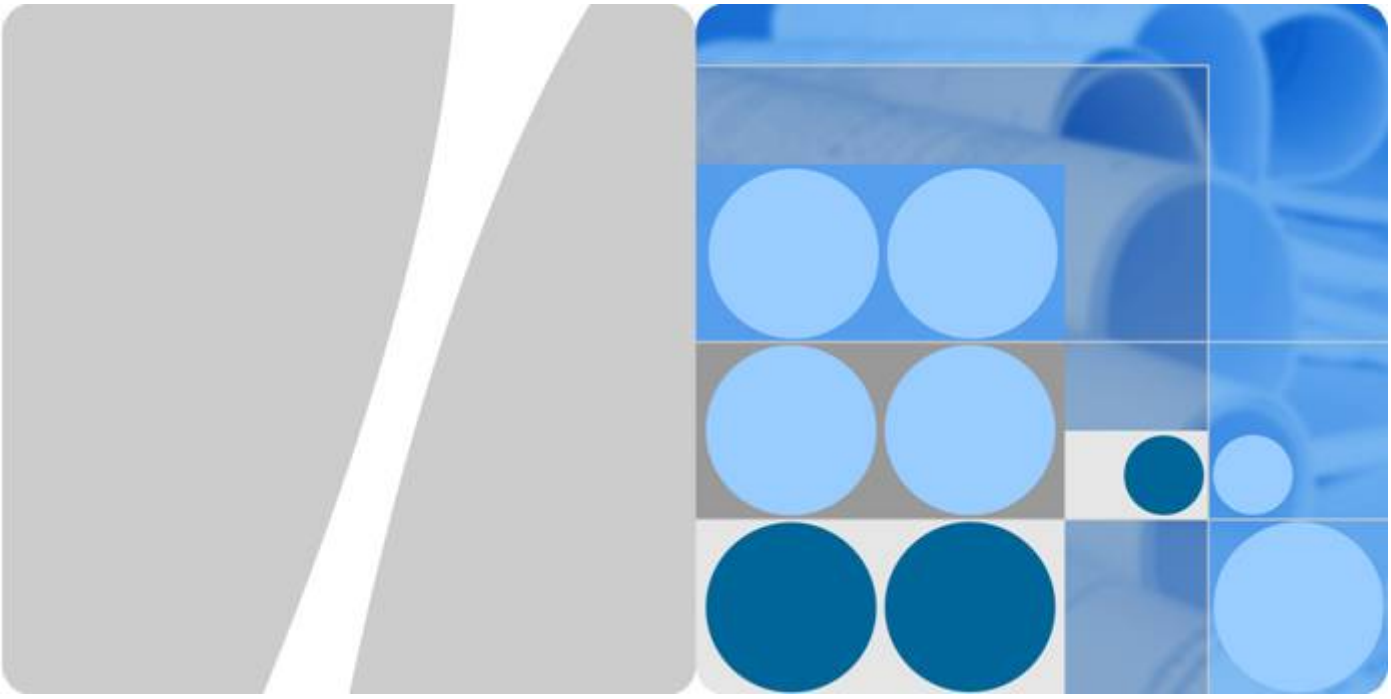


Identity and Access Management

API Reference

Date **2023-11-20**

Contents

1 Before You Start

1.1 Overview

Welcome to Identity and Access Management (IAM). IAM provides identity authentication, permissions management, and access control. With IAM, you can create and manage users and grant them permissions to allow or deny their access to cloud resources.

You can use IAM through the console or application programming interfaces (APIs). This document describes how to use APIs to perform operations on IAM, such as creating users and user groups and obtaining tokens.

1.2 API Calling

IAM supports Representational State Transfer (REST) APIs, allowing you to call APIs using HTTPS. For details about API calling, see **Calling APIs**.

1.3 Endpoints

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

Table 1-1 IAM endpoints

Region	Endpoint	Protocol
eu-west-0 (global)	iam.eu-west-0.prod-cloud-ocb.orange-business.com	HTTPS
eu-west-1	iam.eu-west-1.prod-cloud-ocb.orange-business.com	HTTPS

1.4 Constraints

All APIs of IAM can be called using the global region endpoint. Some APIs can be called using endpoints of both the global region and other regions (see **Table 1-2**), and other APIs can be called using only the global region endpoint.

NOTE

Tokens or temporary AKs/SKs obtained using domain names of all regions except the global region can only be used to access services in the same region.

Table 1-2 Global and region-specific APIs

Category	API URI	Link
Token Management	POST /v3/auth/tokens	**Obtaining a User Token** **Obtaining an Agency Token** **Obtaining a Scoped Token**
	GET /v3/auth/tokens	**Verifying a Token**
Access Key Management	POST /v3.0/OS-CREDENTIAL/securitytokens	**Obtaining a Temporary AK/SK**
Services and Endpoints	GET /v3/services{?type}	**Querying Services**
	GET /v3/endpoints{? interface, service_id}	**Querying Endpoints**
Version Information Management	GET /	**Querying Keystone API Version Information**
	GET /v3	**Querying Information About Keystone API Version 3.0**

Category	API URI	Link
Federated Identity Authentication Management	GET /v3/OS-FEDERATION/identity_providers/{idp_id}/protocols/{protocol_id}/auth	**Obtaining an Unscoped Token (SP Initiated)**
	POST /v3.0/OS-FEDERATION/tokens	**IdP Initiated**
	GET /v3/OS-FEDERATION/projects	**Querying the List of Projects Accessible to Federated Users**
	GET /v3/OS-FEDERATION/domains	**Querying the List of Domains Accessible to Federated Users**
	GET /v3-ext/auth/OS-FEDERATION/SSO/metadata	**Querying the Metadata File of Keystone**

1.5 Concepts

Common concepts used when you call IAM APIs are described as follows:

- Domain

  A domain, also called an "account", is created upon successful registration. The domain has full access permissions for all of its cloud services and resources. It can be used to reset user passwords and grant user permissions.

- User

  A user is created using a domain to use cloud services. Each user has their own identity credentials (password and access keys).

  An IAM user can view the domain ID and user ID on the **My Credentials** page of the console. The account name, username, and password will be required for API authentication.

- Region

  A region contains a physical data center, which is completely isolated to improve fault tolerance and stability. The region that is selected during resource creation cannot be changed after the resource is created. Regions are classified into universal regions and dedicated regions. A universal region provides universal cloud services for common tenants. A dedicated region provides specific services for specific tenants.

- AZ

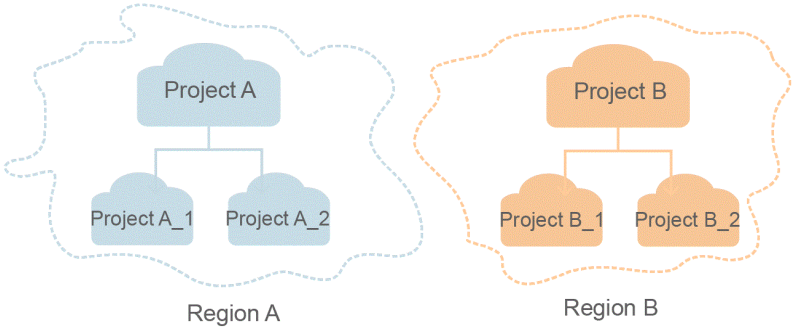
  An AZ is a physical location where resources use independent power supplies and networks. A region contains one or more AZs that are physically isolated but interconnected through internal networks. Because AZs are isolated from each other, any fault that occurs in an AZ will not affect other AZs.

- 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. For more refined access control, create subprojects under a project and create resources in the subprojects. Users can then be assigned permissions to access only specific resources in the subprojects.

Figure 1-1 Project isolating model



2 API Overview

Token Management

API	Description
Obtaining a User Token	Obtain a user token through username/password-based authentication.
Obtaining an Agency Token	Obtain an agency token.
Verifying a Token	Check the validity of a specified token. If the token is valid, detailed information about the token will be returned.

Access Key Management

API	Description
Obtaining a Temporary AK/SK	Obtain a temporary access key (AK/SK) and security token.
Creating a Permanent Access Key	Provided for the administrator to create a permanent access key for a user or provided for a user to create a permanent access key for themselves.
Listing Permanent Access Keys	Provided for the administrator to list all permanent access key of a user or provided for a user to list all of their permanent access keys.
Querying a Permanent Access Key	Provided for the administrator to query the specified permanent access key of a user or provided for a user to query one of their permanent access keys.
Modifying a Permanent Access Key	Provided for the administrator to modify the specified permanent access key of a user or provided for a user to modify one of their permanent access keys.

API	Description
Deleting a Permanent Access Key	Provided for the administrator to delete the specified permanent access key of a user or provided for a user to delete one of their permanent access keys.

Region Management

API	Description
Querying a Region List	List all regions.
Querying Region Details	Query region details.

Project Management

API	Description
Querying Project Information Based on the Specified Criteria	Query project information.
Querying a User Project List	Query the project list of a specified user.
Querying the List of Projects Accessible to Users	List the projects in which resources are accessible to a specified user.
Creating a Project	Create a project.
Modifying Project Data	Modify the details of a project.
Querying Information About a Specified Project	Query the detailed information about a project based on the project ID.
Setting the Status of a Specified Project	Change the status of a specified project. The project status can be normal or suspended.
Querying Information and Status of a Specified Project	Query the details and status of a project.
Deleting a Project	Delete a project.

API	Description
Querying the Quotas of a Project	Query the quotas of a specified project.

Tenant Management

API	Description
Querying the List of Domains Accessible to Users	Query the list of domains accessible to users.
Querying the Password Strength Policy	Query the password strength policy, including its regular expression and description.
Querying the Password Strength Policy by Option	Query the regular expression or description of the password strength policy configured for a specified account.
Querying the Quotas of an Account	Query the quotas of a specified account.

User Management

API	Description
Querying a User List	List all users.
Querying User Details	Query the detailed information about a specified user.
Querying User Details (Recommended)	Provided for the administrator to query the details about a specified user or provided for a user to query their details.
Querying User Details (Including Email Address and Mobile Number)	Provided for a user to query their details.
Querying the User Group to Which a User Belongs	Query the information about the groups to which a specified user belongs.
Querying Users in a User Group	Provided for the administrator to query the users in a user group.

API	Description
Creating an IAM User (Recommended)	Provided for the administrator to create a user.
Changing a Password	Change the password for a user.
Modifying User Information	Modify user information under a domain.
Modifying User Information (Including Email Address and Mobile Number) as an IAM User	Provided for users to modify their information.
Modifying User Information (Including Email Address and Mobile Number) as the Administrator	Provided for the administrator to modify user information.
Deleting a User	Provided for the administrator to delete a user.
Deleting a User from a User Group	Delete a user from a user group.

User Group Management

API	Description
Listing User Groups	Provided for the administrator to list all user groups.
Querying User Group Details	Provided for the administrator to query user group information.
Creating a User Group	Provided for the administrator to create a user group.
Adding a User to a User Group	Provided for the administrator to add a user to a specified user group.
Updating a User Group	Provided for the administrator to update user group information.
Deleting a User Group	Provided for the administrator to delete a user group.

API	Description
Querying Whether a User Belongs to a User Group	Provided for the administrator to check whether a user belongs to a specified user group.

Permission Management

API	Description
Querying a Role List	Provided for the administrator to list all permissions.
Querying Role Details	Provided for the administrator to query permission information.
Querying Role Assignments (Discarded)	Query the user groups to which a specified role has been assigned.
Querying Permissions of a User Group Under a Domain	Query the permissions of a specified user group under a domain.
Querying Permissions of a User Group Corresponding to a Project	Query the permissions of a specified user group for a project.
Granting Permissions to a User Group of a Domain	Grant permissions to a specified user group under a domain.
Granting Permissions to a User Group Corresponding to a Project	Grant permissions to a specified user group for a project.
Deleting Permissions of a User Group Corresponding to a Project	Delete permissions of a user group corresponding to a project.
Deleting Permissions of a User Group of a Domain	Delete permissions of a specified user group of a domain.

API	Description
Querying Whether a User Group Under a Domain Has Specific Permissions	Query whether a specified user group under a domain has specific permissions.
Querying Whether a User Group Corresponding to a Project Has Specific Permissions	Query whether a user group corresponding to a project has specific permissions.

Custom Policy Management

API	Description
Listing Custom Policies	Provided for the administrator to list all custom policies.
Querying Custom Policy Details	Provided for the administrator to query custom policy details.
Creating a Custom Policy for Cloud Services	Provided for the administrator to create a custom policy for cloud services.
Creating a Custom Policy for Agencies	Provided for the administrator to create a custom policy for agencies.
Modifying a Custom Policy for Cloud Services	Provided for the administrator to modify a custom policy for cloud services.
Modifying a Custom Policy for Agencies	Provided for the administrator to modify a custom policy for agencies.
Deleting a Custom Policy	Provided for the administrator to delete a custom policy.

Agency Management

API	Description
Creating an Agency	Create an agency.
Querying an Agency List Based on the Specified Conditions	Query an agency list based on the specified conditions.

API	Description
Obtaining Details of a Specified Agency	Query the details of a specified agency.
Modifying an Agency	Modify agency information, including the **trust_domain_id**, **description**, and **trust_domain_name** parameters.
Deleting an Agency	Delete an agency.
Granting Permissions to an Agency for a Project	Grant permissions to an agency for a project.
Checking Whether an Agency Has the Specified Permissions on a Project	Check whether an agency has the specified permissions on a project.
Querying the List of Permissions of an Agency on a Project	Query the list of permissions of an agency on a project.
Deleting Permissions of an Agency on a Project	Delete permissions of an agency on a project.
Granting Permissions to an Agency on a Domain	Grant permissions to an agency on a domain.
Checking Whether an Agency Has the Specified Permissions on a Domain	Check whether an agency has the specified permissions on a domain.
Querying the List of Permissions of an Agency on a Domain	Query the list of permissions of an agency on a domain.
Deleting Permissions of an Agency on a Domain	Delete permissions of an agency on a domain.

Security Settings

API	Description
Querying the Operation Protection Policy	Query the operation protection policy.

API	Description
Modifying the Operation Protection Policy	Provided for the administrator to modify the operation protection policy.
Querying the Password Policy	Query the password policy.
Modifying the Password Policy	Provided for the administrator to modify the password policy.
Querying the Login Authentication Policy	Query the login authentication policy.
Modifying the Login Authentication Policy	Provided for the administrator to modify the login authentication policy.
Querying the ACL for Console Access	Query the ACL for console access.
Modifying the ACL for Console Access	Provided for the administrator to modify the ACL for console access.
Querying the ACL for API Access	Query the ACL for API access.
Modifying the ACL for API Access	Provided for the administrator to modify the ACL for API access.
Querying MFA Device Information of Users	Provided for the administrator to query the MFA device information of users.
Querying the MFA Device Information of a User	Provided for the administrator to query the MFA device information of a specified user or provided for a user to query their MFA device information.
Querying Login Protection Configurations of Users	Provided for the administrator to query the login protection configurations of users.
Querying the Login Protection Configuration of a User	Used by the administrator to query the login protection configuration of a specified user or used by a user to query their login protection configuration.
Modifying the Login Protection Configuration of a User	Provided for the administrator to modify the login protection configuration of a user.
Binding a Virtual MFA Device	Bind a virtual MFA device to a user.
Unbinding a Virtual MFA Device	Unbind the virtual MFA device bound to a user.

API	Description
Creating a Virtual MFA Device	Create a virtual MFA device for a user.
Deleting a Virtual MFA Device	Provided for the administrator to delete the virtual MFA device created for a user.

Enterprise Project Management

API	Description
Querying the Permissions of a User Group Associated with an Enterprise Project	Query the permissions of a user group associated with the enterprise project of a specified ID.
Removing Permissions of a User Group Associated with an Enterprise Project	Remove the permissions of a user group associated with an enterprise project.
Querying Users Directly Associated with an Enterprise Project	Query the users directly associated with a specified enterprise project.
Querying Permissions of a User Directly Associated with an Enterprise Project	Query the permissions of a user directly associated with a specified enterprise project.
Granting a User Permissions for an Enterprise Project	Grant a user permissions for an enterprise project.
Removing Permissions of a User Directly Associated with an Enterprise Project	Remove the permissions of a user directly associated with a specified enterprise project.
Querying User Groups Associated with an Enterprise Project	Query the user groups associated with the enterprise project of a specified ID.

API	Description
Querying the Permissions of a User Group Associated with an Enterprise Project	Query the permissions of a user group associated with the enterprise project of a specified ID.
Granting Permissions to a User Group Associated with an Enterprise Project	Grant permissions to a user group associated with the enterprise project of a specified ID.
Removing the Permissions of a User Group Associated with an Enterprise Project	Remove the permissions of a user group associated with an enterprise project.

Federated Identity Authentication Management

API	Description
SP Initiated	Obtain a federated authentication token using the OpenStack Client or ShibbolethECP Client.
IdP Initiated	Obtain a federated authentication token in the IdP-initiated mode. The **Client4ShibbolethIdP** script is used as an example.
Querying the Identity Provider List	List all identity providers.
Querying an Identity Provider	Query the details about an identity provider.
Creating an Identity Provider	Provided for the administrator to create an identity provider.
Creating an OpenID Connect Identity Provider	Provided for the administrator to create an OpenID Connect identity provider.
Updating a SAML Identity Provider	Provided for the administrator to update an identity provider.
Updating an OpenID Connect Identity Provider	Provided for the administrator to modify an OpenID Connect identity provider.
Querying an OpenID Connect Identity Provider	Provided for the administrator to query an OpenID Connect identity provider.

API	Description
Deleting an Identity Provider	Provided for the administrator to delete an identity provider.
Querying the Mapping List	List all mappings.
Querying a Mapping	Query the information about a mapping.
Creating a Mapping	Provided for the administrator to register a mapping.
Updating a Mapping	Provided for the administrator to update a mapping.
Deleting a Mapping	Provided for the administrator to delete a mapping.
Querying the Protocol List	List all protocols.
Querying a Protocol	Query the details of a protocol.
Registering a Protocol	Provided for the administrator to register a protocol, that is, to associate a protocol with an identity provider.
Updating a Protocol	Provided for the administrator to update the protocol associated with a specified identity provider.
Deleting a Protocol	Provided for the administrator to delete the protocol associated with a specified identity provider.
Querying a Metadata File	Provided for the administrator to query the metadata file imported to IAM for an identity provider.
Querying the Metadata File of Keystone	Query the metadata file of Keystone.
Importing a Metadata File	Provided for the administrator to import a metadata file.
Obtaining an Unscoped Token (SP Initiated)	Obtain an unscoped token through SP-initiated federated identity authentication.
Obtaining an Unscoped Token (IdP Initiated)	Obtain an unscoped token through IdP-initiated federated identity authentication.
Obtaining a Scoped Token	Obtain a scoped token through federated identity authentication.
Obtaining a Token with an OpenID Connect ID Token	Obtain a federated identity authentication token using an OpenID Connect ID token.

API	Description
Obtaining an Unscoped Token with an OpenID Connect ID Token	Obtain an unscoped token using an OpenID Connect ID token.
Generating an AK/SK in Federated Identity Authentication Mode (Discarded)	Generate an AK/SK in federated identity authentication mode. This API has been deprecated.
Querying the List of Domains Accessible to Federated Users	List the accounts whose resources are accessible to federated users.
Querying the List of Projects Accessible to Federated Users	List the projects in which resources are accessible to federated users.
Processing WebSSO Assertion Requests	Receive responses to web SSO assertion requests sent by an IdP to the SP (IAM) in compliance with SAML 2.0.
Processing ECP Assertion Requests	Receive responses to ECP assertion requests sent by a client to the SP (IAM) in compliance with SAML 2.0.

Custom Identity Brokers

API	Description
Obtaining a Login Token	Obtain a token for logging in through a custom identity broker.

Version Information Management

API	Description
Querying Keystone API Version Information	Query the version information of Keystone APIs.
Querying Information About Keystone API Version 3.0	Obtain the information about Keystone API 3.0.

Services and Endpoints

API	Description
Querying Services	List all services.
Querying Service Details	Query the details of a service.
Querying the Service Catalog	Query the service catalog corresponding to **X-Auth-Token** contained in the request.
Querying Endpoints	List all endpoints.
Querying Endpoint Details	Query the details of an endpoint.

3 Calling APIs

3.1 Making an API Request

This section describes the structure of a REST API request, and uses the IAM API for obtaining a user token (see **Obtaining a User Token**) as an example to demonstrate how to call an API. The obtained token can then be used to authenticate the calling of other APIs.

Request URI

A request URI is in the following format:

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

Table 3-1 Parameter description

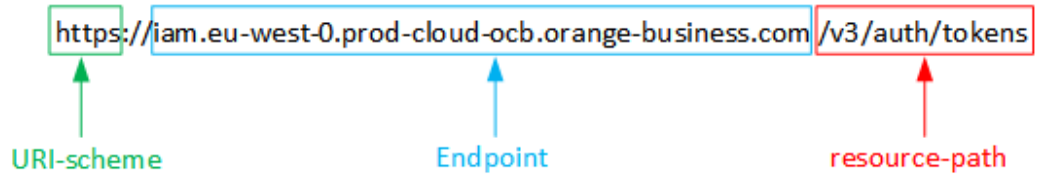
Parameter	Description
URI-scheme	Protocol used to transmit requests. All APIs use HTTPS.
Endpoint	Domain name or IP address of the server bearing the REST service. The endpoint varies between services in different regions. It can be obtained from **Regions and Endpoints**. For example, the endpoint of IAM in the **eu-west-0** region is **iam.eu-west-0.prod-cloud-ocb.orange-business.com**.
resource-path	Access path of an API for performing a specified operation. Obtain the path from the URI of an API. For example, the **resource-path** of the API used to obtain a user token is **/v3/auth/tokens**.

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

For example, to obtain an IAM token in the **eu-west-0** region, obtain the endpoint of IAM (iam.eu-west-0.prod-cloud-ocb.orange-business.com) for this region and the **resource-path** (**/v3/auth/tokens**) in the URI of the API used to obtain a user token (see **Obtaining a User Token**). Then, construct the URI as follows:

```
https://iam.eu-west-0.prod-cloud-ocb.orange-business.com/v3/auth/tokens
```

Figure 3-1 Example URI



NOTE

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

Request Methods

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

- **GET**: requests a 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**: same as GET except that the server must return only the response header.
- **PATCH**: requests the server to update partial content of a specified resource. If the resource does not exist, a new resource will be created.

For example, in the case of the API used to obtain a user token (**Obtaining a User Token**), the request method is POST. The request is as follows:

```
POST https://iam.eu-west-0.prod-cloud-ocb.orange-business.com/v3/auth/tokens
```

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**: specifies the request body type or format. This field is mandatory and its default value is **application/json**.
- **X-Auth-Token**: specifies a user token only for token-based API authentication. **X-Auth-Token** is a response to the API used to obtain a user token (**Obtaining a User Token**). This API is the only one that does not require authentication.

  NOTE

  In addition to supporting token-based authentication, APIs also support authentication using access key ID/secret access key (AK/SK). During AK/SK-based authentication, an SDK is used to sign the request, and the **Authorization** (signature information) and **X-Sdk-Date** (time when the request is sent) header fields are automatically added to the request.

  For details, see "AK/SK-based Authentication" in **Authentication**.

The API used to obtain a user token (**Obtaining a User Token**) does not require authentication. Therefore, only the **Content-Type** field needs to be added to requests for calling the API. An example of such requests is as follows:

```
POST https://iam.eu-west-0.prod-cloud-ocb.orange-business.com/v3/auth/tokens

Content-Type: application/json
```

(Optional) Request Body

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

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

In the case of the API used to obtain a user token (**Obtaining a User Token**), the request parameters and parameter description can be obtained from the API request. The following provides an example request with a body included. Replace *username*, *domainname*, ********* (login password), and *xxxxxxxxxxxxxxxxx* (project ID) with the actual values. If you obtain a token using an account, ensure that you set *username* and *domainname* to the same value.

NOTE

The **scope** parameter specifies where a token takes effect. You can set **scope** to an account or a project under the account. In the following example, the token takes effect only for the resources in a specified project. For more information about this API, see **Obtaining a User Token**.

```
POST https://iam.eu-west-0.prod-cloud-ocb.orange-business.com/v3/auth/tokens

Content-Type: application/json
```

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

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

3.2 Authentication

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

- Token-based authentication: Requests are authenticated using a token.
- AK/SK-based authentication: Requests are authenticated by encrypting the request body using an AK/SK pair.

Token-based Authentication

NOTE

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

A token specifies temporary permissions in a computer system. During API authentication using a token, the token is added to request headers to get permissions for calling the API.

You can obtain a token by calling the API described in **Obtaining a User Token**. IAM APIs can be called only by using a global service token. To call the API described in **Obtaining a User Token**, set **auth.scope** to **domain** in the request body as follows:

```
{
    "auth": {
        "identity": {
            "methods": [
                "password"
            ],
            "password": {
```

```
            "user": {
                "domain": {
                    "name": "IAMDomain"
                },
                "name": "IAMUser",
                "password": "IAMPassword"
            }
        }
    },
    "scope": {
        "domain": {
            "name": "IAMDomain"
        }
    }
  }
}
```

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

```
POST https://iam.eu-west-0.prod-cloud-ocb.orange-business.com/v3/auth/tokens
```

AK/SK-based Authentication

NOTE

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

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

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

In AK/SK-based authentication, you can use an AK/SK pair to sign requests based on the signature algorithm or use the signing SDK to sign requests.

NOTICE

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

3.3 Response

Status Code

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

A status code is a group of digits, ranging from 1xx to 5xx. It indicates the status of a request. For more information, see **Status Codes**.

For example, if status code **201** is returned for calling the API used to obtain a user token (**Obtaining a User Token**), the request is successful.

Response Header

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

Obtaining a User Token shows the response header fields for the API used to obtain a user token (**Figure 3-2**). The **x-subject-token** header field is the desired user token. This token can then be used to authenticate the calling of other APIs.

Figure 3-2 Header fields of the response to the request for obtaining a user token

Response Body

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

The following is part of the response body for the API used to obtain a user token (**Obtaining a User Token**).

```
{
    "token": {
        "expires_at": "2019-02-13T06:52:13.855000Z",
        "methods": [
            "password"
        ],
        "catalog": [
            {
                "endpoints": [
                    {
                        "region_id": "az-01",
......
```

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

```
{
    "error_msg": "The format of message is error",
```

```
    "error_code": "AS.0001"
}
```

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

4 APIs

4.1 Token Management

4.1.1 Obtaining a User Token

Function

This API is used to obtain a token through username/password authentication. A token is a system object encapsulating the identity and permissions of a user.

When calling the APIs of IAM or other cloud services, you can use this API to obtain a token for authentication.

This API can be called using both the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com) and region-specific domain names.

NOTE

Tokens are valid for 24 hours and you can cache them to reduce the number of API calls needed. For a successful API call, you need a valid token. Obtaining a new token does not affect the validity of the existing token. A token that is expiring soon may result in API failures, and a token will become invalid if you delete or disable an IAM user, or change their permissions, password, or access keys.

There are two types of passwords: web passwords and API passwords.

- Web passwords: These are used for console login by Flexible Engine IAM users.
- API passwords: These are used by Flexible Engine IAM users for API calls and by Cloud Alliance users for both API calls and console login. To obtain a token, you need to use an API password. If you need to reset an API password, see **Resetting API Password**. You can also **log in to the console** and choose **API Login** in the top navigation bar, and then click **Forgot API password**.

URI

POST /v3/auth/tokens

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.

- Parameters in the request body

Parameter	Mandatory	Type	Description

identity	Yes	JSON object	Authentication parameters, including: **methods** and **password**.
			"identity": {
			"methods": ["password"],
			"password": {

methods	Yes	String Array	Authentication method. The value of this field is **password**. If virtual MFA–based login authentication is enabled, the value of this field is **["password","totp"]**.

Parameter	Mandatory	Type	Description

password	Yes	JSON object	Authentication information.
			Example:
			"password": {
			"user": {
			"name": "*user A*",
			"password": "**********",
			"domain": {
			"name": "*domain A*"
			• **user.name**: Name of the user that wants to obtain the token. Obtain the username on the **My Credentials** page.
			• password: *Enter the API password.*
			• **domain.name**: Name of the domain that created the user. Obtain the domain name on the **My Credentials** page.

totp	No	JSON object	Authentication information. This parameter is mandatory only when virtual MFA–based login authentication is enabled.
			Example:
			"totp": {
			"user": {
			"id": "b95b78b67fa045b38104c12fb...",
			"passcode": "******"
			• **user.id**: User ID, which can be obtained on the **My Credentials** page.
			• **passcode**: Virtual MFA device verification code, which can be obtained on the MFA app.

Parameter	Mandatory	Type	Description

scope	No	JSON object	Usage scope of the token. The value can be **project** or **domain**.
			• Example 1: If this field is set to **project**, the token can be used to access only services in specific projects, such as ECS. You can specify either **id** or **name**.
			`"scope": { "project": { "id": "0b95b78b67fa045b38104c12fb..." } }`
			• Example 2: If this field is set to **domain**, the token can be used to access global services, such as OBS. Global services are not subject to any projects or regions. You can specify either **id** or **name**.
			`"scope": { "domain": { "name": " domain A" } }`

- Example request

  The following is a sample request for obtaining a token for **user A**. The login password of the user is ************** and the domain name is **domain A**. The scope of the token is **domain**.

```
{
  "auth": {
    "identity": {
      "methods": ["password"],
      "password": {
        "user": {
          "name": "user A",
          "password": "**********",
          "domain": {
            "name": "domain A"
          }
        }
      }
    },
    "scope": {
      "domain": {
        "name": "domain A"
      }
    }
  }
}
```

  The following is a sample request for obtaining a token when virtual MFA–based login authentication is enabled.

```
{
    "auth": {
        "identity": {
            "methods": ["password", "totp"],
            "password": {
                "user": {
                    "name": "user A",
                    "password": "********",
                    "domain": {
                        "name": "domain A"
                    }
                }
            },
            "totp" : {
                "user": {
                    "id": "dfsafdfsaf....",
                    "passcode": "******"
                }
            }
        },
        "scope": {
            "domain": {
                "name": "domain A"
            }
        }
    }
}
```

Response Parameters

- Parameters in the response header

Parameter	Mandatory	Type	Description
X-Subject-Token	Yes	String	Obtained token.

- Token format description

Parameter	Mandatory	Type	Description
methods	Yes	Json Array	Method for obtaining a token.
expires_at	Yes	String	Expiration date of the token.
issued_at	Yes	String	Time when the token was issued.
mfa_authn_at	No	String	MFA authentication time. This field is displayed only when virtual MFA–based login authentication is enabled.

Parameter	Mandatory	Type	Description

user	Yes	JSON object	Example:
			"user": {
			"name": "user A",
			"id": "b95b78b67fa045b38104...",
			"password_expires_at":"2016-11-06T15:32:17.000000",
			"domain": {
			"name": "domain A",
			"id": "fdec73ffea524aa1b373e40..."
			}
			}
			• **user.name**: Name of the user that wants to obtain the token.
			• **user.id**: ID of the user.
			• **domain.name**: Name of the domain that created the user.
			• **domain.id**: ID of the domain.
			• **password_expires_at**: Coordinated Universal Time (UTC) that the password will expire. **null** indicates that the password will not expire.

domain	No	JSON object	This parameter is returned only when the **scope** parameter in the request body has been set to **domain**. Example: "domain": { "name" : "domain A" "id" : "fdec73ffea524aa1b373e40..." • **domain.name**: Name of the domain that created the user. • **domain.id**: ID of the domain.

Parameter	Mandatory	Type	Description

project	No	JSON object	This parameter is returned only when the **scope** parameter in the request body has been set to **project**.
			Example:
			"project": {
			"name": "project A",
			"id": "34c77f3eaf84c00aaf54...",
			"domain": {
			"name": "domain A",
			"id": "fdec73ffea524aa1b373e40..."
			}
			}
			• **project.name**: Name of a project.
			• **project.id**: ID of the project.
			• **domain.name**: Domain name of the project.
			• **domain.id**: Domain ID of the project.

Parameter	Mandatory	Type	Description

catalog	Yes	Json Array	Endpoint information.
			Example:
			"catalog": [{
			"type": "identity",
			"id": "1331e5cff2a74d76b03da1225910e...",
			"name": "iam",
			"endpoints": [{
			"url": "*https://sample.domain.com*/v3",
			"region": "*",
			"region_id": "*",
			"interface": "public",
			"id": "089d4a381d574308a703122d3ae73..."
			}]
			}]
			• **type**: Type of the service to which the API belongs.
			• **id**: ID of the service.
			• **name**: Name of the service.
			• **endpoints**: Endpoints that can be used to call the API.
			• **url**: URL used to call the API.
			• **region**: Region in which the service can be accessed.
			• **region_id**: ID of the region.
			• **interface**: Type of the API. The value **public** means that the API is open for access.
			• **id**: ID of the API.

roles	Yes	JSON object	Permissions information of the token.
			Example:
			"roles" : [{
			"name" : "role1",
			"id" : "roleid1"
			}, {
			"name" : "role2",
			"id" : "roleid2"
			}
			]

- Example response

The following is a sample request for obtaining a token for **user A**. The login password of the user is ************** and the domain name is **domain A**. The scope of the token is **domain**.

```
Token information stored in the response header:
X-Subject-Token:MIIDkgYJKoZIhvcNAQcCoIIDgzCCA38CAQExDTALBglghkgBZQMEAgEwgXXXXX...

Token information stored in the response body:
{
  "token" : {
    "methods" : ["password"],
    "expires_at" : "2015-11-09T01:42:57.527363Z",
    "issued_at" : "2015-11-09T00:42:57.527404Z",
    "user" : {
      "domain" : {
      "id" : "ded485def148s4e7d2se41d5se...",
      "name" : "domain A"
      },
      "id" : "ee4dfb6e5540447cb37419051...",
      "name" : "user A",
      "password_expires_at":"2016-11-06T15:32:17.000000",
    },
    "domain" : {
       "name" : "domain A",
       "id" : "dod4ed5e8d4e8d2e8e8d5d2d..."
    },
    "catalog": [{
        "type": "identity",
        "id": "1331e5cff2a74d76b03da12259...",
        "name": "iam",
        "endpoints": [{
            "url": "https://sample.domain.com/v3",
            "region": "*",
            "region_id": "*",
           "interface": "public",
            "id": "089d4a381d574308a703122d3a..."
       }]
    }],
    "roles" : [{
       "name" : "role1",
       "id" : "roleid1"
       }, {
       "name" : "role2",
       "id" : "roleid2"
       }
  ]
  }
}
```

The following is a sample request for obtaining a token when virtual MFA–based login authentication is enabled.

```
Token information stored in the response header:
X-Subject-Token:MIIDkgYJKoZIhvcNAQcCoIIDgzCCA38CAQExDTALBglghkgBZQMEAgEwgXXXXX...

Token information stored in the response body:
{
  "token": {
    "expires_at": "2020-09-05T06:50:44.390000Z",
    "mfa_authn_at": "2020-09-04T06:50:44.390000Z",
    "issued_at": "2020-09-04T06:50:44.390000Z",
     "methods": [
      "password",
      "totp"
    ],
    "catalog": [
      {
        "endpoints": [
          {
            "id": "33e1cbdd86d34e89a63cf8ad16a5f...",
```

```
            "interface": "public",
            "region": "*",
            "region_id": "*",
            "url": "https://sample.domain.com/v3.0"
          }
        ],
        "id": "100a6a3477f1495286579b819d399...",
        "name": "iam",
        "type": "iam"
      },
      ],
    "domain": {
      "id": "e6505630658e49649784759cdf251...",
      "name": "domain A"
    },
    "roles": [
     {
     "name" : "role1",
     "id" : "roleid1"
      },{
     "name" : "role1",
     "id" : "roleid1"

}
    ],
       "user": {
      "domain": {
        "id": "e6505630658e49649784759cdf251...",
        "name": "domain A"
      },
      "id": "092ac6365a0025b11f76c01e90100...",
      "name": "user A",
      "password_expires_at": ""
    }
  }
}
```


Status Codes

Status Code	Description
201	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
429	Too many requests: The maximum number of API requests is 100 per minute for each IP address.
500	Internal server error. The format may be incorrect.
503	Service unavailable.

4.1.2 Obtaining an Agency Token

Function

This API is used to obtain an agency token. For example, after a trust relationship is established between A (delegating party) and B (delegated party), the delegated party B can use this API to obtain an agency token to manage A's resources that B is delegated to manage. However, B cannot use this agency token to manage its own resources. To do so, B needs to obtain a user token by referring to **Obtaining a User Token**.

NOTE

The validity period of a token is **24 hours**. Cache the token to prevent frequent API calling. Ensure that the token is valid while you use it. Using a token that will soon expire may cause API calling failures. Obtaining a new token does not affect the validity of the existing token.

URI

POST /v3/auth/tokens

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Token that assigns the permissions of the **Agent Operator** policy to user B.

- Parameters in the request body

Parameter	Mandatory	Type	Description

identity	Yes	JSON object	Authentication parameters, including: **methods** and **assume_role**.
			"identity": {
			"methods": ["assume_role"],
			"assume_role": {

methods	Yes	String Array	Method for obtaining the token. Set this field to **assume_role**.
domain_name or domain_id	Yes	String	Domain name or domain ID of the delegating party A. Specify either **domain_name** or **domain_id**.

Parameter	Mandatory	Type	Description
xrole_name	Yes	String	Name of the agency created by A.

scope	No	JSON object	Usage scope of the token. The value can be **project** or **domain**.
			● If this field is set to **project**, the token can only be used to access resources in the project of a specified ID or name.
			"scope": {
			"project": {
			"id": "0b95b78b67fa045b38104c12fb..."
			}
			}
			● If this field is set to **domain**, the token can be used to access all resources under the domain of a specified ID or name.
			"scope": {
			"domain": {
			"id": "6b8eb224c76842e3ac2..."
			}
			}

- Example request

  The following is a sample request for obtaining an agency token for **domain A**. The name of the agency is **agencytest**.

```
{
    "auth":{
        "identity":{
            "methods":[
                "assume_role"
            ],
            "assume_role":{
                "domain_name":"domain A",
                "xrole_name":"agencytest"
                }
        },
        "scope":{
            "domain":{
                "name":"domain A"
            }
        }
    }
}
```

Response Parameters

- Parameters in the response header

Parameter	Mandatory	Type	Description
X-Subject-Token	Yes	String	Agency token that is obtained.

- Token format description

Parameter	Mandatory	Type	Description
methods	Yes	Json Array	Method for obtaining the token.
expires_at	Yes	String	Expiration date of the token.
issued_at	Yes	String	Time when the token was issued.

user	Yes	JSON object	Detailed information about the delegating party. Example:
			"user": {
			"name": "*user A*",
			"id": "*userid*",
			"password_expires_at":"2016-11-06T15:32:17.000000",
			"domain": {
			"name": "*domain A*",
			"id": "*domainid*"
			}
			}
			• **user.name**: Username of the delegating party.
			• **user.id**: User ID of the delegating party.
			• **domain.name**: Name of the domain to which the delegating party belongs.
			• **domain.id**: ID of the domain.
			• **password_expires_at**: Time when the password will expire. **null** indicates that the password will not expire. This parameter is optional.

Parameter	Mandatory	Type	Description

domain	No	JSON object	This parameter is returned only when the **scope** parameter in the request body has been set to **domain**.
			Example:
			"domain": {
			"name" : "*domain A*",
			"id" : "*domainid*"
			}
			• **domain.name**: Name of the domain to which the delegating party belongs.
			• **domain.id**: ID of the domain.

project	No	JSON object	This parameter is returned only when the **scope** parameter in the request body has been set to **project**.
			Example:
			"project": {
			"name": "*projectname*",
			"id": "*projectid*"
			}
			• **project.name**: Name of a project.
			• **project.id**: ID of the project.

catalog	No	Json Array	Endpoint information.
			Example:
			"catalog": [{
			"type": "identity",
			"id": "1331e5cff2a74d76b03da1225910e31d",
			"name": "iam",
			"endpoints": [{
			"url": "*https://sample.domain.com/v3*",
			"region": "*",
			"region_id": "*",
			"interface": "public",
			"id": "089d4a381d574308a703122d3ae738e9"
			}]
			}]

Parameter	Mandatory	Type	Description

roles	Yes	JSON object	Permissions information of the token.
			Example:
			"roles" : [{
			"name" : "role1",
			"id" : "roleid1"
			}, {
			"name" : "role2",
			"id" : "roleid2"
			}
			]

assumed_by	Yes	JSON object	Detailed information about the delegated party. Example:
			Example:
			"assumed_by": {
			"user": {
			"domain": {
			"name": "domain B",
			"id": "bfdd55e02a014894b5a2693f31..."
			},
			"name": "user B",
			"id": "ff5ea657f1dd45c4b8f398cab..."
			}
			}
			• **domain.name**: Name of the domain to which the delegated party belongs.
			• **user.name**: Username of the delegated party.

- Example response

```
Token information stored in the response header:
X-Subject-Token:MIIDkgYJKoZIhvcNAQcCoIIDgzCCA38CAQExDTALBglghkgBZQMEAgEwgXXXXX...

X-Frame-Options: SAMEORIGIN

Information included in the response body:
{
  "token": {
    "methods": [
      "assume_role"
    ],
    "issued_at": "2017-05-18T11:44:05.232000Z",
    "expires_at": "2017-05-19T11:44:05.232000Z",
    "user": {
      "id": "93e12ecdad6f4abd84968741da...",
      "name": "user A/agencytest",
      "password_expires_at":"2016-11-06T15:32:17.000000",
      "domain": {
        "id": "ce925c42c25943bebba10ea64a...",
        "name": "domain A"
      }
    },
    "domain": {
      "id": "ce925c42c25943bebba10ea64a...",
      "name": "domain A"
```

```
    },
    "roles": [
      {
        "id": "c11c61319f08404eaf94f8030b9...",
        "name": "role1"
      },
      {
        "id": "d52dde35ijg62fex2ijhdc785sc3...",
        "name": "role2"
      },
      {
        "id": "d862dwd32dwhu854rdcs447ed1d7..."
        "name": "op_gated_tasssg6"
      }
    ],
    "assumed_by": {
      "user": {
        "domain": {
          "name": "domain B",
          "id": "c1a78a82d81c4a19b03bfe82d3ad..."
        },
        "id": "cdeb158dda854cc3bab77d8926ff...",
        "name": "User B"
      }
    }
  }
}
```


Status Codes

Status Code	Description
201	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.
503	Service unavailable.

4.1.3 Verifying a Token

Function

This API is used to check the validity of a specified token. If the token is valid, detailed information about the token will be returned.

This API can be called using both the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com) and region-specific domain names.

URI

GET /v3/auth/tokens

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	• To verify your own token, specify your token. There are no special requirements on the permissions that your token must have. • To verify the token of another user under the same domain, use a token that has permissions of the **Security Administrator** policy.
X-Subject-Token	Yes	String	Token to be verified.

- Query parameters

Parameter	Mandatory	Type	Description
nocatalog	No	String	If this parameter is set, no catalog information will be displayed in the response.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H "X-Subject-Token:$token" -X GET https://
sample.domain.com/v3/auth/tokens
```

Response Parameters

- Parameters in the response header

Parameter	Mandatory	Type	Description
X-Subject-Token	Yes	String	Verified token.

- Parameters in the response body

Parameter	Mandatory	Type	Description
token	Yes	Object	Token information list.

- Token format description

Parameter	Mandatory	Type	Description
methods	Yes	Array	Method of obtaining the token, for example, **password**.
expires_at	Yes	String	Expiration date of the token.
issued_at	Yes	String	Time when the token was issued.

user	Yes	Object	Example:
			"user": {
			"name": "*username*",
			"id": "*userid*",
			"password_expires_at":"2016-11-06T15:32:17.000000",
			"domain": {
			"name": "*domainname*",
			"id": "*domainid*"
			}
			}
			• **user.name**: Name of the user that owns the token.
			• **user.id**: ID of the user.
			• **domain.name**: Name of the domain to which the user belongs.
			• **domain.id**: ID of the domain.
			• **password_expires_at**: Time when the password will expire. **null** indicates that the password will not expire. This parameter is optional.

domain	No	Object	The system determines whether to return this field based on the scope contained in the request for obtaining the token.
			Example:
			"domain": {
			"name" : "domainame",
			"id" : "domainid"
			}
			• **domain.name**: Domain name.
			• **domain.id**: Domain ID.

Parameter	Mandatory	Type	Description

project	No	Object	The system determines whether to return this field based on the scope contained in the request for obtaining the token.
			Example:
			"project": {
			"name": "*projectname*",
			"id": "*projectid*",
			}
			• **project.name**: Name of a project.
			• **project.id**: ID of the project.

catalog	No	Json Array	Endpoint information.
			Example:
			"catalog": [{
			"type": "identity",
			"id": "1331e5cff2a74d76b03da1225910e31d",
			"name": "iam",
			"endpoints": [{
			"url": "*https://sample.domain.com/v3*",
			"region": "*",
			"region_id": "*",
			"interface": "public",
			"id": "089d4a381d574308a703122d3ae738e9"
			}]
			}]
			• **type**: Type of the service to which the API belongs.
			• **id**: ID of the service.
			• **name**: Name of the service.
			• **endpoints**: Endpoints that can be used to call the API.
			• **url**: URL used to call the API.
			• **region**: Region in which the service can be accessed.
			• **region_id**: ID of the region.
			• **interface**: Type of the API. The value **public** means that the API is open for access.
			• **id**: ID of the API.

Parameter	Mandatory	Type	Description

roles	Yes	Array	Permissions information of the token.
			Example:
			"roles" : [{
			"name" : "role1",
			"id" : "roleid1"
			}, {
			"name" : "role2",
			"id" : "roleid2"
			}
			]

- Example response

```
{
  "token" : {
    "methods" : ["password"],
    "expires_at" : "2015-11-09T01:42:57.527363Z",
    "issued_at" : "2015-11-09T00:42:57.527404Z",
    "user" : {
      "domain" : {
      "id" : "default",
      "name" : "Default"
      },
      "id" : "ee4dfb6e5540447cb3741905149XXX...",
      "password_expires_at":"2016-11-06T15:32:17.000000",
      "name" : "admin"
    },
    "domain" : {
       "name" : "Default",
       "id" : "default"
    },
    "roles" : [{
       "name" : "role1",
       "id" : "roleid1"
       }, {
       "name" : "role2",
       "id" : "roleid2"
       }
  ]
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
503	Service unavailable.

4.2 Access Key Management

4.2.1 Obtaining a Temporary AK/SK

Function

You can obtain a temporary AK/SK and security token (offline AK/SK) by using a user token, agency token, and federated token. A temporary AK/SK is a token with temporary permissions issued to users. It conforms to the principle of least privilege and can be used to temporarily access OBS.

This API can be called using both the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com) and region-specific domain names.

URI

POST /v3.0/OS-CREDENTIAL/securitytokens

Request Parameters

- Parameters in the request header
  - Obtaining a temporary AK/SK with an agency token (**methods** is set to **assume_role**)

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with permissions of the **Agent Operator** policy.
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.

  - Obtaining a temporary AK/SK with a user token or a federated token (**methods** is set to **token**)

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.

Parameter	Mandatory	Type	Description
X-Auth-Token	No	String	User token or federated token required for obtaining a temporary AK/SK. You need to specify either this parameter or the token ID in the request body. This parameter takes the precedence.

- Parameters in the request body
  - Obtaining a temporary AK/SK with an agency token (**methods** is set to **assume_role**)

Parameter	Mandatory	Type	Description
methods	Yes	String Array	Fill **assume_role** in this field.
agency_name	Yes	String	Name of the agency created by a delegating party.
domain_name or domain_id	Yes	String	**domain.name**: Name of the domain to which the delegating party belongs.
duration_seconds	No	Int	Validity period (in seconds) of an AK/SK and security token. The value ranges from 15 minutes to 24 hours. The default value is 15 minutes.

Parameter	Mandatory	Type	Description

scope	No	Object	AK/SK and security token. If this parameter is left blank, the generated security token does not contain the scope information. You are advised to leave this parameter blank. To set the scope of the temporary AK/SK and security token, specify a project or domain.
			● If this field is set to **project**, the temporary AK/SK and security token can only be used to access resources in the project of a specified ID or name.
			`"scope": { "project": { "id": "0b95b78b67fa045b38104c12fb..." } }`
			● If this field is set to **domain**, the temporary AK/SK and security token can be used to access all resources under the domain of a specified ID or name.
			`"scope": { "domain": { "name": " domain A" } }`

– Obtaining a temporary AK/SK with a user token or a federated token (**methods** is set to **token**)

Parameter	Mandatory	Type	Description
methods	Yes	String Array	Fill **token** in this field.

Parameter	Mandatory	Type	Description
token	No	JSON object	Common token or federated token required for obtaining a temporary AK/SK. You need to choose either the ID in this object or **X-Auth-Token** in the request header. **X-Auth-Token** takes priority over the ID in this object.
duration_seconds	No	Int	Validity period (in seconds) of an AK/SK and security token. The value ranges from 15 minutes to 24 hours. The default value is 15 minutes.

- Example request
  - When the **methods** parameter is set to **assume_role**

```
{
    "auth": {
        "identity": {
            "methods": [
                "assume_role"
            ],
            "assume_role": {
                "domain_id": "411edb4b634144f587ffc88f9bbdxxx",
                "xrole_name": "testagency",
                "duration_seconds": 3600
            }
        }
    }
}
```

  - When the **methods** parameter is set to **token**

```
{
    "auth": {
        "identity": {
            "methods": [
                "token"
            ],
            "token": {
                "id":
"MIIDkgYJKoZIhvcNAQcCoIIDgzCCA38CAQExDTALBglghkgBZQMEAgEwgXXXXX...",
                "duration_seconds": 900
            }
        }
    }
}
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
credential	Yes	Object	Authentication information.

- Description about the credential content.

Parameter	Mandatory	Type	Description
expires_at	Yes	String	Expiration time.
access	Yes	String	AK.
secret	Yes	String	SK.
securitytoken	Yes	String	Used for subsequent replacement of an SK or token.

- Example response

```
{
  "credential": {
    "access": "NQC51NFINJS1JXX...",
    "secret": "EY74MByPZ46kTRJL9ay5DskqXX...",
    "expires_at": "2017-04-17T07:55:18.575000Z",
    "securitytoken": "gAAAAABY9GbWUaGtoa9DPj7_dE4qUSnAXXX..."
  }
}
```

Status Codes

Status Code	Description
201	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
500	The system is abnormal.

4.2.2 Creating a Permanent Access Key

Function

This API can be used by the administrator to create a permanent access key for an IAM user or used by an IAM user to create a permanent access key for itself.

Access keys are identity credentials for using development tools (APIs, CLI, and SDKs) to access the cloud system. Access keys cannot be used to log in to the

console. AK is used in conjunction with an SK to sign requests cryptographically, ensuring that the requests are secret, complete, and correct.

The API can be called using both the global endpoint and region-specific endpoints.

URI

POST /v3.0/OS-CREDENTIAL/credentials

Request Parameters

Table 4-1 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	A token with **Security Administrator permissions** is required if the administrator is requesting to create a permanent access key for an IAM user. The user token (no special permission requirements) of an IAM user is required if the user is requesting to create a permanent access key for itself.

Table 4-2 Parameters in the request body

Parameter	Mandatory	Type	Description
credential	Yes	Object	Authentication information.

Table 4-3 credential

Parameter	Mandatory	Type	Description
user_id	Yes	String	IAM user ID.
description	No	String	Description of the access key.

Response Parameters

Table 4-4 Parameters in the response body

Parameter	Type	Description
credential	Object	Authentication result.

Table 4-5 credential

Parameter	Type	Description
create_time	String	Time when the access key was created.
access	String	AK.
secret	String	SK.
status	String	Status of the access key.
user_id	String	IAM user ID.
description	String	Description of the access key.

Example Request

```
POST https://sample.domain.com/v3.0/OS-CREDENTIAL/credentials
{
    "credential": {
        "description": "IAMDescription",
        "user_id": "07609fb9358010e21f7bc003751c7c32"
    }
}
```

Example Response

Status code: 201

The request is successful.

```
{
    "credential": {
        "access": "P83EVBZJMXCYTMUII...",
        "create_time": "2020-01-08T06:25:19.014028Z",
        "user_id": "07609fb9358010e21f7bc003751...",
        "description": "IAMDescription",
        "secret": "TTqAHPbhWorg9ozx8Dv9MUyzYnOKDppxzHt...",
        "status": "active"
    }
}
```

Status code: 400

The server failed to process the request. (The number of access keys has reached the maximum allowed limit.)

```
{
    "error": {
```

```
        "message": "akSkNumExceed",
        "code": 400,
        "title": "Bad Request"
    }
}
```

Status Codes

Status Code	Description
201	The request is successful.
400	The server failed to process the request. (The number of access keys has reached the maximum allowed limit.)
401	Authentication failed.
403	Access denied.
500	Internal server error.

Error Codes

None

4.2.3 Listing Permanent Access Keys

Function

This API can be used by the administrator to list all permanent access key of an IAM user or used by an IAM user to list all of their permanent access keys.

The API can be called using both the global endpoint and region-specific endpoints.

URI

GET /v3.0/OS-CREDENTIAL/credentials

Table 4-6 Query parameters

Parameter	Mandatory	Type	Description
user_id	No	String	User ID.

Request Parameters

Table 4-7 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	A token with **Security Administrator** permissions is required if the administrator is requesting to query all permanent access keys of an IAM user. The user token (no special permission requirements) of an IAM user is required if the user is requesting to query their permanent access keys.

Response Parameters

Table 4-8 Parameters in the response body

Parameter	Type	Description
credentials	Array of objects	Authentication result.

Table 4-9 credentials

Parameter	Type	Description
user_id	String	IAM user ID.
access	String	AK.
status	String	Status of the access key.
create_time	String	Time when the access key was created.
description	String	Description of the access key.

Example Request

- Request for an IAM user to query their permanent access keys
  ```
  GET https://sample.domain.com/v3.0/OS-CREDENTIAL/credentials
  ```
- Request for an administrator to query all permanent access keys of an IAM user (user ID: **07609fb9358010e21f7bc003751c...**)
  ```
  GET https://sample.domain.com/v3.0/OS-CREDENTIAL/credentials?
  user_id=07609fb9358010e21f7bc0037....
  ```

Example Response

Status code: 200

The request is successful.

```
{
   "credentials": [
      {
         "access": "LOSZM4YRVLKOY9E8X...",
         "create_time": "2020-01-08T06:26:08.123059Z",
         "user_id": "07609fb9358010e21f7bc0037...",
         "description": "",
         "status": "active"
      },
      {
         "access": "P83EVBZJMXCYTMU...",
         "create_time": "2020-01-08T06:25:19.014028Z",
         "user_id": "07609fb9358010e21f7bc003751...",
         "description": "",
         "status": "active"
      }
   ]
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

Error Codes

None

4.2.4 Querying a Permanent Access Key

Function

This API can be used by the administrator to query the specified permanent access key of an IAM user or used by an IAM user to query one of their permanent access keys.

The API can be called using both the global endpoint and region-specific endpoints.

URI

GET /v3.0/OS-CREDENTIAL/credentials/{access_key}

Table 4-10 URI parameters

Parameter	Mandatory	Type	Description
access_key	Yes	String	AK of the access key to be queried.

Request Parameters

Table 4-11 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	A token with **Security Administrator** permissions is required if the administrator is requesting to query a specified permanent access key of an IAM user. The user token (no special permission requirements) of an IAM user is required if the user is requesting to query one of their permanent access keys.

Response Parameters

Table 4-12 Parameters in the response body

Parameter	Type	Description
credential	Object	Authentication result.

Table 4-13 credential

Parameter	Type	Description
user_id	String	IAM user ID.
access	String	AK.

Parameter	Type	Description
status	String	Status of the access key.
create_time	String	Time when the access key was created.
last_use_time	String	Time when the access key was last used.
description	String	Description of the access key.

Example Request

```
GET https://sample.domain.com/v3.0/OS-CREDENTIAL/credentials/{access_key}
```

Example Response

Status code: 200

The request is successful.

```
{
    "credential": {
        "last_use_time": "2020-01-08T06:26:08.123059Z",
        "access": "LOSZM4YRVLKOY9E8...",
        "create_time": "2020-01-08T06:26:08.123059Z",
        "user_id": "07609fb9358010e21f7bc003751...",
        "description": "",
        "status": "active"
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

Error Codes

None

4.2.5 Modifying a Permanent Access Key

Function

This API can be used by the administrator to modify the specified permanent access key of an IAM user or used by an IAM user to modify one of their permanent access keys.

The API can be called using both the global endpoint and region-specific endpoints.

URI

PUT /v3.0/OS-CREDENTIAL/credentials/{access_key}

Table 4-14 URI parameters

Parameter	Mandatory	Type	Description
access_key	Yes	String	AK of the access key to be modified.

Request Parameters

Table 4-15 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	A token with **Security Administrator** permissions is required if the administrator is requesting to modify a specified permanent access key of an IAM user. The user token (no special permission requirements) of an IAM user is required if the user is requesting to modify one of their permanent access keys.

Table 4-16 Parameters in the request body

Parameter	Mandatory	Type	Description
credential	Yes	Object	Authentication information.

Table 4-17 credential

Parameter	Mandatory	Type	Description
status	No	String	Status of the access key to be changed to The value can be **active** or **inactive**. Options: • active • inactive
description	No	String	Description of the access key

Response Parameters

Table 4-18 Parameters in the response body

Parameter	Type	Description
credential	Object	Authentication information.

Table 4-19 credential

Parameter	Type	Description
user_id	String	IAM user ID.
access	String	AK.
status	String	Status of the access key.
create_time	String	Time when the access key was created.
description	String	Description of the access key.

Example Request

```
PUT https://sample.domain.com/v3.0/OS-CREDENTIAL/credentials/{access_key}
{
    "credential": {
```

```
    "status": "inactive",
    "description": "IAMDescription"
  }
}
```

Example Response

Status code: 200

The request is successful.

```
{
  "credential": {
    "status": "inactive",
    "access": "LOSZM4YRVLKOY9...",
    "create_time": "2020-01-08T06:26:08.123059Z",
    "user_id": "07609fb9358010e21f7bc00375..."
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

Error Codes

None

4.2.6 Deleting a Permanent Access Key

Function

This API can be used by the administrator to delete the specified permanent access key of an IAM user or used by an IAM user to delete one of their permanent access keys.

The API can be called using both the global endpoint and region-specific endpoints.

URI

DELETE /v3.0/OS-CREDENTIAL/credentials/{access_key}

Table 4-20 URI parameters

Parameter	Mandatory	Type	Description
access_key	Yes	String	AK to be deleted.

Request Parameters

Table 4-21 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	A token with **Security Administrator** permissions is required if the administrator is requesting to delete a specified permanent access key of an IAM user. The user token (no special permission requirements) of an IAM user is required if the user is requesting to delete one of their permanent access keys.

Response Parameters

None

Example Request

```
DELETE https://sample.domain.com/v3.0/OS-CREDENTIAL/credentials/{access_key}
```

Example Response

None

Status Codes

Status Code	Description
204	The access key is deleted successfully.
400	The server failed to process the request.
401	Authentication failed.

Status Code	Description
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

Error Codes

None

4.3 Region Management

4.3.1 Querying a Region List

Function

This API is used to query a region list.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

GET /v3/regions

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token. If the token does not contain the private region information, the system does not return the private region in the query result.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/regions
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
links	Yes	Dict	Region resource link.
regions	Yes	List	Region list.

- Description for the regions format

Parameter	Mandatory	Type	Description
description	Yes	String	Region description.
parent_region_id	Yes	String	Parent region ID of a region.
id	Yes	String	Region ID.
locales	Yes	Dict	Region name.
type	No	String	Region type.
links	Yes	Dict	Region resource link.

- Example response (successful response)

```
{
   "regions": [
      {
         "parent_region_id": null,
         "description": "",
         "links": {
            "self": "None/v3/regions/1500365963661574434"
         },
         "type": "private",
         "id": "1500365963661574434",
         "locales": {

            "en-us": "region_name2"
         }
      },
      {
         "parent_region_id": null,
         "description": "",
         "links": {
            "self": "https://sample.domain.com/v3/regions/500017826026667755"
         },
         "type": "private",
         "id": "500017826026667755",
         "locales": {

            "en-us": "region_name2"
         }
      },
      {
         "parent_region_id": null,
         "description": "",
         "links": {
            "self": "https://sample.domain.com/v3/regions/region_name"
         },
```

```
            "type": "public",
            "id": "test2",
            "locales": {

                "en-us": "region_name2"
            }
        },
        {
            "parent_region_id": null,
            "links": {
                "self": "https://sample.domain.com/v3/regions/test1112244"
            },
            "id": "test1112244",
            "locales": {

                "en-us": "testregion1"
            },
            "description": ""
        }
    ],
    "links": {
        "self": "https://sample.domain.com/v3/regions",
        "previous": null,
        "next": null
    }
}
```


Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.3.2 Querying Region Details

Function

This API is used to query region details.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/regions/{region_id}

- URI parameters

Parameter	Mandatory	Type	Description
region_id	Yes	String	Region ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/regions/test-pusb999999991
```

Response Parameters

Example response

```
{
    "region": {
        "parent_region_id": null,
        "description": "",
        "links": {
            "self": "https://sample.domain.com/v3/regions/test-pusb999999991"
        },
        "type": "public",
        "id": "test-pusb999999991",
        "locales": {
            "en-us": "region_name"
        }
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.

Status Code	Description
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.4 Project Management

4.4.1 Querying Project Information Based on the Specified Criteria

Function

This API is used to query project information based on the specified criteria.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/projects{?domain_id,name,enabled,parent_id,is_domain,page,per_page}

- URI parameters

Parameter	Mandatory	Type	Description
domain_id	No	String	ID of an enterprise account to which a user belongs.
name	No	String	Project name.
parent_id	No	String	Parent project ID of a project.
enabled	No	Boolean	Whether a project is available.
is_domain	No	Boolean	Indicates whether the user calling the API is a tenant.

Parameter	Mandatory	Type	Description
page	No	Integer	The page to be queried. The minimum value is **1**.
per_page	No	Integer	Number of data records on each page. Value range: [1,5000]

NOTE

When querying required information by page, ensure that the query parameters **page** and **per_page** both exist.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token of the target tenant.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -X "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/projects?domain_id=5c9f5525d9d24c5bbf91e74d86772029&name=region_name
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
projects	Yes	List	List of projects.
links	Yes	Object	Project resource link.

- Description for the project format

Parameter	Mandatory	Type	Description
is_domain	Yes	Boolean	Indicates whether the user calling the API is a tenant.
description	Yes	String	Project description.
links	Yes	Object	Project resource link.
enabled	Yes	Boolean	Whether a project is available.

Parameter	Mandatory	Type	Description
id	Yes	String	Project ID.
parent_id	Yes	String	Parent ID of the project.
domain_id	Yes	String	ID of an enterprise account to which a project belongs.
name	Yes	String	Project name.

- Example response

```
{
  "links": {
    "self": "https://sample.domain.com/v3/projects?
domain_id=c9f5525d9d24c5bbf91e74d86772029&name=region_name",
    "previous": null,
    "next": null
  },
  "projects": [
    {
      "is_domain": false,
      "description": "",
      "links": {
        "self": "https://sample.domain.com/v3/projects/e86737682ab64b2490c48f08bcc41914"
      },
      "enabled": true,
      "id": "e86737682ab64b2490c48f08bcc41914",
      "parent_id": "c9f5525d9d24c5bbf91e74d86772029",
      "domain_id": "c9f5525d9d24c5bbf91e74d86772029",
      "name": "region_name"
    }
  ]
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.
503	Service unavailable.

4.4.2 Querying a User Project List

Function

This API is used to query the project list of a specified user.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/users/{user_id}/projects

- URI parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission or token of the user.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/users/43cbe5e77aaf4665bbb962062dc1fc9d/projects
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
projects	Yes	Array	List of projects.
links	Yes	Object	Project resource link.

- Description for the project format

Parameter	Mandatory	Type	Description
description	Yes	String	Project description.
id	Yes	String	Project ID.
domain_id	Yes	String	ID of the domain where a project is located.
name	Yes	String	Project name.
links	Yes	Object	Project resource link.
is_domain	Yes	Boolean	Indicates whether the user calling the API is a tenant.
enabled	Yes	Boolean	Whether a project is available.
parent_id	Yes	String	Parent ID of the project.

- Example response

```
{
  "links": {
    "self": "https://sample.domain.com/v3/auth/projects",
    "previous": null,
    "next": null
  },
  "projects": [
    {
      "is_domain": false,
      "description": "",
      "links": {
        "self": "https://sample.domain.com/v3/projects/9041929bcc6e4bfe85add4e7b96ffdd7"
      },
      "enabled": true,
      "id": "9041929bcc6e4bfe85add4e7b96ffdd7",
      "parent_id": "398998b5392f4150ad48fe456d6de4f1",
      "domain_id": "398998b5392f4150ad48fe456d6de4f1",
      "name": "region_name"
    },
    {
      "is_domain": false,
      "description": "",
      "links": {
        "self": "https://sample.domain.com/v3/projects/ee65ca70d3cf43aaa1ea6492ce15f289"
      },
      "enabled": true,
      "id": "ee65ca70d3cf43aaa1ea6492ce15f289",
      "parent_id": "398998b5392f4150ad48fe456d6de4f1",
      "domain_id": "398998b5392f4150ad48fe456d6de4f1",
      "name": "MOS"    //Default project name of OBS
    }
  ]
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.4.3 Querying the List of Projects Accessible to Users

Function

This API is used to query the list of projects accessible to users.

This API can be called using both the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com) and region-specific domain names.

URI

GET /v3/auth/projects

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token of the user.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET /v3/auth/projects
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
projects	Yes	JSONArray	List of projects.
links	Yes	Object	Project resource link.

- Description for the project format

Parameter	Mandatory	Type	Description
description	Yes	String	Project description.
id	Yes	String	ID of a project.
domain_id	Yes	String	ID of the domain where a project is located.
name	Yes	String	Project name.
links	Yes	Object	Project resource link.
is_domain	Yes	Boolean	Indicates whether the user calling the API is a tenant.
enabled	Yes	Boolean	Whether a project is available.
parent_id	Yes	String	Parent ID of the project.

- Example response

```
{
  "links": {
    "self": "https://sample.domain.com/v3/auth/projects",
    "previous": null,
    "next": null
  },
  "projects": [
    {
      "is_domain": false,
      "description": "",
      "links": {
        "self": "https://sample.domain.com/v3/projects/9041929bcc6e4bfe85add4e7b96ffdd7"
      },
      "enabled": true,
      "id": "9041929bcc6e4bfe85add4e7b96ffdd7",
      "parent_id": "398998b5392f4150ad48fe456d6de4f1",
      "domain_id": "398998b5392f4150ad48fe456d6de4f1",
      "name": "region"
    },
    {
      "is_domain": false,
```

```
    "description": "",
    "links": {
      "self": "https://sample.domain.com/v3/projects/ee65ca70d3cf43aaa1ea6492ce15f289"
    },
    "enabled": true,
    "id": "ee65ca70d3cf43aaa1ea6492ce15f289",
    "parent_id": "398998b5392f4150ad48fe456d6de4f1",
    "domain_id": "398998b5392f4150ad48fe456d6de4f1",
    "name": "{project_name}"
  }
 ]
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.4.4 Creating a Project

Function

This API is used to create a project.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

POST /v3/projects

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Parameters in the request body

Parameter	Mandatory	Type	Description
name	Yes	String	Project name, which must start with "*ID of an existing region*_" and be less than or equal to 64 characters. Example: *{region_id}*_test1
parent_id	Yes	String	Parent project ID to which a project belongs.
domain_id	No	String	ID of the domain that a project belongs to.
description	No	String	Project description, which can contain a maximum of 255 characters.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X POST -d '{"project":{"domain_id":"acf2ffabba974fae8f30378ffde2c...","name":"region_test1"}}' https://sample.domain.com/v3/projects
```

Response Parameters

Example response

```
{
    "project": {
        "is_domain": false,
        "description": "",
        "links": {
            "self": "https://sample.domain.com/v3/projects/3de1461665f045ef91ba1efe8121b979"
        },
        "enabled": true,
        "id": "3de1461665f045ef91ba1efe8121b979",
        "parent_id": "d1294857fdf64251994892b344f53e88",
        "domain_id": "d1294857fdf64251994892b344f53e88",
        "name": "region_test1"
    }
}
```

Status Codes

Status Code	Description
201	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
409	Duplicate project name.

4.4.5 Modifying Project Data

Function

This API is used to modify project information.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  PATCH /v3/projects/{project_id}

- URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Text type and encoding mode. Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Parameters in the request body

Parameter	Mandatory	Type	Description
name	No	String	Project name, which must start with the ID of an existing region and be less than or equal to 64 characters. Example: *{region}*_**test2**
description	No	String	Project description, which can contain a maximum of 255 characters.

- Example Request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X PATCH -d
'{"project":{"name":"region_test2","description":"test_project_desc"}}' https://sample.domain.com/v3/
projects/23da5961c8214f5caf701c27d9703959
```

Response Parameters

Example Response

```
{
    "project": {
        "is_domain": false,
        "description": "test_project_desc",
        "links": {
            "self": "https://sample.domain.com/v3/projects/23da5961c8214f5caf701c27d9703959"
        },
        "enabled": true,
        "id": "23da5961c8214f5caf701c27d9703959",
        "parent_id": "d1294857fdf64251994892b344f53e88",
        "domain_id": "d1294857fdf64251994892b344f53e88",
        "name": "region_test2"
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
409	Duplicate project name.

4.4.6 Querying Information About a Specified Project

Function

This API is used to query detailed information about a project based on the project ID.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/projects/{project_id}

- URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token.
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.

- Example request

  Obtaining information about the project whose ID is project_id=619d3e78f61b4be68bc5aa0b59edcf7b

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/projects/619d3e78f61b4be68bc5aa0b59edcf7b
```

Response Parameters

- Example response

```
{
  "project": {
    "is_domain": false,
    "description": "",
    "links": {
      "self": "https://sample.domain.com/v3/projects/2e93d63d8d2249f5a4ac5e2c78586a6e"
    },
    "enabled": true,
    "id": "2e93d63d8d2249f5a4ac5e2c78586a6e",
    "parent_id": "44c0781c83484eb9a4a5d4d233522cea",
    "domain_id": "44c0781c83484eb9a4a5d4d233522cea",
    "name": "MOS"    //Default project name of OBS
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.4.7 Setting the Status of a Specified Project

Function

This API is used to set the status of a specified project. The project statuses include **Normal** and **Suspended**.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  PUT /v3-ext/projects/{project_id}

- URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Parameters in the request body

Parameter	Mandatory	Type	Description
status	Yes	String	Project status. The value can be **suspended** or **normal**.

NOTE

- **suspended**: The project is frozen.
- **normal**: The project is normal or unfrozen.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -X "X-Auth-Token:$token" -X PUT -d '{"project": {"status":"suspended"}}'https://sample.domain.com/v3-ext/projects/5c9f5525d9d24c5bbf91e74d86772029
```

Response Parameters

None

Status Codes

Status Code	Description
204	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.
503	Service unavailable.

4.4.8 Querying Information and Status of a Specified Project

Function

This API is used to query details about a specified project, including the project status.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3-ext/projects/{project_id}

- URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -X "X-Auth-Token:$token" -X GET https://sample.domain.com/v3-ext/projects/5c9f5525d9d24c5bbf91e74d86772029
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
project	Yes	Object	Project information.

- Description for the project format

Parameter	Mandatory	Type	Description
description	Yes	String	Project description.
id	Yes	String	Project ID.
domain_id	Yes	String	ID of the domain that a project belongs to.
name	Yes	String	Project name.
is_domain	Yes	Boolean	Indicates whether the user calling the API is a tenant.
enabled	Yes	Boolean	Whether a project is available.
parent_id	Yes	String	Parent ID of a project.

Parameter	Mandatory	Type	Description
status	Yes	String	Project status.
suspended_time	No	String	Time when a project is suspended.

- Example response

```
{
  "project": {
    "is_domain": false,
    "description": "",
    "enabled": true,
    "id": "ee65ca70d3cf43aaa1ea6492ce15f289",
    "parent_id": "9041929bcc6e4bfe85add4e7b96ffdd7",
    "domain_id": "398998b5392f4150ad48fe456d6de4f1",
    "name": "{region_id}_test1",
    "status": "suspended",
    "suspended_time": "2017-08-17T02:50:23.000000"
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.
503	Service unavailable.

4.4.9 Deleting a Project

Function

This API is used to delete a project.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  DELETE /v3/projects/{project_id}

- URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example Request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X DELETE https://sample.domain.com/v3/projects/3291eab70fd743499ef1a09aa3ae67a7
```

Response Parameters

None

Status Codes

Status Code	Description
204	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.
503	Service unavailable.

4.4.10 Querying the Quotas of a Project

Function

This API is used to query the quotas of a specified project.

URI

- URI format
  GET /v3.0/OS-QUOTA/projects/{project_id}
- URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	ID of the project to query quotas.

Request Parameters

Table 4-22 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Provide either of the following tokens: • Token with **Security Administrator** permissions • IAM user token with the **scope** specified as the project you want to query

Response Parameters

Table 4-23 Parameters in the response body

Parameter	Type	Description
quotas	object	Quota information of the domain.

Table 4-24 quotas

Parameter	Type	Description
resources	Array of objects	Resource information.

Table 4-25 resources

Parameter	Type	Description
max	Integer	Maximum quota.
min	Integer	Minimum quota.
quota	Integer	Current quota.
type	String	Quota type.
used	Integer	Used quota.

Example Request

```
GET https://sample.domain.com/v3.0/OS-QUOTA/projects/{project_id}
```

Example Response

Status code: 200

The request is successful.

```
{
  "quotas" : {
              "resources" : [
                   {
                       "max" : 50,
                       "min" : 0,
                       "quota" : 10,
                       "type" : "project",
                       "used" : 4
                     }
                  ]
            }
}
```

Status code: 403

Access denied.

- Example 1

```
{
   "error_msg" : "You are not authorized to perform the requested action.",
   "error_code" : "IAM.0002"
 }
```

- Example 2

```
{
   "error_msg" : "Policy doesn't allow %(actions)s to be performed.",
   "error_code" : "IAM.0003"
 }
```

Status code: 404

The requested resource cannot be found.

```
{
  "error_msg" : "Could not find %(target)s: %(target_id)s.",
  "error_code" : "IAM.0004"
}
```

Status code: 500

Internal server error.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
200	The request is successful.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.5 Tenant Management

4.5.1 Querying the List of Domains Accessible to Users

Function

This API is used to query the list of domains accessible to users.

This API can be called using both the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com) and region-specific domain names.

URI

GET /v3/auth/domains

Request Parameters

- Parameters in the request header

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

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/auth/domains
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
domains	Yes	JSONArray	List of domains.
links	Yes	JSON object	Domain resource link.

- Description for the domain format

Parameter	Mandatory	Type	Description
enabled	Yes	Boolean	Whether a domain is enabled. **true** indicates that the domain is enabled. **false** indicates that the domain is disabled. The default value is **true**.
id	Yes	String	Domain ID.
name	Yes	String	Domain name.
links	Yes	JSON object	Domain resource link.
description	No	String	Domain description.

- Example response

```
{
    "domains": [{
        "description": "desc of domain",
        "enabled": true,
        "id": "37ef61",
        "links": {
            "self": "https://sample.domain.com/v3/domains/37ef61"
        },
        "name": "my domain"
    }],
    "links": {
        "self": "https://sample.domain.com/v3/auth/domains",
        "previous": null,
        "next": null
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.

Status Code	Description
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.5.2 Querying the Password Strength Policy

Function

This API is used to query the password strength policy, including its regular expression and description.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/domains/{domain_id}/config/security_compliance

- URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Domain ID to be queried.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token of a user.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/domains/{domain_id}/config/security_compliance
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
security_compliance	Yes	JSON	Password strength policy.
password_regex	Yes	String	Regular expression of the password strength policy.
password_regex_description	Yes	String	Description of the password strength policy.

- Example response

```
{
  "config": {
    "security_compliance": {
      "password_regex": "^(?=.*\\d)(?=.*[a-zA-Z]).{7,}$",
      "password_regex_description": "Passwords must contain at least 1 letter, 1 digit, and be a minimum length of 7 characters."
    }
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.5.3 Querying the Password Strength Policy by Option

Function

This API is used to query the password strength policy by **option**. The option can be the regular expression and description of the password strength policy.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/domains/{domain_id}/config/security_compliance/{option}

- URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	ID of the domain whose password strength policy is to be queried.
option	Yes	String	Query option, which can be **password_regex** or **password_regex_description**.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated user token.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/domains/{domain_id}/config/security_compliance/password_regex
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
config	Yes	JSON	Password strength policy of a domain.

- Description for the config format

Parameter	Mandatory	Type	Description
password_regex	No	String	Regular expression of the password strength policy (When **option** is set to **password_regex**).
password_regex_description	No	String	Description of the password strength policy (When **option** is set to **password_regex_description**).

- Example response

When **option** is set to **password_regex**:

```
{
  "config": {
    "password_regex": "^(?=.*\\d)(?=.*[a-zA-Z]).{7,}$"
  }
}
```

When **option** is set to **password_regex_description**:

```
{
  "config": {
    "password_regex_description": "Passwords must contain at least 1 letter, 1 digit, and be a minimum length of 7 characters."
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.5.4 Querying a Resource Quota

Function

This API is used to query a resource quota. You can query the quota of users, user groups, identity providers, agencies, and policies.

URI

- URI format

  GET /v3.0/OS-QUOTA/domains/{domain_id}

- URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	ID of the domain whose quota is to be queried.
type	No	String	Type of the quota to be queried. The value can be user, group, idp, agency, and policy.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token (no special permission requirements).

- Example request

```
GET https://sample.domain.com/v3.0/OS-QUOTA/domains/{domain_id}?type=group
```

Response Parameters

Table 4-26 Parameters in the response body

Parameter	Type	Description
quotas	Object	Quota information of the domain.

Table 4-27 quotas

Parameter	Type	Description
resources	Array of objects	Resource information.

Table 4-28 resources

Parameter	Type	Description
max	Integer	Maximum quota.
min	Integer	Minimum quota.
quota	Integer	Current quota.
type	String	Quota type.
used	Integer	Used quota.

- Example response

```
Group quota:
{
    "quotas": {
        "resources": [
            {
                "max": 200,
                "min": 10,
                "quota": 20,
                "type": "group",
                "used": 6
            }
        ]
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
500	Internal server error.
503	Service unavailable.

4.5.5 Querying the Quotas of an Account

Function

This API is used to query the quotas of a specified account.

The API can be called using both the global endpoint and region-specific endpoints.

URI

GET /v3.0/OS-QUOTA/domain/{domain_id}

Table 4-29 URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Account ID. For details about how to obtain the account ID, see **Obtaining User, Account, User Group, Project, and Agency Information**.

Table 4-30 Query parameters

Parameter	Mandatory	Type	Description
type	No	String	Quota type. The value can be any of the following: **user**, **group**, **idp**, **agency**, **policy**, **assigment_group_mp**, **assigment_agency_mp**, **assigment_group_ep**, **assigment_user_ep**, **assigment_agency_ep**, and **mapping**.

Request Parameters

Table 4-31 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token (No special permissions are required, but the **scope** of the token must be **domain**.)

Response Parameters

Status code: 200

Table 4-32 Parameters in the response body

Parameter	Type	Description
quotas	Array of **QuotaResult** objects	Quota information of the account.

Table 4-33 QuotaResult

Parameter	Type	Description
resources	Array of **Resources** objects	Resource information.

Table 4-34 Resources

Parameter	Type	Description
max	Integer	Maximum quota.
min	Integer	Minimum quota.
quota	Integer	Current quota.
type	String	Quota type.
used	Integer	Used quota.

Example Request

```
GET https://{domain_url}/v3.0/OS-QUOTA/domains/{domain_id}
```

Example Response

Status code: 200

The request is successful.

```
{
  "quotas" : {
    "resources" : [ {
      "max" : 1000,
      "min" : 50,
      "quota" : 50,
      "type" : "user",
      "used" : 10
    }, {
      "max" : 300,
      "min" : 10,
      "quota" : 20,
      "type" : "group",
      "used" : 8
    }, {
```

```
    "max" : 20,
    "min" : 10,
    "quota" : 10,
    "type" : "idp",
    "used" : 9
   }, {
    "max" : 300,
    "min" : 10,
    "quota" : 50,
    "type" : "agency",
    "used" : 12
   }, {
    "max" : 300,
    "min" : 128,
    "quota" : 200,
    "type" : "policy",
    "used" : 8
   } ]
  }
}
```

Status code: 401

Authentication failed.

```
{
  "error_msg" : "The request you have made requires authentication.",
  "error_code" : "IAM.0001"
}
```

Status code: 403

Access denied.

```
{
  "error_msg" : "You are not authorized to perform the requested action.",
  "error_code" : "IAM.0002"
}
```

Status code: 404

The requested resource cannot be found.

```
{
  "error_msg" : "Could not find %(target)s: %(target_id)s.",
  "error_code" : "IAM.0004"
}
```

Status code: 500

Internal server error.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Code

Status Code	Description
200	The request is successful.
401	Authentication failed.

Status Code	Description
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

Error Codes

See **Error Codes**.

4.6 User Management

4.6.1 Querying a User List

Function

This API is used to query a user list.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/users
- URI parameters

Parameter	Mandatory	Type	Description
domain_id	No	String	ID of the domain that a user belongs to.
enabled	No	String	Whether a user is enabled. **true** indicates that the user is enabled. **false** indicates that the user is disabled. The default value is **true**.
name	No	String	Username.

Parameter	Mandatory	Type	Description
password_expires_at	No	String	Password expiration time. The format is **password_expires_at=***operator***:***timestamp*. Example: password_expires_at=lt:2016-12-08T22:02:00Z • The value of **operator** can be **lt**, **lte**, **gt**, **gte**, **eq**, or **neq**. – **lt**: The expiration time is earlier than *timestamp*. – **lte**: The expiration time is earlier than or equal to *timestamp*. – **gt**: The expiration time is later than *timestamp*. – **gte**: The expiration time is equal to or later than *timestamp*. – **eq**: The expiration time is equal to *timestamp*. – **neq**: The expiration time is not equal to *timestamp*. • The **timestamp** format is **YYYY-MM-DDTHH:mm:ssZ**.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request
  ```
  curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/users
  ```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
users	Yes	JSONArray	User list.
links	Yes	JSON object	Links of a user resource.

- Description for the user format

Parameter	Mandatory	Type	Description
description	Yes	String	Description for a user.
domain_id	Yes	String	ID of the tenant that the user belongs to.
enabled	Yes	Boolean	Indicates whether the user is enabled. The value can be **true** or **false**. The default value is **true**.
id	Yes	String	User ID.
links	Yes	JSON object	User resource link.
name	Yes	String	Username.
password_expires_at	Yes	String	UTC time when the password will expire. **null** indicates that the password will not expire.
pwd_status	No	Boolean	Password status. **true** means that the password needs to be changed, and **false** means that the password is normal.
pwd_strength	No	String	Password strength. The value can be **high**, **mid**, or **low**.
default_project_id	No	String	ID of the project that is displayed by default when the user logs in to the console.
last_project_id	No	String	ID of the project that the user lastly accessed before exiting the system.
email	No	String	User email address.

- Example response

```
{
    "users": [{
        "name": "username",
        "links": {
            "self": "https://sample.domain.com/v3/users/6d8b04e3bf99445b8f76300xxx"
        },
        "description": "1234",
        "domain_id": "88b16b6440684467b8825d7xxx",
        "enabled": false,
        "id": "6d8b04e3bf99445b8f763009xxx",
        "email" : ""
        "default_project_id": "263fd9",
        "password_expires_at": "2016-12-07T00:00:00.000000Z",
        "pwd_status": true,
        "pwd_strength": "high",
        "last_project_id": ""
    }],
    "links": {
        "self": "https://sample.domain.com/v3/users?
domain_id=88b16b6440684467b882xxx154d8&enabled=false",
        "previous": null,
        "next": null
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.6.2 Querying User Details

Function

This API is used to query detailed information about a specified user.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/users/{user_id}

- URI parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with **Security Administrator** permissions or a user token.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/users/43cbe5e77aaf4665bbb962062dc1fxxx
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
user	Yes	JSON object	User details.

- Description for the user format

Parameter	Mandatory	Type	Description
description	Yes	String	Description for a user.
domain_id	Yes	String	ID of the tenant that the user belongs to.
enabled	Yes	Boolean	Indicates whether the user is enabled. The value can be **true** or **false**. The default value is **true**.
id	Yes	String	ID of a user.

Parameter	Mandatory	Type	Description
links	Yes	JSON object	Links of a user resource.
name	Yes	String	Username.
password_expires_at	Yes	String	UTC time when the password will expire. **null** indicates that the password has unlimited validity.
pwd_status	No	Boolean	Password status. **true** means that the password needs to be changed, and **false** means that the password is normal.
pwd_strength	No	String	Password strength. The value can be **high**, **mid**, or **low**.
default_project_id	No	String	ID of the project that is displayed by default when the user logs in to the console.
last_project_id	No	String	ID of the project that the user lastly accessed before exiting the system.

- Example response

```
{
    "users": [{
        "name": "username",
        "links": {
            "self": "https://sample.domain.com/v3/users/6d8b04e3bf99445b8f76300xxx"
        },
        "description": "1234",
        "domain_id": "88b16b6440684467b8825d7xxx",
        "enabled": false,
        "id": "6d8b04e3bf99445b8f763009xxx",
        "password_expires_at": "2016-12-07T00:00:00.000000Z",
        "pwd_status": true,
        "pwd_strength": "high",
        "last_project_id": ""
    }],
    "links": {
        "self": "https://sample.domain.com/v3/users?
domain_id=88b16b6440684467b882xxx154d8&enabled=false",
        "previous": null,
        "next": null
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.

Status Code	Description
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.6.3 Querying User Details (Recommended)

Function

This API can be used by the administrator to query the details about a specified user or used by a user to query their details.

URI

GET /v3.0/OS-USER/users/{user_id}

Table 4-35 URI parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

Table 4-36 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	A token with **Security Administrator** permissions is required if the administrator is requesting to query the details about a specified user. If an IAM user is requesting to query their details, the user token (no special permission requirements) of the user is required.

Response Parameters

Table 4-37 Parameters in the response body

Parameter	Type	Description
user	Object	User information.

Table 4-38 user

Parameter	Type	Description
enabled	Boolean	Enabling status of the user. **true** (default value) indicates that the user is enabled. **false** indicates that the user is disabled.
id	String	User ID.
domain_id	String	ID of the account to which the user belongs.
name	String	Username.
links	Object	User resource link information.
xuser_id	String	ID of the user in the external system.
xuser_type	String	Type of the user in the external system.
areacode	String	Country code.
email	String	Email address.
phone	String	Mobile number.

Parameter	Type	Description
pwd_status	Boolean	Password status. **true** means that the password needs to be changed, and **false** means that the password is normal.
update_time	String	Time when the user was last updated.
create_time	String	Time when the user was created.
last_login_time	String	Last login time of the user.
pwd_strength	String	Password strength. The value can be **Low**, **Middle**, **High**, or **None**.
is_domain_owner	Boolean	Indicates whether the user is the account administrator.
description	String	Description about the user.

Table 4-39 user.links

Parameter	Type	Description
self	String	Resource link.
previous	String	Previous resource link.
next	String	Next resource link.

Example Request

```
GET https://sample.domain.com/v3.0/OS-USER/users/{user_id}
```

Example Response

Status code: 200

The request is successful.

```
{
  "user" : {
    "pwd_strength" : "Strong",
    "create_time" : "2020-07-08 02:19:03.0",
    "last_login_time" : null,
    "areacode" : "",
    "enabled" : true,
    "domain_id" : "086ba757f90089cf0fe5c000dbe7f...",
    "xuser_id" : "",
    "pwd_status" : false,
    "update_time" : null,
    "phone" : "-",
    "name" : "autotest1",
    "links" : {
      "next" : null,
      "previous" : null,
```

```
    "self" : "https://sample.domain.com/v3.0/OS-USER/users/093f75808b8089ba1f6dc000c7cac..."
  },
  "id" : "093f75808b8089ba1f6dc000c7cac...",
  "xuser_type" : "",
  "email" : "",
 }
}
```

Status Codes

Status Code	Description
200	The request is successful.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
500	Internal server error.

4.6.4 Querying User Details (Including Email Address and Mobile Number)

Function

This API is used to query the details of an IAM user.

URI

GET /v3.0/OS-USER/users/{user_id}

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with **Security Administrator** permissions or a user token.

- Example request

  Run the following command under the directory storing the *${filename}*.**json** file:

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3.0/OS-USER/users/0638848aa7801dbe1f01c01e92b95df7
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
user	Yes	JSON object	User details.

- Description for the user format

Parameter	Mandatory	Type	Description
enabled	Yes	Boolean	Enabling status of the user. The value can be **true** or **false**. **true** (default value) indicates the user is enabled and **false** indicates the user is disabled.
id	Yes	String	User ID.
domain_id	Yes	String	ID of the account to which the user belongs.
name	Yes	String	Username.
links	Yes	JSON object	User resource link.
xuser_id	No	String	User ID used in an external system with a maximum of 128 characters.
xuser_type	No	String	User type used in an external system with a maximum of 64 characters.
email	No	String	Email address with a maximum of 255 characters.
areacode	No	String	Country code.
phone	No	String	Mobile number with a maximum of 32 digits.

Parameter	Mandatory	Type	Description
pwd_status	No	Boolean	Whether password reset is required at first login. The value can be **true** (password reset is required at first login) or **false** (password reset is not required at first login).

- Example response

```
{
  "user": {
    "name": "jamesdoe",
    "domain_id": "88b16b6440684467b8825d7d96e154d8",
    "enabled": true,
    "links": {
      "self": "https://sample.domain.com/v3/users/614d1d2fb86940faab8f350bf1b9dbac"
    },
    "id": "614d1d2fb86940faab8f350bf1b9dbac",
    "xuser_id":"57e9bd87d4394fa380056250a7eb231b",
    "xuser_type":"AGC",
    "pwd_status": false,
    "email":"helloIAM@123.com"
    "areacode":"0086",
    "phone":"13412341234"
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
409	A resource conflict occurs.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.6.5 Querying the User Group to Which a User Belongs

Function

This API is used to query the information about the user group to which a specified user belongs.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/users/{user_id}/groups

- URI parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission or authenticated token of the user.

- Example request

  curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/users/43cbe5e77aaf4665bbb962062dc1fc9d/groups

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
groups	Yes	JSONArray	List of a user group.
links	Yes	JSON object	User group resource link.

- Description for the group format

Parameter	Mandatory	Type	Description
description	Yes	String	Description for a user group.
id	Yes	String	User group ID.
domain_id	Yes	String	ID of the domain where a user group is located.
name	Yes	String	User group name.
links	Yes	JSON object	User group resource link.
create_time	Yes	Long	Time when a user group is created.

- Example response

```
{
    "links": {
        "self": "https://sample.domain.com/v3/users/f7cb4876e5174c0885433e280e831c43/groups",
        "previous": null,
        "next": null
    },
    "groups": [{
        "description": "User group that has the permission for all system operations",
        "links": {
            "self": "https://sample.domain.com/v3/groups/e21c7a1e415c4604927948dc24750716"
        },
        "id": "e21c7a1e415c4604927948dc24750716",
        "create_time": 1472888495993,
        "domain_id": "88b16b6440684467b8825d7d96e154d8",
        "name": "admin"
    }]
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.

Status Code	Description
503	Service unavailable.

4.6.6 Querying Users in a User Group

Function

This API is used to query users in a user group.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/groups/{group_id}/users

- URI parameters

Parameter	Mandatory	Type	Description
group_id	Yes	String	ID of a user group.

- Query parameters

Parameter	Mandatory	Type	Description
domain_id	No	String	ID of the domain to which a user group belongs.
name	No	String	Name of a user. The maximum length is 64 characters.
enabled	No	String	Whether a user is enabled. The value can be **true** or **false**. **true** indicates the user is enabled and **false** indicates the user is not enabled.

Parameter	Mandatory	Type	Description
password_expires_at	No	String	Password expiration time. The format is **password_expires_at=***operator*:*timestamp*. Example: password_expires_at=lt:2016-12-08T22:02:00Z • The value of **operator** can be **lt**, **lte**, **gt**, **gte**, **eq**, or **neq**. – **lt**: The expiration time is earlier than *timestamp*. – **lte**: The expiration time is earlier than or equal to *timestamp*. – **gt**: The expiration time is later than *timestamp*. – **gte**: The expiration time is equal to or later than *timestamp*. – **eq**: The expiration time is equal to *timestamp*. – **neq**: The expiration time is not equal to *timestamp*. • The **timestamp** format is **YYYY-MM-DDTHH:mm:ssZ**.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/groups/00007111583e457389b0d4252643181b/users
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
links	Yes	JSON object	User resource link of a user group.
users	Yes	JSONArray	List of users in a user group.

- Description for the user format

Parameter	Mandatory	Type	Description
description	Yes	String	Description for a user.
domain_id	Yes	String	ID of the tenant that the user belongs to.
enabled	Yes	Boolean	Indicates whether the user is enabled. The value can be **true** or **false**. The default value is **true**.
id	Yes	String	User ID.
links	Yes	JSON object	User resource link.
name	Yes	String	Username.
password_expires_at	Yes	String	UTC time when the password will expire. **null** indicates that the password will not expire.
pwd_status	No	Boolean	Password status. **true** means that the password needs to be changed, and **false** means that the password is normal.
pwd_strength	No	String	Password strength. The value can be **high**, **mid**, or **low**.
default_project_id	No	String	ID of the project that is displayed by default when the user logs in to the console.
last_project_id	No	String	ID of the project that the user lastly accessed before exiting the system.
email	No	String	User email address.

- Example response

```
{
    "users": [{
```

```
        "name": "username",
        "links": {
            "self": "https://sample.domain.com/v3/users/6d8b04e3bf99445b8f76300xxx"
        },
        "description": "1234",
        "domain_id": "88b16b6440684467b8825d7xxx",
        "enabled": false,
        "id": "6d8b04e3bf99445b8f763009xxx",
        "email" : ""
        "default_project_id": "263fd9",
        "password_expires_at": "2016-12-07T00:00:00.000000Z",
        "pwd_status": true,
        "pwd_strength": "high",
        "last_project_id": ""
    }],
    "links": {
        "self": "https://sample.domain.com/v3/users?
domain_id=88b16b6440684467b882xxx154d8&enabled=false",
        "previous": null,
        "next": null
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.

4.6.7 Creating an IAM User (Recommended)

Function

This API is provided for the administrator to create an IAM user.

URI

POST /v3.0/OS-USER/users

Request Parameters

Table 4-40 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Access credential issued to a user to bear its identity and permissions. For details about the permissions required by the token, see "Actions".

Table 4-41 Parameters in the request body

Parameter	Mandatory	Type	Description
user	Yes	Object	IAM user information.

Table 4-42 user

Parameter	Mandatory	Type	Description
name	Yes	String	IAM user name, which consists of 1 to 32 characters. It can contain letters, digits, spaces, hyphens (-), underscores (_), and periods (.) and cannot start with a digit or space.
domain_id	Yes	String	Account ID. For details about how to obtain the account ID, see **Obtaining User, Account, User Group, Project, and Agency Information**.
password	No	String	Password of the user. The password must meet the following requirements:
email	No	String	Email address with a maximum of 255 characters.
areacode	No	String	Country code. The country code must be used together with a mobile number.

Parameter	Mandatory	Type	Description
phone	No	String	Mobile number with a maximum of 32 digits. The mobile number must be used together with a country code.
enabled	No	Boolean	Enabling status of the IAM user. **true** (default value) indicates that the user is enabled. **false** indicates that the user is disabled.
pwd_status	No	Boolean	Indicates whether password reset is required at the first login. By default, password reset is required.
xuser_type	No	String	Type of the IAM user in the external system. The user type can contain a maximum of 64 characters. **xuser_type** must be used together with **xuser_id** and will be verified based on **xaccount_type** and **xdomain_type** of the same account. Currently, the parameter value can only be **TenantIdp**. **NOTE** An external system refers to an enterprise management system connected to the cloud platform. Parameters **xaccount_type**, **xaccount_id**, **xdomain_type**, **xdomain_id**, **xuser_type**, and **xuser_id** cannot be obtained from the cloud platform. Please contact your enterprise administrator.
xuser_id	No	String	ID of the IAM user in the external system. The user ID can contain a maximum of 128 characters, and must be used together with **xuser_type**. Due to the latency, the IAM console may not be able to display the external identity ID you have set in real time. Refresh the page later. **NOTE** An external system refers to an enterprise management system connected to the cloud platform. Parameters **xaccount_type**, **xaccount_id**, **xdomain_type**, **xdomain_id**, **xuser_type**, and **xuser_id** cannot be obtained from the cloud platform. Please contact your enterprise administrator.

Parameter	Mandatory	Type	Description
access_mode	No	String	Access type of the IAM user. • **default**: programmatic access and management console access. This option is the default access type. • **programmatic**: programmatic access • **console**: management console access
description	No	String	Description of the IAM user.

Response Parameters

Table 4-43 Parameters in the response body

Parameter	Type	Description
user	Object	IAM user information.

Table 4-44 user

Parameter	Type	Description
status	Integer	Status of the IAM user.
pwd_status	Boolean	Indicates whether password reset is required at the first login.
xuser_id	String	ID of the IAM user in the external system. **NOTE** An external system refers to an enterprise management system connected to the cloud platform. Parameters **xaccount_type**, **xaccount_id**, **xdomain_type**, **xdomain_id**, **xuser_type**, and **xuser_id** cannot be obtained from the cloud platform. Please contact your enterprise administrator.
xuser_type	String	Type of the IAM user in the external system. **NOTE** An external system refers to an enterprise management system connected to the cloud platform. Parameters **xaccount_type**, **xaccount_id**, **xdomain_type**, **xdomain_id**, **xuser_type**, and **xuser_id** cannot be obtained from the cloud platform. Please contact your enterprise administrator.

Parameter	Type	Description
access_mode	String	Access type of the IAM user. • **default**: programmatic access and management console access. This option is the default access type. • **programmatic**: programmatic access • **console**: management console access
description	String	Description of the IAM user.
name	String	IAM user name, which consists of 1 to 32 characters. It can contain letters, digits, spaces, hyphens (-), underscores (_), and periods (.) and cannot start with a digit or space.
phone	String	Mobile number with a maximum of 32 digits. The mobile number must be used together with a country code.
is_domain_owner	Boolean	Whether the IAM user is an administrator.
domain_id	String	ID of the account to which the IAM user belongs.
enabled	Boolean	Enabling status of the IAM user. **true** (default value) indicates that the user is enabled. **false** indicates that the user is disabled.
areacode	String	Country code.
email	String	Email address.
create_time	String	Time when the IAM user was created. **NOTE** The value is a UTC time in the YYYY-MM-DDTHH:mm:ss.ssssssZ format, for example, 2023-06-28T08:56:33.710000Z. For details about the date and timestamp formats, see **ISO-8601**.
xdomain_id	String	Customer code of the business entity.
xdomain_type	String	Business entity.
id	String	IAM user ID that contains 32 characters.
password_expires_at	String	Password expiration time. If this parameter is set to **null**, the password will never expire. **NOTE** The value is a UTC time in the YYYY-MM-DDTHH:mm:ss.ssssssZ format, for example, 2023-06-28T08:56:33.710000Z. For details about the date and timestamp formats, see **ISO-8601**.

Example Request

Request for an administrator to create an IAM user named **IAMUser**, with the email address **IAMEmail@example.com** and mobile number **0012312345678910** bound, and with both programmatic access and management console access

```
POST https://sample.domain.com/v3.0/OS-USER/users
{
    "user": {
        "domain_id": "d78cbac186b744899480f25...",
        "name": "IAMUser",
        "password": "IAMPassword@",
        "email": "IAMEmail@example.com",
        "areacode": "00123",
        "phone": "12345678910",
        "enabled": true,
        "pwd_status": false,
        "xuser_type": "",
        "xuser_id": "",
        "access_mode" : "default",
        "description": "IAMDescription"
    }
}
```

Example Response

Status code: 201

The IAM user is created successfully.

```
{
    "user": {
        "pwd_status": false,
        "xuser_id": "",
        "xuser_type": "",
        "access_mode" : "default",
        "description": "IAMDescription",
        "name": "IAMUser",
        "phone": "12345678910",
        "is_domain_owner": false,
        "enabled": true,
        "domain_id": "d78cbac186b744899480f25bd...",
        "areacode": "00123",
        "email": "IAMEmail@example.com",
        "create_time": "2020-01-06T08:05:16.000000",
        "xdomain_id": "",
        "xdomain_type": "",
        "id": "07664aec578026691f00c003a..."
    }
}
```

Status Codes

Status Code	Description
201	The IAM user is created successfully.
400	Invalid parameters.
401	Authentication failed.
403	Access denied.

Status Code	Description
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
409	A resource conflict occurs.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

Error Codes

See "Error Codes".

4.6.8 Creating a User

Function

This API is used to create a user under a domain.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

POST /v3/users

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Parameters in the request body

Table 4-45 Description for the user format

Parameter	Mandatory	Type	Description
user	Yes	Object	User information.

Table 4-46 user

Parameter	Mandatory	Type	Description
name	Yes	String	A username with 8 to 32 characters. The username can contain special characters, but only hyphens (-), underscores (_), and periods (.) are allowed. It cannot start with a digit.
domain_id	No	String	ID of the domain where a user is located.
enabled	No	Boolean	Whether a user is enabled. The value can be **true** or **false**. **true** indicates the user is enabled and **false** indicates the user is not enabled. The default value is **true**.

Parameter	Mandatory	Type	Description
password	No	String	Password of the user. The password must meet the following requirements: • Can contain 6 to 32 characters. The system default minimum password length is 12 characters, and you can change the minimum password length. • Must contain at least two of the following character types: uppercase letters, lowercase letters, digits, and special characters. • Cannot be the username or the username spelled backwards. • Cannot contain the user's mobile phone number or email address. • Must comply with the password policies under **Account Settings**.
default_project_id	No	String	Default project ID of a user.
description	No	String	Description of the user.

- Example request

1. Create the temporary file *${filename}*.**json** based on the following template. *${filename}* indicates the temporary file name, which is user-defined.

```
{
    "user": {
        "default_project_id": "acf2ffabba974fae8f30378ffde2cfa6",
        "domain_id": "88b16b6440684467b8825d7d96e154d8",
        "enabled": true,
        "name": "jamesdoe",
        "password": "********"
    }
}
```

2. Run the following command under the directory storing the *${filename}*.**json** file.

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X POST -d @${filename}.json https://sample.domain.com/v3/users
```

3. Run the following command under the directory of the *${filename}*.**json** file to delete the *${filename}*.**json** file.

```
rm ${filename}.json
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
user	Yes	JSON object	User object.

- Description for the user format

Parameter	Mandatory	Type	Description
enabled	Yes	Boolean	Whether a user is enabled. The value can be **true** or **false**. **true** indicates the user is enabled and **false** indicates the user is not enabled. The default value is **true**.
id	Yes	String	User ID.
domain_id	Yes	String	ID of the domain where a user is located.
name	Yes	String	Username.
links	Yes	JSON object	User resource link.
default_project_id	No	String	Default project ID of a user.
password_expires_at	Yes	String	UTC when the password will expire. **null** indicates that the password will not expire.

- Example response

```
{
    "user": {
        "name": "jamesdoe",
        "links": {
            "self": "https://sample.domain.com/v3/users/614d1d2fb86940faab8f350bf1b9dbac"
        },
        "domain_id": "88b16b6440684467b8825d7d96e154d8",
        "enabled": true,
        "id": "614d1d2fb86940faab8f350bf1b9dbac",
        "default_project_id": "acf2ffabba974fae8f30378ffde2cfa6",
        "password_expires_at": null
    }
}
```

Status Codes

Status Code	Description
201	The user is successfully created.

Status Code	Description
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
409	A resource conflict occurs.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.6.9 Changing a Password

Function

This API is used to change the password for a user.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  POST /v3/users/{user_id}/password
- URI parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.

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

- Parameters in the request body

Parameter	Mandatory	Type	Description
original_password	Yes	String	Original password of a user.
password	Yes	String	User password after the change. The password must meet the following requirements: ● Can contain 6 to 32 characters. The default minimum password length is 12 characters. ● Must contain at least two of the following character types: uppercase letters, lowercase letters, digits, and special characters. ● Cannot be the username or the username spelled backwards. ● Cannot contain the user's mobile phone number or email address. ● Must meet the requirements of the password policy configured on the account settings page.

- Example request

1. Create the temporary file *${filename}*.**json** based on the following template. *${filename}* indicates the temporary file name, which is user-defined.

```
{
    "user": {
        "password": "*********",
        "original_password": "*********"
    }
}
```

2. Run the following command under the directory storing the *${filename}*.**json** file.

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X POST -d @${filename}.json https://sample.domain.com/v3/users/2c1c6c54e59141b889c99e6fada5f19f/password
```

3. Run the following command under the directory of the *${filename}*.**json** file to delete the *$*

```
{filename}.json file.
rm ${filename}.json
```

Response Parameters

None

Status Codes

Status Code	Description
204	The password is changed successfully.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.6.10 Modifying User Information

Function

This API is used to modify user information under a domain.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  PATCH /v3/users/{user_id}

- URI parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Parameters in the request body

Parameter	Mandatory	Type	Description
name	No	String	A username with 8 to 32 characters. The username can contain special characters, but only hyphens (-), underscores (_), and periods (.) are allowed. It cannot start with a digit.
domain_id	No	String	ID of the domain where a user is located.
enabled	No	Boolean	Enabling status of the user. **true** indicates that the user is enabled. **false** indicates that the user is disabled. The default value is **true**.

Parameter	Mandatory	Type	Description
password	No	String	User password after the change. The password must meet the following requirements: ● Can contain 6 to 32 characters. The system default minimum password length is 12 characters, and you can change the minimum password length. ● Must contain at least two of the following character types: uppercase letters, lowercase letters, digits, and special characters. ● Cannot be the username or the username spelled backwards. ● Cannot contain the user's mobile phone number or email address. ● Must comply with the password policies under **Account Settings**.
default_project_id	No	String	Default project ID of a user.
description	No	String	Description of the user.

- Example request

1. Create the temporary file *${filename}*.**json** based on the following template. *${filename}* indicates the temporary file name, which is user-defined.

```
{
    "user": {
        "name": "james1234",
        "default_project_id": "88b16b6440684467b8825d7d96e154d8",
        "enabled": false,
        "password": "********"
    }
}
```

2. Run the following command under the directory storing the *${filename}*.**json** file.

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X POST -d @${filename}.json https://sample.domain.com/v3/users/
```

2c1c6c54e59141b889c99e6fada5f19f
3. Run the following command under the directory of the *${filename}*.**json** file to delete the *${filename}*.**json** file.
rm *${filename}.json*

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
user	Yes	JSON object	User object.

- Description for the user format

Parameter	Mandatory	Type	Description
enabled	Yes	Boolean	Whether a user is enabled. The value can be **true** or **false**. **true** indicates the user is enabled and **false** indicates the user is not enabled. The default value is **true**.
id	Yes	String	User ID.
domain_id	Yes	String	ID of the domain where a user is located.
name	Yes	String	Username.
links	Yes	JSON object	User resource link.
description	Yes	String	Description of the user.
default_project_id	No	String	Default project ID of a user.
password_expires_at	Yes	String	UTC when the password will expire. **null** indicates that the password will not expire.

- Example response

```
{
    "user": {
        "name": "james1234",
        "links": {
            "self": "https://sample.domain.com/v3/users/6d8b04e3bf99445b8f76300903e5bf32"
        },
        "description": {
        },
        "domain_id": "88b16b6440684467b8825d7d96e154d8",
        "enabled": false,
        "id": "6d8b04e3bf99445b8f76300903e5bf32",
        "default_project_id": "88b16b6440684467b8825d7d96e154d8",
        "password_expires_at": "2016-12-07T00:00:00.000000Z"
```

```
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
409	A resource conflict occurs.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.6.11 Modifying User Information (Including Email Address and Mobile Number) as an IAM User

Function

This API is provided for IAM users to modify their information.

URI

PUT /v3.0/OS-USER/users/{user_id}/info

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	User token.

- Parameters in the request body

  Table 4-47 Parameters in the request body

Parameter	Mandatory	Type	Description
user	Yes	Object	IAM user information.

  Table 4-48 user

Parameter	Mandatory	Type	Description
email	No	String	Email address with a maximum of 255 characters.
phone	No	String	Mobile number with a maximum of 32 digits. To change the mobile number, you must specify the country code.
areacode	No	String	Country code. This parameter is mandatory if the mobile number is changed.

- Example request
  - Create a temporary file named *${filename}*.**json** using the following content format:

```
{
   "user": {
      "areacode": "0001",
      "phone": "1234567890",
      "email": "abcdefg@123.com"
   }
}
```

  - Run the following command under the directory storing the *${filename}*.**json** file:

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X PUT -d @${filename}.json https://sample.domain.com/v3.0/OS-USER/users/0638848aa7801dbe1f01c01e92b95df7/info
```

  - Run the following command to delete the *${filename}*.**json** file:

```
rm ${filename}.json
```

Response Parameters

None

Status Codes

Status Code	Description
204	The user information is modified successfully.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
409	A resource conflict occurs.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.6.12 Modifying User Information (Including Email Address and Mobile Number) as the Administrator

Function

This API is provided for the administrator to modify user information.

URI

PUT /v3.0/OS-USER/users/{user_id}

Table 4-49 URI parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

Table 4-50 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Table 4-51 Parameters in the request body

Parameter	Mandatory	Type	Description
user	Yes	Object	IAM user information.

Table 4-52 user

Parameter	Mandatory	Type	Description
name	No	String	New username with 8–32 characters. The username can contain special characters, but only hyphens (-), underscores (_), and periods (.) are allowed. It cannot start with a digit.
password	No	String	Password of the user. The password must meet the following requirements: • Can contain 6 to 32 characters. The default minimum password length is 6 characters. • Must contain at least two of the following character types: uppercase letters, lowercase letters, digits, and special characters. • Must meet the requirements of the password policy configured on the account settings page. • Must be different from the old password.
email	No	String	Email address, which can contain not more than 255 characters.

Parameter	Mandatory	Type	Description
areacode	No	String	Country code. The country code must be used together with a mobile number.
phone	No	String	New mobile number, which can contain a maximum of 32 digits. The mobile number must be used together with a country code.
enabled	No	Boolean	Enabling status of the IAM user. **true** (default value) indicates that the user is enabled. **false** indicates that the user is disabled.
pwd_status	No	Boolean	Indicates whether the user must change their password at the first login. **true** (default value) indicates that the user must change their password at the first login. **false** indicates that the user does not need to change their password at the first login.
xuser_type	No	String	Type of the user in the external system. The user type can contain a maximum of 64 characters. **xuser_type** must be used together with **xuser_id** and will be verified based on **xaccount_type** and **xdomain_type** of the same account. **NOTE** An external system refers to an enterprise management system connected to cloud system. Parameters **xaccount_type**, **xaccount_id**, **xdomain_type**, **xdomain_id**, **xuser_type**, and **xuser_id** cannot be obtained from the cloud system. Please contact the enterprise administrator.
xuser_id	No	String	ID of the user in the external system. The user ID can contain a maximum of 128 characters, and must be used together with **xuser_type**. **NOTE** An external system refers to an enterprise management system connected to cloud system. Parameters **xaccount_type**, **xaccount_id**, **xdomain_type**, **xdomain_id**, **xuser_type**, and **xuser_id** cannot be obtained from the cloud system. Please contact the enterprise administrator.

Parameter	Mandatory	Type	Description
access_mode	No	String	Access type of the IAM user. • **default**: programmatic access and management console access. This option is the default access type. • **programmatic**: programmatic access • **console**: management console access
description	No	String	Description of the IAM user.

Response Parameters

Table 4-53 Parameters in the response body

Parameter	Type	Description
user	Object	IAM user information.

Table 4-54 user

Parameter	Type	Description
pwd_status	Boolean	Whether password reset is required at first login.
xuser_id	String	ID of the user in the external system. **NOTE** An external system refers to an enterprise management system connected to cloud system. Parameters **xaccount_type**, **xaccount_id**, **xdomain_type**, **xdomain_id**, **xuser_type**, and **xuser_id** cannot be obtained from the cloud system. Please contact the enterprise administrator.
xuser_type	String	Type of the user in the external system. **NOTE** An external system refers to an enterprise management system connected to cloud system. Parameters **xaccount_type**, **xaccount_id**, **xdomain_type**, **xdomain_id**, **xuser_type**, and **xuser_id** cannot be obtained from the cloud system. Please contact the enterprise administrator.
description	String	Description of the IAM user.

Parameter	Type	Description
name	String	New IAM user name with 5 to 32 characters. The username can contain special characters, but only hyphens (-), underscores (_), and spaces are allowed. It cannot start with a digit.
phone	String	New mobile number, which can contain a maximum of 32 digits. The mobile number must be used together with a country code.
domain_id	String	ID of the account to which the user belongs.
enabled	Boolean	Enabling status of the IAM user. **true** (default value) indicates that the user is enabled. **false** indicates that the user is disabled.
pwd_status	Boolean	Indicates whether the user must change their password at the first login. **true** (default value) indicates that the user must change their password at the first login. **false** indicates that the user does not need to change their password at the first login.
areacode	String	Country code.
email	String	New email address.
id	String	IAM user ID.
links	Object	User resource link information.
password_expires_at	String	UTC time when the password will expire. **null** indicates that the password has unlimited validity.

Table 4-55 user.links

Parameter	Type	Description
self	String	Resource link.

Example Request

```
PUT https://sample.domain.com/v3.0/OS-USER/users/{user_id}
{
    "user": {
        "email": "IAMEmail@123.com",
        "areacode": "0086",
        "phone": "12345678910",
        "enabled": true,
        "name": "IAMUser",
        "password": "IAMPassword@",
        "pwd_status": false,
        "xuser_type": "",
        "xuser_id": "",
```

```
        "description": "IAMDescription"
    }
}
```

Example Response

Status code: 200

The request is successful.

```
{
    "user": {
        "description": "IAMDescription",
        "areacode": "0086",
        "enabled": true,
        "pwd_status": false,
        "xuser_id": "",
        "domain_id": "d78cbac186b744899480f25bd0...",
        "phone": "12345678910",
        "name": "IAMUser",
        "links": {
            "self": "https://sample.domain.com/3.0/OS-USER/users/076934ff9f0010cd1f0bc003..."
        },
        "id": "076934ff9f0010cd1f0bc0031019...",
        "xuser_type": "",
        "email": "IAMEmail@123.com"
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
409	A resource conflict occurs.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

Error Codes

Status Code	Error Code	Error Message
400	1100	Mandatory parameters are missing.
400	1101	Invalid username.
400	1102	Invalid email address.
400	1103	Incorrect password.
400	1104	Invalid mobile number.
400	1105	The value of **xuser_type** must be the same as that of **xdomain_type**.
400	1106	The country code and mobile number must be set at the same time.
400	1107	The account administrator cannot be deleted.
400	1108	The new password must be different from the old password.
400	1109	The username already exists.
400	1110	The email address has already been used.
400	1111	The mobile number has already been used.
400	1113	The user ID or user type already exists.
400	1115	The number of IAM users has reached the maximum allowed limit.
400	1117	Invalid user description.

4.6.13 Deleting a User

Function

This API is used to delete a user.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  DELETE /v3/users/{user_id}

- URI parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X DELETE https://sample.domain.com/v3/users/2c1c6c54e59141b889c99e6fada5f19f
```

Response Parameters

None

Status Codes

Status Code	Description
204	The user is deleted successfully.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.

Status Code	Description
500	Internal server error.
503	Service unavailable.

4.6.14 Deleting a User from a User Group

Function

This API is used to delete a user from a user group.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  DELETE /v3/groups/{group_id}/users/{user_id}

- URI parameters

Parameter	Mandatory	Type	Description
group_id	Yes	String	ID of a user group.
user_id	Yes	String	ID of a user.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X DELETE https://sample.domain.com/v3/groups/00007111583e457389b0d4252643181b/users/edb66d2b656c43d0b67fb143d670bb3a
```

Response Parameters

None

Status Codes

Status Code	Description
204	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.

4.7 User Group Management

4.7.1 Listing User Groups

Function

This API is used to query user group information.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/groups{?domain_id,name}

- Query parameters

Parameter	Mandatory	Type	Description
domain_id	No	String	ID of the domain where a user group is located.
name	No	String	Name of a user group. The length is less than or equal to 64 characters.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request
  curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X GET https://sample.domain.com/v3/groups?domain_id=ac7197fd67a24dc5850972854729a762&name=group123

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
links	Yes	JSON object	User group resource link.
groups	Yes	JSONArray	List of a user group.

- Group parameter description

Parameter	Mandatory	Type	Description
description	Yes	String	Description for a user group.
domain_id	Yes	String	ID of the domain to which a user group belongs.
id	Yes	String	ID of a user group.
links	Yes	JSON object	User group resource link.
name	Yes	String	Name of a user group.
create_time	Yes	Long	Time when a user group is created.

- Example response

```
{
    "links": {
        "self": "https://sample.domain.com/v3/groups?
domain_id=ac7197fd67a24dc5850972854729a762&name=group123",
        "previous": null,
        "next": null
    },
    "groups": [{
        "description": "",
        "links": {
            "self": "https://sample.domain.com/v3/groups/ff74abaeabe34c278a4b7693c7f0dff7"
        },
        "id": "ff74abaeabe34c278a4b7693c7f0dff7",
        "create_time": 1482566254983,
        "domain_id": "ac7197fd67a24dc5850972854729a762",
        "name": "group123"
    }]
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.

4.7.2 Querying User Group Details

Function

This API is used to query detailed information about a user group.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/groups/{group_id}

- Query parameters

Parameter	Mandatory	Type	Description
group_id	Yes	String	ID of a user group.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X GET https://sample.domain.com/v3/groups/ab9f261180d746ef8624beb5ae39b5aa
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
group	Yes	JSON object	Response body of a user group.
description	Yes	String	Description for a user group.
domain_id	Yes	String	ID of the domain to which a user group belongs.
id	Yes	String	ID of a user group.
links	Yes	JSON object	Links to a user group.
name	Yes	String	Name of a user group.
create_time	Yes	Long	Time when a user group is created.

- Example response

```
{
    "group":{
        "domain_id":"d54061ebcb5145dd814f8eb3fe9b7ac0",
        "description":"Contract developers",
        "id":"ab9f261180d746ef8624beb5ae39b5aa",
        "links":{
            "self":"https://sample.domain.com/v3/groups/ab9f261180d746ef8624beb5ae39b5aa"
        },
        "name":"abcdef",
        "create_time": 1494943784468
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.

4.7.3 Creating a User Group

Function

This API is used to create a user group.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

POST /v3/groups

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Parameters in the request body

Parameter	Mandatory	Type	Description
description	No	String	Description for a user group. The length is less than or equal to 255 characters.
domain_id	No	String	ID of the domain to which a user group belongs.
name	Yes	String	Name of a user group. The length is less than or equal to 64 characters.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X POST -d'{"group": {"description": "Contract developers","domain_id": "d54061ebcb5145dd814f8eb3fe9b7ac0","name": "jixiang2"}}' https://sample.domain.com/v3/groups
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
description	Yes	String	Description for a user group.

Parameter	Mandatory	Type	Description
domain_id	Yes	String	ID of the domain to which a user group belongs.
id	Yes	String	ID of a user group.
links	Yes	JSON object	Links to a user group.
name	Yes	String	Name of a user group.

- Example response

```
{
    "group":{
        "domain_id":"d54061ebcb5145dd814f8eb3fe9b7ac0",
        "description":"Contract developers",
        "id":"ab9f261180d746ef8624beb5ae39b5aa",
        "links":{
            "self":"https://sample.domain.com/v3/groups/ab9f261180d746ef8624beb5ae39b5aa"
        },
        "name":"abcdef"
    }
}
```

Status Codes

Status Code	Description
201	The user group is successfully created.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
409	A resource conflict occurs.

4.7.4 Adding a User to a User Group

Function

This API is used to add a user to a user group.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  PUT /v3/groups/{group_id}/users/{user_id}

- URI parameters

Parameter	Mandatory	Type	Description
group_id	Yes	String	ID of a user group.
user_id	Yes	String	ID of a user.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X PUT https://sample.domain.com/v3/groups/00007111583e457389b0d4252643181b/users/edb66d2b656c43d0b67fb143d670bb3a
```

Response Parameters

None

Status Codes

Status Code	Description
204	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.

4.7.5 Updating a User Group

Function

This API is used to update user group information.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  PATCH /v3/groups/{group_id}

- URI parameters

Parameter	Mandatory	Type	Description
group_id	Yes	String	ID of a user group.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Parameters in the request body

Parameter	Mandatory	Type	Description
group	Yes	Object	Request body of a group.
description	No	String	Description for a user group. The length is less than or equal to 255 characters.
domain_id	No	String	ID of the domain to which a user group belongs.
name	No	String	Name of a user group. The length is less than or equal to 64 characters.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X PATCH -d'{"group": {"description": "Contract developers 2016"}}' https://sample.domain.com/v3/groups/aaec2abd4eba430fbf61541ffde76650
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
group	Yes	Dict	Response body of a user group.
description	Yes	String	Description for a user group.

Parameter	Mandatory	Type	Description
domain_id	Yes	String	ID of the domain to which a user group belongs.
id	Yes	String	ID of a user group.
links	Yes	Dict	User group resource link.
name	Yes	String	Name of a user group.

- Example response

```
{
  "group": {
    "domain_id": "d54061ebcb5145dd814f8eb3fe9b7ac0",
    "description": "Contract developers 2016",
    "id": "aaec2abd4eba430fbf61541ffde76650",
    "links": {
      "self": "https://sample.domain.com/v3/groups/aaec2abd4eba430fbf61541ffde76650"
    },
    "name": "jixiang1"
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
409	A resource conflict occurs.
501	The API is not implemented.

4.7.6 Deleting a User Group

Function

This API is used to delete a user group.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  DELETE /v3/groups/{group_id}

- URI parameters

Parameter	Mandatory	Type	Description
group_id	Yes	String	ID of a user group.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X DELETE https://sample.domain.com/v3/groups/aaec2abd4eba430fbf61541ffde76650
```

Response Parameters

None

Status Codes

Status Code	Description
204	The user group is deleted successfully.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.

4.7.7 Querying Whether a User Belongs to a User Group

Function

This API is used to query whether a user belongs to a user group.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  HEAD /v3/groups/{group_id}/users/{user_id}

- URI parameters

Parameter	Mandatory	Type	Description
group_id	Yes	String	ID of a user group.
user_id	Yes	String	ID of a user.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X HEAD https://sample.domain.com/v3/groups/00007111583e457389b0d4252643181b/users/edb66d2b656c43d0b67fb143d670bb3a
```

Response Parameters

None

Status Codes

Status Code	Description
204	The user belongs to this user group.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The server could not find the requested page, or the user does not belong to this user group.

4.8 Permission Management

4.8.1 Querying a Role List

Function

This API is used to query a role list, including the permissions policies of a role. A role is a set of permissions and represents a group of actions.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

GET /v3/roles

Table 4-56 Query parameters

Parameter	Mandatory	Type	Description
domain_id	No	String	Domain ID. **NOTE** • If this parameter is specified, only custom policies of the account will be returned. • If this parameter is not specified, all system permissions (including system-defined policies and roles) will be returned.
name	No	String	Permission name for internal use. It may be different from the **display_name** displayed on the console.

Request Parameters

Table 4-57 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

Table 4-58 Parameters in the response body

Parameter	Type	Description
links	Object	Resource link information.
roles	Array of objects	Permission information.
total_number	Integer	Total number of permissions.

Table 4-59 links

Parameter	Type	Description
self	String	Resource link.
previous	String	Previous resource link.
next	String	Next resource link.

Table 4-60 roles

Parameter	Type	Description
domain_id	String	ID of the domain to which the permission belongs.
flag	String	If this parameter is set to **fine_grained**, the permission is a system-defined policy.
description_cn	String	Description of the permission in Chinese.
catalog	String	Service catalog of the permission.
name	String	Permission name. This parameter is carried in the token of a user. The cloud service determines whether the user has the access permission based on the role name.
description	String	Description of the permission.
links	Object	Permission resource link.
id	String	Permission ID.

Parameter	Type	Description
display_name	String	Display name of the permission.
type	String	Display mode of the permission. **NOTE** • **AX**: Account level. • **XA**: Project level. • **AA**: Both the account level and project level. • **XX**: Neither the account level nor project level. • The display mode of a custom policy can only be **AX** or **XA**. A custom policy must be displayed at either of the two levels.
policy	Object	Content of the permission.
updated_time	String	Time when the permission was last updated.
created_time	String	Time when the permission was created.

Table 4-61 roles.links

Parameter	Type	Description
self	String	Resource link.
previous	String	Previous resource link.
next	String	Next resource link.

Table 4-62 roles.policy

Parameter	Type	Description
Depends	Array of objects	Dependence permissions.
Statement	Array of objects	Statement of the permission.

Parameter	Type	Description
Version	String	Permission version. **NOTE** • **1.0**: System-defined role. Only a limited number of service-level roles are provided for authorization. • **1.1**: Policy. A policy defines the permissions required to perform operations on a specific cloud resource under certain conditions.

Table 4-63 roles.policy.Depends

Parameter	Type	Description
catalog	String	Service catalog of the permission.
display_name	String	Display name of the permission.

Table 4-64 roles.policy.Statement

Parameter	Type	Description
Action	Array of strings	Specific operation permission on a resource. A maximum of 100 actions are allowed. **NOTE** • The value format is *Service name*:*Resource type*:*Operation*, for example, **vpc:ports:create**. • *Service name*: indicates the product name, such as **ecs**, **evs**, or **vpc**. Only lowercase letters are allowed. Resource types and operations are not case-sensitive. You can use an asterisk (*) to represent all operations. • For a custom agency policy, this parameter should be set to *"Action": ["iam:agencies:assume"]*.
Effect	String	Effect of the permission. The value can be **Allow** or **Deny**. If both Allow and Deny statements are found in a policy, the authentication starts from the Deny statements. Options: • Allow • Deny
Condition	Object	Conditions for the permission to take effect. A maximum of 10 conditions are allowed.

Parameter	Type	Description
Resource	Array of strings	Cloud resource. The array can contain a maximum of 10 resource strings, and each string cannot exceed 128 characters. **NOTE** • Format: *:::::*. For example, **obs:*:bucket:***. Asterisks are allowed. • The region segment can be ***** or a region accessible to the user. The specified resource must belong to the corresponding service that actually exists. • In the case of a custom policy for agencies, the type of this parameter is object, and the value should be set to *"Resource": {"uri": ["/iam/agencies/07805acaba800fdd4fbdc00b8f888c7c"]}*.

Table 4-65 roles.policy.Statement.Condition.operator

Parameter	Type	Description
attribute	Array of strings	Condition key. The condition key must correspond to the specified operator. A maximum of 10 condition keys are allowed. The parameter type is custom character string array.

Example Request

```
GET https://sample.domain.com/v3/roles
```

Example Response

Status code: 200

The request is successful.

```
{
  "roles" : [ {
    "domain_id" : null,
    "description_cn" : "Description of the permission in Chinese",
    "catalog" : "VulnScan",
    "name" : "wscn_adm",
    "description" : "Vulnerability Scan Service administrator of tasks and reports.",
    "links" : {
      "next" : null,
      "previous" : null,
      "self" : "https://sample.domain.com/v3/roles/0af84c1502f447fa9c2fa18083fbb..."
    },
    "id" : "0af84c1502f447fa9c2fa18083fbb...",
    "display_name" : "VSS Administrator",
    "type" : "XA",
    "policy" : {
      "Version" : "1.0",
      "Statement" : [ {
```

```
      "Action" : [ "WebScan:*:*" ],
      "Effect" : "Allow"
    } ],
    "Depends" : [ {
      "catalog" : "BASE",
      "display_name" : "Server Administrator"
    }, {
      "catalog" : "BASE",
      "display_name" : "Tenant Guest"
    } ]
  }
}, {
  "domain_id" : null,
  "flag" : "fine_grained",
  "description_cn" : "Description of the permission in Chinese",
  "catalog" : "CSE",
  "name" : "system_all_34",
  "description" : "All permissions of CSE service.",
  "links" : {
    "next" : null,
    "previous" : null,
    "self" : "https://sample.domain.com/v3/roles/0b5ea44ebdc64a24a9c372b2317f7..."
  },
  "id" : "0b5ea44ebdc64a24a9c372b2317f7...",
  "display_name" : "CSE Admin",
  "type" : "XA",
  "policy" : {
    "Version" : "1.1",
    "Statement" : [ {
      "Action" : [ "cse:*:*", "ecs:*:*", "evs:*:*", "vpc:*:*" ],
      "Effect" : "Allow"
    } ]
  }
} ],
"links" : {
  "next" : null,
  "previous" : null,
  "self" : "https://sample.domain.com/v3/roles"
},
"total_number" : 300
}
```


Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.

4.8.2 Querying Role Details

Function

This API is used to query role details, including the permissions policies of a role. A role is a set of permissions and represents a group of actions.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/roles/{role_id}

- URI parameters

Parameter	Mandatory	Type	Description
role_id	Yes	String	ID of a role.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X GET https://sample.domain.com/v3/roles/19bb93eec4ca4f08aefdc02da76d8f3c
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
role	Yes	Dict	Details of the role.

- Description for the role format

Parameter	Mandatory	Type	Description
domain_id	Yes	String	ID of the domain to which a role belongs.
id	Yes	String	ID of a role.
links	Yes	Dict	Role resource link.
name	Yes	String	Name of a role.

Parameter	Mandatory	Type	Description
type	Yes	String	Display mode of a role. • **AX**: A role is displayed at the domain layer. • **XA**: A role is displayed at the project layer. • **AA**: A role is displayed at both the domain and project layers. • **XX**: A role is not displayed at the domain or project layer.
display_name	No	String	Displayed name of a role.
catalog	No	String	Directory where a role locates.
policy	No	Dict	Policy of a role.
description	No	String	Description of a role.

- Example response

```
{
  "role": {
    "display_name": "Tanent Guest",
    "description": "Tanent Guest",
    "links": {
      "self": "https://sample.domain.com/v3/roles/19bb93eec4ca4f08aefdc02da76d8f3c"
    },
    "domain_id": null,
    "catalog": "BASE",
    "policy": {
      "Version": "1.0",
      "Statement": [
        {
          "Action": [
            "::Get",
            "::List"
          ],
          "Effect": "Allow"
        },
        {
          "Action": [
            "identity:*"
          ],
          "Effect": "Deny"
        }
      ]
    },
    "id": "19bb93eec4ca4f08aefdc02da76d8f3c",
    "type": "AA",
    "name": "readonly"
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.

4.8.3 Querying Permissions Assignment Records

Function

This API is used to query permissions assignment records of a specified account.

URI

GET /v3.0/OS-PERMISSION/role-assignments

Request Parameters

Table 4-66 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	See **Permissions Management**.

Table 4-67 Request parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Account ID. For details about how to obtain the account ID, see **Obtaining User, Account, User Group, Project, and Agency Information**.
role_id	No	String	Policy ID.

Parameter	Mandatory	Type	Description
subject	No	String	Principal. The value can be **user**, **group**, or **agency**. This parameter is exclusive with **subject.user_id**, **subject.group_id**, and **subject.agency_id**.
subject.user_id	No	String	ID of the IAM user. For details about how to obtain the ID, see **Obtaining User, Account, User Group, Project, and Agency Information**.
subject.group_id	No	String	ID of the user group. For details about how to obtain the ID, see **Obtaining User, Account, User Group, Project, and Agency Information**.
subject.agency_id	No	String	Agency ID. For details about how to obtain the agency ID, see **Obtaining User, Account, User Group, Project, and Agency Information**.
scope	No	String	Authorization scope. The value can be **project**, **domain**, or **enterprise_project**. This parameter is mutually exclusive with **scope.project_id**, **scope.domain_id**, and **scope.enterprise_projects_id**. **NOTE** • To view global service authorization records, set this parameter to **domain** or specify **scope.domain_id**. • To view resource-based authorization records, set this parameter to **domain** and **is_inherited** to **true**. • To view project-based authorization records, set this parameter to **project** or specify **scope.project_id**. • To view enterprise project-based authorization records, set this parameter to **enterprise_project** or specify **scope.enterprise_project_id**.
scope.project_id	No	String	Project ID. For details about how to obtain the project ID, see **Obtaining User, Account, User Group, Project, and Agency Information**.
scope.domain_id	No	String	Account ID. For details about how to obtain the account ID, see **Obtaining User, Account, User Group, Project, and Agency Information**.
scope.enterprise_projects_id	No	String	ID of an authorized enterprise project.

Parameter	Mandatory	Type	Description
is_inherited	No	Boolean	Whether to include all project-based authorization records. The default value is **false**. This parameter is valid only when **scope** is set to **domain** or **scope.domain_id** is specified. **true**: Query all project-based authorization records. **false**: Query global service authorization records.
include_group	No	Boolean	Whether to include user group-based authorization records. The default value is **true**. This parameter is valid only when **subject** is set to **user** or **subject.user_id** is specified. **true**: Query authorization records of IAM users and user groups to which the IAM users belong. **false**: Only query authorization records of IAM users.
page	No	String	Page number for pagination query. The minimum value is **1**. This parameter must be used together with **per_page**.
per_page	No	String	Number of data records to be displayed on each page during pagination query. The value ranges from 1 to 50. This parameter must be specified together with **page**.

Response Parameters

Table 4-68 Parameters in the response body

Parameter	Type	Description
total_num	Long	Total number of returned authorization records.
role_assignments	Array of RoleAssignmentBody objects	Authorization information.

Table 4-69 role_assignments

Parameter	Type	Description
user	RoleUserAssignmentId object	Authorized user.
role	RoleAssignmentId object	Authorization policy.
group	RoleGroupAssignmentId object	Authorized user group.
agency	RoleAgencyAssignmentId object	Authorization agency.
scope	RoleAssignmentScope object	Authorization scope.
is_inherited	Boolean	Whether the authorization is based on all projects.

Table 4-70 role_assignments.user

Parameter	Type	Description
id	String	IAM user ID.

Table 4-71 role_assignments.role

Parameter	Type	Description
id	String	Permission ID.

Table 4-72 role_assignments.group

Parameter	Type	Description
id	String	User group ID.

Table 4-73 role_assignments.agency

Parameter	Type	Description
id	String	Agency ID.

Table 4-74 role_assignments.scope

Parameter	Type	Description
project	RoleProjectAssignmentId object	IAM project-based authorization.
domain	RoleDomainAssignmentId object	Authorization based on global services or all projects.
enterprise_project	RoleEnterpriseProjectAssignmentId object	Enterprise project-based authorization.

Table 4-75 role_assignments.scope.project

Parameter	Type	Description
id	String	IAM project ID.

Table 4-76 role_assignments.scope.domain

Parameter	Type	Description
id	String	Global service ID.

Table 4-77 role_assignments.scope.enterprise_project

Parameter	Type	Description
id	String	Enterprise project ID.

Example Request

```
GET https://sample.domain.com/v3.0/OS-PERMISSION/role-assignments?{domain_id}
```

Example Response

Status code: 200

The request is successful.

```
{
    "role_assignments":{
        "group":{
            "id":"07609e7eb200250a3f7dc003cb7a4e2d"
        },
        "is_inherited":true,
        "role":{
            "id":"11e5c42d20cc349a2b9e2f8afd253f50c"
```

```
        },
        "scope":{
            "domain":{
                "id":"d78cbac186b744899480f25bd022f468"
            }
        }
    },
    "total_num":1
}
```

Status Code

Status Code	Description
200	The request is successful.
400	Invalid parameters.
401	Authentication failed.
403	Access denied.

Error Codes

For details, see **Error Codes**.

4.8.4 Querying Role Assignments (Discarded)

Function

This API is used to query the user groups to which a specified role has been assigned.

URI

- URI format

  GET /v3/role_assignments{?role.id,user.id,group.id,scope.project.id,scope.domain.id, scope.OS-INHERIT:inherited_to,include_subtree}

- URI parameters: Specify any of the **role.id**, **user.id**, **group.id**, **scope.project.id**, and **scope.domain.id** parameters.

Parameter	Mandatory	Type	Description
role.id	No	String	Role ID. This parameter must be specified in conjunction with any of **user.id**, **group.id**, **scope.project.id**, and **scope.domain.id**.

Parameter	Mandatory	Type	Description
user.id	No	String	User ID. This parameter cannot be specified in conjunction with **group.id**.
group.id	No	String	User group ID. This parameter cannot be specified in conjunction with **user.id**.
scope.project.id	No	String	Project ID. This parameter cannot be specified in conjunction with **scope.domain.id**.
scope.domain.id	No	String	Domain ID. This parameter cannot be specified in conjunction with **scope.project.id**.
scope.OS-INHERIT:inherited_to	No	String	Used to filter based on role assignments that are inherited. The only value of this parameter that is currently supported is **projects**.
include_subtree	No	Boolean	The value **true** means listing all role assignments involving the specified project and all subprojects. Any non-zero value of this parameter will be interpreted as **true**. This parameter must be specified in conjunction with **scope.project.id**.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request
  curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X GET https://sample.domain.com/v3/role_assignments?group.id=06c904fddd807cd93f0ec018b5d30a34&role.id=bc61db25975247758de0d5e254a85915&scope.domain.id=06c904fdca807cd90f0ac018001...

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
role_assignments	Yes	List	Role assignments.
links	Yes	Dict	Role resource link.

- role_assignments

Parameter	Mandatory	Type	Description

scope	Yes	Dict	Application scope of the role. The value can be **domain** or **project**.
			Domain:
			"scope": {
			"domain": {
			"id": "06c9..."
			}
			}
			Project:
			"scope": {
			"project": {
			"id": "06c9..."
			}
			}

role	Yes	Dict	Role information, including the role ID.
			Example:
			"role": {
			" id ": " bc61..."
			}

group	No	Dict	Group information, which is returned if the role has been assigned to a user group.
			Example:
			"group": {
			" id ": " 06c9..."
			}

Parameter	Mandatory	Type	Description

agency	No	Dict	Group information, which is returned if the role has been assigned to an agency.
			Example:
			"agency": {
			" id ": " 06c9..."
			}

links	Yes	Dict	Assignment resource link information.
			Example:
			"links": {
			"assignment": "https://sample.domain.com/v3/projects/06c9../groups/06c9../roles/bc61.. "
			}

- links

Parameter	Mandatory	Type	Description
self	Yes	String	Resource link. Example: "self": "https://sample.domain.com/v3/role_assignments? group.id=06c..."
previous	Yes	String	Previous resource link. Example: "previous": null
next	No	String	Next resource link. Example: "next": null

- Example response

```
{
  "role_assignments": [
    {
      "scope": {
        "domain": {
          "id": "06c904fdca807cd90f0ac01800167760"
        }
      },
      "role": {
        "id": "bc61db25975247758de0d5e254a85915"
      },
      "group": {
        "id": "06c904fddd807cd93f0ec018b5d30a34"
      },
      "links": {
        "assignment": "https://sample.domain.com/v3/domains/
```

```
06c904fdca807cd90f0ac01800167760/groups/06c904fddd807cd93f0ec018b5d30a34/roles/
bc61db25975247758de0d5e254a85915"
            }
        }
    ],
    "links": {
        "self": "https://sample.domain.com/v3/role_assignments?
group.id=06c904fddd807cd93f0ec018b5d30a34&role.id=bc61db25975247758de0d5e254a85915&scope.
domain.id=06c904fdca807cd90f0ac01800167760",
        "previous": null,
        "next": null
    }
}
```


Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
503	Service unavailable.

4.8.5 Querying Permissions of a User Group Under a Domain

Function

This API is used to query the permissions of a user group under a domain. A role is a set of permissions and represents a group of actions.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/domains/{domain_id}/groups/{group_id}/roles
- URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Domain ID.
group_id	Yes	String	User group ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X GET https://sample.domain.com/v3/domains/d54061ebcb5145dd814f8eb3fe9b7ac0/groups/47d79cabc2cf4c35b13493d919a5bb3d/roles
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
links	Yes	Dict	Role resource link of a specified user group under a domain.
roles	Yes	Array	Role of a specified user group under a domain.

- Role parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	ID of a role of a specified user group under a domain.
links	Yes	Dict	Role resource link.
name	Yes	String	Name of a role.
domain_id	Yes	String	ID of the domain to which a role belongs.

Parameter	Mandatory	Type	Description
type	Yes	String	Display mode of a role. • **AX**: A role is displayed at the domain layer. • **XA**: A role is displayed at the project layer. • **AA**: A role is displayed at both the domain and project layers. • **XX**: A role is not displayed at the domain or project layer.
display_name	No	String	Displayed name of a role.
catalog	No	String	Directory where a role locates.
policy	No	Dict	Policy of a role.
description	No	String	Description of a role.

- Example response

```
{
  "links": {
    "self": "https://sample.domain.com/v3/domains/d54061ebcb5145dd814f8eb3fe9b7ac0/groups/47d79cabc2cf4c35b13493d919a5bb3d/roles",
    "previous": null,
    "next": null
  },
  "roles": [
    {
      "display_name": "Security Administrator",
      "description": "Security Administrator",
      "links": {
        "self": "https://sample.domain.com/v3/roles/005cf92cfd364105afaa5df2eec25012"
      },
      "domain_id": null,
      "name": "secu_admin",
      "type": "AX",
      "catalog": "BASE",
      "policy": {
        "Version": "1.0",
        "Statement": [
          {
            "Action": [
              "identity:*"
            ],
            "Effect": "Allow"
          }
        ]
      },
      "id": "005cf92cfd364105afaa5df2eec25012"
    },
    {
      "display_name": "Agent Operator",
      "description": "Agent Operator",
      "links": {
        "self": "https://sample.domain.com/v3/roles/d160d30477c642a486ad10e3b4d9820f"
      },
      "domain_id": null,
```

```
    "name": "te_agency",
    "type": "AX",
    "catalog": "IAM",
    "policy": {
      "Version": "1.0",
      "Statement": [
        {
          "Action": [
            "identity:assume role"
          ],
          "Effect": "Allow"
        }
      ]
    },
    "id": "d160d30477c642a486ad10e3b4d9820f"
  }
 ]
}
```


Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.

4.8.6 Querying Permissions of a User Group Corresponding to a Project

Function

This API is used to query the permissions of a specified user group corresponding to a project. A role is a set of permissions and represents a group of actions.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/projects/{project_id}/groups/{group_id}/roles

- URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.

Parameter	Mandatory	Type	Description
group_id	Yes	String	ID of a user group.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X GET https://sample.domain.com/v3/projects/073bbf60da374853841cf6624c94de4b/groups/47d79cabc2cf4c35b13493d919a5bb3d/roles
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
links	Yes	Dict	Role resource link.
roles	Yes	Array	List of roles.

- Role parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	ID of a role.
links	Yes	Dict	Role resource link.
name	Yes	String	Name of a role.
domain_id	Yes	String	ID of the domain to which a role belongs.
type	Yes	String	Display mode of a role. • **AX**: A role is displayed at the domain layer. • **XA**: A role is displayed at the project layer. • **AA**: A role is displayed at both the domain and project layers. • **XX**: A role is not displayed at the domain or project layer.

Parameter	Mandatory	Type	Description
display_name	No	String	Displayed name of a role.
catalog	No	String	Directory where a role locates.
policy	No	Dict	Policy of a role.
description	No	String	Description of a role.

- Example response

```
{
    "links": {
        "self": " https://sample.domain.com/v3/projects/3a4cd4d559d8492bbe7bd355643f9763/groups/728da352c017480f80b5a96beb15f0e6/roles",
        "previous": null,
        "next": null
    },
    "roles": [
        {
            "catalog": "BASE",
            "display_name": "Guest",
            "name": "readonly",
            "links": {
                "self": " https://sample.domain.com/v3/roles/13d132b7856945788f6df7eb3ed5c35e"
            },
            "policy": {
                "Version": "1.0",
                "Statement": [
                    {
                        "Action": [
                            "*:*:Get*",
                            "*:*:List*"
                        ],
                        "Effect": "Allow"
                    },
                    {
                        "Action": [
                            "identity:*"
                        ],
                        "Effect": "Deny"
                    }
                ]
            },
            "domain_id": null,
            "type": "AA",
            "id": "13d132b7856945788f6df7eb3ed5c35e",
            "description": "Guest"
        },
        {
            "catalog": "BASE",
            "display_name": "Tenant Administrator",
            "name": "te_admin",
            "links": {
                "self": " https://sample.domain.com/v3/roles/1def304b73f14e8eb8d1eb9bf8337ae6"
            },
            "policy": {
                "Version": "1.0",
                "Statement": [
                    {
                        "Action": [
                            "*"
                        ],
                        "Effect": "Allow"
                    },
```

```
            {
                "Action": [
                    "identity:*"
                ],
                "Effect": "Deny"
            }
        ]
    },
    "domain_id": null,
    "type": "AA",
    "id": "1def304b73f14e8eb8d1eb9bf8337ae6",
    "description": "Tenant Administrator"
  }
 ]
}
```


Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.

4.8.7 Granting Permissions to a User Group of a Domain

Function

This API is used to grant permissions to a user group of a domain. A role is a set of permissions and represents a group of actions.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  PUT /v3/domains/{domain_id}/groups/{group_id}/roles/{role_id}

- URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	ID of the domain to which a user group belongs. For details about how to obtain the domain ID, see **Obtaining User, Account, User Group, Project, and Agency Information**.
group_id	Yes	String	ID of a user group. For details about how to obtain the group ID, see **Obtaining User, Account, User Group, Project, and Agency Information**.
role_id	Yes	String	ID of a role. For details about how to obtain the role ID, see **Querying a Role List**. **NOTE** To assign a custom policy that contains OBS operations to a user group, create two custom policies with the scope being set to global services and region-specific projects respectively and other parameters being the same, and then attach the two policies to the user group.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X PUT https://sample.domain.com/v3/domains/d54061ebcb5145dd814f8eb3fe9b7ac0/groups/47d79cabc2cf4c35b13493d919a5bb3d/roles/e62d9ba0d6a544cd878d9e8a4663f6e2
```

Response Parameters

None

Status Codes

Status Code	Description
204	The request is successful.

Status Code	Description
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
409	A resource conflict occurs.

4.8.8 Granting Permissions to a User Group Corresponding to a Project

Function

This API is used to grant permissions to a user group corresponding to a project. A role is a set of permissions and represents a group of actions.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  PUT /v3/projects/{project_id}/groups/{group_id}/roles/{role_id}

- URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see **Obtaining User, Account, User Group, Project, and Agency Information**. Ensure that the project is the IAM project that IAM users in the group will be authorized to access and use. **NOTE** To assign a custom policy that contains OBS operations to a user group, use the API described in **Querying Project Information Based on the Specified Criteria** to obtain the ID of the **MOS** project, and attach the custom policy to the user group in this project.

Parameter	Mandatory	Type	Description
group_id	Yes	String	ID of a user group. For details about how to obtain the group ID, see **Obtaining User, Account, User Group, Project, and Agency Information**.
role_id	Yes	String	ID of a role. For details about how to obtain the role ID, see **Querying a Role List**.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X PUT https://sample.domain.com/v3/projects/073bbf60da374853841cf6624c94de4b/groups/47d79cabc2cf4c35b13493d919a5bb3d/roles/e62d9ba0d6a544cd878d9e8a4663f6e2
```

Response Parameters

None

Status Codes

Status Code	Description
204	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
409	A resource conflict occurs.

4.8.9 Deleting Permissions of a User Group Corresponding to a Project

Function

This API is used to delete permissions of a user group corresponding to a project. A role is a set of permissions and represents a group of actions.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  DELETE /v3/projects/{project_id}/groups/{group_id}/roles/{role_id}

- URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.
group_id	Yes	String	ID of a user group.
role_id	Yes	String	ID of a role.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X  DELETE https://sample.domain.com/v3/projects/073bbf60da374853841cf6624c94de4b/groups/47d79cabc2cf4c35b13493d919a5bb3d/roles/e62d9ba0d6a544cd878d9e8a4663f6e2
```

Response Parameters

None

Status Codes

Status Code	Description
204	The request is successful.
400	The server failed to process the request.

Status Code	Description
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.

4.8.10 Deleting Permissions of a User Group of a Domain

Function

This API is used to delete permissions of a specified user group of a domain. A role is a set of permissions and represents a group of actions.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  DELETE /v3/domains/{domain_id}/groups/{group_id}/roles/{role_id}

- URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	ID of the domain to which a user group belongs.
group_id	Yes	String	ID of a user group.
role_id	Yes	String	ID of a role.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

  curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X DELETE https://sample.domain.com/v3/domains/d54061ebcb5145dd814f8eb3fe9b7ac0/groups/47d79cabc2cf4c35b13493d919a5bb3d/roles/e62d9ba0d6a544cd878d9e8a4663f6e2

Response Parameters

None

Status Codes

Status Code	Description
204	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.

4.8.11 Querying Whether a User Group Under a Domain Has Specific Permissions

Function

This API is used to query whether a specified user group under a domain has specific permissions. A role is a set of permissions and represents a group of actions.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  HEAD /v3/domains/{domain_id}/groups/{group_id}/roles/{role_id}

- URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	ID of the domain to which a user group belongs.
group_id	Yes	String	ID of a user group.
role_id	Yes	String	ID of a role.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request
  curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X HEAD https://10.22.44.158:31943/v3/domains/d54061ebcb5145dd814f8eb3fe9b7ac0/groups/47d79cabc2cf4c35b13493d919a5bb3d/roles/e62d9ba0d6a544cd878d9e8a4663f6e2

Response Parameters

None

Status Codes

Status Code	Description
204	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.

4.8.12 Querying Whether a User Group Corresponding to a Project Has Specific Permissions

Function

This API is used to query whether a user group corresponding to a project has specific permissions. A role is a set of permissions and represents a group of actions.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  HEAD /v3/projects/{project_id}/groups/{group_id}/roles/{role_id}

- URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.
group_id	Yes	String	ID of a user group.
role_id	Yes	String	ID of a role.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X HEAD https://sample.domain.com/v3/projects/073bbf60da374853841cf6624c94de4b/groups/47d79cabc2cf4c35b13493d919a5bb3d/roles/e62d9ba0d6a544cd878d9e8a4663f6e2
```

Response Parameters

None

Status Codes

Status Code	Description
204	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.

4.8.13 Granting Permissions to a User Group for All Projects

Function

This API is used to grant permissions to a user group for all projects.

URI

- URI format

  PUT /v3/OS-INHERIT/domains/{domain_id}/groups/{group_id}/roles/{role_id}/inherited_to_projects

- URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	ID of the domain to which a user group belongs.
group_id	Yes	String	ID of a user group.
role_id	Yes	String	User role ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	User token (of a specified domain ID) with **secu_admin** permissions or a token with **op_service** or **op_auth** permissions.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -X PUT https://sample.domain.com/v3/OS-INHERIT/domains/{domain_id}/groups/{group_id}/roles/{role_id}/inherited_to_projects
```

Response Parameters

None

Status Codes

Status Code	Description
204	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.

4.8.14 Removing Specified Permissions of a User Group in All Projects

Function

This API is provided for the administrator to remove the specified permissions of a user group in all projects.

URI

DELETE /v3/OS-INHERIT/domains/{domain_id}/groups/{group_id}/roles/{role_id}/inherited_to_projects

Table 4-78 URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	ID of the domain to which the user group belongs.
group_id	Yes	String	User group ID.
role_id	Yes	String	Permission ID.

Request Parameters

Table 4-79 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-token	Yes	String	Token with **Security Administrator** or **op_auth** permissions.

Response Parameters

None

Example Request

```
DELETE https://sample.domain.com/v3/OS-INHERIT/domains/{domain_id}/groups/{group_id}/roles/{role_id}/inherited_to_projects
```

Example Response

None

Status Codes

Status Code	Description
204	The request is successful.
401	Authentication failed.
403	You do not have permission to perform this action.
404	The requested resource cannot be found.
500	Internal server error.

4.8.15 Checking Whether a User Group Has Specified Permissions for All Projects

Function

This API is provided for the administrator to check whether a user group has specified permissions for all projects.

URI

HEAD /v3/OS-INHERIT/domains/{domain_id}/groups/{group_id}/roles/{role_id}/inherited_to_projects

Table 4-80 URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Domain ID. For details about how to obtain the ID, see **Obtaining User, Account, User Group, Project, and Agency Information**.
group_id	Yes	String	User group ID. For details about how to obtain a user group ID, see **Obtaining User, Account, User Group, Project, and Agency Information**.
role_id	Yes	String	Permission ID. For details about how to obtain a permission ID, see **Querying a Role List**.

Request Parameters

Table 4-81 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

None

Example Request

Request for checking whether a user group has specified permissions for all projects

```
HEAD https://sample.domain.com/v3/OS-INHERIT/domains/{domain_id}/groups/{group_id}/roles/{role_id}/inherited_to_projects
```

Example Response

None

Status Codes

Status Code	Description
204	The request is successful.
401	Authentication failed.
403	Access denied.
404	The server could not find the requested page.

Error Codes

For details, see **Error Codes**.

4.8.16 Querying All Permissions of a User Group

Function

This API is provided for the administrator to query all permissions that have been assigned to a user group.

URI

GET /v3/OS-INHERIT/domains/{domain_id}/groups/{group_id}/roles/inherited_to_projects

Table 4-82 URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Domain ID. For details about how to obtain the ID, see **Obtaining User, Account, User Group, Project, and Agency Information**.
group_id	Yes	String	User group ID. For details about how to obtain a user group ID, see **Obtaining User, Account, User Group, Project, and Agency Information**.

Request Parameters

Table 4-83 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

Status code: 200

Table 4-84 Parameters in the response body

Parameter	Type	Description
links	object	Resource link information.
roles	Array of objects	Permission information.
total_number	Integer	Total number of custom policies. This parameter is returned only when **domain_id** is specified in the request.

Table 4-85 RoleResult

Parameter	Type	Description
domain_id	String	ID of the domain to which the permission belongs.
flag	String	If this parameter is set to **fine_grained**, the permission is a system-defined policy.
description_cn	String	Description of the permission in Chinese.
catalog	String	Service catalog of the permission.
name	String	Permission name. This parameter is carried in the token of a user, allowing the system to determine whether the user has permissions to access a specific cloud service.
description	String	Description of the permission.
links	object	Permission resource link.
id	String	Permission ID.
display_name	String	Display name of the permission.
type	String	Display mode of the permission. **NOTE** • **AX**: Account level. • **XA**: Project level. • **AA**: Both the account level and project level. • **XX**: Neither the account level nor project level. • The display mode of a custom policy can only be **AX** or **XA**. A custom policy must be displayed at either of the two levels.
policy	object	Content of the permission.
updated_time	String	Time when the permission was last updated. **NOTE** The value is a UTC time in the YYYY-MM-DDTHH:mm:ss.ssssssZ format, for example, 2023-06-28T08:56:33.710000Z. For details about the date and timestamp formats, see **ISO-8601**.
created_time	String	Time when the permission was created. **NOTE** The value is a UTC time in the YYYY-MM-DDTHH:mm:ss.ssssssZ format, for example, 2023-06-28T08:56:33.710000Z. For details about the date and timestamp formats, see **ISO-8601**.

Table 4-86 Links

Parameter	Type	Description
self	String	Resource link.
previous	String	Previous resource link.
next	String	Next resource link.

Table 4-87 RolePolicy

Parameter	Type	Description
Depends	Array of objects	Dependent permissions.
Statement	Array of objects	Statement of the permission.
Version	String	Policy version. **NOTE** • **1.0**: System-defined role. Only a limited number of service-level roles are provided for authorization. • **1.1**: Policy. A policy defines the permissions required to perform operations on a specific cloud resource under certain conditions.

Table 4-88 PolicyDepends

Parameter	Type	Description
catalog	String	Service catalog of the permission.
display_name	String	Display name of the permission.

Table 4-89 PolicyStatement

Parameter	Type	Description
Action	Array of strings	Specific operation permissions on a resource. A maximum of 100 actions are allowed. For details about supported actions, see "Permissions Policies and Supported Actions" in the API Reference of cloud services. **NOTE** ● The value format is *Service name*:*Resource type*:*Operation*, for example, **vpc:ports:create**. ● *Service name*: indicates the product name, such as **ecs**, **evs**, or **vpc**. Only lowercase letters are allowed. Resource types and operations are not case-sensitive. You can use an asterisk (*) to represent all operations. ● In the case of a custom policy for agencies, this parameter should be set to *"Action": ["iam:agencies:assume"]*.
Effect	String	Effect of the permission. The value can be **Allow** or **Deny**. If both Allow and Deny statements are found in a policy, the authentication starts from the Deny statements. Enumerated values: ● Allow ● Deny

Condition	Object	Conditions for the permission to take effect. A maximum of 10 conditions are allowed. For details, see .
		NOTE
		Take the condition in the sample request as an example, the values of the condition key (**obs:prefix**) and string (**public**) must be equal (**StringEquals**).
		`"Condition": {`
		`"StringEquals": {`
		`"obs:prefix": [`
		`"public"`
		`]`
		`}`
		`}`

Parameter	Type	Description
Resource	Array of strings	Cloud resource. The array can contain a maximum of 10 resource strings, and each string cannot exceed 128 characters. **NOTE** • Format: *:::::*. For example, **obs:*:bucket:***. Asterisks are allowed. • The region segment can be ***** or a region accessible to the user. The specified resource must belong to the corresponding service that actually exists. • In the case of a custom policy for agencies, the type of this parameter is Object, and the value should be set to *"Resource": {"uri": ["/iam/agencies/07805acaba800fdd4fbdc00b8f888c7c"]}*.

Example Request

Request for querying all permissions of a user group

```
GET https://sample.domain.com/v3/OS-INHERIT/domains/{domain_id}/groups/{group_id}/roles/
inherited_to_projects
```

Example Response

Status code: 200

The request is successful.

```
{
  "roles" : [ {
    "domain_id" : null,
    "description_cn" : "Description of the permission in Chinese",
    "catalog" : "VulnScan",
    "name" : "wscn_adm",
    "description" : "Vulnerability Scan Service administrator of tasks and reports.",
    "links" : {
      "next" : null,
      "previous" : null,
      "self" : "https://sample.domain.com/v3/roles/0af84c1502f447fa9c2fa18083fbb..."
    },
    "id" : "0af84c1502f447fa9c2fa18083fbb...",
    "display_name" : "VSS Administrator",
    "type" : "XA",
    "policy" : {
      "Version" : "1.0",
      "Statement" : [ {
        "Action" : [ "WebScan:*:*" ],
        "Effect" : "Allow"
      } ],
      "Depends" : [ {
        "catalog" : "BASE",
        "display_name" : "Server Administrator"
      }, {
        "catalog" : "BASE",
        "display_name" : "Tenant Guest"
      } ]
    }
  }, {
```

```
    "domain_id" : null,
    "flag" : "fine_grained",
    "description_cn" : "Description of the permission in Chinese",
    "catalog" : "CSE",
    "name" : "system_all_34",
    "description" : "All permissions of CSE service.",
    "links" : {
      "next" : null,
      "previous" : null,
      "self" : "https://sample.domain.com/v3/roles/0b5ea44ebdc64a24a9c372b2317f7..."
    },
    "id" : "0b5ea44ebdc64a24a9c372b2317f7...",
    "display_name" : "CSE Admin",
    "type" : "XA",
    "policy" : {
      "Version" : "1.1",
      "Statement" : [ {
        "Action" : [ "cse:*:*", "ecs:*:*", "evs:*:*", "vpc:*:*" ],
        "Effect" : "Allow"
      } ]
    }
  } ],
  "links" : {
    "next" : null,
    "previous" : null,
    "self" : "https://sample.domain.com/v3/roles"
  }
}
```


Status Codes

Status Code	Description
200	The request is successful.
401	Authentication failed.
403	Access denied.

Error Codes

For details, see **Error Codes**.

4.9 Custom Policy Management

4.9.1 Listing Custom Policies

Function

This API is provided for the administrator to list all custom policies.

The API can be called using both the global endpoint and region-specific endpoints.

URI

GET /v3.0/OS-ROLE/roles

Table 4-90 Query parameters

Parameter	Mandatory	Type	Description
page	No	Integer	Page number for pagination query. The minimum value is **1**. This parameter must be used together with **per_page**.
per_page	No	Integer	Number of data records to be displayed on each page. The value ranges from 1 to 300. This parameter must be used together with **page**.

Request Parameters

Table 4-91 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

Table 4-92 Parameters in the response body

Parameter	Type	Description
links	Object	Resource link information.
roles	Array of objects	Custom policy information.
total_number	Integer	Total number of custom policies returned.

Table 4-93 links

Parameter	Type	Description
self	String	Resource link.
previous	String	Previous resource link.
next	String	Next resource link.

Table 4-94 roles

Parameter	Type	Description
domain_id	String	ID of the domain to which the custom policy belongs.
references	Integer	Number of references.
updated_time	String	Time when the custom policy was last updated.
created_time	String	Time when the custom policy was created.
description_cn	String	Description of the custom policy.
catalog	String	Service catalog.
name	String	Name of the custom policy.
description	String	Description of the custom policy.
links	Object	Resource link of the custom policy.
id	String	Policy ID.
display_name	String	Display name of the custom policy.
type	String	Display mode. **NOTE** • **AX**: Account level. • **XA**: Project level. • The display mode of a custom policy can only be **AX** or **XA**. A custom policy must be displayed at either of the two levels.
policy	Object	Content of custom policy.

Table 4-95 roles.links

Parameter	Type	Description
self	String	Resource link.

Table 4-96 roles.policy

Parameter	Type	Description
Version	String	Policy version. **NOTE** • **1.0**: System-defined role. Only a limited number of service-level roles are provided for authorization. • **1.1**: Policy. A policy defines the permissions required to perform operations on a specific cloud resource under certain conditions.
Statement	Array of objects	Statement of the policy. A policy can contain a maximum of eight statements.

Table 4-97 roles.policy.Statement

Parameter	Type	Description
Action	Array of strings	Specific operation permission on a resource. A maximum of 100 actions are allowed. **NOTE** • The value format is *Service name*:*Resource type*:*Operation*, for example, **vpc:ports:create**. • *Service name*: indicates the product name, such as **ecs**, **evs**, or **vpc**. Only lowercase letters are allowed. Resource types and operations are not case-sensitive. You can use an asterisk (*) to represent all operations. • For a custom policy for agencies, this parameter should be set to *"Action": ["iam:agencies:assume"]*.
Effect	String	Effect of the permission. The value can be **Allow** or **Deny**. If both Allow and Deny statements are found in a policy, the authentication starts from the Deny statements.
Condition	Object	Conditions for the permission to take effect. A maximum of 10 conditions are allowed.

Parameter	Type	Description
Resource	Array of strings	Cloud resource. The array can contain a maximum of 10 resource strings, and each string cannot exceed 128 characters. **NOTE** • Format: *:::::*. For example, **obs:*:bucket:***. Asterisks are allowed. • The region segment can be ***** or a region accessible to the user. The specified resource must belong to the corresponding service that actually exists. • In the case of a custom policy for agencies, the type of this parameter is Object, and the value should be set to *"Resource": {"uri": ["/iam/agencies/07805acaba800fdd4fbdc00b8f888c7c"]}*.

Table 4-98 roles.policy.Statement.Condition

Parameter	Type	Description
operator	Object	Operator, for example, Bool and StringEquals. The parameter type is custom object.

Table 4-99 roles.policy.Statement.Condition.operator

Parameter	Type	Description
attribute	Array of strings	Condition key. The condition key must correspond to the specified operator. A maximum of 10 condition keys are allowed. The parameter type is custom character string array.

Example Request

```
GET https://sample.domain.com/v3.0/OS-ROLE/roles
```

Example Response

Status code: 200

The request is successful.

```
{
  "roles" : [ {
    "domain_id" : "d78cbac186b744899480f25bd022f...",
    "updated_time" : "1579229246886",
    "created_time" : "1579229246886",
```

```
    "description_cn" : "Description in Chinese",
    "catalog" : "CUSTOMED",
    "name" : "custom_d78cbac186b744899480f25bd022f468_1",
    "description" : "IAMDescription",
    "links" : {
      "self" : "https://sample.domain.com/v3/roles/93879fd90f1046f69e6e0b31c94d2..."
    },
    "id" : "93879fd90f1046f69e6e0b31c94d2...",
    "display_name" : "IAMCloudServicePolicy",
    "type" : "AX",
    "policy" : {
      "Version" : "1.1",
      "Statement" : [ {
        "Condition" : {
          "StringStartWith" : {
            "g:ProjectName" : [ "AZ-1" ]
          }
        },
        "Action" : [ "obs:bucket:GetBucketAcl" ],
        "Resource" : [ "obs:*:*:bucket:*" ],
        "Effect" : "Allow"
      } ]
    }
  }, {
    "domain_id" : "d78cbac186b744899480f25bd022f...",
    "updated_time" : "1579229242358",
    "created_time" : "1579229242358",
    "description_cn" : "Description in Chinese",
    "catalog" : "CUSTOMED",
    "name" : "custom_d78cbac186b744899480f25bd022f468_0",
    "description" : "IAMDescription",
    "links" : {
      "self" : "https://sample.domain.com/v3/roles/f67224e84dc849ab954ce29fb4f47..."
    },
    "id" : "f67224e84dc849ab954ce29fb4f473...",
    "display_name" : "IAMAgencyPolicy",
    "type" : "AX",
    "policy" : {
      "Version" : "1.1",
      "Statement" : [ {
        "Action" : [ "iam:agencies:assume" ],
        "Resource" : {
          "uri" : [ "/iam/agencies/07805acaba800fdd4fbdc00b8f888..." ]
        },
        "Effect" : "Allow"
      } ]
    }
  } ],
  "links" : {
    "next" : null,
    "previous" : null,
    "self" : "https://sample.domain.com/v3/roles?domain_id=d78cbac186b744899480f25bd022f..."
  },
  "total_number" : 300
}
```


Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.

Status Code	Description
403	Access denied.
500	Internal server error.

Error Codes

None

4.9.2 Querying Custom Policy Details

Function

This API is provided for the administrator to query custom policy details.

The API can be called using both the global endpoint and region-specific endpoints.

URI

GET /v3.0/OS-ROLE/roles/{role_id}

Table 4-100 URI parameters

Parameter	Mandatory	Type	Description
role_id	Yes	String	Custom policy ID. For details about how to obtain a custom policy ID, see **Custom Policy ID**.

Request Parameters

Table 4-101 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

Table 4-102 Parameters in the response body

Parameter	Type	Description
role	Object	Custom policy information.

Table 4-103 role

Parameter	Type	Description
domain_id	String	Domain ID.
references	Integer	Number of references.
updated_time	String	Time when the custom policy was last updated.
created_time	String	Time when the custom policy was created.
description_cn	String	Description of the custom policy.
catalog	String	Service catalog.
name	String	Name of the custom policy.
description	String	Description of the custom policy.
links	Object	Resource link of the custom policy.
id	String	Policy ID.
display_name	String	Display name of the custom policy.
type	String	Display mode. **NOTE** • **AX**: Account level. • **XA**: Project level. • The display mode of a custom policy can only be **AX** or **XA**. A custom policy must be displayed at either of the two levels.
policy	Object	Content of custom policy.

Table 4-104 role.links

Parameter	Type	Description
self	String	Resource link.

Table 4-105 role.policy

Parameter	Type	Description
Version	String	Policy version. **NOTE** • **1.0**: System-defined role. Only a limited number of service-level roles are provided for authorization. • **1.1**: Policy. A policy defines the permissions required to perform operations on a specific cloud resource under certain conditions.
Statement	Array of objects	Statement of the policy. A policy can contain a maximum of eight statements.

Table 4-106 role.policy.Statement

Parameter	Type	Description
Action	Array of strings	Specific operation permission on a resource. A maximum of 100 actions are allowed. **NOTE** • The value format is *Service name*:*Resource type*:*Operation*, for example, **vpc:ports:create**. • *Service name*: indicates the product name, such as **ecs**, **evs**, or **vpc**. Only lowercase letters are allowed. Resource types and operations are not case-sensitive. You can use an asterisk (*) to represent all operations. • For a custom policy for agencies, this parameter should be set to *"Action": ["iam:agencies:assume"]*.
Effect	String	Effect of the permission. The value can be **Allow** or **Deny**. If both Allow and Deny statements are found in a policy, the authentication starts from the Deny statements. Options: • Allow • Deny
Condition	Object	Conditions for the permission to take effect. A maximum of 10 conditions are allowed.

Parameter	Type	Description
Resource	Array of strings	Cloud resource. The array can contain a maximum of 10 resource strings, and each string cannot exceed 128 characters. **NOTE** • Format: *:::::*. For example, **obs:::bucket:***. Asterisks are allowed. • The region segment can be * or a region accessible to the user. The specified resource must belong to the corresponding service that actually exists. • In the case of a custom policy for agencies, the type of this parameter is Object, and the value should be set to *"Resource": {"uri": ["/iam/agencies/07805acaba800fdd4fbdc00b8f888c7c"]}*.

Table 4-107 role.policy.Statement.Condition

Parameter	Type	Description
operator	Object	Operator, for example, Bool and StringEquals. • The parameter type is custom object.

Table 4-108 role.policy.Statement.Condition.operator

Parameter	Type	Description
attribute	Array of strings	Condition key. The condition key must correspond to the specified operator. A maximum of 10 condition keys are allowed. • The parameter type is custom character string array.

Example Request

GET https://*iam.eu-west-0.prod-cloud-ocb.orange-business.com*/v3.0/OS-ROLE/roles/{role_id}

Example Response

Status code: 200

The request is successful.


```
{
    "role": {
        "domain_id": "d78cbac186b744899480f25bd02...",
        "references": 0,
        "description_cn": "Policy description",
        "catalog": "CUSTOMED",
        "name": "custom_d78cbac186b744899480f25bd022f468_11",
```

```
    "description": "IAMDescription",
    "links": {
        "self": "https://iam.eu-west-0.prod-cloud-ocb.orange-business.com/v3/roles/
a24a71dcc41f4da989c2a1c900b52d1a"
    },
    "id": "a24a71dcc41f4da989c2a1c900b52d1a",
    "display_name": "IAMCloudServicePolicy",
    "type": "AX",
    "policy": {
        "Version": "1.1",
        "Statement": [
            {
                "Condition": {
                    "StringStartWith": {
                        "g:ProjectName": [
                            "eu-west-0"
                        ]
                    }
                },
                "Action": [
                    "obs:bucket:GetBucketAcl"
                ],
                "Resource": [
                    "obs:*:*:bucket:*"
                ],
                "Effect": "Allow"
            }
        ]
    }
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
500	Internal server error.

Error Codes

None

4.9.3 Creating a Custom Policy for Cloud Services

Function

This API is provided for the administrator to create a custom policy for cloud services.

The API can be called using both the global endpoint and region-specific endpoints.

URI

POST /v3.0/OS-ROLE/roles

Request Parameters

Table 4-109 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Table 4-110 Parameters in the request body

Parameter	Mandatory	Type	Description
role	Yes	Object	Custom policy information.

Table 4-111 role

Parameter	Mandatory	Type	Description
display_name	Yes	String	Display name of the custom policy.
type	Yes	String	Display mode. **NOTE** • **AX**: Account level. • **XA**: Project level. • The display mode of a custom policy can only be **AX** or **XA**. A custom policy must be displayed at either of the two levels.
description	Yes	String	Description of the custom policy.
description_cn	No	String	Description of the custom policy.
policy	Yes	Object	Content of custom policy.

Table 4-112 role.policy

Parameter	Mandatory	Type	Description
Version	Yes	String	Policy version. When creating a custom policy, set this parameter to **1.1**. **NOTE** • **1.0**: System-defined role. Only a limited number of service-level roles are provided for authorization. • **1.1**: Policy. A policy defines the permissions required to perform operations on a specific cloud resource under certain conditions.
Statement	Yes	Array of objects	Statement of the policy. A policy can contain a maximum of eight statements.

Table 4-113 role.policy.Statement

Parameter	Mandatory	Type	Description
Action	Yes	Array of strings	Specific operation permission on a resource. A maximum of 100 actions are allowed. **NOTE** • The value format is *Service name*:*Resource type*:*Operation*, for example, **vpc:ports:create**. • *Service name*: indicates the product name, such as **ecs**, **evs**, or **vpc**. Only lowercase letters are allowed. Resource types and operations are not case-sensitive. You can use an asterisk (*) to represent all operations.
Effect	Yes	String	Effect of the permission. The value can be **Allow** or **Deny**. If both Allow and Deny statements are found in a policy, the authentication starts from the Deny statements. Options: • Allow • Deny

Parameter	Mandatory	Type	Description

Condition	No	Object	Conditions for the permission to take effect. A maximum of 10 conditions are allowed.
			NOTE
			Take the condition in the sample request as an example, the condition key (**obs:prefix**) and the string (**public**) must be equal (**StringEquals**).
			`"Condition": {`
			`"StringEquals": {`
			`"obs:prefix": [`
			`"public"`
			`]`
			`}`
			`}`

Resource	No	Array of strings	Cloud resource. The array can contain a maximum of 10 resource strings, and each string cannot exceed 128 characters. **NOTE** • Format: *.:::*. For example, **obs:*:bucket:***. Asterisks are allowed. • The region segment can be * or a region accessible to the user. The specified resource must belong to the corresponding service that actually exists.

Response Parameters

Table 4-114 Parameters in the response body

Parameter	Type	Description
role	Object	Custom policy information.

Table 4-115 role

Parameter	Type	Description
catalog	String	Service catalog.
display_name	String	Display name of the custom policy.
description	String	Description of the custom policy.
links	Object	Resource link of the custom policy.

Parameter	Type	Description
policy	Object	Content of custom policy.
description_cn	String	Description of the custom policy.
domain_id	String	Domain ID.
type	String	Display mode. **NOTE** • **AX**: Account level. • **XA**: Project level. • The display mode of a custom policy can only be **AX** or **XA**. A custom policy must be displayed at either of the two levels.
id	String	Policy ID.
name	String	Name of the custom policy.
updated_time	String	Time when the custom policy was last updated.
created_time	String	Time when the custom policy was created.
references	String	Number of references.

Table 4-116 role.links

Parameter	Type	Description
self	String	Resource link.

Table 4-117 role.policy

Parameter	Type	Description
Version	String	Policy version. **NOTE** • **1.0**: System-defined role. Only a limited number of service-level roles are provided for authorization. • **1.1**: Policy. A policy defines the permissions required to perform operations on a specific cloud resource under certain conditions.
Statement	Array of objects	Statement of the policy. A policy can contain a maximum of eight statements.

Table 4-118 role.policy.Statement

Parameter	Type	Description
Action	Array of strings	Specific operation permission on a resource. A maximum of 100 actions are allowed. **NOTE** • The value format is *Service name*:*Resource type*:*Operation*, for example, **vpc:ports:create**. • *Service name*: indicates the product name, such as **ecs**, **evs**, or **vpc**. Only lowercase letters are allowed. Resource types and operations are not case-sensitive. You can use an asterisk (*) to represent all operations.
Effect	String	Effect of the permission. The value can be **Allow** or **Deny**. If both Allow and Deny statements are found in a policy, the authentication starts from the Deny statements. Options: • Allow • Deny
Condition	Map<String,Map<String,Array<String>>>	Conditions for the permission to take effect. A maximum of 10 conditions are allowed. **NOTE** Take the condition in the sample request as an example, the condition key (**obs:prefix**) and the string (**public**) must be equal (**StringEquals**). `"Condition": { "StringEquals": { "obs:prefix": [ "public" ] } }`
Resource	Array of strings	Cloud resource. The array can contain a maximum of 10 resource strings, and each string cannot exceed 128 characters. **NOTE** • Format: *:::::*. For example, **obs:*:bucket:***. Asterisks are allowed. • The region segment can be * or a region accessible to the user. The specified resource must belong to the corresponding service that actually exists.

Example Request

```
POST https://iam.eu-west-0.prod-cloud-ocb.orange-business.com/v3.0/OS-ROLE/roles
{
    "role": {
        "display_name": "IAMCloudServicePolicy",
        "type": "AX",
```

```
    "description": "IAMDescription",
    "description_cn": "Policy description",
    "policy": {
        "Version": "1.1",
        "Statement": [
            {
                "Effect": "Allow",
                "Action": [
                    "obs:bucket:GetBucketAcl"
                ],
                "Condition": {
                    "StringStartWith": {
                        "g:ProjectName": [
                            "eu-west-0"
                        ]
                    }
                },
            }
        ]
    }
  }
}
```

Example Response

Status code: 201

The request is successful.

```
{
  "role": {
    "catalog": "CUSTOMED",
    "display_name": "IAMCloudServicePolicy",
    "description": "IAMDescription",
    "links": {
        "self": "https://iam.eu-west-0.prod-cloud-ocb.orange-business.com/v3/roles/
93879fd90f1046f69e6e0b31c94d2..."
    },
    "policy": {
        "Version": "1.1",
        "Statement": [
            {
                "Action": [
                    "obs:bucket:GetBucketAcl"
                ],
                "Resource": [
                    "obs:*:*:bucket:*"
                ],
                "Effect": "Allow",
                "Condition": {
                    "StringStartWith": {
                        "g:ProjectName": [
                            "eu-west-0"
                        ]
                    }
                }
            }
        ]
    },
    "description_cn": "Policy description",
    "domain_id": "d78cbac186b744899480f25bd...",
    "type": "AX",
    "id": "93879fd90f1046f69e6e0b31c9...",
    "name": "custom_d78cbac186b744899480f25bd022f468_1"
  }
}
```

Status Codes

Status Code	Description
201	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
500	Internal server error.

Error Codes

None

4.9.4 Creating a Custom Policy for Agencies

Function

This API is provided for the administrator to create a custom policy for agencies.

The API can be called using both the global endpoint and region-specific endpoints.

URI

POST /v3.0/OS-ROLE/roles

Request Parameters

Table 4-119 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Table 4-120 Parameters in the request body

Parameter	Mandatory	Type	Description
role	Yes	Object	Custom policy information.

Table 4-121 role

Parameter	Mandatory	Type	Description
display_name	Yes	String	Display name of the custom policy.
type	Yes	String	Display mode. **NOTE** • **AX**: Account level. • **XA**: Project level. • The display mode of a custom policy can only be **AX** or **XA**. A custom policy must be displayed at either of the two levels.
description	Yes	String	Description of the custom policy.
description_cn	No	String	Description of the custom policy.
policy	Yes	Object	Content of custom policy.

Table 4-122 role.policy

Parameter	Mandatory	Type	Description
Version	Yes	String	Policy version. When creating a custom policy, set this parameter to **1.1**. **NOTE** • **1.0**: System-defined role. Only a limited number of service-level roles are provided for authorization. • **1.1**: Policy. A policy defines the permissions required to perform operations on a specific cloud resource under certain conditions.
Statement	Yes	Array of objects	Statement of the policy. A policy can contain a maximum of eight statements.

Table 4-123 role.policy.Statement

Parameter	Mandatory	Type	Description
Action	Yes	Array of strings	An action item is a specific operation permission on a resource. **NOTE** • For a custom policy for agencies, this parameter should be set to *"Action": ["iam:agencies:assume"]*. Options: • iam:agencies:assume
Effect	Yes	String	Effect of the permission. The value can be **Allow** or **Deny**. If both Allow and Deny statements are found in a policy, the authentication starts from the Deny statements. Options: • Allow • Deny
Resource	No	Object	Resources to be managed. After an account establishes multiple trust relationships between itself and your account, you can authorize IAM users in different user groups to manage resources of the delegating party. Each IAM user can only switch to the delegated agencies. For example: `"Resource": {"uri": ["/iam/agencies/07805acaba800fdd4fbdc00b8f888c7c"]}`

Table 4-124 role.policy.Statement.Resource

Parameter	Mandatory	Type	Description
uri	Yes	Array of strings	URI of a delegated resource, which can contain a maximum of 128 characters. Format: /iam/agencies/*delegation ID*. For example: `"uri": ["/iam/agencies/07805acaba800fdd4fbdc00b8f888c7c"]`

Response Parameters

Table 4-125 Parameters in the response body

Parameter	Type	Description
role	Object	Custom policy information.

Table 4-126 role

Parameter	Type	Description
catalog	String	Service catalog.
display_name	String	Display name of the custom policy.
description	String	Description of the custom policy.
links	Object	Resource link of the custom policy.
policy	Object	Content of custom policy.
description_cn	String	Description of the custom policy.
domain_id	String	Domain ID.
type	String	Display mode. **NOTE** • **AX**: Account level. • **XA**: Project level. • The display mode of a custom policy can only be **AX** or **XA**. A custom policy must be displayed at either of the two levels.
id	String	Policy ID.
name	String	Name of the custom policy.
updated_time	String	Time when the custom policy was last updated.
created_time	String	Time when the custom policy was created.
references	String	Number of references.

Table 4-127 role.links

Parameter	Type	Description
self	String	Resource link.

Table 4-128 role.policy

Parameter	Type	Description
Version	String	Policy version. **NOTE** • **1.0**: System-defined role. Only a limited number of service-level roles are provided for authorization. • **1.1**: Policy. A policy defines the permissions required to perform operations on a specific cloud resource under certain conditions.
Statement	Array of objects	Statement of the policy. A policy can contain a maximum of eight statements.

Table 4-129 role.policy.Statement

Parameter	Type	Description
Action	Array of strings	An action item is a specific operation permission on a resource. **NOTE** • For a custom policy for agencies, this parameter should be set to *"Action": ["iam:agencies:assume"]*.
Effect	String	Effect of the permission. The value can be **Allow** or **Deny**. If both Allow and Deny statements are found in a policy, the authentication starts from the Deny statements. Options: • Allow • Deny
Resource	Object	Resources to be managed. After an account establishes multiple trust relationships between itself and your account, you can authorize IAM users in different user groups to manage resources of the delegating party. Each IAM user can only switch to the delegated agencies. For example: `"Resource": {"uri": ["/iam/agencies/07805acaba800fdd4fbdc00b8f888c7c"]}`

Table 4-130 role.policy.Statement.Resource

Parameter	Type	Description
uri	Array of strings	URI of a delegated resource, which can contain a maximum of 128 characters. Format: /iam/agencies/*delegation ID*. For example: `"uri": ["/iam/agencies/07805acaba800fdd4fbdc00b8f888c7c"]`

Example Request

```
POST https://iam.eu-west-0.prod-cloud-ocb.orange-business.com/v3.0/OS-ROLE/roles
{
    "role": {
        "display_name": "IAMAgencyPolicy",
        "type": "AX",
        "description": "IAMDescription",
        "description_cn": "Policy description",
        "policy": {
            "Version": "1.1",
            "Statement": [
                {
                    "Effect": "Allow",
                    "Action": [
                        "iam:agencies:assume"
                    ],
                    "Resource": {
                        "uri": [
                            "/iam/agencies/07805acaba800fdd4fbdc00b8f888c7c"
                        ]
                    }
                }
            ]
        }
    }
}
```

Example Response

Status code: 201

The request is successful.

```
{
    "role": {
        "catalog": "CUSTOMED",
        "display_name": "IAMAgencyPolicy",
        "description": "IAMDescription",
        "links": {
            "self": "https://iam.eu-west-0.prod-cloud-ocb.orange-business.com/v3/roles/
f67224e84dc849ab954ce29fb4f47f8e"
        },
        "policy": {
            "Version": "1.1",
            "Statement": [
                {
                    "Action": [
                        "iam:agencies:assume"
                    ],
                    "Resource": {
                        "uri": [
                            "/iam/agencies/07805acaba800fdd4fbdc00b8f888c7c"
                        ]
                    },
```

```
                "Effect": "Allow"
            }
        ]
    },
    "description_cn": "Policy description",
    "domain_id": "d78cbac186b744899480f25bd02...",
    "type": "AX",
    "id": "f67224e84dc849ab954ce29fb4f47f8e",
    "name": "custom_d78cbac186b744899480f25bd022f468_0"
  }
}
```


Status Codes

Status Code	Description
201	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
500	Internal server error.

Error Codes

None

4.9.5 Modifying a Custom Policy for Cloud Services

Function

This API is provided for the administrator to modify a custom policy for cloud services.

The API can be called using both the global endpoint and region-specific endpoints.

URI

PATCH /v3.0/OS-ROLE/roles/{role_id}

Table 4-131 URI parameters

Parameter	Mandatory	Type	Description
role_id	Yes	String	Custom policy ID. For details about how to obtain a custom policy ID, see **Custom Policy ID**.

Request Parameters

Table 4-132 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Table 4-133 Parameters in the request body

Parameter	Mandatory	Type	Description
role	Yes	Object	Custom policy information.

Table 4-134 role

Parameter	Mandatory	Type	Description
display_name	Yes	String	Display name of the custom policy.
type	Yes	String	Display mode. **NOTE** • **AX**: Account level. • **XA**: Project level. • The display mode of a custom policy can only be **AX** or **XA**. A custom policy must be displayed at either of the two levels.
description	Yes	String	Description of the custom policy.
description_cn	No	String	Description of the custom policy.
policy	Yes	Object	Content of custom policy.

Table 4-135 role.policy

Parameter	Mandatory	Type	Description
Version	Yes	String	Policy version. When creating a custom policy, set this parameter to **1.1**. **NOTE** • **1.0**: System-defined role. Only a limited number of service-level roles are provided for authorization. • **1.1**: Policy. A policy defines the permissions required to perform operations on a specific cloud resource under certain conditions.
Statement	Yes	Array of objects	Statement of the policy. A policy can contain a maximum of eight statements.

Table 4-136 role.policy.Statement

Parameter	Mandatory	Type	Description
Action	Yes	Array of strings	Specific operation permission on a resource. A maximum of 100 actions are allowed. **NOTE** • The value format is *Service name*:*Resource type*:*Operation*, for example, **vpc:ports:create**. • *Service name*: indicates the product name, such as **ecs**, **evs**, or **vpc**. Only lowercase letters are allowed. Resource types and operations are not case-sensitive. You can use an asterisk (*) to represent all operations.
Effect	Yes	String	Effect of the permission. The value can be **Allow** or **Deny**. If both Allow and Deny statements are found in a policy, the authentication starts from the Deny statements. Options: • Allow • Deny

Parameter	Mandatory	Type	Description
Condition	No	Object	Conditions for the permission to take effect. A maximum of 10 conditions are allowed.
Resource	No	Array of strings	Cloud resource. The array can contain a maximum of 10 resource strings, and each string cannot exceed 128 characters. **NOTE** • Format: .:::: For example, **obs:.:bucket:***. Asterisks are allowed. • The region segment can be * or a region accessible to the user. The specified resource must belong to the corresponding service that actually exists.

Table 4-137 role.policy.Statement.Condition

Parameter	Mandatory	Type	Description
<operator>	No	Object	Operator, for example, Bool and StringEquals. • The parameter type is custom object.

Table 4-138 role.policy.Statement.Condition.<operator>

Parameter	Mandatory	Type	Description
<attribute>	No	Array of strings	Condition key. The condition key must correspond to the specified operator. A maximum of 10 condition keys are allowed. • The parameter type is custom character string array.

Response Parameters

Table 4-139 Parameters in the response body

Parameter	Type	Description
role	Object	Custom policy information.

Table 4-140 role

Parameter	Type	Description
catalog	String	Service catalog.
display_name	String	Display name of the custom policy.
description	String	Description of the custom policy.
links	Object	Resource link of the custom policy.
policy	Object	Content of custom policy.
description_cn	String	Description of the custom policy.
domain_id	String	Domain ID.
type	String	Display mode. **NOTE** • **AX**: Account level. • **XA**: Project level. • The display mode of a custom policy can only be **AX** or **XA**. A custom policy must be displayed at either of the two levels.
id	String	Policy ID.
name	String	Name of the custom policy.
updated_time	String	Time when the custom policy was last updated.
created_time	String	Time when the custom policy was created.
references	String	Number of references.

Table 4-141 role.links

Parameter	Type	Description
self	String	Resource link.

Table 4-142 role.policy

Parameter	Type	Description
Version	String	Policy version. **NOTE** • **1.0**: System-defined role. Only a limited number of service-level roles are provided for authorization. • **1.1**: Policy. A policy defines the permissions required to perform operations on a specific cloud resource under certain conditions.
Statement	Array of objects	Statement of the policy. A policy can contain a maximum of eight statements.

Table 4-143 role.policy.Statement

Parameter	Type	Description
Action	Array of strings	Specific operation permission on a resource. A maximum of 100 actions are allowed. **NOTE** • The value format is *Service name*:*Resource type*:*Operation*, for example, **vpc:ports:create**. • *Service name*: indicates the product name, such as **ecs**, **evs**, or **vpc**. Only lowercase letters are allowed. Resource types and operations are not case-sensitive. You can use an asterisk (*) to represent all operations.
Effect	String	Effect of the permission. The value can be **Allow** or **Deny**. If both Allow and Deny statements are found in a policy, the authentication starts from the Deny statements. Options: • Allow • Deny
Condition	Object	Conditions for the permission to take effect. A maximum of 10 conditions are allowed.

Parameter	Type	Description
Resource	Array of strings	Cloud resource. The array can contain a maximum of 10 resource strings, and each string cannot exceed 128 characters. **NOTE** • Format: *:::::*. For example, **obs:*:bucket:***. Asterisks are allowed. • The region segment can be * or a region accessible to the user. The specified resource must belong to the corresponding service that actually exists.

Table 4-144 role.policy.Statement.Condition

Parameter	Type	Description
operator	Object	Operator, for example, Bool and StringEquals. • The parameter type is custom object.

Table 4-145 role.policy.Statement.Condition.operator

Parameter	Type	Description
attribute	Array of strings	Condition key. The condition key must correspond to the specified operator. A maximum of 10 condition keys are allowed. • The parameter type is custom character string array.

Example Request

```
PATCH https://iam.eu-west-0.prod-cloud-ocb.orange-business.com/v3.0/OS-ROLE/roles/{role_id}
{
    "role": {
        "display_name": "IAMCloudServicePolicy",
        "type": "AX",
        "description": "IAMDescription",
        "description_cn": "Policy description",
        "policy": {
            "Version": "1.1",
            "Statement": [
                {
                    "Effect": "Allow",
                    "Action": [
                        "obs:bucket:GetBucketAcl"
                    ],
                    "Condition": {
                        "StringStartWith": {
                            "g:ProjectName": [
                                "eu-west-0"
                            ]
                        }
```

```
                },
                "Resource": [
                    "obs:*:*:bucket:*"
                ]
            }
        ]
    }
  }
}
```

Example Response

Status code: 200

The request is successful.

```
{
  "role": {
    "catalog": "CUSTOMED",
    "display_name": "IAMCloudServicePolicy",
    "description": "IAMDescription",
    "links": {
      "self": "https://iam.eu-west-0.prod-cloud-ocb.orange-business.com/v3/roles/
93879fd90f1046f69e6e0b31c94d2615"
    },
    "policy": {
      "Version": "1.1",
      "Statement": [
        {
          "Action": [
            "obs:bucket:GetBucketAcl"
          ],
          "Resource": [
            "obs:*:*:bucket:*"
          ],
          "Effect": "Allow",
          "Condition": {
            "StringStartWith": {
              "g:ProjectName": [
                "eu-west-0"
              ]
            }
          }
        }
      ]
    },
    "description_cn": "Policy description",
    "domain_id": "d78cbac186b744899480f25bd0...",
    "type": "AX",
    "id": "93879fd90f1046f69e6e0b31c94d2615",
    "name": "custom_d78cbac186b744899480f25bd022f468_1"
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.

Status Code	Description
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

Error Codes

None

4.9.6 Modifying a Custom Policy for Agencies

Function

This API is provided for the administrator to modify a custom policy for agencies.

The API can be called using both the global endpoint and region-specific endpoints.

URI

PATCH /v3.0/OS-ROLE/roles/{role_id}

Table 4-146 URI parameters

Parameter	Mandatory	Type	Description
role_id	Yes	String	Custom policy ID. For details about how to obtain a custom policy ID, see **Custom Policy ID**.

Request Parameters

Table 4-147 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Table 4-148 Parameters in the request body

Parameter	Mandatory	Type	Description
role	Yes	Object	Custom policy information.

Table 4-149 role

Parameter	Mandatory	Type	Description
display_name	Yes	String	Display name of the custom policy.
type	Yes	String	Display mode. **NOTE** • **AX**: Account level. • **XA**: Project level. • The display mode of a custom policy can only be **AX** or **XA**. A custom policy must be displayed at either of the two levels.
description	Yes	String	Description of the custom policy.
description_cn	No	String	Description of the custom policy.
policy	Yes	Object	Content of custom policy.

Table 4-150 role.policy

Parameter	Mandatory	Type	Description
Version	Yes	String	Policy version. When creating a custom policy, set this parameter to **1.1**. **NOTE** • **1.0**: System-defined role. Only a limited number of service-level roles are provided for authorization. • **1.1**: Policy. A policy defines the permissions required to perform operations on a specific cloud resource under certain conditions.
Statement	Yes	Array of objects	Statement of the policy. A policy can contain a maximum of eight statements.

Table 4-151 role.policy.Statement

Parameter	Mandatory	Type	Description
Action	Yes	Array of strings	An action item is a specific operation permission on a resource. **NOTE** • For a custom policy for agencies, this parameter should be set to *"Action": ["iam:agencies:assume"]*. Options: • iam:agencies:assume
Effect	Yes	String	Effect of the permission. The value can be **Allow** or **Deny**. If both Allow and Deny statements are found in a policy, the authentication starts from the Deny statements. Options: • Allow • Deny
Resource	No	Object	Resources to be managed. After an account establishes multiple trust relationships between itself and your account, you can authorize IAM users in different user groups to manage resources of the delegating party. Each IAM user can only switch to the delegated agencies. For example: `"Resource": {"uri": ["/iam/agencies/07805acaba800fdd4fbdc00b8f888c7c"]}`

Table 4-152 role.policy.Statement.Resource

Parameter	Mandatory	Type	Description
uri	Yes	Array of strings	URI of a delegated resource, which can contain a maximum of 128 characters. Format: /iam/agencies/*delegation ID*. For example: `"uri": ["/iam/agencies/07805acaba800fdd4fbdc00b8f888c7c"]`

Response Parameters

Table 4-153 Parameters in the response body

Parameter	Type	Description
role	Object	Custom policy information.

Table 4-154 role

Parameter	Type	Description
catalog	String	Service catalog.
display_name	String	Display name of the custom policy.
description	String	Description of the custom policy.
links	Object	Resource link of the custom policy.
policy	Object	Content of custom policy.
description_cn	String	Description of the custom policy.
domain_id	String	Domain ID.
type	String	Display mode. **NOTE** • **AX**: Account level. • **XA**: Project level. • The display mode of a custom policy can only be **AX** or **XA**. A custom policy must be displayed at either of the two levels.
id	String	Policy ID.
name	String	Name of the custom policy.
updated_time	String	Time when the custom policy was last updated.
created_time	String	Time when the custom policy was created.
references	String	Number of references.

Table 4-155 role.links

Parameter	Type	Description
self	String	Resource link.

Table 4-156 role.policy

Parameter	Type	Description
Version	String	Policy version. **NOTE** • **1.0**: System-defined role. Only a limited number of service-level roles are provided for authorization. • **1.1**: Policy. A policy defines the permissions required to perform operations on a specific cloud resource under certain conditions.
Statement	Array of objects	Statement of the policy. A policy can contain a maximum of eight statements.

Table 4-157 role.policy.Statement

Parameter	Type	Description
Action	Array of strings	An action item is a specific operation permission on a resource. **NOTE** • For a custom policy for agencies, this parameter should be set to *"Action": ["iam:agencies:assume"]*.
Effect	String	Effect of the permission. The value can be **Allow** or **Deny**. If both Allow and Deny statements are found in a policy, the authentication starts from the Deny statements. Options: • Allow • Deny
Resource	Object	Resources to be managed. After an account establishes multiple trust relationships between itself and your account, you can authorize IAM users in different user groups to manage resources of the delegating party. Each IAM user can only switch to the delegated agencies. For example: `"Resource": {"uri": ["/iam/agencies/07805acaba800fdd4fbdc00b8f888c7c"]}`

Table 4-158 role.policy.Statement.Resource

Parameter	Type	Description
uri	Array of strings	URI of a delegated resource, which can contain a maximum of 128 characters. Format: /iam/agencies/*delegation ID*. For example: `"uri": ["/iam/agencies/07805acaba800fdd4fbdc00b8f888c7c"]`

Example Request

```
PATCH https://iam.eu-west-0.prod-cloud-ocb.orange-business.com/v3.0/OS-ROLE/roles/{role_id}
{
   "role": {
      "display_name": "IAMAgencyPolicy",
      "type": "AX",
      "description": "IAMDescription",
      "description_cn": "Policy description",
      "policy": {
         "Version": "1.1",
         "Statement": [
            {
               "Effect": "Allow",
               "Action": [
                  "iam:agencies:assume"
               ],
               "Resource": {
                  "uri": [
                     "/iam/agencies/07805acaba800fdd4fbdc00b8f888c7c"
                  ]
               }
            }
         ]
      }
   }
}
```

Example Response

Status code: 200

The request is successful.

```
{
   "role": {
      "catalog": "CUSTOMED",
      "display_name": "IAMAgencyPolicy",
      "description": "IAMDescription",
      "links": {
         "self": "https://iam.eu-west-0.prod-cloud-ocb.orange-business.com/v3/roles/
f67224e84dc849ab954ce29fb4f47f8e"
      },
      "policy": {
         "Version": "1.1",
         "Statement": [
            {
               "Action": [
                  "iam:agencies:assume"
               ],
               "Resource": {
                  "uri": [
                     "/iam/agencies/07805acaba800fdd4fbdc00b8f888c7c"
                  ]
               },
```

```
                "Effect": "Allow"
            }
        ]
    },
    "description_cn": "Policy description",
    "domain_id": "d78cbac186b744899480f25b...",
    "type": "AX",
    "id": "f67224e84dc849ab954ce29fb4f47f8e",
    "name": "custom_d78cbac186b744899480f25bd022f468_0"
  }
}
```


Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
500	Internal server error.

Error Codes

None

4.9.7 Deleting a Custom Policy

Function

This API is provided for the administrator to delete a custom policy.

The API can be called using both the global endpoint and region-specific endpoints.

URI

DELETE /v3.0/OS-ROLE/roles/{role_id}

Table 4-159 URI parameters

Parameter	Mandatory	Type	Description
role_id	Yes	String	Custom policy ID. For details about how to obtain a custom policy ID, see **Custom Policy ID**.

Request Parameters

Table 4-160 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

None

Example Request

DELETE https://*iam.eu-west-0.prod-cloud-ocb.orange-business.com*/v3.0/OS-ROLE/roles/{role_id}

Example Response

None

Status Codes

Status Code	Description
200	The custom policy is deleted successfully.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
500	Internal server error.

Error Codes

None

4.10 Agency Management

4.10.1 Creating an Agency

Function

This API is used to create an agency.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

POST /v3.0/OS-AGENCY/agencies

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	application/json;charset=utf8
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Parameters in the request body

Parameter	Mandatory	Type	Description
name	Yes	String	Name of an agency. The length is less than or equal to 64 characters.
domain_id	Yes	String	ID of the current domain.
trust_domain_id	At least one	String	ID of the delegated domain.
trust_domain_name		String	Name of the delegated domain.
description	No	String	Description of an agency. The length is less than or equal to 255 characters.
duration	No	String	Validity period of the agency. The default value is **null**, which means that the agency will never expire. If this parameter is set to **FOREVER**, the validity of the agency is unlimited. If it is set to **ONEDAY**, the agency is valid only for one day.

NOTE

At least one of **trust_domain_id** and **trust_domain_name** must exist in the request body. If both of them exist, **trust_domain_name** takes precedence.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X POST -d'{"agency" : {"name" : "exampleagency","domain_id" : "0ae9c6993a2e47bb8c4c7a9bb8278d61","trust_domain_id" : "35d7706cedbc49a18df0783d00269c20","trust_domain_name" : "exampledomain","description" : "testsfdas"}}' https://sample.domain.com/v3.0/OS-AGENCY/agencies
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
agency	Yes	JSON object	Delegated object.

- Description for the agency format

Parameter	Mandatory	Type	Description
id	Yes	String	ID of an agency.
name	Yes	String	Name of an agency.
domain_id	Yes	String	ID of the current domain.
trust_domain_id	Yes	String	ID of the delegated domain.
description	Yes	String	Description of an agency.
duration	Yes	String	Validity period of an agency.
expire_time	Yes	String	Expiration time of an agency.
create_time	Yes	String	Time when an agency is created.

- Example response (request successful)

```
{
  "agency" : {
    "description" : "testsfdas",
    "trust_domain_id" : "35d7706cedbc49a18df0783d00269c20",
    "id" : "c1a06ec7387f430c8122d6f336c66dcf",
    "duration" : null,
    "create_time" : "2017-01-06T05:56:09.738212",
    "expire_time" : null,
    "domain_id" : "0ae9c6993a2e47bb8c4c7a9bb8278d61",
    "name" : "exampleagency"
   }
}
```

- Example response (request failed)

```
{
   "error": {
      "message": "'name' is a required property",
      "code": 400,
      "title": "Bad Request"
   }
}
```

Status Codes

Status Code	Description
201	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
409	The agency already exists.
500	Internal server error.

4.10.2 Querying an Agency List Based on the Specified Conditions

Function

This API is used to query an agency list based on the specified conditions.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3.0/OS-AGENCY/agencies{?domain_id,name,trust_domain_id}

- Query parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	ID of the current domain.
name	No	String	Name of an agency.
trust_domain_id	No	String	ID of the delegated domain.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X GET https://sample.domain.com/v3.0/OS-AGENCY/agencies?domain_id=0ae9c6993a2e47bb8c4c7a9bb8278d61
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
agencies	Yes	JSONArray	List of agencies.

- Description for the agency format

Parameter	Mandatory	Type	Description
id	Yes	String	ID of an agency.
name	Yes	String	Name of an agency.
domain_id	Yes	String	ID of the current domain.
trust_domain_id	Yes	String	ID of the delegated domain.
trust_domain_name	Yes	String	Name of the delegated domain.
description	Yes	String	Description of an agency.
duration	Yes	String	Validity period of an agency. The default value is **null**, indicating that the agency is permanently valid.
expire_time	Yes	String	Expiration time of an agency.
create_time	Yes	String	Time when an agency is created.

- Example response (request successful)

```
{
  "agencies": [
    {
      "trust_domain_name": "exampledomain",
      "description": " testsfdas ",
      "trust_domain_id": "b3f266d0c08544a0859740de8b84e850",
      "id": "afca8ddf2e92469a8fd26a635da5206f",
```

```
    "duration": null,
    "create_time": "2017-01-04T09:09:15.000000",
    "expire_time": null,
    "domain_id": "0ae9c6993a2e47bb8c4c7a9bb8278d61",
    "name": "exampleagency"
   }
  ]
}
```

- Example response (request failed)

```
{
  "error": {
    "message": "You are not authorized to perform the requested action: identity:list_agencies",
    "code": 403,
    "title": "Forbidden"
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.10.3 Obtaining Details of a Specified Agency

Function

This API is used to obtain the details of a specified agency.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3.0/OS-AGENCY/agencies/{agency_id}

- URI parameters

Parameter	Mandatory	Type	Description
agency_id	Yes	String	ID of an agency.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request
  curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X GET https://sample.domain.com/v3.0/OS-AGENCY/agencies/2809756f748a46e2b92d58d309f67291

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
agency	Yes	JSON object	Delegated object.

- Description for the agency format

Parameter	Mandatory	Type	Description
id	Yes	String	ID of an agency.
name	Yes	String	Name of an agency.
domain_id	Yes	String	ID of the current domain.
trust_domain_id	Yes	String	ID of the delegated domain.
trust_domain_name	Yes	String	Name of the delegated domain.
description	Yes	String	Description of an agency.
duration	Yes	String	Validity period of an agency. The default value is **null**, indicating that the agency is permanently valid.
expire_time	Yes	String	Expiration time of an agency.
create_time	Yes	String	Time when an agency is created.

- Example response (request successful)

```
{
  "agency" : {
    "description" : " testsfdas ",
    "trust_domain_id" : "3ebe1024db46485cb02ef08d3c348477",
    "trust_domain_name" : "exampledomain",
    "id" : "c1a06ec7387f430c8122d6f336c66dcf",
    "duration": "FOREVER",
```

```
    "create_time" : "2017-01-06T05:56:09.738212",
    "expire_time" : null,
    "domain_id" : "0ae9c6993a2e47bb8c4c7a9bb8278d61",
    "name" : "exampleagency"
   }
}
```

- Example response (request failed)

```
{
   "error": {
      "message": "Could not find agency: 2809756f748a46e2b92d58d309f67291",
      "code": 404,
      "title": "Not Found"
   }
}
```

Status Codes

Status Code	Description
200	The request is successful.
401	Authentication failed.
403	Access denied.
404	The agency does not exist.
500	Internal server error.

4.10.4 Modifying an Agency

Function

This API is used to modify agency information, including the **trust_domain_id**, **description**, and **trust_domain_name** parameters.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  PUT /v3.0/OS-AGENCY/agencies/{agency_id}

- URI parameters

Parameter	Mandatory	Type	Description
agency_id	Yes	String	ID of an agency.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Parameters in the request body

Parameter	Mandatory	Type	Description
trust_domain_id	No	String	ID of the delegated domain. The delegated domain must exist.
trust_domain_name	No	String	Name of the delegated domain. The delegated domain must exist.
description	No	String	Description of an agency.

NOTE

The **trust_domain_id** and **trust_domain_name** parameters in a request body must exist or not exist at the same time. If both of them exist, **trust_domain_name** takes precedence.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X PUT -d '{"agency" : {"trust_domain_id" : "35d7706cedbc49a18df0783d00269c20","trust_domain_name" : "exampledomain","description" : "111111"}}' https://sample.domain.com/v3.0/OS-AGENCY/agencies/2809756f748a46e2b92d58d309f67291
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
agency	Yes	JSON object	Delegated object.

- Description for the agency format

Parameter	Mandatory	Type	Description
id	Yes	String	ID of an agency.
name	Yes	String	Name of an agency.

Parameter	Mandatory	Type	Description
domain_id	Yes	String	ID of the current domain.
trust_domain_id	Yes	String	ID of the delegated domain.
description	Yes	String	Description of an agency.
duration	Yes	String	Validity period of an agency. The default value is **null**, indicating that the agency is permanently valid.
expire_time	Yes	String	Expiration time of an agency.
create_time	Yes	String	Time when an agency is created.

- Example response (request successful)

```
{
  "agency" : {
    "description" : " testsfdas ",
    "trust_domain_id" : "3ebe1024db46485cb02ef08d3c348477",
    "id" : "c1a06ec7387f430c8122d6f336c66dcf",
    "duration" : null,
    "create_time" : "2017-01-06T05:56:09.738212",
    "expire_time" : null,
    "domain_id" : "0ae9c6993a2e47bb8c4c7a9bb8278d61",
    "name" : "exampleagency"
   }
}
```

- Example response (request failed)

```
{
  "error": {
    "message": "TrustDomainNotFound",
    "code": 404,
    "title": "Not Found"
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.10.5 Deleting an Agency

Function

This API is used to delete an agency.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

NOTE

After this operation, the delegated party can no longer access the relevant resources. Exercise caution when performing this operation.

URI

- URI format

  DELETE /v3.0/OS-AGENCY/agencies/{agency_id}

- URI parameters

Parameter	Mandatory	Type	Description
agency_id	Yes	String	ID of an agency.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X DELETE https://sample.domain.com/v3.0/OS-AGENCY/agencies/2809756f748a46e2b92d58d309f67291
```

Response Parameters

- Example response (request failed)

```
{
    "error": {
        "message": "Could not find agency: 2809756f748a46e2b92d58d309f67291",
        "code": 404,
        "title": "Not Found"
    }
}
```

Status Codes

Status Code	Description
204	The request is successful.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.10.6 Granting Permissions to an Agency for a Project

Function

This API is used to grant permissions to an agency for a project.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  PUT /v3.0/OS-AGENCY/projects/{project_id}/agencies/{agency_id}/roles/{role_id}

- URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	ID of a project under the current domain.
agency_id	Yes	String	ID of an agency.
role_id	Yes	String	ID of a role.

NOTE

The role name corresponding to **role_id** in a request body is controlled by a blacklist. The role name cannot be **secu_admin** or **te_agency**.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request
  ```
  curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X PUT https://sample.domain.com/v3.0/OS-AGENCY/projects/0945241c5ebc4660bac540d48f2a2c14/agencies/37f90258b820472bbc8a0f4f0bfd720d/roles/0f3a2d418ed747fa8be46e92757be9ff
  ```

Response Parameters

- No response: indicates that the response is successful.
- Example response (request failed)
  ```
  {
    "error" : {
       "message" : "Could not find role: 0f3a2d418ed747fa8be46e92757be9ddff",
       "code" : 404,
       "title" : "Not Found"
     }
  }
  ```

Status Codes

Status Code	Description
204	The request is successful.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.10.7 Checking Whether an Agency Has the Specified Permissions on a Project

Function

This API is used to check whether an agency has the specified permissions on a project.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  HEAD /v3.0/OS-AGENCY/projects/{project_id}/agencies/{agency_id}/roles/{role_id}

- URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	ID of a project under the current domain.
agency_id	Yes	String	ID of an agency.
role_id	Yes	String	ID of a role.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X HEAD https://sample.domain.com/v3.0/OS-AGENCY/projects/0945241c5ebc4660bac540d48f2a2c14/agencies/37f90258b820472bbc8a0f4f0bfd720d/roles/0f3a2d418ed747fa8be46e92757be9ff
```

Response Parameters

- Example response (request failed)

```
{
  "error" : {
    "message" : "Could not find role: 0f3a2d418ed747fa8be46e92757be9ddff",
    "code" : 404,
    "title" : "Not Found"
  }
}
```

Status Codes

Status Code	Description
204	The request is successful. The agency has the specified permissions on the project.
401	Authentication failed.

Status Code	Description
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.10.8 Querying the List of Permissions of an Agency on a Project

Function

This API is used to query the list of permissions of an agency on a project.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3.0/OS-AGENCY/projects/{project_id}/agencies/{agency_id}/roles

- URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	ID of a project under the current domain.
agency_id	Yes	String	ID of an agency.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X GET https://sample.domain.com/v3.0/OS-AGENCY/projects/0945241c5ebc4660bac540d48f2a2c14/agencies/37f90258b820472bbc8a0f4f0bfd720d/roles
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
roles	Yes	Array	List of roles.

- Description for the role format

Parameter	Mandatory	Type	Description
id	Yes	String	ID of a role.
name	Yes	String	Name of a role.
domain_id	Yes	String	ID of the domain to which a role belongs.
type	Yes	String	Display mode of a role. • **AX**: A role is displayed at the domain layer. • **XA**: A role is displayed at the project layer. • **AA**: A role is displayed at both the domain and project layers. • **XX**: A role is not displayed at the domain or project layer.
display_name	Yes	String	Displayed name of a role.
catalog	Yes	String	Directory where a role locates.
policy	Yes	Dict	Policy of a role.
description	Yes	String	Description of a role.

- Example response (successful request)

```
{
  "roles": [
    {
      "catalog": "BASE",
      "display_name": "Tenant Guest",
      "name": "readonly",
      "policy": {
        "Version": "1.0",
        "Statement": [
          {
            "Action": [
              "::Get",
              "::List"
            ],
            "Effect": "Allow"
          },
          {
            "Action": [
```

```
            "identity:*"
          ],
          "Effect": "Deny"
        }
      ]
    },
    "domain_id": null,
    "type": "AA",
    "id": "b32d99a7778d4fd9aa5bc616c3dc4e5f",
    "description": "Tenant Guest"
  }
 ]
}
```


- Example response (request failed)


```
{
 "error": {
  "message": "You are not authorized to perform the requested action: identity:list_domain_grants",
  "code": 403,
  "title": "Forbidden"
 }
}
```


Status Codes

Status Code	Description
200	The request is successful.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.10.9 Deleting Permissions of an Agency on a Project

Function

This API is used to delete permissions of an agency on a project.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  DELETE /v3.0/OS-AGENCY/projects/{project_id}/agencies/{agency_id}/roles/{role_id}

- URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	ID of a project under the current domain.
agency_id	Yes	String	ID of an agency.
role_id	Yes	String	ID of a role.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X DELETE https://sample.domain.com/v3.0/OS-AGENCY/projects/0945241c5ebc4660bac540d48f2a2c14/agencies/37f90258b820472bbc8a0f4f0bfd720d/roles/0f3a2d418ed747fa8be46e92757be9ff
```

Response Parameters

- Example response (request failed)

```
{
  "error" : {
     "message" : "Could not find role: 0f3a2d418ed747fa8be46e92757be9ddff",
     "code" : 404,
     "title" : "Not Found"
   }
}
```

Status Codes

Status Code	Description
204	The request is successful.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.10.10 Granting Permissions to an Agency on a Domain

Function

This API is used to grant permissions to an agency on a domain.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  PUT /v3.0/OS-AGENCY/domains/{domain_id}/agencies/{agency_id}/roles/{role_id}

- URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	ID of the current domain.
agency_id	Yes	String	ID of an agency.
role_id	Yes	String	ID of a role.

NOTE

The role name corresponding to **role_id** in a request body is controlled by a blacklist. The role name cannot be **secu_admin** or **te_agency**.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X PUT https://sample.domain.com/v3.0/OS-AGENCY/domains/b32d99a7778d4fd9aa5bc616c3dc4e5f/agencies/37f90258b820472bbc8a0f4f0bfd720d/roles/0f3a2d418ed747fa8be46e92757be9ff
```

Response Parameters

- No response: indicates that the response is successful.
- Example response (request failed)

```
{
  "error" : {
    "message" : "Could not find role: 0f3a2d418ed747fa8be46e92757be9ddff",
```

```
    "code" : 404,
    "title" : "Not Found"
  }
}
```

Status Codes

Status Code	Description
204	The request is successful.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.10.11 Checking Whether an Agency Has the Specified Permissions on a Domain

Function

This API is used to check whether an agency has the specified permissions on a domain.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  HEAD /v3.0/OS-AGENCY/domains/{domain_id}/agencies/{agency_id}/roles/{role_id}

- URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	ID of the current domain.
agency_id	Yes	String	ID of an agency.
role_id	Yes	String	ID of a role.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X HEAD https://sample.domain.com/v3.0/OS-AGENCY/domains/b32d99a7778d4fd9aa5bc616c3dc4e5f/agencies/37f90258b820472bbc8a0f4f0bfd720d/roles/0f3a2d418ed747fa8be46e92757be9ff
```

Response Parameters

- Example response (request failed)

```
{
  "error" : {
     "message" : "Could not find role: 0f3a2d418ed747fa8be46e92757be9ddff",
     "code" : 404,
     "title" : "Not Found"
   }
}
```

Status Codes

Status Code	Description
204	The request is successful. The agency has the specified permissions on the domain.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.10.12 Querying the List of Permissions of an Agency on a Domain

Function

This API is used to query the list of permissions of an agency on a domain.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3.0/OS-AGENCY/domains/{domain_id}/agencies/{agency_id}/roles

- URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	ID of the current domain.
agency_id	Yes	String	ID of an agency.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X GET https://sample.domain.com/v3.0/OS-AGENCY/domains/b32d99a7778d4fd9aa5bc616c3dc4e5f/agencies/37f90258b820472bbc8a0f4f0bfd720d/roles
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
roles	Yes	Array	List of roles.

- Description for the role format

Parameter	Mandatory	Type	Description
catalog	No	String	Directory where a role locates.
display_name	No	String	Displayed name of a role.
name	Yes	String	Name of a role.
policy	No	Dict	Policy of a role.

Parameter	Mandatory	Type	Description
domain_id	Yes	String	ID of the domain to which a role belongs.
type	Yes	String	Display mode of a role. • **AX**: A role is displayed at the domain layer. • **XA**: A role is displayed at the project layer. • **AA**: A role is displayed at both the domain and project layers. • **XX**: A role is not displayed at the domain or project layer.
id	Yes	String	ID of a role.
description	No	String	Description of a role.

- Example response (successful request)

```
{
  "roles": [
    {
      "catalog": "BASE",
      "display_name": "Tenant Guest",
      "name": "readonly",
      "policy": {
        "Version": "1.0",
        "Statement": [
          {
            "Action": [
              "::Get",
              "::List"
            ],
            "Effect": "Allow"
          },
          {
            "Action": [
              "identity:*"
            ],
            "Effect": "Deny"
          }
        ]
      },
      "domain_id": null,
      "type": "AA",
      "id": "b32d99a7778d4fd9aa5bc616c3dc4e5f",
      "description": "Tenant Guest"
    }
  ]
}
```

- Example response (request failed)

```
{
  "error": {
    "message": "You are not authorized to perform the requested action: identity:list_domain_grants",
    "code": 403,
    "title": "Forbidden"
```

```
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.10.13 Deleting Permissions of an Agency on a Domain

Function

This API is used to delete permissions of an agency on a domain.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  DELETE /v3.0/OS-AGENCY/domains/{domain_id}/agencies/{agency_id}/roles/{role_id}

- URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	ID of the current domain.
agency_id	Yes	String	ID of an agency.
role_id	Yes	String	ID of a role.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request
  curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X DELETE https://sample.domain.com/v3.0/OS-AGENCY/domains/b32d99a7778d4fd9aa5bc616c3dc4e5f/agencies/37f90258b820472bbc8a0f4f0bfd720d/roles/0f3a2d418ed747fa8be46e92757be9ff

Response Parameters

- Example response (request failed)

```
{
  "error" : {
    "message" : "Could not find role: 0f3a2d418ed747fa8be46e92757be9ddff",
    "code" : 404,
    "title" : "Not Found"
   }
}
```

Status Codes

Status Code	Description
204	The request is successful.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.10.14 Querying All Permissions of an Agency

Function

This API is provided for the administrator to query all permissions that have been assigned to an agency.

URI

GET /v3.0/OS-INHERIT/domains/{domain_id}/agencies/{agency_id}/roles/inherited_to_projects

Table 4-161 URI parameters

Parameter	Mandatory	Type	Description
agency_id	Yes	String	Agency ID.
domain_id	Yes	String	ID of the delegating account.

Request Parameters

Table 4-162 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

Table 4-163 Parameters in the response body

Parameter	Type	Description
roles	Array of objects	Permission information.
links	object	Resource link information.

Table 4-164 roles

Parameter	Type	Description
id	String	Permission ID.
links	object	Permission resource link.
name	String	Permission name.

Table 4-165 links

Parameter	Type	Description
self	String	Resource link.

Example Request

```
GET https://sample.domain.com/v3.0/OS-INHERIT/domains/{domain_id}/agencies/{agency_id}/roles/
inherited_to_projects
```

Example Response

Status code: 200

The request is successful.

```
{
  "roles" : [
     {
        "name" : "system_all_154",
        "links" : {
                    "self" : "https://sample.domain.com/v3/roles/04570dfe267c45a3940e1ae9de868..."
                  },
        "id" : "04570dfe267c45a3940e1ae9de868..."
      },
     {
        "name" : "test1_admin",
        "links" : {
                     "self" : "https://sample.domain.com/v3/roles/1bf20f1adba94747a6e02e1be3810..."
                    },
        "id" : "1bf20f1adba94747a6e02e1be3810..."
      }
     ],
  "links" : {
        "self" : "https://sample.domain.com/v3.0/OSHERIT/domains/05b09b4723001dc90f27c0008f8b1.../
agencies/08c6652e86801d234f01c00078308.../roles/inherited_to_projects"
           }
}
```

Status Codes

Status Code	Description
200	The request is successful.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.10.15 Granting Specified Permissions to an Agency for All Projects

Function

This API is provided for the administrator to grant specified permissions to an agency for all projects.

URI

PUT /v3.0/OS-INHERIT/domains/{domain_id}/agencies/{agency_id}/roles/{role_id}/inherited_to_projects

Table 4-166 URI parameters

Parameter	Mandatory	Type	Description
agency_id	Yes	String	Agency ID.
domain_id	Yes	String	Domain ID of the delegating party.
role_id	Yes	String	Permission ID.

Request Parameters

Table 4-167 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

None

Example Request

```
PUT https://sample.domain.com/v3.0/OS-INHERIT/domains/{domain_id}/agencies/{agency_id}/roles/{role_id}/inherited_to_projects
```

Example Response

None

Status Codes

Status Code	Description
204	The authorization is successful.
401	Authentication failed.
403	Access denied.

Status Code	Description
404	The requested resource cannot be found.
500	Internal server error.

4.10.16 Checking Whether an Agency Has Specified Permissions

Function

This API is provided for the administrator to check whether an agency has specified permissions.

URI

HEAD /v3.0/OS-INHERIT/domains/{domain_id}/agencies/{agency_id}/roles/{role_id}/inherited_to_projects

Table 4-168 URI parameters

Parameter	Mandatory	Type	Description
agency_id	Yes	String	Agency ID.
domain_id	Yes	String	Domain ID of the delegating party.
role_id	Yes	String	Permission ID.

Request Parameters

Table 4-169 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

None

Example Request

```
HEAD https://sample.domain.com/v3.0/OS-INHERIT/domains/{domain_id}/agencies/{agency_id}/roles/{role_id}/inherited_to_projects
```

Example Response

None

Status Codes

Status Code	Description
204	The request is successful. (The agency has the specified permissions.)
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.10.17 Removing Specified Permissions of an Agency in All Projects

Function

This API is provided for the administrator to remove the specified permissions of an agency in all projects.

URI

DELETE /v3.0/OS-INHERIT/domains/{domain_id}/agencies/{agency_id}/roles/{role_id}/inherited_to_projects

Table 4-170 URI parameters

Parameter	Mandatory	Type	Description
agency_id	Yes	String	Agency ID.
domain_id	Yes	String	Domain ID of the delegating party.
role_id	Yes	String	Permission ID.

Request Parameters

Table 4-171 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

None

Example Request

```
DELETE https://sample.domain.com/v3.0/OS-INHERIT/domains/{domain_id}/agencies/{agency_id}/roles/{role_id}/inherited_to_projects
```

Example Response

None

Status Codes

Status Code	Description
204	Permissions are removed successfully.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.11 Security Settings

4.11.1 Querying the Operation Protection Policy

Function

This API is used to query the operation protection policy.

URI

GET /v3.0/OS-SECURITYPOLICY/domains/{domain_id}/protect-policy

Table 4-172 URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Domain ID.

Request Parameters

Table 4-173 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

Table 4-174 Parameters in the response body

Parameter	Type	Description
protect_policy	object	Operation protection policy.

Table 4-175 protect_policy

Parameter	Type	Description
operation_protection	Boolean	Indicates whether operation protection has been enabled. The value can be **true** or **false**.

Example Request

```
GET https://sample.domain.com/v3.0/OS-SECURITYPOLICY/domains/{domain_id}/protect-policy
```

Example Response

Status code: 200

The request is successful.

```
{
  "protect_policy" : {
    "operation_protection" : false
```

```
  }
}
```

Status code: 403

Access denied.

- Example 1

```
{
  "error_msg" : "You are not authorized to perform the requested action.",
  "error_code" : "IAM.0002"
}
```

- Example 2

```
{
  "error_msg" : "Policy doesn't allow %(actions)s to be performed.",
  "error_code" : "IAM.0003"
}
```

Status code: 404

The requested resource cannot be found.

```
{
  "error_msg" : "Could not find %(target)s: %(target_id)s.",
  "error_code" : "IAM.0004"
}
```

Status code: 500

Internal server error.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
200	The request is successful.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.11.2 Modifying the Operation Protection Policy

Function

This API is provided for the administrator to modify the operation protection policy.

URI

PUT /v3.0/OS-SECURITYPOLICY/domains/{domain_id}/protect-policy

Table 4-176 URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Domain ID.

Request Parameters

Table 4-177 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Table 4-178 Parameters in the request body

Parameter	Mandatory	Type	Description
protect_policy	Yes	object	Operation protection policy.

Table 4-179 protect_policy

Parameter	Mandatory	Type	Description
operation_protection	Yes	Boolean	Indicates whether operation protection has been enabled. The value can be **true** or **false**.

Response Parameters

Table 4-180 Parameters in the response body

Parameter	Type	Description
protect_policy	object	Operation protection policy.

Table 4-181 protect_policy

Parameter	Type	Description
operation_protection	Boolean	Indicates whether operation protection has been enabled. The value can be **true** or **false**.

Example Request

```
PUT https://sample.domain.com/v3.0/OS-SECURITYPOLICY/domains/{domain_id}/protect-policy

{
  "protect_policy" : {
    "operation_protection" : true
  }
}
```

Example Response

Status code: 200

The request is successful.

```
{
  "protect_policy" : {
    "operation_protection" : false
  }
}
```

Status code: 400

The request body is abnormal.

- Example 1

```
{
  "error_msg" : "'%(key)s' is a required property.",
  "error_code" : "IAM.0072"
}
```

- Example 2

```
{
  "error_msg" : "Invalid input for field '%(key)s'. The value is '%(value)s'.",
  "error_code" : "IAM.0073"
}
```

Status code: 403

Access denied.

- Example 1

```
{
  "error_msg" : "Policy doesn't allow %(actions)s to be performed.",
  "error_code" : "IAM.0003"
}
```

- Example 2

```
{
  "error_msg" : "You are not authorized to perform the requested action.",
  "error_code" : "IAM.0002"
}
```

Status code: 500

The system is abnormal.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The request body is abnormal.
401	Authentication failed.
403	Access denied.
500	The system is abnormal.

4.11.3 Querying the Password Policy

Function

This API is used to query the password policy.

URI

GET /v3.0/OS-SECURITYPOLICY/domains/{domain_id}/password-policy

Table 4-182 URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Domain ID.

Request Parameters

Table 4-183 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

Table 4-184 Parameters in the response body

Parameter	Type	Description
password_policy	object	Password policy.

Table 4-185 password_policy

Parameter	Type	Description
maximum_consecutive_identical_chars	Integer	Maximum number of times that a character is allowed to consecutively present in a password.
maximum_password_length	Integer	Maximum number of characters that a password can contain.
minimum_password_age	Integer	Minimum period (minutes) after which users are allowed to make a password change.
minimum_password_length	Integer	Minimum number of characters that a password must contain.
number_of_recent_passwords_disallowed	Integer	Number of previously used passwords that are not allowed.
password_not_username_or_invert	Boolean	Indicates whether the password can be the username or the username spelled backwards.
password_requirements	String	Characters that a password must contain.
password_validity_period	Integer	Password validity period (days).

Example Request

```
GET https://sample.domain.com/v3.0/OS-SECURITYPOLICY/domains/{domain_id}/password-policy
```

Example Response

Status code: 200

The request is successful.

```
{
  "password_policy" : {
    "password_requirements" : "A password must contain at least two of the following: uppercase letters, lowercase letters, digits, and special characters.",
    "minimum_password_age" : 20,
    "minimum_password_length" : 8,
    "maximum_password_length" : 32,
    "number_of_recent_passwords_disallowed" : 2,
    "password_validity_period" : 60,
    "maximum_consecutive_identical_chars" : 3,
    "password_not_username_or_invert" : true
  }
}
```

Status code: 403

Access denied.

- Example 1

```
{
   "error_msg" : "You are not authorized to perform the requested action.",
   "error_code" : "IAM.0002"
 }
```

- Example 2

```
{
   "error_msg" : "Policy doesn't allow %(actions)s to be performed.",
   "error_code" : "IAM.0003"
 }
```

Status code: 404

The requested resource cannot be found.

```
{
  "error_msg" : "Could not find %(target)s: %(target_id)s.",
  "error_code" : "IAM.0004"
}
```

Status code: 500

Internal server error.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
200	The request is successful.

Status Code	Description
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.11.4 Modifying the Password Policy

Function

This API is provided for the administrator to modify the password policy.

URI

PUT /v3.0/OS-SECURITYPOLICY/domains/{domain_id}/password-policy

Table 4-186 URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Domain ID.

Request Parameters

Table 4-187 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Table 4-188 Parameters in the request body

Parameter	Mandatory	Type	Description
password_policy	Yes	object	Password policy.

Table 4-189 password_policy

Parameter	Mandatory	Type	Description
maximum_consecutive_identical_chars	No	Integer	Maximum number of times that a character is allowed to consecutively present in a password. Value range: 0–32.
minimum_password_age	No	Integer	Minimum period (minutes) after which users are allowed to make a password change. Value range: 0–1440.
minimum_password_length	No	Integer	Minimum number of characters that a password must contain. Value range: 6–32.
number_of_recent_passwords_disallowed	No	Integer	Number of previously used passwords that are not allowed. Value range: 0–10.
password_not_username_or_invert	No	Boolean	Indicates whether the password can be the username or the username spelled backwards.
password_validity_period	No	Integer	Password validity period (days). Value range: 0–180. Value **0** indicates that this requirement does not apply.

Response Parameters

Table 4-190 Parameters in the response body

Parameter	Type	Description
password_policy	object	Password policy.

Table 4-191 password_policy

Parameter	Type	Description
maximum_consecutive_identical_chars	Integer	Maximum number of times that a character is allowed to consecutively present in a password.
maximum_password_length	Integer	Maximum number of characters that a password can contain.
minimum_password_age	Integer	Minimum period (minutes) after which users are allowed to make a password change.
minimum_password_length	Integer	Minimum number of characters that a password must contain.
number_of_recent_passwords_disallowed	Integer	Number of previously used passwords that are not allowed.
password_not_username_or_invert	Boolean	Indicates whether the password can be the username or the username spelled backwards.
password_requirements	String	Characters that a password must contain.
password_validity_period	Integer	Password validity period (days).

Example Request

```
PUT https://sample.domain.com/v3.0/OS-SECURITYPOLICY/domains/{domain_id}/password_policy

{
  "password_policy" : {
    "minimum_password_length" : 6,
    "number_of_recent_passwords_disallowed" : 2,
    "minimum_password_age" : 20,
    "password_validity_period" : 60,
    "maximum_consecutive_identical_chars" : 3,
    "password_not_username_or_invert" : false
  }
}
```

Example Response

Status code: 200

The request is successful.

```
{
  "password_policy" : {
    "password_requirements" : "A password must contain at least two of the following: uppercase letters, lowercase letters, digits, and special characters.",
    "minimum_password_age" : 20,
    "minimum_password_length" : 8,
    "maximum_password_length" : 32,
    "number_of_recent_passwords_disallowed" : 2,
```

```
    "password_validity_period" : 60,
    "maximum_consecutive_identical_chars" : 3,
    "password_not_username_or_invert" : true
  }
}
```

Status code: 400

The request body is abnormal.

- Example 1

```
{
  "error_msg" : "'%(key)s' is a required property.",
  "error_code" : "IAM.0072"
}
```

- Example 2

```
{
  "error_msg" : "Invalid input for field '%(key)s'. The value is '%(value)s'.",
  "error_code" : "IAM.0073"
}
```

Status code: 403

Access denied.

- Example 1

```
{
  "error_msg" : "You are not authorized to perform the requested action.",
  "error_code" : "IAM.0002"
}
```

- Example 2

```
{
  "error_msg" : "Policy doesn't allow %(actions)s to be performed.",
  "error_code" : "IAM.0003"
}
```

Status code: 500

The system is abnormal.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The request body is abnormal.
401	Authentication failed.
403	Access denied.
500	The system is abnormal.

4.11.5 Querying the Login Authentication Policy

Function

This API is used to query the login authentication policy.

URI

GET /v3.0/OS-SECURITYPOLICY/domains/{domain_id}/login-policy

Table 4-192 URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Domain ID.

Request Parameters

Table 4-193 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

Table 4-194 Parameters in the response body

Parameter	Type	Description
login_policy	object	Login authentication policy.

Table 4-195 login_policy

Parameter	Type	Description
account_validity_period	Integer	Validity period (days) to disable users if they have not logged in within the period. Value range: 0–240. Validity period (days) to disable users if they have not logged in within the period If this parameter is set to **0**, no users will be disabled.
custom_info_for_login	String	Custom information that will be displayed upon successful login.
lockout_duration	Integer	Duration (minutes) to lock users out.
login_failed_times	Integer	Number of unsuccessful login attempts to lock users out.
period_with_login_failures	Integer	Period (minutes) to count the number of unsuccessful login attempts.
session_timeout	Integer	Session timeout (minutes) that will apply if you or users created using your account do not perform any operations within a specific period.
show_recent_login_info	Boolean	Indicates whether to display last login information upon successful login.

Example Request

```
GET https://sample.domain.com/v3.0/OS-SECURITYPOLICY/domains/{domain_id}/login-policy
```

Example Response

Status code: 200

The request is successful.

```
{
  "login_policy" : {
    "custom_info_for_login" : "",
    "period_with_login_failures" : 15,
    "lockout_duration" : 15,
    "account_validity_period" : 99,
    "login_failed_times" : 3,
    "session_timeout" : 16,
    "show_recent_login_info" : true
  }
}
```

Status code: 403

Access denied.

- Example 1

```
{
  "error_msg" : "You are not authorized to perform the requested action.",
```

```
  "error_code" : "IAM.0002"
}
```

- Example 2

```
{
  "error_msg" : "Policy doesn't allow %(actions)s to be performed.",
  "error_code" : "IAM.0003"
}
```

Status code: 404

The requested resource cannot be found.

```
{
  "error_msg" : "Could not find %(target)s: %(target_id)s.",
  "error_code" : "IAM.0004"
}
```

Status code: 500

Internal server error.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
200	The request is successful.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.11.6 Modifying the Login Authentication Policy

Function

This API is provided for the administrator to modify the login authentication policy.

URI

PUT /v3.0/OS-SECURITYPOLICY/domains/{domain_id}/login-policy

Table 4-196 URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Domain ID.

Request Parameters

Table 4-197 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Table 4-198 Parameters in the request body

Parameter	Mandatory	Type	Description
login_policy	Yes	object	Login authentication policy.

Table 4-199 login_policy

Parameter	Mandatory	Type	Description
account_validity_period	No	Integer	Validity period (days) to disable users if they have not logged in within the period. Value range: 0–240. If this parameter is set to **0**, no users will be disabled.
custom_info_for_login	No	String	Custom information that will be displayed upon successful login.
lockout_duration	No	Integer	Duration (minutes) to lock users out. Value range: 15–30.
login_failed_times	No	Integer	Number of unsuccessful login attempts to lock users out. Value range: 3–10.

Parameter	Mandatory	Type	Description
period_with_login_failures	No	Integer	Period (minutes) to count the number of unsuccessful login attempts. Value range: 15–60.
session_timeout	No	Integer	Session timeout (minutes) that will apply if you or users created using your account do not perform any operations within a specific period. Value range: 15–1440.
show_recent_login_info	No	Boolean	Indicates whether to display last login information upon successful login. The value can be **true** or **false**.

Response Parameters

Table 4-200 Parameters in the response body

Parameter	Type	Description
login_policy	object	Login authentication policy.

Table 4-201 login_policy

Parameter	Type	Description
account_validity_period	Integer	Validity period (days) to disable users if they have not logged in within the period.
custom_info_for_login	String	Custom information that will be displayed upon successful login.
lockout_duration	Integer	Duration (minutes) to lock users out.
login_failed_times	Integer	Number of unsuccessful login attempts to lock users out.
period_with_login_failures	Integer	Period (minutes) to count the number of unsuccessful login attempts.
session_timeout	Integer	Session timeout (minutes) that will apply if you or users created using your account do not perform any operations within a specific period.

Parameter	Type	Description
show_recent_login_info	Boolean	Indicates whether to display last login information upon successful login.

Example Request

```
PUT https://sample.domain.com/v3.0/OS-SECURITYPOLICY/domains/{domain_id}/login-policy

{
  "login_policy" : {
    "custom_info_for_login" : "",
    "period_with_login_failures" : 15,
    "lockout_duration" : 15,
    "account_validity_period" : 99,
    "login_failed_times" : 3,
    "session_timeout" : 16,
    "show_recent_login_info" : true
  }
}
```

Example Response

Status code: 200

The request is successful.

```
{
  "login_policy" : {
    "custom_info_for_login" : "",
    "period_with_login_failures" : 15,
    "lockout_duration" : 15,
    "account_validity_period" : 99,
    "login_failed_times" : 3,
    "session_timeout" : 16,
    "show_recent_login_info" : true
  }
}
```

Status code: 400

The request body is abnormal.

- Example 1

```
{
   "error_msg" : "'%(key)s' is a required property.",
   "error_code" : "IAM.0072"
 }
```

- Example 2

```
{
   "error_msg" : "Invalid input for field '%(key)s'. The value is '%(value)s'.",
   "error_code" : "IAM.0073"
 }
```

Status code: 403

Access denied.

```
{
  "error_msg" : "You are not authorized to perform the requested action.",
  "error_code" : "IAM.0002"
}
```

Status code: 500

The system is abnormal.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The request body is abnormal.
401	Authentication failed.
403	Access denied.
500	The system is abnormal.

4.11.7 Querying the ACL for Console Access

Function

This API is used to query the ACL for console access.

URI

GET /v3.0/OS-SECURITYPOLICY/domains/{domain_id}/console-acl-policy

Table 4-202 URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Domain ID.

Request Parameters

Table 4-203 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

Table 4-204 Parameters in the response body

Parameter	Type	Description
console_acl_policy	object	ACL for console access.

Table 4-205 console_acl_policy

Parameter	Type	Description
allow_address_netmasks	Array of objects	IPv4 CIDR blocks from which console access is allowed.
allow_ip_ranges	Array of objects	IP address ranges from which console access is allowed.

Table 4-206 allow_address_netmasks

Parameter	Type	Description
address_netmask	String	IPv4 CIDR block, for example, **192.168.0.1/24**.
description	String	Description about the IPv4 CIDR block.

Table 4-207 allow_ip_ranges

Parameter	Type	Description
description	String	Description about an IP address range.
ip_range	String	IP address range, for example, **0.0.0.0-255.255.255.255**.

Example Request

```
GET https://sample.domain.com/v3.0/OS-SECURITYPOLICY/domains/{domain_id}/console-acl-policy
```

Example Response

Status code: 200

The request is successful.

```
{
  "console_acl_policy" : {
    "allow_ip_ranges" : [ {
      "ip_range" : "0.0.0.0-255.255.255.255",
      "description" : ""
    }, {
      "ip_range" : "0.0.0.0-255.255.255.255",
      "description" : ""
    } ],
    "allow_address_netmasks" : [ {
      "address_netmask" : "192.168.0.1/24",
      "description" : ""
    }, {
      "address_netmask" : "192.168.0.1/24",
      "description" : ""
    } ]
  }
}
```

Status code: 403

Access denied.

- Example 1

```
{
   "error_msg" : "You are not authorized to perform the requested action.",
   "error_code" : "IAM.0002"
 }
```

- Example 2

```
{
   "error_msg" : "Policy doesn't allow %(actions)s to be performed.",
   "error_code" : "IAM.0003"
 }
```

Status code: 404

The requested resource cannot be found.

```
{
  "error_msg" : "Could not find %(target)s: %(target_id)s.",
  "error_code" : "IAM.0004"
}
```

Status code: 500

Internal server error.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
200	The request is successful.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.11.8 Modifying the ACL for Console Access

Function

This API is provided for the administrator to modify the ACL for console access.

URI

PUT /v3.0/OS-SECURITYPOLICY/domains/{domain_id}/console-acl-policy

Table 4-208 URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Domain ID.

Request Parameters

Table 4-209 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Table 4-210 Parameters in the request body

Parameter	Mandatory	Type	Description
console_acl_policy	Yes	object	ACL for console access.

Table 4-211 console_acl_policy

Parameter	Mandatory	Type	Description
allow_address_netmasks	Yes	Array of objects	IPv4 CIDR blocks from which console access is allowed.
allow_ip_ranges	Yes	Array of objects	IP address ranges from which console access is allowed.

Table 4-212 allow_address_netmasks

Parameter	Mandatory	Type	Description
address_netmask	Yes	String	IPv4 CIDR block, for example, **192.168.0.1/24**.
description	No	String	Description about the IPv4 CIDR block.

Table 4-213 allow_ip_ranges

Parameter	Mandatory	Type	Description
description	No	String	Description about an IP address range.
ip_range	Yes	String	IP address range, for example, **0.0.0.0-255.255.255.255**.

Response Parameters

Table 4-214 Parameters in the response body

Parameter	Type	Description
console_acl_policy	object	ACL for console access.

Table 4-215 console_acl_policy

Parameter	Type	Description
allow_address_netmasks	Array of objects	IPv4 CIDR blocks from which console access is allowed.
allow_ip_ranges	Array of objects	IP address ranges from which console access is allowed.

Table 4-216 allow_address_netmasks

Parameter	Type	Description
address_netmask	String	IPv4 CIDR block, for example, **192.168.0.1/24**.
description	String	Description about the IPv4 CIDR block.

Table 4-217 allow_ip_ranges

Parameter	Type	Description
description	String	Description about an IP address range.
ip_range	String	IP address range, for example, **0.0.0.0-255.255.255.255**.

Example Request

```
PUT https://sample.domain.com/v3.0/OS-SECURITYPOLICY/domains/{domain_id}/console-acl-policy

{
  "console_acl_policy" : {
    "allow_ip_ranges" : [ {
      "ip_range" : "0.0.0.0-255.255.255.255",
      "description" : "1"
    }, {
      "ip_range" : "0.0.0.0-255.255.255.253",
      "description" : "12"
    } ],
    "allow_address_netmasks" : [ {
```

```
    "address_netmask" : "192.168.0.1/24",
    "description" : "3"
   }, {
    "address_netmask" : "192.168.0.2/23",
    "description" : "4"
   } ]
  }
}
```

Example Response

Status code: 200

The request is successful.

```
{
  "console_acl_policy" : {
    "allow_ip_ranges" : [ {
      "ip_range" : "0.0.0.0-255.255.255.255",
      "description" : ""
    }, {
      "ip_range" : "0.0.0.0-255.255.255.255",
      "description" : ""
    } ],
    "allow_address_netmasks" : [ {
      "address_netmask" : "192.168.0.1/24",
      "description" : ""
    }, {
      "address_netmask" : "192.168.0.1/24",
      "description" : ""
    } ]
  }
}
```

Status code: 400

The request body is abnormal.

- Example 1

```
{
   "error_msg" : "'%(key)s' is a required property.",
   "error_code" : "IAM.0072"
 }
```

- Example 2

```
{
   "error_msg" : "Invalid input for field '%(key)s'. The value is '%(value)s'.",
   "error_code" : "IAM.0073"
 }
```

Status code: 500

The system is abnormal.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
200	The request is successful.

Status Code	Description
400	The request body is abnormal.
401	Authentication failed.
403	Access denied.
500	The system is abnormal.

4.11.9 Querying the ACL for API Access

Function

This API is used to query the ACL for API access.

URI

GET /v3.0/OS-SECURITYPOLICY/domains/{domain_id}/api-acl-policy

Table 4-218 URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Domain ID.

Request Parameters

Table 4-219 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

Table 4-220 Parameters in the response body

Parameter	Type	Description
api_acl_policy	object	ACL for API access.

Table 4-221 api_acl_policy

Parameter	Type	Description
allow_address_netmasks	Array of objects	IPv4 CIDR blocks from which API access is allowed.
allow_ip_ranges	Array of objects	IP address ranges from which API access is allowed.

Table 4-222 allow_address_netmasks

Parameter	Type	Description
address_netmask	String	IPv4 CIDR block, for example, **192.168.0.1/24**.
description	String	Description about the IPv4 CIDR block.

Table 4-223 allow_ip_ranges

Parameter	Type	Description
description	String	Description about an IP address range.
ip_range	String	IP address range, for example, **0.0.0.0-255.255.255.255**.

Example Request

```
GET https://sample.domain.com/v3.0/OS-SECURITYPOLICY/domains/{domain_id}/api-acl-policy
```

Example Response

Status code: 200

The request is successful.

```
{
  "api_acl_policy" : {
```

```
    "allow_ip_ranges" : [ {
      "ip_range" : "0.0.0.0-255.255.255.255",
      "description" : ""
    }, {
      "ip_range" : "0.0.0.0-255.255.255.255",
      "description" : ""
    } ],
    "allow_address_netmasks" : [ {
      "address_netmask" : "192.168.0.1/24",
      "description" : ""
    }, {
      "address_netmask" : "192.168.0.1/24",
      "description" : ""
    } ]
  }
}
```

Status code: 403

Access denied.

- Example 1

```
{
  "error_msg" : "You are not authorized to perform the requested action.",
  "error_code" : "IAM.0002"
}
```

- Example 2

```
{
  "error_msg" : "Policy doesn't allow %(actions)s to be performed.",
  "error_code" : "IAM.0003"
}
```

Status code: 404

The requested resource cannot be found.

```
{
  "error_msg" : "Could not find %(target)s: %(target_id)s.",
  "error_code" : "IAM.0004"
}
```

Status code: 500

Internal server error.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
200	The request is successful.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.11.10 Modifying the ACL for API Access

Function

This API is provided for the administrator to modify the ACL for API access.

URI

PUT /v3.0/OS-SECURITYPOLICY/domains/{domain_id}/api-acl-policy

Table 4-224 URI parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Domain ID.

Request Parameters

Table 4-225 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Table 4-226 Parameters in the request body

Parameter	Mandatory	Type	Description
api_acl_policy	Yes	object	ACL for API access.

Table 4-227 api_acl_policy

Parameter	Mandatory	Type	Description
allow_address_netmasks	Yes	Array of objects	IPv4 CIDR blocks from which API access is allowed.
allow_ip_ranges	Yes	Array of objects	IP address ranges from which API access is allowed.

Table 4-228 allow_address_netmasks

Parameter	Mandatory	Type	Description
address_netmask	Yes	String	IPv4 CIDR block, for example, **192.168.0.1/24**.
description	No	String	Description about the IPv4 CIDR block.

Table 4-229 allow_ip_ranges

Parameter	Mandatory	Type	Description
description	No	String	Description about an IP address range.
ip_range	Yes	String	IP address range, for example, **0.0.0.0-255.255.255.255**.

Response Parameters

Table 4-230 Parameters in the response body

Parameter	Type	Description
api_acl_policy	object	ACL for API access.

Table 4-231 api_acl_policy

Parameter	Type	Description
allow_address_netmasks	objects	IPv4 CIDR blocks from which API access is allowed.
allow_ip_ranges	objects	IP address ranges from which API access is allowed.

Table 4-232 allow_address_netmasks

Parameter	Type	Description
address_netmask	String	IPv4 CIDR block, for example, **192.168.0.1/24**.
description	String	Description about the IPv4 CIDR block.

Table 4-233 allow_ip_ranges

Parameter	Type	Description
description	String	Description about an IP address range.
ip_range	String	IP address range, for example, **0.0.0.0-255.255.255.255**.

Example Request

```
PUT https://sample.domain.com/v3.0/OS-SECURITYPOLICY/domains/{domain_id}/api-acl-policy

{
  "api_acl_policy" : {
    "allow_ip_ranges" : [ {
      "ip_range" : "0.0.0.0-255.255.255.255",
      "description" : "1"
    }, {
      "ip_range" : "0.0.0.0-255.255.255.253",
      "description" : "12"
    } ],
    "allow_address_netmasks" : [ {
      "address_netmask" : "192.168.0.1/24",
      "description" : "3"
    }, {
      "address_netmask" : "192.168.0.2/23",
      "description" : "4"
    } ]
  }
}
```

Example Response

Status code: 200

The request is successful.

```
{
  "api_acl_policy" : {
    "allow_ip_ranges" : [ {
      "ip_range" : "0.0.0.0-255.255.255.255",
      "description" : ""
    }, {
      "ip_range" : "0.0.0.0-255.255.255.255",
      "description" : ""
    } ],
    "allow_address_netmasks" : [ {
      "address_netmask" : "192.168.0.1/24",
      "description" : ""
    }, {
      "address_netmask" : "192.168.0.1/24",
      "description" : ""
    } ]
  }
}
```

Status code: 400

The request body is abnormal.

- Example 1

```
{
  "error_msg" : "'%(key)s' is a required property.",
  "error_code" : "IAM.0072"
}
```

- Example 2

```
{
  "error_msg" : "Invalid input for field '%(key)s'. The value is '%(value)s'.",
  "error_code" : "IAM.0073"
}
```

Status code: 500

The system is abnormal.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The request body is abnormal.
401	Authentication failed.
403	Access denied.
500	The system is abnormal.

4.11.11 Querying MFA Device Information of Users

Function

This API is provided for the administrator to query the MFA device information of users.

URI

GET /v3.0/OS-MFA/virtual-mfa-devices

Request Parameters

Table 4-234 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

Table 4-235 Parameters in the response body

Parameter	Type	Description
virtual_mfa_devices	Array of objects	Virtual MFA device information.

Table 4-236 virtual_mfa_devices

Parameter	Type	Description
serial_number	String	Virtual MFA device serial number.
user_id	String	User ID.

Example Request

```
GET https://sample.domain.com/v3.0/OS-MFA/virtual-mfa-devices
```

Example Response

Status code: 200

The request is successful.

```
{
  "virtual_mfa_devices" : [
        {
           "user_id" : "16b26081f43d4c628c4bb88cf32e9...",
           "serial_number" : "iam/mfa/16b26081f43d4c628c4bb88cf32e9..."
         },
        {
           "user_id" : "47026081f43d4c628c4bb88cf32e9...",
           "serial_number" : "iam/mfa/75226081f43d4c628c4bb88cf32e9..."
         }
        ]
}
```

Status code: 403

Access denied.

- Example 1

```
{
   "error_msg" : "You are not authorized to perform the requested action.",
   "error_code" : "IAM.0002"
 }
```

- Example 2

```
{
   "error_msg" : "Policy doesn't allow %(actions)s to be performed.",
   "error_code" : "IAM.0003"
 }
```

Status code: 404

The requested resource cannot be found.

```
{
  "error_msg" : "Could not find %(target)s: %(target_id)s.",
  "error_code" : "IAM.0004"
}
```

Status code: 500

Internal server error.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
200	The request is successful.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.11.12 Querying the MFA Device Information of a User

Function

This API can be used by the administrator to query the MFA device information of a specified user or used by a user to query their MFA device information.

URI

GET /v3.0/OS-MFA/users/{user_id}/virtual-mfa-device

Table 4-237 URI parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

Table 4-238 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	A token with **Security Administrator** permissions is required if the administrator is requesting to query the MFA device information of a specified user. If a user is requesting to query their MFA device information, the user token (no special permission requirements) of the user is required.

Response Parameters

Table 4-239 Parameters in the response body

Parameter	Type	Description
virtual_mfa_device	object	Virtual MFA device information.

Table 4-240 virtual_mfa_device

Parameter	Type	Description
serial_number	String	Virtual MFA device serial number.
user_id	String	User ID.

Example Request

```
GET https://sample.domain.com/v3.0/OS-MFA/users/{user_id}/virtual-mfa-device
```

Example Response

Status code: 200

The request is successful.

```
{
  "virtual_mfa_device" :
    {
      "user_id" : "16b26081f43d4c628c4bb88cf32e9...",
      "serial_number" : "iam/mfa/16b26081f43d4c628c4bb88cf32e9..."
     }
}
```

Status code: 403

Access denied.

- Example 1

```
{
   "error_msg" : "You are not authorized to perform the requested action.",
   "error_code" : "IAM.0002"
 }
```

- Example 2

```
{
   "error_msg" : "Policy doesn't allow %(actions)s to be performed.",
   "error_code" : "IAM.0003"
 }
```

Status code: 404

The requested resource cannot be found.

```
{
  "error_msg" : "Could not find %(target)s: %(target_id)s.",
  "error_code" : "IAM.0004"
}
```

Status code: 500

Internal server error.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
200	The request is successful.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.11.13 Querying Login Protection Configurations of Users

Function

This API is provided for the administrator to query the login protection configurations of users.

URI

GET /v3.0/OS-USER/login-protects

Request Parameters

Table 4-241 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

Table 4-242 Parameters in the response body

Parameter	Type	Description
login_protects	Array of objects	Login protection configurations. **NOTE** The response only includes the login protection configurations of users for whom login protection has been configured.

Table 4-243 login_protects

Parameter	Type	Description
enabled	Boolean	Indicates whether login protection has been enabled for a user. The value can be **true** or **false**.
user_id	String	User ID.
verification_method	String	Login authentication method of the user. • **email**: email verification code • **vmfa**: virtual MFA verification code • **SMS**: SMS verification code

Example Request

```
GET https://sample.domain.com/v3.0/OS-USER/login-protects
```

Example Response

Status code: 200

The request is successful.

```
{
  "login_protects" : [
        {
          "user_id" : "75226081f43d4c628c4bb88cf32e9...",
          "enabled" : true,
          "verification_method" : "email"
          },
        {
          "user_id" : "16b26081f43d4c628c4bb88cf32e9...",
          "enabled" : true,
          "verification_method" : "vmfa"
          },
        {
          "user_id" : "56b26081f43d4c628c4bb88cf32e9...",
          "enabled" : true,
          "verification_method" : "sms"
          }
        {
          "user_id" : "08c16cb6c58010691f81c0028dd94...",
          "enabled" : false,
          "verification_method" : "none"
          }
      ]
}
```

NOTE

If login protection has never been configured for a user, you cannot use this API to obtain the login protection configuration of the user.

Status code: 403

Access denied.

- Example 1

```
{
  "error_msg" : "You are not authorized to perform the requested action.",
  "error_code" : "IAM.0002"
}
```

- Example 2

```
{
  "error_msg" : "Policy doesn't allow %(actions)s to be performed.",
  "error_code" : "IAM.0003"
}
```

Status code: 404

The requested resource cannot be found.

```
{
  "error_msg" : "Could not find %(target)s: %(target_id)s.",
  "error_code" : "IAM.0004"
}
```

Status code: 500

Internal server error.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
200	The request is successful.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.11.14 Querying the Login Protection Configuration of a User

Function

This API can be used by the administrator to query the login protection configuration of a specified user or used by a user to query their login protection configuration.

URI

GET /v3.0/OS-USER/users/{user_id}/login-protect

Table 4-244 URI parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

Table 4-245 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	A token with **Security Administrator** permissions is required if the administrator is requesting to query the login protection configuration of a specified user. If a user is requesting to query their login protection configuration, the user token (no special permission requirements) of the user is required.

Response Parameters

Status code: 200

Table 4-246 Parameters in the response body

Parameter	Type	Description
login_protect	object	Login protection configuration.

Table 4-247 login_protect

Parameter	Type	Description
enabled	Boolean	Indicates whether login protection has been enabled for a user. The value can be **true** or **false**.
user_id	String	User ID.
verification_method	String	Login authentication method of the user.

Example Request

```
GET https://sample.domain.com/v3.0/OS-USER/users/{user_id}/login-protect
```

Example Response

Status code: 200

The request is successful.

```
{
  "login_protect" : {
    "user_id" : "16b26081f43d4c628c4bb88cf32e9...",
    "enabled" : true,
    "verification_method" : "vmfa"
  }
}
```

Status code: 403

Access denied.

- Example 1

```
{
   "error_msg" : "You are not authorized to perform the requested action.",
   "error_code" : "IAM.0002"
 }
```

- Example 2

```
{
   "error_msg" : "Policy doesn't allow %(actions)s to be performed.",
   "error_code" : "IAM.0003"
 }
```

Status code: 404

The requested resource cannot be found.

```
{
  "error_msg" : "Could not find %(target)s: %(target_id)s.",
  "error_code" : "IAM.0004"
}
```

NOTE

If login protection has never been configured for a user, you cannot use this API to obtain the login protection configuration of the user. Otherwise, the error code IAM.0004 will be returned.

Status code: 500

Internal server error.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
200	The request is successful.

Status Code	Description
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.11.15 Modifying the Login Protection Configuration of a User

Function

This API is provided for the administrator to modify the login protection configuration of a user.

URI

PUT /v3.0/OS-USER/users/{user_id}/login-protect

Table 4-248 URI parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	ID of the user whose login protection configuration is to be modified.

Request Parameters

Table 4-249 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-token	Yes	String	Token with **Security Administrator** permissions.

Table 4-250 Parameters in the request body

Parameter	Mandatory	Type	Description
login_protect	Yes	object	Login protection configuration.

Table 4-251 Login_project

Parameter	Mandatory	Type	Description
enabled	Yes	Boolean	Indicates whether login protection has been enabled for the user. The value can be **true** or **false**.
verification_method	Yes	String	Login authentication method of the user. Options: **sms**, **email**, and **vmfa**.

Response Parameters

Status code: 200

Table 4-252 Parameters in the response body

Parameter	Type	Description
login_protect	object	Login protection configuration.

Table 4-253 login_protect

Parameter	Type	Description
user_id	String	User ID.
enabled	Boolean	Indicates whether login protection has been enabled for the user. The value can be **true** or **false**.
verification_method	String	Login authentication method of the user. Options: **sms**, **email**, and **vmfa**.

Example Request

```
PUT https://sample.domain.com/v3.0/OS-USER/users/{user_id}/login-protect
{
  "login_protect" : {
    "enabled" : true,
    "verification_method" : "vmfa"
  }
}
```

Example Response

Status code: 200

The request is successful.

```
{
  "login_protect" : {
    "user_id": "16b26081f43d4c628c4bb88cf32e9...",
    "enabled" : true,
    "verification_method" : "vmfa"
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The request is invalid.
401	Authentication failed.
403	You do not have permission to perform this action.
404	The requested resource cannot be found.
500	A system error occurred.

4.11.16 Binding a Virtual MFA Device

Function

This API is provided for IAM users to bind a virtual MFA device.

URI

PUT /v3.0/OS-MFA/mfa-devices/bind

Request Parameters

Table 4-254 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-token	Yes	String	Token (no special permission requirements) of the IAM user corresponding to the **user_id** specified in the request body.

Table 4-255 Parameters in the request body

Parameter	Mandatory	Type	Description
user_id	Yes	String	ID of the user to whom you will bind the virtual MFA device.
serial_number	Yes	String	Serial number of the virtual MFA device.
authentication_code_first	Yes	String	Verification code 1.
authentication_code_second	Yes	String	Verification code 2.

Response Parameters

None

Example Request

```
PUT https://sample.domain.com/v3.0/OS-MFA/mfa-devices/bind

{
  "user_id" : "09f99d8f6a001d4f1f01c00c31968...",
  "authentication_code_first" : "977931",
  "authentication_code_second" : "527347",
  "serial_number" : "iam:09f6bd6a96801de40f01c00c85691...:mfa/{device_name}"
}
```

Example Response

None

Status Codes

Status Code	Description
204	The request is successful.
400	The request is invalid.
401	Authentication failed.
403	You do not have permission to perform this action.
404	The requested resource cannot be found.
409	A conflict occurs when the requested resource is saved.
500	A system error occurred.

4.11.17 Unbinding a Virtual MFA Device

Function

This API is used by the administrator to unbind a virtual MFA device from an IAM user, or used by an IAM user to unbind their own virtual MFA device.

URI

PUT /v3.0/OS-MFA/mfa-devices/unbind

Request Parameters

Table 4-256 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	• Administrator: Provide a token with **Security Administrator** permissions. • User: Provide the token (no special permission requirements) of the user specified in **user_id** of the request body.

Table 4-257 Parameters in the request body

Parameter	Mandatory	Type	Description
user_id	Yes	String	ID of the user from whom you will unbind the MFA device.
authentication_code	Yes	String	• Administrator: Set this parameter to any value, because verification is not required. • IAM user: Enter the MFA verification code.
serial_number	Yes	String	Serial number of the MFA device.

Response Parameters

None

Example Request

```
PUT  https://sample.domain.com/v3.0/OS-MFA/mfa-devices/unbind
```

```
{
  "user_id" : "09f99d8f6a001d4f1f01c00c31968...",
  "authentication_code" : "373658",
  "serial_number" : "iam:09f6bd6a96801de40f01c00c85691...:mfa/{device_name}"
}
```

Example Response

None

Status Codes

Status Code	Description
204	The request is successful.
400	The request is invalid.
401	Authentication failed.
403	You do not have permission to perform this action.
404	The requested resource cannot be found.
409	A conflict occurs when the requested resource is saved.
500	A system error occurred.

4.11.18 Creating a Virtual MFA Device

Function

This API is provided for IAM users to create a virtual MFA device.

URI

POST /v3.0/OS-MFA/virtual-mfa-devices

Request Parameters

Table 4-258 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Token (no special permission requirements) of the IAM user corresponding to the **user_id** specified in the request body.

Table 4-259 Parameters in the request body

Parameter	Mandatory	Type	Description
virtual_mfa_device	Yes	object	MFA device information.

Table 4-260 virtual_mfa_device

Parameter	Mandatory	Type	Description
name	Yes	String	Device name. Minimum length: 1 character Maximum length: 64 characters
user_id	Yes	String	ID of the user for whom you will create the MFA device.

Response Parameters

Status code: 201

Table 4-261 Parameters in the response body

Parameter	Type	Description
virtual_mfa_device	object	MFA device information.

Table 4-262 virtual_mfa_device

Parameter	Type	Description
serial_number	String	Serial number of the MFA device.
base32_string_seed	String	Base32 seed, which a third-party system can use to generate a CAPTCHA code.

Example Request

```
POST https://sample.domain.com/v3.0/OS-MFA/virtual-mfa-devices

{
  "virtual_mfa_device" : {
    "name" : "{device_name}",
    "user_id" : "09f99d8f6a001d4f1f01c00c31968..."
  }
}
```

Example Response

Status code: 201

The request is successful.

```
{
  "virtual_mfa_device": {
    "serial_number": "iam:09f6bd6a96801de40f01c00c85691...:mfa/{device_name}",
    "base32_string_seed": "{string}"
  }
}
```

Status Codes

Status Code	Description
201	The request is successful.
400	The request is invalid.
401	Authentication failed.
403	You do not have permission to perform this action.
409	A conflict occurs when the requested resource is saved.
500	A system error occurred.

4.11.19 Deleting a Virtual MFA Device

Function

This API is provided for the administrator to delete their own virtual MFA device.

URI

DELETE /v3.0/OS-MFA/virtual-mfa-devices

Table 4-263 Query parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	ID of the user whose virtual MFA device is to be deleted, that is, the administrator's user ID.
serial_number	Yes	String	Serial number of the virtual MFA device.

Request Parameters

Table 4-264 Parameters in the request header

Parameter	Mandatory	Type	Description
X-auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

None

Example Request

```
DELETE https://sample.domain.com/v3.0/OS-MFA/virtual-mfa-devices?user_id=09f6bd85fc801de41f0cc00ce9172...&serial_number=iam:09f6bd6a96801de40f01c00c85691...:mfa/{device_name}
```

Example Response

None

Status Codes

Status Code	Description
204	The request is successful.
401	Authentication failed.
403	You do not have permission to perform this action.
500	A system error occurred.

4.12 Enterprise Project Management

4.12.1 Querying User Groups Associated with an Enterprise Project

Function

This API is used to query the user groups directly associated with a specified enterprise project.

URI

GET /v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/groups

Table 4-265 URI parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	Yes	String	ID of the enterprise project for querying the permissions of an associated user group.

Request Parameters

Table 4-266 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with **iam:permissions:listGroupsOnEnterpriseProject** or **Security Administrator** permission. The **domain_id** of the account to which the **enterprise_project_id** belongs must be the same as the **domain_id** in the token.

Response Parameters

Status code: 200

Table 4-267 Parameters in the response body

Parameter	Type	Description
groups	Array of objects	User group information.

Table 4-268 ListGroupsForEnterpriseProjectResDetail

Parameter	Type	Description
createTime	Integer	Time when the user group was created.
description	String	User group description.
domainId	String	Account ID.
id	String	User group ID.
name	String	User group name.

Example Request

Request for querying user groups associated with an enterprise project

```
GET https://sample.domain.com/v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/groups
```

Example Response

Status code: 200

The request is successful.

```
{
  "groups" : [ {
    "createTime" : 1552093271000,
    "description" : null,
    "domainId" : "dc7f62ae236c47b8836014c16d64d...",
    "id" : "e6bde2403bda43e2813a1a6848963...",
    "name" : "auth"
  } ]
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	Parameter error.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
415	Incorrect Content-Type.
500	A system error occurred.

Error Codes

For details, see **Error Codes**.

4.12.2 Querying the Permissions of a User Group Associated with an Enterprise Project

Function

This API is used to query the permissions of a user group directly associated with a specified enterprise project.

URI

GET /v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/groups/{group_id}/roles

Table 4-269 URI parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	Yes	String	ID of the enterprise project for querying the permissions of an associated user group.
group_id	Yes	String	User group ID.

Request Parameters

Table 4-270 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with **iam:permissions:listRolesForGroupOnEnterpriseProject** or **Security Administrator** permissions. The **domain_id** of the account to which the **group_id** belongs must be the same as the **domain_id** in the token.

Response Parameters

Status code: 200

Table 4-271 Parameters in the response body

Parameter	Type	Description
roles	Array of objects	Role list.

Table 4-272 roles

Parameter	Type	Description
catalog	String	Service catalog of the permission.

Parameter	Type	Description
display_name	String	Display name of the permission.
description	String	Description of the permission in English.
description_cn	String	Description of the permission in Chinese.
domain_id	String	ID of the account to which the permission belongs.
flag	String	If this parameter is set to **fine_grained**, the permission is a system-defined policy.
id	String	Permission ID.
name	String	Permission name.
policy	object	Content of the permission.
type	String	Display mode of the permission. **NOTE** • **AX**: Account level. • **XA**: Project level. • **AA**: Both the account level and project level. • **XX**: Neither the account level nor project level. • The display mode of a custom policy can only be **AX** or **XA**. A custom policy must be displayed at either of the two levels.

Table 4-273 RolePolicy

Parameter	Type	Description
Depends	Array of objects	Dependent permissions.
Statement	Array of objects	Statement of the permission.
Version	String	Policy version. **NOTE** • **1.0**: System-defined role. Only a limited number of service-level roles are provided for authorization. • **1.1**: Policy. A policy defines the permissions required to perform operations on a specific cloud resource under certain conditions.

Table 4-274 PolicyDepends

Parameter	Type	Description
catalog	String	Service catalog of the permission.
display_name	String	Display name of the permission.

Table 4-275 PolicyStatement

Parameter	Type	Description
Action	Array of strings	Specific operation permissions on a resource. For details about supported actions, see "Permissions and Supported Actions" in the API Reference of cloud services. **NOTE** • The value format is *Service name*:*Resource type*:*Operation*, for example, **vpc:ports:create**. • *Service name*: indicates the product name, such as **ecs**, **evs**, or **vpc**. Only lowercase letters are allowed. Resource types and operations are not case-sensitive. You can use an asterisk (*) to represent all operations. • In the case of a custom policy for agencies, this parameter should be set to *"Action": ["iam:agencies:assume"]*.
Effect	String	Effect of the permission. The value can be **Allow** or **Deny**. If both Allow and Deny statements are found in a policy, the authentication starts from the Deny statements. Enumerated values: • Allow • Deny
Condition	Object	Conditions for the permission to take effect. **NOTE** Take the condition in the sample request as an example, the values of the condition key (**obs:prefix**) and string (**public**) must be equal (**StringEquals**). `"Condition": { "StringEquals": { "obs:prefix": [ "public" ] } }`

Parameter	Type	Description
Resource	Array of strings	Cloud resource. **NOTE** • Format: *:::::*. For example, **obs:::bucket:***. Asterisks are allowed. • The region segment can be ***** or a region accessible to the user. The specified resource must belong to the corresponding service that actually exists. • In the case of a custom policy for agencies, the type of this parameter is Object, and the value should be set to *"Resource": {"uri": ["/iam/agencies/07805acaba800fdd4fbdc00b8f888c7c"]}*.

Example Request

Request for querying the permissions of a user group associated with an enterprise project

```
GET  https://sample.domain.com/v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/groups/{group_id}/roles
```

Example Response

Status code: 200

The request is successful.

```
{
  "roles" : [ {
    "catalog" : "CUSTOMED",
    "description" : "u81eau5b9au4e49u6743u9...",
    "description_cn" : null,
    "display_name" : "XpBdkPYCCx",
    "domain_id" : "0456fd5a278033120f37c006683ab...",
    "flag" : null,
    "id" : "5d1b6256331f4fb494534bf240698...",
    "name" : "custom_policy1",
    "policy" : {
      "Statement" : [ {
        "Action" : [ "aaa:a*b:baa*" ],
        "Condition" : null,
        "Effect" : "deny",
        "Resource" : null
      }, {
        "Action" : [ "aaa:a*b:bab*" ],
        "Condition" : null,
        "Effect" : "Allow",
        "Resource" : null
      } ],
      "Version" : "1.1"
    },
    "type" : "XA"
  } ]
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	Parameter error.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
415	Incorrect Content-Type.
500	A system error occurred.

Error Codes

For details, see **Error Codes**.

4.12.3 Granting Permissions to a User Group Associated with an Enterprise Project

Function

This API is used to grant permissions to a user group associated with the enterprise project of a specified ID.

URI

PUT /v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/groups/{group_id}/roles/{role_id}

Table 4-276 URI parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	Yes	String	Enterprise project ID.
group_id	Yes	String	User group ID.
role_id	Yes	String	Role ID. **NOTE** Ensure that the role you specify can be used for authorization by enterprise project.

Request Parameters

Table 4-277 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with **iam:permissions:grantRoleToGroupOnEnterpriseProject** or **Security Administrator** permissions. The **domain_id** of the account to which the **group_id** belongs must be the same as the **domain_id** in the token.

Response Parameters

None

Example Request

Request for granting permissions to a user group associated with an enterprise project

```
PUT https://sample.domain.com/v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/groups/{group_id}/roles/{role_id}
```

Example Response

None

Status Codes

Status Code	Description
204	The request is successful.
400	The request message is invalid.
401	Token authentication failed.
403	Access denied.
415	Incorrect Content-Type.
500	A system error occurred.

Error Codes

For details, see **Error Codes**.

4.12.4 Removing Permissions of a User Group Associated with an Enterprise Project

Function

This API is used to remove the permissions of a user group associated with an enterprise project.

URI

DELETE /v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/groups/{group_id}/roles/{role_id}

Table 4-278 URI parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	Yes	String	Enterprise project ID.
group_id	Yes	String	User group ID.
role_id	Yes	String	Permission ID.

Request Parameters

Table 4-279 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with **iam:permissions:revokeRoleFromGroupOnEnterpriseProject** or **Security Administrator** permissions. The **domain_id** of the account to which the **group_id** belongs must be the same as the **domain_id** in the token.

Response Parameters

None

Example Request

Request for removing permissions of a user group associated with an enterprise project

```
DELETE https://sample.domain.com/v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/groups/{group_id}/roles/{role_id}
```

Example Response

None

Status Codes

Status Code	Description
204	The request is successful.
400	The request message is invalid.
401	Token authentication failed.
403	Access denied.
404	The resource does not exist.
415	Incorrect Content-Type.
500	A system error occurred.

Error Codes

For details, see **Error Codes**.

4.12.5 Querying the Enterprise Projects Associated with a User Group

Function

This API is used to query the enterprise projects associated with a user group.

URI

GET /v3.0/OS-PERMISSION/groups/{group_id}/enterprise-projects

Table 4-280 URI parameters

Parameter	Mandatory	Type	Description
group_id	Yes	String	User group ID.

Request Parameters

Table 4-281 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with **iam:permissions:listEnterpriseProjectsForGroup** or **Security Administrator** permission. The **domain_id** of the account to which the **group_id** belongs must be the same as the **domain_id** in the token.

Response Parameters

Status code: 200

Table 4-282 Parameters in the response body

Parameter	Type	Description
enterprise-projects	Array of objects	Enterprise project information.

Table 4-283 ListEnterpriseProjectsResDetail

Parameter	Type	Description
projectId	String	Project ID.

Example Request

Request for querying enterprise projects associated with a user group

```
GET https://sample.domain.com/v3.0/OS-PERMISSION/groups/{group_id}/enterprise-projects
```

Example Response

Status code: 200

The request is successful.

```
{
  "enterprise-projects" : [ {
    "projectId" : "dd87a1a8-8602-45a8-8145-393af4c95..."
  } ]
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	Parameter error.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
415	Incorrect Content-Type.
500	A system error occurred.

Error Codes

For details, see **Error Codes**.

4.12.6 Querying the Enterprise Projects Directly Associated with an IAM User

Function

This API is used to query the enterprise projects directly associated with an IAM user.

URI

GET /v3.0/OS-PERMISSION/users/{user_id}/enterprise-projects

Table 4-284 URI parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	IAM user ID.

Request Parameters

Table 4-285 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with **iam:permissions:listEnterpriseProjectsForUser** or **Security Administrator** permission. The **domain_id** of the account to which the **user_id** belongs must be the same as the **domain_id** in the token.

Response Parameters

Status code: 200

Table 4-286 Parameters in the response body

Parameter	Type	Description
enterprise-projects	Array of objects	Enterprise project information.

Table 4-287 enterprise-projects

Parameter	Type	Description
projectId	String	Project ID.

Example Request

Request for querying enterprise projects directly associated with an IAM user

```
GET https://sample.domain.com/v3.0/OS-PERMISSION/users/{user_id}/enterprise-projects
```

Example Response

Status code: 200

The request is successful.

```
{
  "enterprise-projects" : [ {
    "projectId" : "dd87a1a8-8602-45a8-8145-393af4c95..."
  }, {
    "projectId" : "dd87a1a8-8602-45a8-8145-393af4c95..."
  } ]
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	Parameter error.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
415	Incorrect Content-Type.
500	A system error occurred.

Error Codes

For details, see **Error Codes**.

4.12.7 Querying Users Directly Associated with an Enterprise Project

Function

This API is used to query the users directly associated with a specified enterprise project.

URI

GET /v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/users

Table 4-288 URI parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	Yes	String	ID of the enterprise project to be queried.

Request Parameters

Table 4-289 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with **iam:permissions:listUsersForEnterpriseProject** or **Security Administrator** permission.

Response Parameters

Status code: 200

Table 4-290 Parameters in the response body

Parameter	Type	Description
users	Array of objects	User information.

Table 4-291 users

Parameter	Type	Description
domain_id	String	ID of the account to which an authorized user belongs.
id	String	ID of the authorized user.
name	String	Name of the authorized user.
enabled	Boolean	Indicates whether the authorized user is enabled. The value can be **true** or **false**. The default value is **true**.
description	String	Description of the authorized user.
policy_num	Integer	Number of policies that have been assigned to the authorized user.
lastest_policy_time	Long	Duration for which the user has been last associated with a policy in the enterprise project.

Example Request

Request for querying users associated with an enterprise project

```
GET https://sample.domain.com/v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/users
```

Example Response

Status code: 200

The request is successful.

```
{
  "users" : [ {
    "domain_id" : "d78cbac186b744899480f25bd02...",
    "id" : "07667db96a00265f1fc0c003a...",
    "name" : "IAMUserA",
    "enabled" : true,
    "description" : "IAMDescriptionA",
    "policy_num" : 2,
    "lastest_policy_time" : 1589874427000
  } ]
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	Parameter error.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	The system is abnormal.

4.12.8 Querying Permissions of a User Directly Associated with an Enterprise Project

Function

This API is used to query the permissions of a user directly associated with a specified enterprise project.

URI

GET /v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/users/{user_id}/roles

Table 4-292 URI parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	Yes	String	Enterprise project ID.

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

Table 4-293 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with **iam:permissions:listRolesForUserOnEnterpriseProject** or **Security Administrator** permissions.

Response Parameters

Status code: 200

Table 4-294 Parameters in the response body

Parameter	Type	Description
roles	Array of objects	Role list.

Table 4-295 RolesItem

Parameter	Type	Description
catalog	String	Service catalog of the permission.
display_name	String	Display name of the permission.
description	String	Description of the permission in English.
description_cn	String	Description of the permission in Chinese.
domain_id	String	ID of the account to which the permission belongs.
flag	String	If this parameter is set to **fine_grained**, the permission is a system-defined policy.
id	String	Permission ID.
name	String	Permission name.

Parameter	Type	Description
policy	object	Content of the permission.
type	String	Display mode of the permission. **NOTE** • **AX**: Account level. • **XA**: Project level. • **AA**: Both the account level and project level. • **XX**: Neither the account level nor project level. • The display mode of a custom policy can only be **AX** or **XA**. A custom policy must be displayed at either of the two levels.

Table 4-296 RolePolicy

Parameter	Type	Description
Depends	Array of objects	Dependency permissions.
Statement	Array of objects	Statement of the permission.
Version	String	Policy version. **NOTE** • **1.0**: System-defined role. Only a limited number of service-level roles are provided for authorization. • **1.1**: Policy. A policy defines the permissions required to perform operations on a specific cloud resource under certain conditions.

Table 4-297 PolicyDepends

Parameter	Type	Description
catalog	String	Service catalog of the permission.
display_name	String	Display name of the permission.

Table 4-298 PolicyStatement

Parameter	Type	Description
Action	Array of strings	Specific operation permissions on a resource. For details about supported actions, see "Permissions and Supported Actions" in the API Reference of cloud services. **NOTE** • The value format is *Service name*:*Resource type*:*Operation*, for example, **vpc:ports:create**. • *Service name*: indicates the product name, such as **ecs**, **evs**, or **vpc**. Only lowercase letters are allowed. Resource types and operations are not case-sensitive. You can use an asterisk (*) to represent all operations. • In the case of a custom policy for agencies, this parameter should be set to *"Action": ["iam:agencies:assume"]*.
Effect	String	Effect of the permission. The value can be **Allow** or **Deny**. If both Allow and Deny statements are found in a policy, the authentication starts from the Deny statements.
Condition	Object	Conditions for the permission to take effect.
Resource	Array of strings	Cloud resource. **NOTE** • Format: *::::*. For example, **obs:*:bucket:***. Asterisks are allowed. • The region segment can be ***** or a region accessible to the user. The specified resource must belong to the corresponding service that actually exists. • In the case of a custom policy for agencies, the type of this parameter is Object, and the value should be set to *"Resource": {"uri": ["/iam/agencies/07805acaba800fdd4fbdc00b8f888c7c"]}*.

Example Request

Request for querying permissions of a user directly associated with an enterprise project

```
GET https://sample.domain.com/v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/users/{user_id}/roles
```

Example Response

Status code: 200

The request is successful.

```
{
  "roles" : [ {
    "display_name" : "Customed ECS Viewer",
    "description" : "The read-only permissions to all ECS resources, which can be used for statistics and
survey.",
    "domain_id" : "9698542758bc422088c0c3eabfc30d...",
    "catalog" : "CUSTOMED",
    "policy" : {
      "Version" : "1.1",
      "Statement" : [ {
        "Action" : [ "ecs:*:get*", "ecs:*:list*", "ecs:blockDevice:use", "ecs:serverGroups:manage",
"ecs:serverVolumes:use", "evs:*:get*", "evs:*:list*", "vpc:*:get*", "vpc:*:list*", "ims:*:get*", "ims:*:list*" ],
        "Effect" : "Allow"
      } ]
    },
    "id" : "24e7a89bffe443979760c4e9715c1...",
    "type" : "XA",
    "name" : "custom_9698542758bc422088c0c3eabfc30...."
  } ]
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	Parameter error.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	The system is abnormal.

4.12.9 Granting a User Permissions for an Enterprise Project

Function

This API is used to grant a user permissions for a specified enterprise project.

URI

PUT /v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/users/{user_id}/roles/{role_id}

Table 4-299 URI parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	Yes	String	Enterprise project ID.
user_id	Yes	String	User ID.

Parameter	Mandatory	Type	Description
role_id	Yes	String	Permission ID.

Request Parameters

Table 4-300 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with **iam:permissions:grantRoleToUserOnEnterpriseProject** or **Security Administrator** permissions.

Response Parameters

None

Example Request

Request for granting permissions to a user associated with an enterprise project

```
PUT https://sample.domain.com/v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/users/{user_id}/roles/{role_id}
```

Example Response

Status code: 400

Parameter error.

```
{
  "error" : {
    "message" : "Illegal request",
    "code" : 400,
    "title" : "Bad Request"
  }
}
```

Status code: 401

Authentication failed.

```
{
  "error" : {
    "message" : "Authentication failed",
    "code" : 401,
    "title" : "Unauthorized"
  }
}
```

Status code: 403

Access denied.

```
{
  "error" : {
    "message" : "Forbidden operation",
    "code" : 403,
    "title" : "Forbidden"
  }
}
```

Status Codes

Status Code	Description
204	The request is successful.
400	Parameter error.
401	Authentication failed.
403	Access denied.
500	The system is abnormal.

4.12.10 Removing Permissions of a User Directly Associated with an Enterprise Project

Function

This API is used to remove the permissions of a user directly associated with a specified enterprise project.

URI

DELETE /v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/users/{user_id}/roles/{role_id}

Table 4-301 URI parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	Yes	String	Enterprise project ID.
user_id	Yes	String	User ID.
role_id	Yes	String	Permission ID.

Request Parameters

Table 4-302 Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with **iam:permissions:revokeRoleFromUserOnEnterpriseProject** or **Security Administrator** permissions.

Response Parameters

None

Example Request

Request for deleting roles of a user associated with an enterprise project

```
DELETE https://sample.domain.com/v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/users/{user_id}/roles/{role_id}
```

Example Response

None

Status Codes

Status Code	Description
204	The request is successful.
400	Parameter error.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	The system is abnormal.

4.12.11 Querying User Groups Associated with an Enterprise Project

Function Description

This API is used to query the user groups associated with the enterprise project of a specified ID.

NOTE

This API will be deprecated soon. Please use the API described in **Querying User Groups Associated with an Enterprise Project** instead.

URI

- URI format

  GET /v3.0/OS-PAP/enterprise-projects/{enterprise_project_id}/groups

- URI parameter description

Parameter	Mandatory	Type	Description
enterprise_project_id	Yes	String	ID of the enterprise project for querying associated user groups.

Request

- Request header parameter description

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with **Security Administrator** permissions.
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.

- Sample request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X GET https://sample.domain.com/v3.0/OS-PAP/enterprise-projects/535fb147-6148-4c71-a679-b79a2cb0ee5d/groups
```

Response

- Response body parameter description

Parameter	Mandatory	Type	Description
groups	Yes	Array	Details about the user groups associated with the specified enterprise project.

- User groups format

Parameter	Mandatory	Type	Description
group_id	Yes	String	ID of a user group.
group_name	Yes	String	Name of the user group.
group_desc	Yes	String	Description of the user group.

Parameter	Mandatory	Type	Description
user_num	Yes	Int	Number of users contained in the user group.
policy_num	Yes	Int	Number of policies that have been configured for the user group.
created_at	Yes	Int	Time when the user group was created. The value is a Unix timestamp in millisecond.

- Example response: Querying an enterprise project with associated user groups

```
{
   "groups": [
      {
         "group_id": "758b99fa1fa24ec4a297d44e092bd...",
         "group_name": "Test",
         "group_desc": "Test",
         "user_num": 4,
         "policy_num": 1,
         "created_at": 1549088526...
      }
   ]
}
```

- If an enterprise project without any associated user groups is queried, the response body is empty.

```
{
  "groups": []
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	You must enter a username and password to access the requested page.
403	Access denied.
404	The server could not find the requested page.

4.12.12 Querying the Permissions of a User Group Associated with an Enterprise Project

Function

This API is used to query the permissions of a user group associated with the enterprise project of a specified ID.

NOTE

This API will be deprecated soon. Please use the API described in **Querying the Permissions of a User Group Associated with an Enterprise Project** instead.

URI

- URI format

  GET /v3.0/OS-PAP/enterprise-projects/{enterprise_project_id}/groups/{group_id}/roles

- URI parameter description

Parameter	Mandatory	Type	Description
enterprise_project_id	Yes	String	ID of the enterprise project for querying the permissions of an associated user group.
group_id	Yes	String	ID of a user group associated with the enterprise project.

Request

- Request header parameter description

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with **Security Administrator** permissions.
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.

- Sample request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X GET https://sample.domain.com/v3.0/OS-PAP/enterprise-projects/535fb147-6148-4c71-a679-b79a2cb0e.../groups/10d8104f395d43468094753f28692.../roles
```

Response

- Response body parameter description

Parameter	Mandatory	Type	Description
roles	Yes	JSONArray	Permission information.

- Description for the role format

Parameter	Mandatory	Type	Description
display_name	Yes	String	Name of a permission displayed on the console.
description	Yes	String	Description of the permission.
description_cn	Yes	String	Description of the permission.
domain_id	Yes	String	• If a custom policy has been bound to the user group, the value of this parameter is the account ID of the user that creates the custom policy. • If a default policy has been bound to the user group, the value of this parameter is null.
flag	No	String	A tag for indicating an internal fine-grained role.
catalog	Yes	String	Directory to which the permission belongs. • If a custom policy has been bound to the user group, the value of this parameter is **CUSTOMED**. • If a default policy has been bound to the user group, the value of this parameter is the corresponding service name, for example, **ECS**.
policy	Yes	Dict	Details about the permission. For more information, see **Description for the policy format**.
id	Yes	String	Permission ID.

Parameter	Mandatory	Type	Description
type	Yes	String	Display position of the permission. • **AX**: Displayed in the Global project. • **XA**: Displayed in projects other than the Global project. **NOTE** The value of this parameter can only be **AX** or **XA**, and cannot be **AA** or **XX**.
name	Yes	String	Name of the permission used in the system.

- Description for the policy format

Parameter	Mandatory	Type	Description
Version	Yes	String	Policy version.
Statement	Yes	JSONArray	Statement for using the policy to grant permissions. A policy consists of a maximum of eight statements. A **Statement** field contains the **Effect** and **Action** elements.

- Description for the statement format

Parameter	Mandatory	Type	Description
Effect	Yes	String	The value can be **Allow** or **Deny**. If both Allow and Deny statements are found in a policy, the authentication starts from the Deny statements.

Parameter	Mandatory	Type	Description
Action	Yes	StringArray	Permission set, which specifies the operation permissions on resources. The number of permission sets cannot exceed 100. Format: The value format is *Service name*:*Resource type*:*Action*, for example, **vpc:ports:create**. *Service name*: indicates the product name, such as **ecs**, **evs**, or **vpc**. Only lowercase letters are allowed. *Resource type* and *Action*: The values are case-insensitive, and the wildcard (*) is allowed. A wildcard (*) can represent all or part of the information about resource types and actions for the specific service.

- Example successful response

```
{
  "roles": [
    {
      "display_name": "Customed ECS Viewer",
      "description": "The read-only permissions to all ECS resources, which can be used for statistics and survey.",
      "domain_id": "9698542758bc422088c0c3eabf...",
      "catalog": "CUSTOMED",
      "policy": {
        "Version": "1.1",
        "Statement": [
          {
            "Action": [
              "ecs:*:get*",
              "ecs:*:list*",
              "ecs:blockDevice:use",
              "ecs:serverGroups:manage",
              "ecs:serverVolumes:use",
              "evs:*:get*",
              "evs:*:list*",
              "vpc:*:get*",
              "vpc:*:list*",
              "ims:*:get*",
              "ims:*:list*"
            ],
            "Effect": "Allow"
          }
        ]
      },
      "id": "24e7a89bffe443979760c4e9715c1...",
      "type": "XA",
      "name": "custom_9698542758bc422088c0c3eabfc30d1..."
    }
```

```
  ]
}
```

- Error response body parameter description

Parameter	Mandatory	Type	Description
error	Yes	Dict	Response error
message	Yes	String	Error details
code	Yes	Int	Status code
title	Yes	String	Error type

- Example failed response

```
{
  "error": {
    "message": "Authentication failed",
    "code": 401,
    "title": "Unauthorized"
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	You must enter a username and password to access the requested page.
403	Access denied.
500	Failed to complete the request because of an internal service error.

4.12.13 Granting Permissions to a User Group Associated with an Enterprise Project

Function Description

This API is used to grant permissions to a user group associated with the enterprise project of a specified ID.

NOTE

This API will be deprecated soon. Please use the API described in **Granting Permissions to a User Group Associated with an Enterprise Project** instead.

URI

- URI format

  PUT /v3.0/OS-PAP/enterprise-projects/{enterprise_project_id}/groups/{group_id}/roles/{role_id}

- URI parameter description

Parameter	Mandatory	Type	Description
enterprise_project_id	Yes	String	ID of an enterprise project.
group_id	Yes	String	ID of a user group to be granted permissions.
role_id	Yes	String	Permission ID. Only fine-grained policies (including default and custom policies) of version 1.1 can be granted to a user group.

Request

- Request header parameter description

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with **Security Administrator** permissions.
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.

- Sample request

```
curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X PUT https://sample.domain.com/v3.0/OS-PAP/enterprise-projects/535fb147-6148-4c71-a679-b79a2cb0e.../groups/10d8104f395d43468094753f28692.../roles/013ad036ee4c4d108327f02cbb479...
```

Response

No response body.

Status Codes

Status Code	Description
204	The request is successful.
400	The server failed to process the request.
401	You must enter a username and password to access the requested page.

Status Code	Description
403	Access denied.
404	The server could not find the requested page.
500	Internal server error.

4.12.14 Removing the Permissions of a User Group Associated with an Enterprise Project

Function Description

This API is used to remove the permissions of a user group associated with an enterprise project.

NOTE

This API will be deprecated soon. Please use the API described in **Removing Permissions of a User Group Associated with an Enterprise Project** instead.

URI

- URI format

  DELETE /v3.0/OS-PAP/enterprise-projects/{enterprise_project_id}/groups/{group_id}/roles/{role_id}

- URI parameter description

Parameter	Mandatory	Type	Description
enterprise_project_id	Yes	String	ID of an enterprise project.
group_id	Yes	String	ID of a user group.
role_id	Yes	String	ID of a role (policy) associated with the user group.

Request

- Request header parameter description

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with **Security Administrator** permissions.

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.

- Sample request
  *curl -i -k -H "X-Auth-Token:$token" -H 'Content-Type:application/json;charset=utf8' -X DELETE https://sample.domain.com/v3.0/OS-PAP/enterprise-projects/535fb147-6148-4c71-a679-b79a2cb0e.../groups/10d8104f395d43468094753f28692.../roles/*013ad036ee4c4d108327f02cbb479...

Response

No response body.

Status Codes

Status Code	Description
204	The request is successful.
400	The server failed to process the request.
401	You must enter a username and password to access the requested page.
403	Access denied.
404	The server could not find the requested page.
500	Internal server error.

4.13 Federated Identity Authentication Management

4.13.1 Obtaining a Token in Federated Identity Authentication Mode

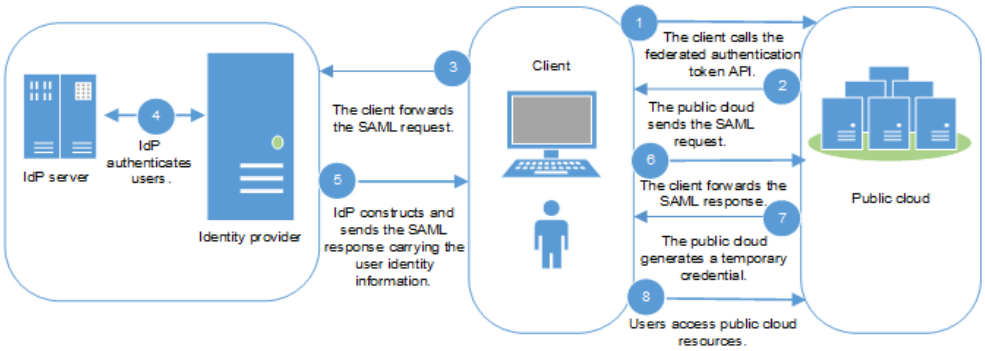
4.13.1.1 SP Initiated

OpenStack and Shibboleth are widely used open-source federated identity authentication solutions. They provide powerful SSO capabilities and connect users to various applications both inside and outside enterprises. This section describes how to use OpenStackClient and Shibboleth ECP Client to obtain the federated authentication token.

Flowchart

The following figure shows the SP-initiated federation authentication process.

Figure 4-1 Flowchart (SP-initiated)



Description

1. The client calls the API (federated token obtained in the SP-initiated mode) provided by the cloud system.
2. The cloud system searches for the metadata file based on the user and IdP information in the URL and sends the SAML request to the client.
3. The client encapsulates the SAML request and forwards the SAML request to the IdP.
4. A user enters a username and password on the IdP server for identity authentication.
5. After the user passes the authentication, IdP constructs an assertion carrying the user identity information and sends the SAML response. The response passes through the client.
6. The client encapsulates the SAML response and forwards the SAML response to the cloud platform.
7. The cloud platform verifies and authenticates the assertion, and generates a temporary access credential according to the identity conversion rule configured by users in the identity provider.
8. Users can access cloud resources according to their permissions.

OpenStackClient

You must have permissions of user **root** to install the unified command-line client. To perform the following operations, you only need to have the permissions of a common user.

NOTICE

The API calling operation must be performed in a secure network environment (in a VPN or a cloud server of a domain). Otherwise, this operation may be under the man-in-the-middle (MITM) attack.

Step 1 Create an environment variable file under the installation directory of OpenStackClient. Modify the environment variable file in a text editor. Add parameters, such as the username, password, region, SAML protocol version, and the IP address and port number of IAM, to the file. **Table 4-303** describes the parameters.

For example:

export OS_IDENTITY_API_VERSION=3

export OS_AUTH_TYPE=v3samlpassword

export OS_AUTH_URL=https://example:443/v3

export OS_IDENTITY_PROVIDER=idpid

export OS_PROTOCOL=saml

export OS_IDENTITY_PROVIDER_URL=https://idp.example.com/idp/profile/SAML2/SOAP/ECP

export OS_USERNAME=username

export OS_PASSWORD=userpassword

export OS_DOMAIN_NAME=example-domain-name

Table 4-303 Parameter description

Parameter	Description
OS_IDENTITY_API_VERSION	Indicates the authentication API version. The value is fixed at **3**.
OS_AUTH_TYPE	Indicates the authentication type. The value is fixed at **v3samlpassword**.
OS_AUTH_URL	Indicates the authentication URL. The value format is **https://***IAM IP address*:*Port number*/*API version*. • *Port number* is fixed at **443**. • *API version* is fixed at **v3**.
OS_IDENTITY_PROVIDER	Indicates the name of an identity provider created by a user in the cloud system. For example: Publiccloud-Shibboleth.
OS_DOMAIN_NAME	Indicates the domain name to be authenticated.
OS_PROTOCOL	Indicates the SAML protocol version. The value is fixed at **saml**.
OS_IDENTITY_PROVIDER_URL	Indicates the URL of the identity provider used to handle the authentication request initialized by the ECP.
OS_USERNAME	Indicates the name of a user who is authenticated in the identity provider.
OS_PASSWORD	Indicates the password of a user who is authenticated in the identity provider.

Step 2 Run the following command to set environment variables:

source keystonerc

Step 3 Run the following command to obtain a token:

openstack token issue

```
>>openstack token issue
command: token issue -> openstackclient.identity.v3.token.IssueToken (auth=True)
Using auth plugin: v3samlpassword
+------------------------------------------------------------------------------------------------------------
| Field   | Value
| expires | 2018-04-16T03:46:51+0000
| id      | MIIDbQYJKoZIhvcNAQcCoIIDXjXXX...
| user_id | 9B7CJy5ME14f0fQKhb6HJVQdpXXX...
```

In the command output, **id** is the obtained federated authentication token.

----End

Shibboleth ECP Client

Step 1 Configure the **metadata-providers.xml** file in Shibboleth IdP v3 and save the **metadata.xml** file in the corresponding path.

```
<MetadataProvider id="LocalMetadata1"xsi:type="FilesystemMetadataProvider" metadataFile="C:\Program Files (x86)\Shibboleth\IdP\metadata\web_metadata.xml"/>
<MetadataProvider id="LocalMetadata2"xsi:type="FilesystemMetadataProvider" metadataFile="C:\Program Files (x86)\Shibboleth\IdP\metadata\api_metadata.xml"/>
```

NOTE

- **MetadataProvider id** indicates the name of the downloaded metadata file of the SP system.
- **metadataFile** indicates the path for storing the metadata file of the SP system in the enterprise IdP.

Step 2 Configure the **attribute-filter.xml** file in Shibboleth IdP v3.

```
<afp:AttributeFilterPolicy id="example1">
    <afp:PolicyRequirementRule xsi:type="basic:AttributeRequesterString" value="https://auth.example.com/" />
    <afp:AttributeRule attributeID="eduPersonPrincipalName">
        <afp:PermitValueRule xsi:type="basic:ANY" />
    </afp:AttributeRule>
    <afp:AttributeRule attributeID="uid">
        <afp:PermitValueRule xsi:type="basic:ANY" />
    </afp:AttributeRule>
    <afp:AttributeRule attributeID="mail">
        <afp:PermitValueRule xsi:type="basic:ANY" />
    </afp:AttributeRule>
</afp:AttributeFilterPolicy>

<afp:AttributeFilterPolicy id="example2">
    <afp:PolicyRequirementRule xsi:type="basic:AttributeRequesterString" value="https://iam.{region_id}.example.com" />
    <afp:AttributeRule attributeID="eduPersonPrincipalName">
        <afp:PermitValueRule xsi:type="basic:ANY" />
    </afp:AttributeRule>
    <afp:AttributeRule attributeID="uid">
        <afp:PermitValueRule xsi:type="basic:ANY" />
    </afp:AttributeRule>
    <afp:AttributeRule attributeID="mail">
        <afp:PermitValueRule xsi:type="basic:ANY" />
    </afp:AttributeRule>
</afp:AttributeFilterPolicy>
```

NOTE

AttributeFilterPolicy id indicates the name of the downloaded metadata file of the SP system.

value indicates the **EntityID** in the metadata file of the SP system.

Step 3 Configure the endpoint address of the enterprise IdP in the **ecp.py** script.

```
# mapping from user friendly names or tags to IdP ECP enpoints
IDP_ENDPOINTS = {
    "idp1": "https://idp.example.com/idp/profile/SAML2/SOAP/ECP"
}
```

Step 4 Run the **ecp.py** script to obtain the federated authentication token.

```
>>python ecp.py
Usage: ecp.py [options] IdP_tag target_url login
>>python ecp.py -d idp1 https://iam.{region_id}.example.com/v3/OS-FEDERATION/identity_providers/idp_example/protocols/saml/auth {username}
X-Subject-Token: MIIDbQYJKoZIhvcNAQcCoIIDXXX...
```

X-Subject-Token is the obtained federated authentication token.

----End

4.13.1.2 IdP Initiated

This section uses the **Client4ShibbolethIdP** script as an example to describe how to obtain a federated authentication token in the IdP-initiated mode. The **Client4ShibbolethIdP** script simulates a user who logs in to the enterprise IdP using a browser. Therefore, by comparing the form data submitted by the browser and the client implementation data, this section helps users develop the client scripts of their enterprise IdP.

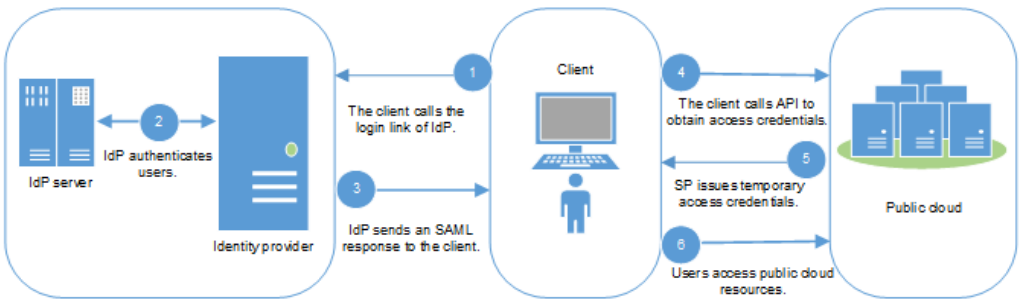
Prerequisites

- IdP-initiated federated identity authentication is supported by the enterprise IdP server.
- The **beautifulsoup4** package of the Python module has been installed on the client.

Flowchart

The following figure shows the IdP-initiated federation authentication process.

Figure 4-2 Flowchart (IdP-initiated)



Description

1. The client calls the login link provided by IdP based on the IdP-initiated mode and sets the cloud platform address in the login link, that is, **entityID** in the metadata file of the cloud platform.
2. The client obtains the login page of the IdP. Users submit identity information to IdP for authentication through the client.
3. After users pass the authentication, IdP constructs an assertion carrying the user identity information and sends the SAML response. The response passes through the client.
4. The client encapsulates the SAML response, forwards the SAML response, and calls the API (federated token obtained in the IdP-initiated mode) provided by the cloud platform.
5. The cloud platform verifies and authenticates the assertion, and generates a temporary access credential according to the identity conversion rule configured by users in the identity provider.
6. Users can access cloud resources according to their permissions.

Implementation on the Client

Download the **Client4ShibbolethIdP.py** script (for reference only) from the following website to implement the federated identity authentication script from the enterprise IdP to the API/CLI side of the cloud system:

https://obs-for-iam-prod.oss.eu-west-0.prod-cloud-ocb.orange-business.com/obs-idp/Client4ShibblethIdP.py

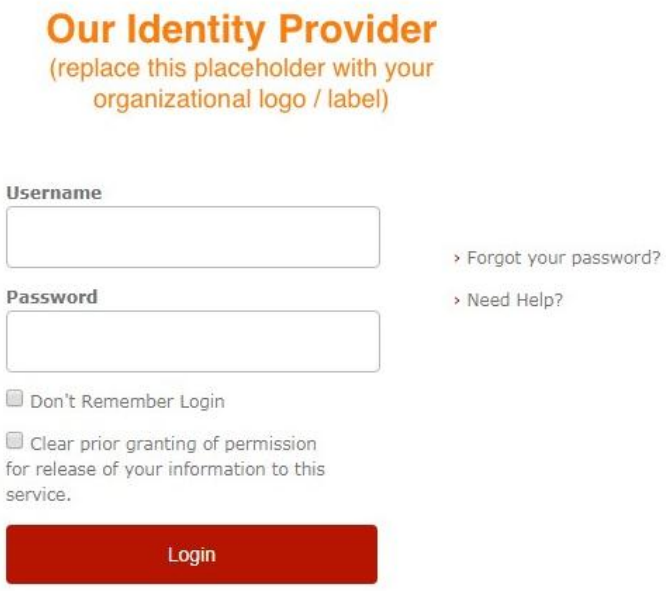
Step 1 Configure the login URL of enterprise IdP.

Table 4-304 Login URLs of common IdP products

IdP	SP Identification Parameter in URL	Login URL Example
ADFS	logintorp	https://adfs-server.contoso.com/adfs/ls/IdpInitiatedSignon.aspx?logintorp=https://iam.example.com
Shibboleth	providerId	https://idp.example.org/idp/profile/SAML2/Unsolicited/SSO?providerId=iam.example.com
SimpleSAMLphp	spentityid	https://idp.example.org/simplesaml/saml2/idp/SSOService.php?spentityid=iam.example.com

After the configuration, enter the login URL in the browser address box. The following page is displayed.

Figure 4-3 Login Page



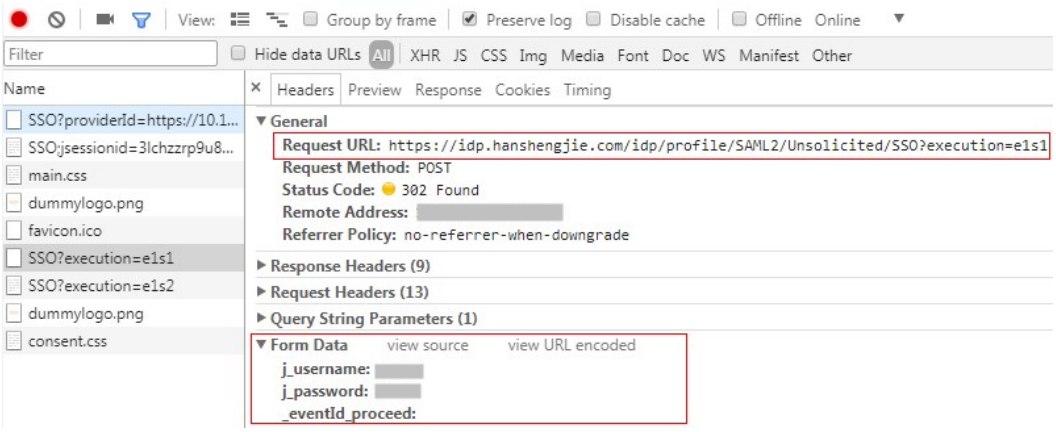
Client4ShibbolethIdP script implementation:

```
import sys
import requests
import getpass
import re
from bs4 import BeautifulSoup
from urlparse import urlparse

# SSL certificate verification: Whether or not strict certificate
# verification is done, False should only be used for dev/test
sslverification = True

# Get the federated credentials from the user
print "Username:",
username = raw_input()
password = getpass.getpass()
print ''

session = requests.Session()

# The initial url that starts the authentication process.
idp_entry_url = 'https://idp.example.com/idp/profile/SAML2/Unsolicited/SSO?providerId=https://
iam.example.com'

# Programmatically get the SAML assertion,open the initial IdP url# and follows all of the HTTP302
redirects, and gets the resulting# login page
formresponse = session.get(idp_entry_url, verify=sslverification)
# Capture the idp_authform_submit_url,which is the final url after# all the 302s
idp_authform_submit_url = formresponse.url
```

Step 2 The client submits authentication information. The client parses the login page using the beautifulsoup4 module, captures the user information input box and requested action, constructs the request parameters, and initiates identity authentication to the IdP.

Obtain all form data submitted for the login page from the browser.

Figure 4-4 Authentication information (1)



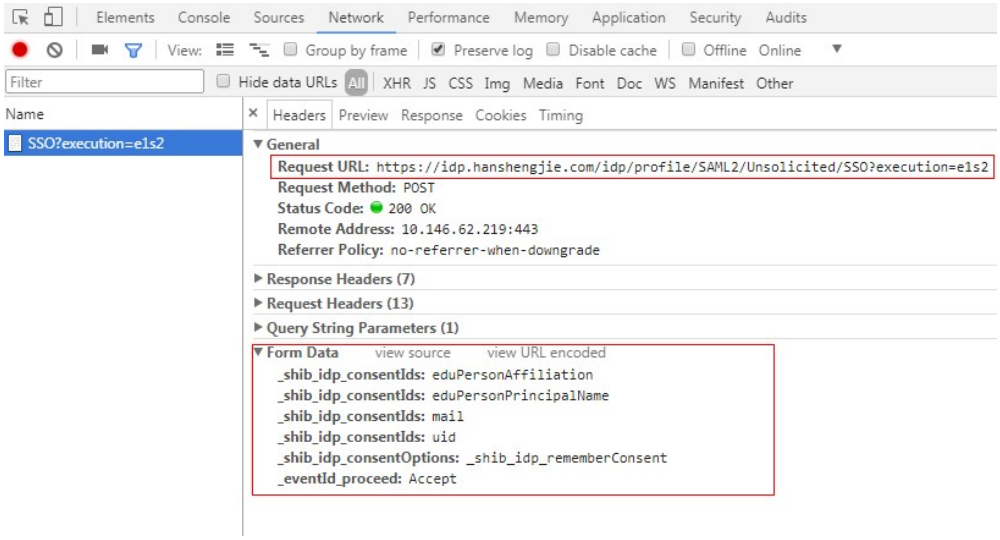
Client4ShibbolethIdP script implementation:

```
# Parse the response and extract all the necessary values in order to build a dictionary of all of the form
values the IdP expects
formsoup = BeautifulSoup(formresponse.text.decode('utf8'), "lxml")
payload = {}

for inputtag in formsoup.find_all(re.compile('(INPUT|input)')):
    name = inputtag.get('name', '')
    value = inputtag.get('value', '')
    if "username" in name.lower():
        payload[name] = username
    elif "password" in name.lower():
        payload[name] = password
    else:
        payload[name] = value

for inputtag in formsoup.find_all(re.compile('(FORM|form)')):
    action = inputtag.get('action')
    if action:
        parsedurl = urlparse(idp_entry_url)
        idp_authform_submit_url = parsedurl.scheme + "://" + parsedurl.netloc + action

# please test on browser first, add other parameters in payload
payload["_eventId_proceed"] = ""

formresponse = session.post(
    idp_authform_submit_url, data=payload, verify=sslverification)
```

Step 3 The client parses the next page. (Some enterprise IdPs provide pages containing user attributes.)

Obtain all form data submitted for the login page from the browser.

Figure 4-5 Authentication information (2)



Client4ShibbolethIdP script implementation:

```
# In shebbleth IdP v3, browser will show attributes page for user,# so we need parse the page
formsoup = BeautifulSoup(formresponse.text.decode('utf8'), "lxml")
payload = {}

# Add other form data required from browser to payload
_shib_idp_consentIds = []
for inputtag in formsoup.find_all(re.compile('input')):
    name = inputtag.get("name")
    value = inputtag.get("value")
    if name == "_shib_idp_consentIds":
        _shib_idp_consentIds.append(value)
payload["_shib_idp_consentIds"] = _shib_idp_consentIds
payload["_shib_idp_consentOptions"] = "_shib_idp_rememberConsent"
payload["_eventId_proceed"] = "Accept"

# user can get the action url from the html file
nexturl = "https://idp.example.com/idp/profile/SAML2/Unsolicited/SSO?execution=e1s2"

for inputtag in formsoup.find_all(re.compile('(FORM|form)')):
    action = inputtag.get('action')
    if action:
        parsedurl = urlparse(idp_entry_url)
        nexturl = parsedurl.scheme + "://" + parsedurl.netloc + action

response = session.post(
    nexturl, data=payload, verify=sslverification)
```

Step 4 The client parses the response message sent from the IdP. The client submits user information to the enterprise IdP for authentication. After authenticating the user information, the IdP sends a response message to the client. The client parses the **SAMLResponse** parameter in the response message.

Client4ShibbolethIdP script implementation:

```
# Decode the response and extract the SAML assertion
soup = BeautifulSoup(response.text.decode('utf8'), "lxml")
SAMLResponse = ''

# Look for the SAMLResponse attribute of the input tag
for inputtag in soup.find_all('input'):
    if (inputtag.get('name') == 'SAMLResponse'):
        SAMLResponse = inputtag.get('value')
```

```
# Better error handling is required for production use.
if (SAMLResponse == ''):
    print 'Response did not contain a valid SAML assertion, please troubleshooting in Idp side.'
    sys.exit(0)
```

Step 5 Obtain an unscoped token. For details, see **Obtaining an Unscoped Token (IdP Initiated)**.

Client4ShibbolethIdP script implementation:

```
# Set headers
headers = {}
headers["X-Idp-Id"] = "test_local_idp"

# IAM API url: get unscoped token on IDP initiated mode
sp_unscoped_token_url = "https://iam.example.com/v3.0/OS-FEDERATION/tokens"

# Set form data
payload = {}
payload["SAMLResponse"] = SAMLResponse
response = session.post(
    sp_unscoped_token_url, data=payload, headers=headers, verify=sslverification)

# Debug only
print(response.text)
print "Status Code: " + str(response.status_code)
if response.status_code != 201:
    sys.exit(1)

unscoped_token = response.headers.get("X-Subject-Token") if "X-Subject-Token" in response.headers.keys()
else None
if unscoped_token:
    print ">>>>>>X-Subject-Token: " + unscoped_token
```

Step 6 Obtain a scoped token. For details, see **Obtaining a Scoped Token**.

Client4ShibbolethIdP script implementation:

```
payload = {
    "auth": {
        "identity": {
            "methods": ["token"],
            "token": {
                "id": unscoped_token
            }
        },
        "scope": {
            "project": {
                "name": "{region_id}_test1"
            }
        }
    }
}

sp_scoped_token_url = "https://iam.example.com/v3/auth/tokens"

response = session.post(
    sp_scoped_token_url, json=payload, verify=sslverification)

# Debug only
print "Status Code: " + str(response.status_code)
if response.status_code != 201:
    print response.text
    sys.exit(1)

scoped_token = response.text if response.status_code == 201 else None
if scoped_token:
    print ">>>>>>Scoped Token:" + scoped_token
```

Step 7 Obtain a temporary AK/SK. For details, see **Obtaining a Temporary AK/SK**.

Client4ShibbolethIdP script implementation:

```
# Set form data
payload = {
    "auth": {
        "identity": {
            "methods": ["token"],
            "token": {
                "duration_seconds": "900"
            }
        }
    }
}

# Set headers
headers = {}
headers["X-Auth-Token"] = unscoped_token

sp_STS_token_url = "https://iam.example.com/v3.0/OS-CREDENTIAL/securitytokens"

response = session.post(
    sp_STS_token_url, json=payload, headers=headers, verify=sslverification)

# Debug only
print "Status Code: " + str(response.status_code)
if response.status_code != 201:
    print response.text
    sys.exit(1)

sts_token = response.text if response.status_code == 201 else None
if sts_token:
    print ">>>>>>STS Token:" + sts_token
```

----End

4.13.2 Identity Provider

4.13.2.1 Querying the Identity Provider List

Function

This API is used to query the identity provider list.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

GET /v3/OS-FEDERATION/identity_providers

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token.

- Example request
  curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/OS-FEDERATION/identity_providers

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
identity_providers	Yes	Array	List of identity providers.
links	Yes	Object	Identity provider resource link.

- links parameter description

Parameter	Type	Description
self	String	Resource link.
previous	String	Previous resource link.
next	String	Next resource link.

- Description for the identity_providers format

Parameter	Mandatory	Type	Description
id	Yes	String	ID of an identity provider.
description	Yes	String	Identity provider description.
enabled	Yes	Boolean	Whether an identity provider is enabled. **true** indicates that the identity provider is enabled. **false** indicates that the identity provider is disabled. The default value is **false**.
remote_ids	Yes	Array	Federated user ID list of an identity provider.
links	Yes	Object	Identity provider resource link.

- identity_providers.links parameter description

Parameter	Type	Description
self	String	Identity provider resource link.
protocols	String	Protocol resource link.

- Example response

```
{
    "identity_providers": [
        {
            "description": "Stores ACME identities",
            "enabled": true,
            "id": "ACME",
            "remote_ids": [],
            "links": {
                "protocols": "https://example.com/v3/OS-FEDERATION/identity_providers/ACME/protocols",
                "self": "https://example.com/v3/OS-FEDERATION/identity_providers/ACME"
            }
        },
        {
            "description": "Stores contractor identities",
            "enabled": false,
            "remote_ids": [],
            "id": "ACME-contractors",

            "links": {
                "protocols": "https://example.com/v3/OS-FEDERATION/identity_providers/ACME-
contractors/protocols",
                "self": "https://example.com/v3/OS-FEDERATION/identity_providers/ACME-contractors"
            }
        }
    ],
    "links": {
        "next": null,
        "previous": null,
        "self": "https://sample.domain.com/v3/OS-FEDERATION/identity_providers"
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.

Status Code	Description
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.2.2 Querying an Identity Provider

Function

This API is used to query the information about an identity provider.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/OS-FEDERATION/identity_providers/{id}

- URI parameters

Parameter	Mandatory	Type	Description
id	Yes	String	ID of an identity provider.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/OS-FEDERATION/identity_providers/ACME
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
id	Yes	String	ID of an identity provider.
description	Yes	String	Identity provider description.
enabled	Yes	Boolean	Whether an identity provider is enabled. • **true** indicates that the identity provider is enabled. • **false** indicates that the identity provider is disabled. The default value is **false**.
remote_ids	Yes	Array	Federated user ID list of an identity provider.
links	Yes	Object	Identity provider resource link.

- Example response

```
{
    "identity_provider": {
        "description": "Stores ACME identities",
        "enabled": false,
        "id": "ACME",

        "remote_ids": [],
        "links": {
            "protocols": "https://sample.domain.com/v3/OS-FEDERATION/identity_providers/ACME/
protocols",
            "self": "https://sample.domain.com/v3/OS-FEDERATION/identity_providers/ACME"
        }
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.

Status Code	Description
500	Internal server error.
503	Service unavailable.

4.13.2.3 Creating an Identity Provider

Function

This API is provided for the administrator to create an identity provider.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  PUT /v3/OS-FEDERATION/identity_providers/{id}

- URI parameters

Parameter	Mandatory	Type	Description
id	Yes	String	ID of an identity provider.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Parameters in the request body

Table 4-305 Parameters in the request body

Parameter	Mandatory	Type	Description
identity_provider	Yes	Object	Identity provider information.

Table 4-306 identity_provider

Parameter	Mandatory	Type	Description
sso_type	No	string	Identity provider type. The following two types are supported: • **virtual_user_sso**: The federated user is mapped to a virtual user after the login is redirected. • **iam_user_sso**: The federated user is mapped to an IAM user after the login is redirected. If you select this type, ensure that you have created an IAM user. The default value is **virtual_user_sso**.
description	No	String	Description of the identity provider.
enabled	No	Boolean	Whether an identity provider is enabled. **true** indicates that the identity provider is enabled. **false** indicates that the identity provider is disabled. The default value is **false**.

- Example request

```
PUT https://sample.domain.com/v3/OS-FEDERATION/identity_providers/{id}
{
    "identity_provider": {
        "description": "Stores ACME identities.",
        "enabled": true
    }
}
```

Response Parameters

- Parameters in the response body

Table 4-307 Parameters in the response body

Parameter	Type	Description
identity_provider	Object	Identity provider information.

Table 4-308 identity_provider

Parameter	Type	Description
sso_type	string	Identity provider type.
id	String	Identity provider ID.
description	String	Description of the identity provider.
enabled	Boolean	Whether an identity provider is enabled. **true** indicates that the identity provider is enabled. **false** indicates that the identity provider is disabled. The default value is **false**.
remote_ids	Array of strings	Federated user ID list of an identity provider.
links	Object	Identity provider resource link.

Table 4-309 identity_provider.links

Parameter	Type	Description
self	String	Identity provider resource link.
protocols	String	Protocol resource link.

- Example response

```
{
    "identity_provider": {
        "description": "Stores ACME identities",
        "enabled": true,
        "id": "ACME",

        "remote_ids": [],
        "links": {
            "protocols": "https://example.com/v3/OS-FEDERATION/identity_providers/ACME/protocols",
            "self": "https://example.com/v3/OS-FEDERATION/identity_providers/ACME"
        }
    }
}
```

Status Codes

Status Code	Description
201	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.

Status Code	Description
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
409	Duplicate identity provider ID.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.2.4 Creating an OpenID Connect Identity Provider

Function

This API is provided for the administrator to create an OpenID Connect identity provider.

URI

POST /v3.0/OS-FEDERATION/identity-providers/{idp_id}/openid-connect-config

Table 4-310 URI parameters

Parameter	Mandatory	Type	Description
idp_id	Yes	String	Identity provider ID. Length: 1 to 64 characters

Request Parameters

Table 4-311 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Table 4-312 Parameters in the request body

Parameter	Mandatory	Type	Description
openid_connect_config	Yes	object	OpenID Connect configurations.

Table 4-313 CreateOpenIDConnectConfig

Parameter	Mandatory	Type	Description
access_mode	Yes	String	Access type. Options: • **program_console**: programmatic access and management console access. • **program**: programmatic access only.
idp_url	Yes	String	URL of the OpenID Connect identity provider. This field corresponds to the **iss** field in the ID token. Length: 10 to 255 characters
client_id	Yes	String	ID of a client registered with the OpenID Connect identity provider. Length: 5 to 255 characters
authorization_endpoint	No	String	Authorization endpoint of the OpenID Connect identity provider. This field is required only if **access_mode** is set to **program_console**. Length: 10 to 255 characters

Parameter	Mandatory	Type	Description
scope	No	String	Scope of authorization requests. This field is required only if **access_mode** is set to **program_console**. Enumerated values: ● openid ● email ● profile **NOTE** ● **openid** must be specified for this field. ● You can specify 1 to 10 values and separate them with spaces. Example: **openid**, **openid email**, **openid profile**, and **openid email profile**.
response_type	No	String	Response type. This field is required only if **access_mode** is set to **program_console**. Enumerated value: ● id_token
response_mode	No	String	Response mode. This field is required only if **access_mode** is set to **program_console**. Enumerated values: ● fragment ● form_post

signing_key	Yes	String	Public key used to sign the ID token of the OpenID Connect identity provider.
			Length: 10 to 30,000 characters
			Format example:
			{
			"keys":[
			{
			"kid":"d05ef20c4512645vv1..." ,
			"n":"cws_cnjiwsbvweolwn_-vnl...",
			"e":"AQAB",
			"kty":"RSA",
			"use":"sig",
			"alg":"RS256"
			}
			]
			}

Response Parameters

Status code: 201

Table 4-314 Parameters in the response body

Parameter	Type	Description
openid_connect_config	object	OpenID Connect configurations.

Table 4-315 openid_connect_config

Parameter	Type	Description
access_mode	String	Access type. Options: • **program_console**: programmatic access and management console access. • **program**: programmatic access only.
idp_url	String	URL of the OpenID Connect identity provider. This field corresponds to the **iss** field in the ID token. Length: 10 to 255 characters
client_id	String	ID of a client registered with the OpenID Connect identity provider. Length: 5 to 255 characters
authorization_endpoint	String	Authorization endpoint of the OpenID Connect identity provider. This field is required only if **access_mode** is set to **program_console**. Length: 10 to 255 characters

Parameter	Type	Description
scope	String	Scope of authorization requests. This field is required only if **access_mode** is set to **program_console**. Enumerated values: • openid • email • profile **NOTE** • **openid** must be specified for this field. • You can specify 1 to 10 values and separate them with spaces. Example: **openid**, **openid email**, **openid profile**, and **openid email profile**.
response_type	String	Response type. This field is required only if **access_mode** is set to **program_console**. Enumerated value: • id_token
response_mode	String	Response mode. This field is required only if **access_mode** is set to **program_console**. Enumerated values: • fragment • form_post
signing_key	String	Public key used to sign the ID token of the OpenID Connect identity provider. Length: 10 to 30,000 characters

Example Request

- Creating an identity provider that supports programmatic access

```
POST /v3.0/OS-FEDERATION/identity-providers/{idp_id}/openid-connect-config

{
  "openid_connect_config" : {
    "access_mode" : "program",
    "idp_url" : "https://accounts.example.com",
    "client_id" : "client_id_example",
    "signing_key" : "{\"keys\":[{\"kty\":\"RSA\",\"e\":\"AQAB\",\"use\":\"sig\",\"n\":\"example\",\"kid
\":\"kid_example\",\"alg\":\"RS256\"}]}"
  }
}
```

- Creating an identity provider that supports programmatic access and management console access

```
POST /v3.0/OS-FEDERATION/identity-providers/{idp_id}/openid-connect-config
```

```
{
  "openid_connect_config" : {
    "access_mode" : "program_console",
    "idp_url" : "https://accounts.example.com",
    "client_id" : "client_id_example",
    "authorization_endpoint" : "https://accounts.example.com/o/oauth2/v2/auth",
    "scope" : "openid",
    "response_type" : "id_token",
    "response_mode" : "form_post",
    "signing_key" : "{\"keys\":[{\"kty\":\"RSA\",\"e\":\"AQAB\",\"use\":\"sig\",\"n\":\"example\",\"kid
\":\"kid_example\",\"alg\":\"RS256\"}]}"
  }
}
```

Example Response

Status code: 201

The identity provider is created successfully.

- Example 1

```
{
  "openid_connect_config" : {
    "access_mode" : "program",
    "idp_url" : "https://accounts.example.com",
    "client_id" : "client_id_example",
    "signing_key" : "{\"keys\":[{\"kty\":\"RSA\",\"e\":\"AQAB\",\"use\":\"sig\",\"n\":\"example\",\"kid
\":\"kid_example\",\"alg\":\"RS256\"}]}"
  }
}
```

- Example 2

```
{
  "openid_connect_config" : {
    "access_mode" : "program_console",
    "idp_url" : "https://accounts.example.com",
    "client_id" : "client_id_example",
    "authorization_endpoint" : "https://accounts.example.com/o/oauth2/v2/auth",
    "scope" : "openid",
    "response_type" : "id_token",
    "response_mode" : "form_post",
    "signing_key" : "{\"keys\":[{\"kty\":\"RSA\",\"e\":\"AQAB\",\"use\":\"sig\",\"n\":\"example\",\"kid
\":\"kid_example\",\"alg\":\"RS256\"}]}"
  }
}
```

Status code: 400

The server failed to process the request.

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

Status code: 401

Authentication failed.

```
{
  "error_msg" : "The request you have made requires authentication.",
  "error_code" : "IAM.0001"
}
```

Status code: 403

Access denied.

```
{
  "error_msg" : "Policy doesn't allow %(actions)s to be performed.",
```

```
  "error_code" : "IAM.0003"
}
```

Status code: 404

The requested resource cannot be found.

```
{
  "error_msg" : "Could not find %(target)s: %(target_id)s.",
  "error_code" : "IAM.0004"
}
```

Status code: 409

The resource already exists.

```
{
  "error_msg" : "Conflict occurred attempting to store %(type)s - %(details)s.",
  "error_code" : "IAM.0005"
}
```

Status code: 500

Internal server error.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
201	The identity provider is created successfully.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
409	The resource already exists.
500	Internal server error.

4.13.2.5 Updating a SAML Identity Provider

Function

This API is used to update the information about a SAML identity provider.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  PATCH /v3/OS-FEDERATION/identity_providers/{id}

- URI parameters

Parameter	Mandatory	Type	Description
id	Yes	String	ID of an identity provider.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Parameters in the request body

Table 4-316 Parameters in the request body

Parameter	Mandatory	Type	Description
identity_provider	Yes	Object	Identity provider information.

Table 4-317 identity_provider

Parameter	Mandatory	Type	Description
description	No	String	Description of the identity provider.
enabled	No	Boolean	Whether an identity provider is enabled. **true** indicates that the identity provider is enabled. **false** indicates that the identity provider is disabled. The default value is **false**.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X PATCH -d'{"identity_provider":{"enabled":false}}' https://sample.domain.com/v3/OS-FEDERATION/identity_providers/ACME
```

Response Parameters

- Parameters in the response body

Table 4-318 Parameters in the response body

Parameter	Type	Description
identity_provider	Object	Identity provider information.

Table 4-319 identity_provider

Parameter	Type	Description
id	String	Identity provider ID.
description	String	Description of the identity provider.
enabled	Boolean	Whether an identity provider is enabled. **true** indicates that the identity provider is enabled. **false** indicates that the identity provider is disabled. The default value is **false**.
remote_ids	Array of strings	Federated user ID list of an identity provider.
links	Object	Identity provider resource link.

Table 4-320 identity_provider.links

Parameter	Type	Description
self	String	Identity provider resource link.
protocols	String	Protocol resource link.

- Example response

```
{
    "identity_provider": {
        "description": "Stores ACME identities",
        "enabled": false,
        "id": "ACME",

        "remote_ids": [],
        "links": {
            "protocols": "https://example.com/v3/OS-FEDERATION/identity_providers/ACME/protocols",
            "self": "https://example.com/v3/OS-FEDERATION/identity_providers/ACME"
        }
```

```
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
409	A resource conflict occurs.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.2.6 Updating an OpenID Connect Identity Provider

Function

This API is provided for the administrator to modify an OpenID Connect identity provider.

URI

PUT /v3.0/OS-FEDERATION/identity-providers/{idp_id}/openid-connect-config

Table 4-321 URI parameters

Parameter	Mandatory	Type	Description
idp_id	Yes	String	Identity provider ID. Length: 1 to 64 characters

Request Parameters

Table 4-322 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Table 4-323 Parameters in the request body

Parameter	Mandatory	Type	Description
openid_connect_config	Yes	object	OpenID Connect configurations.

Table 4-324 openid_connect_config

Parameter	Mandatory	Type	Description
access_mode	No	String	Access type. Options: • **program_console**: programmatic access and management console access. • **program**: programmatic access only.
idp_url	No	String	URL of the OpenID Connect identity provider. This field corresponds to the **iss** field in the ID token. Length: 10 to 255 characters
client_id	No	String	ID of a client registered with the OpenID Connect identity provider. Length: 5 to 255 characters

Parameter	Mandatory	Type	Description
authorization_endpoint	No	String	Authorization endpoint of the OpenID Connect identity provider. This field is required only if **access_mode** is set to **program_console**. Length: 10 to 255 characters
scope	No	String	Scope of authorization requests. This field is required only if **access_mode** is set to **program_console**. Enumerated values: ● openid ● email ● profile **NOTE** ● **openid** must be specified for this field. ● You can specify 1 to 10 values and separate them with spaces. Example: **openid**, **openid email**, **openid profile**, and **openid email profile**.
response_type	No	String	Response type. This field is required only if **access_mode** is set to **program_console**. Enumerated value: ● id_token
response_mode	No	String	Response mode. This field is required only if **access_mode** is set to **program_console**. Enumerated values: ● fragment ● form_post

Parameter	Mandatory	Type	Description

signing_key	No	String	Public key used to sign the ID token of the OpenID Connect identity provider.
			Length: 10 to 30,000 characters
			Format example:
			{
			"keys":[
			{
			"kid":"d05ef20c4512645vv1..." ,
			"n":"cws_cnjiwsbvweolwn_-vnl...",
			"e":"AQAB",
			"kty":"RSA",
			"use":"sig",
			"alg":"RS256"
			}
			]
			}

Response Parameters

Status code: 200

Table 4-325 Parameters in the response body

Parameter	Type	Description
openid_connect_config	object	OpenID Connect configurations.

Table 4-326 OpenIDConnectConfig

Parameter	Type	Description
access_mode	String	Access type. Options: • **program_console**: programmatic access and management console access. • **program**: programmatic access only.
idp_url	String	URL of the OpenID Connect identity provider. This field corresponds to the **iss** field in the ID token. Length: 10 to 255 characters
client_id	String	ID of a client registered with the OpenID Connect identity provider. Length: 5 to 255 characters

Parameter	Type	Description
authorization_endpoint	String	Authorization endpoint of the OpenID Connect identity provider. This field is required only if **access_mode** is set to **program_console**. Length: 10 to 255 characters
scope	String	Scope of authorization requests. This field is required only if **access_mode** is set to **program_console**. Enumerated values: • openid • email • profile **NOTE** • **openid** must be specified for this field. • You can specify 1 to 10 values and separate them with spaces. Example: **openid**, **openid email**, **openid profile**, and **openid email profile**.
response_type	String	Response type. This field is required only if **access_mode** is set to **program_console**. Enumerated value: • id_token
response_mode	String	Response mode. This field is required only if **access_mode** is set to **program_console**. Enumerated values: • fragment • form_post
signing_key	String	Public key used to sign the ID token of the OpenID Connect identity provider. Length: 10 to 30,000 characters

Example Request

- Modifying an identity provider that supports programmatic access

```
PUT /v3.0/OS-FEDERATION/identity-providers/{idp_id}/openid-connect-config

{
  "openid_connect_config" : {
    "access_mode" : "program",
    "idp_url" : "https://accounts.example.com",
    "client_id" : "client_id_example",
    "signing_key" : "{\"keys\":[{\"kty\":\"RSA\",\"e\":\"AQAB\",\"use\":\"sig\",\"n\":\"example\",\"kid
```

```
\":\"kid_example\",\"alg\":\"RS256\"}]}"
  }
}
```

- Modifying an identity provider that supports programmatic access and management console access

```
PUT /v3.0/OS-FEDERATION/identity-providers/{idp_id}/openid-connect-config

{
  "openid_connect_config" : {
    "access_mode" : "program_console",
    "idp_url" : "https://accounts.example.com",
    "client_id" : "client_id_example",
    "authorization_endpoint" : "https://accounts.example.com/o/oauth2/v2/auth",
    "scope" : "openid",
    "response_type" : "id_token",
    "response_mode" : "form_post",
    "signing_key" : "{\"keys\":[{\"kty\":\"RSA\",\"e\":\"AQAB\",\"use\":\"sig\",\"n\":\"example\",\"kid
\":\"kid_example\",\"alg\":\"RS256\"}]}"
  }
}
```

Example Response

Status code: 200

The request is successful.

```
{
  "openid_connect_config" : {
    "access_mode" : "program_console",
    "idp_url" : "https://accounts.example.com",
    "client_id" : "client_id_example",
    "authorization_endpoint" : "https://accounts.example.com/o/oauth2/v2/auth",
    "scope" : "openid",
    "response_type" : "id_token",
    "response_mode" : "form_post",
    "signing_key" : "{\"keys\":[{\"kty\":\"RSA\",\"e\":\"AQAB\",\"use\":\"sig\",\"n\":\"example\",\"kid
\":\"kid_example\",\"alg\":\"RS256\"}]}"
  }
}
```

Status code: 400

The server failed to process the request.

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

Status code: 401

Authentication failed.

```
{
  "error_msg" : "The request you have made requires authentication.",
  "error_code" : "IAM.0001"
}
```

Status code: 403

Access denied.

```
{
  "error_msg" : "Policy doesn't allow %(actions)s to be performed.",
  "error_code" : "IAM.0003"
}
```

Status code: 404

The requested resource cannot be found.

```
{
  "error_msg" : "Could not find %(target)s: %(target_id)s.",
  "error_code" : "IAM.0004"
}
```

Status code: 500

Internal server error.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.

4.13.2.7 Querying an OpenID Connect Identity Provider

Function

This API is provided for the administrator to query an OpenID Connect identity provider.

URI

GET /v3.0/OS-FEDERATION/identity-providers/{idp_id}/openid-connect-config

Table 4-327 URI parameters

Parameter	Mandatory	Type	Description
idp_id	Yes	String	Identity provider ID. Length: 1 to 64 characters

Request Parameters

Table 4-328 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Token with **Security Administrator** permissions.

Response Parameters

Status code: 200

Table 4-329 Parameters in the response body

Parameter	Type	Description
openid_connect_config	object	OpenID Connect configurations.

Table 4-330 OpenIDConnectConfig

Parameter	Type	Description
access_mode	String	Access type. Options: • **program_console**: programmatic access and management console access. • **program**: programmatic access only.
idp_url	String	URL of the OpenID Connect identity provider. This field corresponds to the **iss** field in the ID token.
client_id	String	ID of a client registered with the OpenID Connect identity provider.
authorization_endpoint	String	Authorization endpoint of the OpenID Connect identity provider. This field is required only if **access_mode** is set to **program_console**.

Parameter	Type	Description
scope	String	Scope of authorization requests. This field is required only if **access_mode** is set to **program_console**. Enumerated values: • openid • email • profile
response_type	String	Response type. This field is required only if **access_mode** is set to **program_console**. Enumerated value: • id_token
response_mode	String	Response mode. This field is required only if **access_mode** is set to **program_console**. Enumerated values: • fragment • form_post
signing_key	String	Public key used to sign the ID token of the OpenID Connect identity provider.

Example Request

```
GET https://{address}/v3.0/OS-FEDERATION/identity-providers/{idp_id}/openid-connect-config
```

Example Response

Status code: 200

The request is successful.

```
{
  "openid_connect_config" : {
    "access_mode" : "program_console",
    "idp_url" : "https://accounts.example.com",
    "client_id" : "client_id_example",
    "authorization_endpoint" : "https://accounts.example.com/o/oauth2/v2/auth",
    "scope" : "openid",
    "response_type" : "id_token",
    "response_mode" : "form_post",
    "signing_key" : "{\"keys\":[{\"kty\":\"RSA\",\"e\":\"AQAB\",\"use\":\"sig\",\"n\":\"example\",\"kid
\":\"kid_example\",\"alg\":\"RS256\"}]}"
  }
}
```

Status code: 400

The server failed to process the request.

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

Status code: 401

Authentication failed.

```
{
  "error_msg" : "Request parameter %(key)s is invalid.",
  "error_code" : "IAM.0007"
}
```

Status code: 403

Access denied.

```
{
  "error_msg" : "Policy doesn't allow %(actions)s to be performed.",
  "error_code" : "IAM.0003"
}
```

Status code: 404

The requested resource cannot be found.

```
{
  "error_msg" : "Could not find %(target)s: %(target_id)s.",
  "error_code" : "IAM.0004"
}
```

Status code: 500

Internal system error.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal system error.

4.13.2.8 Deleting an Identity Provider

Function

This API is used to delete a SAML or OpenID Connect identity provider.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  DELETE /v3/OS-FEDERATION/identity_providers/{id}

- URI parameters

Parameter	Mandatory	Type	Description
id	Yes	String	ID of an identity provider.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X DELETE https://sample.domain.com/v3/OS-FEDERATION/identity_providers/ACME
```

Response Parameters

None

Status Codes

Status Code	Description
204	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.

Status Code	Description
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.3 Mapping

4.13.3.1 Querying the Mapping List

Function

This API is used to query the mapping list.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

GET /v3/OS-FEDERATION/mappings

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/OS-FEDERATION/mappings
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
mappings	Yes	Array	List of mappings.
links	Yes	Object	Mapping resource link.

- mappings parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	Mapping ID.

Parameter	Mandatory	Type	Description
rules	Yes	Object	Rule used to map federated users to local users Example rule for SAML: `"rules": [ { "local": [ { "user": { "name": "{0}" } }, { "group": { "name": "0cd5e9" } } ], "remote": [ { "type": "UserName" }, { "type": "orgPersonType", "not_any_of": [ "Contractor", "Guest" ] } ] } ]` **local**: indicates the information about a federated user in the cloud system. • **user**: indicates the name of a federated user in the cloud system. **{0}** indicates the first attribute of the user information in **remote**. • **group**: indicates the user group to which a federated user belongs in the cloud system. **remote**: indicates the information about a federated user in the IdP. This expression is a combination of assertion or ID token attributes and operators. The value of **remote** is determined based on the assertion. • If you use SAML, – **"type": "UserName"** and **"type":**

Parameter	Mandatory	Type	Description
			"orgPersonType": attributes in an IdP assertion. – **not_any_of**: The rule is not matched if any of the specified strings appear in the attribute type. The condition result is Boolean, not the argument that is passed as input. ● If you use OpenID Connect, – **"type": "iss"**, **"type": "azp"**, **"type": "aud"**, and **"type": "sub"**: attributes in an ID token.
links	Yes	Object	Mapping resource link.

- Example response

```
{
    "links": {
        "next": null,
        "previous": null,
        "self": "https://example.com/v3/OS-FEDERATION/mappings"
    },
    "mappings": [
        {
            "id": "ACME",
            "links": {
                "self": "https://example.com/v3/OS-FEDERATION/mappings/ACME"
            },
            "rules": [
                {
                    "local": [
                        {
                            "user": {
                                "name": "{0}"
                            }
                        },
                        {
                            "group": {
                                "id": "0cd5e9"
                            }
                        }
                    ],
                    "remote": [
                        {
                            "type": "UserName"
                        },
                        {
                            "type": "orgPersonType",
                            "any_one_of": [
                                "Contractor",
                                "SubContractor"
                            ]
                        }
                    ]
                }
```

```
        ]
      }
    ]
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.3.2 Querying a Mapping

Function

This API is used to query the information about a mapping.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/OS-FEDERATION/mappings/{id}

- URI parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Mapping ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token.

- Example request
  ```
  curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/OS-FEDERATION/mappings/ACME
  ```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
id	Yes	String	Mapping ID.

Parameter	Mandatory	Type	Description
rules	Yes	Object	Rule used to map federated users to local users Example rule for SAML: `"rules": [ { "local": [ { "user": { "name": "{0}" } }, { "group": { "name": "0cd5e9" } } ], "remote": [ { "type": "UserName" }, { "type": "orgPersonType", "not_any_of": [ "Contractor", "Guest" ] } ] } ]` **local**: indicates the information about a federated user in the cloud system. • **user**: indicates the name of a federated user in the cloud system. **{0}** indicates the first attribute of the user information in **remote**. • **group**: indicates the user group to which a federated user belongs in the cloud system. **remote**: indicates the information about a federated user in the IdP. This expression is a combination of assertion or ID token attributes and operators. The value of **remote** is determined based on the assertion. • If you use SAML, – **"type": "UserName"** and **"type":**

Parameter	Mandatory	Type	Description
			"orgPersonType": attributes in an IdP assertion. – **not_any_of**: The rule is not matched if any of the specified strings appear in the attribute type. The condition result is Boolean, not the argument that is passed as input. ● If you use OpenID Connect, – **"type": "iss"**, **"type": "azp"**, **"type": "aud"**, and **"type": "sub"**: attributes in an ID token.
links	Yes	Object	Mapping resource link.

- Example response

```
{
    "mapping": {
        "id": "ACME",
        "links": {
            "self": "https://example.com/v3/OS-FEDERATION/mappings/ACME"
        },
        "rules": [
            {
                "local": [
                    {
                        "user": {
                            "name": "{0}"
                        }
                    },
                    {
                        "group": {
                            "name": "0cd5e9"
                        }
                    }
                ],
                "remote": [
                    {
                        "type": "UserName"
                    },
                    {
                        "type": "orgPersonType",
                        "not_any_of": [
                            "Contractor",
                            "Guest"
                        ]
                    }
                ]
            }
        ]
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.3.3 Creating a Mapping

Function

This API is used to create a mapping.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  PUT /v3/OS-FEDERATION/mappings/{id}

- URI parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Mapping ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Parameters in the request body

Parameter	Mandatory	Type	Description
rules	Yes	Object	Rule used to map federated users to local users. Example rule for SAML: `"rules": [ { "local": [ { "user": { "name": "{0}" } }, { "group": { "name": "0cd5e9" } } ], "remote": [ { "type": "UserName" }, { "type": "orgPersonType", "not_any_of": [ "Contractor", "Guest" ] } ] } ]` **local**: indicates the information about a federated user in the cloud system. • **user**: indicates the name of a federated user in the cloud system. **{0}** indicates the first attribute of the user information in **remote**. • **group**: indicates the user group to which a federated user belongs in the cloud system. **remote**: indicates the information about a federated user in the IdP. This expression is a combination of assertion or ID token attributes and operators. The value of **remote** is determined based on the assertion. • If you use SAML,

Parameter	Mandatory	Type	Description
			– **"type": "UserName"** and **"type": "orgPersonType"**: attributes in an IdP assertion. – **not_any_of**: The rule is not matched if any of the specified strings appear in the attribute type. The condition result is Boolean, not the argument that is passed as input. ● If you use OpenID Connect, – **"type": "iss"**, **"type": "azp"**, **"type": "aud"**, and **"type": "sub"**: attributes in an ID token.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X PUT -d'{"mapping":{"rules":[{"local":[{"user":{"name":"{0}"}},{"group":{"name":"0cd5e9"}}],"remote":[{"type":"UserName"},{"type":"orgPersonType","not_any_of":["Contractor","Guest"]}]}]}}' https://sample.domain.com/v3/OS-FEDERATION/mappings/ACME
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
id	Yes	String	Mapping ID.

Parameter	Mandatory	Type	Description
rules	Yes	Object	Rule used to map federated users to local users. Example rule for SAML: `"rules": [ { "local": [ { "user": { "name": "{0}" } }, { "group": { "name": "0cd5e9" } } ], "remote": [ { "type": "UserName" }, { "type": "orgPersonType", "not_any_of": [ "Contractor", "Guest" ] } ] } ]` **local**: indicates the information about a federated user in the cloud system. ● **user**: indicates the name of a federated user in the cloud system. **{0}** indicates the first attribute of the user information in **remote**. ● **group**: indicates the user group to which a federated user belongs in the cloud system. **remote**: indicates the information about a federated user in the IdP. This expression is a combination of assertion or ID token attributes and operators. The value of **remote** is determined based on the assertion. ● If you use SAML, – **"type": "UserName"** and **"type": "orgPersonType"**:

Parameter	Mandatory	Type	Description
			attributes in an IdP assertion. – **not_any_of**: The rule is not matched if any of the specified strings appear in the attribute type. The condition result is Boolean, not the argument that is passed as input. ● If you use OpenID Connect, – **"type": "iss"**, **"type": "azp"**, **"type": "aud"**, and **"type": "sub"**: attributes in an ID token.
links	Yes	Object	Mapping resource link.

- Example response

```
{
    "mapping": {
        "id": "ACME",
        "links": {
            "self": "https://example.com/v3/OS-FEDERATION/mappings/ACME"
        },
        "rules": [
            {
                "local": [
                    {
                        "user": {
                            "name": "{0}"
                        }
                    },
                    {
                        "group": {
                            "name": "0cd5e9"
                        }
                    }
                ],
                "remote": [
                    {
                        "type": "UserName"
                    },
                    {
                        "type": "orgPersonType",
                        "not_any_of": [
                            "Contractor",
                            "Guest"
                        ]
                    }
                ]
            }
        ]
    }
}
```

Status Codes

Status Code	Description
201	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
409	A resource conflict occurs.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.3.4 Updating a Mapping

Function

This API is used to update the information about a mapping.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  PATCH /v3/OS-FEDERATION/mappings/{id}

- URI parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Mapping ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Parameters in the request body

Parameter	Mandatory	Type	Description
rules	Yes	Object	Rule used to map federated users to local users. Example rule for SAML: `"rules": [ { "local": [ { "user": { "name": "{0}" } }, { "group": { "name": "0cd5e9" } } ], "remote": [ { "type": "UserName" }, { "type": "orgPersonType", "not_any_of": [ "Contractor", "Guest" ] } ] } ]` **local**: indicates the information about a federated user in the cloud system. • **user**: indicates the name of a federated user in the cloud system. **{0}** indicates the first attribute of the user information in **remote**. • **group**: indicates the user group to which a federated user belongs in the cloud system. **remote**: indicates the information about a federated user in the IdP. This expression is a combination of assertion or ID token attributes and operators. The value of **remote** is determined based on the assertion. • If you use SAML,

Parameter	Mandatory	Type	Description
			– **"type": "UserName"** and **"type": "orgPersonType"**: attributes in an IdP assertion. – **not_any_of**: The rule is not matched if any of the specified strings appear in the attribute type. The condition result is Boolean, not the argument that is passed as input. ● If you use OpenID Connect, – **"type": "iss"**, **"type": "azp"**, **"type": "aud"**, and **"type": "sub"**: attributes in an ID token.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X PATCH -d'{"mapping":{"rules":[{"local":[{"user":{"name":"{0}"}},{"group":{"name":"0cd5e9"}}],"remote":[{"type":"UserName"},{"type":"orgPersonType","any_one_of":["Contractor","SubContractor"]}]}]}}' https://sample.domain.com/v3/OS-FEDERATION/mappings/ACME
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
id	Yes	String	Mapping ID.

Parameter	Mandatory	Type	Description
rules	Yes	Object	Rule used to map federated users to local users. Example rule for SAML: `"rules": [ { "local": [ { "user": { "name": "{0}" } }, { "group": { "name": "0cd5e9" } } ], "remote": [ { "type": "UserName" }, { "type": "orgPersonType", "not_any_of": [ "Contractor", "Guest" ] } ] } ]` **local**: indicates the information about a federated user in the cloud system. • **user**: indicates the name of a federated user in the cloud system. **{0}** indicates the first attribute of the user information in **remote**. • **group**: indicates the user group to which a federated user belongs in the cloud system. **remote**: indicates the information about a federated user in the IdP. This expression is a combination of assertion or ID token attributes and operators. The value of **remote** is determined based on the assertion. • If you use SAML,

Parameter	Mandatory	Type	Description
			– **"type": "UserName"** and **"type": "orgPersonType"**: attributes in an IdP assertion. – **not_any_of**: The rule is not matched if any of the specified strings appear in the attribute type. The condition result is Boolean, not the argument that is passed as input. ● If you use OpenID Connect, – **"type": "iss"**, **"type": "azp"**, **"type": "aud"**, and **"type": "sub"**: attributes in an ID token.
links	Yes	Object	Mapping resource link.

- Example response

```
{
    "mapping": {
        "id": "ACME",
        "links": {
            "self": "https://example.com/v3/OS-FEDERATION/mappings/ACME"
        },
        "rules": [
            {
                "local": [
                    {
                        "user": {
                            "name": "{0}"
                        }
                    },
                    {
                        "group": {
                            "name": "0cd5e9"
                        }
                    }
                ],
                "remote": [
                    {
                        "type": "UserName"
                    },
                    {
                        "type": "orgPersonType",
                        "any_one_of": [
                            "Contractor",
                            "SubContractor"
                        ]
                    }
                ]
            }
        ]
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
409	A resource conflict occurs.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.3.5 Deleting a Mapping

Function

This API is used to delete the information about a mapping.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  DELETE /v3/OS-FEDERATION/mappings/{id}

- URI parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Mapping ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request
  curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X DELETE https://sample.domain.com/v3/OS-FEDERATION/mappings/ACME

Response Parameters

None

Status Codes

Status Code	Description
204	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.4 Protocol

4.13.4.1 Querying the Protocol List

Function

This API is used to query the protocol list.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/OS-FEDERATION/identity_providers/{idp_id}/protocols

- URI parameters

Parameter	Mandatory	Type	Description
idp_id	Yes	String	ID of an identity provider.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/OS-FEDERATION/identity_providers/ACME/protocols/
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
protocols	Yes	List of objects	List of protocols.
links	Yes	Object	Protocol resource link.

- protocols parameter description

Parameter	Mandatory	Type	Description
id	Yes	String	ID of a protocol. The value of this field can be **saml** or **oidc**.
mapping_id	Yes	String	Mapping ID.
links	Yes	Object	Protocol resource link.

- Example response

```
{
    "links": {
        "next": null,
        "previous": null,
        "self": "https://example.com/v3/OS-FEDERATION/identity_providers/ACME/protocols"
    },
    "protocols": [
        {
            "id": "saml",
            "links": {
                "identity_provider": "https://example.com/v3/OS-FEDERATION/identity_providers/ACME",
                "self": "https://example.com/v3/OS-FEDERATION/identity_providers/ACME/protocols/saml"
            },
            "mapping_id": "ACME"
        }
    ]
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.4.2 Querying a Protocol

Function

This API is used to query the information about a protocol.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/OS-FEDERATION/identity_providers/{idp_id}/protocols/{protocol_id}

- URI parameters

Parameter	Mandatory	Type	Description
idp_id	Yes	String	ID of an identity provider.
protocol _id	Yes	String	ID of a protocol. The value of this field can be **saml** or **oidc**.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/OS-FEDERATION/identity_providers/ACME/protocols/saml
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
id	Yes	String	ID of a protocol. The value of this field can be **saml** or **oidc**.
mapping_id	Yes	String	Mapping ID.
links	Yes	Object	Protocol resource link.

- Example response

```
{
    "protocol": {
        "id": "saml",
        "links": {
            "identity_provider": "https://example.com/v3/OS-FEDERATION/identity_providers/ACME",
            "self": "https://example.com/v3/OS-FEDERATION/identity_providers/ACME/protocols/saml"
        },
        "mapping_id": "ACME"
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.4.3 Registering a Protocol

Function

This API is used to register a protocol, that is, associate a rule with an identity provider.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  PUT /v3/OS-FEDERATION/identity_providers/{idp_id}/protocols/{protocol_id}

- URI parameters

Parameter	Mandatory	Type	Description
idp_id	Yes	String	ID of an identity provider.

Parameter	Mandatory	Type	Description
protocol _id	Yes	String	ID of a protocol. The value of this field can be **saml** or **oidc**.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Parameters in the request body

Parameter	Mandatory	Type	Description
mapping_id	Yes	String	Mapping ID.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X PUT -d'{"protocol":{"mapping_id":"ACME"}}' https://sample.domain.com/v3/OS-FEDERATION/identity_providers/ACME/protocols/saml
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
id	Yes	String	ID of a protocol. The value of this field can be **saml** or **oidc**.
mapping_id	Yes	String	Mapping ID.
links	Yes	Object	Protocol resource link.

- Example response

```
{
    "protocol": {
        "id": "saml",
        "links": {
            "identity_provider": "https://example.com/v3/OS-FEDERATION/identity_providers/ACME",
            "self": "https://example.com/v3/OS-FEDERATION/identity_providers/ACME/protocols/saml"
        },
        "mapping_id": "ACME"
    }
}
```

Status Codes

Status Code	Description
201	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.4.4 Updating a Protocol

Function

This API is used to update the information about a protocol.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  PATCH /v3/OS-FEDERATION/identity_providers/{idp_id}/protocols/{protocol_id}

- URI parameters

Parameter	Mandatory	Type	Description
idp_id	Yes	String	ID of an identity provider.
protocol _id	Yes	String	ID of a protocol. The value of this field can be **saml** or **oidc**.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Parameters in the request body

Parameter	Mandatory	Type	Description
mapping_id	Yes	String	Mapping ID.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X PATCH -d'{"protocol":{"mapping_id":"ACME"}}' https://sample.domain.com/v3/OS-FEDERATION/identity_providers/ACME/protocols/saml
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
id	Yes	String	ID of a protocol. The value of this field can be **saml** or **oidc**.
mapping_id	Yes	String	Mapping ID.
links	Yes	Object	Protocol resource link.

- Example response

```
{
    "protocol": {
        "id": "saml",
        "links": {
            "identity_provider": "https://example.com/v3/OS-FEDERATION/identity_providers/ACME",
            "self": "https://example.com/v3/OS-FEDERATION/identity_providers/ACME/protocols/saml"
        },
        "mapping_id": "ACME"
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.

Status Code	Description
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
409	A resource conflict occurs.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.4.5 Deleting a Protocol

Function

This API is used to delete the information about a protocol.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  DELETE /v3/OS-FEDERATION/identity_providers/{idp_id}/protocols/{protocol_id}

- URI parameters

Parameter	Mandatory	Type	Description
idp_id	Yes	String	ID of an identity provider.
protocol _id	Yes	String	ID of a protocol. The value of this field can be **saml** or **oidc**.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request
  curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X DELETE https://sample.domain.com/v3/OS-FEDERATION/identity_providers/ACME/protocols/saml

Response Parameters

None

Status Codes

Status Code	Description
204	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.5 Metadata

4.13.5.1 Querying a Metadata File

Function

This API is used to query the content of the metadata file imported by an identity provider to the IAM system.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3-ext/OS-FEDERATION/identity_providers/{idp_id}/protocols/{protocol_id}/metadata

- URI parameters

Parameter	Mandatory	Type	Description
idp_id	Yes	String	ID of an identity provider.
protocol _id	Yes	String	ID of a protocol.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3-ext/OS-FEDERATION/identity_providers/ACME/protocols/saml/metadata
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
id	Yes	String	ID of a metadata file.
idp_id	Yes	String	ID of an identity provider.
entity_id	Yes	String	**entityID** field in the metadata file.
protocol_id	Yes	String	ID of a protocol.
domain_id	Yes	String	ID of the domain that a user belongs to.
xaccount_type	Yes	String	Domain source. The value is left empty by default.

Parameter	Mandatory	Type	Description
update_time	Yes	String	Time when a metadata file is imported or updated.
data	Yes	String	Content of a metadata file.

- Example response

```
{
"id": "40c174f35ff94e31b8257ad4991bce8b",
"idp_id": "ACME",
"entity_id": "https://idp.test.com/idp/shibboleth",
"protocol_id": "saml",
"domain_id": "ed7a77d365304f458f7d0a7909c6d889",
"xaccount_type": "",
"update_time": "2016-10-26T09:26:23.000000",
"data": "$data"}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
500	Internal server error.

4.13.5.2 Querying the Metadata File of Keystone

Function

This API is used to query the metadata file of the keystone.

This API can be called using both the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com) and region-specific domain names.

URI

GET /v3-ext/auth/OS-FEDERATION/SSO/metadata

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
unsigned	No	Boolean	Whether to sign metadata according to SAML 2.0 specifications. The default value of this parameter is **false**.

- Example request
  GET /v3-ext/auth/OS-FEDERATION/SSO/metadata

Response Parameters

Example response

```
<md:EntityDescriptor xmlns:md="urn:oasis:names:tc:SAML:2.0:metadata"
ID="43ebac773925f6849b196a3c803baba5" entityID="https://www.example.com">
<ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
<ds:SignedInfo>
<ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
<ds:SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"/>
<ds:Reference URI="#43ebac773925f6849b196a3c803baba5">
<ds:Transforms>
<ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
<ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
</ds:Transforms>
<ds:DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1"/>
<ds:DigestValue>yuQJc6OI3xilt6X4cOEUBnVV2Vs=</ds:DigestValue>
</ds:Reference>
</ds:SignedInfo>
<ds:SignatureValue>...</ds:SignatureValue>
<ds:KeyInfo>
<ds:X509Data>
<ds:X509Certificate>...</ds:X509Certificate>
</ds:X509Data>
</ds:KeyInfo>
</ds:Signature>
<md:SPSSODescriptor AuthnRequestsSigned="true" WantAssertionsSigned="true"
protocolSupportEnumeration="urn:oasis:names:tc:SAML:2.0:protocol">
<md:KeyDescriptor use="signing">
<ds:KeyInfo xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
<ds:X509Data>
<ds:X509Certificate>...</ds:X509Certificate>
</ds:X509Data>
</ds:KeyInfo>
</md:KeyDescriptor>
<md:KeyDescriptor use="encryption">
<ds:KeyInfo xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
<ds:X509Data>
<ds:X509Certificate>...</ds:X509Certificate>
</ds:X509Data>
</ds:KeyInfo>
</md:KeyDescriptor>
<md:NameIDFormat xmlns:md="urn:oasis:names:tc:SAML:2.0:metadata">
urn:oasis:names:tc:SAML:2.0:nameid-format:transient
</md:NameIDFormat>
<md:AssertionConsumerService xmlns:md="urn:oasis:names:tc:SAML:2.0:metadata"
Binding="urn:oasis:names:tc:SAML:2.0:bindings:HTTP-POST" Location="https://www.example.com/v3-ext/
auth/OS-FEDERATION/SSO/SAML2/POST" index="0" isDefault="true"/>
<md:AssertionConsumerService xmlns:md="urn:oasis:names:tc:SAML:2.0:metadata"
Binding="urn:oasis:names:tc:SAML:2.0:bindings:PAOS" Location="https://www.example.com/v3-ext/auth/OS-
FEDERATION/SSO/SAML2/ECP" index="1"/>
</md:SPSSODescriptor>
</md:EntityDescriptor>
```

Status Code

Status Code	Description
200	The request is successful.
500	Internal server error.
503	Service unavailable.

4.13.5.3 Importing a Metadata File

Function

Before using the federated identity authentication function, a metadata file must be imported to the IAM system. This API is used to import a metadata file of a domain.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  POST /v3-ext/OS-FEDERATION/identity_providers/{idp_id}/protocols/{protocol_id}/metadata

- URI parameters

Parameter	Mandatory	Type	Description
idp_id	Yes	String	Identity provider ID.
protocol _id	Yes	String	Protocol ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token with the **Security Administrator** permission.

- Parameters in the request body

Parameter	Mandatory	Type	Description
xaccount_type	Yes	String	Source of a domain. This field is left blank by default.
metadata	Yes	String	Content of the metadata file on the IdP server.
domain_id	Yes	String	ID of the domain that a user belongs to.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X POST -d '{"xaccount_type":"","domain_id":"ed7a77d365304f458f7d0a7909c6d889","metadata":"$metadataContent"}' https://sample.domain.com/v3-ext/OS-FEDERATION/identity_providers/ACME/protocols/saml/metadata
```

Response Parameters

Example response

```
{ "message": "Import metadata successful"}
```

Status Codes

Status Code	Description
201	The import is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
500	Internal server error.

4.13.6 Token

4.13.6.1 Obtaining an Unscoped Token (SP Initiated)

Function

This API is used to obtain an unscoped token in SP-initiated federated identity authentication mode.

An unscoped token cannot be used for authentication. If a federated user needs to use a token for authentication, obtain the scoped token based on section **Obtaining a Scoped Token**.

This API can be called using both the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com) and region-specific domain names.

URI

- URI format

  GET /v3/OS-FEDERATION/identity_providers/{idp_id}/protocols/{protocol_id}/auth

- URI parameters

Parameter	Mandatory	Type	Description
idp_id	Yes	String	ID of an identity provider.
protocol_id	Yes	String	ID of a protocol.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Accept	No	String	• This parameter is not required when a token is obtained in the WebSSO mode. • When you obtain a token using the Enhanced Client Proxy (ECP), the value of this parameter is as follows: application/vnd.paos+xml
PAOS	No	String	• This parameter is not required when a token is obtained in the WebSSO mode. • When you obtain a token using the ECP, the value of this parameter is as follows: urn:oasis:names:tc:SAML:2.0:profiles:SSO:ecp

NOTE

1. This API can be used to obtain tokens through WebSSO and ECP. Different request headers are used to determine the method of obtaining a token. For details, see the parameter description of Request Header.
2. You are not advised to obtain a token by directly calling this API. You are advised to obtain a token using OpenStackClient.

- Example request
  GET /v3/OS-FEDERATION/identity_providers/idptest/protocols/saml/auth

Response Parameters

- Parameters in the response body

Response Item	Parameter	Type	Description
X-Subject-Token	header	String	Signed unscoped token.
token	body	Object	Information of the unscoped token obtained in federated identity authentication mode, including methods and user information.

- Example response

```
{
    "token": {
        "issued_at": "2017-05-23T06:54:51.763000Z",
        "expires_at": "2017-05-24T06:54:51.763000Z",
        "methods": [
            "mapped"
        ],
        "user": {
            "domain": {
                "id": "e31ac82d778b4d128cb6fed37fd72cdb",
                "name": "exampledomain"
            },
            "id": "RMQTgtjjSNGDcKy7oUmI3AZg7GgsWG0Z",
            "name": "exampleuser",
            "OS-FEDERATION": {
                "identity_provider": {
                    "id": "exampleuser"
                },
                "protocol": {
                    "id": "saml"
                },
                "groups": [
                    {
                        "id": "b40189e26ea44f959877621b4b298db5"
                    }
                ]
            }
        }
    }
}
```

Status Code

Status Code	Description
200	The request is successful. You need to further obtain user information.
201	The request is successful, and a token is returned.

Status Code	Description
302	The system switches to the identity provider authentication page if the request does not carry user information of the identity provider.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.6.2 Obtaining an Unscoped Token (IdP Initiated)

Function

This API is used to obtain an unscoped token in IdP-initiated federated identity authentication mode.

An unscoped token cannot be used for authentication. If a federated user needs to use a token for authentication, obtain the scoped token based on section **Obtaining a Scoped Token**.

This API can be called using both the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com) and region-specific domain names.

URI

POST /v3.0/OS-FEDERATION/tokens

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
X-Idp-Id	Yes	String	ID of an identity provider.

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	The client must transfer the SAMLResponse parameter to the server by using the form data submitted by the browser. Therefore, the value of this parameter must be: application/x-www-form-urlencoded

- Parameters in the request body

Parameter	Mandatory	Type	Description
SAMLResponse	Yes	String	Response body returned when IdP authentication is successful.

NOTE

This API can only be called on the CLI side. The client needs to obtain SAMLResponse in IdP-initiated federated identity authentication mode and obtain an unscoped token by using the form data submitted by the browser.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'x-Idp-Id:test_local_idp' -H 'Content-Type:application/x-www-form-urlencoded' -X POST -d 'SAMLResponse=PD94bWwgdmVyc2lvbj0iMS4wIiBl4WXZ1OGNmYmRzWk1ZeWlLKy96anpEbm1rT2FrVVBrUmlSWEpLYUt5NzJtUmtoRFBCNjgwVQpzalU3R2hKNHE4ZG48L3hlbmM6Q2lwaGVyVmFsdWU%2BPC94ZW5jOkNpcGhlckRhdGE%2BPC94ZW5jOkVuY3J5cHRlZERhdGE%2BPC9zYW1sMjpFbmNyeXB0ZWRBc3NlcnRpb24%2BPC9zYW1sMnA6UmVzcG9uc2U%2B' https://sample.domain.com/v3.0/OS-FEDERATION/tokens
```

Response Parameters

- Parameters in the response body

Response Item	Parameter	Type	Description
X-Subject-Token	header	String	Signed unscoped token.
token	body	Object	Information of the unscoped token obtained in federated identity authentication mode, including methods and user information.

- Example response

```
{
    "token": {
```

```
        "expires_at": "2018-03-13T03:00:01.168000Z",
        "methods": ["mapped"],
        "issued_at": "2018-03-12T03:00:01.168000Z",
        "user": {
            "OS-FEDERATION": {
                "identity_provider": {
                    "id": "test_local_idp"
                },
                "protocol": {
                    "id": "saml"
                },
                "groups": [{
                    "name": "admin",
                    "id": "45a8c8f1894444e9a016af065e152b91"
                }]
            },
            "domain": {
                "name": "hansheng",
                "id": "c0e20cc993a24ad4aa3251661ef37c87"
            },
            "name": "FederationUser",
            "id": "QNSzD0bycqUXE4hiRNfyFcWfoOs8z6gT"
        }
    }
}
```


Status Code

Status Code	Description
201	The request is successful, and a token is returned.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.6.3 Obtaining a Scoped Token

Function

This API is used to obtain a scoped token through federated identity authentication.

This API can be called using both the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com) and region-specific domain names.

URI

POST /v3/auth/tokens

Request Parameters

Table 4-331 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	No	String	Fill **application/json;charset=utf8** in this field.

Table 4-332 Parameters in the request body

Parameter	Mandatory	Type	Description
auth	Yes	Object	Authentication information.

Table 4-333 auth

Parameter	Mandatory	Type	Description
identity	Yes	Object	Authentication parameters.
scope	Yes	Object	Application scope of the token. The value can be **project** or **domain**.

Table 4-334 auth.identity

Parameter	Mandatory	Type	Description
methods	Yes	Array of strings	Authentication method. The value of this field is **token**.
token	Yes	Object	Unscoped token information.

Table 4-335 auth.identity.token

Parameter	Mandatory	Type	Description
id	Yes	String	Unscoped token ID.

Table 4-336 auth.scope

Parameter	Mandatory	Type	Description
domain	No	Object	If this field is set to **domain**, the token can be used to access resources in all projects under the account of a specified ID or name.
project	No	Object	If this field is set to **project**, the token can only be used to access resources in the project of a specified ID or name.

Table 4-337 auth.scope.domain

Parameter	Mandatory	Type	Description
id	No	String	Domain ID. Either **id** or **name** must be specified.
name	No	String	Domain name. Either **id** or **name** must be specified.

Table 4-338 auth.scope.project

Parameter	Mandatory	Type	Description
domain	No	Object	Domain information. This parameter is mandatory if the **name** parameter is set.
id	No	String	Project ID. Either **id** or **name** must be specified.
name	No	String	Project name. Either **id** or **name** must be specified.

Table 4-339 auth.scope.project.domain

Parameter	Mandatory	Type	Description
id	No	string	Domain ID. Either **id** or **name** must be specified.
name	No	string	Domain name. Either **id** or **name** must be specified.

Response Parameters

Table 4-340 Parameters in the response header

Parameter	Type	Description
X-Subject-Token	string	Signed scoped token.

Table 4-341 Parameters in the response body

Parameter	Type	Description
token	Object	Details of the scoped token.

Table 4-342 token

Parameter	Type	Description
methods	Array of strings	Method for obtaining the token.
expires_at	String	Time when the token will expire.
catalog	Array of objects	Catalog information.
domain	Object	Domain information of the IAM user who requests for the token. This parameter is returned only when the **scope** parameter in the request body has been set to **domain**.
project	Object	Project information of the user. This parameter is returned only when the **scope** parameter in the request body has been set to **project**.

Parameter	Type	Description
roles	Array of objects	Permissions information of the token.
user	Object	Information about the user who requests for the token.
issued_at	String	Time when the token was issued.

Table 4-343 token.catalog

Parameter	Type	Description
type	String	Type of the service to which the API belongs.
id	String	Service ID.
name	String	Service name.
endpoints	Array of objects	Endpoint information.

Table 4-344 token.catalog.endpoints

Parameter	Type	Description
url	String	Endpoint URL.
region	String	Region to which the endpoint belongs.
region_id	String	Region ID.
interface	String	Visibility of the API. **public** indicates that the API is available for public access.
id	String	Endpoint ID.

Table 4-345 token.domain

Parameter	Type	Description
name	String	Domain name.
id	String	Domain ID.

Table 4-346 token.project

Parameter	Type	Description
name	String	Project name.
id	String	Project ID.
domain	Object	Domain information of the project.

Table 4-347 token.project.domain

Parameter	Type	Description
name	String	Domain name.
id	String	Domain ID.

Table 4-348 token.roles

Parameter	Type	Description
name	String	Permission name.
id	String	Permission ID. The default value is **0**, which does not correspond to any permission.

Table 4-349 token.user

Parameter	Type	Description
domain	Object	Information about the domain used to create the user.
OS-FEDERATION	Object	Federated identity authentication information.
id	String	User ID.
name	String	Username.
password_expires_at	String	UTC time when the password will expire. If this parameter is empty, it indicates that the password has unlimited validity.

Table 4-350 token.user.domain

Parameter	Type	Description
name	String	Domain name.
id	String	Domain ID.

Table 4-351 token.user.OS-FEDERATION

Parameter	Type	Description
groups	Array of objects	User group information.
identity_provider	Object	Identity provider information.
protocol	Object	Protocol information.

Table 4-352 token.user.OS-FEDERATION.groups

Parameter	Type	Description
id	String	User group ID.
name	String	User group name.

Table 4-353 token.user.OS-FEDERATION.identity_provider

Parameter	Type	Description
id	String	Identity provider ID.

Table 4-354 token.user.OS-FEDERATION.protocol

Parameter	Type	Description
id	String	Protocol ID.

Example Request

```
POST https://sample.domain.com/v3/auth/tokens
{
    "auth": {
        "identity": {
            "methods": [
                "token"
            ],
```

```
        "token": {
            "id": "MIIatAYJKoZIhvcNAQcCoIIapTCCGqECAQExDTALB..."
        }
    },
    "scope": {
        "domain": {
            "id": "063bb260a480cecc0f36c0086bb6c..."
        }
    }
  }
}
```

Example Response

Status code: 201

The scoped token is obtained successfully.

```
Parameters in the response header
X-Subject-Token:MIIatAYJKoZIhvcNAQcCoIIapTCCGqECAQExDTALB...
Parameters in the response body
{
  "token": {
    "expires_at": "2020-02-13T14:21:34.042000Z",
    "methods": [
        "token"
    ],
    "catalog": [
        {
            "endpoints": [
                {
                    "id": "d2983f677ce14f1e81cbb6a9345a1...",
                    "interface": "public",
                    "region": "*",
                    "region_id": "*",
                    "url": "https://sample.domain.com/v3"
                }
            ],
            "id": "fd631b3426cb40f0919091d5861d8...",
            "name": "keystone",
            "type": "identity"
        }
    ],
    "domain": {
        "id": "06aa2260a480cecc0f36c0086bb6cfe0",
        "name": "IAMDomain"
    },
    "roles": [
        {
            "id": "0",
            "name": "te_admin"
        },
        {
            "id": "0",
            "name": "secu_admin"
        }
    ],
    "issued_at": "2020-02-12T14:21:34.042000Z",
    "user": {
        "OS-FEDERATION": {
            "groups": [
                {
                    "id": "06aa2260bb00cecc3f3ac0084a74038f",
                    "name": "admin"
                }
            ],
            "identity_provider": {
                "id": "ACME"
            },
```

```
            "protocol": {
                "id": "saml"
            }
        },
        "domain": {
            "id": "06aa2260a480cecc0f36c0086bb6cfe0",
            "name": "IAMDomain"
        },
        "id": "LdQTDSC7zmJVIic3yaCbLBXDxPAdDxLg",
        "name": "FederationUser",
        "password_expires_at": ""
    }
  }
}
```

Status Codes

Status Code	Description
201	The scoped token is obtained successfully.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal server error.
503	Service unavailable.

Error Codes

None

4.13.6.4 Obtaining a Token with an OpenID Connect ID Token

Function

This API is used to obtain a federated identity authentication token using an OpenID Connect ID token.

URI

POST /v3.0/OS-AUTH/id-token/tokens

Request Parameters

Table 4-355 Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Idp-Id	Yes	String	Identity provider ID.

Table 4-356 Parameters in the request body

Parameter	Mandatory	Type	Description
auth	Yes	object	Details about the **auth** request parameter.

Table 4-357 GetIdTokenAuthParams

Parameter	Mandatory	Type	Description
id_token	Yes	object	Details about an ID token.
scope	No	object	Permission scope of the token you want to obtain. An unscoped token will be obtained if this parameter is not specified.

Table 4-358 GetIdTokenIdTokenBody

Parameter	Mandatory	Type	Description
id	Yes	String	ID token, which is constructed by the enterprise IdP to carry the identity information of federated users. For details about how to obtain an ID token, see the enterprise IdP documentation.

Table 4-359 GetIdTokenIdScopeBody

Parameter	Mandatory	Type	Description
domain	No	object	Domain scope details. Specify a domain or a project.
project	No	object	Project scope details. Specify a project or a domain.

Table 4-360 GetIdTokenScopeDomainOrProjectBody

Parameter	Mandatory	Type	Description
id	No	String	Domain ID or project ID. Specify either this parameter or the **name** parameter.
name	No	String	Domain name or project name. Specify either this parameter or the **id** parameter.

Response Parameters

Status code: 201

Table 4-361 Parameters in the response header

Parameter	Type	Description
X-Subject-Token	String	Signed token.

Table 4-362 Parameters in the response body

Parameter	Type	Description
token	object	Details about the obtained token.

Table 4-363 ScopedTokenInfo

Parameter	Type	Description
expires_at	String	Time when the token will expire.
methods	Array of strings	Method for obtaining the token. For federated users, the default value of this parameter is **mapped**.
issued_at	String	Time when the token was issued.
user	object	User details.
domain	object	Domain details.
project	object	Project details.
role	Array	Policy details.
catalog	object	Catalog details.

Table 4-364 FederationUserBody

Parameter	Type	Description
OS-FEDERATION	object	Federated user details.

Table 4-365 OSFederationInfo

Parameter	Type	Description
identify_provider	object	Identity provider details.
protocol	object	Protocol details.
groups	Array	User group details.
domain	object	Domain details.
id	String	User ID.
name	String	Username.

Table 4-366 IdpIdInfo

Parameter	Type	Description
id	String	Identity provider ID.

Table 4-367 ProtocolIdInfo

Parameter	Type	Description
id	String	Protocol ID.

Table 4-368 DomainInfo

Parameter	Type	Description
id	String	Domain ID.
name	String	Domain name.

Table 4-369 ProjectInfo

Parameter	Type	Description
domain	object	Domain details.
id	String	Project ID.
name	String	Project name.

Table 4-370 CatalogInfo

Parameter	Type	Description
id	String	Endpoint ID.
interface	String	Visibility of the API. **public** indicates that the API is available for public access.
region	String	Region to which the endpoint belongs.
region_id	String	Region ID.
url	String	Endpoint URL.

Example Request

- Request for obtaining a scoped token for a specific project

```
POST /v3.0/OS-AUTH/id-token/tokens

{
  "auth" : {
    "id_token" : {
      "id" : "eyJhbGciOiJSU..."
    },
    "scope" : {
      "project" : {
        "id" : "46419baef4324...",
```

```
        "name" : "project name"
      }
    }
  }
}
```

- Request for obtaining a scoped token for a specific domain

```
POST /v3.0/OS-AUTH/id-token/tokens

{
  "auth" : {
    "id_token" : {
      "id" : "eyJhbGciOiJSU..."
    },
    "scope" : {
      "domain" : {
        "id" : "063bb260a480...",
        "name" : "IAMDomain"
      }
    }
  }
}
```

- Request for obtaining an unscoped token

```
POST /v3.0/OS-AUTH/id-token/tokens

{
  "auth" : {
    "id_token" : {
      "id" : "eyJhbGciOiJSU..."
    }
  }
}
```

Example Response

Status code: 201

The token is obtained successfully.

```
{
  "token" : {
    "expires_at" : "2018-03-13T03:00:01.168000Z",
    "methods" : [ "mapped" ],
    "issued_at" : "2018-03-12T03:00:01.168000Z",
    "user" : {
      "OS-FEDERATION" : {
        "identity_provider" : {
          "id" : "idptest"
        },
        "protocol" : {
          "id" : "oidc"
        },
        "groups" : [ {
          "name" : "admin",
          "id" : "45a8c8f..."
        } ]
      },
      "domain" : {
        "id" : "063bb260a480...",
        "name" : "IAMDomain"
      },
      "name" : "FederationUser",
      "id" : "suvmgvUZc4PaCOEc..."
    }
  }
}
```

Status code: 400

The server failed to process the request.

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

Status code: 401

Authentication failed.

```
{
  "error_msg" : "The request you have made requires authentication.",
  "error_code" : "IAM.0001"
}
```

Status code: 403

Access denied.

```
{
  "error_msg" : "Policy doesn't allow %(actions)s to be performed.",
  "error_code" : "IAM.0003"
}
```

Status code: 404

The requested resource cannot be found.

```
{
  "error_msg" : "Could not find %(target)s: %(target_id)s.",
  "error_code" : "IAM.0004"
}
```

Status code: 500

Internal system error.

```
{
  "error_msg" : "An unexpected error prevented the server from fulfilling your request.",
  "error_code" : "IAM.0006"
}
```

Status Codes

Status Code	Description
201	The token is obtained successfully.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
500	Internal system error.

4.13.6.5 Obtaining an Unscoped Token with an OpenID Connect ID Token

Function

This API is used to obtain an unscoped token using an OpenID Connect ID token.

URI

POST /v3/OS-FEDERATION/identity_providers/{idp_id}/protocols/{protocol_id}/auth

Table 4-371 URI parameters

Parameter	Mandatory	Type	Description
idp_id	Yes	String	Identity provider ID.
protocol_id	Yes	String	Protocol ID.

Request Parameters

Table 4-372 Parameters in the request header

Parameter	Mandatory	Type	Description
Authorization	Yes	String	ID token of the identity provider. The format is **Bearer** *{ID Token}*.

Response Parameters

Status code: 201

Table 4-373 Parameters in the response header

Parameter	Type	Description
X-Subject-Token	String	Signed token.

Table 4-374 Parameters in the response body

Parameter	Type	Description
token	object	Details about the obtained token.

Table 4-375 UnscopedTokenInfo

Parameter	Type	Description
expires_at	String	Time when the token will expire.
methods	Array of strings	Token obtaining method. The default value for federated authentication is **mapped**.
issued_at	String	Time when the token was issued.
user	object	User details.

Table 4-376 FederationUserBody

Parameter	Type	Description
OS-FEDERATION	object	Federated user details.

Table 4-377 OSFederationInfo

Parameter	Type	Description
identify_provider	object	Identity provider details.
protocol	object	Protocol details.
groups	Array	User group details.
domain	object	Domain details.
id	String	User ID.
name	String	Username.

Table 4-378 IdpIdInfo

Parameter	Type	Description
id	String	Identity provider ID.

Table 4-379 ProtocolIdInfo

Parameter	Type	Description
id	String	Protocol ID.

Table 4-380 DomainInfo

Parameter	Type	Description
id	String	Domain ID.
name	String	Domain name.

Example Request

```
POST https://sample.domain.com/v3/OS-FEDERATION/identity_providers/{idp_id}/protocols/{protocol_id}/auth
```

Example Response

Status code: 201

The request is successful.

```
{
  "token" : {
    "expires_at" : "2018-03-13T03:00:01.168000Z",
    "methods" : [ "mapped" ],
    "issued_at" : "2018-03-12T03:00:01.168000Z",
    "user" : {
      "OS-FEDERATION" : {
        "identity_provider" : {
          "id" : "idptest"
        },
        "protocol" : {
          "id" : "oidc"
        },
        "groups" : [ {
          "name" : "admin",
          "id" : "45a8c8f..."
        } ]
      },
      "domain" : {
        "id" : "063bb260a480...",
        "name" : "IAMDomain"
      },
      "name" : "FederationUser",
      "id" : "suvmgvUZc4PaCOEc..."
    }
  }
}
```

Status code: 400

The server failed to process the request.

```
{
  "error" : {
    "code" : 400,
    "message" : "Request parameter 'idp id' is invalid.",
```

```
    "title" : "Bad Request"
  }
}
```

Status code: 401

Authentication failed.

```
{
  "error" : {
    "code" : 401,
    "message" : "The request you have made requires authentication.",
    "title" : "Unauthorized"
  }
}
```

Status code: 403

Access denied.

```
{
  "error" : {
    "code" : 403,
    "message" : "You are not authorized to perform the requested action.",
    "title" : "Forbidden"
  }
}
```

Status code: 404

The requested resource cannot be found.

```
{
  "error" : {
    "code" : 404,
    "message" : "Could not find %(target)s: %(target_id)s.",
    "title" : "Not Found"
  }
}
```

Status code: 500

Internal system error.

```
{
  "error" : {
    "code" : 500,
    "message" : "An unexpected error prevented the server from fulfilling your request.",
    "title" : "Internal Server Error"
  }
}
```

Status Codes

Status Code	Description
201	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.

Status Code	Description
500	Internal system error.

4.13.7 Credential

4.13.7.1 Generating an AK/SK in Federated Identity Authentication Mode (Discarded)

Function

This API is used to generate an AK/SK in federated identity authentication mode. This API has been deprecated.

NOTE

This API has been deprecated and is replaced by the **/v3.0/OS-CREDENTIAL/securitytokens** API. For details, see **Obtaining a Temporary AK/SK**.

Before obtaining a temporary AK/SK in federated identity authentication mode, you need to establish a relationship of trust between the enterprise IdP and IAM. For details about how to query the metadata file, see **Querying the Metadata File of Keystone**.

URI

- URI format

  GET /v3-ext/OS-FEDERATION/identity_providers/{idp_id}/protocols/{protocol_id}/credential

- URI parameters

Parameter	Mandatory	Type	Description
idp_id	Yes	String	ID of an identity provider.
protocol _id	Yes	String	ID of a protocol.
duration_seconds	No	String	Validity period of an AK/SK, in seconds. The value is an integer ranging from 900 to 86400. The default value is 900.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
idp_id	Yes	String	ID of an identity provider.

Parameter	Mandatory	Type	Description
protocol_id	Yes	String	ID of a protocol.
Accept	No	String	• This parameter is not required when a token is obtained in the WebSSO mode. • When you obtain a token using the ECP, the value of this parameter is as follows: application/vnd.paos+xml
PAOS	No	String	• This parameter is not required when a token is obtained in the WebSSO mode. • When you obtain a token using the ECP, the value of this parameter is as follows: urn:oasis:names:tc:SAML:2.0:profiles:SSO:ecp

NOTE

This API can be used to obtain a token using the Web Single Sign-On (WebSSO) or ECP. The two mechanisms are differentiated based on request headers. For details, see the request header parameter description.

- Example request

```
GET /v3-ext/OS-FEDERATION/identity_providers/idptest/protocols/saml/credential
```

Response Parameters

- Parameters in the response body

Response Item	Parameter	Type	Description
credential	body	Object	Credential obtained in federation authentication mode, including the AK/SK and security token. The default validity period of the AK/SK and security token is 900 ms.

- Example response

```
{
    "credential": {
        "access": "9KDZ9C4FZWDT4R2FCLYT",
        "secret": "An7Qo7j7jmKduupYaJDZd1s2oxFkfujkD23fr3uO",
        "expires_at": "2017-09-14T09:35:22.002000Z",
```

```
        "securitytoken": "gAAAAABZuPvamyED44aYAZgdSvxxareklLGR9V4TwrsGNacjbs_8Z7CUtYdoI39-
RzebqX55VkMZ46HpbaETlrSXqP1Wcdq-scxRt7WfCCV0CH987zruTPeb8Hd0Hb0fYZzi-
OZO9lfIluQuHp8OUF2KwYliQFGIZMdwrgrHQCOg-49CbzhgGj4H2SCaMKT9VkpF9dquNgvoDG5a_j-
_q1pMsoRJMrQyAZwt1vAYEadZ4gEklNprre0KS4D5wefTxsF_BQJfF-wCgeSTc9ggV0zld1t2G0qR5g=="
    }
}
```

Status Codes

Status Code	Description
200	The request is successful. You need to further obtain user information.
201	The request is successful, and an AK/SK is returned.
302	The system switches to the identity provider authentication page if the request does not carry user information of the identity provider.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.8 Domain

4.13.8.1 Querying the List of Domains Accessible to Federated Users

Function

This API is used to query the list of domains accessible to federated users.

This API can be called using both the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com) and region-specific domain names.

URI

GET /v3/OS-FEDERATION/domains

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Unscoped token. For details, see **Obtaining an Unscoped Token (SP Initiated)**.

- Example request

```
GET /v3/OS-FEDERATION/domains
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
domains	Yes	array	List of domains.
links	Yes	Object	Domain resource link.

- Example response

```
{
  "domains": [
    {
      "links": {
        "self": "https://sample.domain.com/v3/domains/e31ac82d778b4d128cb6fed37fd72cdb"
      },
      "description": null,
      "name": "exampledomain",
      "enabled": true,
      "id": "e31ac82d778b4d128cb6fed37fd72cdb"
    }
  ],
  "links": {
    "self": "https://sample.domain.com/v3/OS-FEDERATION/domains",
    "previous": null,
    "next": null
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
405	The method specified in the request is not allowed for the requested resource.

Status Code	Description
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.9 Project

4.13.9.1 Querying the List of Projects Accessible to Federated Users

Function

This API is used to query the list of projects accessible to federated users. The project list is used to obtain the scoped token in federated identity authentication mode.

This API can be called using both the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com) and region-specific domain names.

URI

GET /v3/OS-FEDERATION/projects

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Unscoped token. For details about how to obtain a token, see **Obtaining an Unscoped Token (SP Initiated)**.

- Example request

```
GET /v3/OS-FEDERATION/projects
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
projects	Yes	array	List of projects.
links	Yes	Object	Project resource link.

- Example response

```
{
  "links": {
```

```
    "self": "https://sample.domain.com/v3/OS-FEDERATION/projects",
    "previous": null,
    "next": null
  },
  "projects": [
    {
      "is_domain": false,
      "description": "",
      "links": {
        "self": "https://sample.domain.com/v3/projects/05cf683c351e43518618d9fa96a5efa9"
      },
      "enabled": true,
      "id": "05cf683c351e43518618d9fa96a5efa9",
      "parent_id": "e31ac82d778b4d128cb6fed37fd72cdb",
      "domain_id": "e31ac82d778b4d128cb6fed37fd72cdb",
      "name": "region_name"
    },
    {
      "is_domain": false,
      "description": "",
      "links": {
        "self": "https://sample.domain.com/v3/projects/32b56f108f87418e8219317beb0fff3c"
      },
      "enabled": true,
      "id": "32b56f108f87418e8219317beb0fff3c",
      "parent_id": "e31ac82d778b4d128cb6fed37fd72cdb",
      "domain_id": "e31ac82d778b4d128cb6fed37fd72cdb",
      "name": "MOS"    //Default project name of OBS
    }
  ]
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.13.10 Assertion Requests

4.13.10.1 Processing WebSSO Assertion Requests

Function

This API is used to receive the response message (that is, the assertion request sent by the IdP to the SP) of the AuthnRequest request when the IAM service serves as the service provider (SP) in SAML 2.0 specifications and when the SP and Identity Provider (IdP) implement the single sign-on (SSO).

For the SAML 2.0 specification, see **https://en.wikipedia.org/wiki/SAML_2.0**.

NOTE

You are not advised to obtain a token by directly calling this API. You are advised to obtain a token using OpenStackClient.

URI

POST /v3-ext/auth/OS-FEDERATION/SSO/SAML2/POST

4.13.10.2 Processing ECP Assertion Requests

Function

This API is used to receive the response to AuthnRequest when an IAM service (functioning as a service provider specified in the SAM L2.0 specification) performs SSO login in an identity provider. AuthnRequest refers to the assertion request sent from the ECP to the service provider.

For the SAML 2.0 specification, see **https://en.wikipedia.org/wiki/SAML_2.0**.

NOTE

You are not advised to obtain a token by directly calling this API. You are advised to obtain a token using OpenStackClient.

URI

POST /v3-ext/auth/OS-FEDERATION/SSO/SAML2/ECP

4.14 Custom Identity Brokers

4.14.1 Obtaining a Login Token

Function

This API is used to obtain a token for logging in through a custom identity broker. Login tokens are issued to users to log in through custom identity brokers. Each login token contains identity and session information. To log in to a cloud service console using a custom identity broker URL, call this API to obtain a login token for authentication.

NOTE

The validity period of a login token is 10 minutes.

URI

POST /v3.0/OS-AUTH/securitytoken/logintokens

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.

- Parameters in the request body

Parameter	Mandatory	Type	Description

auth	Yes	Object	Authentication parameter **securitytoken**.
			"auth":{
			"securitytoken":{

securitytoken	Yes	Object	Authentication information, including **access**, **secret**, and **id**.
			"securitytoken":{
			"access":"******",
			"secret":"******",
			"id":"******"
			}

access	Yes	String	AK.
secret	Yes	String	SK.
id	Yes	String	Security token of a temporary identity. A login token can be obtained only using the security token of a custom identity broker user or common user. The security token of a delegated or federated user cannot be used to obtain a login token.

- Example request

```
curl -i -k -X POST -H "Content-Type:application/json" https://sample.domain.com/v3.0/OS-AUTH/securitytoken/logintokens -d '{
    "auth":{
        "securitytoken":{
            "access":"******",
            "secret":"******",
            "id":"******"
        }
```

```
  }
}'
```

Response Parameters

- Parameters in the response header

Parameter	Mandatory	Type	Description
X-Subject-LoginToken	Yes	String	Signed login token.

- Parameters in the response body

Parameter	Mandatory	Type	Description
logintoken	Yes	Object	Login token details.
session_id	Yes	String	Session ID.
expires_at	Yes	String	Validity period of the login token. The default value is 10 minutes.
domain_id	Yes	String	Domain ID.
user_id	Yes	String	Agency ID.
user_name	Yes	String	Domain name of the delegating party or agency name.
method	Yes	String	Authentication method. The value is **federation_proxy** for a custom identity broker user and **token** for a common user.
session_name	No	String	Name of a custom identity broker user.

Parameter	Mandatory	Type	Description

assumed_by	No	Object	Detailed information about the delegated party.
			"assumed_by": {
			"user": {
			"domain": {
			"name": "user002",
			"id": "05fdcf2c188033a70f78c00e6cbd0..."
			},
			"name": "user002",
			"password_expires_at": "",
			"id": "05fdcf44990033a21fbec00e2873a..."
			}
			}
			domain.name: Name of the account to which the delegated party belongs.
			user.name: Username of the delegated party.

- Example response

```
{
    "logintoken": {
        "domain_id": "05fdcf2c188033a70f78c00e6cbd0...",
        "session_name": "testexternaluser",
        "expires_at": "2019-09-02T08:18:38.562000Z",
        "method": "federation_proxy",
        "user_id": "05ffbb619f0033a14f73c00e3d84b...",
        "user_name": "user001/testagency",
        "session_id": "0eb62fa2e9124375ba0e114e8f149...",
        "assumed_by": {
            "user": {
                "domain": {
                    "name": "user002",
                    "id": "05fdcf2c188033a70f78c00e6cbd0..."
                },
                "name": "user002",
                "password_expires_at": "",
                "id": "05fdcf44990033a21fbec00e2873a..."
            }
        }
    }
}
```

Status Codes

Status Code	Description
201	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.

Status Code	Description
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.15 Version Information Management

4.15.1 Querying Keystone API Version Information

Function

This API is used to obtain the keystone API version information.

This API can be called using both the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com) and region-specific domain names.

URI

GET /

Request Parameters

Example request

```
curl -i -k -X GET https://sample.domain.com/
```

Response Parameters

- Response parameter description

Parameter	Mandatory	Type	Description
versions	Yes	Object	Keystone API version information.
values	Yes	Array	Keystone API version list.

- Description for the values format

Parameter	Mandatory	Type	Description
status	Yes	String	Version status.
updated	Yes	String	Last version update time.

Parameter	Mandatory	Type	Description
media-types	Yes	Array	Version-supported message format.
id	Yes	String	Version, for example, v3.0.
links	Yes	Array	Version resource link.

- Example response (successful response)

```
{
   "versions": {
      "values": [
         {
            "media-types": [
               {
                  "type": "application/vnd.openstack.identity-v3+json",
                  "base": "application/json"
               }
            ],
            "links": [
               {
                  "rel": "self",
                  "href": "https://sample.domain.com/v3/"
               }
            ],
            "id": "v3.6",
            "updated": "2016-04-04T00:00:00Z",
            "status": "stable"
         }
      ]
   }
}
```

Status Codes

Status Code	Description
300	The request is successful.
400	The server failed to process the request.
404	The requested resource cannot be found.
503	Service unavailable.

4.15.2 Querying Information About Keystone API Version 3.0

Function

This API is used to obtain the information about the keystone API version 3.0.

This API can be called using both the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com) and region-specific domain names.

URI

GET /v3

Request Parameters

Example request
curl -i -k -X GET https://sample.domain.com/v3

Response Parameters

- Response parameter description

Parameter	Mandatory	Type	Description
version	Yes	Object	Keystone API version information.

- Description for the version format

Parameter	Mandatory	Type	Description
status	Yes	String	Version status.
updated	Yes	String	Last version update time.
media-types	Yes	Array	Version-supported message format.
id	Yes	String	Version, for example, v3.0.
links	Yes	Array	Version resource link.

- Example response (successful response)

```
{
    "version": {
        "status": "stable",
        "updated": "2016-04-04T00:00:00Z",
        "media-types": [
            {
                "base": "application/json",
                "type": "application/vnd.openstack.identity-v3+json"
            }
        ],
        "id": "v3.6",
        "links": [
            {
                "href": "https://sample.domain.com/v3/",
                "rel": "self"
            }
        ]
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
404	The requested resource cannot be found.
503	Service unavailable.

4.16 Services and Endpoints

4.16.1 Querying Services

Function

This API is used to query the service list.

This API can be called using both the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com) and region-specific domain names.

URI

- URI format

  GET /v3/services{?type}
- URI parameters

Parameter	Mandatory	Type	Description
type	No	String	Service type. The value can be **compute**, **ec2**, **identity**, **image**, **network**, or **volume**.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token.

- Example request
  curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/services?type=compute

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
links	Yes	Dict	Service resource link.
services	Yes	List	A list of services.

- Description for the services format

Parameter	Mandatory	Type	Description
description	No	String	Service description.
enabled	Yes	Boolean	Whether a service is available.
id	Yes	String	Service ID.
name	No	String	Service name.
type	Yes	String	Service type.
links	Yes	Dict	Service resource link.

- Example response (successful response)

```
{
    "services": [
        {
            "name": "compute5",
            "links": {
                "self": "https://sample.domain.com/v3/services/053d21d488d1463c818132d9d08fb617"
            },
            "enabled": true,
            "type": "compute",
            "id": "053d21d488d1463c818132d9d08fb617",
            "description": "Compute service 5"
        },
        {
            "name": "compute3",
            "links": {
                "self": "https://sample.domain.com/v3/services/c2474183dca7453bbd73123a0b78feae"
            },
            "enabled": true,
            "type": "compute",
            "id": "c2474183dca7453bbd73123a0b78feae",
            "description": "Compute service 3"
        },
        {
            "name": "compute2",
            "links": {
                "self": "https://sample.domain.com/v3/services/c7166694ebdd4616bd927737f7b12ca2"
            },
            "enabled": true,
            "type": "compute",
            "id": "c7166694ebdd4616bd927737f7b12ca2",
```

```
            "description": "Compute service 2"
        }
    ],
    "links": {
        "self": "https://sample.domain.com/v3/services?type=compute",
        "previous": null,
        "next": null
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.16.2 Querying Service Details

Function

This API is used to query service details.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/services/{service_id}

- URI parameters

Parameter	Mandatory	Type	Description
service_id	Yes	String	Service ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/services/5a4ed456d228428c800ed2b67b4363a7
```

Response Parameters

Example response (successful response)

```
{
    "service": {
        "enabled": true,
        "type": "compute",
        "name": "nova",
        "links": {
            "self": "sample.domain.com/v3/services/5a4ed456d228428c800ed2b67b4363a7"
        },
        "id": "5a4ed456d228428c800ed2b67b4363a7"
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.16.3 Querying Endpoints

Function

This API is used to query the list of terminal addresses and provides a service access entry.

This API can be called using both the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com) and region-specific domain names.

URI

- URI format

  GET /v3/endpoints{?interface, service_id}

- URI parameters

Parameter	Mandatory	Type	Description
interface	No	String	Plane to which an endpoint belongs. The value can be **public**, **internal**, or **admin**. • **public**: Users can view it on the public network interface. • **internal**: Users can view it on the internal network interface. • **admin**: The administrator can view it on the secure network interface.
service_id	No	String	Service ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/endpoints?interface=public&service_id=43cbe5e77aaf4665bbb962062dc1fc9d
```

Response Parameters

- Parameters in the response body

Parameter	Mandatory	Type	Description
links	Yes	dict	Endpoint resource link.
endpoints	Yes	list	List of endpoints.

- Description for the endpoints format

Parameter	Mandatory	Type	Description
id	Yes	String	Endpoint ID.
url	Yes	String	Terminal endpoint URL.
region	Yes	String	Region to which an endpoint belongs.
region_id	Yes	String	ID of the region to which an endpoint belongs.
enabled	Yes	Boolean	Whether an endpoint is available.
interface	Yes	String	Plane to which an endpoint belongs.
service_id	Yes	String	ID of the service to which an endpoint belongs.
links	Yes	dict	Endpoint resource link.

- Example response (successful request)

```
{
    "endpoints": [
        {
            "region_id": null,
            "links": {
                "self": "https://sample.domain.com/v3/endpoints/162277d696f54cf592f19b569f85d158"
            },
            "url": "https://sample.domain.com/v3",
            "region": null,
            "enabled": true,
            "interface": "public",
            "service_id": "053d21d488d1463c818132d9d08fb617",
            "id": "162277d696f54cf592f19b569f85d158"
        }
    ],
    "links": {
        "self": "https://sample.domain.com/v3/endpoints?
service_id=053d21d488d1463c818132d9d08fb617&interface=public",
        "previous": null,
        "next": null
    }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.16.4 Querying Endpoint Details

Function

This API is used to query endpoint details.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

- URI format

  GET /v3/endpoints/{endpoint_id}

- URI parameters

Parameter	Mandatory	Type	Description
endpoint_id	Yes	String	Endpoint ID.

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Fill **application/json;charset=utf8** in this field.
X-Auth-Token	Yes	String	Authenticated token.

- Example request
  curl -i -k -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -H "X-Auth-Token:$token" -X GET https://sample.domain.com/v3/endpoints/62ea3602f8ee42b1825956473f5295a8

Response Parameters

Example response (successful request)

```
{
   "endpoint": {
      "region_id": "region_id",
      "links": {
         "self": "https://sample.domain.com/v3/endpoints/62ea3602f8ee42b1825956473f5295a8"
      },
      "url": "https://sample.domain.com/v2/",
      "region": "region_name",
      "enabled": true,
      "interface": "public",
      "service_id": "5a4ed456d228428c800ed2b67b4363a7",
      "id": "62ea3602f8ee42b1825956473f5295a8"
   }
}
```

Status Codes

Status Code	Description
200	The request is successful.
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

4.16.5 Querying the Service Catalog

Function

This API is used to query the service catalog corresponding to **X-Auth-Token** contained in the request.

This API can be called using only the global domain name (iam.eu-west-0.prod-cloud-ocb.orange-business.com).

URI

GET /v3/auth/catalog

Request Parameters

- Parameters in the request header

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Authenticated scoped token of a project.

- Example request

```
curl -i -k -H 'Accept:application/json' -H 'X-Auth-Token:$token' -H 'Content-Type:application/json;charset=utf8' -X GET https://sample.domain.com/v3/auth/catalog
```

Response Parameters

Example response (successful request)

```
{
  "catalog": [
    {
      "endpoints": [
        {
          "region_id": null,
          "url": "https://sample.domain.com/v2/c972a59e958e407e89b0c6d8e522df3b",
          "region": null,
          "interface": "public",
          "id": "04f0ee42038447f0a9c7b407028fd7b9"
        }
      ],
      "type": "compute",
      "id": "eb884e9f64b44dd0ac73cdc55d817286",
      "name": "nova"
    }
  ],
  "links": {
    "self": "https://sample.domain.com/v3/auth/catalog"
  }
}
```

Status Codes

Status Code	Description
200	The request is successful.

Status Code	Description
400	The server failed to process the request.
401	Authentication failed.
403	Access denied.
404	The requested resource cannot be found.
405	The method specified in the request is not allowed for the requested resource.
413	The request entity is too large.
500	Internal server error.
503	Service unavailable.

5 Permissions Policies and Supported Actions

5.1 Introduction

By default, new users do not have permissions assigned. You need to add a user to one or more groups, and attach permissions policies to these groups. Users inherit permissions from the groups to which they are added and can perform specified operations on cloud services based on the permissions.

An account has all the permissions required to call all APIs, but users must be assigned the required permissions. The permissions required for calling an API are determined by the actions supported by the API. Only users who have been granted permissions allowing the actions can call the API successfully. For example, if a user queries ECSs using an API, the user must have been granted permissions that allow the **ecs:servers:list** action.

Supported Actions

IAM provides system-defined policies that can be directly used. You can also create custom policies and use them to supplement system-defined policies, implementing more refined access control. Operations supported by policies are specific to APIs. The following are common concepts related to policies:

- Permission: Defined by actions in a custom policy.
- APIs: REST APIs that can be called in a custom policy.
- Actions: Added to a custom policy to control permissions for specific operations.
- IAM or enterprise projects: A custom policy can be applied to IAM projects or enterprise projects or both. Policies that contain actions supporting both IAM and enterprise projects can be assigned to user groups and take effect in both IAM and Enterprise Management. Policies that only contain actions supporting IAM projects can be assigned to user groups and only take effect

for IAM. Such policies will not take effect if they are assigned to user groups in Enterprise Management. For details about the differences between IAM and enterprise projects, see "Differences Between IAM Projects and Enterprise Projects".

NOTE

- The check mark (√) and cross symbol (x) indicate that an action takes effect or does not take effect for the corresponding type of projects. A hyphen (-) indicates that an action is irrelevant to the corresponding type of projects.
- IAM is a global service which does not involve project-based authorization.
- Some permissions support only actions and do not support APIs**, such as permissions for virtual MFA device management**.

5.2 Action List

Token Management

Permission	API	Action
Obtaining an Agency Token	**POST /v3/auth/tokens**	iam:tokens:assume

Virtual MFA Device Management

Permission	API	Action
Unbinding a Virtual MFA Device	**PUT /v3.0/OS-MFA/mfa-devices/unbind**	iam:mfa:unbindMFADevice
Binding a Virtual MFA Device	**PUT /v3.0/OS-MFA/mfa-devices/bind**	iam:mfa:bindMFADevice
Creating a Virtual MFA Device	**POST /v3.0/OS-MFA/virtual-mfa-devices**	iam:mfa:createVirtualMFADevice
Deleting a Virtual MFA Device	**DELETE /v3.0/OS-MFA/virtual-mfa-devices**	iam:mfa:deleteVirtualMFADevice

Project Management

Permission	API	Action
Creating a Project	**POST /v3/projects**	iam:projects:createProject
Modifying Project Data	**PATCH /v3/projects/{project_id}**	iam:projects:updateProject

Permission	API	Action
Changing Project Status	**PUT /v3-ext/projects/{project_id}**	iam:projects:updateProject
Querying the List of Projects Accessible to Users	**GET /v3/users/{user_id}/projects**	iam:projects:listProjectsForUser
Deleting a Project	×	iam:projects:deleteProject
Querying the Quotas of a Project	**GET /v3.0/OS-QUOTA/projects/{project_id}**	iam:quotas:listQuotasForProject

Tenant Management

Permission	API	Action
Querying Tenant Quotas	**GET /v3.0/OS-QUOTA/domains/{domain_id}**	iam:quotas:listQuotas

User Management

Permission	API	Action
Listing Users	**GET /v3/users**	iam:users:listUsers
Querying User Details	**GET /v3/users/{user_id}**	iam:users:getUser
Querying User Details (Recommended)	**GET /v3.0/OS-USER/users/{user_id}**	iam:users:getUser
Querying User Details (Including Email Address and Mobile Number)	**GET /v3.0/OS-USER/users/{user_id}**	iam:users:getUser -
Querying the User Group to Which a User Belongs	**GET /v3/users/{user_id}/groups**	iam:groups:listGroupsForUser
Querying Users in a User Group	**GET /v3/groups/{group_id}/users**	iam:users:listUsersForGroup
Changing the Password of a User	**POST /v3/users/{user_id}/password**	iam:users:updateUserPassword
Creating a User (Recommended)	**POST /v3.0/OS-USER/users**	iam:users:createUser

Permission	API	Action
Resetting a User's Password	×	iam:users:resetUserPassword
Configuring Login Protection	×	iam:users:setUserLoginProtect
Listing Users Who Have Access to a Specified Project	×	iam:users:listUsersForProject
Deleting a User from a User Group	**DELETE /v3/groups/{group_id}/users/{user_id}**	iam:permissions:removeUserFromGroup
Querying MFA Device Information of Users	**GET /v3.0/OS-MFA/virtual-mfa-devices**	iam:mfa:listVirtualMFADevices
Querying the MFA Device Information of a User	**GET /v3.0/OS-MFA/users/{user_id}/virtual-mfa-device**	iam:mfa:getVirtualMFADevice
Querying Login Protection Configurations of Users	**GET /v3.0/OS-USER/login-protects**	iam:users:listUserLoginProtects
Querying the Login Protection Configuration of a User	**GET /v3.0/OS-USER/users/{user_id}/login-protect**	iam:users:getUserLoginProtect

User Group Management

Permission	API	Action
Querying Users in a User Group	**GET /v3/groups/{group_id}/users**	iam:users:listUsersForGroup
Listing User Groups	**GET /v3/groups{?domain_id,name}**	iam:groups:listGroups
Querying User Group Details	**GET /v3/groups/{group_id}**	iam:groups:getGroup
Creating a User Group	**POST /v3/groups**	iam:groups:createGroup
Adding a User to a User Group	**PUT /v3/groups/{group_id}/users/{user_id}**	iam:permissions:addUserToGroup
Updating User Group Information	**PATCH /v3/groups/{group_id}**	iam:groups:updateGroup

Permission	API	Action
Deleting a User Group	**DELETE /v3/groups/{group_id}**	• iam:groups:deleteGroup • iam:permissions:removeUserFromGroup • iam:permissions:revokeRoleFromGroup • iam:permissions:revokeRoleFromGroupOnProject • iam:permissions:revokeRoleFromGroupOnDomain
Checking Whether a User Belongs to a Specified User Group	**HEAD /v3/groups/{group_id}/users/{user_id}**	iam:permissions:checkUserInGroup

Permissions Management

Permission	API	Action
Querying a Role List	**GET /v3/roles**	iam:roles:listRoles
Querying Role Details	**GET /v3/roles/{role_id}**	iam:roles:getRole
Querying Permissions Assignment Records	**GET /v3.0/OS-PERMISSION/role-assignments**	iam:permissions:listRoleAssignments
Querying Permissions of a User Group Under a Domain	**GET /v3/domains/{domain_id}/groups/{group_id}/roles**	iam:permissions:listRolesForGroupOnDomain
Querying Permissions of a User Group Corresponding to a Project	**GET /v3/projects/{project_id}/groups/{group_id}/roles**	iam:permissions:listRolesForGroupOnProject
Granting Permissions to a User Group of a Domain	**PUT /v3/domains/{domain_id}/groups/{group_id}/roles/{role_id}**	iam:permissions:grantRoleToGroupOnDomain
Granting Permissions to a User Group Corresponding to a Project	**PUT /v3/projects/{project_id}/groups/{group_id}/roles/{role_id}**	iam:permissions:grantRoleToGroupOnProject

Permission	API	Action
Removing Permissions of a User Group Corresponding to a Project	**DELETE /v3/projects/{project_id}/groups/{group_id}/roles/{role_id}**	iam:permissions:revokeRoleFromGroupOnProject
Removing Permissions of a User Group of a Domain	**DELETE /v3/domains/{domain_id}/groups/{group_id}/roles/{role_id}**	iam:permissions:revokeRoleFromGroupOnDomain
Querying Whether a User Group Under a Domain Has Specific Permissions	**HEAD /v3/domains/{domain_id}/groups/{group_id}/roles/{role_id}**	iam:permissions:checkRoleForGroupOnDomain
Querying Whether a User Group Corresponding to a Project Has Specific Permissions	**HEAD /v3/projects/{project_id}/groups/{group_id}/roles/{role_id}**	iam:permissions:checkRoleForGroupOnProject
Granting Permissions to a User Group	**PUT /v3/domains/{domain_id}/groups/{group_id}/roles/{role_id}** **PUT /v3/projects/{project_id}/groups/{group_id}/roles/{role_id}**	iam:permissions:grantRoleToGroup
Querying the Permissions Granted to a User for a Specified Project	×	iam:permissions:listRolesForUserOnProject
Querying All Permissions of a User Group	×	iam:permissions:listRolesForGroup
Checking Whether a User Group Has Specified Permissions	• **HEAD /v3/domains/{domain_id}/groups/{group_id}/roles/{role_id}** • **HEAD /v3/projects/{project_id}/groups/{group_id}/roles/{role_id}**	iam:permissions:checkRoleForGroup
Removing Permissions of a User Group	• **DELETE /v3/projects/{project_id}/groups/{group_id}/roles/{role_id}** • **DELETE /v3/domains/{domain_id}/groups/{group_id}/roles/{role_id}**	iam:permissions:revokeRoleFromGroup

Permission	API	Action
Querying a Resource Quota	**GET /v3.0/OS-QUOTA/domains/{domain_id}?type={user, group, idp, agency, policy}**	iam:quotas:listQuotas

Custom Policy Management

Permission	API	Action
Listing Custom Policies	**GET /v3.0/OS-ROLE/roles**	iam:roles:listRoles
Querying Custom Policy Details	**GET /v3.0/OS-ROLE/roles/{role_id}**	iam:roles:getRole
Creating a Custom Policy	**POST /v3.0/OS-ROLE/roles**	iam:roles:createRole
Modifying a Custom Policy	**PATCH /v3.0/OS-ROLE/roles/{role_id}**	iam:roles:updateRole
Deleting a Custom Policy	**DELETE /v3.0/OS-ROLE/roles/{role_id}**	iam:roles:deleteRole

Agency Management

Permission	API	Action
Creating an Agency	**POST /v3.0/OS-AGENCY/agencies**	iam:agencies:createAgency
Listing Agencies	**GET /v3.0/OS-AGENCY/agencies**	iam:agencies:listAgencies
Querying Agency Details	**GET /v3.0/OS-AGENCY/agencies/{agency_id}**	iam:agencies:getAgency
Modifying an Agency	**PUT /v3.0/OS-AGENCY/agencies/{agency_id}**	iam:agencies:updateAgency
Deleting an Agency	**DELETE /v3.0/OS-AGENCY/agencies/{agency_id}**	iam:agencies:deleteAgency
Granting Permissions to an Agency for a Project	**PUT /v3.0/OS-AGENCY/projects/{project_id}/agencies/{agency_id}/roles/{role_id}**	iam:permissions:grantRoleToAgencyOnProject

Permission	API	Action
Checking Whether an Agency Has the Specified Permissions on a Project	**HEAD /v3.0/OS-AGENCY/projects/{project_id}/agencies/{agency_id}/roles/{role_id}**	iam:permissions:checkRoleForAgencyOnProject
Querying Permissions of an Agency for a Project	**GET /v3.0/OS-AGENCY/projects/{project_id}/agencies/{agency_id}/roles**	iam:permissions:listRolesForAgencyOnProject
Removing Permissions of an Agency on a Project	**DELETE /v3.0/OS-AGENCY/projects/{project_id}/agencies/{agency_id}/roles/{role_id}**	iam:permissions:revokeRoleFromAgencyOnProject
Granting Permissions to an Agency on a Domain	**PUT /v3.0/OS-AGENCY/domains/{domain_id}/agencies/{agency_id}/roles/{role_id}**	iam:permissions:grantRoleToAgencyOnDomain
Checking Whether an Agency Has the Specified Permissions on a Domain	**HEAD /v3.0/OS-AGENCY/domains/{domain_id}/agencies/{agency_id}/roles/{role_id}**	iam:permissions:checkRoleForAgencyOnDomain
Querying the List of Permissions of an Agency on a Domain	**GET /v3.0/OS-AGENCY/domains/{domain_id}/agencies/{agency_id}/roles**	iam:permissions:listRolesForAgencyOnDomain
Removing Permissions of an Agency on a Domain	**DELETE /v3.0/OS-AGENCY/domains/{domain_id}/agencies/{agency_id}/roles/{role_id}**	iam:permissions:revokeRoleFromAgencyOnDomain
Querying All Permissions of an Agency	**GET /v3.0/OS-INHERIT/domains/{domain_id}/agencies/{agency_id}/roles/inherited_to_projects**	iam:permissions:listRolesForAgency
Granting Specified Permissions to an Agency for All Projects	**PUT /v3.0/OS-INHERIT/domains/{domain_id}/agencies/{agency_id}/roles/{role_id}/inherited_to_projects**	iam:permissions:grantRoleToAgency
Checking Whether an Agency Has Specified Permissions	**HEAD /v3.0/OS-INHERIT/domains/{domain_id}/agencies/{agency_id}/roles/{role_id}/inherited_to_projects**	iam:permissions:checkRoleForAgency
Removing Specified Permissions of an Agency in All Projects	**DELETE /v3.0/OS-INHERIT/domains/{domain_id}/agencies/{agency_id}/roles/{role_id}/inherited_to_projects**	iam:permissions:revokeRoleFromAgency

Security Settings

Permission	API	Action
Querying the Operation Protection Policy	**GET v3.0/OS-SECURITYPOLICY/domains/{domain_id}/protect-policy**	iam:securitypolicies:getProtectPolicy
Querying the Password Policy	**GET v3.0/OS-SECURITYPOLICY/domains/{domain_id}/password-policy**	iam:securitypolicies:getPasswordPolicy
Querying the Login Authentication Policy	**GET v3.0/OS-SECURITYPOLICY/domains/{domain_id}/login-policy**	iam:securitypolicies:getLoginPolicy
Querying the ACL for Console Access	**GET v3.0/OS-SECURITYPOLICY/domains/{domain_id}/console-acl-policy**	iam:securitypolicies:getConsoleAclPolicy
Querying the ACL for API Access	**GET v3.0/OS-SECURITYPOLICY/domains/{domain_id}/api-acl-policy**	iam:securitypolicies:getApiAclPolicy

Enterprise Project Management

Permission	API	Action	IAM Project (Project)	Enterprise Project (Enterprise Project)
Querying User Groups Associated with an Enterprise Project	**GET /v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/groups**	iam:permissions:listGroupsOnEnterpriseProject	-	√
Querying Permissions of a User Group Associated with an Enterprise Project	**GET /v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/groups/{group_id}/roles**	iam:permissions:listRolesForGroupOnEnterpriseProject	-	√
Granting Permissions to a User Group Associated with an Enterprise Project	**PUT /v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/groups/{group_id}/roles/{role_id}**	iam:permissions:grantRoleToGroupOnEnterpriseProject	-	√

Permission	API	Action	IAM Project (Project)	Enterprise Project (Enterprise Project)
Removing Permissions of a User Group Associated with an Enterprise Project	**DELETE /v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/groups/{group_id}/roles/{role_id}**	iam:permissions:revokeRoleFromGroupOnEnterpriseProject	-	√
Querying Enterprise Projects Associated with a User Group	**GET /v3.0/OS-PERMISSION/groups/{group_id}/enterprise-projects**	iam:permissions:listEnterpriseProjectsForGroup	-	√
Querying Enterprise Projects Directly Associated with a User	**GET /v3.0/OS-PERMISSION/users/{user_id}/enterprise-projects**	iam:permissions:listEnterpriseProjectsForUser	-	√
Querying Users Directly Associated with an Enterprise Project	**GET /v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/users**	iam:permissions:listUsersForEnterpriseProject	-	√
Querying Roles of a User Associated with an Enterprise Project	**GET /v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/users/{user_id}/roles**	iam:permissions:listRolesForUserOnEnterpriseProject	-	√
Granting a User Permissions for an Enterprise Project	**PUT /v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/users/{user_id}/roles/{role_id}**	iam:permissions:grantRoleToUserOnEnterpriseProject	-	√
Removing Permissions of a User Directly Associated with an Enterprise Project	**DELETE /v3.0/OS-PERMISSION/enterprise-projects/{enterprise_project_id}/users/{user_id}/roles/{role_id}**	iam:permissions:revokeRoleFromUserOnEnterpriseProject	-	√

Federated Identity Authentication Management

Permission	API	Action
Querying the Identity Provider List	**GET /v3/OS-FEDERATION/identity_providers**	iam:identityProviders:listIdentityProviders
Querying an Identity Provider	**GET /v3/OS-FEDERATION/identity_providers/{id}**	iam:identityProviders:getIdentityProvider
Creating an Identity Provider	**PUT /v3/OS-FEDERATION/identity_providers/{id}**	iam:identityProviders:createIdentityProvider
Updating an Identity Provider	**PATCH /v3/OS-FEDERATION/identity_providers/{id}**	iam:identityProviders:updateIdentityProvider
Deleting an Identity Provider	**DELETE /v3/OS-FEDERATION/identity_providers/{id}**	iam:identityProviders:deleteIdentityProvider
Creating an OpenID Connect Identity Provider	**POST /v3.0/OS-FEDERATION/identity-providers/{idp_id}/openid-connect-config**	iam:identityProviders:createOpenIDConnectConfig
Modifying an OpenID Connect Identity Provider	**PUT /v3.0/OS-FEDERATION/identity-providers/{idp_id}/openid-connect-config**	iam:identityProviders:updateOpenIDConnectConfig
Querying an OpenID Connect Identity Provider	**GET /v3.0/OS-FEDERATION/identity-providers/{idp_id}/openid-connect-config**	iam:identityProviders:getOpenIDConnectConfig
Querying the Mapping List	**GET /v3/OS-FEDERATION/mappings**	iam:identityProviders:listMappings
Querying Mapping Details	**GET /v3/OS-FEDERATION/mappings/{id}**	iam:identityProviders:getMapping
Creating a Mapping	**PUT /v3/OS-FEDERATION/mappings/{id}**	iam:identityProviders:createMapping
Updating a Mapping	**PATCH /v3/OS-FEDERATION/mappings/{id}**	iam:identityProviders:updateMapping
Deleting a Mapping	**DELETE /v3/OS-FEDERATION/mappings/{id}**	iam:identityProviders:deleteMapping
Querying the Protocol List	**GET /v3/OS-FEDERATION/identity_providers/{idp_id}/protocols**	iam:identityProviders:listProtocols
Querying a Protocol	**GET /v3/OS-FEDERATION/identity_providers/{idp_id}/protocols/{protocol_id}**	iam:identityProviders:getProtocol

Permission	API	Action
Registering a Protocol	**PUT /v3/OS-FEDERATION/identity_providers/{idp_id}/protocols/{protocol_id}**	iam:identityProviders:createProtocol
Updating a Protocol	**PATCH /v3/OS-FEDERATION/identity_providers/{idp_id}/protocols/{protocol_id}**	iam:identityProviders:updateProtocol
Deleting a Protocol	**DELETE /v3/OS-FEDERATION/identity_providers/{idp_id}/protocols/{protocol_id}**	iam:identityProviders:deleteProtocol
Querying a Metadata File	**GET /v3-ext/OS-FEDERATION/identity_providers/{idp_id}/protocols/{protocol_id}/metadata**	iam:identityProviders:getIDPMetadata
Importing a Metadata File	**POST /v3-ext/OS-FEDERATION/identity_providers/{idp_id}/protocols/{protocol_id}/metadata**	iam:identityProviders:createIDPMetadata

6 Appendix

6.1 Status Codes

Table 6-1 Status codes

Status Code	Message Title	Description
100	Continue	The client should continue with its request. This interim response is used to inform the client that the initial part of the request has been received and has not yet been rejected by the server.
101	Switching Protocols	The requester has asked the server to switch protocols and the server has agreed to do so. The protocol should be switched only when it is advantageous to do so. For example, switching to a newer version of HTTP is advantageous over older versions.
201	Created	The request has been fulfilled and resulted in a new resource being created.
202	Accepted	The request has been accepted for processing, but the processing has not been completed.
203	Non-Authoritative Information	The server successfully processed the request, but is returning information that may be from another source.

Status Code	Message Title	Description
204	NoContent	The server successfully processed the request and is not returning any content. The status code is returned in response to an HTTP OPTIONS request.
205	Reset Content	The server successfully processed the request, but is not returning any content.
206	Partial Content	The server has fulfilled the partial GET request for the resource.
300	Multiple Choices	There are multiple options for the resource from which the client may choose. For example, this code could be used to present a list of resource characteristics and addresses from which the client such as a browser may choose.
301	Moved Permanently	The requested resource has been assigned a new permanent URI and any future references to this resource should use one of the returned URIs.
302	Found	The requested resource resides temporarily under a different URI.
303	See Other	The response to the request can be found under a different URI and should be retrieved using a GET or POST method.
304	Not Modified	The requested resource has not been modified. When the server returns this status code, it does not return any resources.
305	Use Proxy	The requested resource must be accessed through a proxy.
306	Unused	This HTTP status code is no longer used.
400	BadRequest	The request could not be understood by the server due to malformed syntax. The client should not repeat the request without modifications.
401	Unauthorized	The authorization information provided by the client is incorrect or invalid. Check the username and password.
402	Payment Required	This status code is reserved for future use.

Status Code	Message Title	Description
403	Forbidden	The server understood the request, but is refusing to fulfill it. The client should not repeat the request without modifications.
404	NotFound	The requested resource cannot be found. The client should not repeat the request without modifications.
405	MethodNotAllowed	The method specified in the request is not allowed for the requested resource. The client should not repeat the request without modifications.
406	Not Acceptable	The server cannot fulfill the request based on the content characteristics of the request.
407	Proxy Authentication Required	This code is similar to 401, but indicates that the client must first authenticate itself with the proxy.
408	Request Time-out	The client does not produce a request within the time that the server was prepared to wait. The client may repeat the request without modifications at any later time.
409	Conflict	The request could not be completed due to a conflict with the current state of the resource. This status code indicates that the resource that the client attempts to create already exists, or the request fails to be processed because of the update of the conflict request.
410	Gone	The requested resource is no longer available. The requested resource has been deleted permanently.
411	Length Required	The server refuses to process the request without a defined Content-Length.
412	Precondition Failed	The server does not meet one of the preconditions that the requester puts on the request.

Status Code	Message Title	Description
413	Request Entity Too Large	The server is refusing to process a request because the request entity is larger than the server is willing or able to process. The server may close the connection to prevent the client from continuing the request. If the condition is temporary, the server should include a **Retry-After** header field to indicate that it is temporary and after what time the client may try again.
414	Request-URI Too Large	The server is refusing to service the request because the request URI is longer than the server is willing to interpret.
415	Unsupported Media Type	The server is refusing to service the request because the entity of the request is in a format not supported by the requested resource for the requested method.
416	Requested range not satisfiable	The requested range is invalid.
417	Expectation Failed	The server fails to meet the requirements of the **Expect** request header field.
422	UnprocessableEntity	The request was well-formed but was unable to be followed due to semantic errors.
429	TooManyRequests	The client has sent more requests than its rate limit is allowed within a given amount of time, or the server has received more requests than it is able to process within a given amount of time. In this case, the client should repeat requests after the time specified in the **Retry-After** header of the response expires.
500	InternalServerError	The server encountered an unexpected condition which prevented it from fulfilling the request.
501	Not Implemented	The server does not support the functionality required to fulfill the request.
502	Bad Gateway	The server, while acting as a gateway or proxy, received an invalid response from the upstream server it accessed in attempting to fulfill the request.
503	ServiceUnavailable	The requested service is unavailable. The client should not repeat the request without modifications.

Status Code	Message Title	Description
504	ServerTimeout	The request cannot be fulfilled within a given amount of time. The response will reach the client only if the request carries a timeout parameter.
505	HTTP Version not supported	The server does not support the HTTP protocol version used in the request.

6.2 Error Codes

Status Code	Error Code	Error Message	Description	Measure
400	1100	Mandatory parameters are not specified.	Mandatory parameters are not specified.	Check the request parameters.
400	1101	Invalid username.	Invalid username.	Check the username.
400	1102	Invalid email address.	Invalid email address.	Check the email address.
400	1103	Incorrect password.	Incorrect password.	Check the password.
400	1104	Invalid mobile number.	Invalid mobile number.	Check the mobile number.
400	1105	The value of **xuser_type** must be the same as that of **xdomain_type**.	The value of **xuser_type** must be the same as that of **xdomain_type**.	Check whether the value of **xuser_type** is the same as that of **xdomain_type**.
400	1106	The country code and mobile number must be set at the same time.	The country code and mobile number must be set at the same time.	Check whether the country code and mobile number have been both specified.
400	1107	The account administrator cannot be deleted.	The account administrator cannot be deleted.	This operation is not allowed.

Status Code	Error Code	Error Message	Description	Measure
400	1108	The new password must be different from the old password.	The new password must be different from the old password.	Enter another password.
400	1109	The username already exists.	The username already exists.	Modify the username.
400	1110	The email address has already been used.	The email address has already been used.	Enter another email address.
400	1111	The mobile number has already been used.	The mobile number has already been used.	Enter another mobile number.
400	1113	The values of **xuser_id** and **xuser_type** already exist.	The values of **xuser_id** and **xuser_type** already exist.	Modify the values of **xuser_id** and **xuser_type**.
400	1115	The number of IAM users has reached the maximum allowed limit.	The number of IAM users has reached the maximum allowed limit.	Modify the user quota or contact technical support.
400	1117	Invalid user description.	Invalid user description.	Modify the user description.
400	1118	The password is weak.	The password is weak.	Enter another password.
400	IAM.0007	Request parameter %(key)s is invalid.	The request parameter is invalid.	Check the request parameter.
400	IAM.0008	Please scan the QR code first.	Scan the QR code first.	Scan the QR code first.
400	IAM.0009	X-Subject-Token is invalid in the request.	**X-Subject-Token** in the request is invalid.	Check the request parameter.

Status Code	Error Code	Error Message	Description	Measure
400	IAM.0010	The QR code has already been scanned by another user.	The QR code has already been scanned by someone else.	No action is required.
400	IAM.0011	Request body is invalid.	The request body is invalid.	Check the request body.
400	IAM.0072	'%(key)s' is a required property.	The request is invalid. For example, %(key)s is required.	Contact technical support.
400	IAM.0073	Invalid input for field '%(key)s'. The value is '%(value)s'.	The input is invalid.	Contact technical support.
400	IAM.0077	Invalid policy type.	The policy type is invalid.	Contact technical support.
400	IAM.1000	The role must be a JSONObject.	The role object is missing.	Check whether the request body contains the role object.
400	IAM.1001	The display_name must be a string and cannot be left blank or contain spaces.	The value of **display_name** is empty or contains spaces.	Check whether the value of **display_name** is correct.
400	IAM.1002	The length [input length] of the display name exceeds 64 characters.	The **display_name** field cannot exceed 64 characters.	Check the length of the **display_name** field.
400	IAM.1003	The display_name contains invalid characters.	The **display_name** field contains invalid characters.	Check whether the value of **display_name** is correct.

Status Code	Error Code	Error Message	Description	Measure
400	IAM.1004	The type must be a string and cannot be left blank or contain spaces.	The **type** field is empty.	Check whether the value of **type** is correct.
400	IAM.1005	Invalid type [input type].	The **type** field is invalid.	Check whether the value of **type** is correct.
400	IAM.1006	The custom policy does not need a catalog.	Custom policies cannot contain the **catalog** field.	Delete the **catalog** field.
400	IAM.1007	The custom policy does not need a flag.	Custom policies cannot contain the **flag** field.	Delete the **flag** field.
400	IAM.1008	The custom policy does not need a name.	Custom policies cannot contain the **name** field.	Delete the **name** field.
400	IAM.1009	The type of a custom policy must be 'AX' or 'XA'.	The type of a custom policy can only be **AX** or **XA**.	Change the value of the **type** field to **AX** or **XA**.
400	IAM.1010	The catalog must be a string.	The value of the **catalog** field must be a character string.	Check whether the value of **catalog** is correct.
400	IAM.1011	The length [input length] of the catalog exceeds 64 characters.	The **catalog** field cannot exceed 64 characters.	Check the length of the **catalog** field.
400	IAM.1012	Invalid catalog.	The **catalog** field is invalid.	Check whether the value of **catalog** is correct.

Status Code	Error Code	Error Message	Description	Measure
400	IAM.1013	The flag must be a string.	The value of the **flag** field must be a character string.	Check whether the value of **flag** is correct.
400	IAM.1014	The value of the flag must be 'fine_grained'.	The value of **flag** is not **fine_grained**.	Change the value of **flag** to **fine_grained**.
400	IAM.1015	The name must be a string and cannot be left blank or contain spaces.	The **name** field is empty.	Specify the **name** field for system-defined roles.
400	IAM.1016	The length of the name [input name] cannot exceed 64 characters.	The value of **name** cannot exceed 64 characters.	Check whether the value of **name** is correct.
400	IAM.1017	Invalid name.	The **name** field is invalid.	Check whether the value of **name** is correct.
400	IAM.1018	Invalid description.	The **description** field is invalid.	Check whether the value of **description** is correct.
400	IAM.1019	Invalid description_cn .	The **description_cn** field is invalid.	Check whether the value of **description_cn** is correct.
400	IAM.1020	The policy must be a JSONObject.	The **policy** object is missing.	Check whether the request body contains the **policy** object.
400	IAM.1021	The size [input policySize] of the policy exceeds 6,144 characters.	The **policy** object contains more than 6144 characters.	Check the length of the **policy** object.

Status Code	Error Code	Error Message	Description	Measure
400	IAM.1022	The length [input id length] of the ID exceeds 128 characters.	The **id** field contains more than 128 characters.	Check the length of the **id** field.
400	IAM.1023	Invalid ID '[input id]'.	The **id** field of the policy is invalid.	Check whether the value of **id** is correct.
400	IAM.1024	The version of a fine-grained policy must be '1.1'.	The version of the fine-grained policy is not 1.1.	Change the value of **version** to **1.1**.
400	IAM.1025	Fine-grained policies do not need depends.	The fine-grained policy contains the **depends** field.	Delete the **depends** field.
400	IAM.1026	The version of an RBAC policy must be '1.0' or '1.1'.	The version of an RBAC policy can only be 1.0 or 1.1.	Change the value of **version** to **1.0** or **1.1**.
400	IAM.1027	The Statement/ Rules must be a JSONArray.	The **statement** field is not a JSON array.	Check whether a JSON array statement exists.
400	IAM.1028	The number of statements [input statement size] must be greater than 0 and less than or equal to 8.	The policy does not contain any statements or contains more than 8 statements.	Ensure that the policy contains 1 to 8 statements.
400	IAM.1029	The value of Effect must be 'allow' or 'deny'.	The value of **effect** can only be **allow** or **deny**.	Set the **effect** field to **allow** or **deny**.
400	IAM.1030	The Action or NotAction must be a JSONArray.	The **action** or **notAction** field is invalid.	Check whether the value of **action** is correct.

Status Code	Error Code	Error Message	Description	Measure
400	IAM.1031	The Action and NotAction cannot be set at the same time in a statement.	The **action** and **notAction** fields cannot exist at the same time.	Delete the **action** or **notAction** field.
400	IAM.1032	The OCP NotAction cannot be 'allow'.	The **notAction** field cannot be **allow** for organization control policies (OCPs).	Specify the **notAction** field as **deny** for OCP policies.
400	IAM.1033	The number of actions [input action size] exceeds 100.	The number of actions exceeds 100.	Ensure that the number of actions does not exceed 100.
400	IAM.1034	The length [input urn length] of an action URN exceeds 128 characters.	An action contains more than 128 characters.	Ensure that each action does not exceed 128 characters.
400	IAM.1035	Action URN '[input urn]' contains invalid characters.	The action contains invalid characters.	Check whether the value of **action** is correct.
400	IAM.1036	Action '[input action]' has not been registered.	The action has not been registered.	Register the action using APIs of the registration center.
400	IAM.1037	The number of resource URIs [input Resource uri size] must be greater than 0 and less than or equal to 20.	Only 1 to 20 resources are allowed.	Check the number of resources.

Status Code	Error Code	Error Message	Description	Measure
400	IAM.1038	Resource URI '[input resource uri]' is invalid. Old resources only support agencies.	The resource URI is invalid.	Check whether each resource URI is correct.
400	IAM.1039	Old policies do not support conditions.	Old policies cannot contain the **condition** field.	Delete the **condition** field or use the new policy format.
400	IAM.1040	The number of resources [input Resource size] must be greater than 0 and less than or equal to 10.	Only 1 to 10 resource URIs are allowed.	Check the number of URIs of each resource object.
400	IAM.1041	The resource URI cannot be left blank or contain spaces.	A resource URI is empty.	Check whether each resource URI is correct.
400	IAM.1042	The length [input uri length] of a resource URI exceeds 1,500 characters.	A resource URI contains more than 1,500 characters.	Check the length of each resource URI.
400	IAM.1043	A region must be specified.	A region must be specified.	Specify a region in the resource URI.
400	IAM.1044	Region '[input resource region]' of resource '[input resource]' is invalid.	The **region** field is invalid.	Check whether the value of **region** is correct.

Status Code	Error Code	Error Message	Description	Measure
400	IAM.1045	Resource URI '[input resource uri]' or service '[input resource split]' is invalid.	The service name in the resource URI is invalid.	Check whether the service name is correct or register the service first.
400	IAM.1046	Resource URI '[input resource]' or resource type '[input resource split]' is invalid.	The resource type in the resource URI is invalid.	Check whether the resource type is correct or register the resource type first.
400	IAM.1047	Resource URI '[input resource uri]' contains invalid characters.	The resource URI is invalid.	Check whether the resource URI is correct.
400	IAM.1048	Resource URI '[input resource uri]' is too long or contains invalid characters.	The resource URI contains invalid characters.	Check whether the **id** field contains invalid characters.
400	IAM.1049	The Resource must be a JSONObject or JSONArray.	The **resource** object is missing.	Check whether the **resource** object is a JSON array.
400	IAM.1050	The number of conditions [input condition size] must be greater than 0 and less than or equal to 10.	Only 1 to 10 conditions are allowed.	Specify at least one condition or delete unused conditions.

Status Code	Error Code	Error Message	Description	Measure
400	IAM.1051	The values of Operator '[input operator]' cannot be null.	No operator is specified.	Enter a correct operator.
400	IAM.1052	Invalid Attribute '[input attribute]'.	The attribute is invalid.	Check the attribute value.
400	IAM.1053	Attribute '[input attribute]' must be a JSONArray.	The attribute is not a JSON array.	Check whether the attribute object is a JSON array.
400	IAM.1054	The number [input attribute size] of attributes '[input attribute]' for operator '[input operator]' must be greater than 0 and less than or equal to 10.	Each operator can only be used together with 1 to 10 attributes.	Check whether the number of attributes for each operator is correct.
400	IAM.1055	Attribute '[input attribute]' does not match operator '[input operator]'.	The attribute does not match the operator.	Check whether the attribute and operator match.

Status Code	Error Code	Error Message	Description	Measure
400	IAM.1056	The length [condition length] of attribute '[input attribute]' for operator '[input operator]' must be greater than 0 and less than or equal to 1024 characters.	Each condition can contain only 1 to 1024 characters.	Check the total length of the **condition** object.
400	IAM.1057	Value [input condition] of attribute [input attributes] for operator [input operator] contains invalid characters.	The **condition** field contains invalid characters.	Check whether the **condition** field contains invalid characters.
400	IAM.1058	The number of depends [input policyDepends size] exceeds 20.	The number of dependent permissions exceeds 20.	Delete excessive dependent permissions.
400	IAM.1059	Invalid key '{}'.	The policy contains an invalid key.	Modify or delete the invalid key in the policy request body.
400	IAM.1060	The value of key '{}' must be a string.	The value of this field must be a character string.	Change the values of **display_name** and **name** to character strings.
400	IAM.1061	Invalid TOTP passcode.	The authentication key is invalid.	Check the request or contact technical support.

Status Code	Error Code	Error Message	Description	Measure
400	IAM.1062	Login protection has been bound to mfa, the unbinding operation cannot be performed.	Login protection has been enabled and requires virtual MFA device based verification. You cannot unbind the virtual MFA device.	Check the request or contact technical support.
400	IAM.1101	The request body size %s is invalid.	The size of the request body does not meet the requirements.	Check whether the request body is empty or larger than 32 KB.
400	IAM.1102	The %s in the request body is invalid.	The value in the request body is incorrect.	Check the attribute value in the request body by referring to the *API Reference*.
400	IAM.1103	The %s is required in the request body.	The parameter is required but not specified in the request body.	Check the request body by referring to the *API Reference*.
400	IAM.1104	The access key %s is in the blacklist.	The AK in the request has been blacklisted.	Check whether the AK exists.
400	IAM.1105	The access key %s has expired.	The AK in the request has expired.	Create a new access key.
400	IAM.1106	The user %s with access key %s cannot be found.	The AK does not have matching user information.	Check whether the user or agency corresponding to the AK exists.
400	IAM.1107	The access key %s is inactive.	The AK in the request has been disabled.	Enable the AK.

Status Code	Error Code	Error Message	Description	Measure
400	IAM.1108	The securitytoken has expired.	The temporary access key has expired.	Obtain a new temporary access key.
400	IAM.1109	The project information cannot be found.	No project information can be found.	Check whether the project specified in the request body or token exists. If the fault persists, contact technical support.
401	IAM.0001	The request you have made requires authentication.	Authentication failed.	Complete or check the authentication information.
401	IAM.0061	Account locked.	The user has been locked.	Wait until the user is unlocked.
401	IAM.0062	Incorrect password.	Incorrect password.	Enter the correct password.
401	IAM.0063	Access token authentication failed.	Access token authentication failed.	Contact technical support.
401	IAM.0064	The access token does not have permissions for the request.	The IAM user does not have the required permissions.	Check the permissions of the IAM user.
401	IAM.0066	The token has expired.	The token has expired.	Use a valid token.
401	IAM.0067	Invalid token.	Invalid token.	Enter a valid token.
403	IAM.0002	You are not authorized to perform the requested action.	You do not have permission to perform this action.	Check whether you have been granted the permissions required to perform this action.

Status Code	Error Code	Error Message	Description	Measure
403	IAM.0003	Policy doesn't allow %(actions)s to be performed.	The action is not allowed in the policy.	Check whether the action is allowed in the policy.
403	IAM.0080	The user %s with access key %s is disabled.	The user corresponding to the AK has been disabled.	Contact the security administrator of the user.
403	IAM.0081	This user only supports console access, not programmatic access.	The user only has access to the management console.	Contact the security administrator of the user to change the user's access type.
403	IAM.0082	The user %s is disabled.	The user is disabled.	Contact the security administrator of the user.
403	IAM.0083	You do not have permission to access the private region %s.	You do not have permission to access private regions.	Select another region or contact the private region administrator.
404	IAM.0004	Could not find %(target)s: %(target_id)s.	The requested resource cannot be found.	Check the request or contact technical support.
409	IAM.0005	Conflict occurred when attempting to store %(type)s - %(details)s.	A conflict occurs when the requested resource is saved.	Check the request or contact technical support.
410	IAM.0020	Original auth failover to other regions, please auth downgrade	The Auth service in the original region is faulty and has switched to another region.	The system will automatically downgrade the authentication. No action is required.

Status Code	Error Code	Error Message	Description	Measure
429	IAM.0012	The throttling threshold has been reached. Threshold: %d times per %d seconds	The throttling threshold has been reached.	Check the request or contact technical support.
500	IAM.0006	An unexpected error prevented the server from fulfilling your request.	A system error occurred.	Contact technical support.

6.3 Obtaining User, Account, User Group, Project, and Agency Information

Obtaining User, Account, and Project Information

Your username, user ID, account name, account ID, project name, and project ID need to be specified in the URL and request body for calling certain APIs. Obtain these parameters on the **My Credentials** page.

Step 1 Log in to management console.

Step 2 Click the username in the upper right corner, and choose **My Credentials**.

Step 3 On the **My Credentials** page, view the username, user ID, account name, account ID, project name, and project ID.

----End

Obtaining User Group Information

Step 1 Log in to the IAM console, and choose **User Groups** in the navigation pane.

Step 2 Expand the details page of a user group and view the group name and ID.

----End

Obtaining Agency Information

Step 1 Log in to the IAM console, and choose **Agencies** in the navigation pane.

Step 2 Hover the mouse pointer over the agency you want to view. The name and ID of this agency are displayed.

----End

A Change History

Released On	Description
2023-11-20	This is the twenty-fifth official release. • Updated the parameter description in **Granting Permissions to a User Group of a Domain**. • Updated the parameter description in **Granting Permissions to a User Group Corresponding to a Project**.
2023-09-22	This issue is the twenty-fourth official release, which incorporates the following change: Added parameter **access_mode** in **Creating an IAM User (Recommended)**.
2023-07-20	This issue is the twenty-third official release, which incorporates the following change: Modified content in **Obtaining a User Token**.
2023-06-26	This issue is the twenty-second official release, which incorporates the following change: Added **Querying Permissions Assignment Records**.
2023-06-12	This issue is the twenty-first official release. Added error code 429 in **Obtaining a User Token**.
2023-05-05	This issue is the twentieth official release. Modified the content in **Obtaining a User Token**.

Released On	Description
2023-02-20	This issue is the nineteenth official release. Added the following APIs: • **Granting Permissions to a User Group for All Projects** • **Querying All Permissions of an Agency** • **Granting Specified Permissions to an Agency for All Projects** • **Checking Whether an Agency Has Specified Permissions** • **Removing Specified Permissions of an Agency in All Projects**
2023-02-02	This issue is the eighteenth official release. Added the following APIs: • **Querying the Quotas of an Account** • **Creating an IAM User (Recommended)** • **Creating a User** • **Modifying User Information** • **Modifying User Information (Including Email Address and Mobile Number) as an IAM User** • **Modifying User Information (Including Email Address and Mobile Number) as the Administrator** • **Deleting a User** • **Querying Role Assignments (Discarded)** • **Querying the Operation Protection Policy** • **Modifying the Operation Protection Policy** • **Querying the ACL for Console Access** • **Modifying the ACL for Console Access** • **Querying the ACL for API Access** • **Modifying the ACL for API Access** • **Credential** • **Assertion Requests** • **Obtaining a Login Token** • Added descriptions about the web password and API password in **Obtaining a User Token**.
2022-11-30	This issue is the seventeenth official release. Added the following APIs: **Enterprise Project Management**

Released On	Description
2020-12-30	This issue is the fifteenth official release. Added the following APIs: • **Creating a Virtual MFA Device** • **Deleting a Virtual MFA Device** • **Binding a Virtual MFA Device** • **Unbinding a Virtual MFA Device** • **Modifying the Login Protection Configuration of a User**
2020-08-30	This issue is the fourteenth official release. Added the following sections: **Querying the Quotas of a Project** **Querying User Details (Recommended)** **Querying MFA Device Information of Users** **Querying the MFA Device Information of a User** **Querying Login Protection Configurations of Users** **Querying the Login Protection Configuration of a User** **Modifying the Password Policy** **Querying the Password Policy** **Modifying the Login Authentication Policy** **Querying the Login Authentication Policy** **Creating an OpenID Connect Identity Provider** **Updating an OpenID Connect Identity Provider** **Querying an OpenID Connect Identity Provider** **Obtaining a Token with an OpenID Connect ID Token** **Obtaining an Unscoped Token with an OpenID Connect ID Token**
2020-08-03	This issue is the thirteenth official release. Added the following chapter: **Action List**

Released On	Description
2020-03-06	This issue is the twelfth official release. Added the following sections: • **Querying Whether a User Group Corresponding to a Project Has Specific Permissions** • **Removing Specified Permissions of a User Group in All Projects** • **Checking Whether a User Group Has Specified Permissions for All Projects** • **Querying All Permissions of a User Group** • **Listing Custom Policies** • **Querying Custom Policy Details** • **Creating a Custom Policy for Cloud Services** • **Creating a Custom Policy for Agencies** • **Modifying a Custom Policy for Cloud Services** • **Modifying a Custom Policy for Agencies** • **Deleting a Custom Policy**
2019-06-10	This issue is the eleventh official release. Optimized parameter descriptions in the following sections: • **Obtaining a User Token** • **Obtaining an Agency Token** • **Verifying a Token**
2018-08-14	This issue is the tenth official release. Incorporated the following change: Optimized the contents structure.
2018-06-29	This issue is the ninth official release. Incorporated the following change: • Moved **Obtaining Related Parameter Information** from section **API Description** to section **Preparations**. • Added the **password_expires_at** field to the response body in sections **Querying a User List**, **Querying User Details**, and **Querying Users in a User Group**.
2018-03-23	This issue is the eighth official release. Incorporated the following change: • Added section **Obtaining an Unscoped Token (SP Initiated)**. • Added section **Obtaining an Unscoped Token (IdP Initiated)**. • Added section **Querying the Service Catalog**.

Released On	Description
2017-10-27	This issue is the seventh official release. Incorporated the following change: Added the following sections: • **Querying Information and Status of a Specified Project** • **Creating an Agency** • **Obtaining Details of a Specified Agency** • **Modifying an Agency** • **Deleting an Agency** • **Granting Permissions to an Agency for a Project** • **Checking Whether an Agency Has the Specified Permissions on a Project** • **Querying the List of Permissions of an Agency on a Project** • **Deleting Permissions of an Agency on a Project** • **Granting Permissions to an Agency on a Domain** • **Checking Whether an Agency Has the Specified Permissions on a Domain** • **Querying the List of Permissions of an Agency on a Domain** • **Deleting Permissions of an Agency on a Domain**
2017-08-28	This issue is the sixth official release. Incorporated the following change: Added section **Setting the Status of a Specified Project**.
2017-07-27	This issue is the fifth official release. Incorporated the following change: Added the following sections: • **Querying a Region List** • **Querying Region Details** • **Querying Service Details** • **Querying Endpoint Details** • **Creating a Project** • **Modifying Project Data** • **Querying Information About a Specified Project**

Released On	Description
2017-05-26	This issue is the fourth official release. Incorporated the following change: Modified the following sections: • **Querying the User Group to Which a User Belongs** • **Listing User Groups** • **Querying User Group Details** • **Querying Project Information Based on the Specified Criteria** • **Querying a User Project List** • **Querying a Role List** • **Querying Role Details** • **Querying Permissions of a User Group Under a Domain** • **Querying Permissions of a User Group Corresponding to a Project** • **Granting Permissions to a User Group Corresponding to a Project** • **Querying the Identity Provider List** • **Querying an Identity Provider** • **Updating a SAML Identity Provider** • **Querying Services**

Released On	Description
2017-04-27	This issue is the third official release. Incorporated the following changes: • Added the following sections: – **Deleting a User from a User Group** – **Listing User Groups** – **Querying User Group Details** – **Creating a User Group** – **Adding a User to a User Group** – **Updating a User Group** – **Deleting a User Group** – **Querying Whether a User Belongs to a User Group** – **Querying a Role List** – **Querying Role Details** – **Querying Permissions of a User Group Under a Domain** – **Querying Permissions of a User Group Corresponding to a Project** – **Granting Permissions to a User Group of a Domain** – **Granting Permissions to a User Group Corresponding to a Project** – **Deleting Permissions of a User Group Corresponding to a Project** – **Deleting Permissions of a User Group of a Domain** – **Querying Whether a User Group Under a Domain Has Specific Permissions** – **Querying Whether a User Group Corresponding to a Project Has Specific Permissions** • Modified the content structure based on API types.
2017-03-30	This issue is the second official release. Incorporated the following changes: Added section **Querying Information About Keystone API Version 3.0**.
2016-12-30	This issue is the first official release.