

KooPhone

API Reference

Issue 01
Date 2024-07-22



Copyright © Huawei Cloud Computing Technologies Co., Ltd. 2024. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Cloud Computing Technologies Co., Ltd.

Trademarks and Permissions



HUAWEI and other Huawei trademarks are the property of Huawei Technologies Co., Ltd.

All other trademarks and trade names mentioned in this document are the property of their respective holders.

Notice

The purchased products, services and features are stipulated by the contract made between Huawei Cloud and the customer. All or part of the products, services and features described in this document may not be within the purchase scope or the usage scope. Unless otherwise specified in the contract, all statements, information, and recommendations in this document are provided "AS IS" without warranties, guarantees or representations of any kind, either express or implied.

The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied.

Huawei Cloud Computing Technologies Co., Ltd.

Address: Huawei Cloud Data Center Jiaoxinggong Road
Qianzhong Avenue
Gui'an New District
Gui Zhou 550029
People's Republic of China

Website: <https://www.huaweicloud.com/intl/en-us/>

Contents

1 Before You Start.....	1
1.1 Overview.....	1
1.2 API Calling.....	1
1.3 Endpoints.....	1
1.4 Constraints.....	1
1.5 Concepts.....	1
2 API Overview.....	3
3 Calling APIs.....	4
3.1 Making an API Request.....	4
3.2 Authentication.....	8
3.3 Response.....	9
4 APIs.....	11
4.1 Instance Management.....	11
4.1.1 Synchronization Command.....	11
4.1.2 Asynchronization Command.....	14
4.1.3 Batch Task Query.....	17
4.1.4 Video Settings.....	20
4.1.5 Batch Status Query.....	23
4.1.6 Batch Resetting.....	26
4.2 Instance Usage.....	28
4.2.1 Obtaining device_token Before Streaming.....	28
5 Appendix.....	33
5.1 Status Codes.....	33
5.2 Error Codes.....	35
5.3 Obtaining a Project ID.....	35

1 Before You Start

1.1 Overview

Based on smart engine scheduling and device-cloud collaboration, KooPhone provides efficient cloud phone interaction and rich applications running the cloud OS, builds a prosperous application ecosystem, and delivers a satisfactory user experience with low costs.

This document describes how to use application programming interfaces (APIs) to perform operations on KooPhone, such as video setting and batch resetting. For details about all supported operations, see [API Overview](#).

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

1.2 API Calling

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

1.3 Endpoints

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

1.4 Constraints

None

1.5 Concepts

- Account

An account is created upon successful registration with the cloud system. The account has full access permissions for all of its cloud services and resources.

It can be used to reset user passwords and grant user permissions. The account is a payment entity and should not be used directly to perform routine management. For security purposes, create Identity and Access Management (IAM) users and grant them permissions for routine management.

- User

A user is created using an account to use cloud services. Each user has its own identity credentials (password and access keys).

The account name, username, and password will be required for API authentication.

- Region

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

For details, see [Region and AZ](#).

- AZ

An AZ contains one or more physical data centers. Each AZ has independent cooling, fire extinguishing, moisture-proof, and electricity facilities. Within an AZ, computing, network, storage, and other resources are logically divided into multiple clusters. AZs within a region are interconnected using high-speed optical fibers to support cross-AZ high-availability systems.

2 API Overview

[Table 2-1](#) describes the KooPhone APIs.

Table 2-1 KooPhone APIs

Type	Description
Synchronization Command	Specify a cloud phone instance to synchronously execute Android Debug Bridge (adb) shell commands.
Asynchronization Command	Specify a cloud phone instance to asynchronously execute adb shell commands.
Batch Task Query	Query the execution result after an adb shell command is asynchronously executed.
Video Settings	Set the stream resolution, bit rate, network format, and frames per second (FPS).
Batch Status Query	Query the status of specified cloud phone instances.
Batch Resetting	Reset specified cloud phone instances.
Obtaining device_token Before Streaming	Obtain device_token of a cloud phone instance as the authentication information and carry device_id of the cloud phone instance to call the signaling address (signaling_url) in reverse parameters.

3 Calling APIs

3.1 Making an API Request

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

Request URI

A request URI is in the following format:

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

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

Table 3-1 Parameter description

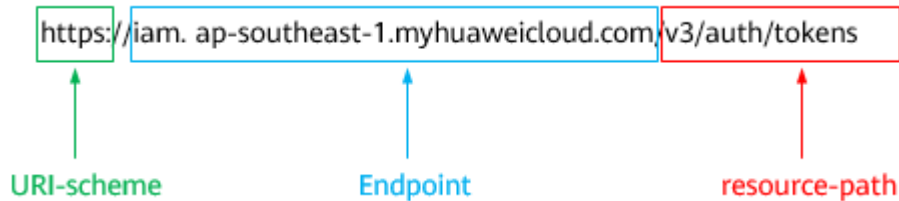
Parameter	Description
URI-scheme	Protocol used to transmit requests. All APIs use HTTPS.
Endpoint	Domain name or IP address of the server bearing the REST service. The endpoint varies between services in different regions. It can be obtained from the administrator.
resource-path	Access path of an API for performing a specified operation. Obtain the path from the URI of an API. For example, the resource-path of the API used to obtain a user token is /v3/auth/tokens .
query-string	Query parameter, which is optional. Ensure that a question mark (?) is included before each query parameter that is in the format of <i>Parameter name=Parameter value</i> . For example, limit=10 indicates that a maximum of 10 data records will be displayed.

For example, to obtain an IAM token in the **CN-Hong Kong** region, obtain the endpoint of IAM (**iam.ap-southeast-1.myhuaweicloud.com**) for this region and

the **resource-path** (/v3/auth/tokens) in the URI of the API used to **obtain a user token**. Then, construct the URI as follows:

```
https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
```

Figure 3-1 Example URI



NOTE

To simplify URI display, only the **resource-path** and request method are displayed. The **URI-scheme** of all APIs is **HTTPS**, and the endpoints of all APIs in the same region are identical.

Request Methods

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

Table 3-2 HTTP methods

Method	Description
GET	Request the server to return specified resources.
PUT	Request the server to update specified resources.
POST	Request the server to add resources or perform special operations.
DELETE	Request the server to delete specified resources, for example, an object.
HEAD	Request the server to return only the response header.
PATCH	Request the server to update partial content of a specified resource. If the resource does not exist, a new resource will be created.

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

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
```

Request Header

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

Table 3-3 lists common request header fields.

Table 3-3 Common request headers

Name	Description	Mandatory	Example
Host	Request server information, which is obtained from the URL of a service API. The value is in the format of <i>hostname[:port]</i> . If the port number is not specified, the default port 443 is used for HTTPS.	No This field is mandatory for authentication using access key ID/secret access key (AK/SK).	code.test.com or code.test.com:443
Content-Type	Request body type or format. 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
X-Auth-Token	User token. The user token is a response to the API used to obtain a user token . This API is the only one that does not require authentication. The token is the value of X-Subject-Token in the response header.	No This field is mandatory for token-based authentication.	The following is part of an example token: MIIPAgYJKoZIhvcNAQc-Co...ggg1BBIINPXsidG9rZ

 NOTE

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

For more information, see "AK/SK-based Authentication" in [Authentication](#).

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

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
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 a user token](#), the request parameters and parameter description can be obtained from the API request. The following provides an example request with a body included. Replace *username*, *domainname*, ******* (login password), and *xxxxxxxxxxxxxxxxxxxx* (project name) with the actual values. Obtain the project name from [Regions and Endpoints](#).

 NOTE

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

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
Content-Type: application/json
```

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

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

3.2 Authentication

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

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

Token-based Authentication

NOTE

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

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

A project-level token is required for calling KooPhone APIs. When calling the API for [obtaining a user token](#), set **project** in **auth.scope** in the request body.

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

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

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

AK/SK-based Authentication

NOTE

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

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

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

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

NOTICE

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

3.3 Response

Status Code

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

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

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

Response Header

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

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

4 APIs

4.1 Instance Management

4.1.1 Synchronization Command

Function

This API is used to execute a synchronization command for an instance. Before calling this API, ensure that the tenant has purchased a KooPhone cloud phone instance. You can call this API to perform ADB operations on your KooPhone cloud phone instance. This API is used for synchronization. If time-consuming ADB operations are performed, you are advised to use the API for executing an asynchronization command for an instance.

URI

POST /v1/instances/sync-command

Request Parameters

Table 4-1 Request header parameters

Parameter	Mandatory	Type	Description
x-request-id	Yes	String	Unique ID of a request.
X-Auth-Token	Yes	String	Tenant-level token.

Table 4-2 Request body parameters

Parameter	Mandatory	Type	Description
command	Yes	String	Command. The value can contain up to 1,024 bytes, including only letters, digits, underscores (_), dots (.), slashes (/), colons (:), and hyphens (-). Maximum: 1024
instance_ids	Yes	Array of strings	Instance list. Maximum: 32

Response Parameters

Status code: 200

Table 4-3 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KP.API.0001, and the number increases in ascending order.
error_msg	String	Response description.
data	CmdResultWrapper object	Command execution result.

Table 4-4 CmdResultWrapper

Parameter	Type	Description
cmd_results	Array of CmdResult objects	Command execution result.

Table 4-5 CmdResult

Parameter	Type	Description
instance_id	String	Instance ID. Maximum: 32
status	Integer	Task status. 1: Running. 2: Successful. -1: Failed.

Parameter	Type	Description
error_code	String	Task error code.
error_msg	String	Task error code description.
execute_msg	String	Content returned after a task is executed. The value can contain up to 1,024 bytes. The command output is returned regardless of whether the command is successfully executed. Maximum: 1024

Status code: 400

Table 4-6 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KOOPHONE.API.0001, and the number increases in ascending order. If error_code is 0, the operation is successful.
error_msg	String	Response description.

Status code: 500

Table 4-7 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KOOPHONE.API.0001, and the number increases in ascending order. If error_code is 0, the operation is successful.
error_msg	String	Response description.

Example Requests

```
/v1/instances/sync-command
{
  "command" : "ls -l /system",
  "instance_ids" : [ "a44uhlf7", "efjy72gs" ]
}
```

Example Responses

Status code: 200

OK

```
{
  "data": {
    "cmd_results": [ {
      "instance_id": "a44uhlf7",
      "status": -1,
      "error_code": "CPS.0191",
      "error_msg": "Run command failed.",
      "execute_msg": "ls: cannot access '/system': No such file or directory"
    }, {
      "instance_id": "efjy72gs",
      "status": 2,
      "error_code": "",
      "error_msg": "",
      "execute_msg": "xxxxxx"
    } ]
  },
  "error_code": "0",
  "error_msg": "ok"
}
```

Status Codes

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

Error Codes

See [Error Codes](#).

4.1.2 Asynchronization Command

Function

This API is used to execute an asynchronization command for an instance. Before calling this API, ensure that the tenant has purchased a KooPhone cloud phone instance. You can call this API to perform asynchronous ADB operations on your KooPhone cloud phone instance. After this API is called, the returned task_id is used to call the instance execution task query API.

URI

POST /v1/instances/async-command

Request Parameters

Table 4-8 Request header parameters

Parameter	Mandatory	Type	Description
x-request-id	Yes	String	Unique ID of a request.
X-Auth-Token	Yes	String	Tenant-level token.

Table 4-9 Request body parameters

Parameter	Mandatory	Type	Description
command	Yes	String	Command. The value can contain up to 1,024 bytes, including only letters, digits, underscores (_), dots (.), slashes (/), colons (:), and hyphens (-). Maximum: 1024
instance_ids	Yes	Array of strings	Instance list. Maximum: 32

Response Parameters

Status code: 200

Table 4-10 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KooPhone.API.1001, and the number increases in ascending order.
error_msg	String	Response description.
data	InstanceAsyncCommandInfo object	Response content.

Table 4-11 InstanceAsyncCommandsInfo

Parameter	Type	Description
task_id	String	Task ID. Maximum: 32
cmd_jobs	Array of CmdJob objects	Response task list.

Table 4-12 CmdJob

Parameter	Type	Description
instance_id	String	Instance list. Maximum: 32
job_id	String	Asynchronization command task ID.

Status code: 400

Table 4-13 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KOOPHONE.API.0001, and the number increases in ascending order. If error_code is 0, the operation is successful.
error_msg	String	Response description.

Status code: 500

Table 4-14 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KOOPHONE.API.0001, and the number increases in ascending order. If error_code is 0, the operation is successful.
error_msg	String	Response description.

Example Requests

```
/v1/instances/async-command
{
  "command": "ls -l /system",
  "instance_ids": [ "a44uhlf7", "efjy72gs" ]
}
```

Example Responses

Status code: 200

OK

```
{
  "data": {
    "task_id": "6837531fd3f54550927b930180a706bf",
    "cmd_jobs": [ {
      "instance_id": "a44uhlf7",
      "job_id": "1564567b8bab40f34711234cb80d0123"
    }, {
      "instance_id": "efjy72gs",
      "job_id": "1564567b8bab40f34711234cb80d0456"
    } ]
  },
  "error_code": "0",
  "error_msg": "ok"
}
```

Status Codes

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

Error Codes

See [Error Codes](#).

4.1.3 Batch Task Query

Function

This API is used to query tasks of an instance in batches. Before calling this API, ensure that the tenant has purchased a KooPhone cloud phone instance. This API must be used together with the API for executing an asynchronization command for an instance. The task_id returned by the API for executing an asynchronization command for an instance is used as the parameter in the path to obtain the asynchronous command execution result.

URI

GET /v1/instances/tasks/{task_id}

Table 4-15 Path Parameters

Parameter	Mandatory	Type	Description
task_id	Yes	String	Task ID returned for an asynchronization request.

Request Parameters

Table 4-16 Request header parameters

Parameter	Mandatory	Type	Description
x-request-id	Yes	String	Unique ID of a request.
X-Auth-Token	Yes	String	Tenant-level token.

Response Parameters

Status code: 200

Table 4-17 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KooPhone.API.1001, and the number increases in ascending order.
error_msg	String	Response description.
data	JobDetailWrapper object	List of tasks queried based on task_id.

Table 4-18 JobDetailWrapper

Parameter	Type	Description
jobs	Array of JobDetail objects	List of tasks queried based on task_id.

Table 4-19 JobDetail

Parameter	Type	Description
job_id	String	Unique ID of a task.
status	Integer	Task status. 1: Running. 2: Successful. -1: Failed.
error_code	String	Task error code.
error_msg	String	Task error code description.
execute_msg	String	Content returned after a task is executed. The value can contain up to 1,024 bytes. The command output is returned regardless of whether the command is successfully executed. Maximum: 1024

Status code: 400

Table 4-20 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KOOPHONE.API.0001, and the number increases in ascending order. If error_code is 0, the operation is successful.
error_msg	String	Response description.

Status code: 500

Table 4-21 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KOOPHONE.API.0001, and the number increases in ascending order. If error_code is 0, the operation is successful.
error_msg	String	Response description.

Example Requests

`/v1/instances/tasks/6837531fd3f54550927b930180a706bf`

Example Responses

Status code: 200

OK

```
{
  "data": {
    "jobs": [ {
      "job_id": "1564567b8bab40f34711234cb80d0123",
      "status": -1,
      "error_code": "CPS0005",
      "error_msg": "Phone not found.",
      "execute_msg": null
    }, {
      "job_id": "1564567b8bab40f34711234cb80d0456",
      "status": 2,
      "error_code": "",
      "error_msg": "",
      "execute_msg": "xxxxxx"
    }
  ]
},
"error_code": "0",
"error_msg": "ok"
}
```

Status Codes

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

Error Codes

See [Error Codes](#).

4.1.4 Video Settings

Function

This API is used to configure video settings. Before calling this API, ensure that the tenant has purchased a KooPhone cloud phone instance. This API is used to set the bit rate and output frame rate corresponding to each definition of an instance.

URI

PUT /v1/instances/video-setting

Request Parameters

Table 4-22 Request header parameters

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

Table 4-23 Request body parameters

Parameter	Mandatory	Type	Description
instance_ids	Yes	Array of strings	Instance list. Maximum: 32
instance_settings	Yes	Array of InstanceSetting objects	Video setting content.

Table 4-24 InstanceSetting

Parameter	Mandatory	Type	Description
network_type	Yes	String	Network type. Value: MOBILE_NETWORK or WIFI.
encoding_type	Yes	String	Encoding type. Fixed value: H.264.
video_spec_groups	Yes	Array of VideoSpecGroup objects	Video specification group.

Table 4-25 VideoSpecGroup

Parameter	Mandatory	Type	Description
definition_540P	Yes	VideoSpec object	540p.
definition_720P	Yes	VideoSpec object	720p.
definition_1080P	Yes	VideoSpec object	1080p.

Table 4-26 VideoSpec

Parameter	Mandatory	Type	Description
code_rate	Yes	Integer	Bit rate, in kbit/s. The value ranges from 0 to 10000 and must be a multiple of 100.

Parameter	Mandatory	Type	Description
fps	Yes	Integer	Frame rate, in fps. Value: 30 or 60.

Response Parameters

Status code: 200

Table 4-27 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KOOPHONE.API.0001, and the number increases in ascending order. If error_code is 0, the operation is successful.
error_msg	String	Response description.

Status code: 400

Table 4-28 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KOOPHONE.API.0001, and the number increases in ascending order. If error_code is 0, the operation is successful.
error_msg	String	Response description.

Status code: 500

Table 4-29 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KOOPHONE.API.0001, and the number increases in ascending order. If error_code is 0, the operation is successful.
error_msg	String	Response description.

Example Requests

```
/v1/instances/video-setting
{
  "instance_ids" : [ "a44uhlf7" ],
  "instance_settings" : [ {
    "network_type" : "WIFI",
    "encoding_type" : "H264",
    "video_spec_groups" : [ {
      "definition_540P" : {
        "code_rate" : 1000,
        "fps" : 30
      },
      "definition_720P" : {
        "code_rate" : 1000,
        "fps" : 60
      },
      "definition_1080P" : {
        "code_rate" : 1000,
        "fps" : 30
      }
    }
  ]
}
}
```

Example Responses

Status code: 200

OK

```
{
  "error_code" : "0",
  "error_msg" : "ok"
}
```

Status Codes

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

Error Codes

See [Error Codes](#).

4.1.5 Batch Status Query

Function

This API is used to query status of instances in batches. Before calling this API, ensure that the tenant has purchased a KooPhone cloud phone instance. The current instance status is returned. 0: Unknown. 1: Stopped. 2: Running. 3: Offline. 4: Starting. 5: Shut down.

URI

POST /v1/instances/batch-query-status

Request Parameters

Table 4-30 Request header parameters

Parameter	Mandatory	Type	Description
x-request-id	Yes	String	Unique ID of a request.
X-Auth-Token	Yes	String	Tenant-level token.

Table 4-31 Request body parameters

Parameter	Mandatory	Type	Description
instance_ids	Yes	Array of strings	Instance ID list. Maximum: 32

Response Parameters

Status code: 200

Table 4-32 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KooPhone.API.1001, and the number increases in ascending order.
error_msg	String	Response description.
data	StatusResult Wrapper object	Status query result.

Table 4-33 StatusResultWrapper

Parameter	Type	Description
status_results	Array of StatusResult objects	Status query result.

Table 4-34 StatusResult

Parameter	Type	Description
instance_id	String	Instance ID. Maximum: 32
status	Integer	Cloud phone status. 0: Unknown. 1: Stopped. 2: Running. 3: Offline. 4: Starting. 5: Shut down.

Status code: 400

Table 4-35 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KOOPHONE.API.0001, and the number increases in ascending order. If error_code is 0, the operation is successful.
error_msg	String	Response description.

Status code: 500

Table 4-36 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KOOPHONE.API.0001, and the number increases in ascending order. If error_code is 0, the operation is successful.
error_msg	String	Response description.

Example Requests

```
/v1/instances/batch-query-status
{
  "instance_ids" : [ "a44uhf7", "efjy72gs" ]
}
```

Example Responses

Status code: 200

OK

```
{
  "status_results" : [ {
```

```

    "instance_id" : "a44uhlf7",
    "status" : 0
  } ]
}

```

Status Codes

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

Error Codes

See [Error Codes](#).

4.1.6 Batch Resetting

Function

This API is used to reset instances in batches. Before calling this API, ensure that the tenant has purchased a KooPhone cloud phone instance. After this API is called, the current instances will be initialized.

URI

POST /v1/instances/batch-reset

Request Parameters

Table 4-37 Request header parameters

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

Table 4-38 Request body parameters

Parameter	Mandatory	Type	Description
instance_ids	Yes	Array of strings	Instance list. Maximum: 32

Response Parameters

Status code: 200

Table 4-39 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KOOPHONE.API.0001, and the number increases in ascending order. If error_code is 0, the operation is successful.
error_msg	String	Response description.

Status code: 400

Table 4-40 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KOOPHONE.API.0001, and the number increases in ascending order. If error_code is 0, the operation is successful.
error_msg	String	Response description.

Status code: 500

Table 4-41 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KOOPHONE.API.0001, and the number increases in ascending order. If error_code is 0, the operation is successful.
error_msg	String	Response description.

Example Requests

```
/v1/instances/batch-reset
{
  "instance_ids" : [ "a44uhlf7", "efjy72gs" ]
}
```

Example Responses

Status code: 200

OK

```
{
  "error_code" : "0",
  "error_msg" : "ok"
}
```

Status Codes

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

Error Codes

See [Error Codes](#).

4.2 Instance Usage

4.2.1 Obtaining device_token Before Streaming

Function

This API is used for the tenant instance to obtain device_token before streaming. Before calling this API, ensure that the tenant has purchased a KooPhone cloud phone instance. The obtained device_token of the cloud phone instance is used as the authentication information and carries device_id to call the signaling address (signaling_url) in the response parameter.

URI

POST /v1/instances/{instance_id}/auth

Table 4-42 Path Parameters

Parameter	Mandatory	Type	Description
instance_id	Yes	String	Instance ID.

Request Parameters

Table 4-43 Request header parameters

Parameter	Mandatory	Type	Description
x-auth-token	Yes	String	IAM token information of the tenant.

Response Parameters

Status code: 200

Table 4-44 Response body parameters

Parameter	Type	Description
data	data object	All response parameter information.
error_code	String	Error code. 0 indicates success.
error_msg	String	Error message.

Table 4-45 data

Parameter	Type	Description
resource	resource object	Resource set.
device_token	String	Device authentication token.

Table 4-46 resource

Parameter	Type	Description
sdk	sdk object	SDK information.
rtc	rtc object	RTC information.
device_id	String	Device ID.
kp_id	String	Cloud phone instance ID, for example, whklpuo1.

Table 4-47 sdk

Parameter	Type	Description
internal	internal object	Internal network information.
external	external object	External network information.

Table 4-48 internal

Parameter	Type	Description
address	String	Internal IP address.
aport	String	Audio port.
atype	String	Audio type.
address_ipv6	String	IPv6 address.

Table 4-49 external

Parameter	Type	Description
address	String	External EIP.
aport	Integer	Audio port.
atype	Integer	Audio type.
address_ipv6	String	External IPv6 address.

Table 4-50 rtc

Parameter	Type	Description
ice_signaling	ice_signaling object	ICE signaling information.

Table 4-51 ice_signaling

Parameter	Type	Description
signaling_url	String	Signaling service access address.
expired_time	String	Streaming duration. Unit: s.

Parameter	Type	Description
ice_servers	Array of strings	ICE server.

Status code: 400

Table 4-52 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KOOPHONE.API.0001, and the number increases in ascending order. If error_code is 0, the operation is successful.
error_msg	String	Response description.

Status code: 500

Table 4-53 Response body parameters

Parameter	Type	Description
error_code	String	Response code. The error code specification is KOOPHONE.API.0001, and the number increases in ascending order. If error_code is 0, the operation is successful.
error_msg	String	Response description.

Example Requests

POST API. The request URL carries the KooPhone instance purchased by the tenant and the tenant token.

```
/v1/instances/Q39YyZvl/auth
```

Example Responses

Status code: 200

OK

```
{
  "data": {
    "resource": {
      "sdk": {
        "internal": {
          "address": null,
          "aport": null,

```

```
    "atype" : null,
    "address_ipv6" : null
  },
  "external" : {
    "address" : "10.xx.xx.xxx",
    "aport" : 10030,
    "atype" : 1,
    "address_ipv6" : null
  }
},
"rtc" : {
  "ice_signaling" : {
    "signaling_url" : "http://xxxxxxxxx",
    "expired_time" : null,
    "ice_servers" : [ ]
  }
},
"device_id" : "7b0cd026df8d495b8a65d628d7bec433",
"kp_id" : "Q39YyZvl"
},
"device_token" : "dee5081f40c83ddea3ded91c387351e9"
},
"error_code" : "0",
"error_msg" : "ok"
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "string",
  "error_msg" : "string"
}
```

Status code: 500

Internal Server Error

```
{
  "error_code" : "string",
  "error_msg" : "string"
}
```

Status Codes

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

Error Codes

See [Error Codes](#).

5 Appendix

5.1 Status Codes

[Table 5-1](#) describes common status codes.

Table 5-1 Status codes

Status Code	Message	Description
200	OK	The request has succeeded.
201	Created	The request has been fulfilled and has resulted in one or more new resources being created.
202	Accepted	The request has been accepted for processing, but the processing has not been completed.
204	No Content	The server has successfully fulfilled the request and that there is no additional content to send in the response content.
400	Bad Request	The server cannot or will not process the request due to something that is perceived to be a client error (e.g., malformed request syntax, invalid request message framing, or deceptive request routing).
401	Unauthorized	The request has not been applied because it lacks valid authentication credentials for the target resource.
403	Forbidden	The server understood the request but refuses to fulfill it.

Status Code	Message	Description
404	Not Found	The origin server did not find a current representation for the target resource or is not willing to disclose that one exists.
405	Method Not Allowed	The method received in the request-line is known by the origin server but not supported by the target resource.
406	Not Acceptable	The target resource does not have a current representation that would be acceptable to the user agent, according to the proactive negotiation header fields received in the request, and the server is unwilling to supply a default representation.
409	Conflict	The request could not be completed due to a conflict with the current state of the target resource.
411	Missing Content-Length	The server refuses to accept the request without a defined Content-Length .
413	Request Entity Too Large	The server is refusing to process a request because the request content is larger than the server is willing or able to process.
416	Requested range not satisfiable	The set of ranges in the request's Range header field has been rejected because none of the requested ranges are satisfiable and the request does not include the If-Range header field.
429	Too Many Requests	The user has sent too many requests in a given amount of time ("rate limiting").
500	Internal Server Error	The server encountered an unexpected condition that prevented it from fulfilling the request.
501	Not Implemented	The server does not support the functionality required to fulfill the request.
503	Service Unavailable	The server is currently unable to handle the request due to a temporary overload or scheduled maintenance, which will likely be alleviated after some delay.

5.2 Error Codes

If an error code starting with APIGW is returned after you call an API, rectify the fault by referring to the instructions provided in [API Gateway Error Codes](#).

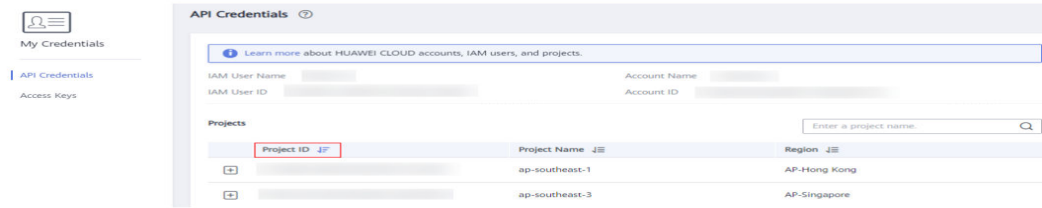
Status Code	Error Codes	Error Message	Description	Solution
400	KOOPHONE.A PI.1000	request param error	request param error	Check whether the request parameter type and range are defined by the interface
400	KOOPHONE.A PI.1002	instance not in the same region	instance not in the same region	modify the request instance to the same region
401	KOOPHONE.A PI.1001	no instance permission	no instance permission	Check whether the instance ID passed in by the request is correct
500	KOOPHONE.A PI.9999	server inner error	server inner error	Please contact the Huawei side operator to check whether the system is normal

5.3 Obtaining a Project ID

A project ID is required for some URLs when an API is called. To obtain a project ID, perform the following operations:

- Step 1** Log in to the management console.
- Step 2** Click the username and select **My Credentials** from the drop-down list.
On the **API Credentials** page, view project IDs in the project list.

Figure 5-1 Viewing project IDs



----End