String	Microservice engine ID.
name	String	Microservice engine name.
description	String	Microservice engine description.
authType	String	Authentication type of a microservice engine. Enumerated values: • RBAC • NONE
flavor	String	Microservice engine flavor.
payment	String	Billing mode of a microservice engine.
version	String	Current version of a microservice engine.

Parameter	Type	Description
latestVersion	String	Latest version of a microservice engine.
status	String	Status of a microservice engine. Enumerated values: • Creating • Available • Unavailable • Deleting • Deleted • Upgrading • Modifying • CreateFailed • DeleteFailed • UpgradeFailed • ModifyFailed • Freezed
beDefault	Boolean	Whether the engine is the default engine.
createUser	String	Creator of a microservice engine.
createTime	Long	Creation time of a microservice engine.
cceSpec	**Spec** object	Application specifications of a microservice engine.
externalEntrypoint	**EngineExternalEntrypoint** object	External node address of a microservice engine.
reference	**EngineReference** object	Parameters about a microservice engine.
latestJobId	Integer	ID of the latest job of a microservice engine.
enterpriseProjectId	String	ID of the enterprise project to which a microservice engine belongs.
enterpriseProjectName	String	Name of the enterprise project to which a microservice engine belongs.
engineAdditionalActions	Array of strings	Additional operations allowed by a microservice engine. Enumerated values: • ForceDelete • Rollback • Retry

Parameter	Type	Description
specType	String	Deployment type of a microservice engine. Default value: CSE Enumerated values: • CCE • CSE • SpringCloud
type	String	Microservice engine type. • CSE: exclusive ServiceComb engine. • NACOS: registry/configuration center. Enumerated values: • CSE • **NACOS**
projectId	String	ID of the project to which an exclusive microservice engine belongs.
vmIds	Array of strings	ID list of VMs used by the current engine on the resource tenant side

Table 5-55 Spec

Parameter	Type	Description
id	Long	CCE specification ID of a microservice engine.
engineId	String	Microservice engine ID.
specType	String	CCE cluster deployment type of a microservice engine. Enumerated values: • CCE • CSE • SpringCloud
cluster	String	CCE cluster information about a microservice engine. Currently, the value is **null**.
clusterId	String	CCE cluster ID of a microservice engine.
clusterNodes	**SpecClusterNode** object	CCE node list of an exclusive microservice engine.
flavor	String	CCE cluster flavor of a microservice engine.
region	String	Region where the CCE cluster of a microservice engine is located.

Parameter	Type	Description
version	String	CCE cluster version of a microservice engine.
extendParam	String	Additional parameter of the CCE cluster of a microservice engine.

Table 5-56 SpecClusterNode

Parameter	Type	Description
clusterNodes	Array of **ClusterNode** objects	CCE node information.

Table 5-57 ClusterNode

Parameter	Type	Description
id	String	CCE node ID of an exclusive microservice engine.
az	String	AZ to which the CCE cluster of an exclusive microservice engine belongs.
ip	String	CCE node IP of an exclusive microservice engine.
label	String	CCE node label of an exclusive microservice engine.
status	String	CCE node label of an exclusive microservice engine. Default value: Active

Table 5-58 EngineExternalEntrypoint

Parameter	Type	Description
externalAddress	String	External IP address of an exclusive microservice engine.
publicAddress	String	Public network address of an exclusive microservice engine.
serviceEndpoint	Map<String,**EntrypointItem**>	Address for accessing an exclusive microservice engine component.

Parameter	Type	Description
publicServiceEndpoint	Map<String,EntrypointItem>	Public network address of an exclusive microservice engine component.

Table 5-59 EntrypointItem

Parameter	Type	Description
masterEntrypoint	String	Primary IPv4 address for accessing an exclusive microservice engine component.
masterEntrypointIpv6	String	Primary IPv6 address for accessing an exclusive microservice engine component.
slaveEntrypoint	String	Secondary IPv4 address for accessing an exclusive microservice engine component.
slaveEntrypointIpv6	String	Secondary IPv6 address for accessing an exclusive microservice engine component.
type	String	Type of an exclusive microservice engine component. Enumerated values: • REGISTRY • SERVICE

Table 5-60 EngineReference

Parameter	Type	Description
vpc	String	VPC name.
azList	Array of strings	AZ list of a microservice engine.
networkId	String	Subnet network ID of a microservice engine.
subnetCidr	String	IPv4 subnet division of a microservice engine.
subnetCidrV6	String	IPv6 subnet division of a microservice engine.
subnetGateway	String	Subnet gateway of a microservice engine.
publicIpId	String	Public network address ID of a microservice engine.
serviceLimit	String	Total number of microservices supported by a microservice engine.

Parameter	Type	Description
instanceLimit	String	Total number of instances supported by a microservice engine.
inputs	Map<String,String>	Additional parameter of a microservice engine.

Status code: 400

Table 5-61 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-62 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
GET https://{endpoint}/v2/{project_id}/enginemgr/engines/{engine_id}
```

Example Response

Status code: 200

Response structure for querying microservice engine details.

```
{
  "id" : "891bf21a-4024-4f47-b38c-bd259ca8f10a",
  "name" : "test",
  "description" : "string",
  "authType" : "NONE",
  "flavor" : "cse.s1.medium2",
  "payment" : "0",
  "version" : "2.3.1",
  "latestVersion" : "2.3.4",
  "status" : "Creating",
  "beDefault" : true,
```



```
 "createUser" : "string",
 "createTime" : 1635576800332,
 "cceSpec" : {
   "id" : 7465,
   "engineId" : "891bf21a-4024-4f47-b38c-bd259ca8f10a",
   "specType" : "CCE",
   "cluster" : "",
   "clusterId" : "41115a6f-912f-11eb-9af9-0255ac100188",
   "clusterNodes" : {
     "clusterNodes" : [ {
       "id" : "c13aaf5c-2192-421c-8e03-522e2b9a06b5",
       "az" : "test",
       "ip" : "172.31.25.277",
       "label" : "test",
       "status" : "Active"
     } ]
   },
   "flavor" : "string",
   "region" : "test",
   "version" : "",
   "extendParam" : ""
 },
 "externalEntrypoint" : {
   "externalAddress" : "192.168.0.169",
   "publicAddress" : "",
   "serviceEndpoint" : {
     "serviceCenter" : {
       "masterEntrypoint" : "https://192.168.0.169:30110",
       "masterEntrypointIpv6" : "https://[2407:c080:11f0:11:b11d:675c:97ab:65f6]:30110",
       "slaveEntrypoint" : "",
       "slaveEntrypointIpv6" : "",
       "type" : "REGISTRY"
     }
   },
   "publicServiceEndpoint" : {
     "serviceCenter" : {
       "masterEntrypoint" : "",
       "masterEntrypointIpv6" : "",
       "slaveEntrypoint" : "",
       "slaveEntrypointIpv6" : "",
       "type" : "REGISTRY"
     }
   }
 },
 "reference" : {
   "vpc" : "vpc-test",
   "azList" : [ "string" ],
   "networkId" : "88550801-e892-4f8e-b21b-f7147f604f69",
   "subnetCidr" : "192.168.0.0/24",
   "subnetCidrV6" : "2407:c080:11f0:11::/64",
   "subnetGateway" : "192.168.0.2",
   "publicIpId" : "",
   "serviceLimit" : "200",
   "instanceLimit" : "200",
   "inputs" : {
     "nodeFlavor" : "s6.large.2",
     "is_arm_cluster" : "false"
   }
 },
 "latestJobId" : 12339,
 "enterpriseProjectId" : "0",
 "enterpriseProjectName" : "default",
 "engineAdditionalActions" : [ "Noting" ],
 "specType" : "CSE2",
 "type" : "CSE",
 "projectId" : "string",
 "vmIds" : [ ]
}
```


Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.3.5 Querying Details About a Microservice Engine Job

Function

This API is used to query details about a microservice engine job.

URI

GET /v2/{project_id}/enginemgr/engines/{engine_id}/jobs/{job_id}

Table 5-63 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.
engine_id	Yes	String	Microservice engine ID.
job_id	Yes	String	Job ID.

Request

Table 5-64 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**.

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
Accept	Yes	String	Set it to **application/json**.

Response

Status code: 200

Table 5-65 Response body parameters

Parameter	Type	Description
id	Integer	Job ID.
engineId	String	ID of the engine to which a job belongs.
type	String	Job type. Enumerated values: • Create • Delete • Upgrade • Modify
description	String	Job description.
status	String	Job status. Enumerated values: • Init • Executing • Error • Timeout • Finished
scheduling	Integer	Whether a job is being executed. 0: no; 1: yes.
createUser	String	Job creator.
startTime	Long	Start time of a job.
endTime	Long	End time of a job.
context	String	Job execution context.
tasks	Array of **TaskSteps** objects	Job phases.

Table 5-66 TaskSteps

Parameter	Type	Description
taskName	String	Phase name.
taskNames	Array of strings	List of procedures contained in the current phase.
status	String	Status of a phase. Enumerated values: • Init • Executing • Error • Timeout • Finished
startTime	Long	Start time of a phase.
endTime	Long	End time of a phase.
taskExecutorBrief	**TaskExecutorBrief** object	Metadata of a phase.
tasks	Array of **Task** objects	Procedure.

Table 5-67 Task

Parameter	Type	Description
jobId	Integer	ID of the job to which the sub-job belongs.
id	Long	Sub-job ID, which is in UUID format.
type	String	Sub-job type. Enumerated values: • Create • Delete • Upgrade • Modify
assigned	String	Executor of a sub-job.
taskName	String	Sub-job name.
engineName	String	Name of the engine to which the sub-job belongs.
taskOrder	Integer	Sequence in which sub-jobs are executed, in ascending order.

Parameter	Type	Description
status	String	Sub-job status. Enumerated values: • Init • Executing • Error • Timeout • Finished
startTime	Long	Start time of a sub-job.
endTime	Long	End time of a sub-job.
createTime	Long	Creation time of a sub-job.
updateTime	Long	Update time of a sub-job.
timeout	Integer	Whether a sub-job times out.
log	String	Sub-job details, which are auxiliary information generated during the execution.
output	String	Sub-job output information. Default value: {}
taskExecutorBrief	**TaskExecutorBrief** object	Job metadata.

Table 5-68 TaskExecutorBrief

Parameter	Type	Description
duration	Long	Duration of a sub-job.
description	String	Sub-job description.

Status code: 400

Table 5-69 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-70 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
GET https://{endpoint}/v2/{project_id}/enginemgr/engines/{engine_id}/jobs/{job_id}
```

Example Response

Status code: 200

Structure for querying details about a microservice engine job.

```
{
  "id" : 12339,
  "engineId" : "ad76972c-a743-4770-859c-c98a680f4d98",
  "type" : "Create",
  "description" : "",
  "status" : "Finished",
  "scheduling" : 0,
  "createUser" : "test",
  "startTime" : 1636540095901,
  "endTime" : 1636540460230,
  "context" : "string",
  "tasks" : [ {
    "taskName" : "resourcePrepare",
    "taskNames" : [ "TenantTaskExecutor" ],
    "status" : "Finished",
    "startTime" : 1636540100216,
    "endTime" : 1636540110215,
    "taskExecutorBrief" : {
      "duration" : 6000,
      "description": "Resource preparation"
    },
    "tasks" : [ {
      "jobId" : 12339,
      "id" : 89117,
      "type" : "Create",
      "assigned" : "string",
      "taskName" : "TenantTaskExecutor",
      "engineName" : "test",
      "taskOrder" : 0,
      "status" : "Init",
      "startTime" : 1636540100216,
      "endTime" : 1636540110215,
      "createTime" : 1636540095910,
      "updateTime" : 1636540110230,
      "timeout" : -1,
      "log" : "string",
      "output" : "{}",
      "taskExecutorBrief" : {
        "duration" : 6000,
        "description": "Tenant processing"
      }
```



```
  }]
 }]
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.3.6 Querying Details About the Microservice Engine Quota

Function

This API is used to query details about the microservice engine quota.

URI

GET /v2/{project_id}/enginemgr/quotas

Table 5-71 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.

Request

Table 5-72 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**.

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
Accept	Yes	String	Set it to **application/json**.

Response

Status code: 200

Table 5-73 Response body parameters

Parameter	Type	Description
quotas	**quotas** object	Microservice engine quota content.

Table 5-74 quotas

Parameter	Type	Description
resources	Array of **TenantQuotaUsed** objects	List of microservice engine quota details.

Table 5-75 TenantQuotaUsed

Parameter	Type	Description
type	String	Quota type. Fixed value: Engine.
used	Integer	Used quota.
quota	Integer	Total engine quota.

Status code: 400

Table 5-76 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-77 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
GET https://{endpoint}/v2/{project_id}/enginemgr/quotas
```

Example Response

Status code: 200

Structure for querying details about the microservice engine quota.

```
{
  "quotas" : {
    "resources" : [ {
      "type" : "Engine",
      "used" : 4,
      "quota" : 5
    } ]
  }
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.3.7 Deleting a Microservice Engine

Function

This API is used to delete a microservice engine.

URI

DELETE /v2/{project_id}/enginemgr/engines/{engine_id}

Table 5-78 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.
engine_id	Yes	String	Microservice engine ID.

Request

Table 5-79 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM token.
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**. Default value: 0
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
Accept	Yes	String	Set it to **application/json**.

Response

Status code: 200

Table 5-80 Response body parameters

Parameter	Type	Description
id	String	Microservice engine ID.
name	String	Microservice engine name.
jobId	Integer	ID of the job executed by a microservice engine.

Status code: 400

Table 5-81 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-82 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
DELETE https://{endpoint}/v2/{project_id}/enginemgr/engines/{engine_id}
```

Example Response

Status code: 200

Response structure for deleting a microservice engine.

```
{
  "id" : "891bf21a-4024-4f47-b38c-bd259ca8f10a",
  "name" : "test",
  "jobId" : 17655
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.3.8 Upgrading a Microservice Engine

Function

This API is used to upgrade a microservice engine, including exclusive ServiceComb engine and registry/configuration center.

URI

PUT /v2/{project_id}/enginemgr/engines/{engine_id}/upgrade

Table 5-83 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.
engine_id	Yes	String	ID of the engine to be upgraded.

Request

Table 5-84 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM token.
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**. Default value: 0

Table 5-85 Request body parameter

Parameter	Mandatory	Type	Description
version	Yes	String	Version number. Maximum length: 24

Response

Status code: 200

Table 5-86 Response body parameters

Parameter	Type	Description
id	String	Microservice engine ID.
name	String	Microservice engine name.
jobId	Integer	ID of the job executed by a microservice engine.

Status code: 400

Table 5-87 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-88 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
{
  "version" : "2.4.0"
}
```

Example Response

Status code: 200

Response structure for upgrading a microservice engine.

```
{
  "id" : "891bf21a-4024-4f47-b38c-bd259ca8f10a",
  "name" : "test",
  "jobId" : 17655
}
```


Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.3.9 Updating Microservice Engine Configurations

Function

This API is used to update the configurations of a microservice engine, including exclusive ServiceComb engine and registry/configuration center.

URI

PUT /v2/{project_id}/enginemgr/engines/{engine_id}/config

Table 5-89 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.
engine_id	Yes	String	ID of the engine to be updated.

Request

Table 5-90 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM token.
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**. Default value: 0

Table 5-91 Request body parameter

Parameter	Mandatory	Type	Description
authType	Yes	String	authType authentication type. Value: NONE or RBAC.

Response

Status code: 200

Table 5-92 Response body parameters

Parameter	Type	Description
id	String	Microservice engine ID.
name	String	Microservice engine name.
jobId	Integer	ID of the job executed by a microservice engine.

Status code: 400

Table 5-93 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-94 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
PUT https://{endpoint}/v2/{project_id}/enginemgr/engines/{engine_id}/config
```



```
{
  "authType" : "RBAC"
}
```

Example Response

Status code: 200

Structure for updating the microservice engine configurations.

```
{
  "id" : "891bf21a-4024-4f47-b38c-bd259ca8f10a",
  "name" : "test",
  "jobId" : 17655
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.3.10 Changing Microservice Engine Specifications

Function

This API is used to change microservice engine specifications.

URI

PUT /v2/{project_id}/enginemgr/engines/{engine_id}/resize

Table 5-95 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.
engine_id	Yes	String	Engine ID.

Request

Table 5-96 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM token.
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**. Default value: 0
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
Accept	Yes	String	Set it to **application/json**.

Table 5-97 Request body parameters

Parameter	Mandatory	Type	Description
flavor	No	String	New flavor.
inputs	No	Map<String,String>	New configuration, which overwrites the **input** parameter of the component.

Response

Status code: 200

Table 5-98 Response body parameters

Parameter	Type	Description
id	String	Engine ID.
name	String	Engine name.
job_id	Integer	Job ID.

Status code: 400

Table 5-99 Response body parameters

Parameter	Type	Description
error_code	String	Error code.

Parameter	Type	Description
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-100 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
PUT https://{endpoint}/v2/{project_id}/enginemgr/engines/{engine_id}/resize

{
  "flavor" : "string",
  "inputs" : {
    "additionalProp1" : "string",
    "additionalProp2" : "string",
    "additionalProp3" : "string"
  }
}
```

Example Response

Status code: 200

Response structure for changing microservice engine specifications.

```
{
  "id" : "string",
  "name" : "string",
  "job_id" : 0
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.3.11 Retrying an Exclusive ServiceComb Engine Job

Function

This API is used to retry an exclusive ServiceComb engine job.

URI

PUT /v2/{project_id}/enginemgr/engines/{engine_id}/actions

Table 5-101 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.
engine_id	Yes	String	Engine ID.

Request

Table 5-102 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM token.
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**. Default value: 0

Table 5-103 Request body parameter

Parameter	Mandatory	Type	Description
action	Yes	String	Operation type. Enumerated values: • Retry

Response

Status code: 200

Table 5-104 Response body parameters

Parameter	Type	Description
id	String	Microservice engine ID.
name	String	Microservice engine name.
jobId	Integer	ID of the job executed by a microservice engine.

Status code: 400

Table 5-105 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-106 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
{
  "action" : "Retry"
}
```

Example Response

Status code: 200

Response body for retrying an exclusive ServiceComb engine job.

```
{
  "id" : "string",
  "name" : "string",
  "jobId" : 0
}
```


Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.3.12 Updating Microservice Engine Details

Function

This API is used to update microservice engine details, including the name and description.

URI

PUT /v2/{project_id}/enginemgr/engines/{engine_id}

Table 5-107 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.
engine_id	Yes	String	Microservice engine ID.

Request

Table 5-108 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**. Default value: 0

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
Accept	Yes	String	Set it to **application/json**.

Table 5-109 Request body parameter

Parameter	Mandatory	Type	Description
description	No	String	Microservice engine description. Maximum length: 255
alias	No	String	Alias of a microservice engine (displayed name). Maximum length: 64

Response

Status code: 200

None

Status code: 400

Table 5-110 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-111 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
POST https://{endpoint}/v2/{project_id}/enginemgr/engines/{engine_id}

{
  "description": "string",
  "alias": "string",
  "maintenanceConfig": {
    "time": "13:00"
  }
}
```

Example Response

Status code: 200

```
{
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.3.13 Querying the Engine Job List

Function

This API is used to query the engine job list.

URI

GET /v2/{project_id}/enginemgr/engines/{engine_id}/jobs

Table 5-112 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.
engine_id	Yes	String	Microservice engine ID.

Table 5-113 Query parameters

Parameter	Mandatory	Type	Description
offset	No	String	Page number.
limit	No	String	Number of records displayed on each page.
from-time	No	String	Start time of the query date range.
to-time	No	String	End time of the query date range.

Request

Table 5-114 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**. Default value: 0
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
Accept	Yes	String	Set it to **application/json**.

Response

Status code: 200

Table 5-115 Response body parameters

Parameter	Type	Description
OK	Array of **JobGetListResp** objects	Query result.

Table 5-116 JobGetListResp

Parameter	Type	Description
total	Integer	Total number of engine jobs.
data	Array of **Job** objects	Job list.

Table 5-117 Job

Parameter	Type	Description
id	Integer	Job ID.
engineId	String	ID of the engine to which a job belongs.
type	String	Job type. Enumerated values: • Create • Delete • Updated • Upgrade • Configure • Modify
description	String	Job description.
status	String	Job status. Enumerated values: • PreInit • Init • Executing • Error • Timeout • Finished
scheduling	Integer	Whether a job is being executed. 0: no; 1: yes.
createUser	String	Job creator.
startTime	Long	Start time of a job.
endTime	Long	End time of a job.
context	String	Job execution context.
tasks	Array of **Task** objects	Job phases.

Table 5-118 Task

Parameter	Type	Description
jobId	Integer	ID of the job to which the sub-job belongs.
id	Long	Sub-job ID, which is in UUID format.
type	String	Sub-job type. Enumerated values: • Create • Delete • Updated • Upgrade • Configure • Modify
assigned	String	Executor of a sub-job.
taskName	String	Sub-job name.
engineName	String	Name of the engine to which the sub-job belongs.
taskOrder	Integer	Sequence in which sub-jobs are executed, in ascending order.
status	String	Sub-job status. Enumerated values: • PreInit • Init • Executing • Error • Timeout • Finished
startTime	Long	Start time of a sub-job.
endTime	Long	End time of a sub-job.
createTime	Long	Creation time of a sub-job.
updateTime	Long	Update time of a sub-job.
timeout	Integer	Whether a sub-job times out.
log	String	Sub-job details, which are auxiliary information generated during the execution.
output	String	Sub-job output information. Default value: {}

Parameter	Type	Description
taskExecutorBrief	TaskExecutorBrief object	Job metadata.

Table 5-119 TaskExecutorBrief

Parameter	Type	Description
duration	Long	Duration of a sub-job.
description	String	Sub-job description.

Status code: 400

Table 5-120 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-121 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
GET https://{endpoint}/v2/{project_id}/enginemgr/engines/{engine_id}/jobs
```

Example Response

Status code: 200

OK

```
{
  "total": 100,
```



```
"data": [
 {
  "id": 12339,
  "engineId": "ad76972c-a743-4770-859c-c98a680f4d98",
  "type": "Create",
  "description": "",
  "status": "Finished",
  "scheduling": 0,
  "createUser": "test",
  "startTime": 1636540095901,
  "endTime": 1636540460230,
  "context": "string",
  "tasks": [
   {
    "jobId": 12339,
    "id": 89117,
    "type": "Create",
    "assigned": "string",
    "taskName": "TenantTaskExecutor",
    "engineName": "test",
    "taskOrder": 0,
    "status": "Init",
    "startTime": 1636540100216,
    "endTime": 1636540110215,
    "createTime": 1636540095910,
    "updateTime": 1636540110230,
    "timeout": -1,
    "log": "string",
    "output": "{}",
    "taskExecutorBrief": {
     "duration": 6000,
     "description": "Tenant processing"
    }
   }
  ]
 }
]
}
```


Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.3.14 Querying an RBAC Token

Function

This API is used to obtain an RBAC token based on the IAM token.

URI

POST /v2/{project_id}/enginemgr/engines/{engine_id}/tokens

Table 5-122 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.
engine_id	Yes	String	Microservice engine ID.

Request

Table 5-123 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**. Default value: 0
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
Accept	Yes	String	Set it to **application/json**.
X-Namespace-ID	No	String	Nacos namespace.

Response

Status code: 200

Table 5-124 Response body parameters

Parameter	Type	Description
token	String	RBAC token.

Status code: 400

Table 5-125 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-126 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
POST https://{endpoint}/v2/{project_id}/enginemgr/engines/{engine_id}/tokens
```

Example Response

Status code: 200

OK

```
{
  "token": "string"
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.4 Microservice Governance

5.4.1 Querying the Governance Policy List

Function

This API is used to query the governance policy list.

URI

GET /v3/{project_id}/govern/governance/display

Table 5-127 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.

Table 5-128 Query parameters

Parameter	Mandatory	Type	Description
environment	Yes	String	Environment. **all** indicates to query all environments.
app	No	String	Application.

Request

Table 5-129 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
X-Auth-Token	Yes	String	User token.
x-engine-id	Yes	String	Instance ID of an exclusive microservice engine.
X-Enterprise-Project-ID	Yes	String	Enterprise project ID.

Response

Status code: 200

Table 5-130 Response body parameters

Parameter	Type	Description
[Array]	Array of **GovPolicyDetail** objects	Response structure for querying the governance policy list.

Table 5-131 GovPolicyDetail

Parameter	Type	Description
matchGroup	**CreateBussinessScene** object	Traffic definition.
policies	Array of **policies** objects	Governance policy definition.

Table 5-132 CreateBussinessScene

Parameter	Type	Description
name	String	Traffic name.
status	String	Enabling status. Value: enabled or disabled. Default value: enabled
selector	**GovSelector** object	Governance policy delivery scope.
spec	**spec** object	Traffic feature description.

Table 5-133 spec

Parameter	Type	Description
alias	String	Feature name.
matches	Array of **matches** objects	Matching condition definition.

Table 5-134 matches

Parameter	Type	Description
name	String	Condition name.
apiPath	Object	Matched **PATH**.
headers	Object	Matched **Headers**.
method	Array of strings	List of matched **Method**.
serviceName	String	Matched microservice name.

Table 5-135 policies

Parameter	Type	Description
id	String	Governance policy ID.
name	String	Governance policy name.
kind	String	Governance kind. Value: retry, rate-limiting, loadbalance, circuit-breaker, instance-isolation, fault-injection, or bulkhead.
status	String	Enabling status. Value: enabled or disabled.
selector	**GovSelector** object	Governance policy delivery scope.
spec	Object	Governance policy definition content.

Table 5-136 GovSelector

Parameter	Type	Description
environment	String	Environment.
app	String	Application.
service	String	Optional. Governance is delivered to a microservice.

Status code: 400

Table 5-137 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
GET https://{endpoint}/v3/{project_id}/govern/governance/display
```

Example Response

Status code: 200

Response structure for querying the governance policy list.

```
[ {
  "matchGroup" : {
    "name" : "",
    "status" : "enabled",
    "selector" : {
      "environment" : "string",
      "app" : "string",
      "service" : "string"
    },
    "spec" : {
      "alias" : "string",
      "matches" : [ {
        "name" : "string",
        "apiPath" : { },
        "headers" : { },
        "method" : [ "string" ],
        "serviceName" : "string"
      } ]
    }
  },
  "policies" : [ {
    "id" : "string",
    "name" : "string",
    "kind" : "string",
    "status" : "string",
    "selector" : {
      "environment" : "string",
      "app" : "string",
      "service" : "string"
    },
    "spec" : { }
  } ]
} ]
```

Status Code

Status Code	Description
200	OK

Status Code	Description
400	Bad Request

Error Code

See **Error Codes**.

5.4.2 Creating a Dark Launch Policy

Function

This API is used to create a dark launch policy.

URI

PUT /v3/{project_id}/govern/route-rule/microservices/{service_name}

Table 5-138 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.
service_name	Yes	String	Microservice name.

Table 5-139 Query parameters

Parameter	Mandatory	Type	Description
environment	No	String	Environment. If this parameter is left blank, **<empty>** is used.
app_id	No	String	Application. If this parameter is left blank, **default** is used.

Request

Table 5-140 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.
x-engine-id	Yes	String	Instance ID of an exclusive microservice engine.
X-Enterprise-Project-ID	Yes	String	Enterprise project ID.

Table 5-141 Request body parameter

Parameter	Mandatory	Type	Description
[Array]	Yes	Array of **CreateRules** objects	Structure of the request for creating a dark launch policy.

Table 5-142 CreateRules

Parameter	Mandatory	Type	Description
precedence	No	Integer	Priority. A larger value indicates a higher priority.
match	No	**CreateMatch** object	Request matching rule. The value ranges from 0 to N. If this parameter is left empty, the request is matched.
route	No	Array of **CreateRoute** objects	Routing rule list.

Table 5-143 CreateMatch

Parameter	Mandatory	Type	Description
headers	No	**headers** object	Matched **Headers**.

Table 5-144 headers

Parameter	Mandatory	Type	Description
<header>	No	**<header>** object	Rule for matching **Headers**.

Table 5-145 <header>

Parameter	Mandatory	Type	Description
exact	No	String	Exactly matched value.
caseInsensitive	No	Boolean	Case insensitive or not.

Table 5-146 CreateRoute

Parameter	Mandatory	Type	Description
name	No	String	Rule name.
weight	No	Integer	Weight.
tags	No	**tags** object	List of matched instance tags.

Table 5-147 tags

Parameter	Mandatory	Type	Description
<tag>	No	String	Instance tag. Instances that meet the tag conditions are placed in this group.

Response

Status code: 200

Table 5-148 Response body parameters

Parameter	Type	Description
result	String	Result.

Status code: 400

Table 5-149 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
PUT https://{endpoint}/v3/{project_id}/govern/route-rule/microservices/{service_name}

[ {
  "precedence" : 1,
  "match" : {
    "headers" : {
      "<header>" : {
        "exact" : "test",
        "caseInsensitive" : false
      }
    }
  },
  "route" : [ {
    "name" : "rule_1",
    "weight" : 20,
    "tags" : {
      "<tag>" : "1.0.0"
    }
  } ]
} ]
```

Example Response

Status code: 200

Response structure for creating a dark launch policy.

```
{
  "result" : "string"
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

See **Error Codes**.

5.4.3 Querying a Dark Launch Policy

Function

This API is used to query a dark launch policy.

URI

GET /v3/{project_id}/govern/route-rule/microservices/{service_name}

Table 5-150 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.
service_name	Yes	String	Microservice name.

Table 5-151 Query parameters

Parameter	Mandatory	Type	Description
environment	No	String	Environment. If this parameter is left blank, **<empty>** is used.
app_id	No	String	Application. If this parameter is left blank, **default** is used.

Request

Table 5-152 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.
x-engine-id	Yes	String	Instance ID of an exclusive microservice engine.
X-Enterprise-Project-ID	Yes	String	Enterprise project ID.

Response

Status code: 200

Table 5-153 Response body parameters

Parameter	Type	Description
result	String	Result.

Status code: 400

Table 5-154 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
GET https://{endpoint}/v3/{project_id}/govern/route-rule/microservices/{service_name}
```

Example Response

Status code: 200

Response structure for querying a dark launch policy.

```
{
  "result" : "string"
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

See **Error Codes**.

5.4.4 Deleting a Dark Launch Policy

Function

This API is used to delete a dark launch policy.

URI

DELETE /v3/{project_id}/govern/route-rule/microservices/{service_name}

Table 5-155 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.
service_name	Yes	String	Microservice name.

Table 5-156 Query parameters

Parameter	Mandatory	Type	Description
environment	No	String	Environment. If this parameter is left blank, **<empty>** is used.
app_id	No	String	Application. If this parameter is left blank, **default** is used.

Request

Table 5-157 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
X-Auth-Token	Yes	String	User token.
x-engine-id	Yes	String	Instance ID of an exclusive microservice engine.
X-Enterprise-Project-ID	Yes	String	Enterprise project ID.

Response

Status code: 200

Table 5-158 Response body parameters

Parameter	Type	Description
result	String	Result.

Status code: 400

Table 5-159 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
DELETE https://{endpoint}/v3/{project_id}/govern/route-rule/microservices/{service_name}
```

Example Response

Status code: 200

Response structure for deleting a dark launch policy.

```
{
  "Result" : "string"
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

See **Error Codes**.

5.4.5 Changing a Governance Policy

Function

This API is used to change a governance policy.

URI

PUT /v3/{project_id}/govern/governance/{kind}/{policy_id}

Table 5-160 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.
kind	Yes	String	Governance policy kind.
policy_id	Yes	String	Governance policy ID.

Request

Table 5-161 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
X-Auth-Token	Yes	String	User token.
x-engine-id	Yes	String	Instance ID of an exclusive microservice engine.
X-Enterprise-Project-ID	Yes	String	Enterprise project ID.
x-environment	No	String	Environment.

Table 5-162 Request body parameter

Parameter	Mandatory	Type	Description
name	No	String	Governance policy name.
selector	No	**GovSelector** object	Governance policy delivery scope.
spec	No	Object	Governance policy definition content.

Table 5-163 GovSelector

Parameter	Mandatory	Type	Description
environment	No	String	Environment.
app	No	String	Application.

Parameter	Mandatory	Type	Description
service	No	String	Optional. Governance is delivered to a microservice.

Response

Status code: 200

Table 5-164 Response body parameters

Parameter	Type	Description
result	String	Result.

Status code: 400

Table 5-165 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
PUT https://{endpoint}/v3/{project_id}/govern/governance/{kind}/{policy_id}

{
  "name" : "string",
  "selector" : {
    "environment" : "string",
    "app" : "string",
    "service" : "string"
  },
  "spec" : { }
}
```

Example Response

Status code: 200

Response structure for changing a governance policy.

```
{
  "result" : "string"
}
```


Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

See **Error Codes**.

5.4.6 Deleting a Governance Policy

Function

This API is used to delete a governance policy.

URI

DELETE /v3/{project_id}/govern/governance/{kind}/{policy_id}

Table 5-166 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.
kind	Yes	String	Governance policy kind.
policy_id	Yes	String	Governance policy ID.

Request

Table 5-167 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
X-Auth-Token	Yes	String	User token.
x-engine-id	Yes	String	Instance ID of an exclusive microservice engine.

Parameter	Mandatory	Type	Description
X-Enterprise-Project-ID	Yes	String	Enterprise project ID.
x-environment	No	String	Environment.

Response

Status code: 200

Table 5-168 Response body parameters

Parameter	Type	Description
result	String	Result.

Status code: 400

Table 5-169 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
DELETE https://{endpoint}/v3/{project_id}/govern/governance/{kind}/{policy_id}
```

Example Response

Status code: 200

Response structure for deleting a governance policy.

```
{
  "Result" : "string"
}
```

Status Code

Status Code	Description
200	OK

Status Code	Description
400	Bad Request

Error Code

See **Error Codes**.

5.4.7 Querying Governance Policy Details

Function

This API is used to query governance policy details.

URI

GET /v3/{project_id}/govern/governance/{kind}/{policy_id}

Table 5-170 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.
kind	Yes	String	Governance policy kind.
policy_id	Yes	String	Governance policy ID.

Request

Table 5-171 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
X-Auth-Token	Yes	String	User token.
x-engine-id	Yes	String	Instance ID of an exclusive microservice engine.
X-Enterprise-Project-ID	Yes	String	Enterprise project ID.
x-environment	No	String	Environment.

Response

Status code: 200

Table 5-172 Response body parameters

Parameter	Type	Description
name	String	Governance policy name.
selector	GovSelector object	Governance policy delivery scope.
spec	Object	Governance policy definition content.

Table 5-173 GovSelector

Parameter	Type	Description
environment	String	Environment.
app	String	Application.
service	String	Optional. Governance is delivered to a microservice.

Status code: 400

Table 5-174 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
GET https://{endpoint}/v3/{project_id}/govern/governance/{kind}/{policy_id}
```

Example Response

Status code: 200

Response structure for querying governance policy details.

```
{
  "name" : "string",
  "selector" : {
    "environment" : "string",
    "app" : "string",
```



```
    "service" : "string"
  },
  "spec" : { }
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

See **Error Codes**.

5.4.8 Creating a Governance Policy

Function

This API is used to create a governance policy.

URI

POST /v3/{project_id}/govern/governance/{kind}

Table 5-175 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.
kind	Yes	String	Governance policy kind.

Request

Table 5-176 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
X-Auth-Token	Yes	String	User token.
x-engine-id	Yes	String	Instance ID of an exclusive microservice engine.

Parameter	Mandatory	Type	Description
X-Enterprise-Project-ID	Yes	String	Enterprise project ID.
x-environment	No	String	Environment.

Table 5-177 Request body parameter

Parameter	Mandatory	Type	Description
name	No	String	Governance policy name.
selector	No	**GovSelector** object	Governance policy delivery scope.
spec	No	Object	Governance policy definition content.

Table 5-178 GovSelector

Parameter	Mandatory	Type	Description
environment	No	String	Environment.
app	No	String	Application.
service	No	String	Optional. Governance is delivered to a microservice.

Response

Status code: 200

Table 5-179 Response body parameters

Parameter	Type	Description
result	String	Result.

Status code: 400

Table 5-180 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
POST https://{endpoint}/v3/{project_id}/govern/governance/{kind}

{
  "name" : "string",
  "selector" : {
    "environment" : "string",
    "app" : "string",
    "service" : "string"
  },
  "spec" : { }
}
```

Example Response

Status code: 200

Response structure for creating a governance policy.

```
{
  "result" : "string"
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

See **Error Codes**.

5.4.9 Querying the Governance Policy List of a Specified Kind

Function

This API is used to query the governance policy list of a specified kind.

URI

GET /v3/{project_id}/govern/governance/{kind}

Table 5-181 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.
kind	Yes	String	Governance policy kind.

Request

Table 5-182 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
X-Auth-Token	Yes	String	User token.
x-engine-id	Yes	String	Instance ID of an exclusive microservice engine.
X-Enterprise-Project-ID	Yes	String	Enterprise project ID.
x-environment	No	String	Environment.

Response

Status code: 200

Table 5-183 Response body parameters

Parameter	Type	Description
[Array]	Array of **GovPolicyDetail** objects	Response structure for querying the governance policy list.

Table 5-184 GovPolicyDetail

Parameter	Type	Description
matchGroup	**CreateBussinessScene** object	Traffic definition.
policies	Array of **policies** objects	Governance policy definition.

Table 5-185 CreateBussinessScene

Parameter	Type	Description
name	String	Traffic name.
status	String	Enabling status. Value: enabled or disabled. Default value: enabled
selector	**GovSelector** object	Governance policy delivery scope.
spec	**spec** object	Traffic feature description.

Table 5-186 spec

Parameter	Type	Description
alias	String	Feature name.
matches	Array of **matches** objects	Matching condition definition.

Table 5-187 matches

Parameter	Type	Description
name	String	Condition name.
apiPath	Object	Matched **PATH**.
headers	Object	Matched **Headers**.
method	Array of strings	List of matched **Method**.
serviceName	String	Matched microservice name.

Table 5-188 policies

Parameter	Type	Description
id	String	Governance policy ID.
name	String	Governance policy name.
kind	String	Governance kind. Value: retry, rate-limiting, loadbalance, circuit-breaker, instance-isolation, fault-injection, or bulkhead.
status	String	Enabling status. Value: enabled or disabled.
selector	GovSelector object	Governance policy delivery scope.
spec	Object	Governance policy definition content.

Table 5-189 GovSelector

Parameter	Type	Description
environment	String	Environment.
app	String	Application.
service	String	Optional. Governance is delivered to a microservice.

Status code: 400

Table 5-190 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
GET https://{endpoint}/v3/{project_id}/govern/governance/{kind}
```

Example Response

Status code: 200

Response structure for querying the governance policy list of a specified type.

```
[ {
  "matchGroup" : {
```



```
  "name" : "",
  "status" : "enabled",
  "selector" : {
    "environment" : "string",
    "app" : "string",
    "service" : "string"
  },
  "spec" : {
    "alias" : "string",
    "matches" : [ {
      "name" : "string",
      "apiPath" : { },
      "headers" : { },
      "method" : [ "string" ],
      "serviceName" : "string"
    } ]
  }
 },
 "policies" : [ {
  "id" : "string",
  "name" : "string",
  "kind" : "string",
  "status" : "string",
  "selector" : {
    "environment" : "string",
    "app" : "string",
    "service" : "string"
  },
  "spec" : { }
 } ]
} ]
```

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

See **Error Codes**.

5.4.10 Querying Microservice Thresholds in Batches

Function

This API is used to query microservice thresholds in batches.

URI

GET /v3/{project_id}/csemonitor/thresholds

Table 5-191 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.

Table 5-192 Query parameters

Parameter	Mandatory	Type	Description
services	Yes	String	List of services whose thresholds are to be queried, which are separated by commas (,). Example: service1,service2

Request

Table 5-193 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**. Default value: 0
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
Accept	Yes	String	Set it to **application/json**.

Response

Status code: 200

Table 5-194 Response body parameters

Parameter	Type	Description
OK	Array of **MetricThreshold** objects	Query result.

Table 5-195 MetricThreshold

Parameter	Type	Description
$timestamp	Long	Timestamp.
appId	String	Application ID.
avgDelay	Integer	Average latency, in milliseconds.
environment	String	Environment name.
failureRate	Float	Request failure rate (%).
serviceName	String	Service name.
throughput	Integer	Throughput, in seconds.

Status code: 400

Table 5-196 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-197 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
GET https://{endpoint}/v3/{project_id}/csemonitor/thresholds?services=service1,service2
```

Example Response

Status code: 200

OK

```
[
 {
```



```
    "serviceName": "string",
    "appId": "string",
    "environment": "",
    "throughput": 10,
    "avgDelay": 10,
    "failureRate": 10.0,
    "$timestamp": 0
  }
]
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.4.11 Querying Microservice Reporting Information

Function

This API is used to query microservice reporting information.

URI

GET /v3/{project_id}/csemonitor/metric

Table 5-198 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.

Table 5-199 Query parameters

Parameter	Mandatory	Type	Description
service	Yes	String	List of service names, which are separated by commas (,).
instance	No	String	Instance name.

Parameter	Mandatory	Type	Description
function	No	String	Function name.
flag	No	String	Batch query flag.

Request

Table 5-200 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**. Default value: 0
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
Accept	Yes	String	Set it to **application/json**.

Response

Status code: 200

Table 5-201 Response body parameters

Parameter	Type	Description
OK	Array of **MetricInfo** objects	Query result.

Table 5-202 MetricInfo

Parameter	Type	Description
time	Long	Timestamp.
appId	String	Service appId.
version	String	Service version.
qps	Double	Number of requests per second.
latency	Double	Delay, in milliseconds.

Parameter	Type	Description
rate	Double	Success rate (%). Value range: 0–100.
failureRate	Double	Failure rate (%). Value range: 0–100.
total	Long	Total number of requests.
breakerRateAgg	Float	Average circuit breaker rate.
circuitBreakerOpen	Boolean	Current circuit breaker status.
failure	Long	Total number of failures.
shortCircuited	Long	Total number of short circuits.
semaphoreRejected	Long	Total number of rejected semaphores.
threadPoolRejected	Long	Total number of rejected threads in the thread pool.
countTimeout	Long	Total number of timeout requests.
l995	double	Top 99.5% of all request latency sorted in ascending order.
l99	double	Top 99% of all request latency sorted in ascending order.
l90	double	Top 90% of all request latency sorted in ascending order.
l75	double	Top 75% of all request latency sorted in ascending order.
l50	double	Top 50% of all request latency sorted in ascending order.
l25	double	Top 25% of all request latency sorted in ascending order.
l5	double	Top 5% of all request latency sorted in ascending order.
name	String	Name.
serviceId	String	Service ID.
instanceCount	Long	Number of service instances.
environment	String	Environment name.
diagnosis	Array of **Diagnosis**object	Service diagnosis result.

Parameter	Type	Description
instanceId	String	Instance ID.
thread	Integer	Number of threads.
cpu	Double	CPU usage (%).
memory	Map object	Memory usage (%).
functionCount	Long	Number of functions.
customs	Map object	Custom variable.
providersCache	Array of **ProviderCache** object	Server instance set.
functionType	String	Function type.

Table 5-203 ProviderCache

Parameter	Type	Description
appId	String	Application ID.
microserviceName	String	Service name.
detail	String	Details.
pulledInstances	Array of ProviderInstance object	Service provider instance information.
status	String	Status information.

Table 5-204 ProviderInstance

Parameter	Type	Description
instanceId	String	Instance ID.
endpoints	Array of String	List of instance access points.
hostName	String	Instance domain name.
timestamp	String	Timestamp.

Table 5-205 Diagnosis

Parameter	Type	Description
instanceCache	Array of **InstanceCache** object	Service instance cache result.

Table 5-206 InstanceCache

Parameter	Type	Description
status	String	Check status. Enumerated values: • NORMAL • ABNORMAL • UNKNOWN
timestamp	Long	Timestamp.
producers	Array of **Producer** object	Service provider list.
checkTime	Long	Check time. If an exception occurs, the latest exception time is displayed. Otherwise, the latest check time is displayed.
latestStatus	String	Check status. Enumerated values: • NORMAL • ABNORMAL • UNKNOWN

Table 5-207 Producer

Parameter	Type	Description
status	String	Check status. Enumerated values: • NORMAL • ABNORMAL • UNKNOWN
appId	String	Application ID.
microserviceName	String	Microservice name.

Parameter	Type	Description
detail	String	Details.

Status code: 400

Table 5-208 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-209 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
GET https://{endpoint}/v3/{project_id}/csemonitor/metric
```

Example Response

Status code: 200

OK


```
[
  [
    {
      "time": 1733973104652,
      "appId": "weathermap",
      "version": "0.0.2",
      "qps": 0.0,
      "latency": 0.0,
      "failureRate": 0.0,
      "total": 0,
      "breakerRateAgg": 0.0,
      "circuitBreakerOpen": false,
      "failure": 0,
      "shortCircuited": 0,
      "semaphoreRejected": 0,
      "threadPoolRejected": 0,
```



```
    "countTimeout": 0,
    "l995": 0,
    "l99": 0,
    "l90": 0,
    "l75": 0,
    "l50": 0,
    "l25": 0,
    "l5": 0,
    "serviceId": "da21c8749d7ca08047b7d8da63f79e296127c21b",
    "instanceCount": 10,
    "environment": "",
    "diagnosis": {
      "instanceCache": null
    },
    "name": "weather"
  }
 ]
]
```


Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

5.4.12 Querying the Reported Information List

Function

Querying the Reported Information List

URI

GET /v3/{project_id}/csemonitor/metric/list

Table 5-210 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.

Table 5-211 Query parameters

Parameter	Mandatory	Type	Description
page	No	String	Page number.
number	No	String	Page size.
sortType	No	String	Sorting type. Enumerated values: increase decrease
sortKey	No	String	Sorting field. Enumerated values: name qps latency total
appIds	No	String	List of applications to be queried, which are separated by commas (,).
nameFilter	No	String	Filter name.

Request

Table 5-212 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.
X-Enterprise-Project-ID	No	String	If this parameter is not set, the default enterprise project is **default** and the ID is **0**. Default value: 0
Content-Type	Yes	String	Set it to **application/json;charset=UTF-8**.
Accept	Yes	String	Set it to **application/json**.

Response

Status code: 200

Table 5-213 Response body parameters

Parameter	Type	Description
OK	**ListData** object	Query result.

Table 5-214 ListData

Parameter	Type	Description
list	Array of KeyObject	Key list.
appIds	Array of String	Application ID list.
page	Integer	Page number.
number	Integer	Number of records on the current page.
total	Integer	Total number of queries.

Table 5-215 KeyObject

Parameter	Type	Description
key	String	Key.
serviceId	String	Service ID.
serviceName	String	Service name.
appId	String	Application ID.
version	String	Version.
environment	String	Environment name.
custom	Map object	Custom information.

Status code: 400

Table 5-216 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Status code: 500

Table 5-217 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
GET https://{endpoint}/v3/{project_id}/csemonitor/metric/list
```

Example Response

Status code: 200

OK

```
{
  "list": [
    {
      "key": "string",
      "serviceId": "string",
      "appId": "string",
      "version": "string",
      "environment": "string",
      "custom": {
        "key": 1.0
      }
    }
  ],
  "appIds": ["string", "string"],
  "page": 0,
  "number": 0,
  "total": 0
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **Error Codes**.

6 Nacos API

6.1 Querying the nacos Namespace

Function

This API is used to query the nacos namespace.

URI

GET /v1/{project_id}/nacos/v1/console/namespaces

Table 6-1 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.

Table 6-2 Query parameters

Parameter	Mandatory	Type	Description
offset	Yes	Integer	Page number. The value starts from **0**.
limit	Yes	Integer	Page size. **0** indicates that all results are displayed on one page.

Request

Table 6-3 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM token.
x-engine-id	Yes	String	Instance ID of an exclusive microservice engine.
X-Enterprise-Project-ID	Yes	String	Enterprise project ID.

Response

Status code: 400

Table 6-4 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
GET https://{endpoint}/v1/{project_id}/nacos/v1/console/namespaces
```

Example Response

None

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

See **Error Codes**.

6.2 Creating the nacos Namespace

Function

This API is used to create the nacos namespace.

URI

POST /v1/{project_id}/nacos/v1/console/namespaces

Table 6-5 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.

Table 6-6 Query parameters

Parameter	Mandatory	Type	Description
custom_namespace_id	Yes	String	Namespace ID. The value can contain a maximum of 128 characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_).
namespace_name	Yes	String	Namespace name. The value can contain a maximum of 128 characters, excluding @, #, $, %, ^, &, and *.
namespace_desc	No	String	Namespace description. The value can contain a maximum of 256 characters.

Request

Table 6-7 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM token.
x-engine-id	Yes	String	Instance ID of an exclusive microservice engine.

Parameter	Mandatory	Type	Description
X-Enterprise-Project-ID	Yes	String	Enterprise project ID.

Response

Status code: 400

Table 6-8 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
POST https://{endpoint}/v1/{project_id}/nacos/v1/console/namespaces
```

Example Response

None

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

See **Error Codes**.

6.3 Updating the nacos Namespace

Function

This API is used to update the nacos namespace.

URI

PUT /v1/{project_id}/nacos/v1/console/namespaces

Table 6-9 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.

Table 6-10 Query parameters

Parameter	Mandatory	Type	Description
namespace	Yes	String	Namespace ID.
namespace_show_name	Yes	String	Namespace name. The value can contain a maximum of 128 characters, excluding @, #, $, %, ^, &, and *.
namespace_desc	Yes	String	Namespace description. The value can contain a maximum of 256 characters.

Request

Table 6-11 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM token.
x-engine-id	Yes	String	Instance ID of an exclusive microservice engine.
X-Enterprise-Project-ID	Yes	String	Enterprise project ID.

Response

Status code: 400

Table 6-12 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
PUT https://{endpoint}/v1/{project_id}/nacos/v1/console/namespaces
```

Example Response

None

Status Code

Status Code	Description
200	OK
400	Bad Request

Error Code

See **Error Codes**.

6.4 Deleting the nacos Namespace

Function

This API is used to delete the nacos namespace.

URI

DELETE /v1/{project_id}/nacos/v1/console/namespaces

Table 6-13 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which must be unique. The value contains 1 to 64 characters.

Table 6-14 Query parameters

Parameter	Mandatory	Type	Description
namespace_id	Yes	String	Namespace ID.

Request

Table 6-15 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM token.
x-engine-id	Yes	String	Instance ID of an exclusive microservice engine.
X-Enterprise-Project-ID	Yes	String	Enterprise project ID.

Response

Status code: 400

Table 6-16 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
detail	String	Location details.

Example Request

```
DELETE https://{endpoint}/v1/{project_id}/nacos/v1/console/namespaces
```

Example Response

None

Status Code

Status Code	Description
200	OK

Status Code	Description
400	Bad Request

Error Code

See **Error Codes**.

7 ServiceComb API

7.1 API Calling

CSE provides REST APIs, allowing you to call APIs using HTTPS.

NOTICE

APIs in **Microservice**, **Schema**, **Microservice Instance**, and **Dependency** are available only in ME-Riyadh, CN-Hong Kong, and AP-Singapore.

To call the ServiceComb APIs of an exclusive ServiceComb engine, do as follows:

1. Log in to CSE.
2. Choose **Exclusive ServiceComb Engines**.
3. Click the target ServiceComb engine.

   When calling the APIs in **Authentication**, **Microservice**, **Schema**, **Microservice Instance**, and **Dependency**, view or click to copy the service center address of the engine.

   When calling the APIs in **Configuration Management**, view or click to copy the configuration center address of the engine.
4. Call the API by referring to **Calling APIs**. In **Request URI**, replace **{Endpoint}** with the obtained service center address.

7.2 Authentication

7.2.1 Obtaining the User Token of an Exclusive ServiceComb Engine

Function

This API is intended only for exclusive ServiceComb engines with security authentication enabled.

Before accessing APIs of an exclusive ServiceComb engine with security authentication enabled, you need to call this API to obtain a user token. This token is the unique credential for accessing the APIs.

The token must be contained in the request header when an access request is sent. The format is as follows:

```
Authorization:Bearer{Token}
```

Restrictions

None

URI

POST /v4/token

Request

Table 7-1 Request body parameters

Parameter	Mandatory	Type	Description
name	Yes	String	ServiceComb engine account name.
password	Yes	String	ServiceComb engine account password.

Response

Status code: 200

Table 7-2 Response body parameter

Parameter	Type	Description
token	String	User token, which is valid for 12 hours.

Status code: 401

Table 7-3 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-4 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

```
POST https://{Service center address}/v4/token

{
    "name": "root",
    "password": "*******"
}
```

Example Response

Status code: 200

OK

```
{
  "token" :
"****bGciOiJSUzUxMiIsInR5cCI6IkpXVCJ9.eyJhY2NvdW50Ijoicm9vdCIsImV4cCI6MTY1MDU5MTcwMSwicm9sZXMiOlsiYWRtaW4iXX0.WKwNAjaYMMCSjNX0qCGCeyh13FJRzLousxoXlThdkMwkH-pXEmG51_SguH0LlHOZoIc8gNJq-ilQg4bxTo1s0pnQZIS3wma0qvE-MzaYnFguTuHM7rxD7eZdwnbUe3dhnw9xRqR1hcd-lTuBbLoL9fbED4U_63IoEDyBCJl9D_l0F86uGzpUysCvC-t6MrJHgi7miUaO7ZZQmSAUNhmbEoN8IIVp-QtP_cWNWtWaFO-eoQrmCT2FdlYiB9MCuELr9-5EGM_mFLPgs6E4fyIGiGHy7IwoGUKOCW5w6Jb0l-2JxeUe3eOl5Md5kzOIAE_EYUATxCbJ5GmgpSSJf*****"
}
```

Status Code

Status Code	Description
200	OK
401	Unauthorized
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.3 Microservice

7.3.1 Querying Information About a Microservice

Function

This API is used to query the definition information about a microservice based on **service_id**.

Restrictions

None

URI

GET /v4/{project_id}/registry/microservices/{service_id}

Table 7-5 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.
service_id	Yes	String	Microservice ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^.*$. See **Querying Information About All Microservices**.

Request

Table 7-6 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Response

Status code: 200

Table 7-7 Response body parameter

Parameter	Type	Description
service	**MicroService** object	Microservice information.

Table 7-8 Microservice

Parameter	Type	Description
serviceId	String	Microservice ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^.*$
environment	String	Microservice environment. Value: development, testing, acceptance, or production.

Parameter	Type	Description
appId	String	Application ID, which must be unique. The value contains 1 to 160 characters. Regular expression: ^[a-zA-Z0-9]$\|^[a-zA-Z0-9][a-zA-Z0-9_-.][a-zA-Z0-9]$
serviceName	String	Microservice name, which must be unique in an application. The value contains 1 to 128 characters. Regular expression: ^[a-zA-Z0-9]$\|^[a-zA-Z0-9][a-zA-Z0-9_-.][a-zA-Z0-9]$
version	String	Microservice version. The value contains 1 to 64 characters. Regular expression: ^[0-9]$\|^[0-9]+(.[0-9]+)$
description	String	Microservice description. The value contains a maximum of 256 characters.
level	String	Microservice level. Value: FRONT, MIDDLE, or BACK.
registerBy	String	Microservice registration mode. Value: SDK, PLATFORM, SIDECAR, or UNKNOWN.
schemas	Array of strings	Microservice schema content. The value must be 1 to 160 bytes long. Only digits, letters, underscores (_), hyphens (-), and periods (.) are allowed. An array contains a maximum of 100 schemas.
status	String	Microservice status. Value: UP or DOWN. Default value: UP. Value: • UP • DOWN
timestamp	String	Microservice registration time.
modTimestamp	String	Latest modification time (UTC).
framework	**Framework** object	Development framework.
paths	Array of **ServicePath** objects	Service path.

Table 7-9 Framework

Parameter	Type	Description
name	String	Microservice development framework. Default value: UNKNOWN.
version	String	Version of the microservice development framework.

Table 7-10 ServicePath

Parameter	Type	Description
Path	String	Route address.
Property	Object	Extended attribute. You can customize a key and value. The value must be at least 1 byte long.

Status code: 400

Table 7-11 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-12 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Query details about the microservice whose ID is **819706e21b7173306797d19922ce4231441c17c5**.


```
GET https://{endpoint}/v4/{project_id}/registry/microservices/
819706e21b7173306797d19922ce4231441c17c5
```

Example Response

Status code: 200

Successfully queried.

```
{
   "service": {
      "serviceId": "819706e21b7173306797d19922ce4231441c17c5",
      "appId": "default",
      "serviceName": "SERVICECENTER",
      "version": "2.4.8",
      "level": "BACK",
      "schemas": [
         "servicecenter.grpc.api.ServiceCtrl",
         "servicecenter.grpc.api.ServiceInstanceCtrl"
      ],
      "status": "UP",
      "timestamp": "1616426688",
      "modTimestamp": "1616426688",
      "environment": "development"
   }
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.3.2 Deleting Definition Information About a Microservice

Function

This API is used to delete definition and related information about a microservice, and deregister all instances of the microservice.

Restrictions

None

URI

DELETE /v4/{project_id}/registry/microservices/{service_id}

Table 7-13 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.
service_id	Yes	String	Microservice ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^.*$. See **Querying Information About All Microservices**.

Table 7-14 Query parameter

Parameter	Mandatory	Type	Description
force	No	Boolean	Whether to forcibly delete information about a microservice. true: forcible deletion; false: non-forcible deletion. If you choose forcible deletion, all service instances are automatically deregistered and related service dependencies are deleted. If this parameter is not transferred, the service cannot be deleted when it has an instance. Default value: false.

Request

Table 7-15 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Response

Status code: 400

Table 7-16 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-17 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Delete the microservice whose ID is **e0f0da073f2c91e8979a89ff2d7c69t6**.

```
DELETE https://{endpoint}/v4/d9f4da085f2c11e8959a00ff2d7c69b7/registry/microservices/
e0f0da073f2c91e8979a89ff2d7c69t6
```

Example Response

None

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.3.3 Querying Information About All Microservices

Function

This API is used to query definition information about microservices that meet filter criteria.

Restrictions

None

URI

GET /v4/{project_id}/registry/microservices

Table 7-18 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.

Request

Table 7-19 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Response

Status code: 200

Table 7-20 Response body parameter

Parameter	Type	Description
services	Array of **MicroService** objects	Microservice list.

Table 7-21 Microservice

Parameter	Type	Description
serviceId	String	Microservice ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^.*$

Parameter	Type	Description
environment	String	Microservice environment. Value: development, testing, acceptance, or production. You can use the API for uploading schemas in batches to add or modify an existing schema only when the value is **development**, **testing**, or **acceptance**. Default value: development.
appId	String	Application ID, which must be unique. The value contains 1 to 160 characters. Regular expression: ^[a-zA-Z0-9]$\|^[a-zA-Z0-9][a-zA-Z0-9_-.][a-zA-Z0-9]$
serviceName	String	Microservice name, which must be unique in an application. The value contains 1 to 128 characters. Regular expression: ^[a-zA-Z0-9]$\|^[a-zA-Z0-9][a-zA-Z0-9_-.][a-zA-Z0-9]$
version	String	Microservice version. The value contains 1 to 64 characters. Regular expression: ^[0-9]$\|^[0-9]+(.[0-9]+)$
description	String	Microservice description. The value contains a maximum of 256 characters.
level	String	Microservice level. Value: FRONT, MIDDLE, or BACK.
registerBy	String	Microservice registration mode. Value: SDK, PLATFORM, SIDECAR, or UNKNOWN.
schemas	Array of strings	Microservice schema content. The value must be 1 to 160 bytes long. Only digits, letters, underscores (_), hyphens (-), and periods (.) are allowed. An array contains a maximum of 100 schemas.
status	String	Microservice status. Value: UP or DOWN. Default value: UP.
timestamp	String	Microservice registration time.
modTimestamp	String	Latest modification time (UTC).
framework	**Framework** object	Development framework.
paths	Array of **ServicePath** objects	Service path.

Table 7-22 Framework

Parameter	Type	Description
name	String	Microservice development framework. Default value: UNKNOWN.
version	String	Version of the microservice development framework.

Table 7-23 ServicePath

Parameter	Type	Description
Path	String	Route address.
Property	Object	Extended attribute. You can customize a key and value. The value must be at least 1 byte long.

Status code: 400

Table 7-24 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-25 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Query information about all registered microservices.

```
GET https://{endpoint}/v4/{project_id}/registry/microservices
```


Example Response

Status code: 200

Successfully queried.


```
{
   "services": [
      {
         "serviceId": "8aed80ea052ac04a64dfc79c24f2170224d074f5",
         "appId": "default",
         "serviceName": "test",
         "version": "1.0.0",
         "description": "this is a test",
         "level": "BACK",
         "status": "UP",
         "timestamp": "1650543950",
         "modTimestamp": "1650543950"
      },
      {
         "serviceId": "dcc6c1073eab3cadb47cea2e1a874b7883b02a63",
         "appId": "test",
         "serviceName": "test1",
         "version": "1.0.0",
         "level": "BACK",
         "status": "UP",
         "timestamp": "1650544223",
         "modTimestamp": "1650544223"
      }
   ]
}
```


Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.3.4 Creating Static Information for a Microservice

Function

This API is used to create static information for a microservice before registering a microservice instance. The registered instance is associated with the static information based on **serviceId**. One service corresponds to multiple instances.

serviceId can be customized. If **serviceId** is not customized, the system generates a random service ID.

Restrictions

None

URI

POST /v4/{project_id}/registry/microservices

Table 7-26 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.

Request

Table 7-27 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Table 7-28 Request body parameters

Parameter	Mandatory	Type	Description
service	Yes	**MicroService** object	Microservice information.
rules	No	Array of **Rule** objects	Blacklist and whitelist.

Parameter	Mandatory	Type	Description
instances	No	Array of MicroServiceInstance objects	Instance information.
tags	No	Object	Extended attribute. You can customize a key and value. The value must be at least 1 byte long.

Table 7-29 Microservice

Parameter	Mandatory	Type	Description
serviceId	No	String	Microservice ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^.*$
environment	No	String	Microservice environment. Value: development, testing, acceptance, or production. You can use the API for uploading schemas in batches to add or modify an existing schema only when the value is **development**, **testing**, or **acceptance**. Default value: development.
appId	No	String	Application ID, which must be unique. The value contains 1 to 160 characters. Regular expression: ^[a-zA-Z0-9]$\|^[a-zA-Z0-9][a-zA-Z0-9_-.][a-zA-Z0-9]$
serviceName	Yes	String	Microservice name, which must be unique in an application. The value contains 1 to 128 characters. Regular expression: ^[a-zA-Z0-9]$\|^[a-zA-Z0-9][a-zA-Z0-9_-.][a-zA-Z0-9]$
version	No	String	Microservice version. The value contains 1 to 64 characters. Regular expression: ^[0-9]$\|^[0-9]+(.[0-9]+)$

Parameter	Mandatory	Type	Description
description	No	String	Microservice description. The value contains a maximum of 256 characters.
level	No	String	Microservice level. Value: FRONT, MIDDLE, or BACK.
registerBy	No	String	Microservice registration mode. Value: SDK, PLATFORM, SIDECAR, or UNKNOWN.
schemas	No	Array of strings	Foreign key ID of a microservice access schema. The array length supports a maximum of 100 schemas.
status	No	String	Microservice status. Value: UP or DOWN. Default value: UP.
timestamp	No	String	Microservice registration time.
modTimestamp	No	String	Latest modification time (UTC).
framework	No	**Framework** object	Development framework.
paths	No	Array of **ServicePath** objects	Service path.

Table 7-30 Framework

Parameter	Mandatory	Type	Description
name	No	String	Microservice development framework. Default value: **UNKNOWN**.
version	No	String	Version of the microservice development framework.

Table 7-31 ServicePath

Parameter	Mandatory	Type	Description
Path	No	String	Route address.

Parameter	Mandatory	Type	Description
Property	No	Object	Extended attribute. You can customize a key and value. The value must be at least 1 byte long.

Table 7-32 Rule

Parameter	Mandatory	Type	Description
ruleId	No	String	Customized rule ID.
ruleType	No	String	Rule type. Value: WHITE or BLACK.
attribute	No	String	If the value starts with **tag_*xxx***, the attributes are filtered by **Tag**. Otherwise, the attributes are filtered by **serviceId**, **AppId**, **ServiceName**, **Version**, **Description**, **Level**, or **Status**.
pattern	No	String	Matching rule. The value is a regular expression containing 1 to 64 characters.
description	No	String	Rule description.
timestamp	No	String	Time when a rule is created. This parameter is used only when you query rules.
modTimestamp	No	String	Update time.

Table 7-33 MicroServiceInstance

Parameter	Mandatory	Type	Description
instanceId	No	String	Instance ID, which must be unique. The instance ID is generated by the service center.
serviceId	No	String	Microservice ID, which must be unique. During instance creation, use the service ID in the URL instead of the service ID here.

Parameter	Mandatory	Type	Description
version	No	String	Microservice version.
hostName	Yes	String	Host information.
endpoints	Yes	Array of strings	Access address information.
status	No	String	Instance status. Value: UP, DOWN, STARTING, or OUTOFSERVICE. Default value: UP.
properties	No	Object	Extended attribute. You can customize a key and value. The value must be at least 1 byte long.
healthCheck	No	**HealthCheck** object	Health check information.
dataCenterInfo	No	**DataCenterInfo** object	Data center information.
timestamp	No	String	Time when an instance is created, which is automatically generated.
modTimestamp	No	String	Update time.

Table 7-34 HealthCheck

Parameter	Mandatory	Type	Description
mode	Yes	String	Heartbeat mode. Value: push or pull.
port	No	Integer	Port.
interval	Yes	Integer	Heartbeat interval. Unit: s. If the value is less than 5s, the registration is performed at an interval of 5s.
times	Yes	Integer	Maximum retries.

Table 7-35 DataCenterInfo

Parameter	Mandatory	Type	Description
name	Yes	String	Region name.

Parameter	Mandatory	Type	Description
region	Yes	String	Region.
availableZone	Yes	String	AZ.

Response

Status code: 200

Table 7-36 Response body parameter

Parameter	Type	Description
serviceId	String	Microservice ID, which must be unique.

Status code: 400

Table 7-37 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-38 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Create static information about a microservice: microservice name is **test**, microservice version is **1.0.0**, rule type is whitelist, host information of the instance is **instanceTest**, and access address is **rest:127.0.0.1:8080**.

```
POST https://{endpoint}/v4/{project_id}/registry/microservices
```



```
{
    "service": {
        "appId": "default",
        "serviceName": "test",
        "version": "1.0.0",
        "description": "this is a test"
    },
    "rules": [{
        "ruleType": "WHITE",
        "attribute": "tag_123",
        "pattern": "aaa"
    }],
    "instances": [{
        "hostName": "instanceTest",
        "endpoints": ["rest:127.0.0.1:8080"]
    }],
    "tags": {
        "test_tag1": "test_tag1",
        "test_tag2": "test_tag2",
        "test_tag3": "test_tag3"
    }
}
```

Example Response

Status code: 200

Successfully created. **serviceId** indicates the ID generated for the microservice. Subsequent operations are operated based on the microservice ID.

```
{
  "serviceId" : "8aed80ea052ac04a64dfc79c24f2170224d074f5"
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.3.5 Deleting Static Information About Microservices in Batches

Function

This API is used to delete the definitions and related information about microservices in batches, and deregister all instances of the microservices.

Restrictions

None

URI

DELETE /v4/{project_id}/registry/microservices

Table 7-39 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.

Table 7-40 Query parameter

Parameter	Mandatory	Type	Description
force	No	Boolean	Whether to forcibly delete static information about microservices. true: forcible deletion; false: non-forcible deletion. If you choose forcible deletion, all service instances are automatically deregistered and related service dependencies are deleted. If this parameter is not transferred, the service cannot be deleted when it has an instance. Default value: false.

Request

Table 7-41 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Table 7-42 Request body parameter

Parameter	Mandatory	Type	Description
serviceIds	Yes	Array of strings	Service ID list. See **Querying Information About All Microservices**.

Response

Status code: 200

Table 7-43 Response body parameter

Parameter	Type	Description
services	Array of **DelServicesRspInfo** objects	List of services to be deleted.

Table 7-44 DelServicesRspInfo

Parameter	Type	Description
serviceId	String	Microservice ID.

Status code: 400

Table 7-45 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-46 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Delete the static information about the microservices whose IDs are **id1** and **id2**.

```
DELETE https://{endpoint}/v4/{project_id}/registry/microservices

{
  "serviceIds" : [ "id1", "id2"]
}
```

Example Response

Status code: 200

Successfully deleted.

```
{
  "services" : [ {
    "serviceId" : "id1"
  },
 {
    "serviceId" : "id2"
  }
```



```
]
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.3.6 Modifying Extended Attributes of a Microservice

Function

This API is used to modify static information about a microservice. To update some fields in the static information, input all static information (including the fields that do not need to be updated) in JSON format.

Restrictions

None

URI

PUT /v4/{project_id}/registry/microservices/{service_id}/properties

Table 7-47 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.
service_id	Yes	String	Microservice ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^.*$. See **Querying Information About All Microservices**.

Request

Table 7-48 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Table 7-49 Request body parameter

Parameter	Mandatory	Type	Description
properties	Yes	Object	Extended attribute. You can customize a key and value. The value must be at least 1 byte long.

Response

Status code: 400

Table 7-50 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-51 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Modify extended information about a microservice with specified **service_id**.

```
PUT https://{endpoint}/v4/{project_id}/registry/microservices/{service_id}/properties

{
  "properties" : {
    "a" : "test"
  }
}
```

Example Response

None

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.3.7 Querying the Unique Service or Schema ID of a Microservice

Function

This API is used to query the unique service or schema ID of a microservice based on filter criteria.

URI

GET /v4/{project_id}/registry/existence

Table 7-52 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.

Table 7-53 Query parameter

Parameter	Mandatory	Type	Description
type	Yes	String	Request type. • microservice • schema **NOTE** • If **type** is set to **microservice**, **env**, **appId**, **serviceName**, and **version** are mandatory. • If **type** is set to **schema**, **serviceId** and **schemaId** are mandatory.
env	No	String	Microservice environment. Value: development, testing, acceptance, or production.
appId	Yes	String	Application ID, which needs to be transferred when the resource type is **microservice**. The value contains 1 to 160 characters. Regular expression: ^[a-zA-Z0-9]$\|^[a-zA-Z0-9][a-zA-Z0-9_-.][a-zA-Z0-9]$
serviceName	Yes	String	Microservice name, which needs to be transferred when the resource type is **microservice**. The value contains 1 to 128 characters. Regular expression: ^[a-zA-Z0-9]$\|^[a-zA-Z0-9][a-zA-Z0-9_-.][a-zA-Z0-9]$
version	Yes	String	Microservice version, which needs to be transferred when the resource type is **microservice**. The value contains 1 to 64 characters. Regular expression: ^[0-9]$\|^[0-9]+(.[0-9]+)$

Parameter	Mandatory	Type	Description
serviceId	Yes	String	Microservice ID, which needs to be transferred when the resource type is **schema**. The value contains 1 to 64 characters. Regular expression: ^.*$
schemaId	Yes	String	Schema ID, which needs to be transferred when the resource type is **schema**. The value contains 1 to 160 characters. Regular expression: ^[a-zA-Z0-9]{1,160}$\|^[a-zA-Z0-9][a-zA-Z0-9_-.]{0,158}[a-zA-Z0-9]$.

Request

Table 7-54 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Response

Status code: 200

Table 7-55 Response header parameter

Parameter	Type	Description
X-Schema-Summary	String	Summary of a microservice schema.

Table 7-56 Response body parameters

Parameter	Type	Description
serviceId	String	When a service is queried, a service ID is returned.
schemaId	String	When a schema is queried, a schema ID is returned.

Status code: 400

Table 7-57 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-58 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Query **serviceId** based on **microservice** as **type**, **default** as **appId**, **service** as **serviceName**, and **1.0.0** as **version**.

```
GET https://{endpoint}/v4/{project_id}/registry/existence?
type=microservice&appId=default&serviceName=service&version=1.0.0
```


Example Response

Status code: 200

Successfully queried. **serviceId** or **schemaId** is returned.

```
{
  "serviceId" : "8aed80ea052ac04a64dfc79c24f2170224d074f5"
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.4 Schema

7.4.1 Querying a Microservice Schema

Function

Query a microservice schema based on **service_id** and **schema_id**.

Restrictions

None

URI

GET /v4/{project_id}/registry/microservices/{service_id}/schemas/{schema_id}

Table 7-59 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.

Parameter	Mandatory	Type	Description
service_id	Yes	String	Microservice ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^.*$. See **Querying Information About All Microservices**.
schema_id	Yes	String	Schema ID. See **Querying All Schema Information About a Microservice**.

Request

Table 7-60 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Response

Status code: 200

Table 7-61 Response header parameter

Parameter	Type	Description
X-Schema-Summary	String	Schema summary.

Table 7-62 Response body parameter

Parameter	Type	Description
schema	String	Schema content.

Status code: 400

Table 7-63 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-64 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Query details about a schema with specified **service_id** and **schema_id**.

```
GET https://{endpoint}/v4/{project_id}/registry/microservices/{service_id}/schemas/{schema_id}
```

Example Response

Status code: 200

Successfully queried. If the summary exists, the value of **X-Schema-Summary** in the header is the summary of the schema.

```
{
  "schema" : "---\nswagger: \"2.0\"\ninfo:\n  version: \"1.0.0\"\n  title: \"swagger definition for com.service.provider.controller.ProviderImpl\"\n  x-java-interface: \"cse.gen.springmvc.provider.provider.ProviderImplIntf\"\nbasePath: \"/provider\"\nconsumes:\n- \"application/json\"\nproduces:\n- \"application/json\"\npaths:\n  /helloworld:\n    get:\n      operationId: \"helloworld\"\n      produces:\n      - \"application/json\"\n      parameters:\n      - name: \"name\"\n        in: \"query\"\n        required: true\n        type: \"string\"\n      responses:\n        200:\n          description: \"response of 200\"\n          schema:\n            type: \"string\"\n"
}
```


Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.4.2 Modifying a Microservice Schema

Function

Modify a microservice schema based on **schema_id**.

Restrictions

In versions earlier than 2.3.33, schema overwriting is not supported in production environment. In version 2.3.33 and later, the environment variable **SCHEMA_EDITABLE** can be used to support schema overwriting.

URI

PUT /v4/{project_id}/registry/microservices/{service_id}/schemas/{schema_id}

Table 7-65 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.
service_id	Yes	String	Microservice ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^.*$. See **Querying Information About All Microservices**.

Parameter	Mandatory	Type	Description
schema_id	Yes	String	Microservice schema ID, which must be unique. The value contains 1 to 160 characters. Regular expression: ^[a-zA-Z0-9]{1,160}$\|^[a-zA-Z0-9][a-zA-Z0-9_-.]{0,158}[a-zA-Z0-9]$. See **Querying All Schema Information About a Microservice**.

Request

Table 7-66 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Table 7-67 Request body parameters

Parameter	Mandatory	Type	Description
schema	Yes	String	Schema content.
summary	No	String	Schema summary.

Response

Status code: 400

Table 7-68 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-69 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Modify the content and summary of a schema with specified **service_id** and **schema_id**.

```
PUT https://{endpoint}/v4/{project_id}/registry/microservices/{service_id}/schemas/{schema_id}

{
  "schema": "---\nswagger: \"2.0\"\ninfo:\n  version: \"1.0.0\"\n  title: \"swagger definition for com.service.provider.controller.ProviderImpl\"\n  x-java-interface: \"cse.gen.springmvc.provider.provider.ProviderImplIntf\"\nbasePath:  \"/provider\"\nconsumes:\n- \"application/json\"\nproduces:\n- \"application/json\"\npaths:\n  /helloworld:\n    get:\n      operationId: \"helloworld\"\n      produces:\n      - \"application/json\"\n      parameters:\n      - name: \"name\"\n        in: \"query\"\n        required: true\n        type: \"string\"\n      responses:\n        200:\n          description: \"response of 200\"\n          schema:\n            type: \"string\"\n",
  "summary": "test"
}
```

Example Response

None

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.4.3 Querying All Schema Information About a Microservice

Function

Query all schema information (including **schemaId** and **summary**) about a microservice.

URI

GET /v4/{project_id}/registry/microservices/{service_id}/schemas

Table 7-70 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.
service_id	Yes	String	Microservice ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^.*$. See **Querying Information About All Microservices**.

Table 7-71 Query parameter

Parameter	Mandatory	Type	Description
withSchema	No	Integer	Whether to query the schema content. Default value: 0. 0: Only **schema_id** and **summary** are displayed. 1: **schema_id**, **summary**, and **schema** are displayed.

Request

Table 7-72 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Response

Status code: 200

Table 7-73 Response body parameter

Parameter	Type	Description
schemas	Array of **Schema** objects	Schema list.

Table 7-74 Schema

Parameter	Type	Description
schemaId	String	Schema ID.
schema	String	Schema content.
summary	String	Schema summary.

Status code: 400

Table 7-75 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-76 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Query the schema of a microservice with specified **service_id**, including **schema_id**, **summary**, and **schema**.

```
GET /v4/{project_id}/registry/microservices/{service_id}/schemas?withSchema=1
```

Example Response

Status code: 200

Successfully queried.

```
{
    "schemas": [{
        "schemaId": "xxxxmvc",
        "schema": "---\nswagger: \"2.0\"\ninfo:\n  version: \"1.0.0\"\n  title: \"swagger definition for com.service.provider.controller.ProviderImpl\"\n  x-java-interface: \"cse.gen.springmvc.provider.provider.ProviderImplIntf\"\nbasePath: \"/provider\"\nconsumes:\n- \"application/json\"\nproduces:\n- \"application/json\"\npaths:\n  /helloworld:\n    get:\n      operationId: \"helloworld\"\n      produces:\n      - \"application/json\"\n      parameters:\n      - name: \"name\"\n        in: \"query\"\n        required: true\n        type: \"string\"\n      responses:\n        200:\n          description: \"response of 200\"\n          schema:\n            type: \"string\"\nxxxx",
        "summary": "abcda7b4072ef2d7a5fc9aefccf03e5548029ae31c6cd5fc29da7685d6d9e14adea3"
    }]
}
```

Status Code

Status Code	Description
200	OK

Status Code	Description
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.5 Microservice Instance

7.5.1 Registering a Microservice Instance

Function

This API is used to register a microservice instance after a microservice is created.

Information about the instance must be provided during registration.

instanceid can be customized. If it is customized, the new instance ID will overwrite the original one. If it is not customized, the system automatically generates an ID. If the endpoints are duplicate, the original ID is used.

URI

POST /v4/{project_id}/registry/microservices/{service_id}/instances

Table 7-77 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.
service_id	Yes	String	Microservice ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^.*$. See **Querying Information About All Microservices**.

Request

Table 7-78 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Table 7-79 Request body parameter

Parameter	Mandatory	Type	Description
instance	Yes	**MicroServiceInstance** object	Microservice instance information.

Table 7-80 MicroServiceInstance

Parameter	Mandatory	Type	Description
instanceId	No	String	Instance ID, which must be unique. The instance ID is generated by the service center.
serviceId	No	String	Microservice ID, which must be unique. During instance creation, use the microservice ID in the URL instead of the microservice ID specified here.
version	No	String	Microservice version.
hostName	Yes	String	Host information.

Parameter	Mandatory	Type	Description
endpoints	No	Array of strings	Access address information.
status	No	String	Instance status. Value: UP, DOWN, STARTING, or OUTOFSERVICE. Default value: UP.
properties	No	Object	Extended attribute. You can customize a key and value. The value must be at least 1 byte long.
healthCheck	No	**HealthCheck** object	Health check information.
dataCenterInfo	No	**DataCenterInfo** object	Data center information.
timestamp	No	String	Time when an instance is created, which is automatically generated.
modTimestamp	No	String	Update time.

Table 7-81 HealthCheck

Parameter	Mandatory	Type	Description
mode	Yes	String	Heartbeat mode. Value: push or pull.
port	No	Integer	Port.
interval	Yes	Integer	Heartbeat interval. Unit: s. If the value is less than 5s, the registration is performed at an interval of 5s.
times	Yes	Integer	Maximum retries.

Table 7-82 DataCenterInfo

Parameter	Mandatory	Type	Description
name	Yes	String	Region name.
region	Yes	String	Region.

Parameter	Mandatory	Type	Description
availableZone	Yes	String	AZ.

Response

Status code: 200

Table 7-83 Response body parameter

Parameter	Type	Description
instanceId	String	Instance ID.

Status code: 400

Table 7-84 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-85 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Register a microservice instance: host information is **localhost**, heartbeat mode is **push**, heartbeat interval is **30s**, region is **r1**, name is **dc**, and AZ is **az1**.

```
POST https://{endpoint}/v4/{project_id}/registry/microservices/{service_id}/instances

{
  "instance" : {
    "endpoints" : [ "grpc://127.0.1.312:9980", "rest://127.0.0.111:8081" ],
    "hostName" : "localhost",
```



```
  "status" : "UP",
  "properties" : {
    "_TAGS" : "A, B",
    "attr1" : "a",
    "nodeIP" : "127.0.0.1"
  },
  "dataCenterInfo" : {
    "name" : "dc",
    "region" : "r1",
    "availableZone" : "az1"
  },
  "healthCheck" : {
    "mode" : "push",
    "interval" : 30,
    "times" : 3
  }
 }
}
```

Example Response

Status code: 200

Successfully registered.

```
{
 "instanceId" : "8540bb8b693c4ad1a7fb6a756c415244"
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.5.2 Querying a Microservice Instance Based on service_id

Function

This API is used to query all instances of a microservice based on **service_id** after the instances are registered.

URI

GET /v4/{project_id}/registry/microservices/{service_id}/instances

Table 7-86 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.
service_id	Yes	String	Microservice ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^.*$. See **Querying Information About All Microservices**.

Table 7-87 Query parameter

Parameter	Mandatory	Type	Description
tags	No	String	Tag. When there are multiple tags, separate them using commas (,). Regular expression: ^[a-zA-Z][a-zA-Z0-9_-.]{0,63}$

Request

Table 7-88 Request header parameters

Parameter	Mandatory	Type	Description
X-ConsumerId	No	String	Microservice consumer ID, which must be unique.
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Response

Status code: 200

Table 7-89 Response body parameter

Parameter	Type	Description
instances	Array of **MicroServiceInstance** objects	Instance list.

Table 7-90 MicroServiceInstance

Parameter	Type	Description
instanceId	String	Instance ID, which must be unique. The instance ID is generated by the service center.
serviceId	String	Microservice ID, which must be unique. During instance creation, use the microservice ID in the URL instead of the microservice ID specified here.
version	String	Microservice version.
hostName	String	Host information.
endpoints	Array of strings	Access address information.
status	String	Instance status. Value: UP, DOWN, STARTING, or OUTOFSERVICE. Default value: UP.
properties	Object	Extended attribute. You can customize a key and value. The value must be at least 1 byte long.
healthCheck	**HealthCheck** object	Health check information.
dataCenterInfo	**DataCenterInfo** object	Data center information.
timestamp	String	Time when an instance is created, which is automatically generated.
modTimestamp	String	Update time.

Table 7-91 HealthCheck

Parameter	Type	Description
mode	String	Heartbeat mode. Value: push or pull.
port	Integer	Port.
interval	Integer	Heartbeat interval. Unit: s. If the value is less than 5s, the registration is performed at an interval of 5s.
times	Integer	Maximum retries.

Table 7-92 DataCenterInfo

Parameter	Type	Description
name	String	Region name.
region	String	Region.
availableZone	String	AZ.

Status code: 400

Table 7-93 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-94 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Query instance information about a microservice with specified **service_id**.

```
GET https://{endpoint}/v4/{project_id}/registry/microservices/{service_id}/instances
```

Example Response

Status code: 200

Successfully queried.

```
{
   "instances": [
      {
         "instanceId": "8540bb8b693c4ad1a7fb6a756c415244",
         "serviceId": "8aed80ea052ac04a64dfc79c24f2170224d074f5",
         "endpoints": [
            "rest:127.0.0.1:8080"
         ],
         "hostName": "hostNameTest",
         "status": "UP",
         "properties": {
            "engineID": "30c263e5-2eac-4da1-9c72-5abb9ac94550",
            "engineName": "cse-fkln1-HA"
         },
         "healthCheck": {
            "mode": "push",
            "interval": 30,
            "times": 3
         },
         "timestamp": "1650545035",
         "modTimestamp": "1650545035",
         "version": "1.0.0"
      }
   ]
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.5.3 Deregistering a Microservice Instance

Function

This API is used to deregister an instance based on **instance_id**.

URI

DELETE /v4/{project_id}/registry/microservices/{service_id}/instances/{instance_id}

Table 7-95 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.
service_id	Yes	String	Microservice instance ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^[A-Za-z0-9_.-]*$. See **Querying a Microservice Instance Based on service_id**.
instance_id	Yes	String	Microservice instance ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^[A-Za-z0-9_.-]*$. See **Querying a Microservice Instance Based on service_id**.

Request

Table 7-96 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Response

Status code: 400

Table 7-97 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-98 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Deregister an instance with specified **instance_id**.

```
DELETE https://{endpoint}/v4/{project_id}/registry/microservices/{service_id}/instances/{instance_id}
```

Example Response

None

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.5.4 Querying Details About a Microservice Instance

Function

This API is used to query details about an instance based on **service_id** and **instance_id** after the instance is registered.

URI

GET /v4/{project_id}/registry/microservices/{service_id}/instances/{instance_id}

Table 7-99 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.
service_id	Yes	String	Microservice ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^.*$. See **Querying Information About All Microservices**.
instance_id	Yes	String	Microservice instance ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^[A-Za-z0-9_.-]*$. See **Querying a Microservice Instance Based on service_id**.

Table 7-100 Query parameter

Parameter	Mandatory	Type	Description
tags	No	String	Tag. When there are multiple tags, separate them using commas (,). Regular expression: ^[a-zA-Z][a-zA-Z0-9_-.]{0,63}$

Request

Table 7-101 Request header parameters

Parameter	Mandatory	Type	Description
X-consumerId	No	String	Microservice consumer ID, which must be unique.
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Response

Status code: 200

Table 7-102 Response body parameter

Parameter	Type	Description
instance	**MicroServiceInstance** object	Microservice instance information.

Table 7-103 MicroServiceInstance

Parameter	Type	Description
instanceId	String	Instance ID, which must be unique. The instance ID is generated by the service center.

Parameter	Type	Description
serviceId	String	Microservice ID, which must be unique. During instance creation, use the microservice ID in the URL instead of the microservice ID specified here.
version	String	Microservice version.
hostName	String	Host information.
endpoints	Array of strings	Access address information.
status	String	Instance status. Value: UP, DOWN, STARTING, or OUTOFSERVICE. Default value: UP.
properties	Object	Extended attribute. You can customize a key and value. The value must be at least 1 byte long.
healthCheck	**HealthCheck** object	Health check information.
dataCenterInfo	**DataCenterInfo** object	Data center information.
timestamp	String	Time when an instance is created, which is automatically generated.
modTimestamp	String	Update time.

Table 7-104 HealthCheck

Parameter	Type	Description
mode	String	Heartbeat mode. Value: push or pull.
port	Integer	Port.
interval	Integer	Heartbeat interval. Unit: s. If the value is less than 5s, the registration is performed at an interval of 5s.
times	Integer	Maximum retries.

Table 7-105 DataCenterInfo

Parameter	Type	Description
name	String	Region name.

Parameter	Type	Description
region	String	Region.
availableZone	String	AZ.

Status code: 400

Table 7-106 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-107 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Query details about an instance with specified **service_id** and **instance_id**.

```
GET https://{endpoint}/v4/{project_id}/registry/microservices/{service_id}/instances/{instance_id}
```

Example Response

Status code: 200

Successfully queried.

```
{
  "instance": {
    "instanceId": "4994929d6b8044b29462d4f7daa33c4f",
    "serviceId": "8aed80ea052ac04a64dfc79c24f2170224d074f5",
    "endpoints": [
      "rest:127.0.0.1:8080"
    ],
    "hostName": "hostNameTest",
    "status": "UP",
    "properties": {
      "engineID": "30c263e5-2eac-4da1-9c72-5abb9ac94550",
```



```
            "engineName": "cse-fkln1-HA"
        },
        "healthCheck": {
            "mode": "push",
            "interval": 30,
            "times": 3
        },
        "timestamp": "1650545270",
        "modTimestamp": "1650545270",
        "version": "1.0.0"
    }
}
```


Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.5.5 Modifying the Extended Information About a Microservice Instance

Function

This API is used to add or update the extended information about a microservice instance based on **instance_id** after the instance is registered.

Restrictions

None

URI

PUT /v4/{project_id}/registry/microservices/{service_id}/instances/{instance_id}/properties

Table 7-108 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.

Parameter	Mandatory	Type	Description
service_id	Yes	String	Microservice ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^.*$. See **Querying Information About All Microservices**.
instance_id	Yes	String	Microservice instance ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^[A-Za-z0-9_.-]*$. See **Querying a Microservice Instance Based on service_id**.

Request

Table 7-109 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.
X-consumerId	No	String	Microservice consumer ID, which must be unique.

Table 7-110 Request body parameter

Parameter	Mandatory	Type	Description
properties	No	Object	Extended attribute. You can customize a key and value. The value must be at least 1 byte long.

Response

Status code: 400

Table 7-111 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-112 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Update the extended information of an instance with specified **instance_id** to **"attr1": "b"**.

```
PUT https://{endpoint}/v4/{project_id}/registry/microservices/{service_id}/instances/{instance_id}/properties

{
  "properties" : {
    "attr1" : "b"
  }
}
```

Example Response

None

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.5.6 Modifying Status of a Microservice Instance

Function

This API is used to update the status of a microservice instance based on **instance_id** after the instance is registered.

Restrictions

The TESTING state is supported only in version 2.3.X.

URI

PUT /v4/{project_id}/registry/microservices/{service_id}/instances/{instance_id}/status

Table 7-113 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.
service_id	Yes	String	Microservice ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^.*$. See **Querying Information About All Microservices**.
instance_id	Yes	String	Microservice instance ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^[A-Za-z0-9_.-]*$. See **Querying a Microservice Instance Based on service_id**.

Table 7-114 Query parameter

Parameter	Mandatory	Type	Description
value	Yes	String	Instance status. UP: online; OUTOFSERVICE: off-hook; STARTING: starting; DOWN: offline; TESTING: dialing test.

Request

Table 7-115 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Response

Status code: 400

Table 7-116 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-117 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Update the status of an instance with specified **instance_id** to **UP**.

```
PUT https://{endpoint}/v4/{project_id}/registry/microservices/{service_id}/instances/{instance_id}/status?value=UP
```

Example Response

None

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.5.7 Sending Heartbeat Information

Function

This API is used to send heartbeat information. Service providers need to send heartbeat information to the service center, so that the center can check whether service instances are normal.

Restrictions

None

URI

PUT /v4/{project_id}/registry/microservices/{service_id}/instances/{instance_id}/heartbeat

Table 7-118 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.
service_id	Yes	String	Microservice ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^.*$. See **Querying Information About All Microservices**.
instance_id	Yes	String	Microservice instance ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^[A-Za-z0-9_.-]*$. See **Querying a Microservice Instance Based on service_id**.

Request

Table 7-119 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Response

Status code: 400

Table 7-120 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-121 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Send heartbeat information to check whether an instance with specified **instance_id** is healthy.

```
PUT https://{endpoint}/v4/{project_id}/registry/microservices/{service_id}/instances/{instance_id}/heartbeat
```

Example Response

None

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.5.8 Querying a Microservice Instance by Filter Criteria

Function

This API is used to query a microservice instance based on microservice field filter criteria after the instance is registered.

URI

GET /v4/{project_id}/registry/instances

Table 7-122 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.

Table 7-123 Query parameter

Parameter	Mandatory	Type	Description
appId	Yes	String	Application ID, which must be unique. The value contains 1 to 160 characters. Regular expression: ^[a-zA-Z0-9]$\|^[a-zA-Z0-9][a-zA-Z0-9_-.][a-zA-Z0-9]$
serviceName	Yes	String	Microservice name The value contains 1 to 128 characters. Regular expression: ^[a-zA-Z0-9]$\|^[a-zA-Z0-9][a-zA-Z0-9_-.][a-zA-Z0-9]$
tags	No	String	Tag. When there are multiple tags, separate them using commas (,). Regular expression: ^[a-zA-Z][a-zA-Z0-9_-.]{0,63}$
env	No	String	Environment information about the instance.

Request

Table 7-124 Request header parameters

Parameter	Mandatory	Type	Description
X-ConsumerId	No	String	Microservice consumer ID, which must be unique.
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Response

Status code: 200

Table 7-125 Response body parameter

Parameter	Type	Description
instances	Array of **MicroServiceInstance** objects	Instance list.

Table 7-126 MicroServiceInstance

Parameter	Type	Description
instanceId	String	Instance ID, which must be unique. The instance ID is generated by the service center.

Parameter	Type	Description
serviceId	String	Microservice ID, which must be unique. During instance creation, use the microservice ID in the URL instead of the microservice ID specified here.
version	String	Microservice version.
hostName	String	Host information.
endpoints	Array of strings	Access address information.
status	String	Instance status. Value: UP, DOWN, STARTING, or OUTOFSERVICE. Default value: UP.
properties	Object	Extended attribute. You can customize a key and value. The value must be at least 1 byte long.
healthCheck	**HealthCheck** object	Health check information.
dataCenterInfo	**DataCenterInfo** object	Data center information.
timestamp	String	Time when an instance is created, which is automatically generated.
modTimestamp	String	Update time.

Table 7-127 HealthCheck

Parameter	Type	Description
mode	String	Heartbeat mode. Value: push or pull.
port	Integer	Port.
interval	Integer	Heartbeat interval. Unit: s. If the value is less than 5s, the registration is performed at an interval of 5s.
times	Integer	Maximum retries.

Table 7-128 DataCenterInfo

Parameter	Type	Description
name	String	Region name.

Parameter	Type	Description
region	String	Region.
availableZone	String	AZ.

Status code: 400

Table 7-129 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-130 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Query the instance of the microservice whose application ID is **default** and microservice name is **test**.

```
GET https://{endpoint}/v4/{project_id}/registry/instances?appId=default&serviceName=test
```

Example Response

Status code: 200

Successfully queried.

```
{
  "instances": [
    {
      "instanceId": "4098483294bb42d8b3c27eee0c166c1c",
      "serviceId": "8aed80ea052ac04a64dfc79c24f2170224d074f5",
      "endpoints": [
        "rest:127.0.0.1:8080"
      ],
      "hostName": "hostNameTest",
      "status": "UP",
```



```
        "properties": {
            "engineID": "30c263e5-2eac-4da1-9c72-5abb9ac94550",
            "engineName": "cse-fkln1-HA"
        },
        "healthCheck": {
            "mode": "push",
            "interval": 30,
            "times": 3
        },
        "timestamp": "1650545431",
        "modTimestamp": "1650545442",
        "version": "1.0.0"
    }
  ]
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.5.9 Querying Microservice Instances in Batches

Function

This API is used to query microservice instances in batches based on microservice field filter criteria after the instances are registered.

URI

POST /v4/{project_id}/registry/instances/action

Table 7-131 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.

Table 7-132 Query parameter

Parameter	Mandatory	Type	Description
type	Yes	String	Operation type. Currently, only **query** is supported.

Request

Table 7-133 Request header parameters

Parameter	Mandatory	Type	Description
X-consumerId	No	String	Microservice consumer ID, which must be unique.
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Table 7-134 Request body parameters

Parameter	Mandatory	Type	Description
services	At least one of the two parameters must be specified.	Array of **FindService** objects	Structure for querying service information.
instances		Array of **FindInstance** objects	Structure for querying instance information.

Table 7-135 FindService

Parameter	Mandatory	Type	Description
service	Yes	**DependencyKey** object	Dependency item.
rev	No	String	Version number of the client cache, which determines the difference between the local cache and the microservice in the service center. • Input **0** for the first time. • If the input **rev** is the same as that of the current microservice, **notModified** is returned. If they are different, **updated** is returned. • If **rev** is required in the next request, use the value of **rev** in **updated** in the response body.

Table 7-136 DependencyKey

Parameter	Mandatory	Type	Description
environment	Yes	String	Environment. Value: development, testing, acceptance, or production.
appId	Yes	String	Application ID, which must be unique.
serviceName	Yes	String	Microservice name

Table 7-137 FindInstance

Parameter	Mandatory	Type	Description
instance	No	**HeartbeatSetElement** object	Request struct of a microservice instance.

Parameter	Mandatory	Type	Description
rev	No	String	Version number cached by the client. Version number of the client cache, which determines the difference between the local cache and the microservice instance in the service center. • Input **0** for the first time. • If the input **rev** is the same as that of the current microservice instance, **notModified** is returned. If they are different, **updated** is returned. • If **rev** is required in the next request, use the value of **rev** in **updated** in the response body.

Table 7-138 HeartbeatSetElement

Parameter	Mandatory	Type	Description
serviceId	No	String	Microservice ID.
instanceId	No	String	Microservice instance ID.

Response

Status code: 200

Table 7-139 Response body parameters

Parameter	Type	Description
services	**BatchFindResult** object	Batch query result structure.
instances	**BatchFindResult** object	Batch query result structure.

Table 7-140 BatchFindResult

Parameter	Type	Description
failed	Array of **FindFailedResult** objects	Query failure result structure.

Parameter	Type	Description
notModified	Array of integers	Index set corresponding to the request array.
updated	Array of **FindResult** objects	Query result structure list.

Table 7-141 FindFailedResult

Parameter	Type	Description
indexes	Array of integers	Index set corresponding to the request array.
error	**Error** object	Error struct.

Table 7-142 Error

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Table 7-143 FindResult

Parameter	Type	Description
index	Integer	Index corresponding to the request array.
rev	String	Versions returned by the server. If the versions are the same as the versions cached on the client, the **instances** parameter is left empty.
instances	Array of **MicroServiceInstance** objects	Instance list.

Table 7-144 MicroServiceInstance

Parameter	Type	Description
instanceId	String	Instance ID, which must be unique. The instance ID is generated by the service center.
serviceId	String	Microservice ID, which must be unique. During instance creation, use the microservice ID in the URL instead of the microservice ID specified here.
version	String	Microservice version.
hostName	String	Host information.
endpoints	Array of strings	Access address information.
status	String	Instance status. Value: UP, DOWN, STARTING, or OUTOFSERVICE. Default value: UP.
properties	Object	Extended attribute. You can customize a key and value. The value must be at least 1 byte long.
healthCheck	**HealthCheck** object	Health check information.
dataCenterInfo	**DataCenterInfo** object	Data center information.
timestamp	String	Time when an instance is created, which is automatically generated.
modTimestamp	String	Update time.

Table 7-145 HealthCheck

Parameter	Type	Description
mode	String	Heartbeat mode. Value: push or pull.
port	Integer	Port.
interval	Integer	Heartbeat interval. Unit: s. If the value is less than 5s, the registration is performed at an interval of 5s.
times	Integer	Maximum retries.

Table 7-146 DataCenterInfo

Parameter	Type	Description
name	String	Region name.
region	String	Region.
availableZone	String	AZ.

Status code: 400

Table 7-147 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-148 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Query all instances of the microservice whose application ID is **default** and microservice name is **test**.

```
POST https://{endpoint}/v4/{project_id}/registry/instances/action?type=query
{
  "services": [
    {
      "service": {
        "environment": "",
        "appId": "default",
        "serviceName": "test"
      },
      "rev": "0"
    }
  ]
}
```


Example Response

Status code: 200

Successfully queried.


```
{
   "services": {
      "updated": [
         {
            "index": 0,
            "rev": "0feb784798bca7b2fb4de8351578c4437b516c4b",
            "instances": [
               {
                  "instanceId": "79cdaf47cacf43a5b2b4185527da2255",
                  "serviceId": "8aed80ea052ac04a64dfc79c24f2170224d074f5",
                  "endpoints": [
                     "rest:127.0.0.1:8080"
                  ],
                  "hostName": "hostNameTest",
                  "status": "UP",
                  "properties": {
                     "engineID": "30c263e5-2eac-4da1-9c72-5abb9ac94550",
                     "engineName": "cse-fkln1-HA"
                  },
                  "healthCheck": {
                     "mode": "push",
                     "interval": 30,
                     "times": 3
                  },
                  "timestamp": "1650546183",
                  "modTimestamp": "1650546183",
                  "version": "1.0.0"
               }
            ]
         }
      ]
   }
}
```


Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.6 Dependency

7.6.1 Querying All Providers of a Microservice

Function

This API is used to query all providers of a microservice based on **consumer_id**. For example, if service A depends on services B and C, you can query the information about services B and C based on service A ID.

URI

GET /v4/{project_id}/registry/microservices/{consumer_id}/providers

Table 7-149 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.
consumer_id	Yes	String	Consumer service ID.

Table 7-150 Query parameters

Parameter	Mandatory	Type	Description
noSelf	No	Integer	Whether to return the self-dependency relationship. 0: no; 1: yes.
sameDomain	No	Integer	Whether to return the shared-service relationship. 0: no; 1: yes.

Request

Table 7-151 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Response

Status code: 200

Table 7-152 Response body parameter

Parameter	Type	Description
providers	**MicroService** object	Microservice information.

Table 7-153 Microservice

Parameter	Type	Description
serviceId	String	Microservice ID, which must be unique. The value contains 1 to 64 characters. Regular expression: ^.*$
environment	String	Microservice environment. Value: development, testing, acceptance, or production. You can use the API for uploading schemas in batches to add or modify an existing schema only when the value is **development**, **testing**, or **acceptance**. Default value: development.

Parameter	Type	Description
appId	String	Application ID, which must be unique. The value contains 1 to 160 characters. Regular expression: ^[a-zA-Z0-9]$\|^[a-zA-Z0-9][a-zA-Z0-9_-.][a-zA-Z0-9]$
serviceName	String	Microservice name, which must be unique in an application. The value contains 1 to 128 characters. Regular expression: ^[a-zA-Z0-9]$\|^[a-zA-Z0-9][a-zA-Z0-9_-.][a-zA-Z0-9]$
version	String	Microservice version. The value contains 1 to 64 characters. Regular expression: ^[0-9]$\|^[0-9]+(.[0-9]+)$
description	String	Microservice description. The value contains a maximum of 256 characters.
level	String	Microservice level. Value: FRONT, MIDDLE, or BACK.
registerBy	String	Microservice registration mode. Value: SDK, PLATFORM, SIDECAR, or UNKNOWN.
schemas	Array of strings	Microservice schema content. The value must be 1 to 160 bytes long. Only digits, letters, underscores (_), hyphens (-), and periods (.) are allowed. An array contains a maximum of 100 schemas.
status	String	Microservice status. Value: UP or DOWN. Default value: UP.
timestamp	String	Microservice registration time.
modTimestamp	String	Latest modification time (UTC).
framework	**Framework** object	Development framework.
paths	Array of **ServicePath** objects	Service path.
properties	Object	Extended attribute. You can customize a key and value.

Table 7-154 Framework

Parameter	Type	Description
name	String	Microservice development framework. Default value: UNKNOWN.
version	String	Version of the microservice development framework.

Table 7-155 ServicePath

Parameter	Type	Description
Path	String	Route address.
Property	Object	Extended attribute. You can customize a key and value. The value must be at least 1 byte long.

Status code: 400

Table 7-156 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-157 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Query the providers of a consumer service with specified **consumer_id**.

```
GET https://{endpoint}/v4/{project_id}/registry/microservices/{consumer_id}/providers
```


Example Response

Status code: 200

Successfully queried. **serviceId** or **schemaId** is returned.


```
{
   "providers": [
      {
         "serviceId": "8aed80ea052ac04a64dfc79c24f2170224d074f5",
         "appId": "default",
         "serviceName": "test",
         "version": "1.0.0",
         "description": "this is a test",
         "level": "BACK",
         "status": "UP",
         "properties": {
            "test": "test"
         },
         "timestamp": "1650543950",
         "modTimestamp": "1650544411"
      }
   ]
}
```


Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.7 Configuration Management

7.7.1 Creating a Configuration

Function

This API is used to create a configuration.

URI

POST /v1/{project_id}/kie/kv

Table 7-158 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.

Request

Table 7-159 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Table 7-160 Request body parameters

Parameter	Mandatory	Type	Description
key	Yes	String	Configuration key.
value	No	String	Configuration value.
labels	No	Map<String,String>	Configuration labels.
status	No	String	Configuration status.
value_type	No	String	Type of the configuration value. Supported types: text, yaml, json, properties, ini, and xml.

Response

Status code: 200

Table 7-161 Response body parameter

Parameter	Type	Description
kie	SingleKieInfo	Configuration information.

Table 7-162 SingleKieInfo

Parameter	Type	Description
id	String	Configuration ID.
key	String	Configuration key.
value	String	Configuration value.
value_type	String	Type of the configuration value.
status	String	Configuration status.
create_time	String	Time when the configuration is created.
update_time	String	Time when the configuration is updated.
labels	Map<String,String>	Configuration labels.
create_revision	Integer	Created version number of the configuration.
update_revision	Integer	Updated version number of the configuration.

Status code: 400

Table 7-163 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_message	String	Error message.

Status code: 500

Table 7-164 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_message	String	Error message.

Example Request

Create a configuration whose label is **"key1": "value1"** and **"key2": "value2"**.

```
POST https://{endpoint}/v1/{project_id}/kie/kv
{
   "key": "String",
   "value": "String",
   "labels": {
        "key1": "value1",
        "key2": "value2",
   },
   "status": "String",
   "value_type": "String"
}
```

Example Response

Status code: 200

Successfully created. The configuration information is returned.

```
{
   "id": "8a9e6a5d-8d65-48fb-a40c-5150c8479da8",
   "key": "string",
   "labels": {
      "key1": "value1",
      "key2": "value2"
   },
   "value": "string",
   "value_type": "text",
   "status": "enabled",
   "create_time": 1623139038,
   "update_time": 1623139038,
   "create_revision": 13,
   "update_revision": 13,
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
409	Conflict
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.7.2 Modifying a Configuration

Function

This API is used to modify a configuration.

URI

PUT /v1/{project_id}/kie/kv/{kv_id}

Table 7-165 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.
kv_id	Yes	String	ID of the configuration to be modified. See **Querying the Configuration List**.

Request

Table 7-166 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Table 7-167 Request body parameters

Parameter	Mandatory	Type	Description
value	Yes	String	Configuration value.
status	No	String	Configuration status.

Response

Status code: 200

Table 7-168 Response body parameter

Parameter	Type	Description
kie	SingleKieInfo	Configuration information.

Status code: 400

Table 7-169 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_message	String	Error message.

Status code: 500

Table 7-170 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_message	String	Error message.

Example Request

Modify the value of the configuration whose ID is **8a9e6a5d-8d65-48fb-a40c-5150c8479da8** to **this is a test** and set the configuration status to **enabled**.

```
PUT https://{endpoint}/v1/{project_id}/kie/kv/8a9e6a5d-8d65-48fb-a40c-5150c8479da8

{
   "value": "this is a test",
```



```
    "status": "enabled"
}
```

Example Response

Status code: 200

Successfully modified. The configuration information is returned.

```
{
    "id": "8a9e6a5d-8d65-48fb-a40c-5150c8479da8",
    "key": "string",
    "labels": {
        "key1": "value1",
        "key2": "value2"
    },
    "value": "this is a test",
    "value_type": "text",
    "status": "enabled",
    "create_time": 1623139038,
    "update_time": 1623139038,
    "create_revision": 13,
    "update_revision": 13,
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.7.3 Querying a Configuration

Function

This API is used to query a configuration in the configuration center.

URI

GET /v1/{project_id}/kie/kv/{kv_id}

Table 7-171 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.

Parameter	Mandatory	Type	Description
kv_id	Yes	String	ID of the configuration to be queried. See **Querying the Configuration List**.

Request

Table 7-172 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Response

Status code: 200

Table 7-173 Response body parameter

Parameter	Type	Description
id	String	Configuration ID.
key	String	Configuration key.
value	String	Configuration value.
value_type	String	Type of the configuration value.
status	String	Configuration status.
create_time	String	Time when the configuration is created.

Parameter	Type	Description
update_time	String	Time when the configuration is updated.
labels	Map<String,String>	Configuration labels.
create_revision	Integer	Created version number of the configuration.
update_revision	Integer	Updated version number of the configuration.

Status code: 400

Table 7-174 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_message	String	Error message.

Status code: 404

Table 7-175 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_message	String	Error message.

Status code: 500

Table 7-176 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_message	String	Error message.

Example Request

Query the configuration whose configuration ID is **8a9e6a5d-8d65-48fb-a40c-5150c847**.

```
GET https://{endpoint}/v1/{project_id}/kie/kv/8a9e6a5d-8d65-48fb-a40c-5150c8479da8
```

Example Response

Status code: 200.

Successfully queried.

```
{
  "id": "8a9e6a5d-8d65-48fb-a40c-5150c8479da8",
  "key": "string",
  "labels": {
    "key1": "value1",
    "key2": "value2"
  },
  "value": "string",
  "value_type": "text",
  "status": "enabled",
  "create_time": 1623139038,
  "update_time": 1623139038,
  "create_revision": 13,
  "update_revision": 13
}
```

Status Code

Status Code	Description
200	OK
400	Bad Request
404	Not Found
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.7.4 Querying the Configuration List

Function

This API is used to query the configuration list in the configuration center.

URI

GET /v1/{project_id}/kie/kv

Table 7-177 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.

Request

Table 7-178 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Table 7-179 Query parameters

Parameter	Mandatory	Type	Description
label	No	String	Exports data filtered by label. The format is {Label key}: {Label value}.
match	No	String	Matching option of the filtered items. Value **exact** indicates exact matching, including the same number of labels. If the value is null, inclusive matching is used.

Parameter	Mandatory	Type	Description
revision	No	Integer	Configuration version number This parameter is used to determine the difference between the local cache configuration and the configuration in the configuration center. • Input **0** for the first time. • If the input **revision** value is the same as the current **revision** value, status code 304 is returned, but no body is returned. If they are inconsistent, both **revision** values are returned. • If **revision** is required in the next request, use the value of **update_revision** in the response body.

Response

Status code: 200

Table 7-180 Response body parameters

Parameter	Type	Description
total	Integer	Number of query results.
data	List<SingleKieInfo>	List of queried kie.

Table 7-181 SingleKieInfo

Parameter	Type	Description
id	String	Configuration ID.
key	String	Configuration key.
value	String	Configuration value.
value_type	String	Type of the configuration value.
status	String	Configuration status.
create_time	String	Time when the configuration is created.

Parameter	Type	Description
update_time	String	Time when the configuration is updated.
labels	Map<String,String>	Configuration labels.
create_revision	Integer	Created version number of the configuration.
update_revision	Integer	Updated version number of the configuration.

Status code: 304

None

Status code: 400

Table 7-182 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_message	String	Error message.

Status code: 500

Table 7-183 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_message	String	Error message.

Example Request

Query the configuration list.

```
GET https://{endpoint}/v1/{project_id}/kie/kv
```

Example Response

Status code: 200

Successfully queried.


```
{
   "total": 1,
   "data":[{
      "id": "8a9e6a5d-8d65-48fb-a40c-5150c8479da8",
      "key": "string",
      "labels": {
         "key1": "value1",
         "key2": "value2"
      },
      "value": "string",
      "value_type": "text",
      "status": "enabled",
      "create_time": 1623139038,
      "update_time": 1623139038,
      "create_revision": 13,
      "update_revision": 13
   }]
}
```


Status Code

Status Code	Description
200	OK
304	Not Modified
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.7.5 Deleting a Configuration

Function

This API is used to delete a configuration.

URI

DELETE /v1/{project_id}/kie/kv/{kv_id}

Table 7-184 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.
kv_id	Yes	String	ID of the configuration to be deleted. See **Querying the Configuration List**.

Request

Table 7-185 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Response

Status code: 200

Successfully deleted.

Status code: 404

Table 7-186 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_message	String	Error message.

Status code: 400

Table 7-187 Response body parameters

Parameter	Type	Description
error_code	String	Error code.

Parameter	Type	Description
error_message	String	Error message.

Status code: 500

Table 7-188 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_message	String	Error message.

Example Request

Delete the configuration whose configuration ID is **8a9e6a5d-8d65-48fb-a40c-5150c8479da8**.

```
DELETE https://{endpoint}/v1/{project_id}/kie/kv/8a9e6a5d-8d65-48fb-a40c-5150c8479da8
```

Example Response

Status code: 204

Successfully deleted.

Status Code

Status Code	Description
200	No Content
400	Bad Request
404	Not Found
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

7.7.6 Deleting All Configurations

Function

This API is used to delete all configurations.

URI

DELETE /v1/{project_id}/kie/kv

Table 7-189 Path parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Fixed value: default.

Request

Table 7-190 Request header parameter

Parameter	Mandatory	Type	Description
Authorization	No	String	This parameter is mandatory if security authentication is enabled for an exclusive ServiceComb engine. Otherwise, this parameter is not required. The token of an exclusive ServiceComb engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.

Table 7-191 Request body parameter

Parameter	Mandatory	Type	Description
ids	Yes	List<String>	ID list of the configurations to be deleted. See **Querying the Configuration List**.

Response

Status code: 204

Successfully deleted.

Status code: 404

Table 7-192 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Status code: 500

Table 7-193 Response body parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error message.
detail	String	Location details.

Example Request

Delete all configurations.

```
DELETE https://{endpoint}/v1/{project_id}/kie/kv

{
   "ids":[
      "id1",
      "id2"
   ]
}
```

Example Response

Status code: 204

Successfully deleted.

Status Code

Status Code	Description
204	No Content
400	Bad Request
500	Internal Server Error

Error Code

See **ServiceComb Error Codes**.

8 Appendixes

8.1 Status Codes

Table 8-1 describes the status codes.

Table 8-1 Status codes

Status Code	Message	Description
200	-	OK
204	No Content	OK
400	Bad Request	Invalid request. The client should not repeat the request without modifications.
401	Unauthorized	The authentication information is incorrect or invalid.
404	Not Found	The requested resource cannot be found. The client should not repeat the request without modifications.
409	Conflict	The resource already exists.
422	Unprocessable Entity	The request was well-formed but was unable to be followed due to semantic errors.
500	Internal Server Error	The server is able to receive the request but it could not understand the request.

8.2 Error Codes

If an error code starting with **APIGW** is returned after you call an API, rectify the fault by referring to the instructions provided in **API Gateway Error Codes**.

Table 8-2 Engine management error codes

Status Codes	Error Code	Error Message	Description	Solution
400	SVCSTG.00501134	The engine type is left blank.	Invalid engine type.	The engine type field is the **specType** field in the request query. Set it to a valid value (for example, **CSE2**) and try again. For example, to query the specifications supported by CSE, set **specType** to **CSE2**.
400	SVCSTG.00501111	Duplicate engine instance name.	Duplicate engine instance name.	Change the engine name.
400	SVCSTG.00501112	Insufficient engine instance quota.	Insufficient engine instance quota	Contact technical support to increase the engine instance quota or delete unnecessary engine instances.
400	SVCSTG.00501133	The number of engines has reached the upper limit of the site.	The number of engines reaches the upper limit of the site.	Contact technical support.

Status Codes	Error Code	Error Message	Description	Solution
400	SVCSTG.0050 1103	Engine payment is empty or is invalid.	Empty or invalid billing mode.	Input the billing mode parameter of the engine and check whether the user can create such an engine.
400	SVCSTG.0050 1104	Incorrect format of the engine instance specifications.	Incorrect engine instance flavor format.	Invalid flavor. Enter a valid flavor.
400	SVCSTG.0050 1105	Incorrect AZ format.	Incorrect AZ format	Specify a valid AZ in the request parameter. The AZ field is a string array and cannot be empty. The number of AZ name levels ranges from 1 to 3.
400	SVCSTG.0050 1117	The engine in the current state cannot be deleted.	The engine in this state cannot be deleted.	Wait until the engine state changes to Available, Unavailable, or Creation failed, and then try again.
400	SVCSTG.0050 1152	Incorrect task ID format.	Incorrect task ID format.	Use the job ID returned by the APIs for creating and deleting an engine.

Status Codes	Error Code	Error Message	Description	Solution
400	SVCSTG.00501153	No task found.	Failed to find the task.	Use the job ID returned by the APIs for creating and deleting an engine.
400	SVCSTG.00501149	Abnormal node status.	Abnormal engine node.	Try again later or contact technical support.
400	SVCSTG.00501116	Failed to find the engine instance.	Failed to find the engine instance.	Check whether the input engine ID is correct. Use the username and password of the tenant to log in to CSE and check whether the current tenant has an engine with the corresponding ID.

Status Codes	Error Code	Error Message	Description	Solution
400	SVCSTG.0050 1201	The name must contain 3 to 24 characters, including letters, digits, and hyphens (-). It must start with a letter but not end with a hyphen (-). The name cannot be default or the current engine name.	Incorrect format of the peer engine instance name.	The peer engine instance name must contain 3 to 24 characters, including letters, digits, and hyphens (-), and must start with a letter but cannot end with a hyphen (-). The name cannot be **default** and must be different from the current engine instance name.
400	SVCSTG.0050 1202	An HA engine can be the peer engine.	The peer engine must be an HA engine.	The engine must be an HA engine. Enter the engine flavor again.
400	SVCSTG.0050 1203	The peer engine must be in a single AZ.	The peer engine must be in a single AZ.	The AZs must be single AZs. Enter the AZ list again.
500	SVCSTG.0050 0400	Internal service request parameter error.	Incorrect internal request parameter of the service.	Check the error message. If the parameter is invalid, check whether the input argument is correct. For other errors, contact technical support.

Table 8-3 Dynamic configuration error codes

Status Codes	Error Code	Error Message	Description	Solution
400	SVCSTG.0040 0649	Key/value length exceeds the upper limit.	Too long key or value.	The configuration item contains 1 to 2048 characters, including digits, letters, and special characters (.-_:[]). The value can contain 1 to 131072 characters, including digits, letters, and special characters ('~!@#$%^&*()_\{}|:"<>?`-[],./=).
400	SVCSTG.0040 0650	Invalid configuration file.	Invalid configuration file.	The uploaded file is invalid.
400	SVCSTG.0040 0651	The file is empty or in an incorrect format.	The file is empty or in an incorrect format.	The uploaded file is empty or not in JSON format.
400	SVCSTG.0040 0652	Configuration item key/ value is null or not a string.	The key or value is empty or is not a string.	The uploaded key or value is null or is not a string.
400	SVCSTG.0040 0653	Invalid label or body.	Invalid label or body.	Enter a valid body or label in the query parameter.
400	SVCSTG.0040 0100	Invalid parameter(s)	Invalid parameter.	Change parameters as prompted.

Status Codes	Error Code	Error Message	Description	Solution
404	SVCSTG.00400106	Record does not exist	The resource does not exist.	Enter valid search criteria.
409	SVCSTG.00400107	ecord already exist	The resource already exists.	Do not create the same record.
500	SVCSTG.00300605	Failed to connect the configuration center to ETCD.	Internal Server Error	Contact technical support engineers.
400	SVCSTG.00300401	Invalid token	Unauthorized	Enter a correct token.

8.3 ServiceComb Error Codes

If an error code starting with **APIGW** is returned after you call an API, rectify the fault by referring to the instructions provided in **API Gateway Error Codes**.

Category	Status Code	Error Code	Error Message	Description	Solution
Common error codes	400	400001	Invalid parameter(s)	Invalid parameter.	Change parameters as prompted.
	404	404001	ErrRecoudNotExists	The resource does not exist.	Enter valid search criteria.
	409	409001	ErrRecordAlreadyExists	The resource already exists.	Do not create the same record.
	500	500003	Internal server error	Internal server error.	Contact technical support.
Microservice	400	400002	ErrUnhealthy	The service is unhealthy.	Try again later or contact technical support.

Category	Status Code	Error Code	Error Message	Description	Solution
		400010	Micro-service already exists	The service already exists.	Modify the service ID or microservice description in the body of the request for creating a microservice.
		400011	ErrUnavailableBackend	No available backend instance.	Try again later or contact technical support.
		400012	Micro-service does not exist	The service does not exist.	Enter a valid service ID.
		400013	Micro-service has deployed instance(s)	The microservice cannot be deleted because instances have been deployed.	Take the instance offline and then delete the microservice. Alternatively, forcibly delete the microservice by setting the query parameter **force** to **true** in the URL.
		400014	Undefined schema id	The schema ID does not exist.	Enter a valid schema ID.
		400015	Not allowed to modify schema	The schema cannot be modified.	The schema has been registered and cannot be modified.
		400016	Schema does not exist	The schema does not exist.	Register the schema first.
		400017	Instance does not exist	Instance does not exist.	Enter a valid instance ID.

Category	Status Code	Error Code	Error Message	Description	Solution
		400018	ErrTagNotExists	The tag does not exist.	This error code is usually generated for a query API, indicating that the tag does not exist. The service performs subsequent processing based on the returned value.
		400019	ErrRuleAlreadyExists	The rule already exists.	The rule is repeatedly created. Generally, this error can be ignored.
		400020	ErrBlackAndWhiteRule	Blacklist and whitelist error.	Modify the parameter value based on the error message.
		400021	ErrModifyRuleNotAllow	The rule cannot be modified.	You can modify the microservice information only after changing the version number.
		400022	ErrRuleNotExists	The rule does not exist.	This error code is usually generated for a query API, indicating that the rule does not exist. The service performs subsequent processing based on the returned value.

Category	Status Code	Error Code	Error Message	Description	Solution
		400023	Cosumer(s) depends on this micro-service	The microservice cannot be deleted because it is the dependent service of other microservices.	You can forcibly delete microservices by setting the query parameter **force** to **true** in the URL.
		400024	ErrPermissionDeny	Insufficient permissions.	Use a proper account to perform operations.
		400025	ErrEndpointAlreadyExists	The port already exists.	Check whether the port is occupied by another instance.
		400026	Micro-service version does not exist	The microservice instance does not exist.	Enter a correct version number or range.
		400100	Not enough quota	Insufficient quota.	The quotas of resources such as microservices, instances, or schemas are insufficient. Delete some resources and create again.

Category	Status Code	Error Code	Error Message	Description	Solution
	401	401204	No authorization header	Unauthorized.	This parameter is mandatory if security authentication is enabled for the microservice engine. Otherwise, this parameter is not required. The token of the microservice engine with security authentication enabled is in the following format: `Authorization:Bearer {Token}` For details about how to obtain the token, see **Obtaining the User Token of an Exclusive ServiceComb Engine**.
		401201	Request unauthorized	Unauthorized.	Enter a valid authorization.
	403	403001	ErrForbidden	Insufficient permissions	Use a proper account to perform operations.
	500	500011	Registry service is unavailable	The registry service is unavailable.	Contact technical support.
		500101	ErrUnavailableQuota	No quota.	Try again later or contact technical support.

Category	Status Code	Error Code	Error Message	Description	Solution
		500605	NA	Failed to connect to etcd of the configuration center.	Try again later or contact technical support.
Authentication	401	401202	User name or password is wrong	Incorrect account name or password.	Enter the correct account name and password.

8.4 Obtaining a Project ID

Obtaining a Project ID on the Console

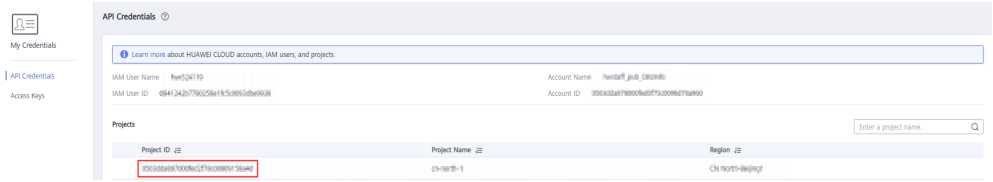
A project ID is required for some URLs when an API is called. To obtain an ID, do as follows:

Step 1 Log in to CSE.

Step 2 Move the cursor to the username in the upper right corner and select **My Credentials** from the drop-down list.

Step 3 On the **Project List** tab, obtain the required project ID in the project list.

Figure 8-1 Viewing a project ID



----End

Obtaining a Project ID by Calling an API

You can also call the API for **querying project information based on the specified criteria** to obtain a project ID.

The API for obtaining a project ID is **GET https://*{Endpoint}*/v3/projects**, where *{Endpoint}* indicates the IAM endpoint. You can obtain the IAM endpoint from **Regions and Endpoints**. For details about API authentication, see **Authentication**.

The following is an example response. *id* indicates a project ID.

```
{
    "projects": [
        {
```



```
            "domain_id": "65382450e8f64ac0870cd180d14e684b",
            "is_domain": false,
            "parent_id": "65382450e8f64ac0870cd180d14e684b",
            "name": "region_id",
            "description": "",
            "links": {
                "next": null,
                "previous": null,
                "self": "https://www.example.com/v3/projects/a4a5d4098fb4474fa22cd05f897d6b99"
            },
            "id": "a4a5d4098fb4474fa22cd05f897d6b99",
            "enabled": true
        }
    ],
    "links": {
        "next": null,
        "previous": null,
        "self": "https://www.example.com/v3/projects"
    }
}
```

9 Change History

Released On	Change History
2021-11-30	This issue is the second official release. The API sections are divided into CSE API and ServiceComb API sections.
2021-09-20	This issue is the first official release.

