FIBERME Communications LLC.

FCM630A Series IP PBX - HTTPS API Guide

Table of Contents

Table of Figures

Table of Tables

INTRODUCTION

The FCM630A provides a new API interface to query, edit PBX settings and implement multiple call functions on another server connected to it via API. FCM will actively send system reports and call reports to this other server. Additionally, legacy CDR API, REC API and PMS API in addition to QUEUE API are included and supported by default when enabling API.
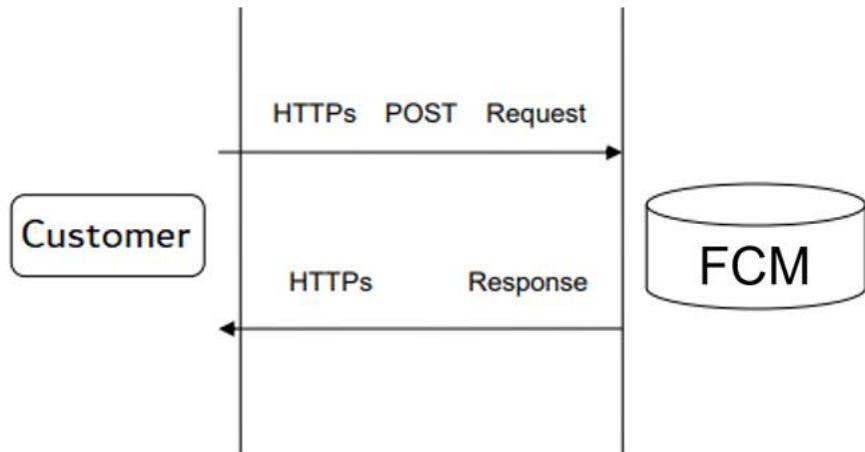
Figure 1: API Flow

API BASICS

To get started with FCM's API feature, users must configure the HTTPS API settings and get familiar with the feature's communication method, request structure, response messages, and event reports.

Configuring the API

Enabling PBX API Interface

1. Log into the FCM web UI and navigate to **Value-Added Features → API Configuration → HTTPS API Settings (New)**.

2. Check the Enable option and configure a username and password. These credentials will be used when connecting to the API.

Figure 2: HTTPS API Settings

Table 1: New API Configuration Parameters

Enable	Enable/Disable API. The default setting is disabled.
Username	Configure the username for API Authentication.
Password	Configure the password for API Authentication.
Call Control	If enabled, 3rd party applications will be able to manage inbound calls via API actions. **acceptCall** will accept incoming calls while **refuseCall** will reject them. If no actions are done within 10 seconds, calls will automatically be accepted.

Server Configuration

The API server address is the same as the FCM's web UI address. To configure the FCM's HTTP server settings, navigate to **System Settings → HTTP Server**.

Figure 3: HTTP Server Settings

Login Restrictions

When several failed login attempts have been made from a specific IP address, that IP address will be added to the FCM's blacklist and will be unable to access the FCM. To ensure this doesn't happen to trusted IP addresses, consider enabling and adding its IP address to whitelist as shown on the same page as server configuration.

Communication

Communication Protocol

The API uses HTTPS protocol and the same certificate used for FCM web portal. If the FCM is using HTTP, the API feature cannot be used.

JSON data into HTTP request

Below is a JSON example of **challenge** action and how the JSON script will be encapsulated in HTTPS Post request:

```
curl -H "Content-Type: application/json;charset=UTF-8" -H "Connection: close" -X
POST -d '{"request": {"action": "challenge", "user": "cdrapi", "version": "1.0"}}'
-k "https://192.168.5.153:8089/api" --insecure
```

As a response to the sent request, the FCM will return a challenge string which will be used to generate the token as mentioned above and with the same structure the **login** action needs to be sent to have the cookie id as response.

Communication Method

2 methods of communication can occur between the FCM and 3rd party applications:

- 3rd party application server sends request to FCM:

    1. 3rd party application initiates the request.

    2. 3rd party application is the client, and FCM is the server.

    3. Scenario: 3rd party application initiates calls and sends query to FCM.

- FCM initiates and sends events to 3rd party application

    1. Prerequisite: 3rd party applications need to be verified by FCM API and enable related events.

    2. 3rd party application is the server, and FCM is the client.

    3. Scenario: Extension or trunk status change, call events etc.

Version Control

"Challenge" requests must contain the API version number. If version is not specified, requests will be parsed based on the latest version of the API, and this may result in information being processed incorrectly. Thus, it is highly recommended to include version number in the challenge request.

Example: If the latest API version is 1.2, and the 3rd party interface was developed using version 1.0, version 1.0 must be included when sending the challenge request.

```
{"request": {"action": "challenge", "version": "1.0", "user": "api"}}
```

Operation Log

FCM's Operation Log feature is able to display API activity history. API actions will be labeled with "(API)" at the end of each entry. Operation Log entries can be filtered and deleted.

Date	User Name	IP Address	Results	Page Operation
2019-02-25 17:03:03	cdrapi	192.168.129.16	Operation successful	Logout: logout(API)
2019-02-25 17:03:02	cdrapi	192.168.129.16	Operation successful	Extensions: updateSIPAccount(API)
2019-02-25 17:03:02	cdrapi	192.168.129.16	Operation successful	applyChanges(API)
2019-02-25 17:03:01	cdrapi	192.168.129.16	Operation successful	Login: login(API)
2019-02-25 16:43:12	cdrapi	192.168.129.16	Operation successful	Extensions: updateSIPAccount(API)
2019-02-25 16:43:12	cdrapi	192.168.129.16	Operation successful	applyChanges(API)

Figure 4: Operation Log

API QUERIES

The new API supports the queries listed below which will accomplish certain requests and get DATA about different modules on FCM630A.

Table 2: New API Supported Queries

getSystemStatus	addInboundRoute	listPaginggroup
getSystemGeneralStatus	getInboundRoute	addPaginggroup
listAccount	updateInboundRoute	getPaginggroup
getSIPAccount	deleteInboundRoute	updatePaginggroup
updateSIPAccount	playPromptByOrg	deletePaginggroup
listVoIPTrunk	listBridgedChannels	MulticastPaging
addSIPTrunk	listUnBridgedChannels	MulticastPagingHangup
getSIPTrunk	Hangup	listIVR
updateSIPTrunk	Callbarge	addIVR
deleteSIPTrunk	listQueue	getIVR
listOutboundRoute	getQueue	updateIVR
addOutboundRoute	updateQueue	deleteIVR
getOutboundRoute	addQueue	cdrapi
updateOutboundRoute	deleteQueue	recapi
deleteOutboundRoute	loginLogoffQueueAgent	pmsapi
listInboundRoute	pauseUnpauseQueueAgent	queueapi
mute	Unmute	hold
unhold	dialExtension	dialOutbound
callTransfer	transferNumberInbound	transferNumberOutbound
dialIVR	dialIVROutbound	dialQueue
dialRinggroup	dialOutboundTwo	listUser
getUser	updateUser	listExtensionGroup
listPinSets	refuseCall	acceptCall
applyChanges		

ESTABLISHING CONNECTION AND USER AUTHENTICATION

To use HTTPS API users need to connect to the FCM630A's IP address with HTTPS/HTTP port which isby default **8089** then authenticate using the configured **Username** and **Password**.

Challenge

The HTTP authentication is based on challenge/response authentication protocol. The client sends a request for a challenge.

```
{
    "request":{
        "action":"challenge",
        "user":"cdrapi",
        "version":"1.0"
    }
}


{
    "response":{
        "challenge":"0000001652831717"
    },
    "status":0
}
```

<p align="center">Table 3: Challenge</p>

Key word	Value	Mandatory	Type	Note
Request Parameter				
user		Yes	string	API username
Version		No	string	API protocol version. New versions will be available for future interfaces. Different versions will be compatible with one another. This keyword is not mandatory. By default, the latest version will be used. If the requested version cannot be matched, the latest version is used
Successful response				
status	0	Yes	int	Successful response
challenge	16-digit Random number	Yes	string	Random string returned by the API used to generate secret key for logging in.

Failed response				
status		Yes		Please see the error code list for more details.
remain_num		No	int	When obtaining parameter failed, the number of remaining attempts will be returned. After exceeding the remaining number of attempts, this IP and username will be added to FCM login blacklist. On FCM web page, the banned IP can be removed.
remain_time		No	int	When an IP address or username has been banned, the ban period will be returned.

Login

Upon obtaining the challenge string, the client then creates an MD5 hash consisting of the challenge and the user password. By sending a login command with the username and MD5 hash, the client will be able to log in. User information will be returned upon successful login.

```
{
    "request":{
        "action":"login",
        "token":"0faa24433e3c7a9bcfa8000f735305d5",
        "url":"http://192.168.5.199:8070",
        "user":"cdrapi"
    }
}

{
    "response":{
        "cookie":"sid1652831717-1574421057"
    },
    "status":0
}
```

Table 4: Login

Key word	Value	Mandatory	Type	Note
Request Parameter				
user		Yes	string	API username
token		No	string	Verification code MD5(${challenge}${password})

url		No	string	The URL used by the 3rd party application to obtain API reports. For example: ${ip}:${port}/${path} **Note:** If this parameter is not included, no API report can be sent.
Successful response				
status	0	Yes	int	Successful response
Cookie		Yes	string	Cookie is generated after the 3rd party application successfully connects to the FCM. Excluding challenge and login requests, other API requests need to include the cookie returned by API authentication. Cookie times out in 10 minutes.
Failed response				
status		Yes		Please see the error code list for more details.
remain_num		No	int	When obtaining parameter failed, the number of remaining attempts will be returned. After exceeding the remaining number of attempts, this IP and username will be added to FCM login blacklist. On FCM web page, the banned IP can be removed.
remain_time		No	int	When an IP address or username has been banned, the ban period will be returned.

DATA DEFINITION

Request Data

Action: Define the action needed to be executed on the FCM.

Cookie: Session identifier.

Parameters: Parameters of the defined action.

```
{
    "request":{
        "action":"",
        "cookie":"",
        "options":""                    #This field is optional to include parameters
    }
}
```

Note: Parameters will be added depending on the used action.

Response Data

Status: Please refer to the return code table. [ERROR RETURN CODES]

OPERATION METHODS

Get System Configuration

getSystemStatus

The "getSystemStatus" action will return the system information.

- **Request**

```
{
    "request":{
        "action":"getSystemStatus",
        "cookie":"sid877877-1574437822"
    }
}
```

- **Response**

```
{
    "response":{
        "idle-time":"14:32:44",
        "part-number":"9660002815A",
        "serial-number":"21AWMJPH70BCA783",
        "system-time":"2019-11-22 17:50:26 UTC+02:00",
        "up-time":"07:33:15"
    },
    "status":0
}
```

Table 5: getSystemStatus

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		Yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
Successful response				
status	0	Yes	int	Return successful, status is 0
part-number		No	string	Product part number
up-time		No	string	System uptime since bootup
idle-time		No	string	System idle time

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system-time		No	string	System time
Failed response				
status		yes	int	Please see the error code list for more details.

getSystemGeneralStatus

The "getSystemGeneralStatus" action will return the version information.

- **Request**

```
{
    "request":{
        "action":"getSystemGeneralStatus",
        "cookie":"sid877877-1574437822"
    }
}
```

- **Response**

```
{
    "response":{
        "base-version":"1.0.20.13",
        "boot-version":"1.0.20.8",
        "core-version":"1.0.20.8",
        "lang-version":"1.0.20.13",
        "product-model":"FCM630A V1.5A",
        "prog-version":"1.0.20.13",
        "rcvr-version":"1.0.20.8"
    },
    "status":0
}
```

<div align="center">Table 6: getSystemGeneralStatus</div>

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
Successful response				
status	0	yes	int	Successful response, status is 0
product-model		no	string	Product model
base-version		no	string	Base version

prog-version		no	string	Program version
boot-version		no	string	Boot version
core-version		no	string	Core version
rcvr-version		no	string	Recovery version
lang-version		no	string	Lang version
Failed response				
status		yes	int	Please see the error code list for more details.

Extension

listAccount

The "listAccount" action will return information about the extensions created on the FCM, such as the extension's number, its name etc.

Note: The needed information, can be defined in the parameter "**options**".

- **Request**

```
{
    "request":{
        "action":"listAccount",
        "cookie":"sid877877-1574437822",
        "item_num":"30",
        "options":"extension,account_type,fullname,status,addr",
        "page":"1",
        "sidx":"extension",
        "sord":"asc"
 #If only the action and the cookie were defined, this will return all the available
account
    }
}
```

- **Response**

```
{
    "response":{
        "account":[
            {
                "account_type":"SIP(WebRTC)",
                "addr":"-",
                "extension":"1000",
                "fullname":null,
                "status":"Unavailable"
            },
            {
```

```
                "account_type":"SIP(WebRTC)",
                "addr":"192.168.5.95:62144",
                "extension":"1102",
                "fullname":null,
                "status":"Idle"
            },
        ],
        "page":1,
        "total_item":2,
        "total_page":1
    },
    "status":0
}
```

Table 7: listAccount

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
page		no	int	Retrieves the extensions on the specified page. This page is based on the value for the **item_num** parameter. If **item_num** is unspecified, all items will be on page 1.
item_num		no	int	Maximum number of extensions to retrieve for the query. If unspecified, all extensions will be returned. This also indicates the number of items per page for the page parameter
sord	acs, desc	no	string	Sorting method. acs stands for ascending, and desc stands for descending.
sidx		no	string	Sort according to the index.
options	extension,account_type,fullname, out_of_service,status, addr,urgemsg,newms, oldmsg	no	string	Specify the extension details to retrieve and display. Multiple items can be entered and must be separated by commas. If unspecified, all details will be returned.
Successful response:				

status	0	yes	int	Successful response, status is 0
account		yes	Json array	Account List
total_item		yes	int	Total number of items on the list
total_page		yes	int	Total pages of the list
page		yes	int	Page the extensions are on.
extension		yes	string	Extension number.
account_type	SIP,IAX,FXS,SIP(WebRTC)	no	string	Extension type.
fullname		no	string	Caller ID Name, which consists of first_name, space, and last name
out_of_service	Yes, no	no	string	Indicates whether the extension is out of service
status	Idle，InUse，Busy，Unavailable，Ringing	no	string	Just "Extension status" is fine.
addr		no	string	IP address and port number of registered extensions. If there are multiple devices under the same account, they will be separated by commas.
urgmsg		no	int	Number of urgent messages.
newmsg		no	int	Number of new messages.
oldmsg		no	int	Number of old messages.
presence_status	unavailable, available, away, chat, dnd, userdef	no	string	Presence status. Only SIP extensions support presence status.
presence_def_script				Custom presence status. If **presence_status** is userdef, this parameter's value will be used.
user_name		no	string	Typically the same as extension number.
email_to_user		no	string	Indicates whether or not to send email notifications to an extension's configured email address if the extension gets updated.

Failed response:			
status		yes	int	Please see the error code list for more details.

getSIPAccount

The "getSIPAccount" action will return information about specific extension.

- **Request**

```
{
    "request":{
        "action":"getSIPAccount",
        "cookie":"sid877877-1574437822",
        "extension":"1000"
    }
}
```

- **Response**

```
{
    "response":{
        "cti_feature_privilege":{
            "active_call":"no",
            "callbarge":"no",
            "extension_status":"no",
            "hangup":"no"
        },
        "extension":{
            "account_type":"SIP(WebRTC)",
            "alertinfo":null,
            "allow":"ulaw,alaw,gsm,g726,g722,g729,h264,ilbc",
            "authid":null,
            "auto_record":"off",
            "bypass_outrt_auth":"no",
            "call_waiting":"yes",
            "callbarging_monitor":"",
            "cc_agent_policy":"never",
          "cc_max_agents":1,
            "cc_max_monitors":2,
            "cc_monitor_policy":"never",
            "cidnumber":"1000",
            "custom_autoanswer":"no",
            "directmedia":"no",
            "dnd":"no",
            "dnd_timetype":0,
            "dndwhitelist":"",
            "dtmfmode":"rfc2833",
            "emergcidnumber":null,
            "en_ringboth":"no",
```

```
"enable_ldap":"yes",
"enable_qualify":"no",
"enable_webrtc":"yes",
"enablehotdesk":"no",
"encryption":"no",
"extension":"1000",
"external_number":null,
"fax_gateway":"no",
"faxdetect":"no",
"fullname":null,
"fwdwhitelist":null,
"hasvoicemail":"yes",
"ice_support":"yes",
"intranet_ip_filter":"no",
"limitime":null,
"local_network1":null,
"local_network10":null,
"local_network2":null,
"local_network3":null,
"local_network4":null,
"local_network5":null,
"local_network6":null,
"local_network4":null,
"local_network5":null,
"local_network6":null,
"local_network7":null,
"local_network8":null,
"local_network9":null,
"max_contacts":1,
"media_encryption":"auto_dtls",
"missed_call":"no",
"mohsuggest":"default",
"nat":"yes",
"out_of_service":"no",
"permission":"internal",
"presence_def_script":null,
"presence_status":"available",
"qualify":1000,
"qualifyfreq":60,
"ring_timeout":null,
"ringboth_timetype":0,
"sca_enable":"no",
"seamless_transfer_members":"",
"secret":"pas0",
"sendtofax":null,
"skip_auth_timetype":0,
"skip_vmsecret":"no",
"specific_ip":null,
"strategy_ipacl":0,
```

```
                "t38_udptl":"no",
                "tel_uri":"disabled",
                "use_avpf":"yes",
                "use_callee_dod_on_fm":"no",
                "use_callee_dod_on_fwd_rb":"no",
                "user_outrt_passwd":null,
                "vmsecret":"5333"
},
"sip_presence_settings":[
                {
                    "cfb":null,
                    "cfb_destination_type":"0",
                    "cfb_timetype":0,
                    "cfn":null,
                    "cfn_destination_type":"0",
                    "cfn_timetype":0,
                    "cfu":null,
                    "cfu_destination_type":"0",
                    "cfu_timetype":0,
                    "presence_status":"available"
                },
"sip_presence_settings":[
                {
                    "cfb":null,
                    "cfb_destination_type":"0",
                    "cfb_timetype":0,
                    "cfn":null,
                    "cfn_destination_type":"0",
                    "cfn_timetype":0,
                    "cfu":null,
                    "cfu_destination_type":"0",
                    "cfu_timetype":0,
                    "presence_status":"available"
                },
                {
                    "cfb":null,
                    "cfb_destination_type":"0",
                    "cfb_timetype":0,
                    "cfn":null,
                    "cfn_destination_type":"0",
                    "cfn_timetype":0,
                    "cfu":null,
                    "cfu_destination_type":"0",
                    "cfu_timetype":0,
                    "presence_status":"away"
                },
                {
                    "cfb":null,
                    "cfb_destination_type":"0",
```

```
                "cfb_timetype":0,
                "cfn":null,
                "cfn_destination_type":"0",
                "cfn_timetype":0,
                "cfu":null,
                "cfu_destination_type":"0",
                "cfu_timetype":0,
                "presence_status":"chat"
            },
            {
                "cfb":null,
                "cfb_destination_type":"0",
                "cfb_timetype":0,
                "cfn":null,
                "cfn_destination_type":"0",
                "cfn_timetype":0,
                "cfu":null,
                "cfu_destination_type":"0",
                "cfu_timetype":0,
                "presence_status":"unavailable"
            },
{
                "cfb":null,
                "cfb_destination_type":"0",
                "cfb_timetype":0,
                "cfn":null,
                "cfn_destination_type":"0",
                "cfn_timetype":0,
                "cfu":null,
                "cfu_destination_type":"0",
                "cfu_timetype":0,
                "presence_status":"userdef"
            }
        ],
        "voicemail":{
            "vm_attach":null,
            "vm_reserve":null
        }
    },
    "status":0
}
```

Note: If you only want to get some parameters regarding a specific extension, users can specify that parameter in the sending request.

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
extension	Existing extension number	yes	string	Specify which extension's configuration to retrieve.
Successful response				
status	0	yes	int	The response is successful, status is 0.
extension		no	Json obj	The specific configuration of the extension.
account_type	SIP,IAX,SIP(WebRTC)	no	string	Extension type.
fullname		no	string	Caller ID Name, which consists of first_name, space, and last name.
hasvoicemail	yes, no	no	string	Indicates whether voicemail is enabled or disabled.
cidnumber		no	string	Caller ID of incoming calls.
secret		no	string	SIP/IAX password.
vmsecret		no	string	Voicemail password.
skip_vmsecret	Yes, no	no	string	Indicates whether an extension will need to enter a password when dialing into voicemail.
ring_timeout		no	int	Extensions' ring timeout. If unspecified, the system ring timeout will be used. Default is 60 seconds.
auto_record	all, external, internal, off	no	string	Auto-recording. all：all incoming calls to the extension will be recorded external: only calls to external numbers will be recorded. internal: only calls to internal numbers will be recorded. off: No calls will be recorded.

encryption	no, yes, support	no	string	SRTP encryption mode. Set whether to turn on SRTP mode to encrypt RTP streams. Support: Enable but not forced.
faxdetect	no, yes	no	string	Configure the mode of using fax. There are 2 available settings. The default is "no". no：Disable fax related features. yes (Fax detection): Fax signals from this user or the trunk can be detected during a call. The received fax will be sent to the email address set for the user. If the user's email address is not configured, the fax will be sent to the default email address set on the fax page.
sendtofax	yes, no	no	string	Indicates whether or not fax will also be sent to the extension's configured email address when receiving a fax call.
strategy_ipacl	0,1,2	no	int	Indicates the device's ACL policy. 0(Allow All)：Any IP address can register to this extension. 1(Local Network): Only IP addresses in the configured subnets can register to this extension. Devices on the FCM's subnet is allowed by default. Up to 10 subnets can be added. 2 (Special IP address): This option seems to have been merged with 1 (Local Network) in 1.0.20.x
local_network1		no	string	local_network1-10 are the subnets that are allowed to register to the extension when 1 is configured as the value for **strategy_ipacl**.
local_network2		no	string	
local_network3		no	string	
local_network4		no	string	
local_network5		no	string	
local_network6		no	string	
local_network7		no	string	
local_network8		no	string	

local_network9		no	string	
local_network10		no	string	
specific_ip		no	string	When the policy is 2, that is, Special IP Address, Format is xxx.xxx.xxx.xxx or xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx.
allow	ulaw,alaw,gsm,g726,g722,g729,h264,ilbc,g726aal2,adpcm,g723,h263,h263p,vp8,opus,h265,rtx	no	string	The extension's supported codecs. Several codecs can be configured for a single extension.
dnd	yes, no	no	string	Indicates DND status. If set to yes, all calls will be ignored, and the extension's call forwarding rules will not take effect
dnd_timetype	0,1,2,3,4,5,6,8	no	int	The time conditions where DND status will be enabled. 0：All Time 1 ：Office Time 2：Out of Office Time 3：Holiday 4: Out of Holiday 5：Out of office time or holiday 6：Specific time 8：Office time and out of holiday
permission	internal，internal-local，internal-local-national，	no	string	Outbound call permissions of the extension. internal：Internal internal-local：Local internal-local-national：Nationwide internal-local-national-international：International

	internal-local-national-international			
nat	yes, no	no	string	Indicates whether the extension is behind a NAT. If the FCM is using a public IP address to communicate with devices behind NAT, one-way audio issues may occur if this option is not enabled, NAT is not configured properly, or if SIP/RTP ports are not supported by the firewall.
bypass_outrt_auth	no, yes, bytime	no	string	Indicates whether the extension can skip password authentication when dialing out of a trunk yes: Users will not need to enter a password when dialing out of a trunk. bytime: Users will not need to enter a password when dialing out of a trunk only during the specified time condition.
skip_auth_time type	0,1,2,3,4,5,6,8	no	int	Time condition where the extension will be able to dial out of a trunk without needing to enter a password. 0：All Time 1 ：Office Time 2：Out of Office Time 3：Holiday 4: Out of Holiday 5：Out of office time or holiday 6：Specific time 8：Office time and out of holiday
t38_udptl	yes, no	no	string	Indicates whether T.38 support is toggled on or off
directmedia	yes, no	no	string	Indicates whether direct media is enabled or not. No: The PBX will route RTP media streams from SIP endpoints through itself.

				Yes: The PBX will attempt to redirect RTP media streams so that they are only between caller and callee. Note: It is not always possible for the FCM to negotiate endpoint-to endpoint media routing.
dtmfmode	rfc4733, info, inband, auto	no	string	Indicates the DTMF signaling sent from the extension Info: Signaling is transmitted through SIP messages. Inband: Signaling is transmitted in audio streams. Requires PCMU and PCMA codec support. RFC4733: Signaling is transmitted as audio but is encoded separately from the audio stream. Auto: Selects the signaling to use based on negotiation. Signaling is preferred in the following priority: RFC4733, Inband, Info
enable_qualify	yes, no	no	string	Indicates whether or not keep-alive is enabled for this extension. Yes: The PBX periodically sends SIP OPTION messages to the extension endpoint to monitor and maintain FCM's connection to the endpoint.
qualifyfreq		no	int	Keep-alive Frequency. Indicates how often keep-alive messages are sent to this extension's endpoints.
authid		no	string	Authentication ID. This is the SIP service subscriber's ID used for authentication. If not configured, the Extension Number will be used for authentication.
tel_uri	disabled, user_phone, enabled	no	string	TEL URI. Enabled: TEL URI and Remove OBP from Route cannot be enabled at the same time. "Tel:" will be used instead of "SIP:" in the SIP request. User_Phone: If the phone has an assigned PSTN telephone number, this field should be set. A "User=Phone" parameter will then be attached to the Request-Line and "TO" header in the SIP

				request to indicate the E.164 number.
enablehotdesk	no, yes	no	string	Indicates whether or not hotdesking is enabled for this extension. yes：SIP Password will accept only alphanumeric characters; Extension will be used for AuthID.
user_outrt_passwd		no	string	Dial Trunk Password Password that must be entered by the extension to dial out.
out_of_service	yes, no	no	string	Indicates whether the "Disable this Extension" option is toggled on or off for this extension. yes：The extension is disabled. no：The extension is enabled.
mohsuggest	default，ringbacktone_default，……	no	string	Music on Hold. Indicates the Music on Hold playlist to use when putting parties on hold.
en_ringboth	no，yes	no	string	Ring Simultaneously: Indicates whether the "Ring Simultaneously" option is toggled on or off for this extension If enabled, both this extension and the configured external number will be rung at the same time. If the calling the external number requires the use of a register trunk, the register trunk's number will be displayed to the caller. Failover trunks cannot be used for Ring Simultaneously calls.
external_number		no	string	The external number configured for Ring Simultaneously. Hyphens (-) are ignored
use_callee_dod_on_fwd_rb	no, yes	no	string	Indicates whether or not the callee's DOD number will be used as CID for forwarded calls or Ring Simultaneously calls
use_callee_dod_on_fm	no，yes	no	string	Use Callee DOD for Follow Me Indicates whether or not to the callee's DOD number will be used as CID for Follow Me calls.

ringboth_timet ype	0,1,2,3,4,5,6 ，8	no	int	Time Condition for Ring Simultaneously The time conditions when Ring Simultaneously will be used 0：All Time 1 ：Office Time 2：Out of Office Time 3：Holiday 4: Out of Holiday 5：Out of office time or holiday 6：Specific time 8：Office time and out of holiday
enable_ldap	yes, no	no	string	Enable LDAP Indicates whether or not this extension can be added to LDAP phonebooks.
max_contacts		no	int	Concurrent Registrations The maximum allowed number of endpoints that can register to this extension. Supported values: 1-10
custom_autoan swer	no, yes	no	string	Custom Call-info for Auto Answer Indicates whether or not the extension supports auto-answer when denoted in Call-info and Alert-info headers.
sca_enable	no，yes	no	string	Enable SCA Indicates whether or not SCA is enabled for the extension
call_waiting	yes, no	no	string	Call Waiting Indicates whether or not calls can be made to the extension while it is already in a call. If disabled, CC service and Call Forward Busy will not work.
emergcidnumb er		no	string	Emergency Calls CID CallerID number that will be used when calling out and receiving direct callbacks.
enable_webrtc	yes, no	no	string	Enable WebRTC Support Indicates whether or not this extension supports WebRTC registration and calling.

alertinfo	none, ring1, ring2, ring3, ring4, ring5, ring6, ring7, ring8, ring9, ring10, Bellcore-dr1, Bellcore-dr2 Bellcore-dr3, Bellcore-dr4, Bellcore-dr5, custom			Alert-info Indicates the alert-info header that will be used in the extension's INVITE requests to specify a ring tone to be used by the UAS.
limitime		no	int	Maximum Call Duration Indicates the maximum duration of this extension's calls. The default value 0 means no limit.
dndwhitelist		no	string	DND whitelist Displays the numbers that can call this extension even if it has DND enabled. Multiple numbers are separated by commas.
fwdwhitelist		no	string	Forward Whitelist Displays the numbers that will ignore this extension's call forwarding rules when calling in. Multiple numbers are separated by commas
callbarging_mo nitor		no	string	Allow call-baring Displays the extensions that are able to barge in and monitor this extensions' calls via feature code.
seamless_tran sfer_members		no	string	Allowed to seamless transfer Displays the extensions that can seamless transfer to this extension.
sip_presence_ settings			Json array	The specific configuration content of the online status of the SIP extension. The specific content needs to specify which state the presence_status is. "sip_presence_settings": [{

				`"presence_status": "available",`
				`"cfb":"6000" ,`
				`"cfn": null,`
				`"cfu": null,`
				`"cfb_timetype": 1,`
				`"cfn_timetype": 0,`
				`"cfu_timetype": 0,`
				`"cfb_destination_type": "0",`
				`"cfn_destination_type": "0",`
				`"cfu_destination_type": "0"`
				`}, {`
				`"presence_status": "unavailable",`
				`"cfb": null,`
				`"cfn": "12345",`
				`"cfu": null,`
				`"cfb_timetype": 0,`
				`"cfn_timetype": 2,`
				`"cfu_timetype": 0,`
				`"cfb_destination_type": "0",`
				`"cfn_destination_type": "0",`
				`"cfu_destination_type": "0"`
				`}]`
				When available, cfb to extension 6000;
				When unavailable, cfn to custom extension 12345.

presence_status	available, away, chat, dnd, userdef, unavailable	no	string	presence status Presence status of this extension. Default is Available.
cfb		no	string	Call Forward Busy (CFB) destination. Callers will be redirected to this number if the extension is busy.
cfn		no	string	Call Forward No Answer (CFNA) Destination Callers will be redirected to this number if calls to

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				the extension are not answered before ring timeout. Note: If unspecified, this feature is disabled.
cfu		no	string	Call Forward Unconditional (CFU) destination. Callers will always be redirected to this number.
cfb_timetype	0,1,2,3,4,5,6,8	no	string	Call forward busy based on this time condition. CFB will be active only during the selected time condition. 0：All Time 1 ：Office Time 2：Out of Office Time 3：Holiday 4: Out of Holiday 5：Out of office time or holiday 6：Specific time 8：Office time and out of holiday
cfn_timetype	0,1,2,3,4,5,6,8	no	string	Call forward no answer based on this time condition. CFNA will be active only during the selected time condition. 0：All Time 1 ：Office Time 2：Out of Office Time 3：Holiday 4: Out of Holiday 5：Out of office time or holiday 6：Specific time 8：Office time and out of holiday
cfu_timetype	0,1,2,3,4,5,6,8	no	string	Call forward unconditional based on this time condition. CFU will be active only during the selected time condition. 0：All Time 1 ：Office Time 2：Out of Office Time 3：Holiday

				4: Out of Holiday
				5：Out of office time or holiday
				6：Specific time
				8：Office time and out of holiday
cfb_destination _type	0,1,2,3,4,5,6 ,8			Extension type of the CFB destination. If unspecified, CFB will be disabled.0: None 1: Extension 2: Custom Number 3: Voicemail 4: Ring Group 5: Queues 6: Voicemail Group
cfn_destination _type	0,1,2,3,4,5,6 ,8			Extension type of the CFNA destination. If unspecified, CFNA will be disabled. 0: None 1: Extension 2: Custom Number 3: Voicemail 4: Ring Group 5: Queues 6: Voicemail Group
cfu_destination _type	0,1,2,3,4,5,6 ,8			Extension type of the CFU destination. If unspecified, CFU will be disabled 0: None 1: Extension 2: Custom Number 3: Voicemail 4: Ring Group 5: Queues 6: Voicemail Group

voicemail		no	Json obj	Specific Configuration of voicemail.
				"voicemail": {
				"vm_attach": null,
				"vm_reserve": null
				}

vm_attach	NULL, yes, no	no	string	Send voicemail to email NULL: "Default". Global voicemail settings in the Voicemail page will be used
vm_reserve	NULL, yes, no	no	string	Keep Voicemail after Emailing Only applicable when either condition is fulfilled: 1. Edit Extension→Send Voicemail to Email is enabled. 2.Voicemail→Voicemail Email Settings→Send Voicemail to Email is enabled and Edit Extension→Send Voicemail to Email is set to "Default". Global voicemail settings in the Voicemail page will be used. "Default". Global voicemail settings in the Voicemail page will be used.
Failed response				
status		yes	int	Please see the error code list for more details.

updateSIPAccount

This action will allow users to update an existing SIP account.

- **Request**

```
{
    "request":{
        "action":"updateSIPAccount",
        "cookie":"sid719338887-1574671289",
        "extension":"1000",
        "permission":"internal"
    }
}
```

- **Response**

```
{
    "response":{
        "extension":{
            "alertinfo":null,
            "extension":"1000"
        }
    },
    "status":0
}
```

Note: Editing presence configuration requires sending the entire json list of sip_presence_settings. Make sure to specify the presence status when updating presence settings.

<div align="center">

Table 9: updateSIPAccount

</div>

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
extension	Required. 2-18 digits	yes	string	Specifies the extension to configure.
hasvoicemail	Yes, no	no	string	Whether to enable voicemail
cidnumber	2-32 digit	no	string	Caller ID number
secret	Required. 4-32 alphanumerical characters or special characters ~!@#$%^*,	no	string	SIP/IAX password
vmsecret	4-32 digits	no	string	Voicemail password
skip_vmsecret	Yes, no	no	string	Skip Voicemail Password Verification yes: When user dials My Voicemail, the password verification IVR is skipped
ring_timeout	Value between 3 and 600. Can be set to "null". When set to null, global settings will be used.	no	int	Ring Timeout when set to NULL, the system default ring timeout is used.
auto_record	all, external,	no	string	Auto record All Calls: All incoming calls to this extension will

	internal, off			be recorded.
				OFF: This extension's calls will not be recorded.
				external: All external calls of the extension will be recorded.
				internal: All internal calls of the extension will be recorded.
encryption	no, yes, support	no	string	SRTP encryption mode
				Enable/disable SRTP for RTP stream encryption.
				support：Enabled but not forced
faxdetect	no, yes	no	string	Configure the mode of using fax. There are 2 available settings. The default is "no". no：
				Disable fax related features.
				yes (Fax detection): Fax signals from this user or the trunk can be detected during a call. The received fax will be sent to the email address set for the user. If the user's email address is not configured, the fax will be sent to the default email address set on the fax page.
sendtofax	yes, no	no	string	Send fax to the email address.
				yes: The received fax will be sent to the email address set for the user. If the user's email address is not configured, the fax will be sent to the default email address set on the fax page.
strategy_ipacl	0,1,2	no	int	IP access strategy.
				0(Allow All)：Any IP address can register to this extension.
				1(Local Network): IP addresses in local network segments can register to this extension. By default it is the current IP segment of the device and can be set to register 10 other subnet devices.
				2 (Special IP address): Only allow one special IP address to register; special IP is disabled for WebRTC users.

local_network1	IP address Format: xxx.xxx.xxx .0 or :/16	no	string	Local subnet. When the policy is 1, that is, the local subnet, you can set up to 10 local subnets.
local_network2		no	string	
local_network3		no	string	
local_network4		no	string	
local_network5		no	string	
local_network6		no	string	
local_network7		no	string	
local_network8		no	string	
local_network9		no	string	
local_network1 0		no	string	
specific_ip	IP address	no	string	When the policy is 2, that is, Special IP Address, Format is xxx.xxx.xxx.xxx or XXXX:XXXX:XXXX:XXXX:XXXX:XXXX:XXXX:XXXX.
allow	At least one of the following must be selected: ulaw, alaw, gsm, g726, g722, g729, h264, ilbc, g726aal2, adpcm, g723, h263, h263p, vp8, opus, h265, rtx	no	string	Supported codec. Multiple can be set.
dnd	yes, no	no	string	Do Not Disturb. yes: All calls will be ignored, and the call forward unconditional/ no answer/ busy of the extension

				will not take effect.
dnd_timetype	0,1,2,3,4,5,6,8	no	int	Do not disturb time condition. DND will take effect only when this condition is satisfied. 0：All Time 1 ：Office Time 2：Out of Office Time 3：Holiday 4: Out of Holiday 5：Out of office time or holiday 6：Specific time 8：Office time and out of holiday
permission	internal，internal-local，internal-local-national，internal-local-national-international al	no	string	Select outbound permission. internal：internal internal-local：local internal-local-national：nationwide internal-local-national-international：international
nat	yes, no	no	string	NAT is used when FCM uses public IP and communicates with devices hidden behind a NAT network, such as a broadband router. You may encounter one-way audio problem. This type of problem is often associated with NAT configuration or SIP and RTP ports supported by the firewall.
bypass_outrt_auth	no, yes, bytime	no	string	Skip trunk authentication. yes: When dialing an external line, the user does not need to enter a password; bytime: dial an external line in the set time condition, the user does not need to enter a password.

skip_auth_time type	0,1,2,3,4,5, 6,8	no	int	time condition for Skip the trunk authentication: skipping the trunk authentication can only take effect after this condition is satisfied. 0：All Time 1 ：Office Time 2：Out of Office Time 3：Holiday 4: Out of Holiday 5：Out of office time or holiday 6：Specific time 8：Office time and out of holiday
t38_udptl	yes, no	no	string	Whether to support T.38 UDPTL.
directmedia	yes, no	no	string	Whether to enable direct media. No: the PBX will route the media streams from SIP endpoints through itself. Yes: the PBX will attempt to redirect the RTP media streams to bypass the PBX and to go directly between caller and callee. Note: It is not always possible for the PBX to negotiate endpoint-to-endpoint media routing.
dtmfmode	rfc2833, info, inband, auto	no	string	Default mode of sending DTMF signal. The DTMF signal is carried by the info method of SIP signaling. Inband: Requires 64kbit codec PCMU and PCMA. Auto: Adaptive preference is for RFC2833, followed by inband.
enable_qualify	yes, no	no	string	Enable keeping-alive. Yes: The PBX periodically sends SIP OPTION signaling to detect if the host is online.
qualifyfreq	Required. Set a value between 1	no	int	Keep-alive Frequency. When the host is on, set the interval of sending keep-alive messages measured in seconds.

	and 3600.			
authid	Up to 32 characters excluding space., ;:?\ "()<>@,\V[] ={}.	no	string	Authentication ID. This is the SIP service subscriber's ID used for authentication. If not configured, the Extension Number will be used for authentication.
tel_uri	disabled, user_phone, enabled	no	string	TEL URI. Enabled: TEL URI and Remove OBP from Route cannot be enabled at the same time. "Tel:" will be used instead of "SIP:" in the SIP request. User_Phone: If the phone has an assigned PSTN telephone number, this field should be set. A "User=Phone" parameter will then be attached to the Request-Line and "TO" header in the SIP request to indicate the E.164 number.
enablehotdesk	no, yes	no	string	Support Hot-desking Mode yes：SIP Password will accept only alphanumeric characters; Extension will be used for AuthID.
user_outrt_pas swd	4-10 digits	no	string	Dial Trunk Password Configure personal password when making outbound calls.
out_of_service	yes, no	no	string	Whether to disable this extension yes：disable no：enable
mohsuggest	Required: default, ringbackton e_default, MoH playlist name, etc	no	string	Music on Hold. Specify which Music on Hold class to suggest to the bridged channel when putting them on hold.
en_ringboth	no，yes	no	string	Ring Simultaneously If you want the extension and external number to

				ring simultaneously, check this box. If you use register trunk for outbound calls, the caller will display the registered number. The outbound call will use only the main trunk. The failover trunk will not be used.
external_number	Up to 32 alphanumeric characters and special characters +-*#	no	string	Set the external number for Ring Simultaneously. "-" is the connection character and will be ignored.
use_callee_dod_on_fwd_rb	no, yes	no	string	yes: Use the callee's DOD number as callerID on Outgoing Forwarding or Ring Simultaneously calls.
use_callee_dod_on_fm	no, yes	no	string	Use Callee DOD for Follow Me Use the callee DOD number as CID if configured Follow Me numbers are external numbers.
ringboth_timetype	0,1,2,3,4,5,6,8	no	int	Time Condition for Ring Simultaneously 0：All Time 1：Office Time 2： Out of Office Time3： Holiday 4: Out of Holiday 5：Out of office time or holiday 6：Specific time 8：Office time and out of holiday
enable_ldap	yes, no	no	string	Enable LDAP yes: If enabled, the extension will be added to LDAP Phonebook PBX lists.
max_contacts	Value between 1 and 10	no	int	Concurrent Registrations The maximum endpoints which can be registered to this extension. Value: 1-10.
custom_autoanswer	no, yes	no	string	Custom Call-info for Auto Answer yes: If checked, the invite message sent to the

				extension will contain a Call-info header to indicate auto answer.
sca_enable	no，yes	no	string	Enable SCA.
call_waiting	yes, no	no	string	Call waiting yes: Allows calls to the extension even when it is already in a call. This only works if the caller is directly dialing the extension. If disabled, the CC service and busy in-call forward will not work.
emergcidnumber	2-32 alphanumeric characters	no	string	Emergency Calls CID CallerID number that will be used when calling out and receiving direct callbacks.
enable_webrtc	yes, no	no	string	Enable WebRTC Support Enable registration and call from WebRTC.
alertinfo	none, ring1, ring2, ring3, ring4, ring5, ring6, ring7, ring8, ring9, ring10, Bellcore-dr1, Bellcore-dr2 Bellcore-dr3, Bellcore-dr4, Bellcore-dr5, custom			Alert-info When present in an INVITE request, the Alert-info header field specifies an alternative ring tone to the UAS.
limitime	Value between 0 and 86400	no	int	Maximum Call Duration The maximum call duration (in seconds). The default value 0 means no limit.
dndwhitelist		no	string	DND whitelist Multiple numbers are supported and separated by commas.

fwdwhitelist			no	string	Forward Whitelist
					Set extension numbers, multiple can be separated by commas. Calls from users in the forward whitelist will not be forwarded.
callbarging_mo nitor			no	string	Set up Allow call-barging list. Members of the list can spy on this extension via feature codes. Multiple extensions can be set, separated by commas.
seamless_tran sfer_members			no	string	Set up Allow to seamless transfer list. Members of the list can seamless transfer via feature code. Multiple extensions can be set, separated by commas.
sip_presence_ settings				Json array	The specific configuration content of the online status of the SIP extension. The specific content needs to specify which state the presence_status is. "sip_presence_settings": [{ "presence_status": "available", "cfb":"6000" , "cfn": null, "cfu": null, "cfb_timetype": 1, "cfn_timetype": 0, "cfu_timetype": 0, "cfb_destination_type": "0", "cfn_destination_type": "0", "cfu_destination_type": "0" }，{ "presence_status": "unavailable", "cfb": null, "cfn": "12345", "cfu": null, "cfb_timetype": 0, "cfn_timetype": 2, "cfu_timetype": 0, "cfb_destination_type": "0",

				"cfn_destination_type": "0", "cfu_destination_type": "0" }] When available, cfb to extension 6000; When unavailable, cfn to custom extension 12345.
presence_status	available, away, chat, dnd, userdef, unavailable	no	string	presence status Set the presence status of this extension. Default is Available. To set the transfer destination, configure call transfer.
cfb		no	string	Configure the target number to be forwarded to for Call Forward Busy(CFB). Incoming calls during busy time will be forwarded to the entered extension. Corresponds to the extension number under the cfb_destination_type type.
cfn		no	string	Configure the target number to be forwarded to for Call Forward No Answer(CFN). Incoming calls that are not answered after ring timeout will be forwarded to the entered extension. Note: If not specified, this feature is disabled. Corresponds to the extension number under the cfn_destination_type type.
cfu		no	string	Configure the target number to be forwarded to for Call Forward Unconditional(CFU). All incoming calls will be forwarded to the entered extension unconditionally. Corresponds to the extension number under the cfu_destination_type type.
cfb_timetype	0,1,2,3,4,5,6,8	no	string	Call forward busy based on this time condition. CFB can take effect only after this condition is satisfied. 0：All Time

				1：Office Time 2：
				Out of Office Time3：
				Holiday
				4: Out of Holiday
				5：Out of office time or holiday
				6：Specific time
				8：Office time and out of holiday
cfn_timetype	0,1,2,3,4,5,6,8	no	string	Call forward no answer based on this time condition. CFN can take effect only after this condition is satisfied.
				0：All Time 1
				：Office Time
				2：Out of Office Time
				3：Holiday
				4: Out of Holiday
				5：Out of office time or holiday
				6：Specific time
				8：Office time and out of holiday
cfu_timetype	0,1,2,3,4,5,6,8	no	string	Call forward unconditional based on this time condition. CFU can take effect only after this condition is satisfied.
				0：All Time 1
				：Office Time
				2：Out of Office Time
				3：Holiday
				4: Out of Holiday
				5：Out of office time or holiday
				6：Specific time
				8：Office time and out of holiday
cfb_destination _type	0,1,2,3,4,5,6			Type of CFB. Note: If not specified, this feature is disabled.
				0: None
				1: Extension

				2: Custom Number
				3: Voicemail
				4: Ring Group
				5: Queues
				6: Voicemail Group
cfn_destination _type	0,1,2,3,4,5, 6			Type of CFN. Note: If not specified, this feature is disabled. 0: None 1: Extension 2: Custom Number 3: Voicemail 4: Ring Group 5: Queues 6: Voicemail Group
cfu_destination _type	0,1,2,3,4,5, 6			Type of CFU. Note: If not specified, this feature is disabled. 0: None 1: Extension 2: Custom Number 3: Voicemail 4: Ring Group 5: Queues 6: Voicemail Group
vm_attach	yes, no If set to NULL, global setting will be used.	no	string	Send voicemail to email NULL: the global setting will be used.
vm_reserve	Yes, no, NULL If set to NULL, global setting will be used	no	string	Keep Voicemail after Emailing Only applies if extension-level is enabled or global Send Voicemail to Email is enabled and extension-level is default. NULL: the global setting will be used.

Successful response				
status	0	yes	int	Successful response，status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

Note: Editing presence configuration requires sending the entire json list of sip_presence_settings. Make sure to specify the presence status when updating presence settings.

Trunk

listVoIPTrunk

The "listVoIPTrunk" action will allow users to get information about the existing SIP trunk, such as the trunk's name, its IP address etc.

Note: The needed information, can be defined in the parameter "**options**". Otherwise all the information will be returned.

- **Request**

```
{
    "request":{
        "action":"listVoIPTrunk",
        "cookie":"sid719338887-1574671289",
        "options":"trunk_index,trunk_name,trunk_type"
    }
}
```

- **Response**

```
{
    "response":{
        "page":1,
        "total_item":3,
        "total_page":1,
        "voip_trunk":[
            {
                "trunk_index":2,
                "trunk_name":"test",
                "trunk_type":"peer"
            },
            {
                "trunk_index":3,
                "trunk_name":"test2",
                "trunk_type":"peer"
            },
            {
                "trunk_index":4,
                "trunk_name":"test12",
                "trunk_type":"peer"
            }
        ]
    },
```

```
    "status":0
}
```

<p align="center">**Table 10: listVoIPTrunk**</p>

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
Page		no	int	Get extension list by page number.
item_num		no	int	Number of trunks to return for the request. If unspecified, all trunks will be returned.
Sord	acs,desc	no	string	Sorting method. acs stands for ascending, and desc stands for descending.
Sidx		no	string	Sort by trunk index. This is based on trunk creation date.
options	trunk_index,trunk_name,host,trunk_type, username, technology,ldap_sync_enable,trunks.out_of_service	no	string	Specify the information to return. Multiple options can be selected and must be separated by commas. If unspecified, all the listed information will be returned.
Successful response				
status	0	yes	int	Successful response, status is 0
voip_trunk		yes	Json array	VOIP trunk list
total_item		yes	int	Total number of items that were returned.
total_page		yes	int	Total number of pages in the list.
page		yes	int	What page is on.
trunk_index		no	string	Trunk ID
trunk_name		no	string	Trunk name

Host		no	string	Host
trunk_type	peer, register	no	string	Trunk type Peer trunk and register trunk
username		no	string	Username of register trunk. NULL for peer trunk.
Failed response				
status		yes	int	Please see the error code list for more details.

addSIPTrunk

The "addSIPTrunk" action will allow users to create SIP trunks.

- **Request**

```
{
    "request":{
        "action":"addSIPTrunk",
        "cookie":"sid719338887-1574671289",
        "host":"192.168.5.222",
        "trunk_name":"FMtest",
        "trunk_type":"peer"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

Table 11: addSIPTrunk

Key Word	Value	Mandatory	Type	Note
Request parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
trunk_name		yes	string	Trunk name
Host		yes	string	Host
trunk_type	Peer, register	yes	string	Trunk type

Username	Up to 64 characters	yes	string	Configure the username to authenticate with the VoIP provider.
Secret				Configure the password to authenticate with the VoIP provider. Required for register trunks.
The rest options are Same as updateSIPTrunk				
Successful response				
Status	0	yes	int	The response is successful, status is 0
Failed response				
Status		yes	int	Please see the error code list for more details.

getSIPTrunk

The "getSIPTrunk" will allow users to get information about a specific trunk.

- **Request**

```
{
    "request":{
        "action":"getSIPTrunk",
        "cookie":"sid23597213-1574672527",
        "trunk":"3"
    }
}
```

- **Response**

```
{
    "response":{
        "trunk":{
            "allow":"ulaw,alaw,gsm,g726,g729,ilbc",
            "allow_outgoing_calls_if_reg_failed":"yes",
            "auth_trunk":"no",
            "authid":null,
            "auto_recording":"no",
            "cc_agent_policy":"never",
            "cc_max_agents":5,
            "cc_max_monitors":5,
            "cc_monitor_policy":"never",
            "cidname":null,
            "cidnumber":null,
            "dialin_direct":"no",
            "did_mode":"request-line",
            "dtmfmode":null,
            "enable_qualify":"no",
            "encryption":"no",
            "fromdomain":null,
            "fromuser":null,
```

```
             "host":"1.2.55.4",
             "keepcid":"no",
             "keeporgcid":"no",
             "ldap_custom_prefix":null,
             "ldap_default_outrt":null,
             "ldap_default_outrt_prefix":null,
             "ldap_sync_enable":"no",
             "ldap_sync_passwd":null,
             "ldap_sync_port":null,
             "nat":"no",
             "need_register":"no",
             "out_maxchans":0,
             "out_of_service":"no",
             "outboundproxy":null,
             "pai_number":null,
             "passthrough_pai":"yes",
             "qualifyfreq":60,
             "rmv_obp_from_route":"no",
             "secret":null,
             "send_ppi":"no",
             "status":"Unmonitored",
             "tel_uri":"disabled",
             "transport":"udp",
             "trunk_index":3,
             "trunk_name":"test2",
             "trunk_type":"peer",
             "uri_sip_or_sips":0,
             "use_dod_as_from_name":"no",
             "use_dod_in_ppi":"no",
             "use_for_sfu_conf":"no",
             "use_origcid_in_ppi":"no",
             "username":null
}
     },
     "status":0
}
```

Table 12: getSIPTrunk

Key Word	Value	Mandatory	Type	Note
Request parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
trunk		yes	string	Retrieves the configuration of the specified trunk. Please enter the trunk ID.
Response successfully				
status	0	yes	int	Successful response, the status is 0.
trunk		yes	Json, obj	Specific Trunk configuration.

trunk_index		yes	string	Trunk id.
allow	ulaw,alaw,gsm,g726,g729,ilbc,g722,g726aal2,adpcm,g723,h263,h263p,h264,h265,vp8,opus,rtx.	no	string	The trunk's supported codecs
allow_outgoing_calls_if_reg_failed	yes, no	no	string	Whether outgoing calls are allowed the trunk is unable to register successfully.
auth_trunk	yes, no	no	string	Authenticate trunk. If enabled, FCM will respond to incoming calls with 401 message to authenticate the trunk.
authid		no	string	Authenticate ID This is the SIP service subscriber's ID used for authentication. If not configured, the Extension Number will be used for authentication.
auto_recording	no, yes	no	string	Auto record.
cc_agent_policy	native, never	no	string	To enable CC service Control together with cc_monitor_policy. CC service is enabled if both cc_agent_policy and cc_monitory_policy are native. It is disabled if both are set to never.
cc_max_agents		no	int	The maximum number of CCSS agents that may be allocated to this channel. In other words, this number is the maximum number of CC requests this channel is allowed to make.
cc_max_monitors		no	int	The maximum number of monitor structures which may be created for this device. In other words, this number tells how many callers may request CC services for a specific device at one time.
cc_monitor_policy	native, never	no	string	To enable CC service Control together with cc_agent_policy.

				CC service is enabled if both cc_agent_policy and cc_monitory_policy are native. It is disabled if both are set to never.
cidname		no	string	Caller ID Name CID name for this trunk that will be used if the caller does not have CID name configured.
cidnumber		no	string	Caller ID Number that the trunk will try to use when making outbound calls. CID priority from highest to lowest is as follows: From User (register trunk only) > Inbound Call CID (enable using remote CID) > Trunk CID/register trunk username (Keep Trunk CID enabled) > DOD CID(with correspond DOD configuration) > Extension CID > Register Trunk Username (for register trunk only, Keep Trunk CID disabled) > Global Outbound CID. Note: Certain providers may ignore this CID.
dialin_direct	no，yes	no	string	Direct callback Allows external numbers the option to get directed to the extension that last called them.
did_mode	request-line, to-header	no	string	DID Mode Configure to obtain the destination ID of an incoming SIP call from SIP Request-line or To header.
dtmfmode	null, rfc2833, info, inband, auto	no	string	Configures the mode for sending DTMF. Null: Use global setting. RFC4733 (default): DTMF is transmitted as audio in the RTP stream but is encoded separately from the audio stream. Backward-compatible with RFC2833. Info: DTMF is transmitted through SIP signaling using info method. Inband: DTMF is transmitted as audio and is included in the audio stream. Auto: self-adjust
enable_qua	yes, no	no	string	Enable Heartbeat Detection

lify				yes：the PBX will regularly send SIP OPTIONS to check if the device is online.
encryption	no，yes，support	no	string	SRTP encryption mode Toggles support for RTP stream encryption.
fax_intellig ent_route		no	string	Enable fax intelligent routing. Set the destination to which the fax will be forwarded when a fax is detected. The following options are available: • Extension: Sends a fax to the specified extension when a fax is detected. If extension is selectedhere, the fax will be sent to this extension; • Fax to E-mail: When the fax is detected, the fax will be sent as an attachment to the specified e-mail address. The e-mail address can be the extension's mailbox or self-identification. Define a mailbox. Note: If you need to send a fax to your mailbox, make sure that the Mailbox in System is set up correctly.
fax_intellig ent_route_ destination		no	string	Fax destination. The destination of fax intelligent routing can only be a fax extension.
faxdetect	yes, no	no	string	
Fromdomai n		no	string	From domain Configure the actual domain where the extension comes from. Can override From field. For example,"trunk.FCM630A.provider.com "is the domain name of the following From header field. sip:1234567@trunk.FCM630A.provider.com
fromuser		no	string	Configure the actual user Can override From header field. A single ID could register multiple DID. For example "1234567"is the username of the following From header field: sip:1234567@trunk.FCM630A.provider.com
host		no	string	Enter the IP address or hostname of the VoIP provider's server.
keepcid	no, yes	no	string	Keep Trunk CID yes: Trunk CID will not be overwritten by host CID.

				When set to yes, cidnumber is mandatory.
keeporgcid	no, yes	no	string	Keep Original CID Keep CID from the inbound call when dialing out even if option "Keep Trunk CID" is enabled. Please make sure the peer PBX at the other end supports matching user entry using the "username" field from the authentication line.
ldap_custo m_prefix		no	string	LDAP Dialed Prefix System will automatically modify the remote contacts by adding this prefix. When ldap_default_outrt is set to self-defined, use this prefix.
ldap_defaul t_outrt		no	int	LDAP Outbound Rule Specify an outbound rule. The PBX system will automatically modify the remote contacts by adding prefix parsed from this rule. If null and ldap_default_outrt_prefix is configured, use custom outbound prefix. If null, no outbound prefix is added by default.
ldap_sync_ enable	no, yes	no	string	Sync LDAP Enable Provide and update the local LDAP contact to a remote peer automatically (SIP peer trunk only). To ensure successful synchronization, the remote peer needs to enable this service and set the same password as the local FCM.
ldap_sync_ passwd		no	string	Sync LDAP Password This is the password used for LDAP contact file encryption and decryption. The password must be the same for both peers to ensure successful synchronization.
ldap_sync_ port		no	int	Sync LDAP Port The TCP port used by this service.
nat	no, yes	no	string	Enable this setting if the FCM is using public IP and communicating with devices behind NAT. Note 1: This setting will overwrite the Contact header of received messages, which may affect the

				ability to establish calls when behind NAT. Consider changing settings in PBX Settings->SIP Settings->NAT instead. If one is experiencing one-way audio issues, please check the NAT configuration and SIP/RTP ports in the firewall.
need_register	no, yes	no	string	Whether to register on the external server.
out_maxchans		no	int	The number of current outgoing calls over the trunk at the same time. The default value 0 means no limit.
out_of_service	no, yes	no	string	Whether to disable the trunk.
outboundproxy		no	string	Outbound proxy When configured, the outbound signal will be sent to the proxy instead of the devices directly. The outbound proxy can be domain name or IP address.
pai_number		no	string	PAI Header PAI header for the trunk formatted as "name<number>", "<number>", or "number". If not configured, CID will be used instead.
passthrough_pai	yes, no	no	string	Passthrough PAI Header If enabled and "Send PAI Header" is disabled, PAI headers will be preserved as calls pass through the FCM.
qualifyfreq		no	int	Configure the frequency (in seconds) to send SIP OPTIONS messages to check the status of the device. Default is 60.
rmv_obp_from_route	no, yes	no	string	Remove OBP from Route If enabled, the outbound proxy URI in the Route header will be removed from SIP requests. Default setting is "No".
secret		no	string	Password of register trunk
send_ppi	no, yes	no	string	Send PPI Header Yes: the invite message sent to trunks will contain PPI (P-Preferred-Identity) Header.
status	Unknown,	no	string	

	Unmonitored, Reachable, Unreachable, Registered, Unregistered, Lagged, Failed, Request Sent, Rejected, Timeout, No Authentication			
tel_uri	disabled, user_phone, enabled	no	string	TEL URI Enabled: TEL URI and Remove OBP from Route cannot be enabled at the same time. If set to "Enable", "Tel:" will be used instead of "SIP:" in the SIP request. User_phone: If the phone has an assigned PSTN telephone number, this field should be set. A "User=Phone" parameter will then be attached to the Request-Line and "TO" header in the SIP request to indicate the E.164 number.
transport	udp, tcp, tls	no	string	Configure the SIP Transport method. Using TCP requires local TCP support; using TLS requires local TLS support.
trunk_index		no	string	Trunk ID
trunk_name		no	string	Provider name Configure a unique label to identify the trunk when listed in outbound rules and incoming rules.
trunk_type	peer, register	no	string	Trunk type Peer trunk or register trunk
use_dod_in _ppi	no, yes	no	string	Displays whether or not the DOD is being used for the PPI header. If both use_dod_in_pi and use_origcid_in_ppi are set to "no", CID will be used for the PPI header.
use_origcid _in_ppi	no, yes	no	string	Displays whether or not the original CID is used for the PPI header.

				If both use_dod_in_pi and use_origcid_in_ppi are set to "no", CID will be used for the PPI header.
username		no	string	Configure the username to authenticate with the VoIP provider.
use_for_sfu _conf	yes, no	no	string	IPVT Mode Enabling this will allow FCM to establish communication with IPVT.
Failed response				
status		yes	int	Please see the error code list for more details.

updateSIPTrunk

The "updateSIPTrunk" action will allow users to update existing SIP trunk while specifying the trunk's number.

- **Request**

```
{
    "request":{
        "action":"updateSIPTrunk",
        "cookie":"sid23597213-1574672527",
        "trunk":"5",
        "trunk_name":"FM1"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

<center>Table 13: updateSIPTrunk</center>

Key Word	Value	Mandatory	Type	Note
Request parameter				
cookie		yes	string	Cookie: Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
trunk		yes	string	Trunk id, specify which trunk to edit.
allow	ulaw, alaw, gsm, g726,	no	string	Supported codec, multiple can be set.

	g729, ilbc, g722, g726aal2, adpcm, g723, h263, h263p, h264, h265, vp8, opus, rtx, mandatory			
allow_outgoing_calls_if_reg_failed	yes, no	no	string	Whether outgoing calls are allowed when registration failed no：Calls are not allowed when the registration fails. If no outgoing registration is set, this configuration item can be ignored.
auth_trunk	yes, no	no	string	Authenticate trunk yes: the FCM will send a 401 response to the incoming call to authenticate the trunk.
authid	Up to 64 characters	no	string	Authenticate ID This is the SIP service subscriber's ID used for authentication. If not configured, the Extension Number will be used for authentication.
auto_recording	no, yes	no	string	Auto record.
cc_agent_policy	native, never	no	string	To enable CC service Control together with cc_monitor_policy. When cc_agent_policy and cc_monitor_policy are native at the same time, service is enables. When both are never, service is disabled.

cc_max_agents	1-999	no	int	The maximum number of CCSS agents that may be allocated to this channel. In other words, this number is the maximum number of CC requests this channel is allowed to make.。
cc_max_monitors	1-999	no	int	The maximum number of monitor structures which may be created for this device. In other words, this number tells how many callers may request CC services for a specific device at one time.
cc_monitor_policy	native, never	no	string	To enable CC service Control together with cc_agent_policy. When cc_agent_policy and cc_monitor_policy are native at the same time, service is enables. When both are never, service is disabled.
cidname	2-64 characters	no	string	Caller ID Name Configure the new name of the caller when the extension has no CallerID Name configured.
cidnumber	2-64 characters	no	string	Caller ID Number that the trunk will try to use when making outbound calls. CID priority from highest to lowest is as follows: From User (register trunk only) > Inbound Call CID (enable using remote CID) > Trunk CID/register trunk username (Keep Trunk CID enabled) > DOD CID(with correspond DOD configuration) > Extension CID > Register Trunk Username (for register trunk only, Keep Trunk CID disabled) > Global Outbound CID. Note: Certain providers may ignore this CID.
dialin_direct	no，yes	no	string	Direct callback Allows external numbers the option to get directed to the extension that last called them.。
did_mode	request-line, to-header	no	string	DID Mode Configure to obtain the destination ID of an incoming SIP call from SIP Request-line or To header.

dtmfmode	Null, rfc4733, info, inband, auto	no	string	Configures the mode for sending DTMF. Null: Use global setting. RFC4733 (default): DTMF is transmitted as audio in the RTP stream but is encoded separately from the audio stream. Backward-compatible with RFC2833. Info: DTMF is transmitted through SIP signaling using info method. Inband: DTMF is transmitted as audio and is included in the audio stream. Auto: self-adjust
enable_qualify	yes, no	no	string	Enable Heartbeat Detection yes：the PBX will regularly send SIP OPTIONS to check if the device is online.
encryption	no，yes，support	no	string	SRTP encryption mode Set whether to turn on SRTP mode to encrypt RTP streams.
fax_intelligent_route		no	string	Enable fax intelligent routing. Set the destination to which the fax will be forwarded when a fax is detected. The following options are available: • Extension: Sends a fax to the specified extension when a fax is detected. If extension is selected here, the fax will be sent to this extension; • Fax to E-mail: When the fax is detected, the fax will be sent as an attachment to the specified e-mail address. The e-mail address can be the extension's mailbox or self-identification. Define a mailbox. Note: If you need to send a fax to your mailbox, make sure that the Mailbox in System is set up correctly.
fax_intelligent_route_destination		no	string	Fax destination. The destination of fax intelligent routing can only be a fax extension.
fromdomain	Up to 60 characters	no	string	From domain

				Configure the actual domain where the extension comes from. Can override From field. For example,"trunk.FCM630A.provider.com "is the domain name of the following From header field. sip:1234567@trunk.FCM630A.provider.com
fromuser	Up to 64 characters	no	string	Configure the actual user，Can override From header field. A single ID could register multiple DID. For example "1234567"is the username of the following From header field: sip:1234567@trunk.FCM630A.provider.com
host	Required. Up to 60 characters.	no	string	Enter the IP address or hostname of the VoIP provider's server.
keepcid	no, yes	no	string	Keep Trunk CID yes: Trunk CID will not be overwritten by host CID. When set to yes, cidnumber is mandatory.
keeporgcid	no, yes	no	string	Keep Original CID Keep CID from the inbound call when dialing out even if option "Keep Trunk CID" is enabled. Please make sure the peer PBX at the other end supports matching user entry using the "username" field from the authentication line.
ldap_custom_prefix	1-14 characters	no	string	LDAP Dialed Prefix System will automatically modify the remote contacts by adding this prefix. When ldap_default_outrt is set to self-defined, use this prefix.
ldap_default_outrt	The existing outgoing route id	no	int	LDAP Outbound Rule Specify an outbound rule. The PBX system will automatically modify the remote contacts by adding prefix parsed from this rule.

				If null and ldap_default_outrt_prefix is configured, use custom outbound prefix. If null, no outbound prefix is added by default.
ldap_sync_e nable	no, yes	no	string	Sync LDAP Enable Provide and update the local LDAP contact to a remote peer automatically (SIP peer trunk only). To ensure successful synchronization, the remote peer needs to enable this service and set the same password as the local FCM.
ldap_sync_p asswd	4-64 alphanume ric characters and underscore (_) only.	no	string	Sync LDAP Password This is the password used for LDAP contact file encryption and decryption. The password must be the same for both peers to ensure successful synchronization.
ldap_sync_p ort	Value between 1-65534	no	int	Sync LDAP Port The TCP port used by this service.
nat	no, yes	no	string	Enable this setting if the FCM is using public IP and communicating with devices behind NAT. Note 1: This setting will overwrite the Contact header of received messages, which may affect the ability to establish calls when behind NAT. Consider changing settings in PBX Settings->SIP Settings->NAT instead. If one is experiencing one-way audio issues, please check the NAT configuration and SIP/RTP ports in the firewall. This configuration needs to be confirmed under real situation because it will change the Contact header field of incoming message in tun affects the

				establishing of calls. Under NAT environment, it requires configuring on NAT interface of SIP settings.
need_registe r	no, yes	no	string	Whether to register on the external server.
out_maxcha ns	Value between 0-999	no	int	The number of current outgoing calls over the trunk at the same time. The default value 0 means no limit.
out_of_servi ce	no, yes	no	string	Whether to disable the trunk.
outboundpro xy	Domain name or IP address	no	string	Outbound proxy When configured, the outbound signal will be sent to the proxy instead of the devices directly. The outbound proxy can be domain name or IP address.
pai_number	Up to 60 characters	no	string	PAI Header The user and name of the PAI header, it is formatted as "name<number>" or "<number>" or "number". If null, use the CID according to the priority.
passthrough _pai	yes, no	no	string	Passthrough PAI Header If enabled and "Send PAI Header" is disabled, PAI headers will be preserved as calls pass through the FCM.
qualifyfreq	Value between 1-3600	no	int	Configure the frequency (in seconds) to send SIP OPTIONS messages to check the status of the device. Default is 60.
rmv_obp_fro m_route	no, yes	no	string	Remove OBP from Route It is used for removing the URI of outbound proxy from Route header field of phone system. If enabled, Route header will be removed from SIP requests. The default setting is "No".

secret	Up to 64 characters	no	string	Password of register trunk
send_ppi	no, yes	no	string	Send PPI Header Yes: the invite message sent to trunks will contain PPI (P-Preferred-Identity) Header.
tel_uri	disabled, user_phone, enabled	no	string	TEL URI Enabled: TEL URI and Remove OBP from Route cannot be enabled at the same time. If set to "Enable", "Tel:" will be used instead of "SIP:" in the SIP request. User_phone: If the phone has an assigned PSTN telephone number, this field should be set. A "User=Phone" parameter will then be attached to the Request-Line and "TO" header in the SIP request to indicate the E.164 number.
transport	udp, tcp, tls	no	string	Configure the SIP Transport method. Using TCP requires local TCP support; using TLS requires local TLS support.
trunk_name	2-64 characters	no	string	Trunk id
use_dod_in_ppi	no, yes	no	string	Configure how to set the PPI number. When use_dod_in_ppi and use_origcid_in_ppi are both no, set the ppi number by CID option priority. When use_origcid_in_ppi is yes, use the original CID in the PPI header, if no original CID, use the default number. When use_dod_in_ppi is yes, use the DOD number in the PPI header, if no DOD number, use the default number.
use_origcid_in_ppi	no, yes	no	string	Configure how to set the PPI number.

				When use_dod_in_ppi and use_origcid_in_ppi are both no, set the ppi number by CID option priority. When use_origcid_in_ppi is yes, use the original CID in the PPI header, if no original CID, use the default number. When use_dod_in_ppi is yes, use the DOD number in the PPI header, if no DOD number, use the default number.
username	Up to 64 characters	no	string	Configure the username to authenticate with the VoIP provider.
use_for_sfu_ conf	yes, no	no	string	IPVT Mode Configures the FCM to be used exclusively for IPVT. Warning: This will lock out certain FCM features.
Successful response				
status	0	yes	int	Successful response, the status is 0.
Failed response				
status		yes	int	Please see the error code list for more details.

deleteSIPTrunk

The "deleteSIPTrunk" action, allows users to delete an existing trunk.

- **Request**

```
{
    "request":{
        "action":"deleteSIPTrunk",
        "cookie":"sid23597213-1574672527",
        "trunk":"5"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

Key Word	Value	Mandatory	Type	Note
Request parameter				
Cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
Trunk		yes	string	Enter the trunk ID to specify the trunk to delete.
Successful response				
Status	0	yes	int	The response is successful, status is 0
Failed response				
Status		yes	Int	Please see the error code list for more details.

Outbound Route

listOutboundRoute

The "listOutboundRoute" allows users to list the existing outbound route such as the route's name, its permission etc.

Note: The needed information, can be defined in the parameter "**options**".

- **Request**

```
{
    "request":{
        "action":"listOutboundRoute",
        "cookie":"sid23597213-1574672527",

"options":"outbound_rt_name,outbound_rt_index,permission,sequence,pattern,out_of
_service"
    }
}
```

- **Response**

```
{
    "response":{
        "outbound_route":[
            {
                "members":[],
                "out_of_service":"no",
                "outbound_rt_index":2,
                "outbound_rt_name":"test123",
                "pattern":"_1xxx",
                "permission":"none",
                "sequence":1
            }
        ],
        "page":1,
        "total_item":1,
        "total_page":1
    },
    "status":0
}
```

Table 15: listOutboundRoute

Key Word	Value	Mandatory	Type	Note
Request parameter				
Cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.

Page		no	int	Retrieves outbound routes by the page they're on.
item_num		no	int	Extension number on each page, which is, the maximum items of each return. If empty, all members are returned by default.
Sord	acs, desc	no	string	Sorting method. acs stands for ascending, and desc stands for descending.
Sidx		no	string	Sort according to the index.
options	outbound_rt_na me, outbound_rt_in dex, permission, sequence, pattern, out_of_service	no	string	Specifies the information to retrieve. Several items can be entered and separated by commas. If unspecified, all outbound route information will be retrieved.
Successful response				
status	0	yes	int	Successful response, status is 0
outbound_ route		yes	Json array	Outbound route list
total_item		yes	int	Total number of items that were returned.
total_page		yes	int	Total number of pages in the list.
Page		yes	int	Page number that the trunks are on.
outbound_ rt_index		no	string	ID of the outbound route. Used for updating and deleting outbound routes.
outbound_ rt_name		no	string	Name of the outbound route.
Permissio n		no	string	Privilege Level The required permission level to use the outbound route.
sequence		no	string	Trunk type Peer trunk and register trunk
pattern		no	string	Outbound routing rules. Multiple patterns are separated by commas.
Failed response				

		yes	int	Please see the error code list for more details.
Status		yes	int	Please see the error code list for more details.

addOutboundRoute

The "addOutboundRoute" will allow users to add an outbound route for a specific trunk that needs to be defined using the "**default_trunk_index**".

- **Request**

```
{
    "request":{
        "action":"addOutboundRoute",
        "cookie":"sid23597213-1574672527",
        "default_trunk_index":"3",
        "outbound_rt_name":"test123",
        "pattern":[
            {
                "match":"_1xxx"
            }
        ]
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

Table 16: addOutboundRoute

Key Word	Value	Mandatory	Type	Note
Request parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
outbound_rt_ index		yes	string	The id of the outgoing route, which configuration of the outgoing route is obtained.
outbound_rt_ name	2-24 letters/numb ers/special characters_- . Mandatory.	yes	string	Outbound route name

default_trunk _index	mandatory	yes	string	Corresponding trunk id used by the outbound route

pattern	mandatory	no	Json array	Available Extensions/Extension Groups after enabling filter on source caller ID. If is extension group, use the id of the group. Multiple should be separated by commas:6000,6001,group-1
				
				 Outgoing prefix
				 All patterns are prefixed by "_" character, but please do not enter more than one "_" at the beginning. All patterns can add comments, such as "_pattern /* comment */". In patterns, some characters have special meanings:
				 [12345-9] ... Any digit in the brackets. In this example, 1,2,3,4,5,6,7,8,9 are allowed.
				 N ... Any digit from 2-9.
				 . ... Wildcard, matching one or more characters.
				 ! ... Wildcard, matching zero or more characters immediately.
				 X ... Any digit from 0-9.
				 Z ... Any digit from 1-9.
				 - ... Hyphen is to connect characters and it will be ignored.
				 [] Contain special characters ([x], [n], [z]) represent letters x, n, z. Multiple patterns can be one member in json array, which is saved in match. For example, pattern is _1, _2: "pattern":[
				    {
				      "allow":null,
				      "match":"_1",
				      "outbound_rt_index":2,
				      "strip_prefix":null
				    },
				    {
				      "allow":null,

				"match":"_2",
				"outbound_rt_index":2,
				"strip_prefix":null
				    }
				  ]

permission	none, Internal, local, national, international	no	string	outbound permission. internal：internal internal-local：local internal-local-national：nationwide internal-local-national-international：international
out_of_servic e	Yes, no	no	string	Whether to disable the outgoing route
password	4-10 digits. If null, no outbound password is used.	no	string	Outbound password
strip	[0,32]	no	int	Strip Specify the number of digits that will be stripped from the beginning of the dialed string before the call is placed via the selected trunk. For example, the users will dial 9 as the first digit of a long distance calls. However, 9 should not be sent out via SIP lines. In this case, one digit should be stripped before the call is placed.
prepend	0 to 20 alphanumeri c characters or +_*#	no	string	Prepend Those digits will be prepended after the dialing number is stripped.
enable_wlist	Yes, no	no	string	Enable Filter on Source Caller ID Set to yes to enable filter on Source Caller ID. If enabled, Caller ID must in the selected list or match Custom Dynamic Route to make outbound calls.

Successful response				
status	0	yes	int	The response is successful, status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

getOutboundRoute

The "getOutboundRoute" allows users to get information about an existing outbound route.

- **Request**

```
{
    "request":{
        "action":"getOutboundRoute",
        "cookie":"sid932531770-1574674600",
        "custom_member":"",
        "default_trunk_index":"",
        "enable_wlist":"",
        "failover_outbound_data":"",
        "limitime":"",
        "members":"",
        "out_of_service":"",
        "outbound_route":"2",
        "outbound_rt_index":"",
        "outbound_rt_name":"",
        "password":"",
        "pattern":"",
        "permission":"",
        "pin_sets_id":"",
        "prepend":"",
        "strip":"",
        "time_mode":""
    }
}
```

- **Response**

```
{
    "response":{
        "failover_outbound_data":[],
        "outbound_route":{
            "custom_member":null,
            "default_trunk_index":3,
            "enable_wlist":"no",
            "limitime":null,
            "members":null,
            "out_of_service":"no",
            "outbound_rt_index":2,
            "outbound_rt_name":"test123",
            "password":null,
            "permission":"none",
            "pin_sets_id":null,
            "prepend":null,
            "strip":0,
```

```
            "time_mode":0
        },
"pattern":[
            {
                "allow":null,
                "match":"_1xxx",
                "outbound_rt_index":2,
                "strip_prefix":null
            }
        ]
    },
    "status":0
}
```

Table 17: getOutboundRoute

Key Word	Value	Mandatory	Type	Note
Request parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned
outbound_ route		yes	string	Outbound route id, which configuration of the outgoing route is obtained.
Successful response				
status	0	yes	int	The response is successful, status is 0
outbound_ route		yes	Json, obj	Configuration of the specified outbound route
outbound_ rt_index		yes	string	ID of the outbound route.
outbound_ rt_name		no	string	Name of the outbound route
permissio n	none, Internal, local, national, international	no	string	The required permission level to use the outbound route. disable internal： internal internal- local： local internal-local-national： national internal-local-national-international： international
default_tru nk_index		no	string	The ID of the trunk used for the outbound route.

out_of_ser vice	Yes, no		string	Disable this Route Displays whether or not this outbound route is disabled.
password			string	The password required to use the outbound route
strip			int	Strip The number of digits to remove from the beginning of a dialed number before actually making the call. Don't think the example is necessary in this case.
prepend			string	Prepend The digits to add to the beginning of a dialed number before actually making the call.
enable_wli st	Yes, no		string	Enable Filter on Source Caller ID If enabled, only the selected extensions/extension groups or extensions that satisfy the Custom Dynamic Route pattern can use the outbound route.
members			string	Available Extensions/Extension Groups. The extensions and extension groups that can use this outbound route when Enable Filter on Source Caller ID is toggled on. Extension groups will be identified by ID.
pattern		no	json array	Outgoing prefix All patterns are prefixed by "_" character, but please do not enter more than one "_" at the beginning. All patterns can add comments, such as "_pattern /* comment */". In patterns, some characters have special meanings: [12345-9] ... Any digit in the brackets. In this example, 1,2,3,4,5,6,7,8,9 are allowed. N ... Any digit from 2-9. . ... Wildcard, matching one or more characters. ! ... Wildcard, matching zero or more characters immediately. X ... Any digit from 0-9. Z ... Any digit from 1-9.

				- ... Hyphen is to connect characters and it will be ignored.
				[] Contain special characters ([x], [n], [z]) represent letters x, n, z. Multiple patterns can be one member in json array, which is saved in match. For example, pattern is _1, _2: "pattern":[
				    {
				        "allow":null,
				        "match":"_1",
				        "outbound_rt_index":2,
				        "strip_prefix":null
				    },
				    {
				        "allow":null,
				        "match":"_2",
				        "outbound_rt_index":2,
				        "strip_prefix":null
				    }
				  ]

failover_outbound_data			json array	Each failover trunk is a member of json array. failover_prepend：failover prepend failover_strip：failover strip failover_trunk_index：failover trunk id failover_trunk_sequence：failover trunk sequence outbound_rt_index：outbound route id
				For example, the first failover trunk of outbound route 3 is Trunk 4, strip is 2, prepend is 1:
				 "failover_outbound_data":[
				    {
				        "failover_prepend":"1",
				        "failover_strip":2,
				        "failover_trunk_index":4,
				        "failover_trunk_sequence":1,
				        "outbound_rt_index":3
				    }
				  ]

Failed response				
status		yes	int	Please see the error code list for more details.

updateOutboundRoute

The "updateOutboundRoute" allows users to update an existing outbound route.

- **Request**

```
{
    "request":{
        "action":"updateOutboundRoute",
        "cookie":"sid932531770-1574674600",
        "outbound_route":"2",
        "outbound_rt_name":"out1",
        "permission":"internal"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

Table 18: updateOutboundRoute

Key Word	Value	Mandatory	Type	Note
Request parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
outbound_rt_ index		yes	string	The id of the outgoing route, which configuration of the outgoing route is updated
outbound_rt_ name	Required. 2-24 alphanume ric characters, hyphens	no	string	Outgoing route name

	(-), or underscores (_)			
permission	none, Internal, local, national, international	no	string	outbound permission. internal：internal internal-local：local internal-local-national：nationwide internal-local-national-international：international
default_trunk _index	required	no	string	The corresponding trunk id of the outbound route
pattern	required	no	Json array	Pattern All patterns are prefixed by "_" character, but please do not enter more than one "_" at the beginning. All patterns can add comments, such as "_pattern /* comment */". In patterns, some characters have special meanings: [12345-9] ... Any digit in the brackets. In this example, 1,2,3,4,5,6,7,8,9 are allowed. N ... Any digit from 2-9. . ... Wildcard, matching one or more characters. ! ... Wildcard, matching zero or more characters immediately. X ... Any digit from 0-9. Z ... Any digit from 1-9. - ... Hyphen is to connect characters and it will be ignored. [] Contain special characters ([x], [n], [z]) represent letters x, n, z. For multiple modes, see the array written in json. For example, rules for allowing 2xxx, 12xx outgoing is set as following: [{"match": "_2xxx/*asadad*/"}, {"match": "_12xx"}]
out_of_servic e	Yes, no	no	string	Whether to disable the outgoing route
password	4-10 digits. If not configured, no password	no	string	Outbound password

	will be used for the outbound route.			
strip	0-32	no	int	Strip Specify the number of digits that will be stripped from the beginning of the dialed string before the call is placed via the selected trunk. For example, the users will dial 9 as the first digit of a long distance calls. However, 9 should not be sent out via SIP lines. In this case, one digit should be stripped before the call is placed.
prepend	0-20 alphanumeric characters or special characters +_#*	no	string	Prepend The digits that will be prepended after the dialing number is stripped.
enable_wlist	Yes, no	no	string	Enable Filter on Source Caller ID Set yes to enable filter on Source Caller ID. If enabled, Caller ID must in the selected list or match Custom Dynamic Route to make outbound calls.
members		no	string	Available Extensions/Extension Groups after enabling filter on source caller ID. If is extension group, use the id of the group. Multiple should be separated by commas:6000,6001,group-1
Successful response				
status	0	yes	int	The response is successful, status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

deleteOutboundRoute

The "deleteOutboundRoute" action allows users to delete an existing outbound route.

- **Request**

```
{
    "request":{
        "action":"deleteOutboundRoute",
        "cookie":"sid932531770-1574674600",
        "outbound route":"2"
```

```
        }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

Table 19: deleteOutboundRoute

Key Word	Value	Mandatory	Type	Note
Request parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
outbound_route		yes	string	The id of the outbound route, which configuration of the outbound route is obtained
Successful response				
status	0	yes	int	The response is successful, status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

Inbound Route

listInboundRoute

The "listInboundRoute" allows users to list the existing inbound routes such as the route's name, its permission etc.

Note: The needed information, can be defined in the parameter "**options**".

- **Request**

```
{
    "request":{
        "action":"listInboundRoute",
        "cookie":"sid932531770-1574674600",
        "trunk_index":"1"
    }
}
```

- **Response**

```json
{
    "response":{
        "inbound_route":[
            {
                "account":null,
                "accout_voicemail_out_of_service":"no",
                "alertinfo":null,
                "announcement":null,
                "blocking_did_collect_calls":"no",
                "callback":null,
                "conference":null,
                "destination_type":"byDID",
                "dialdirect":"no",
                "did_pattern_allow":"",
                "did_pattern_match":"_.",
                "did_strip":0,
                "directory":null,
                "disa":null,
                "en_multi_mode":"no",
                "enable_fax_detect":"no",
                "enable_inbound_muti_mode":"no",
                "external_number":null,
                "fax":null,
                "fax_intelligent_route":"email",
                "fax_intelligent_route_destination":null,
                "inbound_mode":0,
                "inbound_muti_mode":0,
                "inbound_rt_index":1,
                "inbound_suffix":null,
                "incoming_prepend":null,
                "ivr":null,
                "members":[
                    {
                        "account":null,
                        "announcement":null,
                        "callback":null,
                        "conference":null,
                        "destination_type":"byDID",
                        "did_strip":0,
                        "directory":null,
                        "disa":null,
                        "en_multi_mode":"no",
                        "end_hour":"",
                        "end_min":"",
                        "external_number":null,
                        "fax":null,
                        "inbound_mode":"0",
```

```
                    "ivr":null,
                    "mode":"",
                    "multimedia_conference":null,
                    "paginggroup":null,

                    "queue":null,
                    "ringgroup":null,
                    "sequence":"0",
                    "start_hour":"",
                    "start_min":"",
                    "tc":"0",
                    "timetype":"0",
                    "vmgroup":null,
                    "voicemail":null
                }
            ],
            "multimedia_conference":null,
            "out_of_service":"no",
            "paginggroup":null,
            "permission":"internal-local-national-international",
            "prepend_inbound_name":null,
            "prepend_inbound_name_enable":null,
            "prepend_trunk_name":"no",
            "queue":null,
            "ringgroup":null,
            "set_callerid_enable":"no",
            "set_callerid_name":"${CALLERID(name)}",
            "set_callerid_number":"${CALLERID(num)}",
            "trunk_index":1,
            "vmgroup":null,
            "voicemail":null
        }
    ],
"page":1,
        "total_item":1,
        "total_page":1
    },
    "status":0
}
```

<div align="center">

Table 20: listInboundRoute

</div>

Key Word	Value	Mandatory	Type	Note
Request parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.

page		no	int	Retrieves all the inbound routes on the specified page.
item_num		no	int	Retrieves the maximum number of inbound routes to retrieve for the query. If unspecified, all inbound routes will be returned.
sord	acs,desc	no	string	Sorting method. acs stands for ascending, and desc stands for descending.
sidx		no	string	Sort according to the index.
trunk_index		yes	int	The ID of the trunk of which to retrieve the inbound routes of.
options	inbound_rt_index, did_pattern_match ,did_pattern_allow ,out_of_service	no	string	See previous comments regarding similar parameter
Successful response				
status	0	yes	int	The response is successful, status is 0
inbound_route		yes	Json array	List of inbound routes
total_item		yes	int	Total number of items that were returned.
total_page		yes	int	Total number of pages in the list.
page		yes	int	Page number that the trunks are on.
inbound_rt_index		yes	string	ID of the inbound route.
members		yes	Json array	Destination of the inbound route
did_pattern_match		no	string	Callee id pattern match mode of the inbound route All patterns are prefixed by "_" character, but please do not enter more than one "_" at the beginning. All patterns can add comments, such as "_pattern /* comment */". In patterns, some characters have special meanings: [12345-9] ... Any digit in the brackets. In this example, 1,2,3,4,5,6,7,8,9 are allowed. N ... Any digit from 2-9. . ... Wildcard, matching one or more characters. ! ... Wildcard, matching zero or more characters

				immediately.
				X ... Any digit from 0-9.
				Z ... Any digit from 1-9.
				- ... Hyphen is to connect characters and it will be ignored.
				[] Contain special characters ([x], [n], [z]) represent letters x, n, z.
did_pattern_al low		no	string	Callee pattern match
out_of_servic e	yes, no	no	string	Indicates whether the extension is out of service
Failed response				
status		yes	int	Please see the error code list for more details.

addInboundRoute

The "addInboundRoute" action allows users to add and configure an inbound route for a specific trunk that needs to be defined using the "**trunk_index**".

- **Request**

```
{
    "request":{
        "account":"1001",
        "action":"addInboundRoute",
        "cookie":"sid1302335489-1574676590",
        "destination_type":"account",
        "dial_trunk":"no",
        "did_pattern_match":"_x.",
        "did_strip":"0",
        "en_multi_mode":"no",
        "enable_fax_detect":"no",
        "enable_inbound_muti_mode":"no",
        "ext_conference":"no",
        "ext_directory":"no",
        "ext_group":"no",
        "ext_local":"yes",
        "ext_paging":"no",
        "ext_queues":"no",
        "fax_intelligent_route":"email",
        "fax_intelligent_route_destination":"1001",
        "inbound_muti_mode":"0",
        "multi_mode":"[]",
        "out_of_service":"no",
```

```
        "permission":"internal",
        "prepend_trunk_name":"no",
        "set_callerid_enable":"no",
        "set_callerid_name":"${CALLERID(name)}",
        "set_callerid_number":"${CALLERID(num)}",
        "time_condition":"[]",
        "trunk_index":"6",
        "voicemailgroups":"no",
        "voicemenus":"no"
    }
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

Table 21: addInboundRoute

Key Word	Value	Mandatory	Type	Note
Request parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
inbound_route		yes	string	Inbound route id, which inbound route to obtain configuration from.
trunk_index		yes	int	Trunk id of inbound route
inbound_suffix		no	string	Inbound Mode Suffix Dial global inbound feature code + the inbound mode suffix(or dial inbound mode suffix) could switch the mode of the inbound route. BLF subscription inbound mode suffix can monitor inbound multiple mode.
inbound_muti_ mode		no	string	Inbound mode
permission	Internal,	no	string	Inbound permission

	local, national, internati onal			Internal, local, national, international.
enable_inboun d_muti_mode		no	string	Inbound multiple mode Can be configured in the "Inbound Routes" page. If enabled, the global inbound mode will be used. Otherwise, the default mode will be used.
set_callerid_nu mber		no	string	Configure the pattern-matching format to manipulate the numbers of incoming callers or to set a fixed callerID number for calls that go through this inbound route. ${CALLERID(num)}: Default value which indicates the number of an incoming caller (CID). The CID will not be modified. ${CALLERID(num):n}: Skips the first n characters of a CID number, where n is a number. ${CALLERID(num):-n}: Takes the last n characters of a CID number, where n is a number. ${CALLERID(num):s:n}: Takes n characters of a CID number starting from s+1, where n is a number and s is a character position (e.g. ${CALLERID(num):2:7} takes 7 characters after the second character of a CID number). n${CALLERID(num)}: Prepends n to a CID number, where n is a number.
set_callerid_na me			string	Configure the pattern-matching format to customize the callerID name of incoming callers. ${CALLERID(name)}: Default value which indicates the name of an incoming caller. A${CALLERID(name)}B: Prepends the character "A" and appends the character "B" to ${CALLERID(name)}. Using a string instead of the pattern-matching syntax

				will set a fixed name to incoming callers.
set_callerid_enable	yes，no	no	string	Manipulate Caller ID (CID) name and/or number within the call flow.
out_of_service	yes, no	no	string	Whether to disable this inbound route
prepend		no	string	Prepend Those digits will be prepended after the dialing number is stripped.
enable_wlist	yes, no	no	string	Enable Filter on Source Caller ID Set to yes to enable filter on Source Caller ID. If enabled, Caller ID must in the selected list or match Custom Dynamic Route to make outbound calls.
incoming_prepend		no	string	Prepend Those digits will be prepended after the dialing number is stripped.
alertinfo		no	string	Alert info
did_strip		no	string	Strip Specify the number of digits that will be stripped from the beginning of the dialed string before the call is placed via the selected trunk. For example, the users will dial 9 as the first digit of a long distance calls. However, 9 should not be sent out via SIP lines. In this case, one digit should be stripped before the call is placed.
callback		no	string	Default destination-callback
external_number		no	string	Default destination- external number
directory		no	string	Default destination-dial by name
disa		no	string	Default destination-DISA

fax		no	string	Default destination-Fax
pApaginggroup		no	string	Default destination-paging/intercom group
queue		no	string	Default destination-Queues
ringgroup		no	string	Default destination-ring group
ivr		no	string	Default destination-IVR
vmgroup		no	string	Default destination-voicemail group
conference		no	string	Default destination-conference rooms
voicemail		no	string	Default destination-voicemail
account		no	string	Default destination-extension
prepend_trunk _name	yes，no	no	string	Prepend trunk name
destination_typ e		no	string	Default destination
did_pattern_all ow		no	string	callerID pattern All patterns are prefixed by "_" character, but please do not enter more than one "_" at the beginning. All patterns can add comments, such as "_pattern /* comment */". In patterns, some characters have special meanings: [12345-9] ... Any digit in the brackets. In this example, 1,2,3,4,5,6,7,8,9 are allowed. N ... Any digit from 2-9. . ... Wildcard, matching one or more characters. ! ... Wildcard, matching zero or more characters immediately. X ... Any digit from 0-9. Z ... Any digit from 1-9. - ... Hyphen is to connect characters and it will be ignored.

				[] Contain special characters ([x], [n], [z]) represent letters x, n, z.
did_pattern_match		yes	string	Pattern All patterns are prefixed by "_" character, but please do not enter more than one "_" at the beginning. All patterns can add comments, such as "_pattern /* comment */". In patterns, some characters have special meanings: [12345-9] ... Any digit in the brackets. In this example, 1,2,3,4,5,6,7,8,9 are allowed. N ... Any digit from 2-9. . ... Wildcard, matching one or more characters. ! ... Wildcard, matching zero or more characters immediately. X ... Any digit from 0-9. Z ... Any digit from 1-9. - ... Hyphen is to connect characters and it will be ignored. [] Contain special characters ([x], [n], [z]) represent letters x, n, z. Multiple patterns should be separated by commas. For example the patterns are _1xx, _2xx, the configuration should be: "did_pattern_allow":"_1xx,_2xx"
seamless_transfer_did_whitelist		no	string	Extension list allowed to seamless transfer Allows the selected extension to use this function. If an extension is busy, and a mobile phone is bound to that extension, the mobile phone can pick up calls to that extension.
ext_directory	yes，no	no	string	Dial by name, add at least one destination for the did destination

ext_paging	yes，no	no	string	Paging/intercom group, add at least one destination for the did destination
ext_group	yes，no	no	string	Ring group, add at least one destination for the did destination
ext_queues	yes，no	no	string	Queues, add at least one destination for the did destination
ext_conference	yes，no	no	string	Conference room, add at least one destination for the did destination
voicemenus	yes，no	no	string	IVR, add at least one destination for the did destination
voicemailgroups	yes，no	no	string	Voicemail groups, add at least one destination for the did destination
ext_fax	yes，no	no	string	Fax, add at least one destination for the did destination
ext_local	yes，no	yes	string	extensions, add at least one destination for the did destination
dial_trunk	yes，no	no	string	Dial trunk
multi_mode		yes	Json obj	Mode1
time_condition		yes	Json obj	Time condition
blocking_did_collect_calls	yes，no	no	string	Block Collect Calls If enabled, collect calls will be blocked. Otherwise calls will be dealt as normal calls. Note: Collect calls are indicated by the header "P-Asserted-Service-Info: service-code=Backward Collect Call, P-Asserted-Service-Info: service-code=Collect Call".
Successful response				
status	0	yes	int	The response is successful, status is 0
need_apply	yes, no	yes	string	Whether "Apply" is required for the configuration to take

				effect
Failed response				
status		yes	int	Please see the error code list for more details.

getInboundRoute

The "getInboundRoute" action allows users to get information about a specific inbound route.

- **Request**

```
{
    "request":{
        "action":"getInboundRoute",
        "cookie":"sid1148042340-1574781519"
    }
}
```

- **Response**

```
{
    "response":{
        "inbound_did_destination":{
            "dial_trunk":"yes",
            "ext_conference":"yes",
            "ext_directory":"yes",
            "ext_fax":"yes",
            "ext_group":"yes",
            "ext_local":"yes",
            "ext_multimedia_conference":"yes",
            "ext_paging":"yes",
            "ext_queues":"yes",
            "inbound_rt_index":1,
            "voicemailgroups":"yes",
            "voicemenus":"yes"
        },
        "inbound_routes":{
            "account":null,
            "accout_voicemail_out_of_service":"no",
            "alertinfo":null,
            "announcement":null,
            "blocking_did_collect_calls":"no",
            "callback":null,
            "conference":null,
            "destination_type":"byDID",
            "dialdirect":"no",
            "did_pattern_allow":"",
            "did_pattern_match":"_.",
            "did_strip":0,
```

```
            "directory":null,
            "disa":null,
            "en_multi_mode":"no",
            "enable_fax_detect":"no",
            "enable_inbound_muti_mode":"no",
            "external_number":null,
            "fax":null,
            "fax_intelligent_route":"email",
            "fax_intelligent_route_destination":null,
            "inbound_muti_mode":0,
            "inbound_rt_index":1,
            "inbound_suffix":null,
            "incoming_prepend":null,
            "ivr":null,
            "multimedia_conference":null,
            "out_of_service":"no",
            "paginggroup":null,
            "permission":"internal-local-national-international",
            "prepend_inbound_name":null,
            "prepend_inbound_name_enable":null,
            "prepend_trunk_name":"no",
            "queue":null,
            "ringgroup":null,
            "seamless_transfer_did_whitelist":"",
            "set_callerid_enable":"no",
            "set_callerid_name":"${CALLERID(name)}",
            "set_callerid_number":"${CALLERID(num)}",
            "trunk_index":1,
            "vmgroup":null,
            "voicemail":null
        }
    },
    "status":0
```

<div align="center">

Table 22: getInboundRoute

</div>

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
inbound_route		yes	string	The ID of the inbound route
Successful response				
status	0	yes	int	The response is successful, status is 0

inbound_routes		yes	Json obj	Configuration of the specified inbound route
inbound_suffix		no	string	Inbound Mode Suffix The suffix of the inbound route. Dialing the global inbound mode feature code + this suffix will toggle the route's inbound mode. BLF subscription inbound mode suffix can monitor inbound multiple mode.
inbound_muti_mode		no	string	The current inbound mode of the inbound route.
permission	Internal, local, national, international	no	string	Privilege Level. Permission level of incoming calls when they are routed to other trunks. This must be equal to or higher than the destination trunk's Privilege Level for calls to be routed successfully.
enable_inbound_muti_mode		no	string	Inbound multiple mode Displays whether or not this route
set_callerid_number		no	string	Configure the pattern-matching format to manipulate the numbers of incoming callers or to set a fixed CallerID number for calls that go through this inbound route. ${CALLERID(num)}: Default value which indicates the number of an incoming caller (CID). The CID will not be modified. ${CALLERID(num):n}: Skips the first n characters of a CID number, where n is a number. ${CALLERID(num):-n}: Takes the last n characters of a CID number, where n is a number. ${CALLERID(num):s:n}: Takes n characters of a CID number starting from s+1, where n is a number and s is a character position (e.g. ${CALLERID(num):2:7} takes 7 characters after the second character of a CID number). n${CALLERID(num)}: Prepends n to a CID number, where n is a number.
set_callerid_na			string	Configure the pattern-matching format to customize the CallerID name of incoming

me				callers.
				${CALLERID(name)}: Default value which indicates the name of an incoming caller.
				A${CALLERID(name)}B: Prepends the character "A" and appends the character "B" to ${CALLERID(name)}.
				Using a string instead of the pattern-matching syntax will set a fixed name to incoming callers.
set_callerid_ena ble	yes，no	no	string	Set CallerID Info
				Displays whether or not the route will manipulate the CID information of incoming calls based on set_callerid_number and set_callerid_name.
out_of_service	yes, no	no	string	Indicates whether the extension is out of service
prepend		no	string	Prepend
				The digits to add to the beginning of a dialed number before actually making the call.
alertinfo		no	string	Alert info
callback		no	string	The number configured for callback when selected as Default Destination.
external_number		no	string	The number configured for external number when selected as Default Destination.
directory		no	string	The number configured for dial by name when configured as Default Destination.
disa		no	string	Default destination-DISA
fax		no	string	Default destination-Fax
paginggroup		no	string	Default destination-paging/intercom group
queue		no	string	Default destination-Queues
ringgroup		no	string	Default destination-ring group
ivr		no	string	Default destination-IVR
vmgroup		no	string	Default destination-voicemail group
conference		no	string	Default destination-conference rooms
voicemail		no	string	Default destination-voicemail
account		no	string	Default destination-extension

prepend_trunk_name	yes，no	no	string	Prepend trunk name
destination_type		no	string	Default Destination The destination that incoming calls will be routed to.
did_pattern_allow		no	string	callerID pattern All patterns are prefixed by "_" character, but please do not enter more than one "_" at the beginning. All patterns can add comments, such as "_pattern /* comment */". In patterns, some characters have special meanings: [12345-9] ... Any digit in the brackets. In this example, 1,2,3,4,5,6,7,8,9 are allowed. N ... Any digit from 2-9. . ... Wildcard, matching one or more characters. ! ... Wildcard, matching zero or more characters immediately. X ... Any digit from 0-9. Z ... Any digit from 1-9. - ... Hyphen is to connect characters and it will be ignored. [] Contain special characters ([x], [n], [z]) represent letters x, n, z. Multiple patterns should be separated by commas. For example the patterns are _123, _234, the configuration should be: "did_pattern_allow":"_123,_234"
did_pattern_match		yes	string	All patterns are prefixed by "_" character, but please do not enter more than one "_" at the beginning. All patterns can add comments, such as "_pattern /* comment */". In patterns, some characters have special meanings: [12345-9] ... Any digit in the brackets. In this example, 1,2,3,4,5,6,7,8,9 are allowed. N ... Any digit from 2-9. . ... Wildcard, matching one or more characters. ! ... Wildcard, matching zero or more characters immediately.

				X ... Any digit from 0-9. Z ... Any digit from 1-9. - ... Hyphen is to connect characters and it will be ignored. [] Contain special characters ([x], [n], [z]) represent letters x, n, z. Multiple patterns should be separated by commas. For example the patterns are _1xx, _2xx, the configuration should be: "did_pattern_allow":"_1xx,_2xx"
trunk_index		yes	string	ID of the trunk associated with the inbound route.
seamless_transfer_did_whitelist		no	string	List of extensions allowed to seamless transfer. Allows the selected extension to use this function. If an extension is busy, and a mobile phone is bound to that extension, the mobile phone can pick up calls to that extension.
inbound_did_destination		yes	Json obj	Allowed DID Destination Extension types that incoming calls can be routed to when "By DID" is selected for Default Destination..
ext_directory		no	string	Dial by name
ext_paging		no	string	Paging/intercom group
ext_group		no	string	Ring group
ext_queues		no	string	queues
ext_conference		no	string	Conference room
voicemenus		no	string	IVR
voicemailgroups		no	string	Voicemail groups
ext_fax		no	string	Fax
ext_local		no	string	extensions
dial_trunk	yes，no	no	string	Dial trunk
blocking_did_collect_calls	yes，no	no	string	Block collect calls Indicates whether or not collect calls will be blocked. Note: Collect calls are indicated by the header "P-Asserted-Service-Info: service-

				code=Backward Collect Call, P-Asserted-Service-Info: service-code=Collect Call".
Failed response				

updateInboundRoute

The "updateInboundRoute" action allows users to update an existing inbound route.

- **Request**

```
{
    "request":{
        "account":"1001",
        "action":"updateInboundRoute",
        "cookie":"sid1058050971-1574689082",
        "destination_type":"account",
        "inbound_route":"3"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

Table 23: updateInboundRoute

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
inbound_route		yes	string	Inbound route id, which inbound route configuration to obtain
inbound_suffix		no	string	Inbound Mode Suffix
				Dial global inbound feature code + the inbound mode suffix(or dial inbound mode suffix) could switch the mode of the inbound route.
				BLF subscription inbound mode suffix can monitor inbound multiple mode.

inbound_muti_mode		no	string	Inbound mode
permission	Internal, local, national, international	no	string	Inbound permission Internal, local, national, international
enable_inbound_muti_mode		no	string	Inbound multiple mode Can be configured the in the "Inbound Routes" page. If enabled, the global inbound mode will be used. Otherwise, the default mode will be used.
set_callerid_number		no	string	Configure the pattern-matching format to manipulate the numbers of incoming callers or to set a fixed callerID number for calls that go through this inbound route. ${CALLERID(num)}: Default value which indicates the number of an incoming caller (CID). The CID will not be modified. ${CALLERID(num):n}: Skips the first n characters of a CID number, where n is a number. ${CALLERID(num):-n}: Takes the last n characters of a CID number, where n is a number. ${CALLERID(num):s:n}: Takes n characters of a CID number starting from s+1, where n is a number and s is a character position (e.g. ${CALLERID(num):2:7} takes 7 characters after the second character of a CID number). n${CALLERID(num)}: Prepends n to a CID number, where n is a number.
set_callerid_name			string	Configure the pattern-matching format to customize the callerID name of incoming callers. ${CALLERID(name)}: Default value which indicates the name of an incoming caller. A${CALLERID(name)}B: Prepends the character "A" and appends the character "B" to ${CALLERID(name)}. Using a string instead of the pattern-matching syntax will set a fixed name to incoming callers.
set_callerid_enable	yes，no	no	string	Set callerID info Manipulate Caller ID (CID) name and/or number within the call.

out_of_servic e	yes, no	no	string	Whether to disable the inbound route.
prepend		no	string	Prepend Those digits will be prepended after the dialing number is stripped.
enable_wlist	yes, no	no	string	Enable Filter on Source Caller ID Set to yes to enable filter on Source Caller ID. If enabled, Caller ID must in the selected list or match Custom Dynamic Route to make outbound calls.
incoming_pre pend		no	string	Prepend Those digits will be prepended after the dialing number is stripped.
alertinfo		no	string	Alert info
did_strip		no	string	Strip Specify the number of digits that will be stripped. For example, the users will dial 9 as the first digit of a long distance calls. However, 9 should not be sent out via SIP lines. In thiscase, one digit should be stripped before the call isplaced.
callback		no	string	Default destination-callback
external_num ber		no	string	Default destination- external number
directory		no	string	Default destination-dial by name
disa		no	string	Default destination-DISA
fax		no	string	Default destination-Fax
paginggroup		no	string	Default destination-paging/intercom group
queue		no	string	Default destination-Queues
ringgroup		no	string	Default destination-ring group
ivr		no	string	Default destination-IVR
vmgroup		no	string	Default destination-voicemail group
conference		no	string	Default destination-conference rooms
voicemail		no	string	Default destination-voicemail
account		no	string	Default destination-extension

prepend_trunk_name	yes，no	no	string	Prepend trunk name
destination_type		no	string	Default destination
did_pattern_allow		no	string	callerID pattern All patterns are prefixed by "_" character, but please do not enter more than one "_" at the beginning. All patterns can add comments, such as "_pattern /* comment */". In patterns, some characters have special meanings: [12345-9] ... Any digit in the brackets. In this example, 1,2,3,4,5,6,7,8,9 are allowed. N ... Any digit from 2-9. . ... Wildcard, matching one or more characters. ! ... Wildcard, matching zero or more characters immediately. X ... Any digit from 0-9. Z ... Any digit from 1-9. - ... Hyphen is to connect characters and it will be ignored. [] Contain special characters ([x], [n], [z]) represent letters x, n, z.
did_pattern_match		yes	string	Pattern All patterns are prefixed by "_" character, but please do not enter more than one "_" at the beginning. All patterns can add comments, such as "_pattern /* comment */". In patterns, some characters have special meanings: [12345-9] ... Any digit in the brackets. In this example, 1,2,3,4,5,6,7,8,9 are allowed. N ... Any digit from 2-9. . ... Wildcard, matching one or more characters. ! ... Wildcard, matching zero or more characters immediately. X ... Any digit from 0-9. Z ... Any digit from 1-9. - ... Hyphen is to connect characters and it will be

				ignored.
				[] Contain special characters ([x], [n], [z]) represent letters x, n, z.
				Multiple patterns should be separated by commas. For example the patterns are _1xx, _2xx, the configuration should be:
				"did_pattern_allow":"_1xx,_2xx"
seamless_transfer_did_whitelist		no	string	Extension list allowed to seamless transfer
				Allows the selected extension to use this function. If an extension is busy, and a mobile phone is bound to that extension, the mobile phone can pick up calls to that extension.
ext_directory		no	string	Dial by name
ext_paging		no	string	Paging/intercom group
ext_group		no	string	Ring group
ext_queues		no	string	queues
ext_conference		no	string	Conference room
voicemenus		no	string	IVR
voicemailgroups		no	string	Voicemail groups
ext_fax		no	string	Fax
ext_local		no	string	extensions
dial_trunk	yes，no	no	string	Dial trunk
multi_mode		yes	Json obj	Mode1
time_condition		yes	Json obj	Time condition
blocking_did_collect_calls	yes，no	no	string	Block Collect Calls
				If enabled, collect calls will be blocked. Otherwise calls will be dealt as normal calls.
				Note: Collect calls are indicated by the header "P-Asserted-Service-Info: service-code=Backward Collect Call, P-Asserted-Service-Info: service-code=Collect Call".

Successful response				
status	0	yes	int	The response is successful, status is 0
need_apply	Yes, no	yes	string	Whether "Apply" is required for the configuration to take effect
Failed response				
status		yes	int	Please see the error code list for more details.

deleteInboundRoute

The "deleteInboundRoute" action allows users to delete an existing inbound route.

- **Request**

```
{
    "request":{
        "action":"deleteInboundRoute",
        "cookie":"sid1058050971-1574689082",
        "inbound_route":"3"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

Table 24: deleteInboundRoute

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
inbound_route		yes	string	The ID of the inbound route
Successful response				
status	0	yes	int	The response is successful, status is 0
need_apply	Yes, no	yes	string	Whether "Apply" is required for the configuration to

				take effect.
Failed response				
status		yes	int	Please see the error code list for more details.

playPromptByOrg

The "playPromptByOrg" actions allows to play the selected prompt in the configured extension.

- **Request**

```
{
    "request":{
        "action":"playPromptByOrg",
        "channel":"1000",
        "cookie":"sid1863069817-1574933211",
        "type":"ivr"
        "variable":"prompt1"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

<p align="center">Table 25: playPromptByOrg</p>

Key Word	Value	Mandatory	Type	Note
Request parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
type	ivr,name_voice, moh	yes	string	Type of audio prompt to play. ivr: Custom prompt uploaded to IVR. name_voice: User name prompt for an extension moh: Music on Hold file
channel		yes	string	Extension to send the prompt to. Example: If set to 6000, extension 6000 will ring, and the prompt will play upon answering the call

variable		yes	string	File name of the audio prompt
				File extension is not necessary. The audio prompt should exist under the specified type.
class		no	string	Music on Hold Playlist
				If "moh" is selected as type, enter the MoH playlist name. If unspecified, the Default playlist will be used.
Successful response				
status	0	yes	int	The response is successful, status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

Voice Call

listBridgedChannels

The "listBridgedChannels" action will list the bridged channels.

- **Request**

```json
{
    "request":{
        "action":"listBridgedChannels",
        "cookie":"sid95569340-1574692824"
    }
}
```

- **Response**

```json
{
    "response":{
        "channel":[
            {
                "bridge_id":"7f12ed1a-f03d-4575-a4cb-f986f864c2a2",
                "bridge_time":"2019-11-25 09:43:19",
                "callerid1":"1001",
                "callerid2":"1000",
                "channel1":"PJSIP/1001-00000002",
                "channel2":"PJSIP/1000-00000003",
                "have_send":1,
                "inbound_trunk_name":"",
                "name1":"1001",
                "name2":"",
                "outbound_trunk_name":"",
                "uniqueid1":"1574692996.4",
```

```
            "uniqueid2":"1574692996.5"
        }
    ],
    "page":1,
    "total_item":1,
    "total_page":1
  },
  "status":0
}
```

Table 26: listBridgedChannels

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
Successful response				
status	0	yes	int	The response is successful, status is 0.
total_item			int	Current number of established calls.
page			int	Current page is on.
channel			Json array	Detailed list of currently established calls.
channel1			string	The calling channel. If the call is from an extension, the extension number will be displayed. If the call originated from an external source instead, the trunk ID will be displayed instead. This channel name will be used for call control commands.
channel2			string	The called channel. If the call is from an extension, the extension number will be displayed. If the call originated from an external source instead, the trunk ID will be displayed instead. This channel name will be used for call control commands
callerid1			string	Calling number
callerid2			string	Called number
uniqueid1			string	Calling channel identifier
uniqueid2			string	Called channel identifier

Key Word	Value	Mandatory	Type	Note
bridge_time			string	Duration of the call starting from the time the call was answered.
name1			string	Caller's name
name2			string	Callee's name
bridge_id			string	Bridge ID
inbound_trunk_name			string	Name of the trunk used for the inbound call. If the call is outbound, this field will be empty.
outbound_trunk_name			string	Name of the trunk used for the outbound call. If the call is inbound, this field will be empty.
Failed response				
status		yes	int	Please see the error code list for more details.

listUnBridgedChannels

The "listUnBridgedChannels" action allows users to list the unbridged channels.

- **Request**

```
{
    "request":{
        "action":"listUnBridgedChannels",
        "cookie":"sid624909538-1574783406"
    }
}
```

- **Response**

```
{
    "response":{
        "channel":[],
        "page":1,
        "total_item":0,
        "total_page":1
    },
    "status":0
}
```

Table 27: listUnBridgedChannels

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.

Successful response				
status	0	yes	int	Successful response，status is 0.
total_item			int	Current number of established calls.
page			int	Current page is on.
channel			Json array	Detailed list of current calls waiting to be answered.
channel			string	The calling channel, if carrying trunk_x as an incoming call. Call control can be performed through the channel number, such as forced release.
state			string	Channel status(Up, Ringing...)
service			string	Channel type(macro-dial, queue ....)
callername			string	Caller name
callernum			string	Caller number
connectednum			string	Connected number(when the channel is not bridged, display s)
connectedname			string	Connected name
alloc_time			string	Channel change time(the first one is channel establish time)
inbound_trunk_ name			string	The name of trunk from where the unanswered incoming call originated.
outbound_trunk _name			string	The name of the trunk used for the unanswered outgoing call.
Failed response				
status		yes	int	Please see the error code list for more details.

Hangup

The "Hangup" action allows users to end an active call.

- **Request**

```
{
    "request":{
        "action":"Hangup",
        "channel":"PJSIP/4000-00000084",
        "cookie":"sid1926227010-1576858973"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

Table 28: Hangup

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
channel		yes	string	The channel of the call to hang up. This information can be obtained by using the **listBridgeChannels** command.
Successful response				
status	0	yes	int	Successful response，status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

Callbarge

The "Callbarge" action allows users to barge into an ongoing call.

- **Request**

```
{
    "request":{
        "action":"callbarge ",
        "barge-exten":"4002",
        "channel":"PJSIP/4003-00000087",
        "cookie":"sid1926227010-1576858973",
        "exten":"4003"    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
```

```
    "status":0
}
```

Table 29: Callbarge

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
channel		yes	string	The channel to monitor
exten		yes	string	The extension that will monitor the call.
mode		yes	string	Null: Only listen in on the call. No parties will be able to hear you. W: Talk to the extension being monitored. The other party will not hear you. B: Join in on the call. Both parties will be able to hear and talk to you.
barge-exten		yes	string	Specify whether or not to request permission from an extension before monitoring its call. Request permission: @1 Don't request permission: @0 Example: To request permission from extension 2002 permission to monitor its ongoing call, enter 2002@1
Successful response				
status	0	yes	int	Successful response，status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

Mute

Mute the extension through this interface. That is, the remote party of the extension cannot hear the extension, and the extension can hear the voice of the other party. To unmute, use the unmute interface. The extension will also be automatically unmuted after the call ends.

- **Request**

```
{
    "request": {
        "action": "mute",
        "cookie": "sid612583207-1551962142",
        "channel": "PJSIP/2000-00000013",
    }
}
```

- **Response**

```
{
    "response": {},
    "status": 0
}
```

Table 30: Mute

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
channel		yes	string	The channel to be muted
Successful response				
status	0	yes	int	Successful response，status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

Unmute

Unmute muted calls through the API.

- **Request**

```
{
    "request": {
        "action": "unmute",
        "cookie": "sid612583207-1551962142",
        "channel": "PJSIP/2000-00000013",
    }
}
```

- **Response**

```
{
    "response": {},
    "status": 0
}
```

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
channel		yes	string	The channel to be unmuted.
Successful response				
status	0	yes	int	Successful response，status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

Hold

This action allows users to hold current call of the specified extension through this interface. Use unhold action if need to resume call.

- **Request**

```
{
    "request": {
        "action": "hold",
        "cookie": "sid612583207-1551962142",
        "channel": "PJSIP/2000-00000013",
    }
}
```

- **Response**

```
{
    "response": {},
    "status": 0
}
```

Table 32: Hold

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
channel		yes	string	The channel to hold. Users can obtain the channel number by using the **listBridgeChannels** command.

Successful response				
status	0	yes	int	Successful response，status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

Unhold

This action allows users to Resume the held call.

- **Request**

```
{
    "request": {
        "action": "unhold",
        "cookie": "sid612583207-1551962142",
        "channel": "PJSIP/2000-00000013",
    }
}
```

- **Response**

```
{
    "response": {},
    "status": 0
}
```

Table 33: Unhold

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
channel		yes	string	The channel to resume a held call
Successful response				
status	0	yes	int	Successful response，status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

DialExtension

This action allows users to dial local extension.

- **Request**

```json
{
    "request":{
        "action":"dialExtension",
        "callee":"1002",
        "caller":"1005",
        "cookie":"sid2035575025-1556156494"
    }
}
```

- **Response**

```json
{
    "response":{
        "need_apply":"no"
    },
    "status":0
}
```

Table 34: DialExtension

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
caller		yes	string	Caller number
callee		yes	string	Callee number
Successful response				
status	0	yes	int	Successful response，status is 0
need_apply	no	no	string	Whether "Apply" is required for the configuration to take effect
Failed response				
status		yes	int	Please see the error code list for more details.

DialOutbound

This application allows users to dial external numbers.

- **Request**

```json
{
    "request":{
        "action":"dialOutbound",
        "outbound":"4002",
```

```
        "caller":"1005",
        "cookie":"sid2035575025-1556156494"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"no"
    },
    "status":0
}
```

Table 35: DialOutbound

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
caller		yes	string	Caller number
outbound		yes	string	Callee number
Successful response				
status	0	yes	int	Successful response，status is 0
need_apply	no	No	string	Whether "Apply" is required for the configuration to take effect
Failed response				
status		yes	int	Please see the error code list for more details.

CallTransfer

The action allows users to transfer in-call number to another number.

- **Request**

```
{
    "request":{
        "action":"callTransfer",
        "channel":"PJSIP/1008-00000040",
        "extension":"1002",
        "cookie":"sid49474975-1556163431"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"no"
    },
    "status":0
}
```

Key Word	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
channel		yes	string	The channel that initiates the transfer.
extension		yes	string	The transfer destination.
Successful response				
status	0	yes	int	Successful response，status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

TransferNumberInbound

This action allows users to transfer external inbound call that is ringing or in call to other extension.

- **Request**

```
{
    "request":{
        "action":"transferNumberInbound",
        "cookie":"sid1612261872-1556164651",
        "channel":"PJSIP/trunk_4-00000044",
        "callee":"1008"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"no"
    },
    "status":0
}
```

Key Word	Value	Mandatory	Type	Notes
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
channel		yes	string	Channel of the inbound call.
callee		yes	string	The destination that the caller will be transferred to.
Successful response				
status	0	yes	int	Successful response，status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

TransferNumberOutbound

This action allows users to transfer the caller of an unanswered or ongoing outbound call to another destination

- **Request**

```
{
    "request":{
        "action":"transferNumberOutbound",
        "cookie":"sid1612261872-1556164651",
        "channel":"PJSIP/1008-00000048",
        "outbound":"4002"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"no"
    },
    "status":0
}
```

Table 38: TransferNumberOutbound

Key Word	Value	Mandatory	Type	Notes
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will

				be returned.
channel		yes	string	Channel of the outbound call.
outbound		yes	string	The destination that the caller will be transferred to.
Successful response				
status	0	yes	int	Successful response，status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

DialIVR

This action allows users to dial other extension via IVR.

- **Request**

```
{
    "request":{
        "action":"dialIVR",
        "cookie":"sid806817679-1556171969",
        "caller":"1002",
        "ivrnumber":"7000"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"no"
    },
    "status":0
}
```

Table 39: DialIVR

Key Word	Value	Mandatory	Type	Notes
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
caller		yes	string	The internal extension that will be used to dial other extensions via the IVR specified for the ivrnumber parameter.

ivrnumber		yes	string	IVR number.
Successful response				
status	0	yes	int	Successful response，status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

DialIVROutbound

This action will allow users to dial external number via IVR.

- **Request**

```
{
    "request":{
        "action":"dialIVROutbound",
        "cookie":"sid806817679-1556171969",
        "outcaller":"4005",
        "ivrnumber":"7000"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"no"
    },
    "status":0
}
```

<p align="center">Table 40: DialIVROutbound</p>

Key Word	Value	Mandatory	Type	Notes
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
outcaller		yes	string	The internal extension that will be used to dial external numbers via the IVR specified for the **ivrnumber** parameter.
ivrnumber		yes	string	IVR number.
Successful response				
status	0	yes	int	Successful response，status is 0

Failed response				
status		yes	int	Please see the error code list for more details.

DialQueue

This action allows users to dial into a queue's extension.

- **Request**

```
{
    "request":{
        "action":"dialQueue",
        "cookie":"sid1772490686-1556173837",
        "outcaller":"4005",
        "queue":"6500"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"no"
    },
    "status":0
}
```

Table 41: DialQueue

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
outcaller		yes	string	Caller number (external extension)
queue		yes	string	Call Queue number
Successful response				
status	0	yes	int	Successful response，status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

DialRinggroup

This action allows users to dial into a ring group's extension.

- **Request**

```
{
    "request":{
        "action":"dialRinggroup",
        "cookie":"sid1772490686-1556173837",
        "outcaller":"4005",
        "ringgroup":"6500"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"no"
    },
    "status":0
}
```

<p align="center">**Table 42: DialRinggroup**</p>

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
outcaller		yes	string	Caller number (external extension)
ringgroup		yes	string	Ring Group number
Successful response				
status	0	yes	int	Successful response，status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

DialOutboundTwo

This action allows users to call between two external extensions.

- **Request**

```
{
    "request":{
        "action":"dialOutboundTwo",
        "cookie":"sid1772490686-1556173837",
        "outcaller":"4005",
        "outcallee":"1506"
```

```
        }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"no"
    },
    "status":0
}
```

Table 43: DialOutboundTwo

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
outcaller		yes	string	Caller number (external extension)
outcallee		yes	string	Callee number(external extension)
Successful response				
status	0	yes	int	Successful response，status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

refuseCall

This action allows users to reject an inbound call and this is doable if the "Call Control option" is enabled in the FCM's API Configuration page which gives a 3rd party services 10 seconds to manage incoming calls.

- **Request**

```
{
    "request": {
        "action": "refuseCall",
        "cookie": "sid612583207-1551962142",
        "channel": "PJSIP/2000-00000013"
    }
}
```

- **Response**

```
{
    "response": {},
    "status": 0
}
```

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
channel		yes	string	The channel of the call to be rejected.
Successful response				
status	0	yes	int	Successful response，status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

AcceptCall

This action allows users to accept inbound call, and this is doable if the "Call Control option" is enabled in the FCM's API Configuration page which gives a 3rd party services 10 seconds to manage incoming calls.

- **Request**

```
{
    "request": {
        "action": " acceptCall",
        "cookie": "sid612583207-1551962142",
        "channel": "PJSIP/2000-00000013"
    }
}
```

- **Response**

```
{
    "response": {},
    "status": 0
}
```

Table 45: AcceptCall

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
channel		yes	string	The channel of the call to be accepted.

Successful response				
status	0	yes	int	Successful response，status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

Call Queue

listQueue

The "listQueue" action will allow users to list the available call queues such as the queue's name, the members etc.

Note: The needed information, can be defined in the parameter "**options**".

- **Request**

```
{
    "request":{
        "action":"listQueue",
        "cookie":"sid226931826-1574694317",
        "options":"extension,queue_name,strategy,queue_chairmans,members",
        "sidx":"extension",
        "sord":"asc"
    }
}
```

- **Response**

```
{
    "response":{
        "page":1,
        "queue":[
            {
                "extension":"6500",
                "members":null,
                "queue_chairmans":null,
                "queue_name":"Test",
                "strategy":"ringall"
            }
        ],
        "total_item":1,
        "total_page":1
    },
    "status":0
}
```

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
page		no	int	Get queue list by page number.
sord	acs,desc	no	string	Sorting method. acs stands for ascending, and desc stands for descending.
sidx		no	string	Sort according to the index.
options	extension, queue_name, strategy, queue_chairmans, members	no	string	Specifies the information to retrieve for each queue. If unspecified, all information will be retrieved.
Successful response				
status	0	yes	int	Successful response，status is 0
total_item		yes	int	Total number of items on the list
total_page		yes	int	Total pages of the list
page		yes	int	What page is on.
extension		no	string	Extension number.
queue_name		no	string	Queue name
strategy	ringall, linear, leastrecent, fewestcalls, random, memory	no	string	Strategy Ring All: Ring all available agents simultaneously until one agent answers. Linear: Ring agents in the specified order. Least Recent: Ring the agent who has been called the least recently. Fewest Calls: Ring the agent with the fewest completed calls. Random: Ring a random agent. Round Robin: Ring agents using round robin schedule with memory.
queue_chairmans		no	string	Queue chairman
members		no	string	Queue agents
Failed response				

status		yes	int	Please see the error code list for more details.

getQueue

The "getQueue" action allows users to get information about a specific call queue.

- **Request**

```
{
    "request":{
        "action":"getQueue",
        "cookie":"sid226931826-1574694317",
        "queue":"6500"
    }
}
```

- **Response**

```
{
    "response":{
        "queue":{
            "account":null,
            "account_el":null,
            "account_t":null,
            "account_v":null,
            "alertinfo":null,
            "announce_frequency":20,
            "announce_holdtime":"no",
            "announce_position":"no",
            "announcement":null,
            "announcement_el":null,
            "announcement_t":null,
            "announcement_v":null,
            "auto_record":"off",
            "autofill":"yes",
            "createid":"0",
            "custom_dates":null,
            "custom_months":null,
            "custom_prompt":null,
            "custom_welcome_prompt":null,
            "destination_type":"voicemail",
            "destination_type_el":"playsound",
            "destination_type_t":"hangup",
            "destination_type_v":"account",
            "destination_voice_enable":"no",
            "directory":null,
            "directory_el":null,
            "directory_t":null,
            "directory_v":null,
```

```
"email":null,
"enable_agent_login":"no",
"enable_destination":"D",
"enable_feature":"no",
"enable_welcome":"no",
"extension":"6500",
"external_number":null,
"external_number_el":null,
"external_number_t":null,
"external_number_v":null,
"hasvoicemail":"no",
"ivr":null,
"ivr_el":null,
"ivr_t":null,
"ivr_v":null,
"joinempty":"no",
"leavewhenempty":"strict",
"maxlen":0,
"members":null,
"musicclass":"default",
"pagingtype":"once",
"permission":"internal",
"pin":null,
"queue_chairman":null,
"queue_chairmans":null,
"queue_dest":null,
"queue_dest_el":null,
"queue_dest_t":null,
"queue_dest_v":null,
"queue_name":"Test",
"queue_timeout":60,
"queuesasvm":"no",
"replace_caller_id":"no",
"reportholdtime":"no",
"retry":5,
"ringgroup":null,
"ringgroup_el":null,
"ringgroup_t":null,
"ringgroup_v":null,
"ringtime":30,
"schedule_clean_enable":"no",
"starttime":null,
"strategy":"ringall",
"tmp":null,
"tmp2":"6500",
"vm_extension":null,
"vm_extension_el":null,
"vm_extension_t":null,
"vm_extension_v":null,
```

```
            "vmgroup":null,
            "vmgroup_el":null,
            "vmgroup_t":null,
            "vmgroup_v":null,
            "vmsecret":null,
            "voice_prompt_time":60,
            "vq_callback_enable_timeout":"no",
            "vq_callback_timeout":60,
            "vq_mode":"periodic",
            "vq_outprefix":null,
            "vq_periodic":20,
            "vq_switch":"no",
            "waittime":null,
            "week_date":null,
            "wrapuptime":10
        }
    },
    "status":0
}
```

Table 47: getQueue

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
queue		yes	string	Specific queue number
Successful response				
queue_name	0	yes	string	Queue name
musicclass		yes	string	The Music on Hold playlist used by the queue.
leavewhenempty		yes	string	Configures whether to disconnect callers in queue based on agent status. There are three options: Yes: Callers will be disconnected from queue if all agents are paused or unavailable. No: Callers will never be disconnected from queue. Strict (Default): Callers will be disconnected from the queue if there are no agents or if all agents are unavailable or paused.
joinempty		yes	string	Configures whether callers can dial into a call queue with no agents. There are three options: Yes: Callers can always dial into a queue even if it is empty.

				No (Default): Callers cannot dial into a queue if all agents are unavailable or paused. Strict: Callers cannot dial into a queue if there are no agents or if all agents are unavailable or paused.
pin		no	string	PIN for dynamic agent login. The suffix for dynamic agent login can be configured on the **Agent Login** page.
ringtime		yes	string	Ring time Configure the number of seconds to ring an agent. The minimum is 5.
strategy	ringall, linear, leastrecent, fewestcalls, random, memory	yes	string	Strategy Ring All: Ring all available agents simultaneously until one agent answers. Linear: Ring agents in the specified order. Least Recent: Ring the agent who has been called the least recently. Fewest Calls: Ring the agent with the fewest completed calls. Random: Ring a random agent. Round Robin: Ring agents using round robin schedule with memory.
wrapuptime		yes	string	Wrap-up time Configure the delay time (in seconds) after a completed call before a new call will ring. If set to 0, there will be no delay between call completion and a new call.
maxlen		yes	string	Max Queue Length Configure the maximum number of calls to be queued at once. This number does not include calls that have been connected to agents, only calls that are still in queue. When this maximum value is exceeded, the caller will hear a busy tone and be forwarded to the configured failover destination. Default value is 0 (unlimited).
reportholdtime	yes, no	no	string	Report wait time If enabled, the wait time of the caller will be shown to the agent before establishing the call.
auto_record	all, external, internal, off	yes	string	Auto Record all: All incoming calls to this extension will be recorded.

				Off: This extension's calls will not be recorded.
				External: All external calls of the extension will be recorded.
				Internal: All internal calls of the extension will be recorded.
queue_timeout		yes	int	Max wait time
				Amount of time to keep a caller in queue before rerouting them to the timeout destination.
enable_feature	yes, no	no	string	Enable Feature Codes
				If enabled, call queue members can use feature codes to transfer, call park or disconnect calls.
alertinfo	none, ring1,ring2, ring3,ring4, ring5,ring6, ring7,ring8, ring9,ring10,Bellcore-dr1,Bellcore-dr2,Bellcore-dr3,Bellcore-dr4,Bellcore-dr5,custom	no	string	Alert-info
				When the extension is callee, the Alert-info header field specifies an alternative ring tone to the callee.
voice_prompt_time		no	int	Destination Prompt Cycle
				Configures the amount of time (in seconds) to pass before repeating the audio prompt specified in the **custom_promt** parameter below to callers. During the prompt, users can press 1 to transfer to the queue's configured Destination Prompt destination. Valid range is 20-200. Default is 20 seconds.
custom_prompt		no	string	Custom prompt
				When playing a custom prompt, press 1 to enter the failover destination or continue waiting in queue.
retry		no	int	Retry time
				Configure the number of seconds to wait before ringing the next agent. The minimum is 1.
replace_caller_id	yes, no	no	string	Replace display name
				If enabled, the FCM will replace the caller CID name with Call Queue name.

queue_chairman s		no	string	Queue chairman
enable_agent_lo gin	yes, no	no	string	Enable agent login Allows agent logins via 3rd party services. Warning: Enabling this will log out all dynamic agents.
vq_switch	yes, no	no	string	Enable Virtual Queue If enabled, virtual queue will be available for callers. Virtual queue allows callers to hang up the call while still maintaining their position in line. Callers will be called back when an agent is available to answer them.
vq_mode	yes, no	no	string	Virtual Queue Mode When in DTMF mode，press 2 to trigger virtual queue. When in timeout mode, virtual queue will be triggered when the configured Virtual Queue Period has passed.
vq_periodic		no	int	Virtual Queue Period When **vq_mode** is set to timeout mode and when callers have waited the configured amount time, they will automatically be entered into virtual queue.
vq_outprefix		no	string	Virtual Queue Outbound Prefix System will add this prefix to dialed numbers when calling back users.
announce_positi on	yes，no	no	string	Enable Position Announcement If enabled, the FCM will announce to callers their position in queue.
announce_freque ncy		no	int	Announcement Interval The time interval (in seconds) in which positions and estimated wait times will be announced to callers.
destination_type _t	playsound, account, voicemail, queue, ringgroup, vmgroup, ivr, external_n umber	no	string	Timeout Destination The destination that the call will be routed to if not answered within the configured queue wait time.
vm_extension_t		no	string	Timeout Destination – Voicemail Use this as reference for the other "max wait time destination options" commands below.

account_t		no	string	Max wait time-Destination-extension
vmgroup_t		no	string	Max wait time-Destination-voicemail group
ivr_t		no	string	Max wait time-Destination-IVR
ringgroup_t		no	string	Max wait time-Destination-Ring Group
queue_dest_t		no	string	Max wait time-Destination-queues
external_number _t		no	string	Max wait time-Destination-external number
destination_type _v	account, voicemail, queue, ringgroup, vmgroup, ivr, external_n umber	no	string	Destination Prompt Cycle-destination The caller will be prompted to follow steps and get redirected to the configured failover destination.
vm_extension_v		no	string	Destination Prompt Cycle-destination-voicemail
account_v		no	string	Destination Prompt Cycle-destination-extension
vmgroup_v		no	string	Destination Prompt Cycle-destination-voicemail group
ivr_v		no	string	Destination Prompt Cycle-destination-IVR
ringgroup_v		no	string	Destination Prompt Cycle-destination-Ring group
queue_dest_v		no	string	Destination Prompt Cycle-destination-queues
external_number _v		no	string	Destination Prompt Cycle-destination-external number
destination_voic e_enable	yes，no	no	string	Configure whether callers will be prompted to be rerouted to the configured Destination Prompt Cycle destination.
autofill	yes，no	no	string	Configures the queue's call handling behavior. See the FCM user manual for more details. yes: Parallel call handling no: Serial call handling
destination_type _el	playsound, account,	no	string	Failover Destination The destination that callers will be redirected to

	voicemail, queue, ringgroup, vmgroup, ivr, external_number			if the queue is empty or if all agents are unavailable.
vm_extension_el		no	string	Failover Destination-voicemail
account_el		no	string	Failover Destination-extension
vmgroup_el		no	string	Failover Destination-voicemail group
ivr_el		no	string	Failover Destination-IVR
ringgroup_el		no	string	Failover Destination-Ring group
queue_dest_el		no	string	Failover Destination-queues
external_number _el		no	string	Failover Destination-external number
vq_callback_ena ble_timeout	yes, no	no	string	Whether or not a timeout will be set for callers waiting in virtual queue. Upon timeout, callers will be disconnected from virtual queue.
vq_callback_time out		no	int	The virtual queue timeout period.
announce_holdti me	yes, no	no	sting	Enable Wait Time Announcement If enabled, the estimated wait time for the call to get answered will periodically be announced to the caller. Note: Wait time will not be announced if less than one minute.
enable_welcome	yes, no	no	sting	Enable welcome prompt
custom_welcome _prompt		no	string	Custom welcome prompt
schedule_clean_ enable	yes, no	no	string	Whether or not to enable periodic agent call count clearing.
extension		no	string	Extension number
starttime		no	string	The time to reset agent call count.
pagingtype	once, daily, week,	no	string	How often to reset agent call count.

	month			
week_date	sun, mon, tue, wed, thu, fri, sat	no	string	The weekday to reset agent call count.
custom_months	jan, feb, mar, apr, may, jun, jul, aug, sep, oct, nov, dec	no	string	The month to reset agent call count.
custom_dates		no	string	The day of the month to reset agent call count.
members		no	string	Static agents
status		yes	int	Successful response，status is 0
Failed response				
status	0	yes	int	Please see the error code list for more details.

updateQueue

The "updateQueue" action allows users to update an existing call queue.

- **Request**

```
{
    "request":{
        "action":"updateQueue",
        "cookie":"sid225627296-1574851572",
        "members":"1001,1002,1003",
        "queue":"6502",
        "queue_name":"FMtest"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
queue		yes	string	Queue number
queue_name		yes	string	Successful response，status is 0
musicclass		yes	string	Music on hold
leavewhenempty		yes	string	Configures whether to disconnect callers in queue based on agent status. There are three options: Yes: Callers will be disconnected from queue if all agents are paused or unavailable. No: Callers will never be disconnected from queue. Strict (Default): Callers will be disconnected from the queue if there are no agents or if all agents are unavailable or paused.
joinempty		yes	string	Configures whether callers can dial into a call queue with no agents. There are three options: Yes: Callers can always dial into a queue even if it is empty. No (Default): Callers cannot dial into a queue if all agents are unavailable or paused. Strict: Callers cannot dial into a queue if there are no agents or if all agents are unavailable or paused.
pin		no	string	Dynamic login password The suffix of dynamic login number can be configured for login on [agent login config] page.
ringtime		yes	string	Ring time Configure the number of seconds to ring an agent. The minimum is 5.
strategy	ringall, linear, leastrecent, fewestcalls, random memory	yes	string	Strategy Ring All: Ring all available agents simultaneously until one agent answers. Linear: Ring agents in the specified order. Least Recent: Ring the agent who has been called the least recently. Fewest Calls: Ring the agent with the fewest

				completed calls.
				Random: Ring a random agent.
				Round Robin: Ring agents using round robin schedule with memory.
wrapuptime		yes	string	Wrap-up time
				Configure the delay time (in seconds) after a completed call before a new call will ring. If set to 0, there will be no delay between call completion and a new call.
maxlen		yes	string	Max Queue Length
				Configure the maximum number of calls to be queued at once. This number does not include calls that have been connected to agents, only calls that are still in queue. When this maximum value is exceeded, the caller will hear a busy tone and be forwarded to the configured failover destination. Default value is 0 (unlimited).
reportholdtime	yes, no	no	string	Report hold time
				If enabled, the hold time of the caller will be shown to the agent before establishing the call.
auto_record	all, external, internal, off	yes	string	Auto Record
				all: All incoming calls to this extension will be recorded.
				Off: This extension's calls will not be recorded.
				External: All external calls of the extension will be recorded.
				Internal: All internal calls of the extension will be recorded.
queue_timeout		yes	int	Max wait time
				Amount of time to keep a caller in queue.
enable_feature	yes, no	no	string	Enable Feature Codes
				If enabled, call queue members can use feature codes to transfer, call park or disconnect.
alertinfo	none, ring1, ring2, ring3, ring4, ring5, ring6, ring7, ring8, ring9, ring10, Bellcore-dr1, Bellcore-dr2, Bellcore-dr3, Bellcore-dr4, Bellcore-dr5,	no	string	When the extension is callee, the Alert-info header field specifies an alternative ring tone to the callee.

	custom			
voice_prompt _time		no	int	Destination Prompt Cycle Configure the voice prompt cycle (in seconds) of this call queue. When playing the voice prompt, you can press 1 to transfer to failover destination. Default is 20. Effective value between 20 and 2000.
custom_pro mpt		no	string	Custom prompt When playing a custom prompt, press 1 to enter the failover destination or continue waiting in queue.
retry		no	int	Retry time Configure the number of seconds to wait before ringing the next agent. The minimum is 1.
replace_calle r_id	yes, no	no	string	Replace display name If enabled, the FCM will replace the caller display name with Call Queue name.
queue_chair mans		no	string	Queue chairman
enable_agent _login	yes, no	no	string	Enable agent login Enabling agent login will cause the dynamic agents to be unavailable.
vq_switch	yes, no	no	string	Enable Virtual Queue If enabled, system will enable a virtual queue for users waiting in queue.
vq_mode	yes, no	no	string	Virtual Queue Mode When in DTMF mode，press 2 to trigger virtual queue. When in timeout mode, virtual queue will be triggered when enough time has passed.。
vq_periodic		no	int	Virtual Queue Period When in timeout mode, when incoming users' waiting time has reached this period, the system would trigger virtual queue service for the user. Default value is 20. Effective value is between 5-2000.
vq_outprefix		no	string	Virtual Queue Outbound Prefix System will add this prefix to dialed numbers when calling back users.
announce_po sition	yes，no	no	string	Enable Position Announcement If enabled, the system will inform callers waiting in the queue of their positions in line.

announce_fre quency		no	int	Announcement Interval The interval (seconds) at which caller positions and estimated wait times will be announced.
destination_t ype_t	playsound, account, voicemail, queue, ringgroup, vmgroup, ivr, external_num ber	no	string	Max wait time-destination The call will be routed to this destination if no one in this queue answers the call.
vm_extensio n_t		no	string	Max wait time-Destination-voicemail
account_t		no	string	Max wait time-Destination-extension
vmgroup_t		no	string	Max wait time-Destination-voicemail group
ivr_t		no	string	Max wait time-Destination-IVR
ringgroup_t		no	string	Max wait time-Destination-Ring Group
queue_dest_t		no	string	Max wait time-Destination-queues
external_num ber_t		no	string	Max wait time-Destination-external number
destination_t ype_v	account, voicemail, queue, ringgroup, vmgroup, ivr, external_num ber	no	string	Destination Prompt Cycle-destination The caller will be prompted to follow steps and get redirected to the configured failover destination.
vm_extensio n_v		no	string	Destination Prompt Cycle-destination-voicemail
account_v		no	string	Destination Prompt Cycle-destination-extension
vmgroup_v		no	string	Destination Prompt Cycle-destination-voicemail group
ivr_v		no	string	Destination Prompt Cycle-destination-IVR
ringgroup_v		no	string	Destination Prompt Cycle-destination-Ring group
queue_dest_ v		no	string	Destination Prompt Cycle-destination-queues

external_number_v		no	string	Destination Prompt Cycle-destination-external number
destination_voice_enable	yes，no	no	string	Whether to enable destination prompt cycle
autofill	yes，no	no	string	autofill
destination_type_el	playsound, account, voicemail, queue, ringgroup, vmgroup, ivr, external_number	no	string	Failover Destination Callers will be redirected to this destination if the queue is empty or if all agents are not logged in.
vm_extension_el		no	string	Failover Destination-voicemail
account_el		no	string	Failover Destination-extension
vmgroup_el		no	string	Failover Destination-voicemail group
ivr_el		no	string	Failover Destination-IVR
ringgroup_el		no	string	Failover Destination-Ring group
queue_dest_el		no	string	Failover Destination-queues
external_number_el		no	string	Failover Destination-external number
vq_callback_enable_timeout	yes, no	no	string	Enable Virtual Queue Timeout
vq_callback_timeout		no	int	Virtual queue Write Timeout
announce_holdtime	yes, no	no	sting	Enable Wait Time Announcement If enabled, the estimated wait time for the call to get answered will periodically be announced to the caller. Note: Wait time will not be announced if less than one minute.
enable_welcome	yes, no	no	sting	Enable welcome prompt
custom_welcome_prompt		no	string	Custom welcome prompt

schedule_clean_enable	yes, no	no	string	Enable reset agent counting Enable this feature to specify the cycle of resetting agent counting.
extension		no	string	Extension number
starttime		no	string	Start time of reset agent counting
pagingtype	once, daily, week, month	no	string	Repeat (reset agent counting cycle type)
week_date	Sun ,mon, tue, wed, thu, fri, sat	no	string	Repeat (reset agent counting cycle type)-specific weekday under weekly type
custom_months	jan, feb, mar, apr, may, jun, jul, aug, sep, oct, nov, dec	no	string	Repeat (reset agent counting cycle type)-specific month under monthly type
custom_dates		no	string	Repeat (reset agent counting cycle type)-specific date under monthly type
members		no	string	Static agents
Successful response				
status	0	yes	int	Successful response，status is 0
need_apply	yes, no	yes	string	Whether "Apply" is required for the configuration to take effect
Failed response				
status		yes	int	Please see the error code list for more details.

addQueue

The "addQueue" action will allow users to add a call queue.

- **Request**

```
{
    "request":{
        "action":"addQueue",
        "cookie":"sid225627296-1574851572",
        "extension":"6502",
        "members":"1001,1002",
        "queue_chairmans":"1001",
        "queue_name":"test",
        "strategy":"ringall"
    }
```

```
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

Table 49: addQueue

Key Word	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
extension		yes	string	Queue number
queue_name		yes	string	Successful response，status is 0
musicclass		no	string	Music on hold
leavewhenempty		yes	string	Configures whether to disconnect callers in queue based on agent status. There are three options: Yes: Callers will be disconnected from queue if all agents are paused or unavailable. No: Callers will never be disconnected from queue. Strict (Default): Callers will be disconnected from the queue if there are no agents or if all agents are unavailable or paused.
joinempty		yes	string	Configures whether callers can dial into a call queue with no agents. There are three options: Yes: Callers can always dial into a queue even if it is empty. No (Default): Callers cannot dial into a queue if all agents are unavailable or paused. Strict: Callers cannot dial into a queue if there are no agents or if all agents are unavailable or paused.
pin		no	string	Dynamic login password The suffix of dynamic login number can be configured for login on [agent login config]

				page.
ringtime		yes	string	Ring time
				Configure the number of seconds to ring an agent. The minimum is 5.
strategy	ringall, linear, leastrecent, fewestcalls, random, memory	yes	string	Strategy
				Ring All: Ring all available agents simultaneously until one agent answers.
				Linear: Ring agents in the specified order.
				Least Recent: Ring the agent who has been called the least recently.
				Fewest Calls: Ring the agent with the fewest completed calls.
				Random: Ring a random agent.
				Round Robin: Ring agents using round robin schedule with memory.
wrapuptime		yes	string	Wrap-up time
				Configure the delay time (in seconds) after a completed call before a new call will ring. If set to 0, there will be no delay between call completion and a new call.
maxlen		yes	string	Max Queue Length
				Configure the maximum number of calls to be queued at once. This number does not include calls that have been connected to agents, only calls that are still in queue. When this maximum value is exceeded, the caller will hear a busy tone and be forwarded to the configured failover destination. Default value is 0 (unlimited).
reportholdtime	yes, no	no	string	Report hold time
				If enabled, the hold time of the caller will be shown to the agent before establishing the call.
auto_record	all, external, internal, off	yes	string	Auto Record
				all: All incoming calls to this extension will be recorded.
				Off: This extension's calls will not be recorded.
				External: All external calls of the extension will be recorded.
				Internal: All internal calls of the extension will be recorded.
queue_timeout		yes	int	Max wait time
				Amount of time to keep a caller in queue.

enable_feature	yes, no	no	string	Enable Feature Codes If enabled, call queue members can use feature codes to transfer, call park or disconnect.
alertinfo	none, ring1, ring2, ring3, ring4, ring5, ring6, ring7, ring8, ring9, ring10, Bellcore-dr1, Bellcore-dr2, Bellcore-dr3, Bellcore-dr4, Bellcore-dr5, custom	no	string	Alert info.
voice_prompt_time		no	int	Destination Prompt Cycle Configure the voice prompt cycle (in seconds) of this call queue. When playing the voice prompt, you can press 1 to transfer to failover destination. Default is 20. Effective value between 20 and 2000.
custom_prompt		no	string	Custom prompt When playing a custom prompt, press 1 to enter the failover destination or continue waiting in queue.
retry		no	int	Retry time Configure the number of seconds to wait before ringing the next agent. The minimum is 1.
replace_caller_id	yes, no	no	string	Replace display name If enabled, the FCM will replace the caller display name with Call Queue name.
queue_chairmans		no	string	Queue chairman
enable_agent_login	yes, no	no	string	Enable agent login Enabling agent login will cause the dynamic agents to be unavailable.
vq_switch	yes, no	no	string	Enable Virtual Queue If enabled, system will enable a virtual queue for users waiting in queue.
vq_mode	yes, no	no	string	Virtual Queue Mode When in DTMF mode，press 2 to trigger virtual queue. When in timeout mode, virtual queue will be triggered when enough time has

				passed.。
vq_periodic		no	int	Virtual Queue Period When in timeout mode, when incoming users' waiting time has reached this period, the system would trigger virtual queue service for the user. Default value is 20. Effective value is between 5-2000.
vq_outprefix		no	string	Virtual Queue Outbound Prefix System will add this prefix to dialed numbers when calling back users.
announce_position	yes，no	no	string	Enable Position Announcement If enabled, the system will inform callers waiting in the queue of their positions in line.
announce_frequency		no	int	Announcement Interval The interval (seconds) at which caller positions and estimated wait times will be announced.
destination_type_t	playsound, account, voicemail, queue, ringgroup, vmgroup, ivr, external_number	no	string	Max wait time-destination The call will be routed to this destination if no one in this queue answers the call.
vm_extension_t		no	string	Max wait time-Destination-voicemail
account_t		no	string	Max wait time-Destination-extension
vmgroup_t		no	string	Max wait time-Destination-voicemail group
ivr_t		no	string	Max wait time-Destination-IVR
ringgroup_t		no	string	Max wait time-Destination-Ring Group
queue_dest_t		no	string	Max wait time-Destination-queues
external_number_t		no	string	Max wait time-Destination-external number
destination_type_v	account, voicemail, queue, ringgroup, vmgroup, ivr,	no	string	Destination Prompt Cycle-destination The caller will be prompted to follow steps and get redirected to the configured failover destination.

	external_number			
vm_extension_v		no	string	Destination Prompt Cycle-destination-voicemail
account_v		no	string	Destination Prompt Cycle-destination-extension
vmgroup_v		no	string	Destination Prompt Cycle-destination-voicemail group
ivr_v		no	string	Destination Prompt Cycle-destination-IVR
ringgroup_v		no	string	Destination Prompt Cycle-destination-Ring group
queue_dest_v		no	string	Destination Prompt Cycle-destination-queues
external_number_v		no	string	Destination Prompt Cycle-destination-external number
destination_voice_enable	yes，no	no	string	Whether to enable destination prompt cycle
autofill	yes，no	no	string	autofill
destination_type_el	account, voicemail, queue, ringgroup, vmgroup, ivr, external_number	no	string	Failover Destination Callers will be redirected to this destination if the queue is empty or if all agents are not logged in.
vm_extension_el		no	string	Failover Destination-voicemail
account_el		no	string	Failover Destination-extension
vmgroup_el		no	string	Failover Destination-voicemail group
ivr_el		no	string	Failover Destination-IVR
ringgroup_el		no	string	Failover Destination-Ring group
queue_dest_el		no	string	Failover Destination-queues
external_number_el		no	string	Failover Destination-external number

vq_callback_enable_timeout	yes, no	no	string	Enable Virtual Queue Timeout
vq_callback_timeout		no	int	Virtual queue Write Timeout
announce_holdtime	yes, no	no	sting	Enable Wait Time Announcement If enabled, the estimated wait time for the call to get answered will periodically be announced to the caller. Note: Wait time will not be announced if less than one minute.
enable_welcome	yes, no	no	sting	Enable welcome prompt
custom_welcome_prompt		no	string	Custom welcome prompt
schedule_clean_enable	yes, no	no	string	Enable reset agent counting Enable this feature to specify the cycle of resetting agent counting.
starttime		no	string	Start time of reset agent counting
pagingtype	once, daily, week, month	no	string	repeat（reset agent counting cycle type）
week_date	sun, mon, tue, wed, thu, fri, sat	no	string	Repeat (reset agent counting cycle type)-specific weekday under weekly type
custom_months	jan, feb, mar, apr, may, jun, jul, aug, sep, oct, nov, dec	no	string	Repeat (reset agent counting cycle type)-specific month under monthly type
custom_dates		no	string	Repeat (reset agent counting cycle type)-specific date under monthly type
members		no	string	Static agents
Successful response				
status	0	yes	int	Successful response，status is 0
need_apply	yes, no	yes	string	Whether "Apply" is required for the configuration to take effect
Failed response				
status		yes	int	Please see the error code list for more details.

deleteQueue

The "deleteQueue" allows users to delete an existing queue.

- **Request**

```
{
    "request":{
        "action":"deleteQueue",
        "cookie":"sid1095249077-1574756325",
        "queue":"6502"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

Table 50: deleteQueue

Keyword	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
queue		yes	int	Queue number
Successful response				
status	0	yes	int	Successful response，status is 0
need_apply	yes，no	yes	string	Whether "Apply" is required for the configuration to take effect

loginLogoffQueueAgent

The "loginLogoffQueueAgent" action allows users to login or logoff static agents.

- **Request**

```
{
    "request":{
        "action":"loginLogoffQueueAgent",
        "cookie":"sid1632521748-1574853548",
        "extension":"6502",
        "interface":"1001",
```

```
            "operatetype":"logoff"
        }
}
```

- **Response**

```
{
    "response":{},
    "status":0
}
```

Table 51: loginLogoffQueueAgent

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
operatetype	login，logoff	yes	string	Operation type
interface		yes	string	Agent number
extension		yes	string	Queue number
Successful response				
Status	0	yes	int	Successful response，status is 0

pauseUnpauseQueueAgent

The "pauseUnpauseQueueAgent" action allows users to pause or unpause static agents.

- **Request**

```
{
    "request":{
        "action":"pauseUnpauseQueueAgent",
        "cookie":"sid1632521748-1574853548",
        "interface":"1002",
        "operatetype":"pause"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
```

```
    "status":0
}
```

Table 52: pauseUnpauseQueueAgent

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
operatetype	pause，unpause	yes	string	Operation type
interface		yes	string	Agent number
extension		no	string	Queue number
Successful response				
status	0	yes	int	Successful response，status is 0
need_apply	yes, no	yes	string	Whether "Apply" is required for the configuration to take effect

Paging/Intercom

addPaginggroup

The "addPaginggroup" will allow users to add a paging group.

- **Request**

```
{
    "request":{
        "action":"addPaginggroup",
        "cookie":"sid1095249077-1574756325",
        "extension":"8004",
        "members":"1000,1001,1002",
        "number_allowed":"1000",
        "paginggroup_name":"8004",
        "paginggroup_type":"1way"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
```

```
}
```

Table 53: addPaginggroup

Keyword	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
extension		yes	string	extension
paginggroup_na me		yes	string	Paging group name
paginggroup_ty pe	3way, 2way, 1way, announc ement	yes	string	Type： 1way：1-way paging 2way：2-way intercom 3way：Multicast paging announcement：announcement paging
custom_prompt		no	string	Custom Prompt
replace_caller_i d	yes, no	no	string	Replace Display Name If enabled, the FCM will replace the caller display name with Paging/Intercom name.
multicast_ip		no	string	Multicast IP Address The allowed multicast IP address range is 224.0.1.0 - 238.255.255.255.
multicast_port		no	int	port
limitime		no	int	Maximum Call Duration In seconds. Default is 0 means no limit.
custom_date		no	string	date
time		no	string	time，HH:MM
enable	yes, no	no	string	Enable. Whether to enable announcement paging.
members		no	string	Members that need paging/intercom
paginggroup		yes	string	Paging group number
old_multicast_ip		no	string	Multicast ip address set before The allowed multicast IP address range is 224.0.1.0 - 238.255.255.255.
old_multicast_p ort		no	string	Multicast port set before

number_allowed		no	string	Paging/Intercom Whitelist
				Only selected extensions will be able to initiate paging/intercom calls. If no extension is selected, all extensions will be able to initiate paging/intercom calls.
Successful response				
status		yes	int	The response is successful, status is 0
need_apply	yes, no	yes	string	Whether "Apply" is required for the configuration to take effect
Failed response				
status		yes	int	Please see the error code list for more details.

listPaginggroup

The "listPaginggroup" allows users to list the existing paging group.

- **Request**

```
{
    "request":{
        "action":"listPaginggroup",
        "cookie":"sid1095249077-1574756325",
        "page":"1",
        "sidx":"extension",
        "sord":"asc"
    }
}
```

- **Response**

```
{
    "response":{
        "page":1,
        "paginggroup":[
            {
                "custom_date":"2018-08-01",
                "custom_prompt":null,
                "enable":"yes",
                "extension":"8004",
                "holiday":null,
                "limitime":0,
                "members":"1000,1001,1002",
                "multicast_ip":"null",
                "multicast_port":"null",
                "paginggroup_name":"8004",
                "paginggroup_type":"1way",
                "replace_caller_id":"no",
                "time":"00:00",
```

```
            "tmp":"8004"
        }
    ],
    "total_item":1,
    "total_page":1
},
"status":0 }
```

<div align="center">Table 54: listPaginggroup</div>

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
page		no	int	Get extension list by page number.
sord	acs,desc	no	string	Sorting method. acs stands for ascending, and desc stands for descending.
sidx		no	string	Sort according to the index.
item_num		no	int	Extension number on each page, which is, the maximum items of each return. If empty, all members are returned by default.
options	paginggroup_name, paginggroup_type,extension,custom_prompt,replace_caller_id,multicast_ip,multicast_port,limitime,custom_date,time,enable,members	no	string	Specify obtaining options. Multiple can be set, separated by commas. If empty, all options are returned by default.
Successful response				
status	0	yes	int	Total number of items on the list
total_item		yes	int	Total pages of the list
total_page		yes	int	What page is on.
page		yes	int	Extension number.
extension		no	string	extension
paginggroup_		no	string	Paging/intercom group name

name				
paginggroup_type	3way, 2way, 1way, announcement	no	string	Type： 1way：1-way paging 2way：2-way intercom 3way：Multicast paging announcement：announcement paging
custom_prompt		no	string	Custom Prompt
replace_caller_id	yes, no	no	string	Replace Display Name If enabled, the FCM will replace the caller display name with Paging/Intercom name.
multicast_ip		no	string	Multicast IP Address The allowed multicast IP address range is 224.0.1.0 - 238.255.255.255.
multicast_port		no	int	port
limitime		no	int	Maximum Call Duration The maximum amount of time a paging call can be in seconds. Default is 0 (no limit).
custom_date		no	string	date
time		no	string	Time in HH:MM format.
enable	yes, no	no	string	Whether or not to enable the announcement page.
members		no	string	The members that will be paged.
Failed response				
status		yes	int	Please see the error code list for more details.

getPaginggroup

The "getPaginggroup" action allows users to get a specific paging group.

- **Request**

```
{
    "request":{
        "action":"getPaginggroup",
        "cookie":"sid1095249077-1574756325",
        "paginggroup":"8004"
    }
}
```

- **Response**

```
{
    "response":{
        "paginggroup":{
            "custom_date":"2018-08-01",
            "custom_prompt":null,
            "enable":"yes",
            "extension":"8004",
            "holiday":null,
            "limitime":0,
            "members":"1000,1001,1002",
            "multicast_ip":"null",
            "multicast_port":"null",
            "number_allowed":"1000",
            "paginggroup_name":"8004",
            "paginggroup_type":"1way",
            "replace_caller_id":"no",
            "time":"00:00",
            "tmp":"8004"
        }
    },
    "status":0
}
```

Table 55: getPaginggroup

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
paginggroup		yes	string	Paging/intercom group number
Successful response				
status		yes	int	The response is successful, status is 0
extension		yes	string	extension
paginggroup_ name		yes	string	Paging group name
paginggroup_ type	3way, 2way, 1way, announce ment	yes	string	Type： 1way：1-way paging 2way：2-way intercom 3way：Multicast paging announcement：announcement paging
custom_prom pt		no	string	Custom Prompt

Keyword	Value	Mandatory	Type	Note
replace_caller_id	yes, no	no	string	Replace Display Name If enabled, the FCM will replace the caller display name with Paging/Intercom name.
multicast_ip		no	string	Multicast IP Address The allowed multicast IP address range is 224.0.1.0 - 238.255.255.255.
multicast_port		no	int	port
limitime		no	int	Maximum Call Duration In seconds. Default is 0 means no limit.
custom_date		no	string	date
time		no	string	time，HH:MM
Failed response				
status		yes	int	Please see the error code list for more details.

updatePaginggroup

The "updatePaginggroup" action allows users to update an existing paging group.

- **Request**

```
{
    "request":{
        "action":"updatePaginggroup",
        "cookie":"sid1381890074-1574854661",
        "members":"1003",
        "paginggroup":"8005",
        "paginggroup_type":"2way"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

Table 56: updatePaginggroup

Keyword	Value	Mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error

				code -6 will be returned.
extension		yes	string	extension
paginggroup_ name		yes	string	Paging group name
paginggroup_ type	3way, 2way, 1way, announce ment	yes	string	Type： 1way：1-way paging 2way：2-way intercom 3way：multicast paging announcement：announcement paging
custom_prom pt		no	string	Custom Prompt
replace_caller _id	Yes, no	no	string	Replace Display Name If enabled, the FCM will replace the caller display name with Paging/Intercom name.
multicast_ip		no	string	Multicast IP Address The allowed multicast IP address range is 224.0.1.0 - 238.255.255.255.
multicast_port		no	int	port
limitime		no	int	Maximum Call Duration In seconds. Default is 0 means no limit.
custom_date		no	string	date
time		no	string	time，HH:MM
enable	yes, no	no	string	Enable. Whether to enable announcement paging.
members		no	string	Members that need paging/intercom
paginggroup		yes	string	Paging group number
old_multicast _ip		no	string	Multicast ip address set before The allowed multicast IP address range is 224.0.1.0 - 238.255.255.255.
old_multicast _port		no	string	Multicast port set before
number_allow ed		no	string	Paging/Intercom Whitelist Only selected extensions will be able to initiate paging/intercom calls. If no extension is selected, all extensions will be able to initiate paging/intercom calls.
Successful response				

status		yes	int	The response is successful, status is 0
need_apply	yes, no	yes	string	Whether "Apply" is required for the configuration to take effect
Failed response				
status		yes	int	Please see the error code list for more details.

deletePaginggroup

The "deletePaginggroup" action allows users to delete an existing paging group.

- **Request**

```
{
    "request":{
        "action":"deletePaginggroup",
        "cookie":"sid627603306-1574758858",
        "paginggroup":"8004"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

Table 57: deletePaginggroup

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
paginggroup		yes	string	Paging/intercom group number
Successful response				
status		yes	int	The response is successful, status is 0
need_apply	yes, no	yes	string	Whether "Apply" is required for the configuration to take effect
Failed response				
status		yes	int	Please see the error code list for more details.

MulticastPaging

The "MulticastPaging" action allows users to initiate a multicast paging call.

- **Request**

```
{
    "request":{
        "action":"MulticastPaging",
        "caller":"1004",
        "cookie":"sid1381890074-1574854661",
        "pagingnum":"8005"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

Table 58: MulticastPaging

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
pagingnum		yes	string	Multicast paging number
caller		yes	string	The extension used to initiate the page.
Successful response				
status		yes	int	The response is successful, status is 0
need_apply	no	yes	string	Whether "Apply" is required for the configuration to take effect
Failed response				
status		yes	int	Please see the error code list for more details.

MulticastPagingHangup

The "MulticastPagingHangup" action allows users to hangup an ongoing multicast paging call.

- **Request**

```
{
    "request":{
        "action":"MulticastPagingHangup",
        "cookie":"sid1381890074-1574854661",
        "pagingnum":"8005"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

<p align="center">Table 59: MulticastPagingHangup</p>

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
pagingnum		yes	string	Multicast paging number
Successful response				
status	0	yes	int	The response is successful, status is 0
need_apply	no	yes	string	Whether "Apply" is required for the configuration to take effect
Failed response				
status		yes	int	Please see the error code list for more details.

IVR

addIVR

The "addIVR" action allows users to add an IVR.

- **Request**

```
{
    "request":{
        "action":"addIVR",
        "alertinfo":"ring1",
        "cookie":"sid1682729010-1574760528",
```

```
        "dial_conference":"no",
        "dial_directory":"no",
      "dial_extension":"no",
        "dial_fax":"no",
        "dial_paginggroup":"no",
        "dial_queue":"no",
        "dial_ringgroup":"no",
        "dial_trunk":"yes",
        "dial_vmgroup":"no",
        "digit_timeout":3,
        "extension":"7000",
        "iloop":3,
        "invalid_prompt":"invalid",
        "ivr_blackwhite_list":"",
        "ivr_name":"7000",
        "ivr_out_blackwhite_list":"1000",
        "language":null,
        "members":[
            {
                "keypress":"i",
                "keypress_event":"member_prompt",
                "member_prompt":"goodbye"
            },
            {
                "keypress":"t",
                "keypress_event":"member_prompt",
                "member_prompt":"goodbye"
            }
        ],
        "permission":"internal-local",
        "replace_caller_id":"yes",
        "response_timeout":10,
        "switch":"no",
        "timeout_prompt":"ivr-create-timeout",
        "tloop":3,
        "welcome_prompt":"welcome"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

Table 60: addIVR

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
ivr_name		yes	string	IVR Name
extension		yes	string	IVR number, the extension number of automatic voice reply.
welcome_prompt		yes	string	Prompt Initial tone that plays when the user enters the IVR.
response_timeout		yes	int	Response Timeout Timeout occurs when no DTMF entry is detected for the configured number of seconds after the IVR finishes playing the prompts.
digit_timeout		yes	int	Digit timeout After the user enters a digit, the user needs to enter the next digit within the timeout. If no digit is detected within the timeout, the PBX will consider the entries complete. The default timeout is 3 seconds.
timeout_prompt		yes	string	Response Timeout Prompt Play the selected prompt if response timeout occurs.
invalid_prompt		yes	string	Maximum calling period. In seconds, default is 0, which means unlimited.
tloop		yes	int	Response Timeout Prompt Repeats Number of times to repeat the prompt. After the final repeat, calls will be redirected to the Timeout destination (if configured) or dropped.
iloop		yes	int	Invalid Input Prompt Repeats Number of times to repeat the prompt. After the final repeat, calls will be redirected to the Invalid destination (if configured) or dropped.
dial_extension	yes，no	no	string	Dial Other Extensions-extension
dial_conference	yes，no	no	string	Dial Other Extensions-conference rooms
dial_queue	yes，no	no	string	Dial Other Extensions-queues
dial_ringgroup	yes，no	no	string	Dial Other Extensions-ring group
dial_vmgroup	yes，no	no	string	Dial Other Extensions-voicemail group
dial_paginggrou	yes，no	no	string	Dial Other Extensions-paging/intercom group

p				
dial_fax	yes，no	no	string	Dial Other Extensions-fax
dial_trunk	yes，no	no	string	Dial trunk If enabled, users will be able to access trunks through this IVR. if using this feature, it is mandatory to configure permission.
dial_directory	yes，no	no	string	Dial Other Extensions-dial by name
permission	internal, internal-local, internal-local-national, internal-local-national-international	no	string	permission internal-internal internal-local-local internal-local-national-national internal-local-national-international-international
language		no	string	language
alertinfo	none, ring1, ring2, ring3, ring4, ring5, ring6, ring7, ring8, ring9, ring10, Bellcore-dr1, Bellcore-dr2 Bellcore-dr3, Bellcore-dr4, Bellcore-dr5, custom	no	string	Alert-info When present in an INVITE request, the Alert-info header field specifies an alternative ring tone to the UAS.
replace_caller_id		no	string	Replace Display Name
switch	no white	no	string	IVR Black/Whitelist Only whitelisted numbers and numbers not blacklisted can be called from the IVR.

	black			
ivr_blackwhite_l ist		no	string	Internal Black/Whitelist
ivr_out_blackwh ite_list		no	string	External Blacklist/Whitelist Can be used only when Dial Trunk is enabled. Numbers will be added as follows: number1, number2, number3.
members		no	Json array	Key Pressing Events
Successful response				
status		yes	int	The response is successful, status is 0
need_apply	yes, no	yes	string	Whether "Apply" is required for the configuration to take effect
Failed response				
status		yes	int	Please see the error code list for more details.

listIVR

The "listIVR" action allows users to list the available IVR.

- **Request**

```
{
    "request":{
        "action":"listIVR",
        "cookie":"sid1682729010-1574760528"
    }
}
```

- **Response**

```
{
    "response":{
        "ivr":[
            {
                "alertinfo":"ring1",
                "dial_conference":"no",
                "dial_directory":"no",
                "dial_extension":"no",
                "dial_failed_back2menu":"no",
                "dial_fax":"no",
                "dial_multimedia_conference":"no",
                "dial_paginggroup":"no",
                "dial_queue":"no",
                "dial_ringgroup":"no",
                "dial_trunk":"yes",
                "dial_vmgroup":"no",
```

```
            "digit_timeout":3,
            "extension":"7000",
            "iloop":3,
            "invalid_prompt":"invalid",
            "ivr_id":"ivr-1",
            "ivr_name":"7000",
            "language":null,
            "permission":"internal-local",
            "replace_caller_id":"yes",
            "response_timeout":10,
            "switch":"no",
            "timeout_prompt":"ivr-create-timeout",
            "tloop":3,
            "welcome_prompt":"welcome"
        }
    ],
    "page":1,
    "total_item":1,
    "total_page":1
},
"status":0
```

Table 61: listIVR

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
page		no	int	Get extension list by page number.
sord	acs, desc	no	string	Sorting method. acs stands for ascending, and desc stands for descending.
sidx		no	string	Sort according to the index.
item_num		no	int	Extension number on each page, which is, the maximum items of each return. If empty, all members are returned by default.
options	ivr_id, ivr_name, extension, response_tim eout, digit_timeout	no	string	Specify obtaining options. Multiple can be set, separated by commas. If empty, all options are returned by default.
Successful response				
status	0	yes	int	Successful response，status is 0

total_item		yes	int	Total members of the list
total_page		yes	int	Total pages of the list
page		yes	int	What page is on.
ivr_id		no	string	IVR id
ivr_name		yes	string	IVR name
extension		yes	string	IVR number, the extension number of automatic voice reply.
custom_prompt		yes	string	Prompt The welcome prompt that plays when a caller dials into the IVR.
response_timeout		yes	int	Response Timeout The timeout that occurs when no DTMF input is detected for the configured number of seconds after an IVR prompt finishes playing.
digit_timeout		yes	int	Digit timeout The amount of time to enter each subsequent key after the first key entry. If no input is detected within the timeout period, the FCM will consider the entry complete. Default is 3 seconds.
timeout_prompt		yes	string	Response Timeout Prompt Play the selected prompt if response timeout occurs.
invalid_prompt		yes	string	Description doesn't match the parameter. Invalid Prompt Prompt that plays when invalid input is detected.
tloop		yes	int	Response Timeout Prompt Repeats Amount of times to repeat the response timeout prompt before redirecting the call to the timeout destination (if configured) or disconnecting the call.
iloop		yes	int	Invalid Input Prompt Repeats Amount of times to repeat the invalid prompt before redirecting the call to the invalid destination (if configured) or disconnecting the call.
dial_extension	yes，no	no	string	Whether or not the IVR can dial regular extensions.
dial_conference	yes，no	no	string	Use previous comment as reference for the rest of the "dial_" parameters.
dial_queue	yes，no	no	string	Dial Other Extensions-queues

dial_ringgroup	yes，no	no	string	Dial Other Extensions-ring group
dial_vmgroup	yes，no	no	string	Dial Other Extensions-voicemail group
dial_paginggroup	yes，no	no	string	Dial Other Extensions-paging/intercom group
dial_fax	yes，no	no	string	Dial Other Extensions-fax
dial_trunk	yes，no	no	string	Dial trunk Whether or not the IVR can dial to trunks. If enabled, the IVR must have permission level configured.
dial_directory	yes，no	no	string	Dial Other Extensions-dial by name
permission	internal, internal-local, internal-local-national, internal-local-national-international	no	string	permission internal-internal internal-local-local internal-local-national-national internal-local-national-international-international
language		no	string	language
alertinfo	none,　ring1, ring2,　ring3, ring4,　ring5, ring6,　ring7, ring8,　ring9, ring10, Bellcore-dr1, Bellcore-dr2 Bellcore-dr3, Bellcore-dr4, Bellcore-dr5, custom	no	string	Alert-info When present in an INVITE request, the Alert-info header field specifies an alternative ring tone to the UAS.
replace_caller_id		no	string	Replace Display Name
switch	no white black	no	string	IVR Black/Whitelist white: Only numbers in the whitelist can access this IVR. black: Numbers in the blacklist cannot access the IVR.
Failed response				
status		yes	int	Please see the error code list for more details.

getIVR

The "getIVR" action allows users to get information about a specific IVR.

- **Request**

```
{
    "request":{
        "action":"getIVR",
        "cookie":"sid1682729010-1574760528",
        "ivr":"ivr-1"
    }
}
```

- **Response**

```
{
    "response":{
        "ivr":{
            "alertinfo":"ring1",
            "dial_conference":"no",
            "dial_directory":"no",
            "dial_extension":"no",
            "dial_failed_back2menu":"no",
            "dial_fax":"no",
            "dial_multimedia_conference":"no",
            "dial_paginggroup":"no",
            "dial_queue":"no",
            "dial_ringgroup":"no",
            "dial_trunk":"yes",
            "dial_vmgroup":"no",
            "digit_timeout":3,
            "extension":"7000",
            "iloop":3,
            "invalid_prompt":"invalid",
            "ivr_blackwhite_list":"",
            "ivr_id":"ivr-1",
            "ivr_name":"7000",
            "ivr_out_blackwhite_list":"1000",
            "language":null,
            "permission":"internal-local",
            "replace_caller_id":"yes",
            "response_timeout":10,
            "switch":"no",
            "timeout_prompt":"ivr-create-timeout",
            "tloop":3,
            "welcome_prompt":"welcome"
        },
        "members":[
```

```
            {
                "keypress":"i",
                "keypress_event":"member_prompt",
                "member_prompt":"goodbye"
            },
{
                "keypress":"t",
                "keypress_event":"member_prompt",
                "member_prompt":"goodbye"
            }
        ]
    },
    "status":0
}
```

Table 62: getIVR

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
ivr		yes	string	IVR number
Successful response				
status	0	yes	int	Successful response，status is 0
ivr_id		no	string	IVR id
ivr_name		yes	string	IVR name
extension		yes	string	IVR number, the extension number of automatic voice reply.
welcome_prompt		yes	string	Prompt Initial tone that plays when the user enters the IVR.
response_timeout		yes	int	Response Timeout Timeout occurs when no DTMF entry is detected for the configured number of seconds after the IVR finishes playing the prompts.
digit_timeout		yes	int	Digit timeout After the user enters a digit, the user needs to enter the next digit within the timeout. If no digit is detected within the timeout, the PBX will consider the entries complete. The default timeout is 3 seconds.
timeout_prompt		yes	string	Response Timeout Prompt Play the selected prompt if response timeout occurs.

invalid_prompt		yes	string	Maximum calling period.
				In seconds, default is 0, which means unlimited.
tloop		yes	int	Response Timeout Prompt Repeats
				Number of times to repeat the prompt.
				After the final repeat, calls will be redirected to the Timeout destination (if configured) or dropped.
iloop		yes	int	Invalid Input Prompt Repeats
				Number of times to repeat the prompt.
				After the final repeat, calls will be redirected to the Invalid destination (if configured) or dropped.
dial_extension	yes，no	no	string	Dial Other Extensions-extension
dial_conferenc e	yes，no	no	string	Dial Other Extensions-conference rooms
dial_queue	yes，no	no	string	Dial Other Extensions-queues
dial_ringgroup	yes，no	no	string	Dial Other Extensions-ring group
dial_vmgroup	yes，no	no	string	Dial Other Extensions-voicemail group
dial_paginggro up	yes，no	no	string	Dial Other Extensions-paging/intercom group
dial_fax	yes，no	no	string	Dial Other Extensions-fax
dial_trunk	yes，no	no	string	Dial trunk
				If enabled, users will be able to access trunks through this IVR. if using this feature, it is mandatory to configure permission.
dial_directory	yes，no	no	string	Dial Other Extensions-dial by name
permission	internal, internal-local, internal-local-national, internal-local-national-internati onal	no	string	permission
				internal-internal
				internal-local-local
				internal-local-national-national
				internal-local-national-international-international
language		no	string	language
alertinfo	none, ring1, ring2, ring3,	no	string	Alert-info
				When present in an INVITE request, the Alert-info header field specifies an alternative ring tone to the

	ring4, ring5, ring6, ring7, ring8, ring9, ring10, Bellcore-dr1, Bellcore-dr2 Bellcore-dr3, Bellcore-dr4, Bellcore-dr5, custom			UAS.
replace_caller_id		no	string	Replace Display Name
switch	no white black	no	string	IVR Black/Whitelist Only whitelisted numbers and numbers not blacklisted can be called from the IVR.
ivr_blackwhite_list		no	string	Internal Black/Whitelist
ivr_out_blackwhite_list		no	string	External Blacklist/Whitelist Can be used only when Dial Trunk is enabled. Numbers will be added as follows: number1, number2, number3.
members		no	Json array	Key Pressing Events
Failed response				
status		yes	int	Please see the error code list for more details.

updateIVR

The "updateIVR" action allows users to update a specific IVR.

- **Request**

```
{
    "request":{
        "action":"updateIVR",
        "alertinfo":"ring2",
        "cookie":"sid1682729010-1574760528",
        "dial_conference":"no",
```

```
        "dial_directory":"no",
        "dial_extension":"no",
        "dial_failed_back2menu":"no",
        "dial_fax":"no",
        "dial_paginggroup":"no",
        "dial_queue":"no",
        "dial_ringgroup":"no",
        "dial_trunk":"yes",
        "dial_vmgroup":"no",
        "digit_timeout":"3",
        "extension":"7000",
        "iloop":"3",
        "invalid_prompt":"invalid",
        "ivr":"ivr-1",
        "ivr_name":"7000",
        "ivr_out_blackwhite_list":"1009",
        "permission":"internal-local",
        "replace_caller_id":"yes",
        "response_timeout":"10",
        "switch":"no",
        "timeout_prompt":"ivr-create-timeout",
        "tloop":"3",
        "welcome_prompt":"welcome"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

Table 63: updateIVR

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
ivr		yes	string	IVR Number
ivr_name		yes	string	IVR Name
extension		yes	string	IVR number, the extension number of automatic voice reply.
welcome_pro		yes	string	Prompt

mpt				Initial tone that plays when the user enters the IVR.
response_tim eout		yes	int	Response Timeout Timeout occurs when no DTMF entry is detected for the configured number of seconds after the IVR finishes playing the prompts.
digit_timeout		yes	int	Digit timeout After the user enters a digit, the user needs to enter the next digit within the timeout. If no digit is detected within the timeout, the PBX will consider the entries complete. The default timeout is 3 seconds.
timeout_prom pt		yes	string	Response Timeout Prompt Play the selected prompt if response timeout occurs.
invalid_promp t		yes	string	Maximum calling period. In seconds, default is 0, which means unlimited.
tloop		yes	int	Response Timeout Prompt Repeats Number of times to repeat the prompt. After the final repeat, calls will be redirected to the Timeout destination (if configured) or dropped.
iloop		yes	int	Invalid Input Prompt Repeats Number of times to repeat the prompt. After the final repeat, calls will be redirected to the Invalid destination (if configured) or dropped.
dial_extensio n	yes，no	no	string	Dial Other Extensions-extension
dial_conferen ce	yes，no	no	string	Dial Other Extensions-conference rooms
dial_queue	yes，no	no	string	Dial Other Extensions-queues
dial_ringgrou p	yes，no	no	string	Dial Other Extensions-ring group
dial_vmgroup	yes，no	no	string	Dial Other Extensions-voicemail group
dial_paginggr oup	yes，no	no	string	Dial Other Extensions-paging/intercom group
dial_fax	yes，no	no	string	Dial Other Extensions-fax
dial_trunk	yes，no	no	string	Dial trunk If enabled, users will be able to access trunks through this IVR. if using this feature, it is mandatory to configure permission.
dial_directory	yes，no	no	string	Dial Other Extensions-dial by name
permission	internal,	no	string	permission

	internal-local, internal-local-national, internal-local-national-international			internal-internal internal-local-local internal-local-national-national internal-local-national-international-international
language		no	string	language
alertinfo	none, ring1, ring2, ring3, ring4, ring5, ring6, ring7, ring8, ring9, ring10, Bellcore-dr1, Bellcore-dr2 Bellcore-dr3, Bellcore-dr4, Bellcore-dr5, custom	no	string	Alert-info When present in an INVITE request, the Alert-info header field specifies an alternative ring tone to the UAS.
replace_caller _id		no	string	Replace Display Name
switch	no white black	no	string	IVR Black/Whitelist Only whitelisted numbers and numbers not blacklisted can be called from the IVR.
ivr_blackwhite _list		no	string	Internal Black/Whitelist
ivr_out_black white_list		no	string	External Blacklist/Whitelist Can be used only when Dial Trunk is enabled. Numbers will be added as follows: number1, number2, number3.
members		no	Json array	Key Pressing Events

Successful response				
status		yes	int	The response is successful, status is 0
need_apply	yes, no	yes	string	Whether "Apply" is required for the configuration to take effect
Failed response				
status		yes	int	Please see the error code list for more details.

deleteIVR

The "deleteIVR" action allows users to delete an existing IVR.

- **Request**

```
{
    "request":{
        "action":"deleteIVR",
        "cookie":"sid1682729010-1574760528",
        "ivr":"ivr-1"
    }
}
```

- **Response**

```
{
    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

<p align="center">Table 64: deleteIVR</p>

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
ivr		yes	string	Talked to development team. This is the IVR index, not extension. Will be changed to IVR extension in the future.
Successful response				
status		yes	int	The response is successful, status is 0
need_apply	yes, no	yes	string	Whether "Apply" is required for the configuration to take effect
Failed response				

status		yes	int	Please see the error code list for more details.

User Information

listUser

The "listUser" action allows users to get information about a user.

- **Request**

```
{
  "request":{
            "action":"listUser",
            "item_num":"10",
            "sidx":"extension",
            "sord":"asc",
            "page":"1",
            "cookie": "sid81747798-1551856142"
  }
}
```

- **Response**

```
{

    "response":{
    "user_id":[
     {
                "user_id":0,
                "user_name":"admin",
                "privilege":0,
                "department":null,
                "first_name":null,
                "last_name":null,
                "enable_multiple_extension":"no",
                "multiple_extension":null,
                "email":null,
                "language":null,
                "fax":null,
                "family_number":null,
                "phone_number":null,
                "cookie":"sid523099813-1555662509",
                "login_time":"2019-04-19 16:49:05",
                "email_to_user":"no",
                "ip":"192.168.129.55"
    },
    {

                "user_id":2,
                "user_name":"1083",
                "privilege":3,
                "department":null,
                "first_name":"aaa",
```

```
                "last_name":"aaa",
                "enable_multiple_extension":"no",
                "multiple_extension":null,
                "email":null,
                "language":null,
                "fax":null,
                "family_number":null,
                "phone_number":null,
                "cookie":null,
                "login_time":null,
                "email_to_user":"no",
                "ip":null
    },
    {

                "user_id":3,
                "user_name":"1084",
                "privilege":3,
                "department":null,
                "first_name":null,
                "last_name":null,
                "enable_multiple_extension":"no",
                "multiple_extension":null,
                "email":null,
                "language":null,
                "fax":null,
                "family_number":null,
                "phone_number":null,
                "cookie":null,
                "login_time":null,
                "email_to_user":"no",
                "ip":null
    }
  ],
        "total_item":3,
        "total_page":1,
        "page":1
  },
    "status":0

}
```

Table 65: listUser

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
page		no	int	Get extension list by page number.
sord	acs,desc	no	string	Sorting method. acs stands for ascending, and

				desc stands for descending.
sidx		no	string	Sort according to the index.
item_num		no	int	Extension number on each page, which is, the maximum items of each return. If empty, all members are returned by default.
options	department, first_name, last_name, email, language, fax, family_number, phone_number, login_time, ip	no	string	Specify obtaining options. Multiple can be set, separated by commas. If empty, all options are returned by default.
Successful response				
status	0	yes	int	Successful response，status is 0
total_item		yes	int	Total number of items on the list
total_page		yes	int	Total pages of the list
page		yes	int	What page is on.
user_id		no	int	User id
user_name		yes	string	User name
privilege		yes	int	The privilege level granted to the user.
department		yes	string	The department that the user belongs to.
first_name		yes	string	First name of the user
last_name		yes	string	Last name of the user
email		yes	string	Email address of the user. For example, "bobjones@bobjones.null".
language		yes	string	Language The language that the user will hear voice prompts in.

				“default” uses the language of global settings.
fax		yes	string	Fax number of the user.
family_num ber		yes	string	User family number
phone_num ber		yes	string	User phone number
login_time		yes	string	Last login time
ip		yes	string	IP address of the user.
Failed response				
status		yes	int	Please see the error code list for more details.

getUser

The "getUser" action allows users to obtain user's configuration.

- **Request**

```
{
     "request":{
          "action":"getUser",
          "user_name":"1083",
          "cookie": "sid81747798-1551856142"
     }
}
```

- **Response**

```
{

  "response":{
      "user_name":{
          "login_time":null,
          "cookie":null,
          "phone_number":"18373710740",
          "family_number":"8888",
          "fax":"123",
          "language":"en",
          "email":"2453034231@qq.com",
          "multiple_extension":null,
          "enable_multiple_extension":"no",
          "email_to_user":"yes",
          "last_name":"aaa",
          "first_name":"aaa",
```

```
            "department":"二部",
            "privilege":3,
            "user_id":2
    }
  },
    "status":0

}
```

<p align="center">**Table 66: getUser**</p>

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
user_name		yes	string	username
Successful response				
status	0	yes	int	Successful response，status is 0
phone_number		yes	string	User phone number
family_number		yes	string	User family phone number
fax		yes	string	User fax
language		yes	string	Language Language of voice prompt. "default" uses the language of global settings.
email		yes	string	The Email address of this user. For example, "bobjones@bobjones.null".
last_name		yes	string	The last Name of the user.
first_name		yes	string	The first Name of the user.
department		yes	string	The Department that the user belongs to
user_id		yes	int	User id
Failed response				
status		yes	int	Please see the error code list for more details.

updateUser

The "updateUser" action allows users to update a user.

- **Request**

```
{

    "request":{
        "user_name":"1083",
        "department":"R&D department 2",
        "fax":"123",
        "email":"john@fiberme.com",
        "first_name":"aaa",
        "last_name":"aaa",
        "family_number":"8888",
        "phone_number":"18373710740",
        "action":"updateUser",
        "user_id":"2"
 }

}
```

- **Response**

```
{

    "response":{
        "need_apply":"yes"
    },
    "status":0
}
```

Table 67: updateUser

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
user_name		yes	string	Username
department		no	string	The Department that the user belongs to.
fax		no	string	User fax
email		no	string	The Email address of this user. For example, "bobjones@bobjones.null".
first_name		no	string	The first Name of the user.

last_name		no	string	The last Name of the user.
family_number		no	string	User family phone number
phone_number		no	string	User phone number
user_id		no	int	User id
Successful response				
status		yes	int	The response is successful, status is 0
need_apply	yes, no	yes	string	Whether "Apply" is required for the configuration to take effect
Failed response				
status		yes	int	Please see the error code list for more details.

Extension Groups

listExtensionGroup

The "listExtensionGroup" action allows users to list extension group.

- **Request**

```
{
      "request": {
            "action":"listExtensionGroup",
            "item_num":"10",
            "sidx":"group_name",
            "sord":"asc",
            "page":"1",
            "cookie": "sid81747798-1551856142"
      }
}
```

- **Response**

```
{

 "response":{
  "extension_group":[
    {
                "group_id":"group-3",
                "group_name":"1083",
                "members":"1083",
                "tmp":"group-3"
    },
```

```
    {
                "group_id":"group-2",
                "group_name":"45",
                "members":"1083,1084",
                "tmp":"group-2"
    },
    {
                "group_id":"group-1",
                "group_name":"ew",
                "members":null,
                "tmp":null
    }
  ],
      "total_item":3,
      "total_page":1,
      "page":1
  },
    "status":0

}
```

Table 68: listExtensionGroup

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
page		no	int	Get extension list by page number.
sord	acs,desc	no	string	Sorting method. acs stands for ascending, and desc stands for descending.
sidx		no	string	Sort according to the index.
item_num		no	int	Extension number on each page, which is, the maximum items of each return. If empty, all members are returned by default.
options	group_name, members, group_id	no	string	Specify obtaining options. Multiple can be set, separated by commas. If empty, all options are returned by default.
Successful response				
status	0	yes	int	Successful response，status is 0
total_item		yes	int	Total number of items on the list
total_page		yes	int	Total pages of the list
page		yes	int	What page is on.
group_id		no	int	Group id
group_name		yes	string	Group name

members		yes	int	Extensions in the group
Failed response				
status		yes	int	Please see the error code list for more details.

PIN Groups

listPinSets

The "listPinSets" action allows users to list the available pin group.

- **Request**

```
{
      "request":{
            "action":"listPinSets",
            "item_num":"10",
            "sidx":"pin_sets_id",
            "sord":"asc",
            "page":"1",
            "cookie": "sid81747798-1551856142"
      }
}
```

- **Response**

```
{

  "response":{
    "pin_sets_id":[
      {
                  "pin_sets_id":"1557210434090",
                  "pin_sets_name":"hehe",
                  "record_in_cdr":"no"
      },
      {
                  "pin_sets_id":"1557210889523",
                  "pin_sets_name":"kp",
                  "record_in_cdr":"no"
      }
    ],
        "total_item":2,
        "total_page":1,
        "page":1
  },
    "status":0

}
```

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
page		no	int	Get extension list by page number.
sord	acs,desc	no	string	Sorting method. acs stands for ascending, and desc stands for descending.
sidx		no	string	Sort according to the index.
item_num		no	int	Extension number on each page, which is, the maximum items of each return. If empty, all members are returned by default.
options	pin_sets_id, pin_sets_name, record_in_cdr	no	string	Specify obtaining options. Multiple can be set, separated by commas. If empty, all options are returned by default.
Successful response				
status	0	yes	int	Successful response，status is 0
total_item		yes	int	Total number of items on the list
total_page		yes	int	Total pages of the list
page		yes	int	What page is on.
pin_sets_id		yes	int	ID of the PIN set
pin_sets_name		yes	string	Name of the PIN set
record_in_cdr	yes, no	yes	string	Whether to record in CDR
Failed response				
status		yes	int	Please see the error code list for more details.

cdrapi

The "cdrapi" action allows users to get the CDR database.

- **Request**

```
{
  "request":{
        "action":"cdrapi",
        "cookie":"sid1381890074-1574854661",
        "format":"json"
  }
}
```

- **Response**

```json
{
    "cdr_root":[
        {
            "AcctId":"1",
            "accountcode":"",
            "action_owner":"1004",
            "action_type":"PAGE[8005]",
            "amaflags":"DOCUMENTATION",
            "answer":"2019-11-27 07:17:13",
            "billsec":"1",
            "caller_name":"1004",
            "cdr":"1574857028274003-1004",
            "chanext":"",
            "channel":"PJSIP/1004-00000010",
            "channel_ext":"1004",
            "clid":"\"1004\" <1004>",
            "dcontext":"pagegroups",
            "disposition":"ANSWERED",
            "dst":"8005",
            "dst_trunk_name":"",
            "dstanswer":"8005",
            "dstchanext":"",
            "dstchannel":"MulticastRTP/0x47e2650c",
            "dstchannel_ext":"0x47e2650c",
            "duration":"6",
            "end":"2019-11-27 07:17:14",
            "lastapp":"Dial",
            "lastdata":"MulticastRTP/basic/224.0.1.2:8080,10,zA()",
            "recordfiles":"",
            "service":"p",
            "session":"1574857028274003-1004",
            "src":"1004",
            "src_trunk_name":"",
            "start":"2019-11-27 07:17:08",
            "uniqueid":"1574857028.56",
            "userfield":"Internal"
        }
    ]
}
```

Table 70: cdrapi

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
format	csv, xml, json	yes	string	Define the matching CDR output format. Default is csv.
numRecords	[0,1000]	no	int	Returned records amount. Default is 1000, which is also the maximum allowed.
offset	number	no	int	The number of records that need to be skipped, use together with numRecords. Accept all records when multiple responses show up. Default is 0.
caller **callee**	Extension separated by comma, extension range, caller regular expression	no	string	The filter can find call records that match the input parameter, based on source (caller) number or destination (callee) number. A format including wildcard ('@' or '_') will be treated as regular expression. , '-' is treated as range symbol rather than hyphen; '@' represents characters of any digit(including 0); '_' represents one character. Otherwise, digits including a hyphen will be recognized as an extension segment, non-numeric characters or characters including multiple hyphens will be ignored 0-0 matches all non-numeric string and null string. For example, caller=5300,5302-5304,_4@-or-caller=5300&caller=5302-5304&caller=_4@ (matches extension 5300. 5302, 5303, 5304 and any extension of which the second digit is 4.)
startTime	Date and /or time, format is as follows: YYYY-MM-DDTHH:MM YYYY-MM-DDTHH:MM:SS YYYY-MM-DDTHH:MM	yes	int	Filter is based on value of starting time. It matches calls start time in this period, despite the time of answering or hangup. If null, there is no limitation of minimum and maximum start time. If date is null, the default date is 2000-01-01; If time is null, the default time is 0:00 UTC. String including time could also specify a time zone, use '%2B' to replace the '+' in timezone. (See detail in http://www.w3.org/TR/NOTE-datetime)

endTime	:SS.SSS ('T' is the separator of the 3 formats) HH:MM HH:MM:SS HH:MM:SS.SSS			
minDur	Number(in seconds)	no	int	Filter is based on call duration.
maxDur				
answeredby		no	string	callee
tineFilterType	Start, End	no	string	
callerName		no	string	
delete		no	string	Delete CDR records
Successful response				
Consistent with former cdrapi interface. Return corresponding content based on format.				
Failed response				
status		yes	int	Please see the error code list for more details.

Recapi

The "recapi" action allows users to download the wanted audio file.

- **Request**

```
{
    "request":{
        "action":"recapi",
        "cookie":"sid1381890074-1574854661",
        "filedir":"monitor",
        "filename":"auto-1574857256-1003-1004.wav"
    }
}
```

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- **Response**

Once successful, it will prompt you to choose a location to save the downloaded file

<p align="center">**Table 71: Recapi**</p>

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
filedir	monitor, emergency meetme，queue，sca	no	string	Which type of record file to obtain. Multiple can be separated commas. If filename and filedir are null at the same time, the supported filedir list will be returned. If only filename is set, filedir is set to monitor as default.
filename		no	string	If only filedir is set, all csv files of the corresponding type will be returned. When multiple files are downloaded, they are separated bt commas.
Successful response				
Consistent with original recapi interface. Download file.				
Failed response				
Consistent with original recapi interface. Error description.				

Pmsapi

The "pmsapi" action allows users to configure PMS actions such us Checkin, checkout, etc.

- **Request**

```
{
    "request":{
        "action":"pmsapi",
        "cookie":"sid992645785-1575025577",
        "data":"<pms_data_request>
            <checkin>
            <address>1001</address>
            <room>1001</room>
            <account>1001</account>
            <firstname>John</firstname>
```

```
            <lastname>Doe</lastname>
            <language>EN</language>
            <vipcode>2</vipcode>
            <datein>2021/01/01 10:00</datein>
            <dateout>2021/01/07 11:00</dateout>
            <credit>9999900</credit>
            <cos>3</cos>
            </checkin>
            </pms_data_request>",
        "format":"xml",
        "token":"16c4a7b1fe890f89c8908f3f522fc18f"
    }
}
```

- **Response**

```
{
    "response":{},
    "status":0
}
```

Table 72: Pmsapi

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
token		yes	string	String consist of PMS username and password after md5 encryption.
format	xml, json	no	string	Type of data string
data		yes		String in xml or json format：
				............xml ....
				<pms_data_request>
				<checkin>
				<address>1000</address>
				<room>100</room>
				<account>123456</account>
				<firstname>John</firstname>
				<lastname>Doe</lastname>
				<language>EN</language>
				<vipcode>2</vipcode>
				<datein>2010/01/01 10:00</datein>

				<dateout>2010/01/07 11:00</dateout>
				<credit>9999900</credit>
				<cos>3</cos>
				</checkin>
				</pms_data_request>
				............json............
				{"checkin": {"address": "2345", "room": "2345", "account":"2345", "datein":"20180909","dateout":"20180910","language":"en", "firstname": "fiberme", "lastname":"stream", "vipcode":"1234", "cos":"1", "credit":"100"}}
address				identifier recognized by destination
room				room number, source room
account				account number
firstname				firstname of guest
lastname				lastname of guest
language				language for account
vipcode				vipcode
datein				datein format YYYY/MM/DD hh:mm
dateout				dateout format YYYY/MM/DD hh:mm
credit				credit
cos				call permission 1 < 2 < 3 < 4
d_address				Mov :destination address
r_room				Move :destination room
w_action	0,1			1 = set. 0 = cancel
w_mode	1,2			1 = single (default). 2 = daily.
w_date	YYYYMMDD			wakeup date format YYYYMMDD
w_time	HHMM			wakeup time format HHMM
Successful response				
status	0	yes	int	Successful response，status is 0
Failed response				
status	0	yes	int	Status is -1
error		yes	string	Error description

The following actions can also be done using pmsapi action :

- **Update**

```
{
      "request": {
            "action": "pmsapi",
            "cookie": "sid612583207-1551962142",
            "token": "63E780C3F321D13109C71BF81805476E",
            "format": "xml",
            "data":"<pms_data_request>
                    <update>
                    <address>1000</address>
                    <room>100</room>
                    <account>123456</account>
                    <firstname>John</firstname>
                    <lastname>Doe</lastname>
                    <language>EN</language>
                    <vipcode>2</vipcode>
                    <datein>2010/01/01 10:00</datein>
                    <dateout>2010/01/07 11:00</dateout>
                    <credit>9999900</credit>
                    <cos>3</cos>
                    </update>
                    </pms_data_request>"
      }
}
```

- **Mov**

```
{
      "request": {
            "action": "pmsapi",
            "cookie": "sid612583207-1551962142",
            "token": "63E780C3F321D13109C71BF81805476E",
            "format": "xml",
            "data": "<pms_data_request>
                    <mov>
                    <address>1000</address>
                    <room>100</room>
                    <d_address>1002</d_address>
                    <d_room>1002</d_room>
                    </mov>
                    </pms_data_request>"
      }
}
```

- **Wakeup**

```
{
      "request": {
```

```
            "action": "pmsapi",
            "token": "63E780C3F321D13109C71BF81805476E",
            "format": "xml",
            "data": "<pms_data_request>
                    <wakeup>
                    <address>1000</address>
                    <room>1000</room>
                    <w_action>1</w_action>
                    <w_mode>1</w_mode>
                    <w_date>20140101</w_date>
                    <w_time>0900</w_time>
                    </wakeup>
                    </pms_data_request>",
            "cookie": "sid612583207-1551962142"
    }
}
```

- **Checkout**

```
{
    "request": {
            "action": "pmsapi",
            "cookie": "sid612583207-1551962142",
            "token": "63E780C3F321D13109C71BF81805476E",
            "format": "xml",
            "data": "<pms_data_request>
                    <checkout>
                    <address>1000</address>
                    <room>100</room>
                    </checkout>
                    </pms_data_request>"
    }
}
```

- **Add minibar**

```
{
    "request": {
    "action": "pmsapi",
    "cookie": "sid612583207-1551962142"
    "token": "63E780C3F321D13109C71BF81805476E",
    "format": "xml",
    "data": "<pms_data_request>
            <addminibar>
            <barcode>12450</barcode>
            <barname>winebar</barname>
            <prompt>record/sukima</prompt>
            <verifyskip></verifyskip>
            <listgoods></listgoods>
            </addminibar>
            </pms_data_request>"
```

```
            }
}
```

- **Delete Minibar**

```
{
      "request": {
            "action": "pmsapi",
            "cookie": "sid612583207-1551962142",
            "token": "63E780C3F321D13109C71BF81805476E",
            "format": "xml",
            "data": "<pms_data_request>
                    <delminibar>
                    <barcode>1324</barcode>
                    </delminibar>
                    </pms_data_request>"
      }
}
```

- **Add minibar goods**

```
{
      "request": {
            "action": "pmsapi",
            "token": "63E780C3F321D13109C71BF81805476E",
            "cookie": "sid612583207-1551962142",
            "format": "xml",
            "data": "<pms_data_request><addminibargoods>
                    <goodscode>900</goodscode>
                    <goodsname>beverage</goodsname>
                    </addminibargoods>
                    </pms_data_request>",
      }
}
```

- **Delete minibar goods**

```
{
      "request": {
            "action": "pmsapi",
            "cookie": "sid612583207-1551962142",
            "token": "63E780C3F321D13109C71BF81805476E",
            "format": "xml",
            "data": "<pms_data_request><delminibargoods>
                    <goodscode>900</goodscode>
                    </delminibargoods>
                    </pms_data_request>"
      }
}
```

- **Add waiter**

```
{
```

```
      "request": {
            "action": "pmsapi",
            "cookie": "sid612583207-1551962142",
            "token": "63E780C3F321D13109C71BF81805476E",
            "format": "xml",
            "data": "<pms_data_request><addminibarwaiter>
                  <maidcode>9898</maidcode>
                  <password>1324</password>
                  </addminibarwaiter>
                  </pms_data_request>"
      }
}
```

- **Delete waiter**

```
{
      "request": {
            "action": "pmsapi",
            "cookie": "sid612583207-1551962142",
            "token": "63E780C3F321D13109C71BF81805476E",
            "format": "xml",
            "data": "<pms_data_request><delminibarwaiter>
                  <maidcode>9898</maidcode>
                  </delminibarwaiter>
                  </pms_data_request>"
      }
}
```

- **Callforward unconditional**

```
{
      "request": {
            "action": "pmsapi",
            "cookie": "sid612583207-1551962142",
            "token": "63E780C3F321D13109C71BF81805476E",
            "format": "xml",
            "data": "<pms_data_request><cfu>
                  <address>4000</address>
                  <room>400</room>
                  <cfwt>4002</cfwt>
                  </cfu>
                  </pms_data_request>"
      }
}
```

- **DND**

```
{
      "request": {
            "action": "pmsapi",
            "cookie": "sid612583207-1551962142",
            "token": "63E780C3F321D13109C71BF81805476E",
```

```
            "format": "xml",
            "data": "<pms_data_request><address>4000</address>
                    <room>400</room>
                    <status>0</status>
                    </dnd>
                    </pms_data_request>"
    }
}
```

Queueapi

The "Queueapi" action allows users to get the Queue Statistics.

- **Request**

```
{
    "request":{
        "action":"queueapi",
        "cookie":"sid1682729010-1574760528",
        "endTime":"2019-11-28",
        "startTime":"2019-11-27",
        "queue":"6500"                    #If this line is not specified, results return
all available queues
    }
}
```

- **Response**

```
<?xml version="1.0"?>
<root_statistics>
  <total>
    <queuechairman>admin</queuechairman>
    <total_calls>2</total_calls>
    <abandoned_rate>50.0</abandoned_rate>
    <avg_wait>2</avg_wait>
    <avg_talk>7</avg_talk>
    <vq_total_calls>0</vq_total_calls>
  </total>
  <queue>
    <queuechairman>admin</queuechairman>
    <queue>6500</queue>
    <total_calls>2</total_calls>
    <answered_calls>1</answered_calls>
    <answered_rate>50.0</answered_rate>
    <avg_wait>2</avg_wait>
    <avg_talk>7</avg_talk>
    <vq_total_calls>0</vq_total_calls>
  </queue>
  <agent>
```

```
    <queuechairman>admin</queuechairman>
    <agent>1004</agent>
    <total_calls>2</total_calls>
    <answered_calls>1</answered_calls>
    <answered_rate>50.0</answered_rate>
    <avg_talk>7</avg_talk>
  </agent>
</root_statistics>
```

Table 73: Queueapi

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
format	csv, xml, json	no	string	Define output format of matching call queue statistics. Default is xml.
queuecha irman	Admin, number	no	string	Queue chairman Default is admin
queue	Number,*	no	string	Queue number if queue number is *(default), all call queue information will be listed.
agent	Number,*	no	string	Agent number If agent number is *(default), all agent information will be listed.
statistics Type	overview, calldetail, loginhistory, pausedhistory,	no	string	overview：overview(default)calldetail：agent detail loginhistory：login record pausedhistory：pause log
numReco rds	[0,1000]	no	int	Number of returned records Default is 1000, which is also the maximum allowed.
offset	number	no	int	The number of records that need to be skipped, use together with numRecords. Accept all records when multiple responses show up. Default is 0.
startTime	Date and/or time, format is YYYY-MM-DD	yes	int	Time range of call queue statistics, format is YYYY-MM-DD

Successful response				
Return content based on corresponding format.				
Failed response				
status		yes	int	Please see the error code list for more details.

applyChanges

The "applyChanges" action allows users to apply the changes made.

- **Request**

```
{
    "request":{
        "action":"applyChanges",
        "cookie":"sid1965594381-1575027385"
    }
}
```

- **Response**

```
{
    "response":{
        "settings":"0"
    },
    "status":0
}
```

Table 74: applyChanges

Keyword	Value	mandatory	Type	Note
Request Parameter				
cookie		yes	string	Returned value after login. All requests must include this value. If no cookie is included, error code -6 will be returned.
Successful response				
status	0	yes	int	Successful response, status is 0
Failed response				
status		yes	int	Please see the error code list for more details.

ERROR RETURN CODES

Table 75: Error return codes

Code	Description
0	Success
-1	Invalid parameters
-5	Need authentication
-6	Cookie error
-7	Connection closed
-8	System timeout
-9	Abnormal system error!
-15	Invalid value
-16	No such item. Please refresh the page and try again
-19	Unsupported
-24	Failed to operate data
-25	Failed to update data
-26	Failed to get data
-37	Wrong account or password!
-43	Some data in this page has been modified or deleted. Please refresh the page and try again
-44	This item has been added
-45	Operating too frequently or other users are doing the same operation. Please retry after 15 seconds.
-46	Operating too frequently or other users are doing the same operation. Please retry after 15 seconds.
-47	No permission
-50	Command contains sensitive characters
-51	Another task is running now
-57	Operating too frequently, or other users are doing the same operation. Please retry after 60 seconds
-68	Login Restriction
-69	There is currently a conference going on. Changes cannot be applied at this time
-70	Login Forbidden

-71	The username doesn't exist
-90	The conference is busy, cannot be edited or deleted
-98	There are currently digital calls. Failed to apply configuration