

OneAccess

API Reference

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1 Before You Start

Welcome to OneAccess. OneAccess is an identity management service that enables you to centrally manage, authenticate, and authorize identities. With OneAccess, you can control access of your users to cloud and on-premises applications, and defend against access risks.

This document describes how to perform operations on OneAccess using the following types of APIs:

- Management APIs: for administrators to manage users, organizations, and applications.
- User APIs: for users to log in, log out, and manage their passwords.
- Application integration APIs: for downstream applications to implement single sign-on (SSO) and other functions.

If you plan to access OneAccess through an API, ensure that you are familiar with OneAccess concepts. For details, see [Service Overview](#).

Endpoints

An endpoint is the **request address** for calling an API. Endpoints vary depending on services and regions.

OneAccess is a global service. You do not need to specify an endpoint when you call OneAccess APIs. You only need to specify the user access domain name. For details, see [Obtaining the User Access Domain Name](#).

Concepts

- Enterprise administrator
Enterprise administrators include the account administrator and users who have administrator permissions for OneAccess. Enterprise administrators manage users, user groups, organizations, applications, and APIs in the administrator portal.
- System administrator
System administrators are created by enterprise administrators in Identity and Access Management (IAM). They can access the organizations, users, and applications menus in the administrator portal but cannot create administrators.

- User
Users include employees, partners, and customers who use enterprise applications. They can log in to the user portal to access and use applications.

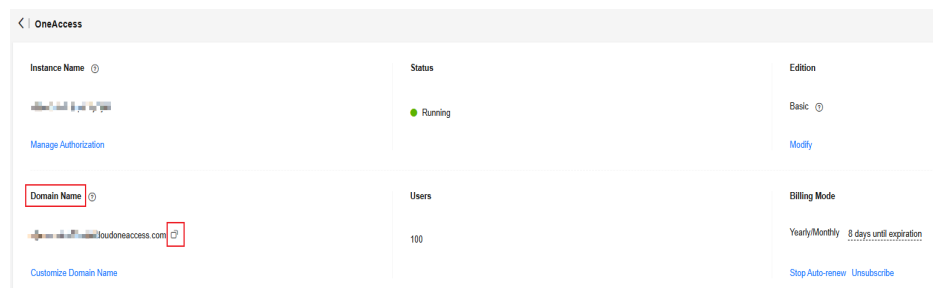
Obtaining the User Access Domain Name

When calling a OneAccess API, you must specify the user access domain name **{domain_name}** in the request header.

As a OneAccess instance creator, you can obtain the user access domain name on the OneAccess console. The procedure is as follows:

- Step 1** Log in to the OneAccess console as an administrator.
- Step 2** Click **Copy** next to the user access domain name under **Domain Name**.

Figure 1-1 Obtaining the user access domain name



----End

2 API Overview

OneAccess provides management, user, and application integration APIs.

Table 2-1 OneAccess APIs

Type	Subtype	Description
Management APIs	Access credentials	Obtain an access credential.
	User management	Create, modify, and delete users, grant permissions to users, and query user information.
	Organization management	Create, modify, delete, and query organizations.
	Application organization management	Update, delete, add, and query application organizations.
	Application account management	Update, disable, enable, delete, add, and query application accounts.
	Application role management	Update, delete, add, and query application roles and members.
User APIs	System APIs	Obtain the server time and public key.

Type	Subtype	Description
	Registration	Register using a mobile number and SMS verification code.
	Verification Code	Obtain and verify a CAPTCHA code, obtain an international country code, and send an SMS verification code.
	Login and Logout	Log in via username/password, SMS verification code, WeChat, or Alipay, and log out.
	Social Media Accounts	Register and log in to a social media account, bind/unbind a mobile number, and list the bound social media accounts.
	Password Management	Skip password change when the password is about to expire or has expired, check personal password settings, and reset the password using a mobile number.
	MFA	Obtain the mobile number using state_token and complete authentication via SMS verification code.
	Personal Information Management	Query and modify personal information, including the mobile number.
	SSO	Obtain sso_ticket with session_token , obtain user information with sso_ticket , and refresh session_token .
	ID Token Management	Generate id_token using session_token .
Application integration APIs	CAS-based application authentication	Log in, validate tickets, and log out.
	SAML 2.0-based application authentication	Obtain identity provider metadata and perform IdP-initiated SSO.

Type	Subtype	Description
	OAuth2.0-based application authentication	Log in to obtain an authorization code, obtain an access token, and query user information.
	OIDC-based application authentication	Perform implicit grant, log in to obtain an authorization code, obtain an ID token, and refresh the access token.
	Logout	Log out of sessions to exit all applications.

3 OneAccess APIs

3.1 Management APIs

3.1.1 Calling APIs

3.1.1.1 Making an API Request

This section describes the structure of an API request, and uses the OneAccess management API for obtaining an access credential as an example to demonstrate how to call an API. The obtained access credential can then be used to call other management APIs.

Prerequisites

Before calling APIs, ensure that your administrator has authorized them by referring to [Authorizing APIs](#), and obtain **ClientId** and **ClientSecret** of added applications in the administrator portal from [Basic Information](#).

Request URI

A request URI is in the following format:

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

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

- **URI-scheme:** Protocol used to transmit requests. All APIs use HTTPS.
- **domain_name:** User access domain name that you must specify when you call a OneAccess API. For details about how to obtain the domain name, see [Obtaining the User Access Domain Name](#).
- **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 an access credential is **/api/v2/tenant/token**.

- **query-string**: An optional query parameter. 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 access credential for the domain name **abcdefg.huaweioneaccess.com**, provide this domain name and obtain the **resource-path (/api/v2/tenant/token)** in the URI of the API used to obtain an access credential. Then, construct the URI as follows:

```
https://abcdefg.huaweioneaccess.com/api/v2/tenant/token
```

Figure 3-1 Example URI



NOTE

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

Request Methods

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

- **GET**: requests the server to return specified resources.
- **PUT**: requests the server to update specified resources.
- **POST**: requests the server to add resources or perform special operations.
- **DELETE**: requests the server to delete specified resources, for example, an object.
- **HEAD**: requests the server to return the response header only.
- **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 an access credential, the request method is **POST**. The request is as follows:

```
POST https://abcdefg.huaweioneaccess.com/api/v2/tenant/token
```

Request Header

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

Table 3-1 Common request header fields

Name	Description	Mandatory	Example
Content-Type	Specifies the request body type or format. The default value is application/json . Other values of this field will be provided for specific APIs if any.	Yes	application/json
Accept	Response type. The default value application/json is recommended. Other values of this field will be provided for specific APIs if any.	No	application/json
Content-Length	Length of the request body, in bytes.	No	3495
Authorization	Authentication credential. For example, you can set this field to Bearer <i>{access_token}</i> when you call the API used to query user information.	No	Bearer {access_token}

The API used to obtain an access credential 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://{domain_name}/api/v2/tenant/token
Content-Type: application/x-www-form-urlencoded
```

(Optional) Request Body

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

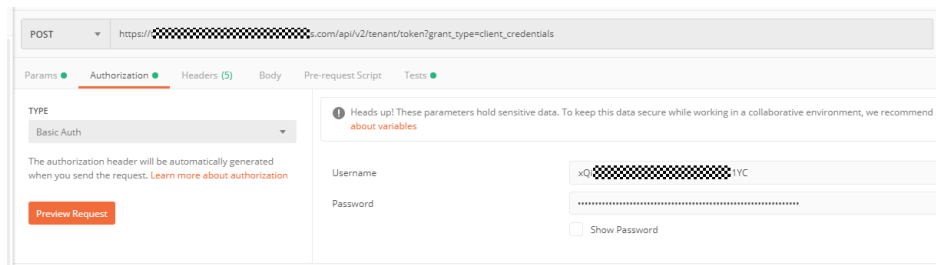
The request body varies between APIs. Some APIs do not require the request body, such as the APIs requested using the GET and DELETE methods.

In the case of the API used to obtain an access credential, 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* and *Password* with the API credential ID and secret assigned after application registration.

```
POST https://{domain_name}/api/v2/tenant/token?grant_type=client_credentials
Content-Type: application/x-www-form-urlencoded
Authorization: Basic
eFFp*****bzZaNg==
```

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 an access credential, **Authorization** is the desired access credential. This access credential can then be used to authenticate the calling of other APIs.

This is a Postman calling example.



3.1.1.2 Response

Status Code

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

A status code is a group of digits, ranging from 1xx to 5xx. It indicates the status of a request.

For example, if status code **200** is returned for calling the API used to obtain an access credential, the request is successful.

(Optional) Response Header

This part is optional.

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

The API used to obtain an access credential does not return a response header.

(Optional) Response Body

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

The following is part of the response body for the API used to obtain an access credential.

```
{
  "access_token": "334*****140...",
  "token_type": "Bearer",
  "expires_in": 1719,
  "scope": "all",
  "id_token": "eyJ*****pYW..."
}
```

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

```
{
  "error": "invalid_client",
  "error_description": "Bad client credentials"
}
```

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

3.1.2 Access Credentials

3.1.2.1 Obtaining an Access Credential

Function

This API is used to obtain the application API access credential. A token is valid for 30 minutes by default. You can configure the validity period in "Administrator Portal" > "Settings" > "Service Settings" > "API Authentication". Cache your 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.

Constraints

null

URI

POST /api/v2/tenant/token

Request Parameters

Table 3-2 FormData parameters

Parameter	Mandatory	Type	Description
grant_type	Yes	String	Grant type. The value is fixed at client_credentials.
client_id	Yes	String	Application ID, which is a client ID allocated to an application after registration.
client_secret	Yes	String	Application secret, which is a client secret allocated to an application after registration.

Response Parameters

Status code: 200

Table 3-3 Response body parameters

Parameter	Type	Description
access_token	String	Authentication credential, which is used to call management APIs.
token_type	String	Authentication credential type. This value is fixed at Bearer.
expires_in	Integer	Time when the token will expire. Unit: second. Default value: 1,800.
scope	String	Authorization scope of the obtained access token.
id_token	String	Authorized access ID token.

Status code: 400

Table 3-4 Response body parameters

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

Example Requests

Obtain the credential, namely, the API authentication token, by using the application client ID and client secret.

```
POST https://{domain_name}/api/v2/tenant/token
Content-Type: application/x-www-form-urlencoded
client_id=ONtQq2igSggfFClyGgzmuXR8ubWEP...&
client_secret=XdqUmJpG19hNEHz3472XsPcwwfe...&
grant_type=client_credentials
```

Example Responses

Status code: 200

Request successful.

```
{
  "access_token" : "334*****140",
```

```

"token_type" : "Bearer",
"expires_in" : 1719,
"scope" : "all",
"id_token" : "eyJ*****Is.eyJ*****Yo.EL*****YW"
}
    
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.3 User Management

3.1.3.1 Creating a User

Function

This API is used to create a user.

Constraints

null

URI

POST /api/v2/tenant/users

Request Parameters

Table 3-5 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Table 3-6 Request body parameters

Parameter	Mandatory	Type	Description
user_name	Yes	String	Username, which is a unique identifier in an enterprise. You can modify mandatory attributes on the User Attributes page under the Users menu on the administrator portal.
password	No	String	Password, which must be in the format defined by the enterprise.
mobile	Yes	String	Mobile number, which is unique in an enterprise. You can modify mandatory attributes on the User Attributes page under the Users menu on the administrator portal.
org_code	No	String	Main organization code. Enter an existing organization code in an enterprise. If the value is empty, the organization is under the first root organization.
name	No	String	Real name. If the value is null, which means it is set to user_name. You can modify mandatory attributes on the User Attributes page under the Users menu on the administrator portal.
email	No	String	Email address. You can modify mandatory attributes on the User Attributes page under the Users menu on the administrator portal.
employee_id	No	String	Employee ID. You can modify mandatory attributes on the User Attributes page under the Users menu on the administrator portal.

Parameter	Mandatory	Type	Description
first_name	No	String	Name. You can modify mandatory attributes on the User Attributes page under the Users menu on the administrator portal.
middle_name	No	String	Middle name. You can modify mandatory attributes on the User Attributes page under the Users menu on the administrator portal.
last_name	No	String	Last name. You can modify mandatory attributes on the User Attributes page under the Users menu on the administrator portal.
pwd_must_modify	No	Boolean	Whether the password must be changed upon the first login.
attr_gender	No	String	Gender. You can modify mandatory attributes on the User Attributes page under the Users menu on the administrator portal.
attr_birthday	No	String	Date of birth. Format: yyyy-mm-dd. You can modify mandatory attributes on the User Attributes page under the Users menu on the administrator portal.
attr_nickname	No	String	Alias. You can modify mandatory attributes on the User Attributes page under the Users menu on the administrator portal.
attr_identity_type	No	String	Certificate type.
attr_identity_number	No	String	Certificate number.
attr_area	No	String	Country or region code.
attr_city	No	String	City.
attr_manager_id	No	String	Immediate superior.

Parameter	Mandatory	Type	Description
attr_user_type	No	String	Personnel type.
attr_hire_date	No	String	Onboarding date. Format: yyyy-MM-dd.
attr_work_place	No	String	Work location.
user_org_relation_list	No	Array of UserOrgRelationListOption objects	User organization relationship set. If you enter a value, the main organization information must be included.
extension	No	Object	Custom extended attribute.

Table 3-7 UserOrgRelationListOption

Parameter	Mandatory	Type	Description
orgCode	Yes	String	Organization code.
relationType	Yes	String	Ownership. A user only belongs to one organization and can be mounted to a maximum of nine organizations.

Response Parameters

Status code: 201

Table 3-8 Response body parameters

Parameter	Type	Description
user_id	String	User ID.

Status code: 400

Table 3-9 Response body parameters

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

Example Requests

Create a user whose username is zhangsan, mobile number is 12345678901, and email address is zhangsan@example.com.

```
POST https://{domain_name}/api/v2/tenant/users

Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
{
  "user_name": "zhangsan",
  "password": "p*****d",
  "org_code": "10000",
  "name": "zhangsan",
  "mobile": "12345678901",
  "email": "zhangsan@example.com",
  "employee_id": "123456789",
  "pwd_must_modify": false,
  "first_name": "F",
  "middle_name": "M",
  "last_name": "L",
  "attr_gender": "male",
  "attr_birthday": "1990-02-01",
  "attr_nick_name": "zhangsan",
  "attr_identity_type": "id_card",
  "attr_identity_number": "123456789",
  "attr_area": "CN",
  "attr_city": "xxx",
  "attr_manager_id": "123456789",
  "attr_user_type": "regular",
  "attr_hire_date": "2021-04-01",
  "attr_work_place": "xxx",
  "user_org_relation_list": [
    {
      "orgCode": "10000",
      "relationType": 1
    },
    {
      "orgCode": "TestOrg1",
      "relationType": 0
    },
    {
      "orgCode": "TestOrg2",
      "relationType": 0
    }
  ],
  "extension": {
    "age": "18"
  }
}
```

Example Responses

Status code: 201

Request successful.

```
{
  "user_id" : "20210621095935811-5E16-6B3060..."
}
```

Status Codes

Status Code	Description
201	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.3.2 Modifying a User

Function

This API is used to modify a user.

Constraints

null

URI

PUT /api/v2/tenant/users/{user_id}

Table 3-10 Path Parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

Table 3-11 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Table 3-12 Request body parameters

Parameter	Mandatory	Type	Description
user_name	No	String	Username, which is a unique identifier in an enterprise.
mobile	No	String	Mobile number, which is unique in an enterprise.
org_code	No	String	Organization code.
name	No	String	Real name.
email	No	String	Email address.
employee_id	No	String	Employee ID.
first_name	No	String	Name.
middle_name	No	String	Middle name.
last_name	No	String	Last name.
pwd_must_modify	No	Boolean	Whether the password must be changed upon the first login.
attr_gender	No	String	Gender.
attr_birthday	No	String	Date of birth. Format: yyyy-mm-dd.
attr_nickname	No	String	Alias.
attr_identity_type	No	String	Certificate type.
attr_identity_number	No	String	Certificate number.
attr_area	No	String	Country or region code.
attr_city	No	String	City.
attr_manager_id	No	String	Immediate superior.
attr_user_type	No	String	Personnel type.
attr_hire_date	No	String	Onboarding date. Format: yyyy-MM-dd.
attr_workplace	No	String	Work location.
user_org_relation_list	No	UserOrgRelationListOption object	List of organizations to which the user belongs.

Parameter	Mandatory	Type	Description
extension	No	Object	Custom extended attribute.

Table 3-13 UserOrgRelationListOption

Parameter	Mandatory	Type	Description
orgCode	Yes	String	Organization code.
relationType	Yes	String	Ownership. A user only belongs to one organization and can be mounted to a maximum of nine organizations.

Response Parameters

Status code: 200

Table 3-14 Response body parameters

Parameter	Type	Description
user_id	String	User ID.

Status code: 400

Table 3-15 Response body parameters

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

Example Requests

Modify the username to zhangsan, mobile number to 12345678901, and email address to zhangsan@example.com.

```
PUT https://{domain_name}/api/v2/tenant/users/{user_id}
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

```
{
  "user_name": "zhangsan",
  "org_code": "10000",
  "name": "zhangsan",
```

```

"mobile": "12345678901",
"email": "zhangsan@example.com",
"employee_id": "123456789",
"pwd_must_modify": false,
"first_name": "F",
"middle_name": "M",
"last_name": "L",
"attr_gender": "male",
"attr_birthday": "1990-02-01",
"attr_nick_name": "zhangsan",
"attr_identity_type": "id_card",
"attr_identity_number": "123456789",
"attr_area": "CN",
"attr_city": "xxx",
"attr_manager_id": "123456789",
"attr_user_type": "regular",
"attr_hire_date": "2021-04-01",
"attr_work_place": "xxx",
"user_org_relation_list": [
  {
    "orgCode": "10000",
    "relationType": 1
  },
  {
    "orgCode": "TestOrg1",
    "relationType": 0
  },
  {
    "orgCode": "TestOrg2",
    "relationType": 0
  }
],
"extension": {
  "age": "18"
}
}

```

Example Responses

Status code: 200

Request successful.

```

{
  "user_id" : "20210621095935811-5E16-6B3060..."
}

```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.3.3 Deleting a User

Function

This API is used to delete a user.

Constraints

null

URI

DELETE /api/v2/tenant/users/{user_id}

Table 3-16 Path Parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

Table 3-17 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 400

Table 3-18 Response body parameters

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

Example Requests

Delete a specified user based on the transferred user ID.

```
DELETE https://{domain_name}/api/v2/tenant/users/{user_id}
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

None

Status Codes

Status Code	Description
204	Request successful.
400	Authentication failed.

Error Codes

See [Error Codes](#).

3.1.3.4 Enabling a User

Function

This API is used to enable a user.

Constraints

null

URI

PUT /api/v2/tenant/users/{user_id}/enable

Table 3-19 Path Parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

Table 3-20 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 200

Table 3-21 Response body parameters

Parameter	Type	Description
user_id	String	User ID.

Status code: 400

Table 3-22 Response body parameters

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

Example Requests

Enable a user based on the transferred user ID.

```
PUT https://{domain_name}/api/v2/tenant/users/{user_id}/enable
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

Status code: 200

Request successful.

```
{
  "user_id" : "20210621095935811-5E16-6B3060..."
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.3.5 Disabling a User

Function

This API is used to disable a user.

Constraints

null

URI

PUT /api/v2/tenant/users/{user_id}/disable

Table 3-23 Path Parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

Table 3-24 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 200

Table 3-25 Response body parameters

Parameter	Type	Description
user_id	String	User ID.

Status code: 400

Table 3-26 Response body parameters

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

Example Requests

Disable a user based on the transferred user ID.

```
PUT https://{domain_name}/api/v2/tenant/users/{user_id}/disable
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

Status code: 200

Request successful.

```
{
  "user_id" : "20210621095935811-5E16-6B3060..."
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.3.6 Changing a User Password

Function

This API is used to change a user password.

Constraints

null

URI

PUT /api/v2/tenant/users/{user_id}/change-password

Table 3-27 Path Parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

Table 3-28 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Table 3-29 Request body parameters

Parameter	Mandatory	Type	Description
password	Yes	String	New password.
pwd_must_modify	No	Boolean	Whether the password must be changed upon the first login.

Response Parameters

Status code: 200

Table 3-30 Response body parameters

Parameter	Type	Description
user_id	String	User ID.

Status code: 400

Table 3-31 Response body parameters

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

Example Requests

Modify the user password to 12345678 and not requiring password change upon first login.

```
PUT https://{domain_name}/api/v2/tenant/users/{user_id}/change-password
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

```
{
  "password":"12345678",
  "pwd_must_modify":false
}
```

Example Responses

Status code: 200

Request successful.

```
{
  "user_id" : "20210621095935811-5E16-6B3060..."
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.3.7 Verifying and Modifying the Original User Password

Function

Verify and modify the original user password.

Constraints

null

URI

PUT /api/v2/tenant/users/{user_id}/change-password-verify

Table 3-32 Path Parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

Table 3-33 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Table 3-34 Request body parameters

Parameter	Mandatory	Type	Description
password	Yes	String	New password.
old_password	Yes	String	Original password.

Response Parameters

Status code: 200

Table 3-35 Response body parameters

Parameter	Type	Description
user_id	String	User ID.

Status code: 400

Table 3-36 Response body parameters

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

Example Requests

Verify and modify the original user password.

```
PUT https://{domain_name}/api/v2/tenant/users/{user_id}/change-password-verify
```

Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...

```
{
  "password": "N*****8",
  "old_password": "O*****4"
}
```

Example Responses

Status code: 200

Request successful.

```
{
  "user_id": "20210621095935811-5E16-6B3060..."
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.3.8 Querying User Details by User ID

Function

This API is used to query user details based on the user ID.

URI

GET /api/v2/tenant/users/{user_id}

Table 3-37 Path Parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

Table 3-38 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 200

Table 3-39 Response body parameters

Parameter	Type	Description
user_id	String	User ID.
org_id	String	Organization to which the user belongs.
user_name	String	Username.
name	String	Real name.
mobile	String	Mobile number.
email	String	Email address.

Parameter	Type	Description
pwd_must_modify	Boolean	Whether the password must be changed upon the first login.
pwd_change_at	String	Password change time.
created_at	String	Creation time.
updated_at	String	Last modification time.
disabled	Boolean	Whether disabled.
grade	Integer	Trust level.
locked	String	Whether locked.
extension	Object	Custom extended attribute.
user_org_relation_list	Array of UserOrgRelation-ListResult objects	User organization relationship set.

Table 3-40 UserOrgRelationListResult

Parameter	Type	Description
org_id	String	Organization ID.
relation_type	String	Relationship type.

Status code: 400

Table 3-41 Response body parameters

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

Example Requests

Query user details based on the transferred user ID.

```
GET https://{domain_name}/api/v2/tenant/users/{user_id}
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

Status code: 200

Request successful.

```
{
  "user_id" : "20220413165737132-3BA0-91FCA2CB7",
  "org_id" : "20220117125622909-9346-35755733F",
  "user_name" : "zhangsan",
  "name" : "zhangsan",
  "mobile" : "12345678901",
  "email" : "zhangsan@example.com",
  "pwd_must_modify" : true,
  "pwd_change_at" : "2022-04-14 10:14:01.988",
  "created_at" : "2022-04-13 16:57:36.532",
  "updated_at" : "2022-04-14 10:14:01.979",
  "disabled" : false,
  "grade" : 1,
  "locked" : false,
  "extension" : { },
  "user_org_relation_list" : [ {
    "org_id" : "20220117125622909-9346-35755733F",
    "relation_type" : 1
  }, {
    "org_id" : "20220415103506608-AF59-5CC9081B9",
    "relation_type" : 0
  } ]
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.3.9 Querying User Details by Username

Function

This API is used to query user details by username.

Constraints

null

URI

POST /api/v2/tenant/users/user-by-username

Request Parameters

Table 3-42 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Table 3-43 Request body parameters

Parameter	Mandatory	Type	Description
user_name	Yes	String	User real name.

Response Parameters

Status code: 200

Table 3-44 Response body parameters

Parameter	Type	Description
user_id	String	User ID.
org_id	String	Organization to which the user belongs.
user_name	String	Username.
name	String	Real name.
mobile	String	Mobile number.
email	String	Email address.
pwd_must_modify	Boolean	Whether the password must be changed upon the first login.
pwd_change_at	String	Password change time.
created_at	String	Creation time.
updated_at	String	Last modification time.
disabled	Boolean	Whether disabled.

Parameter	Type	Description
grade	Integer	Trust level.
locked	String	Whether locked.
extension	Object	Custom extended attribute.
user_org_relation_list	Array of UserOrgRelationListResult objects	User organization relationship set.

Table 3-45 UserOrgRelationListResult

Parameter	Type	Description
org_id	String	Organization ID.
relation_type	String	Relationship type.

Status code: 400

Table 3-46 Response body parameters

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

Example Requests

Query user details based on the username. The username is zhangsan.

```
POST https://{domain_name}/api/v2/tenant/users/user-by-username
{
  "user_name" : "zhangsan"
}
```

Example Responses

Status code: 200

Request successful.

```
{
  "user_id" : "20220413165737132-3BA0-91FCA2CB7",
  "org_id" : "20220117125622909-9346-35755733F",
  "user_name" : "zhangsan",
  "name" : "zhangsan",
  "mobile" : "12345678901",
  "email" : "zhangsan@example.com",
```

```

"pwd_must_modify" : true,
"pwd_change_at" : "2022-04-14 10:14:01.988",
"created_at" : "2022-04-13 16:57:36.532",
"updated_at" : "2022-04-14 10:14:01.979",
"disabled" : false,
"grade" : 1,
"locked" : false,
"extension" : { },
"user_org_relation_list" : [ {
  "org_id" : "20220117125622909-9346-35755733F",
  "relation_type" : 1
}, {
  "org_id" : "20220415103506608-AF59-5CC9081B9",
  "relation_type" : 0
} ]
}

```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.3.10 Querying the User List

Function

This API is used to query the user list.

Constraints

null

URI

GET /api/v2/tenant/users

Table 3-47 Query Parameters

Parameter	Mandatory	Type	Description
org_id	Yes	String	Organization ID. The value can be null, which means querying all users.
offset	Yes	Integer	Page number.

Parameter	Mandatory	Type	Description
limit	Yes	Integer	Number of data records on each page.

Request Parameters

Table 3-48 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 200

Table 3-49 Response body parameters

Parameter	Type	Description
total	Long	Total number of users.
users	Array of UsersDetailsResult objects	User list.

Table 3-50 UsersDetailsResult

Parameter	Type	Description
user_id	String	User ID.
org_id	String	Organization to which the user belongs.
user_name	String	Username.
name	String	Real name.
mobile	String	Mobile number.
email	String	Email address.

Parameter	Type	Description
pwd_must_modify	Boolean	Whether the password must be changed upon the first login.
pwd_change_at	String	Password change time.
created_at	String	Creation time.
updated_at	String	Last modification time.
disabled	Boolean	Whether disabled.
grade	Integer	Trust level.
locked	String	Whether locked.
extension	Object	Custom extended attribute.
user_org_relation_list	Array of UserOrgRelation-ListResult objects	User organization relationship set.

Table 3-51 UserOrgRelationListResult

Parameter	Type	Description
org_id	String	Organization ID.
relation_type	String	Relationship type.

Status code: 400

Table 3-52 Response body parameters

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

Example Requests

Query the first 10 users for all organizations.

```
GET https://{domain_name}/api/v2/tenant/users?org_id=&offset=0&limit=10
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

Status code: 200

Request successful.

```
{
  "total" : 1,
  "users" : [ {
    "extension" : { },
    "user_name" : "zhangsan",
    "mobile" : "12345678901",
    "created_at" : "2022-03-31 16:46:02.964",
    "pwd_must_modify" : false,
    "updated_at" : "2022-03-31 16:48:44.073",
    "user_id" : "20220331164602949-904C-D475B60AE",
    "org_id" : "20220331135144180-0FA5-EE3B69068",
    "grade" : 1,
    "name" : "zhangsan",
    "disabled" : false,
    "pwd_change_at" : "2022-03-31 16:47:51.481",
    "locked" : false,
    "user_org_relation_list" : [ {
      "org_id" : "20220331135144180-0FA5-EE3B69068",
      "relation_type" : 1
    }, {
      "org_id" : "20220415103506608-AF59-5CC9081B9",
      "relation_type" : 0
    } ]
  } ]
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.3.11 Authorizing an Application Account

Function

This API is used to grant the application access permission to a user and create an application account for the user in the application.

Constraints

null

URI

POST /api/v2/tenant/users/{user_id}/applications/{application_id}/accounts

Table 3-53 Path Parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.
application_id	Yes	String	Application ID.

Request Parameters

Table 3-54 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Table 3-55 Request body parameters

Parameter	Mandatory	Type	Description
account_name	No	String	(Optional) Name of the application account created in the application for the user. The value can be null, which means the username is used by default.

Response Parameters

Status code: 200

Table 3-56 Response body parameters

Parameter	Type	Description
account_id	String	Application account ID.

Status code: 400

Table 3-57 Response body parameters

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

Example Requests

Authorize an application account named Test01 by creating it for the application ID.

```
POST https://{domain_name}/api/v2/tenant/users/{user_id}/applications/{application_id}/accounts
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
{
  "account_name":"Test01"
}
```

Example Responses

Status code: 200

Request successful.

```
{
  "account_id" : "20210621095931341-4CB3-122995..."
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.3.12 Querying All Authorized Application Accounts of a User

Function

This API is used to query all authorized application accounts of a user.

Constraints

null

URI

GET /api/v2/tenant/users/{user_id}/accounts

Table 3-58 Path Parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	User ID.

Request Parameters

Table 3-59 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 200

Table 3-60 Response body parameters

Parameter	Type	Description
total	Integer	Total number.
accounts	Array of Accounts objects	Application account list.

Table 3-61 Accounts

Parameter	Type	Description
id	String	Application account ID.
application_id	String	Application ID.
account_name	String	Application account name.
account_type	String	Application account type.
name	String	Real name.

Parameter	Type	Description
extension	Object	Custom extended attribute.

Status code: 400

Table 3-62 Response body parameters

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

Example Requests

Query all authorized application accounts of a user based on the transferred user_id.

```
GET https://{domain_name}/api/v2/tenant/users/{user_id}/accounts
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

Status code: 200

Request successful.

```
{
  "total" : 1,
  "accounts" : [ {
    "id" : "20210621095952398-57D5-B75A129DB",
    "account_name" : "Test01",
    "account_type" : "BASIC_ACCOUNT",
    "application_id" : "20210621095843929-CC99-9E7B3BC1F",
    "name" : "test",
    "extension" : { }
  } ]
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.4 Organization Management

3.1.4.1 Creating an Organization

Function

This API is used to create an organization.

Constraints

null

URI

POST /api/v2/tenant/organizations

Request Parameters

Table 3-63 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Table 3-64 Request body parameters

Parameter	Mandatory	Type	Description
code	Yes	String	Organization code. The value can contain letters, digits, underscores (_), and hyphens (-).
name	Yes	String	Organization name, which is unique at the level. The value can contain letters, digits, spaces, hyphens (-), underscores (_), and ampersands (&).

Parameter	Mandatory	Type	Description
parent_id	No	String	Parent organization ID. This parameter needs to be transferred only when a sub-organization is created.
category	No	String	Organization type.

Response Parameters

Status code: 201

Table 3-65 Response body parameters

Parameter	Type	Description
org_id	String	Organization ID.

Status code: 400

Table 3-66 Response body parameters

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

Example Requests

Create an organization. Organization name: subdepartment; organization code: 1000001; parent organization code: 20210623103509267-6ABA-201FFC...; organization type: department.

```
POST https://{domain_name}/api/v2/tenant/organizations
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
{
  "code": "1000001",
  "name": "subdepartment",
  "parent_id": "20210623103509267-6ABA-201FFC...",
  "category": "department"
}
```

Example Responses

Status code: 201

Creation successful.

```
{
  "org_id" : "20210623103509267-6ABA-201FFC..."
}
```

Status Codes

Status Code	Description
201	Creation successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.4.2 Modifying an Organization

Function

This API is used to modify a specified organization.

Constraints

null

URI

PUT /api/v2/tenant/organizations/{org_id}

Table 3-67 Path Parameters

Parameter	Mandatory	Type	Description
org_id	Yes	String	Organization ID.

Request Parameters

Table 3-68 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Table 3-69 Request body parameters

Parameter	Mandatory	Type	Description
code	No	String	Organization code. If this parameter is left empty, the organization code is not changed by default. The value can contain letters, digits, underscores (_), and hyphens (-).
name	No	String	Organization name. If this parameter is left empty, the organization name is not changed by default. The value can contain letters, digits, spaces, hyphens (-), underscores (_), and ampersands (&).
parent_id	No	String	Parent organization ID.
category	No	String	Organization type.

Response Parameters

Status code: 200

Table 3-70 Response body parameters

Parameter	Type	Description
org_id	String	Organization ID.

Status code: 400

Table 3-71 Response body parameters

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

Example Requests

Modify organization information. Organization code: TestOrg; organization name: testing organization; parent organization: root organization; organization type: department.

```
PUT https://{domain_name}/api/v2/tenant/organizations/{org_id}
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

```
{
  "code": "TestOrg",
  "name": "testing organization",
  "parent_id": "",
  "category": "department"
}
```

Example Responses

Status code: 200

Request successful.

```
{
  "org_id" : "20210623103509267-6ABA-201FFC..."
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.4.3 Deleting an Organization

Function

This API is used to delete a specified organization.

Constraints

null

URI

DELETE /api/v2/tenant/organizations/{org_id}

Table 3-72 Path Parameters

Parameter	Mandatory	Type	Description
org_id	Yes	String	ID of the organization to be deleted. If a sub-organization exists, the organization cannot be deleted.

Request Parameters

Table 3-73 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 400

Table 3-74 Response body parameters

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

Example Requests

Delete the organization based on the organization ID.

```
DELETE https://{domain_name}/api/v2/tenant/organizations/{org_id}
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

None

Status Codes

Status Code	Description
204	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.4.4 Querying Organization Details

Function

This API is used to query organization details by organization ID.

Constraints

null

URI

GET /api/v2/tenant/organizations/{org_id}

Table 3-75 Path Parameters

Parameter	Mandatory	Type	Description
org_id	Yes	String	Organization ID.

Request Parameters

Table 3-76 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 200

Table 3-77 Response body parameters

Parameter	Type	Description
org_id	String	Organization ID.
org_code	String	Organization ID, which is globally unique.
name	String	Organization name, which is unique at the corresponding level.
parent_id	String	Parent organization ID.
category	String	Organization type.

Status code: 400

Table 3-78 Response body parameters

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

Example Requests

Query an organization details based on the organization ID.

```
GET https://{domain_name}/api/v2/tenant/organizations/{org_id}
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

Status code: 200

Request successful.

```
{
  "org_id" : "20220412142914549-1E50-B49C521A4",
  "parent_id" : "20220412105608948-3B83-D566C6D94",
  "name" : "Testing organization",
  "category" : "department",
  "org_code" : "TestOrg"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.4.5 Querying the Organization List

Function

This API is used to query a specified organization and its sub-organizations.

Constraints

null

URI

GET /api/v2/tenant/organizations

Table 3-79 Query Parameters

Parameter	Mandatory	Type	Description
all_child	No	Boolean	Whether to obtain sub-organizations of all levels.
limit	Yes	Integer	Number of data records on each page.
offset	Yes	Integer	Page number.

Parameter	Mandatory	Type	Description
org_id	No	String	<p>Organization ID.</p> <p>When the value of org_id is null and that of all_child is false, all root organizations (organizations of the highest level) are returned.</p> <p>When the value of org_id is null and that of all_child is true, in addition to the returned root organization, all sub-organizations are returned.</p> <p>When the value of org_id is orgId and that of all_child is true, this organization and its sub-organizations of all levels are returned.</p> <p>When the value of org_id is orgId and that of all_child is false, this organization and its lower-level organizations are returned.</p>

Request Parameters

Table 3-80 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 200

Table 3-81 Response body parameters

Parameter	Type	Description
total	Long	Total number of organizations.

Parameter	Type	Description
organizations	Array of ResponseOrgInfo objects	Organization list.

Table 3-82 ResponseOrgInfo

Parameter	Type	Description
org_id	String	Organization ID.
org_code	String	Organization ID, which is globally unique.
name	String	Organization name, which is unique at the corresponding level.
parent_id	String	Parent organization ID.
category	String	Organization type.

Status code: 400

Table 3-83 Response body parameters

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

Example Requests

Query an organization list in pagination mode. In addition to the returned root organization, the first 100 sub-organizations are returned. If the number of records is less than 100, all the records are returned.

```
GET https://{domain_name}/api/v2/tenant/organizations?org_id=&all_child=true&offset=0&limit=100
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

Status code: 200

Request successful.

```
{
  "total": 2,
  "organizations": [ {
    "org_code": "1000000",
```

```

"org_id" : "20210619175242949-6040-CA7ECF...",
"name" : "Headquarter",
"category" : "department",
"parent_id" : null
}, {
"org_code" : "1000001",
"org_id" : "20210623103509267-6ABA-201FFC...",
"name" : "Subdepartments",
"category" : "department",
"parent_id" : "20210619175242949-6040-CA7ECF..."
}]
}

```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.5 Application Organization Management

3.1.5.1 Adding an Application Organization

Function

This API is used to add an application organization.

Constraints

null

URI

POST /api/v2/tenant/applications/{application_id}/organizations

Table 3-84 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.

Request Parameters

Table 3-85 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Table 3-86 Request body parameters

Parameter	Mandatory	Type	Description
org_code	Yes	String	Application organization code. The value can contain letters, digits, underscores (_), and hyphens (-).
name	Yes	String	Application organization name. The value can contain letters, digits, spaces, hyphens (-), underscores (_), and ampersands (&).
parent_id	No	String	This parameter needs to be transferred only when creating an application suborganization.

Response Parameters

Status code: 201

Table 3-87 Response body parameters

Parameter	Type	Description
org_id	String	Application organization ID.

Status code: 400

Table 3-88 Response body parameters

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

Example Requests

- Add a root organization. Organization code: 10000; organization name: headquarter.

```
POST https://{domain_name}/api/v2/tenant/applications/{application_id}/organizations
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

```
{
  "org_code": "10000",
  "name": "headquarter",
  "parent_id": ""
}
```

- Add a suborganization. Organization code: 10001; organization name: development group; parent organization ID: 20210623103520050-C5AF-DD1A97...

```
POST https://{domain_name}/api/v2/tenant/applications/{application_id}/organizations
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

```
{
  "org_code": "10001",
  "name": "development group",
  "parent_id": "20210623103520050-C5AF-DD1A97..."
}
```

Example Responses

Status code: 201

Request successful.

```
{
  "org_id" : "20210623103520050-C5AF-DD1A97..."
}
```

Status Codes

Status Code	Description
201	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.5.2 Modifying an Application Organization

Function

This API is used to modify an application organization.

Constraints

null

URI

PUT /api/v2/tenant/applications/{application_id}/organizations/{org_id}

Table 3-89 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.
org_id	Yes	String	Organization ID.

Request Parameters

Table 3-90 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Table 3-91 Request body parameters

Parameter	Mandatory	Type	Description
name	No	String	Organization name. If this parameter is left empty, the organization name is not changed by default. The value can contain letters, digits, spaces, hyphens (-), underscores (_), and ampersands (&).
parent_id	No	String	Parent organization ID.

Response Parameters

Status code: 200

Table 3-92 Response body parameters

Parameter	Type	Description
org_id	String	Application organization ID.

Status code: 400

Table 3-93 Response body parameters

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

Example Requests

Modify an organization attribute based on the application ID and organization ID.
Name: development group; parent organization ID: 20201027162527852-B712-D040F4...

```
PUT https://{domain_name}/api/v2/tenant/applications/{application_id}/organizations/{org_id}
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
{
  "name": "development group",
  "parent_id": "20201027162527852-B712-D040F4..."
}
```

Example Responses

Status code: 200

Request successful.

```
{  
  "org_id" : "20210623103520050-C5AF-DD1A9770E"  
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.5.3 Deleting an Application Organization

Function

This API is used to delete an application organization.

Constraints

null

URI

DELETE /api/v2/tenant/applications/{application_id}/organizations/{org_id}

Table 3-94 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.
org_id	Yes	String	Application organization ID.

Request Parameters

Table 3-95 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 400

Table 3-96 Response body parameters

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

Example Requests

Delete an application organization based on the application ID and organization ID.

```
DELETE https://{domain_name}/api/v2/tenant/applications/{application_id}/organizations/{org_id}
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

None

Status Codes

Status Code	Description
204	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.5.4 Querying Application Organization Details

Function

This API is used to query application organization details.

Constraints

null

URI

GET /api/v2/tenant/applications/{application_id}/organizations/{org_id}

Table 3-97 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.
org_id	Yes	String	Application organization ID.

Request Parameters

Table 3-98 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 200

Table 3-99 Response body parameters

Parameter	Type	Description
org_id	String	Application organization ID.
org_code	String	Application organization code.
name	String	Application organization name.
parent_id	String	Parent organization ID.

Status code: 400

Table 3-100 Response body parameters

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

Example Requests

Query the organization details based on the application ID and organization ID.

```
GET https://{domain_name}/api/v2/tenant/applications/{application_id}/organizations/{org_id}
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

Status code: 200

Request successful.

```
{
  "org_id" : "20210623103520050-C5AF-DD1A97...",
  "org_code" : "10000",
  "name" : "Headquarter",
  "parent_id" : null
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.5.5 Querying the Application Organization List

Function

This API is used to query the list of organizations that are authorized to access an application.

Constraints

null

URI

GET /api/v2/tenant/applications/{application_id}/organizations

Table 3-101 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.

Table 3-102 Query Parameters

Parameter	Mandatory	Type	Description
offset	Yes	Integer	Page number.
limit	Yes	Integer	Number of data records on each page.

Request Parameters

Table 3-103 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 200

Table 3-104 Response body parameters

Parameter	Type	Description
total	Long	Total number of application organizations.

Parameter	Type	Description
organizations	Array of ApplicationOrg objects	Organization list.

Table 3-105 ApplicationOrg

Parameter	Type	Description
org_id	String	Application organization ID.
org_code	String	Application organization code.
name	String	Application organization name.
parent_id	String	Parent organization ID.

Status code: 400

Table 3-106 Response body parameters

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

Example Requests

Query the organization list in an application by application ID in the pagination mode. The first 100 data records are returned. If the number of data records is less than 100, all data records are returned.

```
GET https://{domain_name}/api/v2/tenant/applications/{application_id}/organizations?offset=0&limit=100
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

Status code: 200

Request successful.

```
{
  "total": 1,
  "organizations": [ {
    "org_id": "20210623103520050-C5AF-DD1A97...",
    "org_code": "10000",
    "name": "Headquarter",
    "parent_id": null
  }, {
    "org_id": "20210619175409400-BFA4-63FA63...",
```

```
"org_code" : "10001",  
"name" : "Development Group",  
"parent_id" : "20210623103520050-C5AF-DD1A97..."  
}]  
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.6 Application Account Management

3.1.6.1 Adding an Application Account

Function

This API is used to create an application account for a user and grant permissions to them.

Constraints

null

URI

POST /api/v2/tenant/applications/{application_id}/accounts/basic-account

Table 3-107 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.

Request Parameters

Table 3-108 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Table 3-109 Request body parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	ID of the authorized user that is associated with the application account.
account_name	No	String	Application account name. If the parameter is left blank, the username is used by default.
name	No	String	Real name.
org_code	No	String	Application organization code.
password	No	String	Application account password.
disabled	No	Boolean	Whether the application account is disabled. If the parameter is left blank, the application account is enabled by default.
extension	No	Object	Custom extended attributes, which can be customized by choosing "Object Models" > "Application Accounts".

Response Parameters

Status code: 201

Table 3-110 Response body parameters

Parameter	Type	Description
account_id	String	Application account ID.

Status code: 400

Table 3-111 Response body parameters

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

Example Requests

Create an account for the application and associate specified users to it. The Account field is set to zhangshan, the Name field is set to zs, and ID of the associated user is 20220331164602949-904C-D475B60AE. The application account is enabled.

POST https://{domain_name}/api/v2/tenant/applications/{application_id}/accounts/basic-account

Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...

```
{
  "account_name": "zhangsan",
  "user_id": "20220331164602949-904C-D475B60AE",
  "name": "zs",
  "org_code": "",
  "password": "",
  "disabled": false,
  "extension": {}
}
```

Example Responses

Status code: 201

Request successful.

```
{
  "account_id": "20210517100458591-6F1C-965A4C..."
}
```

Status Codes

Status Code	Description
201	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.6.2 Updating an Application Account

Function

This API is used to update an application account.

Constraints

null

URI

PUT /api/v2/tenant/applications/{application_id}/accounts/{account_id}

Table 3-112 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.
account_id	Yes	String	Application account ID.

Request Parameters

Table 3-113 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Table 3-114 Request body parameters

Parameter	Mandatory	Type	Description
account_name	No	String	Application account name.
name	No	String	Real name.
org_code	No	String	Application organization code.
password	No	String	Password.
disabled	No	Boolean	Whether disabled.
extension	No	Object	Custom extended attributes, which can be customized by choosing "Object Models" > "Application Accounts".

Response Parameters

Status code: 200

Table 3-115 Response body parameters

Parameter	Type	Description
account_id	String	Application account ID.

Status code: 400

Table 3-116 Response body parameters

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

Example Requests

Modify an application account information based on the application ID and application account ID. The Account field is set to Test02, the Name field is set to Example, the application organization code is 10000, and the status is enabled.

```
PUT https://{domain_name}/api/v2/tenant/applications/{application_id}/accounts/{account_id}
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

```
{
  "account_name": "Test02",
```

```
"name": "Example",  
"org_code": "10000",  
"disabled": false  
}
```

Example Responses

Status code: 200

Request successful.

```
{  
  "account_id": "20210515151018087-2F92-6DBCA6..."  
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.6.3 Deleting an Application Account

Function

This API is used to delete an application account.

Constraints

null

URI

DELETE /api/v2/tenant/applications/{application_id}/accounts/{account_id}

Table 3-117 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.
account_id	Yes	String	Application account ID.

Request Parameters

Table 3-118 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 400

Table 3-119 Response body parameters

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

Example Requests

Delete an application account based on the application ID and application account ID.

```
DELETE https://{domain_name}/api/v2/tenant/applications/{application_id}/accounts/{account_id}
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

None

Status Codes

Status Code	Description
204	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.6.4 Querying Application Account Details

Function

This API is used to query application account details.

Constraints

null

URI

GET /api/v2/tenant/applications/{application_id}/accounts/{account_id}

Table 3-120 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.
account_id	Yes	String	Application account ID.

Request Parameters

Table 3-121 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 200

Table 3-122 Response body parameters

Parameter	Type	Description
id	String	Application account ID.
account_name	String	Application account name.
account_type	String	Application account type.
name	String	Real name.

Parameter	Type	Description
disabled	Boolean	Whether disabled.
org_id	String	Application organization ID.
roles	Array of RolesInfo objects	Role information.
extension	Object	Custom extended attribute.

Table 3-123 RolesInfo

Parameter	Type	Description
role_id	String	Role ID.
role_code	String	Role code.
role_name	String	Role name.
privileges	Array of PrivilegeInfo objects	Permission set.

Table 3-124 PrivilegeInfo

Parameter	Type	Description
privilege_id	String	Permission ID.
privilege_code	String	Permission code.
privilege_name	String	Permission name.
resource_items	Array of ResourceItem objects	Resource item set.

Table 3-125 ResourceItem

Parameter	Type	Description
item_id	String	Item ID.
item_code	String	Item code.
item_name	String	Item name.
item_parentid	String	Parent item ID.

Status code: 400

Table 3-126 Response body parameters

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

Example Requests

Query an application account details based on the application ID and application account ID.

```
GET https://{domain_name}/api/v2/tenant/applications/{application_id}/accounts/{account_id}
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

Status code: 200

Request successful.

```
{
  "id": "5C00-C91355BC0",
  "account_name": "example01",
  "name": "Example 1",
  "account_type": "BASIC_ACCOUNT",
  "org_id": "20201027162527852-B712-D040F4C71",
  "disabled": false,
  "extension": {
    "age": "18"
  },
  "roles": [ {
    "role_id": "20220210090626329-AFAE-EB2862B3A",
    "role_code": "admin",
    "role_name": "Administrator",
    "privileges": [ {
      "privilege_id": "20220210135202250-92C8-D89EC88C6",
      "privilege_code": "demo_privilege",
      "privilege_name": "Permission example",
      "resource_items": [ {
        "item_id": "20201027161283642-R582-7230F4E84",
        "item_code": "demo_item",
        "item_name": "Item example",
        "item_parentid": null
      }
    ]
  }
  ]
}
}
```

Status Codes

Status Code	Description
200	Request successful.

Status Code	Description
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.6.5 Querying the Application Account List

Function

This API is used to query the list of accounts that are authorized to access an application.

Constraints

null

URI

GET /api/v2/tenant/applications/{application_id}/accounts

Table 3-127 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.

Table 3-128 Query Parameters

Parameter	Mandatory	Type	Description
account_type	No	String	Account type. The value is fixed at BASIC_ACCOUNT (common application account), ORPHAN_ACCOUNT (orphan account), or PUBLIC_ACCOUNT (public account). This value can be left blank, which means to query all accounts.
offset	Yes	Integer	Page number.
limit	Yes	Integer	Number of data records on each page.

Request Parameters

Table 3-129 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 200

Table 3-130 Response body parameters

Parameter	Type	Description
total	Long	Total number of application accounts.
accounts	Array of AccountDetail objects	List of users who respond to the request.

Table 3-131 AccountDetail

Parameter	Type	Description
id	String	Application account ID.
account_name	String	Application account name.
account_type	String	Application account type.
name	String	Real name.
disabled	Boolean	Whether disabled.
org_id	String	Application organization ID.
roles	Array of RolesInfo objects	Role information.
extension	Object	Custom extended attribute.

Table 3-132 RolesInfo

Parameter	Type	Description
role_id	String	Role ID.
role_code	String	Role code.
role_name	String	Role name.
privileges	Array of PrivilegeInfo objects	Permission set.

Table 3-133 PrivilegeInfo

Parameter	Type	Description
privilege_id	String	Permission ID.
privilege_code	String	Permission code.
privilege_name	String	Permission name.
resource_items	Array of ResourceItem objects	Resource item set.

Table 3-134 ResourceItem

Parameter	Type	Description
item_id	String	Item ID.
item_code	String	Item code.
item_name	String	Item name.
item_parentid	String	Parent item ID.

Status code: 400**Table 3-135** Response body parameters

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

Example Requests

Query a common account list in an application by application ID in the pagination mode. The first 100 records are returned. If the number of records is less than 100, all records are returned.

```
GET https://{domain_name}/api/v2/tenant/applications/{application_id}/accounts?
account_type=BASIC_ACCOUNT&offset=0&limit=100
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

Status code: 200

Request successful.

```
{
  "total": 1,
  "accounts": [ {
    "id": "20210621095850460-5A8A-03D94B540",
    "account_name": "Test01",
    "account_type": "BASIC_ACCOUNT",
    "name": "Example01",
    "disabled": false,
    "org_id": "20210621095942194-560B-57E3CC...",
    "extension": { }
  } ]
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.6.6 Enabling an Application Account

Function

This API is used to enable an application account.

Constraints

null

URI

PUT /api/v2/tenant/applications/{application_id}/accounts/{account_id}/enable

Table 3-136 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.
account_id	Yes	String	Application account ID.

Request Parameters

Table 3-137 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 200

Table 3-138 Response body parameters

Parameter	Type	Description
account_id	String	Application account ID.

Status code: 400

Table 3-139 Response body parameters

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

Example Requests

Enable an application account based on the application ID and application account ID.

```
PUT https://{domain_name}/api/v2/tenant/applications/{application_id}/accounts/{account_id}/enable
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

Status code: 200

Request successful.

```
{
  "account_id" : "20210515151018087-2F92-6DBCA6..."
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.6.7 Disabling an Application Account

Function

This API is used to disable an application account.

Constraints

null

URI

PUT /api/v2/tenant/applications/{application_id}/accounts/{account_id}/disable

Table 3-140 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.
account_id	Yes	String	Application account ID.

Request Parameters

Table 3-141 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 200

Table 3-142 Response body parameters

Parameter	Type	Description
account_id	String	Application account ID.

Status code: 400

Table 3-143 Response body parameters

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

Example Requests

Disable an application account based on the application ID and application account ID.

```
PUT https://{domain_name}/api/v2/tenant/applications/{application_id}/accounts/{account_id}/disable
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

Status code: 200

Request successful.

```
{
  "account_id" : "20210515151018087-2F92-6DBCA6..."
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.1.7 Application Role Management

3.1.7.1 Adding an Application Role

Function

This API is used to add an application role.

Constraints

null

URI

POST /api/v2/tenant/applications/{application_id}/role

Table 3-144 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.

Request Parameters

Table 3-145 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Table 3-146 Request body parameters

Parameter	Mandatory	Type	Description
code	Yes	String	Role code, which is unique in an application.
name	No	String	Role name.

Response Parameters

Status code: 200

Table 3-147 Response body parameters

Parameter	Type	Description
role_id	String	Role ID.

Status code: 400

Table 3-148 Response body parameters

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

Example Requests

Add an application role based on the application ID. Role code: admin1; role name: administrator 1.

```
POST https://{domain_name}/api/v2/tenant/applications/{application_id}/role
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

```
{
```

```
"code": "admin1",  
"name": "administrator 1"  
}
```

Example Responses

Status code: 200

Role ID.

```
{  
  "role_id": "20220420140745089-23E4-DFFOA1900"  
}
```

Status Codes

Status Code	Description
200	Role ID.
400	Request failed.

Error Codes

See [Error Codes](#).

3.1.7.2 Modifying Application Role Information

Function

This API is used to modify application role information.

URI

PUT /api/v2/tenant/applications/{application_id}/role/{role_id}

Table 3-149 Path Parameters

Parameter	Mandatory	Type	Description
role_id	Yes	String	Role ID.
application_id	Yes	String	Application ID.

Request Parameters

Table 3-150 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Table 3-151 Request body parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Application role name.

Response Parameters

Status code: 200

Table 3-152 Response body parameters

Parameter	Type	Description
role_id	String	Role ID.

Status code: 400

Table 3-153 Response body parameters

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

Example Requests

Modify an application role based on the application ID and role ID, and modify the role name to administrator 2.

```
PUT https://{domain_name}/api/v2/tenant/applications/{application_id}/role/{role_id}
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
{
  "name": "administrator 2"
}
```

Example Responses

Status code: 200

Request successful.

```
{
  "role_id" : "20220420140745089-23E4-DFE0A1900"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Request failed.

Error Codes

See [Error Codes](#).

3.1.7.3 Deleting an Application Role

Function

This API is used to delete an application role.

URI

DELETE /api/v2/tenant/applications/{application_id}/role/{role_id}

Table 3-154 Path Parameters

Parameter	Mandatory	Type	Description
role_id	Yes	String	Role ID.
application_id	Yes	String	Application ID.

Request Parameters

Table 3-155 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 400

Table 3-156 Response body parameters

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

Example Requests

Delete an application role based on the application ID and role ID.

```
DELETE https://{domain_name}/api/v2/tenant/applications/{application_id}/role/{role_id}
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

None

Status Codes

Status Code	Description
200	Request successful.
400	Request failed.

Error Codes

See [Error Codes](#).

3.1.7.4 Querying Application Role Details

Function

This API is used to query application role details.

URI

GET /api/v2/tenant/applications/{application_id}/role/{role_id}

Table 3-157 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.
role_id	Yes	String	Role ID.

Request Parameters

Table 3-158 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 200

Table 3-159 Response body parameters

Parameter	Type	Description
id	String	Role ID.
code	String	Role code.
name	String	Role name.
createdAt	String	Creation time.
updatedAt	String	Modification time.

Status code: 400

Table 3-160 Response body parameters

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

Example Requests

Query application role details based on the application ID and role ID.

```
GET https://{domain_name}/api/v2/tenant/applications/{application_id}/role/{role_id}
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

Status code: 200

Request successful.

```
{
  "id" : "20220210090626329-AFAE-EB2862B3A",
  "code" : "admin",
  "name" : "Administrator",
  "createdAt" : "2022-02-10 09:06:26.333",
  "updatedAt" : "2022-02-10 09:06:26.333"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Request failed.

Error Codes

See [Error Codes](#).

3.1.7.5 Querying the Application Role List

Function

This API is used to query the application role list.

URI

```
GET /api/v2/tenant/applications/{application_id}/role-list
```

Table 3-161 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.

Table 3-162 Query Parameters

Parameter	Mandatory	Type	Description
offset	No	Integer	Page number.
limit	Yes	Integer	Number of data records on each page.

Request Parameters

Table 3-163 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 200

Table 3-164 Response body parameters

Parameter	Type	Description
total	Integer	Total number.
offset	Integer	Page number.
limit	Integer	Number of data records on each page.
roles	Array of RoleInfoResult objects	Role information set.

Table 3-165 RoleInfoResult

Parameter	Type	Description
id	String	Role ID.
code	String	Role code.
name	String	Role name.
createdAt	String	Creation time.
updatedAt	String	Modification time.

Status code: 400

Table 3-166 Response body parameters

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

Example Requests

Query the application role list by application ID in the pagination mode. The first 10 records are returned. If the number of records is less than 10, all results are returned.

```
GET https://{domain_name}/api/v2/tenant/applications/{application_id}/role-list?offset=0&limit=10
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

Status code: 200

Request successful.

```
{
  "total" : 3,
  "offset" : 0,
  "limit" : 10,
  "roles" : [ {
    "id" : "20220415170305200-EF22-C2404E358",
    "code" : "role1",
    "name" : "role1",
    "createdAt" : "2022-04-15 17:03:05.200",
    "updatedAt" : null
  }, {
    "id" : "20220415170305223-7193-A01122B37",
    "code" : "role2",
    "name" : "role2",
    "createdAt" : "2022-04-15 17:03:05.223",
    "updatedAt" : null
  }, {
    "id" : "20220420144449385-C66D-E8C1D1D79",
```

```

"code" : "admin",
"name" : "Administrator",
"createdAt" : "2022-04-20 14:44:49.385",
"updatedAt" : null
} ]
}

```

Status Codes

Status Code	Description
200	Request successful.
400	Request failed.

Error Codes

See [Error Codes](#).

3.1.7.6 Adding an Application Role Member

Function

This API is used to add an application role member.

URI

POST /api/v2/tenant/applications/{application_id}/role-member

Table 3-167 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.

Request Parameters

Table 3-168 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Table 3-169 Request body parameters

Parameter	Mandatory	Type	Description
role_id	Yes	String	Role ID.
account_ids	Yes	Array of strings	Application account ID set. Max. 50 IDs are supported.

Response Parameters

Status code: 200

Table 3-170 Response body parameters

Parameter	Type	Description
success_list	Array of strings	List of successfully added members.
fail_list	Array of strings	List of members failing to be added.

Status code: 400

Table 3-171 Response body parameters

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

Example Requests

Add an application role member based on the application ID. Role ID: 20220420144449385-C66D-E8C1D1D79; Application account IDs: ["20220415171558023-84A4-ED5C390B8", "20220414163425614-2FD6-CA9B208BE"].

```
POST https://{domain_name}/api/v2/tenant/applications/{application_id}/role-member
```

```
{
  "role_id" : "20220420144449385-C66D-E8C1D1D79",
  "account_ids" : [ "20220415171558023-84A4-ED5C390B8", "20220414163425614-2FD6-CA9B208BE" ]
}
```

Example Responses

Status code: 200

Application account ID list.

```
{
  "success_list" : [ "20220415171558023-84A4-ED5C390B8", "20220414163425614-2FD6-CA9B208BE" ],
  "fail_list" : [ ]
}
```

Status Codes

Status Code	Description
200	Application account ID list.
400	Request failed.

Error Codes

See [Error Codes](#).

3.1.7.7 Deleting an Application Role Member

Function

This API is used to delete an application role member.

URI

DELETE /api/v2/tenant/applications/{application_id}/role-member

Table 3-172 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.

Request Parameters

Table 3-173 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Table 3-174 Request body parameters

Parameter	Mandatory	Type	Description
role_id	Yes	String	Role ID.
account_ids	Yes	Array of strings	Application account ID set. Max. 50 IDs are supported.

Response Parameters

Status code: 200

Table 3-175 Response body parameters

Parameter	Type	Description
success_list	Array of strings	List of successfully added members.
fail_list	Array of strings	List of members failing to be added.

Status code: 400

Table 3-176 Response body parameters

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

Example Requests

Delete an application role member based on the application ID. Application role ID: 20220420144449385-C66D-E8C1D1D79; Application account IDs: ["20220415171558023-84A4-ED5C390B8", "20220414163425614-2FD6-CA9B208BE"].

```
DELETE https://{domain_name}/api/v2/tenant/applications/{application_id}/role-member
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
{
  "role_id": "20220420144449385-C66D-E8C1D1D79",
  "account_ids": [
    "20220415171558023-84A4-ED5C390B8",
    "20220414163425614-2FD6-CA9B208BE"
  ]
}
```

Example Responses

Status code: 200

Application account ID list.

```
{
  "success_list": [ "20220415171558023-84A4-ED5C390B8", "20220414163425614-2FD6-CA9B208BE" ],
  "fail_list": [ ]
}
```

Status Codes

Status Code	Description
200	Application account ID list.
400	Request failed.

Error Codes

See [Error Codes](#).

3.1.7.8 Querying the Application Role Member List

Function

This API is used to query the application role member list.

URI

GET /api/v2/tenant/applications/{application_id}/role-member-list/{role_id}

Table 3-177 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.
role_id	Yes	String	Role ID.

Table 3-178 Query Parameters

Parameter	Mandatory	Type	Description
offset	Yes	Integer	Page number. Min. value: 0.
limit	Yes	Integer	Number of data records on each page. Min. value: 10. Max. value: 100.

Request Parameters

Table 3-179 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
Authorization	Yes	String	Authentication credential. The value is "Bearer {access_token}". access_token is obtained by calling the API for obtaining an access credential.

Response Parameters

Status code: 200

Table 3-180 Response body parameters

Parameter	Type	Description
total	Integer	Total number.
offset	Integer	Page number.

Parameter	Type	Description
limit	Integer	Number of data records on each page.
role_members	Array of RoleMemberInfo objects	Role member information set.

Table 3-181 RoleMemberInfo

Parameter	Type	Description
id	String	Application account ID.
account_name	String	Application account name.
name	String	Real name.
org_id	String	Application organization ID.
disabled	Boolean	Whether disabled.
account_type	String	Application account type.
extension	Object	Custom extended attribute.

Status code: 400

Table 3-182 Response body parameters

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

Example Requests

Query the application role member list by application ID and role ID in the pagination mode. The first 10 data records are returned. If the number of data records is less than 10, all results are returned.

```
GET https://{domain_name}/api/v2/tenant/applications/{application_id}/role-member-list/{role_id}?offset=0&limit=10
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

Example Responses

Status code: 200

Request successful.

```
{
  "total" : 1,
  "offset" : 0,
  "limit" : 10,
  "role_members" : [ {
    "id" : "20220210090626329-AFAE-EB2862B3A",
    "account_name" : "adminAcc",
    "account_type" : "1",
    "name" : "Administrator",
    "org_id" : "20220210135202250-92C8-D89EC88C6",
    "disabled" : false,
    "extension" : null
  } ]
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Request failed.

Error Codes

See [Error Codes](#).

3.2 User APIs

3.2.1 Calling APIs

3.2.1.1 Making an API Request

This section describes the structure of an API request, and uses the OneAccess API for login with a username and password as an example to demonstrate how to call an API. After successful request, the obtained **session_token** can then be used to obtain user information.

Prerequisites

Before calling APIs, obtain the **ClientId** of added applications in the administrator portal from [Basic Information](#).

Request URI

A request URI is in the following format:

{URI-scheme}://{domain_name}/ {resource-path}

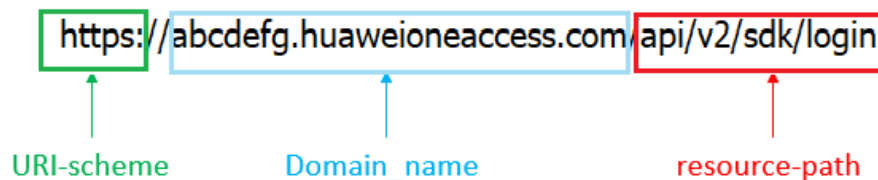
Although a request URI is included in the request header, most programming languages or frameworks require the request URI to be transmitted separately.

- **URI-scheme:** Protocol used to transmit requests. All APIs use HTTPS.
- **domain_name:** User access domain name that you must specify when you call a OneAccess API. For details about how to obtain the domain name, see [Obtaining the User Access Domain Name](#).
- **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 log in with a username and password is `/api/v2/sdk/login`.

For example, to obtain a **session_token** for the domain name **abcdefg.huaweioneaccess.com**, provide this domain name and obtain the **resource-path** (`/api/v2/sdk/login`) in the URI of the API used to obtain a **session_token**. Then, construct the URI as follows:

```
https://abcdefg.huaweioneaccess.com/api/v2/sdk/login
```

Figure 3-2 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 **domain_name** values of all APIs in the same instance are identical.

Request Methods

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

- **GET:** requests the server to return specified resources.
- **PUT:** requests the server to update specified resources.
- **POST:** requests the server to add resources or perform special operations.
- **DELETE:** requests the server to delete specified resources, for example, an object.
- **HEAD:** requests the server to return the response header only.
- **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 log in with a username and password, the request method is POST. The request is as follows:

```
POST https://abcdefg.huaweioneaccess.com/api/v2/sdk/login
```

Request Header

You can also add additional fields to a request, such as the fields required by a specified URI or HTTP method. For example, fields that indicate user agent information and application ID.

Table 3-183 lists the common request header fields.

Table 3-183 Common request header fields

Name	Description	Mandatory	Example
X-operating-sys-version	OS version of the caller.	Yes	Android 10
X-device-fingerprint	Device fingerprint of the caller.	Yes	156aysdna213sc50
X-device-ip	Caller IP address.	No	10.10.10.1
X-agent	User agent information.	Yes	Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	Language type.	No	zh
X-client-id	Application ID, which is a ClientId allocated to an application after registration.	Yes	DRrYIquawN0I8myTModTPys6ezGZxnm
X-tenant-id	Tenant ID. This parameter is mandatory for ISV applications.	No	08f770f51f80d2f40f38c00cb199fd20
X-signature	Signature information, which is used to determine the user login status. This parameter is not required for all APIs. For details about how to construct the signature, see Signing a Session Token .	No	D0JeOUuVqU8lxvl0xrmewQRk4AuGZrtk1RfBxueNKUrNPpgSbX-rYnzw...

An example request for calling the API used to log in with a username and password is as follows:

```
POST https://abcdefg.huaweioneaccess.com/api/v2/sdk/login
X-operating-sys-version: Android 10
```

```
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; ww) AppleWebKit/537.36
(KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYlqauawN0I8myTModTPys6ezGZxnm
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21
```

(Optional) Request Body

The body of a request is often sent in a structured format (for example, JSON or XML) to transfer 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 log in with a username and password, 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* and *Password* with the actual username and password, respectively.

```
POST https://abcdefg.huaweioneaccess.com/api/v2/sdk/login
X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; ww) AppleWebKit/537.36
(KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYlqauawN0I8myTModTPys6ezGZxnm
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21

{
  "user_name": "UserName",
  "password": "Password"
}
```

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 log in with a username and password, **session_token** is the credential indicating successful login. This **session_token** can then be used to obtain user information.

3.2.1.2 Response

Status Code

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

A status code is a group of digits, ranging from 1xx to 5xx. It indicates the status of a request.

For example, if status code **200** is returned for calling the API used to log in with a username and password, the request is successful.

(Optional) Response Header

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

(Optional) Response Body

The body of a response is often returned in a structured format (for example, JSON or XML) to transfer content except the response header.

The following is part of the response body for the API used to log in with a username and password.

```
{
  "session_token" : "bts*****2VO",
  "expire" : 604800,
  "status" : "SUCCESS"
}
```

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

```
{
  "error_code": "LOGIN.0002",
  "error_msg": "Invalid account name or password. Remaining attempts: 8."
}
```

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

3.2.2 System APIs

3.2.2.1 Obtaining the Server Time

Function

This API is used to obtain the server time.

URI

GET /api/v2/sdk/server-date

Request Parameters

Table 3-184 Request header parameters

Parameter	Mandatory	Type	Description
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1

Parameter	Mandatory	Type	Description
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Response Parameters

Status code: 200

Table 3-185 Response body parameters

Parameter	Type	Description
timestamp	String	Server timestamp.

Status code: 400

Table 3-186 Response body parameters

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

Example Requests

Obtain the server time. In the request header configuration, the caller system is Android 10, the caller device fingerprint is 156aysdna213sac, the caller IP address is 10.10.10.1, and the application ID is ClientId allocated during application registration.

```
GET https://{domain_name}/api/v2/sdk/server-date
X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYlqauawN0I8myTModTPys6ezGZxnm
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21
```

Example Responses

Status code: 200

Request successful.

```
{
  "timestamp" : "1628496895102"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.2.2 Obtaining the Public Key

Function

This API is used to obtain the public key (each application has a unique public key). The public key is used to encrypt sensitive information when calling a service API.

URI

GET /api/v2/sdk/public-key

Request Parameters

Table 3-187 Request header parameters

Parameter	Mandatory	Type	Description
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Response Parameters

Status code: 200

Table 3-188 Response body parameters

Parameter	Type	Description
public_key	String	Application public key.

Status code: 400

Table 3-189 Response body parameters

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

Example Requests

Obtain the public key for encryption. In the request header configuration, the caller system is Android 10, the caller device fingerprint is 156aysdna213sac, the caller IP address is 10.10.10.1, and the application ID is ClientId allocated during application registration.

```
GET https://{domain_name}/api/v2/sdk/public-key

X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; ww) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYlqauawN0I8myTMoDTPys6ezGZxnm
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21
```

Example Responses

Status code: 200

Request successful.

```
{
  "public_key" : "-----BEGIN PUBLIC KEY-----
\nMIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAbkfo0k5yU8ZEt6D5Rl6\nnmNGGIGKy1dO237iEUtl
ttf48YUBMrruAvINc68cT5hwHoQdZDAXq6YaK6j+QkmD\nOr/
wl5qUllrqrS5jMsyx80bWMkkJDmnV8WJWVlqmaEu1XJUTOinOIXHDwQtougP+
\nq6Ai0gQC395QESR5t9WKCGIFMoWuEesCj1K8YUW3lSBojiz+vCYQSDy0xTOC3uWz\nxds4mDe4qeX+9wSH
+XgFPCu/YpufNz+1iSBtALvpOGORT+zkPpt+0c7zvEpy+pgi\nsx0/
aV5vA6S481ZCYZR3gzG4xthVuS0o022UGdr5Rny6SxvIrx09JG2RvhdWsxW\n7wIDAQAB\n-----END PUBLIC
KEY-----"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.3 Registration

3.2.3.1 Registering a User with a Mobile Number and SMS Verification Code

Function

This API is used to register a user by using a mobile number and an SMS verification code.

URI

POST /api/v2/sdk/register/mobile-verify-code

Request Parameters

Table 3-190 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.

Parameter	Mandatory	Type	Description
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Table 3-191 Request body parameters

Parameter	Mandatory	Type	Description
user_name	No	String	Username.
name	No	String	Name.
mobile	Yes	String	Mobile number.
verify_code	Yes	String	SMS verification code.
email	No	String	Email address.
pwd	No	String	Password.
head_img	No	String	Profile picture. Enter the URL.
attr_gender	No	String	Gender.
attr_birthday	No	String	Date of birth. Format: yyyy-MM-dd.
attr_nickname	No	String	Alias.
first_name	No	String	Name.
middle_name	No	String	Middle name.
last_name	No	String	Last name.
extension	No	Object	Custom extended attribute.

Response Parameters

Status code: 200

Table 3-192 Response body parameters

Parameter	Type	Description
status	String	Return result.
expire	Integer	session_token validity period. Unit: second. Within the validity period, ticket can be obtained using session_token.
session_token	String	User session_token, which can be used to call the SSO API to obtain sso_ticket. User information can be obtained using sso_ticket.
id_token	String	It is essentially a JWT token that contains user identity information. The token is valid for 2 hours by default and its validity period can be configured.

Status code: 400

Table 3-193 Response body parameters

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

Example Requests

Register a user using a mobile number and SMS verification code. Username is John, name is Johnson, mobile number is 12345678901, SMS verification code is 1234, email address is 12345678901@example.com, and password is Q*****3. Age value of the custom extended field is 18.

```
POST https://{domain_name}/api/v2/sdk/register/mobile-verify-code
```

```
X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36
(KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYlqauawN0I8myTModTPys6ezGZxnm
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21
```

```
{
  "user_name": "John",
  "name": "Johnson",
  "mobile": "12345678901",
  "verify_code": "1234",
  "email": "12345678901@example.com",
```

```
"pwd": "Q*****3",  
"head_img": "  
https://thirdwx.qlogo.cn/mmopen/vi_32/  
Q0j4TwGTfTIQ8QOTSn3y4cYHLIMC3sv6RCBmeMkxtOog47Zr3v2Afbqc2bmP0WibUIUskX39eJU",  
"attr_gender": "male",  
"attr_birthday": "Feb 17, 2022",  
"attr_nick_name": "Johnson",  
"first_name": "Johnson",  
"middle_name": "Johnson",  
"last_name": "Johnson",  
"extension": {  
  "age": "18"  
}  
}
```

Example Responses

Status code: 200

Request successful.

```
{  
  "status" : "SUCCESS",  
  "expire" : 43200,  
  "session_token" : "LGT*****sq"  
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.4 Verification Code

3.2.4.1 Obtaining a CAPTCHA Code

Function

This API is used to obtain a CAPTCHA code.

URI

GET /api/v2/sdk/captcha

Request Parameters

Table 3-194 Request header parameters

Parameter	Mandatory	Type	Description
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; ww) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Response Parameters

Status code: 200

Table 3-195 Response body parameters

Parameter	Type	Description
captchaId	String	Verification code ID.

Parameter	Type	Description
projectCode	String	Project code, which is not supported currently. Returned value is fixed at null.
captchaOriginal-Path	String	Verification code original path, which is not supported currently. Returned value is fixed at null.
captchaFontType	String	Verification code font, which is not supported currently. Returned value is fixed at null.
captchaFontSize	String	Verification code font size, which is not supported currently. Returned value is fixed at null.
secretKey	String	Secret, which is not supported currently. Returned value is fixed at null.
originalImageBase64	String	Native image encoded using Base64.
point	String	Slider coordinates for tapping to select.
jigsawImageBase64	String	Slider image encoded using Base64.
wordList	String	Text CAPTCHAs.
pointList	String	Coordinate CAPTCHAs.
pointJson	String	Point coordinates (Base64-encoded for transmission).
token	String	Unique ID of each verification code request.
result	String	Verification result.
captchaVerification	String	Secondary verification parameter in the background.

Status code: 400

Table 3-196 Response body parameters

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

Example Requests

Obtain a CAPTCHA code.

```
GET https://{domain_name}/api/v2/sdk/captcha

X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYlqauawN0I8myTMOdTPys6ezGZxnm
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21
```

Example Responses

Status code: 200

Request successful.

```
{
  "captchaId" : null,
  "projectId" : null,
  "captchaOriginalPath" : null,
  "captchaFontType" : null,
  "captchaFontSize" : null,
  "secretKey" : "yMX*****hmq",
  "originalImageBase64" : "iVBORw0KGgoAAAANSUHEUgAAATYABj/WRVvk78AAAAASUVORK5CYII=",
  "point" : null,
  "jigsawImageBase64" : "iVBORw0KGgoAAAANSUHEUgADcAAAAASUVORK5CYII=",
  "wordList" : null,
  "pointList" : null,
  "pointJson" : null,
  "token" : "389*****fd1",
  "result" : false,
  "captchaVerification" : null
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.4.2 Verifying a CAPTCHA Code

Function

This API is used to verify a CAPTCHA code.

URI

POST /api/v2/sdk/captcha/verify

Request Parameters

Table 3-197 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Table 3-198 Request body parameters

Parameter	Mandatory	Type	Description
point_json	Yes	String	Coordinate information. The Y axis value is fixed at 5.0.
token	Yes	String	Obtain the token returned by the CAPTCHA code.
sender	Yes	String	Sender (mobile phone number or email address).

Response Parameters

Status code: 200

Table 3-199 Response body parameters

Parameter	Type	Description
captcha_token	String	CAPTCHA credential.

Status code: 400

Table 3-200 Response body parameters

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

Example Requests

Verify a CAPTCHA code. Coordinate information is {"x":237.0,"y":5.0}, the token is 71d*****635, and the sender's mobile number is 12345678901.

POST https://{domain_name}/api/v2/sdk/captcha/verify

```
X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36
(KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYIquawN0i8myTMoDTPys6ezGZxnm
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21

{
  "point_json": "{\\"x\\":237.0,\\"y\\":5.0}",
  "token": "71d*****635",
  "sender": "12345678901"
}
```

Example Responses

Status code: 200

Request successful.

```
{
  "captcha_token" : "71d*****635---{"x":237.0,"y":5.0}"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.4.3 Obtaining the Country Codes

Function

This API is used to obtain the supported country codes.

URI

GET /api/v2/sdk/country-codes

Request Parameters

Table 3-201 Request header parameters

Parameter	Mandatory	Type	Description
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1

Parameter	Mandatory	Type	Description
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Response Parameters

Status code: 200

Table 3-202 Response body parameters

Parameter	Type	Description
phoneAreaCodeDefinitions	Array of PhoneAreaCodeDefinitionsResult objects	Details about supported country codes.
preferredAreaCode	String	Preferred country codes configured on the administrator portal.

Table 3-203 PhoneAreaCodeDefinitionsResult

Parameter	Type	Description
areaCode	String	Country code.
displayMapping	DisplayMapping object	Multi-language display name mapping.
countryCode	String	Country code.
mobileRegex	String	Regular expression of the mobile phone number format.
areaCodeSuffixes	String	Country code suffix.

Table 3-204 DisplayMapping

Parameter	Type	Description
zh-TW	String	Traditional Chinese description.
en	String	English description.
zh-CN	String	Simplified Chinese description.

Status code: 400

Table 3-205 Response body parameters

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

Example Requests

Obtain the supported country codes.

```
GET https://{domain_name}/api/v2/sdk/country-codes
```

```
X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYlqauawN0I8myTModTPys6ezGZxnm
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21
```

Example Responses

Status code: 200

Request successful.

```
{
  "phoneAreaCodeDefinitions" : [ {
    "areaCode" : "86",
    "displayMapping" : {
      "zh-TW" : "Chinese mainland (traditional)",
      "en" : "China",
      "zh-CN" : "Chinese mainland (simplified)"
    },
    "countryCode" : "CN",
    "mobileRegex" : "^((\\+86){0,1})\\-?1\\d{10}$",
    "areaCodeSuffixes" : [ ]
  }, {
    "areaCode" : "852",
    "displayMapping" : {
      "zh-TW" : "Hong Kong, China (traditional)",
      "en" : "Hong Kong",
      "zh-CN" : "Hong Kong, China (simplified)"
    },
    "countryCode" : "HK",
    "mobileRegex" : "^((\\+852){1})\\-?0{0,1}[1,4,5,6,7,8,9](?:\\d{7}|\\d{8}|\\d{12})$",
    "areaCodeSuffixes" : [ ]
  }, {
    "areaCode" : "886",
    "displayMapping" : {
      "zh-TW" : "Taiwan, China (traditional)",
      "en" : "Taiwan",
      "zh-CN" : "Taiwan, China (simplified)"
    },
    "countryCode" : "TW",
    "mobileRegex" : "^((\\+886){1})\\-?[6,7,9](?:\\d{7}|\\d{8})$",
    "areaCodeSuffixes" : [ ]
  }, {
    "areaCode" : "853",
    "displayMapping" : {
      "zh-TW" : "Macao, China (traditional)",
      "en" : "Macao",
      "zh-CN" : "Macao, China (simplified)"
    },
    "countryCode" : "MO",
    "mobileRegex" : "^((\\+853){1})\\-?0{0,1}[1,4,5,6,7,8,9](?:\\d{7}|\\d{8}|\\d{12})$",
    "areaCodeSuffixes" : [ ]
  }, {
    "areaCode" : "93",
    "displayMapping" : {
      "zh-TW" : "Afghanistan",
      "en" : "Afghanistan",
      "zh-CN" : "Afghanistan"
    },
    "countryCode" : "AF",
    "mobileRegex" : "^((\\+93){1})\\-\\d{6,11}",
    "areaCodeSuffixes" : [ ]
  } ],
  "preferredAreaCode" : "CN"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.4.4 Sending an SMS Verification Code

Function

This API is used to send an SMS verification code.

URI

POST /api/v2/sdk/sms/send

Request Parameters

Table 3-206 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; ww) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.

Parameter	Mandatory	Type	Description
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Table 3-207 Request body parameters

Parameter	Mandatory	Type	Description
mobile	Yes	String	Mobile number.
type	Yes	String	Sending scenarios.
captcha_token	Yes	String	CAPTCHA credential.

Response Parameters

Status code: 200

None

Status code: 400

Table 3-208 Response body parameters

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

Example Requests

Send an SMS with a verification code to a recipient phone number 12345678901 for binding. The CAPTCHA verification credential is 71d*****635---{"x":237.0,"y":5.0}.

```
POST https://{domain_name}/api/v2/sdk/sms/send
```

```
X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
```

```
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; ww) AppleWebKit/537.36
(KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYlqauawN0l8myTModTPys6ezGZxnm
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21

{
  "mobile": "12345678901",
  "type": "BIND_MOBILE_SMS",
  "captcha_token": "71d*****635---{"x":237.0,"y":5.0}"
}
```

Example Responses

None

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.5 Login and Logout

3.2.5.1 Logging In Using a Username and Password

Function

This API is used for login with a username and password. If the API is successfully called, the user's session_token is returned. If the password expiry check or MFA is enabled, state_token is returned. If the API fails to be called, an error message is returned.

URI

POST /api/v2/sdk/login

Request Parameters

Table 3-209 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Table 3-210 Request body parameters

Parameter	Mandatory	Type	Description
user_name	Yes	String	Username.
password	Yes	String	Password.

Response Parameters

Status code: 200

Table 3-211 Response body parameters

Parameter	Type	Description
status	String	Login process status identifier.
session_token	String	User session_token, which can be used to call the SSO API to obtain sso_ticket. User information can be obtained using sso_ticket.
id_token	String	It is essentially a JWT token that contains user identity information. The token is valid for 2 hours by default and its validity period can be configured.
expire	Integer	session_token validity period. Unit: second. Within the validity period, sso_ticket can be obtained using session_token.
state_token	String	User token with a status.
data	String	Return description.

Status code: 400

Table 3-212 Response body parameters

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

Example Requests

Log in with a username and password. The username is test01 and the password is 1*****6.

```
POST https://{domain_name}/api/v2/sdk/login
```

```
X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36
(KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYlqauawN0I8myTMOdTPys6ezGZxnm
```

```
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21
```

```
{
  "user_name": "test01",
  "password": "1*****6"
}
```

Example Responses

Status code: 200

If the user is successfully matched, session_token is returned.

```
{
  "session_token" : "bts*****2VO",
  "expire" : 604800,
  "status" : "SUCCESS"
}
```

Status Codes

Status Code	Description
200	If the user is successfully matched, session_token is returned.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.5.2 Logging In with an SMS Verification Code

Function

This API is used to log in with an SMS verification code.

URI

POST /api/v2/sdk/login/mobile-verify-code

Request Parameters

Table 3-213 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.

Parameter	Mandatory	Type	Description
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Table 3-214 Request body parameters

Parameter	Mandatory	Type	Description
mobile	Yes	String	Mobile number for receiving a verification code.
verify_code	Yes	String	Verification code that is received.

Response Parameters

Status code: 200

Table 3-215 Response body parameters

Parameter	Type	Description
status	String	Login process status identifier.
session_token	String	User session_token, which can be used to call the SSO API to obtain sso_ticket. User information can be obtained using sso_ticket.
id_token	String	It is essentially a JWT token that contains user identity information. The token is valid for 2 hours by default and its validity period can be configured.
expire	Integer	session_token validity period. Unit: second. Within the validity period, sso_ticket can be obtained using session_token.
state_token	String	User token with a status.
data	String	Return description.

Status code: 400

Table 3-216 Response body parameters

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

Example Requests

SMS verification code. The number of the mobile phone that receives the verification code is 12345678901, and the verification code is 232326.

```
POST https://{domain_name}/api/v2/sdk/login/mobile-verify-code
```

```
X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36
(KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYlqauawN0I8myTMoDTPys6ezGZxnm
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21

{
  "mobile": "12345678901",
  "verify_code": "232326"
}
```

Example Responses

Status code: 200

Request successful.

```
{
  "status": "SUCCESS",
  "session_token": "bts*****2VO",
  "expire": 604800
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.5.3 Logging In with WeChat

Function

This API is used to log in with WeChat.

URI

POST /api/v2/sdk/login/wechat

Request Parameters

Table 3-217 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1

Parameter	Mandatory	Type	Description
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Table 3-218 Request body parameters

Parameter	Mandatory	Type	Description
code	Yes	String	Authorization code, provided by WeChat when started by the application.

Response Parameters

Status code: 200

Table 3-219 Response body parameters

Parameter	Type	Description
status	String	Login process status identifier.

Parameter	Type	Description
session_token	String	User session_token, which can be used to call the SSO API to obtain sso_ticket. User information can be obtained using sso_ticket.
id_token	String	It is essentially a JWT token that contains user identity information. The token is valid for 2 hours by default and its validity period can be configured.
expire	Integer	session_token validity period. Unit: second. Within the validity period, sso_ticket can be obtained using session_token.
state_token	String	User token with a status.
data	String	Return description.

Status code: 400

Table 3-220 Response body parameters

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

Example Requests

WeChat login. The authorization code provided by WeChat is ad12sasdsfe3dfdg3sc.

```
POST https://{domain_name}/api/v2/sdk/login/wechat
X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYlqauawN0I8myTMoDTPys6ezGZxnm
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21
{
  "code": "ad12sasdsfe3dfdg3sc"
}
```

Example Responses

Status code: 200

Request successful.

```
{
  "status": "SUCCESS",
  "session_token": "bts*****2VO",
  "expire": 604800
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.5.4 Logging In with Alipay

Function

This API is used to log in with Alipay.

URI

POST /api/v3/sdk/login/alipay

Request Parameters

Table 3-221 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1

Parameter	Mandatory	Type	Description
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Table 3-222 Request body parameters

Parameter	Mandatory	Type	Description
code	Yes	String	Authorization code, provided by Alipay when started by the application.

Response Parameters

Status code: 200

Table 3-223 Response body parameters

Parameter	Type	Description
status	String	Login process status identifier.

Parameter	Type	Description
session_token	String	User session_token, which can be used to call the SSO API to obtain sso_ticket. User information can be obtained using sso_ticket.
id_token	String	It is essentially a JWT token that contains user identity information. The token is valid for 2 hours by default and its validity period can be configured.
expire	Integer	session_token validity period. Unit: second. Within the validity period, sso_ticket can be obtained using session_token.
state_token	String	User token with a status.
data	String	Return description.

Status code: 400

Table 3-224 Response body parameters

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

Example Requests

Log in with Alipay. The authorization code provided by Alipay is ad12sasdsfe3dfdg3sc.

```
POST https://{domain_name}/api/v2/sdk/login/alipay
X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYlqauawN0I8myTMoDTPys6ezGZxnm
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21
{
  "code": "ad12sasdsfe3dfdg3sc"
}
```

Example Responses

Status code: 200

Request successful.

```
{
  "status" : "SUCCESS",
  "session_token" : "bts*****2VO",
  "expire" : 604800
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.5.5 Logging Out

Function

This API is used to log out.

URI

GET /api/v2/sdk/logout

Request Parameters

Table 3-225 Request header parameters

Parameter	Mandatory	Type	Description
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1

Parameter	Mandatory	Type	Description
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-signature	Yes	String	In the encrypted data session_token=xxx×tamp=xxx&nonce=xxx, session_token indicates the session token, timestamp indicates the current timestamp, nonce indicates the timestamp's hexadecimal value, and the encryption mode is RSA. The current timestamp can be obtained by calling the API for obtaining the server time, and the public key for encryption can be obtained by calling the API for obtaining the public key.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Response Parameters

Status code: 200

None

Status code: 400

Table 3-226 Response body parameters

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

Example Requests

Log out.

```
GET https://{domain_name}/api/v2/sdk/logout
```

```
X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; ww) AppleWebKit/537.36
(KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYlqauawN0I8myTMDTPys6ezGZxnm
X-signature:D0JeOUuVqU8Ixl0xrmewQRk4AuGZrtk1RfBxueNKUrNPpgSbXrYnzw...
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21
```

Example Responses

None

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.6 Social Media Accounts

3.2.6.1 Binding a Social Account to a Mobile Number

Function

This API is used to bind a social account to a mobile number when the bind option is selected for the unassociated user field in the authentication source configuration on the administrator portal.

URI

POST /api/v2/sdk/social/bind

Request Parameters

Table 3-227 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-state-token	Yes	String	Temporary token. When the bind option is selected in the authentication source configuration, the corresponding state_token needs to be transferred for binding a social account to a mobile number. If the binding is successful, the user session_token is returned. If the binding fails, an error message is returned.

Parameter	Mandatory	Type	Description
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Table 3-228 Request body parameters

Parameter	Mandatory	Type	Description
mobile	Yes	String	Mobile number for receiving a verification code.
verify_code	Yes	String	Verification code that is received.

Response Parameters

Status code: 200

Table 3-229 Response body parameters

Parameter	Type	Description
status	String	Login process status identifier. If SUCCESS is returned, the login is successful.
session_token	String	User session_token, which can be used to call the SSO API to obtain sso_ticket. User information can be obtained using sso_ticket.
id_token	String	It is essentially a JWT token that contains user identity information. The token is valid for 2 hours by default and its validity period can be configured.

Parameter	Type	Description
expire	Integer	session_token validity period. Unit: second. Within the validity period, ticket can be obtained using session_token.

Status code: 400

Table 3-230 Response body parameters

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

Example Requests

Bind a social account to a mobile number. The bound mobile number is 12345678901 and the received verification code is 123456.

```
POST https://{domain_name}/api/v2/sdk/social/bind

X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; ww) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYlqauawN0i8myTMoDTPys6ezGZxnm
X-state-token: eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9...
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21

{
  "mobile": "12345678901",
  "verify_code": "123456"
}
```

Example Responses

Status code: 200

Request successful.

```
{
  "session_token" : "bts*****2VO",
  "expire" : 604800,
  "status" : "SUCCESS"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.6.2 Registering a Social Account and Binding It to a Mobile Number

Function

This API is used to register a social account and bind it to a mobile number when the bind or register option is selected for the unassociated user field in the authentication source configuration on the administrator portal.

URI

POST /api/v2/sdk/social/register-bind

Request Parameters

Table 3-231 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36

Parameter	Mandatory	Type	Description
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-state-token	Yes	String	Temporary token. When the bind option is selected in the authentication source configuration, the corresponding state_token needs to be transferred for binding a social account to a mobile number. If the binding is successful, the user session_token is returned. If the binding fails, an error message is returned.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Table 3-232 Request body parameters

Parameter	Mandatory	Type	Description
mobile	Yes	String	Mobile number for receiving a verification code.
verify_code	Yes	String	Verification code that is received.

Response Parameters

Status code: 200

Table 3-233 Response body parameters

Parameter	Type	Description
status	String	Login process status identifier. If SUCCESS is returned, the login is successful.
session_token	String	User session_token, which can be used to call the SSO API to obtain sso_ticket. User information can be obtained using sso_ticket.
id_token	String	It is essentially a JWT token that contains user identity information. The token is valid for 2 hours by default and its validity period can be configured.
expire	Integer	session_token validity period. Unit: second. Within the validity period, ticket can be obtained using session_token.

Status code: 400

Table 3-234 Response body parameters

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

Example Requests

Register a social account and bind it to a mobile number. The mobile number is 12345678901 and the received verification code is 123456.

```
POST https://{domain_name}/api/v2/sdk/social/register-bind
```

```
X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36
(KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYlqauawN0i8myTMoDTPys6ezGZxnm
X-state-token: eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9...
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21

{
  "mobile": "12345678901",
  "verify_code": "123456"
}
```

Example Responses

Status code: 200

Request successful.

```
{
  "session_token" : "bts*****2VO",
  "expire" : 604800,
  "status" : "SUCCESS"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.6.3 Obtaining the List of Social Accounts Bound to a User

Function

This API is used to obtain the list of social accounts bound to a user.

URI

GET /api/v2/sdk/social

Request Parameters

Table 3-235 Request header parameters

Parameter	Mandatory	Type	Description
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1

Parameter	Mandatory	Type	Description
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-signature	Yes	String	In the encrypted data session_token=xxx×tamp=xxx&nonce=xxx, session_token indicates the session token, timestamp indicates the current timestamp, nonce indicates the timestamp's hexadecimal value, and the encryption mode is RSA. The current timestamp can be obtained by calling the API for obtaining the server time, and the public key for encryption can be obtained by calling the API for obtaining the public key.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Response Parameters

Status code: 200

Table 3-236 Response body parameters

Parameter	Type	Description
social	Array of SocialResult objects	Social account information set.

Table 3-237 SocialResult

Parameter	Type	Description
id	String	ID automatically generated by the system.
userId	String	User ID.
socialType	String	Social type.
social_uid	String	Social account ID.
socialNickname	String	Alias.
socialHeadImage	String	Avatar.
socialAccountDetails	String	Description.
createdAt	String	Creation time.
updatedAt	String	Modification time.

Status code: 400**Table 3-238** Response body parameters

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

Example Requests

Obtain the list of social accounts bound to a user.

```
GET https://{domain_name}/api/v2/sdk/social
```

```
X-operating-sys-version: Android 10  
X-device-fingerprint: 156aysdna213sac  
X-device-ip: 10.10.10.1  
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36  
(KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36  
X-L: zh
```

```
X-client-id: DRrYlqauawN0I8myTModTPys6ezGZxnm
X-signature: D0JeOUuVqU8lxvl0xrmewQRk4AuGZrtk1RfBxueNKUrNPpgSbXrYnzw...
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21
```

Example Responses

Status code: 200

Request successful.

```
{
  "social" : [ {
    "id" : "20210516130247432-C84E-E5EA8CFE7",
    "userId" : "20210515202200788-094F-074FB1341",
    "socialType" : "weixin",
    "social_uid" : "001GKgGa15HGZA0aOxIa1bFktp1GKgG4_social_uid",
    "socialNickname" : "zhangsan",
    "socialHeadImage" : "https://thirdwx.qlogo.cn/mmopen/vi_32/Q0j4TwGTfTIQ8QOTSn3y4cYHLIMC3sv6RCBmeMkxtOog47Zr3v2Afbqc2bmP0WibUIUskX39eJUAEbAibXs",
    "socialAccountDetails" : "zhangsan",
    "createdAt" : "2021-05-16 13:02:48.513",
    "updatedAt" : "2021-05-16 13:02:48.513"
  } ]
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.6.4 Unbinding a Social Account

Function

This API is used to unbind a social account.

URI

POST /api/v2/sdk/social/unbind-account

Request Parameters

Table 3-239 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-signature	Yes	String	In the encrypted data session_token=xxx×tamp=xxx&nonce=xxx, session_token indicates the session token, timestamp indicates the current timestamp, nonce indicates the timestamp's hexadecimal value, and the encryption mode is RSA. The current timestamp can be obtained by calling the API for obtaining the server time, and the public key for encryption can be obtained by calling the API for obtaining the public key.

Parameter	Mandatory	Type	Description
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Table 3-240 Request body parameters

Parameter	Mandatory	Type	Description
id	Yes	String	System auto-generated ID, which can be obtained by calling the API for querying the list of social accounts bound to a user.

Response Parameters

Status code: 200

None

Status code: 400

Table 3-241 Response body parameters

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

Example Requests

Unbind a social account through the ID automatically generated during social account binding.

```
POST https://{domain_name}/api/v2/sdk/social/unbind-account
```

```
X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36
```

```
(KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYIqauawN0I8myTModTPys6ezGZxnm
X-signature:D0JeOUuVqU8lxvl0xrmewQRk4AuGZrtk1RfBxueNKUrNPpgSbXrYnzw...
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21

{
  "id": "001GKgGa15HGZA0aOxla1bFktp1GKgG4"
}
```

Example Responses

None

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.7 Password Management

3.2.7.1 Skipping Force Password Change

Function

During the calling of the API for login with a password, if the password is about to expire and the API for skipping password change is called, the corresponding state_token must be transferred.

URI

GET /api/v2/sdk/pwd/skip-update

Request Parameters

Table 3-242 Request header parameters

Parameter	Mandatory	Type	Description
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.

Parameter	Mandatory	Type	Description
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-state-token	Yes	String	Temporary token, which is the returned state_token when the API for login with a password is called and the password is about to expire.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Response Parameters

Status code: 200

Table 3-243 Response body parameters

Parameter	Type	Description
status	String	Login process status identifier.
session_token	String	User session_token, which can be used to call the SSO API to obtain sso_ticket. User information can be obtained using sso_ticket.

Parameter	Type	Description
id_token	String	It is essentially a JWT token that contains user identity information. The token is valid for 2 hours by default and its validity period can be configured.
expire	Integer	session_token validity period. Unit: second. Within the validity period, ticket can be obtained using session_token.

Status code: 400

Table 3-244 Response body parameters

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

Example Requests

Skip force password change.

```
GET https://{domain_name}/api/v2/sdk/pwd/skip-update
```

```
X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36
(KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYIqauawN0I8myTMoDTPys6ezGZxnm
X-state-token: eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9...
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21
```

Example Responses

Status code: 200

Request successful.

```
{
  "status" : "SUCCESS",
  "expire" : 43200,
  "session_token" : "LGT*****sq"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.7.2 Requiring Password Change After Expiry

Function

During the calling of the API for login with a password, if the password is about to expire or has already expired and the API for requiring password change after expiry is called, the corresponding state_token must be transferred.

URI

POST /api/v2/sdk/pwd/update

Request Parameters

Table 3-245 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36

Parameter	Mandatory	Type	Description
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-state-token	Yes	String	Temporary token, which is the returned state_token when the API for login with a password is called and the password is about to expire or has already expired.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Table 3-246 Request body parameters

Parameter	Mandatory	Type	Description
old_password	Yes	String	Original password of the user.
new_password	Yes	String	New password.

Response Parameters

Status code: 200

Table 3-247 Response body parameters

Parameter	Type	Description
status	String	Login process status identifier.
session_token	String	User session_token, which can be used to call the SSO API to obtain sso_ticket. User information can be obtained using sso_ticket.

Parameter	Type	Description
id_token	String	It is essentially a JWT token that contains user identity information. The token is valid for 2 hours by default and its validity period can be configured.
expire	Integer	session_token validity period. Unit: second. Within the validity period, ticket can be obtained using session_token.

Status code: 400

Table 3-248 Response body parameters

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

Example Requests

The password must be changed after it expires.

```
POST https://{domain_name}/api/v2/sdk/pwd/update

X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36
(KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYIqauawN0I8myTMOdTPys6ezGZxnm
X-state-token: eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9...
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21

{
  "old_password": "P*****d",
  "new_password": "P*****3"
}
```

Example Responses

Status code: 200

Request successful.

```
{
  "status" : "SUCCESS",
  "expire" : 43200,
  "session_token" : "LGT*****sqa"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.7.3 Resetting Password Using Mobile Number

Function

A user clicks "Forgot password" on the login page and resets the password using the mobile number. This API is called after the user enters the mobile number, verification code, and new password.

URI

POST /api/v2/sdk/pwd/update-by-mobile

Request Parameters

Table 3-249 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36

Parameter	Mandatory	Type	Description
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Table 3-250 Request body parameters

Parameter	Mandatory	Type	Description
mobile	Yes	String	Mobile number for receiving a verification code.
verify_code	Yes	String	Verification code that is received.
password	Yes	String	New password.

Response Parameters

Status code: 200

None

Status code: 400

Table 3-251 Response body parameters

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

Example Requests

Reset password using mobile number. The mobile number is 12345678901, the verification code is 123456, and the new password is P*****d.

```
POST https://{domain_name}/api/v2/sdk/pwd/update-by-mobile

X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36
(KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYIqauawN0I8myTMoDTPys6ezGZxnm
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21

{
  "mobile": "12345678901",
  "verify_code": "123456",
  "password": "P*****d"
}
```

Example Responses

None

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.8 MFA

3.2.8.1 Obtaining the Mobile Number Using state-Token

Function

This API is used to obtain the mobile number using state_token during SMS-based MFA.

URI

GET /api/v2/sdk/mobile-by-token

Request Parameters

Table 3-252 Request header parameters

Parameter	Mandatory	Type	Description
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-state-token	Yes	String	User token with a status. state_token is returned when login-related APIs are called for MFA.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Response Parameters

Status code: 200

Table 3-253 Response body parameters

Parameter	Type	Description
mobile	String	Mobile number.

Status code: 400

Table 3-254 Response body parameters

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

Example Requests

Obtain the mobile number using state_Token. The request header X-state-token is eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9...

```
GET https://{domain_name}/api/v2/sdk/mobile-by-token
```

```
X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; ww) AppleWebKit/537.36
(KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYlqauawN0I8myTMoDTPys6ezGZxnm
X-state-token: eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9...
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21
```

Example Responses

Status code: 200

Request successful.

```
{
  "mobile" : "12345678901"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.8.2 SMS-based MFA

Function

If SMS-based MFA is required during login, this API is called for authentication in accordance with mobile number and SMS verification code.

URI

POST /api/v2/sdk/mfa/sms

Request Parameters

Table 3-255 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; ww) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-state-token	Yes	String	User token with a status. state_token is returned when login-related APIs are called for MFA.

Parameter	Mandatory	Type	Description
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Table 3-256 Request body parameters

Parameter	Mandatory	Type	Description
mobile	Yes	String	Mobile number for receiving a verification code.
verify_code	Yes	String	Verification code that is received.

Response Parameters

Status code: 200

Table 3-257 Response body parameters

Parameter	Type	Description
status	String	Login process status identifier.
session_token	String	User session_token, which can be used to call the SSO API to obtain sso_ticket. User information can be obtained using sso_ticket.
id_token	String	It is essentially a JWT token that contains user identity information. The token is valid for 2 hours by default and its validity period can be configured.
expire	Integer	session_token validity period. Unit: second. Within the validity period, ticket can be obtained using session_token.

Status code: 400

Table 3-258 Response body parameters

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

Example Requests

SMS-based MFA. The mobile number is 12345678901 and the verification code is 123456.

```
POST https://{domain_name}/api/v2/sdk/mfa/sms

X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36
(KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYlqauawN0I8myTmoDTPys6ezGZxnm
X-state-token: eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9...
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21

{
  "mobile": "12345678901",
  "verify_code": "123456"
}
```

Example Responses

Status code: 200

Request successful.

```
{
  "status" : "SUCCESS",
  "expire" : 43200,
  "session_token" : "LGT*****sqa"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.9 Personal Information Management

3.2.9.1 Querying Personal Information

Function

This API is called when querying personal information after a user successfully logs in.

URI

GET /api/v2/sdk/profile

Request Parameters

Table 3-259 Request header parameters

Parameter	Mandatory	Type	Description
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.

Parameter	Mandatory	Type	Description
X-signature	Yes	String	In the encrypted data session_token=xxx×tamp=xxx&nonce=xxx, session_token indicates the session token, timestamp indicates the current timestamp, nonce indicates the timestamp's hexadecimal value, and the encryption mode is RSA. The current timestamp can be obtained by calling the API for obtaining the server time, and the public key for encryption can be obtained by calling the API for obtaining the public key.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Response Parameters

Status code: 200

Table 3-260 Response body parameters

Parameter	Type	Description
user_name	String	Username.
name	String	Name.
head_img	String	Profile picture URL.
email	String	Email address.
mobile	String	Mobile number.

Parameter	Type	Description
attr_gender	String	Gender. Options: female: female; male: male; unknown: confidential
attr_birthday	String	Birthday. Format: yyyy-MM-dd
attr_nick_name	String	Alias.
first_name	String	Name.
middle_name	String	Middle name.
last_name	String	Last name.
extension	String	Extended attribute.

Status code: 400

Table 3-261 Response body parameters

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

Example Requests

None

Example Responses

Status code: 200

Request successful.

```
{
  "user_name" : "John",
  "name" : "Johnson",
  "head_img" : "https://thirdwx.qlogo.cn/mmopen/vi_32/
Q0j4TwGTfTIQ8QOTSn3y4cYHLIMC3sv6RCBmeMkxtOog47Zr3v2Afbqc2bmP0WibUIUskX39eJUAEbAibXs",
  "email" : "12345678901@example.com",
  "mobile" : "12345678901",
  "attr_gender" : "male",
  "attr_birthday" : "Feb 17, 2022",
  "attr_nick_name" : "Johnson",
  "first_name" : "Johnson",
  "middle_name" : "Johnson",
  "last_name" : "Johnson",
  "extension" : {
```

```
"age" : "18"
}
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.9.2 Modifying Personal Information

Function

This API is called to modify personal information after a user successfully logs in. This API does not support the modification of the personal password, mobile number, or email address.

URI

POST /api/v2/sdk/profile/update

Request Parameters

Table 3-262 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1

Parameter	Mandatory	Type	Description
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-signature	Yes	String	In the encrypted data session_token=xxx×tamp=xxx&nonce=xxx, session_token indicates the session token, timestamp indicates the current timestamp, nonce indicates the timestamp's hexadecimal value, and the encryption mode is RSA. The current timestamp can be obtained by calling the API for obtaining the server time, and the public key for encryption can be obtained by calling the API for obtaining the public key.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Table 3-263 Request body parameters

Parameter	Mandatory	Type	Description
user_name	No	String	Username.

Parameter	Mandatory	Type	Description
name	No	String	Name.
mobile	Yes	String	Mobile number.
verify_code	Yes	String	SMS verification code.
email	No	String	Email address.
pwd	No	String	Password.
head_img	No	String	Profile picture. Enter the URL.
attr_gender	No	String	Gender.
attr_birthday	No	String	Date of birth. Format: yyyy-MM-dd.
attr_nick_name	No	String	Alias.
first_name	No	String	Name.
middle_name	No	String	Middle name.
last_name	No	String	Last name.
extension	No	Object	Custom extended attribute.

Response Parameters

Status code: 200

None

Status code: 400

Table 3-264 Response body parameters

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

Example Requests

Modify personal information.

```
POST https://{domain_name}/api/v2/sdk/profile/update
```

```
X-operating-sys-version: Android 10
X-device-fingerprint: 156aysdna213sac
X-device-ip: 10.10.10.1
X-agent: Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36
```

```
(KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L: zh
X-client-id: DRrYIqauawN0I8myTModTPys6ezGZxnm
X-signature: D0JeOUuVqU8Ixl0xrmewQRk4AuGZrkt1RfBxueNKUrNPpgSbXrYnzw...
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21

{
  "user_name": "John",
  "name": "Johnson",
  "head_img": "https://thirdwx.qlogo.cn/mmopen/vi_32/
Q0j4TwGTfTIQ8QOTSn3y4cYHLIMC3sv6RCBmeMkxtOog47Zr3v2Afbqc2bmP0WibUIUskX39eJUAEBaibXs",
  "attr_gender": "male",
  "attr_birthday": "Feb 17, 2022",
  "attr_nick_name": "Johnson",
  "first_name": "Johnson",
  "middle_name": "Johnson",
  "last_name": "Johnson",
  "extension": {
    "age": "18"
  }
}
```

Example Responses

None

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.10 SSO

3.2.10.1 Obtaining sso_ticket Using session_token

Function

This API is called to obtain sso_ticket when obtaining user information.

URI

POST /api/v2/tenant/sso/session-token/sso-ticket

Request Parameters

Table 3-265 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
Authorization	Yes	String	Authentication credential. The value is Bearer {access_token}. access_token is obtained by calling the API for obtaining an access credential.
X-tenant-id	No	String	External ID of a tenant. This parameter is mandatory if the API is called by an ISV. Replace "{domain_name}" with the ISV common domain name "{common_domain}". The tenant ID of the corresponding tenant must be specified in the request header.

Table 3-266 Request body parameters

Parameter	Mandatory	Type	Description
session_token	Yes	String	Session token returned upon successful login.
operating_sys_version	Yes	String	Caller OS version, for example, Android 10.
device_ip	Yes	String	Caller device IP address, for example, 10.10.10.1
device_fingerprint	Yes	String	Caller device fingerprint. When the same user calls the API, the value of this parameter must be the same as that in the login API, for example, 156aysdna213sc50.
agent	No	String	User agent information of the caller, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36

Parameter	Mandatory	Type	Description
client_id	No	String	Application authorization ID. If the user information of a single-point application needs to be obtained, client_id of the single-point application needs to be transferred.

Response Parameters

Status code: 200

Table 3-267 Response body parameters

Parameter	Type	Description
expire	Integer	Expiration time, in seconds.
sso_ticket	String	One-time access ticket (sso_ticket), which is obtained using session_token upon user login, and used to obtain user information.

Status code: 400

Table 3-268 Response body parameters

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

Example Requests

Obtain sso_ticket using session_token whose value is iJK*****ITu after successful login.

```
POST https://{domain_name}/api/v2/tenant/sso/session-token/sso-ticket
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

```
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21
```

```
{
  "session_token": "iJK*****ITu",
  "operating_sys_version": "Android 10",
  "device_ip": "10.10.10.1",
  "device_fingerprint": "156aysdna213sac",
  "agent": "Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; ww) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36",
```

```
{
  "client_id": "9fIHl3Dc9ivToWLVtblrF6Sjv9Fx47JJ"
}
```

Example Responses

Status code: 200

Request successful.

```
{
  "expire" : 9600,
  "sso_ticket" : "cd7*****yjn"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.10.2 Obtaining User Information Using sso_ticket

Function

This API is used to obtain user information using sso_ticket.

URI

POST /api/v2/tenant/sso/sso-ticket/verify

Request Parameters

Table 3-269 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
Authorization	Yes	String	Authentication credential. The value is Bearer {access_token}. access_token is obtained by calling the API for obtaining an access credential.

Parameter	Mandatory	Type	Description
X-tenant-id	No	String	External ID of a tenant. This parameter is mandatory if the API is called by an ISV. Replace "{domain_name}" with the ISV common domain name "{common_domain}". The tenant ID of the corresponding tenant must be specified in the request header.

Table 3-270 Request body parameters

Parameter	Mandatory	Type	Description
sso_ticket	Yes	String	One-time access ticket (sso_ticket), which is obtained using session_token upon user login, and used to obtain user information.
operating_sys_version	Yes	String	Caller OS version, for example, Android 10.
device_ip	Yes	String	Caller device IP address, for example, 10.10.10.1
device_fingerprint	Yes	String	Caller device fingerprint. When the same user calls the API, values of this parameter must be the same, for example, 156aysdna213sc50.
agent	No	String	User agent information of the caller, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; ww) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36

Response Parameters

Status code: 200

Table 3-271 Response body parameters

Parameter	Type	Description
code	String	Error code.
message	String	Error description.
data	data object	User information.

Table 3-272 data

Parameter	Type	Description
user	UserInfoDataResult object	User information.

Table 3-273 UserInfoDataResult

Parameter	Type	Description
userName	String	Username.
id	String	User ID.
name	String	Name.
mobile	String	Mobile number.
email	String	Email address.

Status code: 400

Table 3-274 Response body parameters

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

Example Requests

Query user information based on sso_ticket obtained from session_token. The value of sso_ticket is ssoTicket-r5TCBLU14oSGxCMVdxeB5HA1uJiV.

```
POST https://{domain_name}/api/v2/tenant/sso/sso-ticket/verify
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21
```

```
{
  "sso_ticket": "ssoTicket-r5TCBLU14oSGxCMVdxeB5HA1uJiV",
  "operating_sys_version": "Android 10",
  "device_ip": "10.10.10.1",
  "device_fingerprint": "156aysdna213sac",
  "agent": "Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36"
}
```

Example Responses

Status code: 200

Request successful.

```
{
  "code" : "0",
  "message" : "success",
  "data" : {
    "user" : {
      "name" : "20220330162435",
      "mobile" : "12345678901",
      "id" : "20220330162436475-7570-D943B4FF3",
      "userName" : "20220330162435",
      "email" : "20220330162435@example.com"
    }
  }
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.10.3 Refreshing session_token

Function

This API is used to refresh session_token.

URI

POST /api/v2/tenant/sso/session-token/refresh

Request Parameters

Table 3-275 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Set this field to "application/json;charset=utf8".
Authorization	Yes	String	Authentication credential. The value is Bearer {access_token}. access_token is obtained by calling the API for obtaining an access credential.
X-tenant-id	No	String	External ID of a tenant. This parameter is mandatory if the API is called by an ISV. Replace "{domain_name}" with the ISV common domain name "{common_domain}". The tenant ID of the corresponding tenant must be specified in the request header.

Table 3-276 Request body parameters

Parameter	Mandatory	Type	Description
session_token	Yes	String	session_token after user login.
operating_sys_version	Yes	String	Caller OS version, for example, Android 10.
device_ip	Yes	String	Caller device IP address, for example, 10.10.10.1
device_fingerprint	Yes	String	Caller device fingerprint. When the same user calls the API, values of this parameter must be the same, for example, 156aysdna213sc50.
agent	No	String	User agent information of the caller. For example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36

Response Parameters

Status code: 200

Table 3-277 Response body parameters

Parameter	Type	Description
session_token	String	User's new session token, which is used to call the SSO API to obtain sso_ticket. User information can be obtained through sso_ticket.
id_token	String	It is essentially a JWT token that contains user identity information. The token is valid for 2 hours by default and its validity period can be configured.
expire	Integer	Expiration time, in seconds.

Status code: 400

Table 3-278 Response body parameters

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

Example Requests

Refresh session_token whose value is r5y*****LU1 after successful login.

```
POST https://{domain_name}/api/v2/tenant/sso/session-token/refresh
```

```
Authorization: Bearer 334963fc-1e4a-473b-9096-52a929140...
```

```
X-tenant-id: 08f770f51f80d2f40f38c00cb199fd21
```

```
{
  "session_token": "r5y*****LU1",
  "operating_sys_version": "Android 10",
  "device_ip": "10.10.10.1",
  "device_fingerprint": "156aysdna213sac",
  "agent": "Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; ww) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36"
}
```

Example Responses

Status code: 200

Request successful.

```
{
  "session_token" : "lq|*****JFH"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.2.11 ID Token Management

3.2.11.1 Generating id_token Using session_token

Function

This API is used to refresh id_token that is generated from session_token.

URI

POST /api/v2/sdk/session-token/refresh-id-token

Request Parameters

Table 3-279 Request header parameters

Parameter	Mandatory	Type	Description
X-operating-sys-version	Yes	String	Caller OS version, for example, Android 10.
X-device-fingerprint	Yes	String	Caller device fingerprint, for example, 156aysdna213sc50.
X-device-ip	No	String	Caller IP address, for example, 10.10.10.1

Parameter	Mandatory	Type	Description
X-agent	Yes	String	User agent information, for example, Mozilla/5.0 (Linux; Android 10; Redmi K30 Build/QKQ1.190825.002; wv) AppleWebKit/537.36 (KHTML, like Gecko) Version/4.0 Chrome/80.0.3987.99 Mobile Safari/537.36
X-L	No	String	Language type, for example, en.
X-client-id	Yes	String	Application ID, which is a ClientId allocated to an application after registration.
X-signature	Yes	String	In the encrypted data session_token=xxx×tamp=xxx&nonce=xxx, session_token indicates the session token, timestamp indicates the current timestamp, nonce indicates the timestamp's hexadecimal value, and the encryption mode is RSA. The current timestamp can be obtained by calling the API for obtaining the server time, and the public key for encryption can be obtained by calling the API for obtaining the public key.
X-tenant-id	No	String	Tenant ID. This parameter is mandatory when calling an ISV application. Replace "{domain_name}" with the ISV common domain name "{common_domain}". In the request header, specify tenant_id of the corresponding tenant and replace X-client-id with client_id of the ISV application template.

Response Parameters

Status code: 200

Table 3-280 Response body parameters

Parameter	Type	Description
id_token	String	It is essentially a JWT token that contains user identity information. The token is valid for 2 hours by default and its validity period can be configured.

Status code: 400

Table 3-281 Response body parameters

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

Example Requests

None

Example Responses

Status code: 200

Request successful.

```
{  
  "id_token" : "eyJ*****dhg"  
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Invalid parameter.

Error Codes

See [Error Codes](#).

3.3 Application Integration APIs

3.3.1 Calling APIs

3.3.1.1 Making an API Request

This section describes the structure of an API request, and uses the OneAccess API used to obtain an access token for OAuth 2.0-based application authentication as an example to demonstrate how to call an API. The obtained access token can then be used to authenticate the calling of the API used to query user information.

Prerequisites

Before calling APIs, obtain **ClientId** and **ClientSecret** of added applications in the administrator portal from [Basic Information](#).

Request URI

A request URI is in the following format:

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

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

- **URI-scheme:** Protocol used to transmit requests. All APIs use HTTPS.
- **domain_name:** User access domain name that you must specify when you call a OneAccess API. For details about how to obtain the domain name, see [Obtaining the User Access Domain Name](#).
- **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 **api/v1/oauth2/token**.
- **query-string:** An optional query parameter. 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 access token for the domain name **abcdefg.huaweioneaccess.com**, provide this domain name and obtain the **resource-path (/api/v1/oauth2/token)** in the URI of the API used to obtain an access token. Then, construct the URI as follows:

```
https://abcdefg.huaweioneaccess.com/api/v1/oauth2/token
```

Figure 3-3 Example URI



 NOTE

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

Request Methods

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

- **GET**: requests the server to return specified resources.
- **PUT**: requests the server to update specified resources.
- **POST**: requests the server to add resources or perform special operations.
- **DELETE**: requests the server to delete specified resources, for example, an object.
- **HEAD**: requests the server to return the response header only.
- **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 an access token, the request method is POST. The request is as follows:

```
POST https://abcdefg.huaweioneaccess.com/api/v1/oauth2/token
```

Request Header

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

[Table 3-282](#) lists the common request header fields.

Table 3-282 Common request header fields

Name	Description	Man dato ry	Example
Content-Type	Specifies the request body type or format. The default value is application/json . Other values of this field will be provided for specific APIs if any.	Yes	application/json

Name	Description	Mandatory	Example
Accept	Response type. The default value application/json is recommended. Other values of this field will be provided for specific APIs if any.	No	application/json
Content-Length	Length of the request body, in bytes.	No	3495

The API used to obtain an access 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://abcdefg.huaweioneaccess.com/api/v1/oauth2/token
Content-Type: application/json
```

(Optional) Request Body

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

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 an access 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 *domain_name* (user access domain name), ******* (authorization code returned after login), *ClientId* (API credential ID generated after application registration), *ClientSecret* (API credential secret generated after application registration), and *https://example.com* (callback address of an application specified during registration) with the actual values.

```
POST https://abcdefg.huaweioneaccess.com/api/v1/oauth2/token
Content-Type: application/json

code=*****&
client_id=ClientId&
client_secret=ClientSecret&
redirect_uri=https://example.com&
grant_type=authorization_code
```

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 an access token, **access_token** is the desired access token. This token can then be used to authenticate the calling of other APIs.

3.3.1.2 Response

Status Code

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

A status code is a group of digits, ranging from 1xx to 5xx. It indicates the status of a request.

For example, if status code **200** is returned for calling the API used to obtain an access credential, the request is successful.

(Optional) Response Header

This part is optional.

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

The API used to obtain an access token does not return a response header.

(Optional) Response Body

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

The following is part of the response body for the API used to obtain an access token.

```
{
  "access_token" : "334*****140...",
  "expires_in" : 1719,
  "refresh_token":"42e*****w24...",
  "token_type" : "Bearer",
  "scope" : "get_user_info",
}
```

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

```
{
  "error": "invalid_client",
  "error_description": "Invalid authorization code"
}
```

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

3.3.2 CAS Authentication

3.3.2.1 Logging In

Function

When a user accesses an integrated application, the application sends a CAS-based login request (redirection mode) to OneAccess. The user adds an authorized account for the application and transfers parameters username and password

using the application authentication login API POST/api/v1/login/form. The user enters their username and password to complete the authentication, and then calls the following API. OneAccess redirects the user to the application, with the ticket parameter transferring the service ticket.

Constraints

null

URI

GET /api/v1/cas/login

Table 3-283 Query Parameters

Parameter	Mandatory	Type	Description
service	Yes	String	URL for an application to receive tickets. The URL must be the same as the application callback URL in the CAS configuration.

Request Parameters

None

Response Parameters

Status code: 302

Table 3-284 Response header parameters

Parameter	Type	Description
Location	String	Redirection address used after successful authentication. Example: https://example.com?ticket=ST-eYlKs8FrLCltwRwfm8AiwCxmQ8gAL...

Example Requests

Call the CAS single sign-on (SSO) API for authentication. Set the redirection address carrying ticket information to https://example.com.

```
GET https://{domain_name}/api/v1/cas/login?service=https://example.com
```

Example Responses

None

Status Codes

Status Code	Description
302	The login is successful or the user has already logged in. The user is redirected to the service address (for example, https://example.com?ticket=ST-eYlKs8FrLClwRwfm8AiwCxmQ8gALNSK) with a service ticket.

Error Codes

See [Error Codes](#).

3.3.2.2 Verifying Tickets (CAS 3.0)

Function

This API is used by an application to verify tickets and obtain user attributes.

Constraints

null

URI

GET /api/v1/cas/p3/serviceValidate

Table 3-285 Query Parameters

Parameter	Mandatory	Type	Description
service	Yes	String	URL for an application to receive tickets. The URL must be the same as the application callback URL in the CAS configuration.
ticket	Yes	String	Service ticket obtained during login authentication.
format	No	String	Format of user information in the response. Options: XML and JSON.

Request Parameters

None

Response Parameters

None

Example Requests

Call the CAS 3.0 API to verify a ticket. Obtain the user attribute information in the JSON response format by configuring parameters, including the application callback address (<https://example.com>), and authentication ticket (ST-eYIKs8FrLCltwRwfm8AiwCxmQ8gAL...) obtained by the login authentication API.

```
GET https://{domain_name}/api/v1/cas/p3/serviceValidate?service=https://example.com&ticket=ST-eYIKs8FrLCltwRwfm8AiwCxmQ8gAL...&format=JSON
```

Example Responses

Status code: 200

Request successful.

- Example 1

```
<cas:serviceResponse xmlns:cas="http://www.yale.edu/tp/cas">
  <cas:authenticationSuccess>
    <cas:user>minghui</cas:user>
    <cas:attributes>
      <cas:authenticationDate>2020-02-11T09:28:14.987Z</cas:authenticationDate>
      <cas:longTermAuthenticationRequestTokenUsed>false</
cas:longTermAuthenticationRequestTokenUsed>
      <cas:isFromNewLogin>true</cas:isFromNewLogin>
      <cas:date>2020-02-03T16:00:00.000Z</cas:date>
      <cas:birthday>2020-02-04T16:00:00.000Z</cas:birthday>
      <cas:createAt>2020-01-10T09:01:04.000Z</cas:createAt>
      <cas:disabledAt>null</cas:disabledAt>
      <cas:disabed>false</cas:disabed>
    </cas:attributes>
  </cas:authenticationSuccess>
</cas:serviceResponse>
```

- Example 2

```
{
  "serviceResponse" : {
    "authenticationSuccess" : {
      "attributes" : {
        "date" : "2020-02-03T16:00:00.000Z",
        "birthday" : "2020-02-04T16:00:00.000Z",
        "createAt" : "2020-01-10T09:01:04.000Z",
        "disabed" : false,
        "authenticationDate" : "2020-02-11T06:43:30.588Z",
        "longTermAuthenticationRequestTokenUsed" : false,
        "isFromNewLogin" : true
      },
      "user" : "minghui"
    }
  }
}
```

Status Codes

Status Code	Description
200	Request successful.

Error Codes

See [Error Codes](#).

3.3.2.3 Logging Out

Function

This API is used to log out of the login session.

Constraints

null

URI

GET /api/v1/cas/logout

Table 3-286 Query Parameters

Parameter	Mandatory	Type	Description
service	No	String	Redirection URL after logout. If this parameter is not set, the login page is displayed. If this parameter is set, the value must be the same as the application callback URL in the CAS configuration of the application.

Request Parameters

None

Response Parameters

None

Example Requests

Log out of the login session. The user is redirected to the application callback address <https://example.com>.

GET https://{domain_name}/api/v1/cas/logout?service= https://example.com

Example Responses

None

Status Codes

Status Code	Description
302	Users are redirected to the service address if it is set. Otherwise, they are redirected to the login page.

Error Codes

See [Error Codes](#).

3.3.2.4 Verifying Tickets (CAS 1.0)

Function

This API is used by an application to verify tickets.

Constraints

null

URI

GET /api/v1/cas/validate

Table 3-287 Query Parameters

Parameter	Mandatory	Type	Description
service	Yes	String	URL for an application to receive tickets. The URL must be the same as the application callback URL in the CAS configuration.
ticket	Yes	String	Service ticket obtained during login authentication.

Request Parameters

None

Response Parameters

Status code: 200

None

Example Requests

Call the CAS 1.0 API to verify a ticket. Obtain the user attribute information by configuring parameters, including the application callback address (<https://example.com>), and authentication ticket (ST-eYIKs8FrLCltwRwfm8AiwCxmQ8gAL...) obtained by the login authentication API.

```
GET https://{domain_name}/api/v1/cas/validate?service=https://example.com&ticket=ST-eYIKs8FrLCltwRwfm8AiwCxmQ8gAL...
```

Example Responses

Status code: 200

Request successful.

```
{  
  "application/text" : "yes \"username\""  
}
```

Status Codes

Status Code	Description
200	Request successful.

Error Codes

See [Error Codes](#).

3.3.2.5 Verifying Tickets (CAS 2.0)

Function

This API is used by an application to verify tickets and obtain user information.

Constraints

null

URI

GET /api/v1/cas/serviceValidate

Table 3-288 Query Parameters

Parameter	Mandatory	Type	Description
service	Yes	String	URL for an application to receive tickets. The URL must be the same as the application callback URL in the CAS configuration.
ticket	Yes	String	Service ticket obtained during login authentication.
format	No	String	Format of user information in the response. Options: XML and JSON.

Request Parameters

None

Response Parameters

None

Example Requests

Call the CAS 2.0 API to verify a ticket. Obtain the user attribute information in the JSON response format by configuring parameters, including the application callback address (<https://example.com>), and authentication ticket (ST-eYIKs8FrLCltwRwfm8AiwCxmQ8gAL...) obtained by the login authentication API.

```
GET https://{domain_name}/api/v1/cas/serviceValidate?service=https://example.com&ticket=ST-eYIKs8FrLCltwRwfm8AiwCxmQ8gAL...&format=JSON
```

Example Responses

Status code: 200

Request successful.

- Example 1

```
<cas:serviceResponse xmlns:cas="http://www.yale.edu/tp/cas">
  <cas:authenticationFailure code="INVALID_TICKET">Ticket ST-
l1HnvKIWa0hhKTapEMdR7CU31iSG2... not recognized</cas:authenticationFailure>
</cas:serviceResponse>
```

- Example 2

```
{
  "serviceResponse" : {
    "authenticationFailure" : {
      "code" : "INVALID_TICKET",
      "description" : "the ticket provided was not valid, ticket is ST-
l1HnvKIWa0hhKTapEMdR7CU31iSG2..."
    }
  }
}
```

```
}  
}
```

Status Codes

Status Code	Description
200	Request successful.

Error Codes

See [Error Codes](#).

3.3.3 SAML 2.0 Authentication

3.3.3.1 Logging In Through IdP-Initiated SSO

Function

This API is used to initiate SSO login through an IdP.

Constraints

null

URI

GET /api/v1/saml2/idp/sso

Table 3-289 Query Parameters

Parameter	Mandatory	Type	Description
sp	Yes	String	Application entity ID.

Request Parameters

None

Response Parameters

None

Example Requests

Initiate SSO login through an IdP. The entity ID is <https://example.com/sp/>.

https://{domain_name}/api/v1/saml2/idp/sso?sp=https://example.com/sp/

Example Responses

None

Status Codes

Status Code	Description
200	The login is successful, and an assertion is sent to the SP's assertion consumption address.
302	The login fails, and the user is redirected to the login address.

Error Codes

See [Error Codes](#).

3.3.3.2 Obtaining IdP Metadata

Function

This API is used to obtain the metadata file of a SAML 2.0 identity provider (IdP). (Download requests from a Postman API are not supported.)

Constraints

null

URI

GET /api/v1/saml2/idp/metadata

Request Parameters

None

Response Parameters

None

Example Requests

Obtain the metadata file of a SAML 2.0 identity provider (IdP).

```
GET https://{domain_name}/api/v1/saml2/idp/metadata
```

Example Responses

None

Status Codes

Status Code	Description
200	Request successful.

Error Codes

See [Error Codes](#).

3.3.4 OAuth 2.0 Authentication

3.3.4.1 Obtaining an Authorization Code

Function

When a user accesses an integrated application, the application sends an authorization request (in redirection mode) to OneAccess. The user enters their username and password to complete the authentication. OneAccess redirects the user to the application callback address with an authorization code transferred in the code parameter.

Constraints

null

URI

GET /api/v1/oauth2/authorize

Table 3-290 Query Parameters

Parameter	Mandatory	Type	Description
response_type	Yes	String	Grant type. The value is fixed at code.
client_id	Yes	String	Application ID, which is a client ID allocated to an application after registration.
scope	No	String	Scope of the granted access. The value is fixed at get_user_info.

Parameter	Mandatory	Type	Description
redirect_uri	No	String	Callback address for successful authorization. The address can be the callback address or the domain name entered during application registration. You are advised to set the address to the home page or the application user center. Note that URLEncode processing needs to be performed on the URI.
state	No	String	Application status, which is used to prevent CSRF attacks. After successful authorization, the status is returned during callback to verify the mapping between the authentication and callback requests. The status can contain letters and digits.

Request Parameters

None

Response Parameters

Status code: 302

Table 3-291 Response header parameters

Parameter	Type	Description
Location	String	Redirection address used after successful authentication. Example: https://example.com? code=z2D...&state=test

Example Requests

Obtain the OAuth 2.0 authorization code. The value of the grant type is fixed at code. Configure clientId generated in the application registration. Callback address after the grant is successful: https://example.com. The value of the scope of the granted access is fixed at get_user_info.

```
GET https://{domain_name}/api/v1/oauth2/authorize?
response_type=code&client_id=NzZeWuiJa91dPSRdZQChMazlh13AW...&redirect_uri=https://
example.com&scope=get_user_info&state=test
```

Example Responses

None

Status Codes

Status Code	Description
302	The login fails, and the user is redirected to the login page. The login is successful, and the user is redirected to redirect_uri with an authorization code. Example: https://example.com?code=z2D...&state=test

Error Codes

See [Error Codes](#).

3.3.4.2 Obtaining an Access Token

Function

This API is used to obtain an access token that can be used to call the API for obtaining user information.

Constraints

null

URI

POST /api/v1/oauth2/token

Request Parameters

Table 3-292 FormData parameters

Parameter	Mandatory	Type	Description
code	Yes	String	Authorization code, which is returned by the API for obtaining authentication login code.
client_id	Yes	String	Application ID, which is a client ID allocated to an application after registration.
client_secret	Yes	String	Application secret, which is a client secret allocated to an application after registration.

Parameter	Mandatory	Type	Description
grant_type	Yes	String	Grant type. The value is fixed at authorization_code.
redirect_uri	No	String	Callback address. The address can be the callback address or the domain name entered during application registration. If this parameter is transferred, the value must be the same as the value of redirect_url in the API for obtaining an authorization login code.

Response Parameters

Status code: 200

Table 3-293 Response body parameters

Parameter	Type	Description
access_token	String	Access token that the authorization server returns to the third-party application.
token_type	String	Type of the access token. Fixed value: Bearer.
expires_in	Long	Validity period of the access token. Unit: second.
scope	String	Authorization scope.
refresh_token	String	Refresh token. By default, no refresh token is generated. If you need one, set the refresh token validity period in the authentication configuration of the application.

Status code: 400

Table 3-294 Response body parameters

Parameter	Type	Description
error	String	Error type.
error_description	String	Error description.

Example Requests

Obtain the access token that will be used to obtain user information. code uses authorization code z2D... returned by the API. client_id and client_secret use ClientId and ClientSecret assigned during the application registration. redirect_uri is configured to the application callback address https://example.com. The value of grant_type is fixed at authorization_code.

```
POST https://{domain_name}/api/v1/oauth2/token
Content-Type: application/x-www-form-urlencoded
code=z2D...&
client_id=NzZeWuiJa91dPSRdZQChMazlh13AW...&
client_secret=NzZeWuiJa91dPSRdZQChMazlh13AW...&
redirect_uri=https://example.com&
grant_type=authorization_code
```

Example Responses

Status code: 200

Request successful.

```
{
  "access_token" : "NqM*****d3k",
  "token_type" : "Bearer",
  "expires_in" : "7200",
  "scope" : "get_user_info",
  "refresh_token" : "42e*****w24"
}
```

Status code: 400

Request error.

```
{
  "error" : "invalid_grant",
  "error_description" : "Invalid authorization code"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Request error.

Error Codes

See [Error Codes](#).

3.3.4.3 Obtaining User Information

Function

This API is used to obtain user information.

Constraints

null

URI

GET /api/v1/oauth2/userinfo

Request Parameters

Table 3-295 Request header parameters

Parameter	Mandatory	Type	Description
Authorization	Yes	String	Authentication credential. The value is Bearer {access_token}.
Accept	Yes	String	Type of response that can be received. The value is application/json.

Response Parameters

Status code: 200

Table 3-296 Response body parameters

Parameter	Type	Description
id	String	User ID.
userName	String	Username.
name	String	Name.
email	String	Email address.
mobile	String	Mobile number.

Status code: 401

Table 3-297 Response body parameters

Parameter	Type	Description
error	String	Error type.
error_description	String	Error description.

Example Requests

Query user information based on access_token.

```
GET https://{domain_name}/api/v1/oauth2/userinfo
```

```
Authorization: Bearer b7e1fda8-33ce-432c-9b97-7ff035fac...
Accept: application/json
```

Example Responses

Status code: 200

Request successful.

```
{
  "id" : "20201029190841785-CB37-8BD36B...",
  "name" : "test",
  "userName" : "test",
  "mobile" : "12345678901",
  "email" : "123@example.com"
}
```

Status code: 401

Authentication failed.

```
{
  "error" : "unauthorized",
  "error_description" : "Full authentication is required to access this resource"
}
```

Status Codes

Status Code	Description
200	Request successful.
401	Authentication failed.

Error Codes

See [Error Codes](#).

3.3.4.4 Refreshing an Access Token

Function

This API is used to refresh an access token.

URI

POST /api/v1/oauth2/token

Request Parameters

Table 3-298 FormData parameters

Parameter	Mandatory	Type	Description
client_id	Yes	String	Application ID, which is a client ID allocated to an application after registration.
client_secret	Yes	String	Application secret, which is a client secret allocated to an application after registration.
refresh_token	Yes	String	Refresh token, which is returned when the API for obtaining an access token is called.
grant_type	Yes	String	Grant type. The value is fixed at refresh_token.

Response Parameters

Status code: 200

Table 3-299 Response body parameters

Parameter	Type	Description
access_token	String	Access token that the authorization server returns to the third-party application.
token_type	String	Type of the access token. Fixed value: Bearer.
expires_in	Long	Validity period of the access token. Unit: second.
scope	String	Authorization scope.

Parameter	Type	Description
refresh_token	String	Refresh token.

Status code: 400

Table 3-300 Response body parameters

Parameter	Type	Description
error	String	Error type.
error_description	String	Error description.

Example Requests

Refresh access_token based on refresh_token. refresh_token can be obtained by calling the API for obtaining an access token. client_id and client_secret use ClientId and ClientSecret assigned during the application registration. The value of grant_type is fixed at refresh_token.

```
POST https://{domain_name}/api/v1/oauth2/token
Content-Type: application/x-www-form-urlencoded
client_id=NzZeWuiJa91dPSRdZQChMazlh13AW...&
client_secret=NzZ*****3AW&
refresh_token=e8e*****7e3&
grant_type=refresh_token
```

Example Responses

Status code: 200

Request successful.

```
{
  "access_token" : "9b0*****df2",
  "token_type" : "Bearer",
  "expires_in" : 7200,
  "scope" : "get_user_info",
  "refresh_token" : "dec*****7f1"
}
```

Status code: 400

Request error.

```
{
  "error" : "invalid_grant",
  "error_description" : "Invalid refresh token"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Request error.

Error Codes

See [Error Codes](#).

3.3.5 OIDC Authentication

3.3.5.1 Obtaining an Authorization Code

Function

When a user accesses an integrated application, the application sends an authorization request (in redirection mode) to OneAccess. The user enters their username and password to complete the authentication. OneAccess redirects the user to the application with an authorization code transferred in the code parameter.

URI

GET /api/v1/oauth2/authorize

Table 3-301 Query Parameters

Parameter	Mandatory	Type	Description
client_id	Yes	String	Application ID, which is a client ID allocated to an application after registration.
redirect_uri	No	String	Callback address, which is used by the application to receive the OneAccess authorization code. The address can be the callback address or the domain name entered during application registration.
response_type	Yes	String	Grant type. The value is fixed at code.
scope	No	String	Scope of the granted access. The value is fixed at openid.

Parameter	Mandatory	Type	Description
state	No	String	Application status, which is used to prevent CSRF attacks. After successful authorization, the status is returned during callback to verify the mapping between the authentication and callback requests. The status can contain letters and digits.

Request Parameters

None

Response Parameters

Status code: 302

Table 3-302 Response header parameters

Parameter	Type	Description
Location	String	Redirection address used after successful authentication. Example: <code>https://example.com?code=z2D...&state=test</code>

Example Requests

Obtain the OIDC authorization code. The value of the grant type is fixed at code. Configure clientId generated in the application registration. Callback address after the grant is successful: `https://example.com`. The value of the scope of the granted access is fixed at openid.

```
GET https://{domain_name}/api/v1/oauth2/authorize?
response_type=code&client_id=cU0L3GsEq1vuOJ5iQrRSu5AyPnKL8...&redirect_uri=https://
example.com&scope=openid&state=test
```

Example Responses

None

Status Codes

Status Code	Description
302	The login fails, and the user is redirected to the login page. The login is successful, and the user is redirected to redirect_uri with an authorization code. Example: https://example.com?code=z2D...&state=test

Error Codes

See [Error Codes](#).

3.3.5.2 Obtaining an ID Token

Function

This API is used to obtain an ID token.

URI

POST /api/v1/oauth2/token

Request Parameters

Table 3-303 FormData parameters

Parameter	Mandatory	Type	Description
grant_type	Yes	String	Grant type. The value is fixed at authorization_code.
code	Yes	String	Authorization code, which is obtained through callback after login authentication.
client_id	Yes	String	Application ID, which is a client ID allocated to an application after registration.
client_secret	Yes	String	Application secret, which is a client secret allocated to an application after registration.
redirect_uri	Yes	String	Callback address. The address can be the callback address or the domain name entered during application registration.

Response Parameters

Status code: 200

Table 3-304 Response body parameters

Parameter	Type	Description
access_token	String	Access token that the authorization server returns to the third-party application.
token_type	String	Type of the access token. Fixed value: Bearer.
expires_in	String	Validity period of the access token. Unit: second.
scope	String	Authorization scope.
refresh_token	String	Refresh token. By default, no refresh token is generated. If you need one, set the refresh token validity period in the authentication configuration of the application.
id_token	String	ID token.

Status code: 400

Table 3-305 Response body parameters

Parameter	Type	Description
error	String	Error type.
error_description	String	Error description.

Example Requests

Obtain an ID token based on an authorization code. The value of grant type is fixed at authorization_code. ClientId and ClientSecret allocated in the application registration are used. Redirection address is configured to the callback address (https://example.com) in the application registration.

```
POST https://{domain_name}/api/v1/oauth2/token
Content-Type: application/x-www-form-urlencoded
grant_type=authorization_code&
code=0yV...&
client_id=cU0L3GsEq1vuOJ5iQrRSu5AyPnKL8...&
client_secret=EFj*****TcE&
redirect_uri=https://example.com
```

Example Responses

Status code: 200

Request successful.

- Example 1

```
{
  "access_token" : "ObU*****NpD",
  "token_type" : "Bearer",
  "expires_in" : 7200,
  "scope" : "openid",
  "id_token" : "eyJ*****Njg"
}
```

- Example 2

```
{
  "access_token" : "NqMh*****d3k",
  "token_type" : "Bearer",
  "expires_in" : 7200,
  "scope" : "openid",
  "refresh_token" : "5wl*****anH",
  "id_token" : "eyJ*****Njg"
}
```

Status code: 400

Request error.

```
{
  "error" : "invalid_grant",
  "error_description" : "Invalid authorization code"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Request error.

Error Codes

See [Error Codes](#).

3.3.5.3 Refreshing an Access Token

Function

This API is used to refresh an access token.

URI

POST /api/v1/oauth2/token

Request Parameters

Table 3-306 FormData parameters

Parameter	Mandatory	Type	Description
client_id	Yes	String	Application ID, which is a client ID allocated to an application after registration.
client_secret	Yes	String	Application secret, which is a client secret allocated to an application after registration.
refresh_token	Yes	String	Refresh token, which is returned when the API for obtaining an ID token is called.
grant_type	Yes	String	Grant type. The value is fixed at refresh_token.

Response Parameters

Status code: 200

Table 3-307 Response body parameters

Parameter	Type	Description
access_token	String	Access token that the authorization server returns to the third-party application.
token_type	String	Type of the access token. Fixed value: Bearer.
expires_in	String	Validity period of the access token. Unit: second.
scope	String	Authorization scope.
refresh_token	String	Refresh token.
id_token	String	ID token.

Status code: 400

Table 3-308 Response body parameters

Parameter	Type	Description
error	String	Error type.
error_description	String	Error description.

Example Requests

Refresh access_token based on refresh_token. refresh_token can be obtained by calling the API for obtaining an ID token. client_id and client_secret use ClientId and ClientSecret assigned during the application registration. The value of grant_type is fixed at refresh_token.

```
POST https://{domain_name}/api/v1/oauth2/token
Content-Type: application/x-www-form-urlencoded

client_id=cU0L3GsEq1vuOJ5iQrRSu5AyPnKL8...&
client_secret=EFj*****TcE&
refresh_token=b462*****7ef&
grant_type=refresh_token
```

Example Responses

Status code: 200

Request successful.

```
{
  "access_token": "270*****6d5",
  "token_type": "Bearer",
  "expires_in": 7200,
  "scope": "openid",
  "refresh_token": "162*****412",
  "id_token": "eyJ*****YTk"
}
```

Status code: 400

Request error.

```
{
  "error": "invalid_grant",
  "error_description": "Invalid authorization code"
}
```

Status Codes

Status Code	Description
200	Request successful.
400	Request error.

Error Codes

See [Error Codes](#).

3.3.5.4 Performing Implicit Grant

Function

When a user accesses an integrated application, the application obtains an access token and ID token through implicit grant, and sends a grant request (in redirection mode) to OneAccess. If the grant is successful after the user enters their username and password, OneAccess redirects the user to the application with the access token and ID token.

URI

GET /api/v1/oauth2/authorize

Table 3-309 Query Parameters

Parameter	Mandatory	Type	Description
client_id	Yes	String	Application ID, which is a client ID allocated to an application after registration.
redirect_uri	Yes	String	Callback address, which is used by the application to receive the address of OneAccess token (ID token or access token). The address can be the callback address or the domain name entered during application registration.
response_type	Yes	String	Grant type. Options: id_token or id_token token. <ul style="list-style-type: none"> id_token: An ID token is returned. id_token token: An access token and ID token are returned.
scope	Yes	String	Scope of the granted access. The value is fixed at openid.

Parameter	Mandatory	Type	Description
state	No	String	Application status, which is used to prevent CSRF attacks. After successful authorization, the status is returned during callback to verify the mapping between the authentication and callback requests. The status can contain letters and digits.

Request Parameters

None

Response Parameters

Status code: 302

Table 3-310 Response header parameters

Parameter	Type	Description
location	String	Redirection address used after successful authentication. - If the grant type of list text here is id_token, https://example.com#id_token=eyJraWQiOiJlNWFlNTg1Mzky.NjA0Njg... is returned. - If the grant type of list text here is id_token token, https://example.com#access_token=f9dd6b8a-4b4f-4380-bf3a-39f8bfef...&token_type=Bearer&expires_in=7199&id_token=eyJraWQiOiJlNWFlNTg1Mzky.NjA0Njg... is returned.

Example Requests

- Implicit grant is performed based on the grant type value id_token token. In this case, the response carries access_token and id_token.

```
GET https://{domain_name}/api/v1/oauth2/authorize?response_type=id_token
token&client_id=cU0L3GsEq1vuOJ5iQrRSu5AyPnKL8...&redirect_uri=https://
example.com&scope=openid&state=test
```

- Implicit grant is performed based on the grant type value id_token. In this case, the response carries id_token.

```
GET https://{domain_name}/api/v1/oauth2/authorize?
response_type=id_token&client_id=cU0L3GsEq1vuOJ5iQrRSu5AyPnKL8...&redirect_uri=https://
example.com&scope=openid&state=test
```

Example Responses

None

Status Codes

Status Code	Description
302	The login fails, and the user is redirected to the login page. The login is successful, and the user is redirected to redirect_uri with an access token and ID token.

Error Codes

See [Error Codes](#).

3.3.5.5 Obtaining OIDC Metadata

Function

This API is used to obtain the metadata file of an OIDC IdP.

Constraints

null

URI

GET /api/v1/oauth2/.well-known/openid-configuration

Request Parameters

None

Response Parameters

None

Example Requests

Obtain the metadata file of an OIDC IdP.

```
GET https://{domain_name}/api/v1/oauth2/.well-known/openid-configuration
```

Example Responses

None

Status Codes

Status Code	Description
200	Request successful.

Error Codes

See [Error Codes](#).

3.3.6 Unified Logout

3.3.6.1 Logging Out Globally

Function

When a user logs out of a third-party application system, the session of the application system is terminated and the SSO ticket generated by OneAccess is destroyed. After the SSO ticket is destroyed, the browser performs a redirection to the callback URL specified by the application.

Constraints

null

URI

GET /api/v1/logout

Table 3-311 Query Parameters

Parameter	Mandatory	Type	Description
redirect_url	No	String	Redirection address used after logout. The address must be URL-encoded. If this parameter is not set, the login page is displayed.

Request Parameters

None

Response Parameters

None

Example Requests

Log out of OneAccess globally and redirect to the application callback address
`https://example.com`.

```
GET https://{domain_name}/api/v1/logout?redirect_url= https://example.com
```

Example Responses

None

Status Codes

Status Code	Description
302	By default, users are redirected to the login page. If <code>redirect_url</code> is specified, users are redirected to this address instead.

Error Codes

See [Error Codes](#).

4 Appendix

4.1 Signing a Session Token

Signing Process

1. Construct the data to be signed: "session_token="+sessionToken+"×tamp="+timestamp+"&nonce="+nonce.
In the data, **timestamp** indicates the timestamp of the current server. The timestamp can be obtained by calling the API used to obtain the server timestamp. **nonce** is a random character string generated for each signature. The string can be a hexadecimal string of the current timestamp.
2. Obtain a public key by calling the corresponding API.
The signature algorithm is RSA, and the padding mode is RSA/ECB/OAEPWithSHA-256AndMGF1Padding. The encrypted data to be signed must be encoded using Base64.

Java Code Signing Example

```
import org.bouncycastle.jce.provider.BouncyCastleProvider;
import org.apache.commons.codec.binary.Base64;
import javax.crypto.Cipher;
import java.nio.charset.Charset;
import java.security.*;
import java.security.spec.InvalidKeySpecException;
import java.security.spec.PKCS8EncodedKeySpec;
import java.security.spec.X509EncodedKeySpec;
import java.util.Date;

public class RSAUtils {
    public static final Provider provider = new BouncyCastleProvider();
    public static final String KEY_ALGORITHM = "RSA";
    public static final String BEGIN_PRI_KEY = "-----BEGIN RSA PRIVATE KEY-----";
    public static final String END_PRI_KEY = "-----END RSA PRIVATE KEY-----";
    public static final String BEGIN_PUB_KEY = "-----BEGIN PUBLIC KEY-----";
    public static final String END_PUB_KEY = "-----END PUBLIC KEY-----";

    // Encryption
    public static String encrypt(String input, String publicKey) {
        // Remove the start and end identifiers and newline characters from the public key.
        publicKey = publicKey.replaceAll(BEGIN_PUB_KEY, "").replaceAll(END_PUB_KEY, "").replace("\n", "");
        try {
```

```
        byte[] enStrByte = encrypt(input, getPublicRSAKey(publicKey));
        return Base64Utils.encodeToString(enStrByte);
    }catch (Exception e){
        throw new RuntimeException("Could not encrypt data ",e);
    }
}

private static PublicKey getPublicRSAKey(String key) throws NoSuchAlgorithmException,
InvalidKeySpecException {
    X509EncodedKeySpec x509 = new X509EncodedKeySpec(Base64Utils.decodeFromStrings(key));
    KeyFactory kf = KeyFactory.getInstance(KEY_ALGORITHM, provider);
    return kf.generatePublic(x509);
}

private static byte[] encrypt(String input, PublicKey publicKey)
throws Exception {
    Cipher cipher = Cipher.getInstance("RSA/ECB/OAEPWithSHA-256AndMGF1Padding", provider);
    cipher.init(Cipher.ENCRYPT_MODE, publicKey);
    byte[] re = cipher.doFinal(input.getBytes("UTF-8"));
    return re;
}

// Decryption
public String decrypt(String input, String privateKey) {
    privateKey = privateKey.replaceAll(BEGIN_PRI_KEY, "").replaceAll(END_PRI_KEY, "").replaceAll("\\n", "");
    try {
        byte[] bt = Base64.decodeBase64(input);
        byte[] decryptedData = RSAUtils.decrypt(bt, RSAUtils.getPrivateRSAKey(privateKey));
        return validateData(decryptedData);
    }catch (Exception e){
        return e.getMessage();
    }
}

private static byte[] decrypt(byte[] encrypted, PrivateKey privateKey)
throws Exception {
    Cipher cipher = Cipher.getInstance("RSA/ECB/OAEPWithSHA-256AndMGF1Padding", provider);
    cipher.init(Cipher.DECRYPT_MODE, privateKey);
    return cipher.doFinal(encrypted);
}

public static PrivateKey getPrivateRSAKey(String key) throws InvalidKeySpecException,
NoSuchAlgorithmException {
    PKCS8EncodedKeySpec pkcs8 = new PKCS8EncodedKeySpec(Base64Utils.decodeFromStrings(key));
    KeyFactory kf = KeyFactory.getInstance(KEY_ALGORITHM, provider);
    return kf.generatePrivate(pkcs8);
}

private static String validateData(byte[] decryptedData) {
    String dataStr = new String(decryptedData, Charset.defaultCharset());
    if (dataStr!=null && dataStr.length() > 0){
        String[] split = dataStr.split("#");
        if (split.length > 1 && split[split.length-1].length() == String.valueOf(new
Date().getTime()).length()) {
            try {
                if (new Date().getTime() - Long.parseLong(split[split.length-1]) < 5*60*1000L){
                    return dataStr.substring(0,dataStr.length()-1-split[split.length-1].length());
                }else {
                    throw new RuntimeException("operate time out");
                }
            } catch (Exception e) {
                throw new RuntimeException("wrong timestamp ", e);
            }
        }else {
            return dataStr;
        }
    }
    return null;
}
```


Status Code	Error Codes	Error Message	Description	Solution
400	APP_ACCOUNT.0002	Application account already exists.	Application account already exists.	Changing an application account that has not been added to the system.
400	APP_ACCOUNT.0003	Unsupported application account.	Unsupported application account.	Check whether the application account type is correct.
400	APP_ACCOUNT.0004	Unsupported application account permission.	Unsupported application account permission.	Check whether the permission type of the application account is correct.
400	APP_ACCOUNT.0006	Public account does not exist.	Public account does not exist.	Check whether the public account of the corresponding application exists.
400	APP_ACCOUNT.0007	Extended attribute does not exist.	Extended attribute does not exist.	Check whether the extended attribute of the corresponding application account exists.
400	APP_ACCOUNT.0008	The name of the application account required.	The name of the application account required.	Check whether the application account name in the input parameter is empty.
400	APP_ACCOUNT.0035	Application account name required.	Application account name required.	Check whether the application account name in the input parameter is empty.
400	APP_ACCOUNT.0036	Application account name invalid.	Application account name invalid.	Check whether the application account name in the input parameter meets the verification rules.

Status Code	Error Codes	Error Message	Description	Solution
400	APP_ORG.0001	Application organization does not exist.	Application organization does not exist.	Check whether the corresponding application organization exists.
400	APP_ORG.0002	Application organization is not enabled.	Application organization is not enabled.	Check whether the application organization is enabled for the corresponding application.
400	APP_ORG.0003	Application organization code already exists.	Application organization code already exists.	Changing the code of an application organization that has not been added.
400	APP_ORG.0004	Parent application organization does not exist.	Parent application organization does not exist.	Check whether the corresponding application organization exists.
400	APP_ORG.0005	Application organization cannot be modified.	Application organization cannot be modified.	Check whether the corresponding application is under the tenant.
400	APP_ORG.0006	Application organization and its parent must be different.	Application organization and its parent must be different.	Please check whether the parent application organization is the same as the application organization.
400	APP_ORG.0007	Application organizations cannot be deleted.	Application organizations cannot be deleted.	Check whether the corresponding application organization has sub-organizations or users.
400	APP_ORG.0008	Application organization code required.	Application organization code required.	Check whether the application organization code field in the input parameter is empty.

Status Code	Error Codes	Error Message	Description	Solution
400	APP_ORG.0009	Application organization name required.	Application organization name required.	Check whether the application organization name field in the input parameter is empty.
400	APP_ORG.0010	Application organization name already exists.	Application organization name already exists.	Replace the name of an application organization that has not been added at the same level.
400	APP_ORG.0011	Invalid application organization code.	Invalid application organization code.	Check whether the application organization code in the input parameter meets the verification rules.
400	APP_ORG.0012	Invalid application organization name.	Invalid application organization name.	Check whether the application organization name field in the input parameters complies with the verification rule.
400	APP_ROLE.0001	Application role does not exist.	Application role does not exist.	Check whether the corresponding application role exists.
400	APP_ROLE.0002	Application role is not enabled.	Application role is not enabled.	Check whether the application role is enabled for the corresponding application.
400	APP_ROLE.0003	Application role already exists.	Application role already exists.	Changing an application role that has not been added.
400	APP_ROLE.0004	Application role is bound to accounts.	Application role is bound to accounts.	Please unbind the app account first.

Status Code	Error Codes	Error Message	Description	Solution
400	APP_ROLE.0005	Application role code required.	Application role code required.	Check whether the application role code in the input parameter is empty.
400	APP_ROLE.0006	Application role code invalid.	Application role code invalid.	Please check whether the application role code field in the input parameters complies with the verification rule.
400	APP_ROLE.0007	Application role name required.	Application role name required.	Check whether the application role name in the input parameter is empty.
400	APP_ROLE.0008	Application role name invalid.	Application role name invalid.	Check whether the application role name in the input parameter meets the verification rules.
400	CAPTCHA.0002	Invalid CAPTCHA code.	Invalid CAPTCHA code.	Please check whether the input is correct and call again.
400	CAPTCHA.0003	CAPTCHA token expired.	CAPTCHA token expired.	Obtain and verify the graphic verification code again before calling.
400	CAPTCHA.0004	Invalid CAPTCHA token.	Invalid CAPTCHA token.	The input token is the same as the token returned in the verification code.
400	CAPTCHA.0005	Unsupported scenario.	Unsupported scenario.	Please check whether the delivery method is correct.

Status Code	Error Codes	Error Message	Description	Solution
400	CAPTCHA.0006	Failed to send the verification code.	Failed to send the verification code.	Please check whether the input is correct and call again.
400	CAPTCHA.0007	Incorrect verification code.	Incorrect verification code.	Check whether the verification code is correct.
400	COM.0002	System busy. Please try again later.	System busy. Please try again later.	Contact the administrator.
400	LOGIN.0001	User has been locked due to multiple login failures. It will be unlocked in {0} minutes and {1} seconds.	User has been locked due to multiple login failures. It will be unlocked in {0} minutes and {1} seconds.	Unlock and try again.
400	LOGIN.0002	Invalid account name or password. Remaining attempts: {0}	Invalid account name or password. Remaining attempts: {0}	Check whether the entered user name or password is correct.
400	LOGIN.0003	id_token generate error.	id_token generate error.	Check whether the entered user name or password is correct.
400	MOBILE.0002	Unauthenticated mobile number.	Unauthenticated mobile number.	Check whether the entered mobile number is correct.
400	ORG.0001	Organization does not exist.	Organization does not exist.	Check whether the organization exists.
400	ORG.0002	Parent organization does not exist.	Parent organization does not exist.	Check whether the parent organization exists.
400	ORG.0010	Organization code required.	Organization code required.	Check the organization code.

Status Code	Error Codes	Error Message	Description	Solution
400	ORG.0011	Organization name required.	Organization name required.	Check whether the organization name field in the input parameter is empty.
400	ORG.0012	Organization code already exists.	Organization code already exists.	Replace an organization code that has not been added yet.
400	ORG.0014	Invalid organization code.	Invalid organization code.	Please check whether the organization code field in the input parameters complies with the verification rules.
400	ORG.0015	Invalid organization name.	Invalid organization name.	Check whether the organization name field in the input parameters meets the verification rule.
400	ORG.0016	Organizations cannot be deleted.	Organizations cannot be deleted.	Check whether there are sub-organizations or users under the organization.
400	ORG.0017	Organization and its parent must be different.	Organization and its parent must be different.	The parent organization and the current organization cannot be the same.
400	PAGE.0001	Number of records per page is invalid.	Number of records per page is invalid.	Check the number of records on each page.
400	PARAM.0001	Incomplete device information.	Incomplete device information.	Check whether the entered device information is complete.
400	PARAM.0002	clientId required.	clientId required.	Check whether the entered client ID is empty.

Status Code	Error Codes	Error Message	Description	Solution
400	PARAM.0004	Coordinates required.	Coordinates required.	Please check whether the input coordinate information is empty.
400	PARAM.0005	Token required.	Token required.	Check whether the entered image verification code token is empty.
400	PARAM.0006	Sender required.	Sender required.	Check whether the entered sender is empty.
400	PARAM.0007	Scenario required.	Scenario required.	Please check whether the input delivery scenario is empty.
400	PARAM.0008	CAPTCHA token required.	CAPTCHA token required.	Check whether the entered verification code token is empty.
400	PARAM.0009	Verification code required.	Verification code required.	Check whether the verification code is empty.
400	PARAM.0010	Account required.	Account required.	Check whether the entered account is empty.
400	PARAM.0011	WeChat authorization code required.	WeChat authorization code required.	Check whether the WeChat authorization code is empty.
400	PARAM.0012	Alipay authorization code required.	Alipay authorization code required.	Check whether the entered Alipay authorization code is empty.
400	PARAM.0013	State token required.	State token required.	Check whether the entered temporary token is empty.

Status Code	Error Codes	Error Message	Description	Solution
400	PARAM.0014	Invalid state token.	Invalid state token.	Please check whether the temporary token you entered is correct.
400	PARAM.0017	PARAM.0017	The social ID cannot be empty.	Check whether the entered social ID is empty.
400	PARAM.0018	Old password required.	Old password required.	Check whether the old password field in the input parameter is empty.
400	PARAM.0019	New password required.	New password required.	Check whether the new password field in the input parameter is empty.
400	PARAM.0020	Old and new passwords must be different.	Old and new passwords must be different.	Check whether the entered old password is the same as the new password.
400	PARAM.0028	Old password is incorrect.	Old password is incorrect.	Please enter the password again.
400	PARAM.0029	Invalid list.	Invalid list.	Check whether the size of the input collection complies with the verification rule.
400	PARAM.0030	Signature invalid or expired.	Signature invalid or expired.	Please regenerate the signature and try again.
400	PARAM.0031	SSO ticket required.	SSO ticket required.	Check whether the entered one-time token is empty.
400	PARAM.0032	SSO ticket invalid or expired.	SSO ticket invalid or expired.	Please obtain a new one-time token and try again.