

Web API Specification for iPECS SME System

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Ericsson-LG Enterprise Co. Ltd.

Version history

Ver.	Date	Changes
0.9	2018.08.17	Initial Release SMDR and click to call feature added for SME system.
0.99	2020.01.07	Web API Document Release SMDR, Click to Call, ACD and Call Control API
1.0	2020.02.25	Trouble Shooting added Conference Room Command added callRefID added in SMDR

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1. Overview

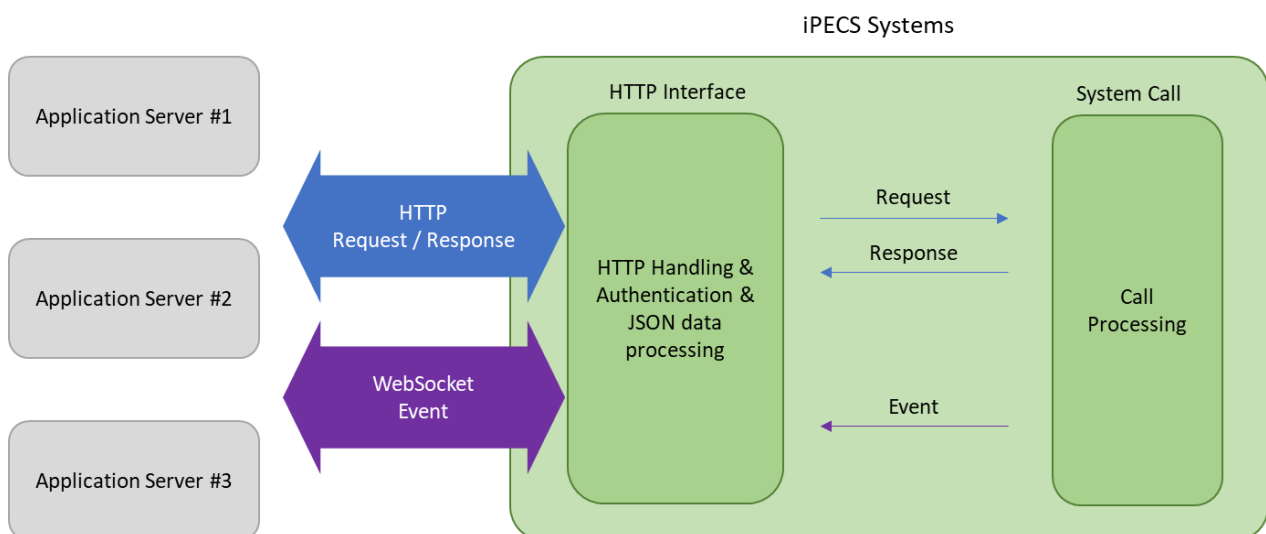
iPECS SME System Web API is a platform independent API that can directly control iPECS SME system with HTTP based API. This API helps you build applications to provide more services to your customers. You can use APIs to connect to our system after authentication to control or monitor some of its resources. This API provides the following features:

- SMDR API: providing SMDR information after every call completion.
- ACD Manager Protocol API: providing all call event information in a real time.
- Call Control and Event API: providing call control service to control and monitor CTI functionality in the system.
- ClickCall API: providing a web service to make a call.

License is required to use each group of Web APIs as below.

- Call Control and Call Event APIs: Server license (API-CTI) and Client license (API-CTI-EXT) as the number of clients if there are CTI clients to use call control APIs.
- SMDR APIs: API-SMDR
- ACD Manager Protocol APIs: API-AMP
- ClickCall API: CLICKCALL license as the number of clients.

Because it works over HTTPS, the connection with the server is encrypted. Requests and responses are served over HTTP and you can receive information raised as events when you connect a WebSocket. All data is provided in JSON format. You can use multiple functions at the same time through one connection with one login. And multiple logins with the same account are not allowed. Up to three Web API accounts can be logged in.

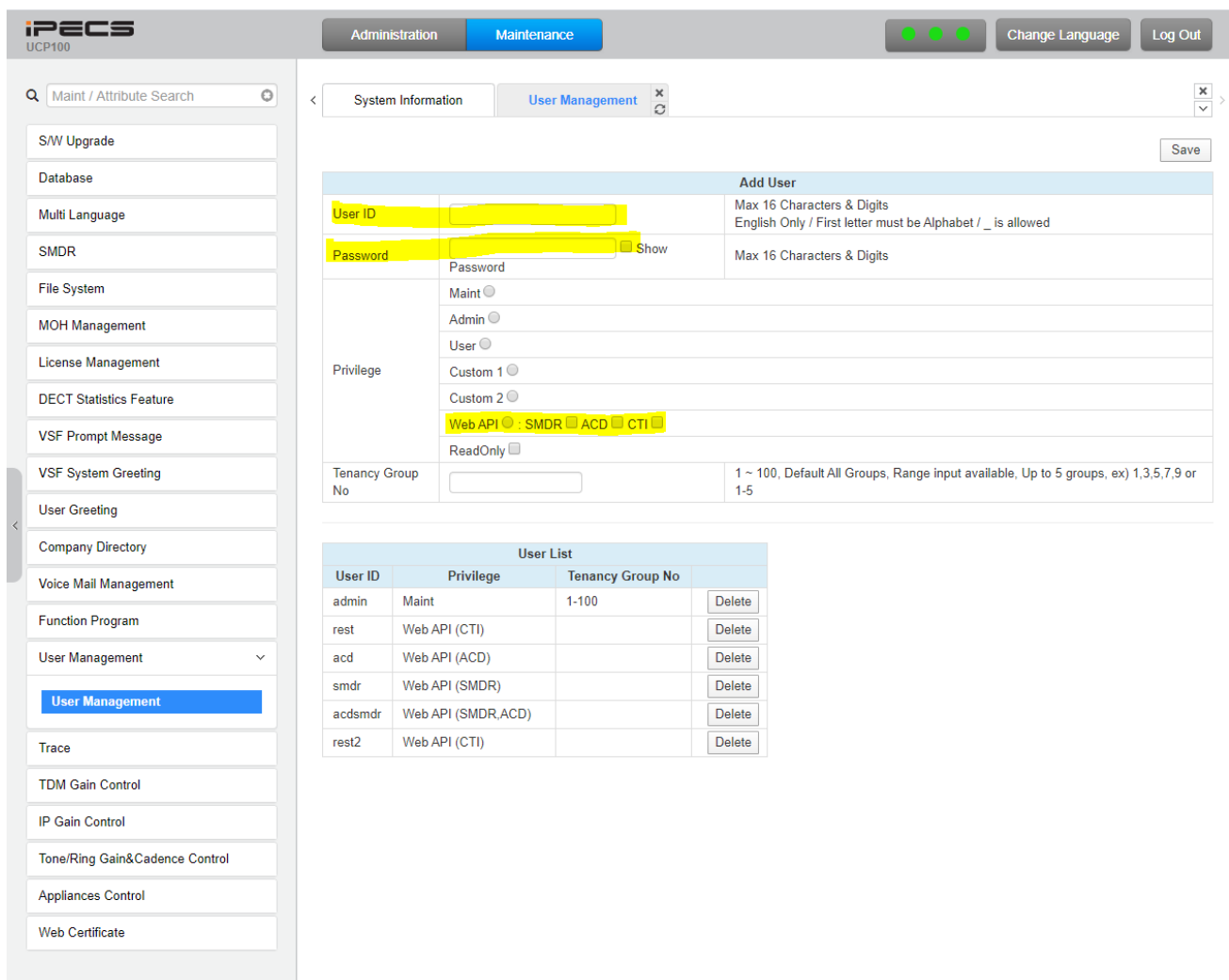


2. Getting Started

2.1. Configuration (admin program)

2.1.1. Set Up Account

You need to create an account to use the Web API. This account is for the server and has all the permissions provided by the API. Please contact your system administrator. System administrator can access Web Admin and go to Maintenance->User Management->User Management page. Enter the proper ID and password, select Web API in the Privilege section, and check the features you want to use. You can select several resources (SMDR, ACD or CTI) and you can use resources at once with one login. readOnly and ICM group number do not matter.



Administration **Maintenance** Change Language Log Out

Search: Maint / Attribute Search

User Management

Add User

User ID: Max 16 Characters & Digits
English Only / First letter must be Alphabet / _ is allowed

Password: Show Max 16 Characters & Digits

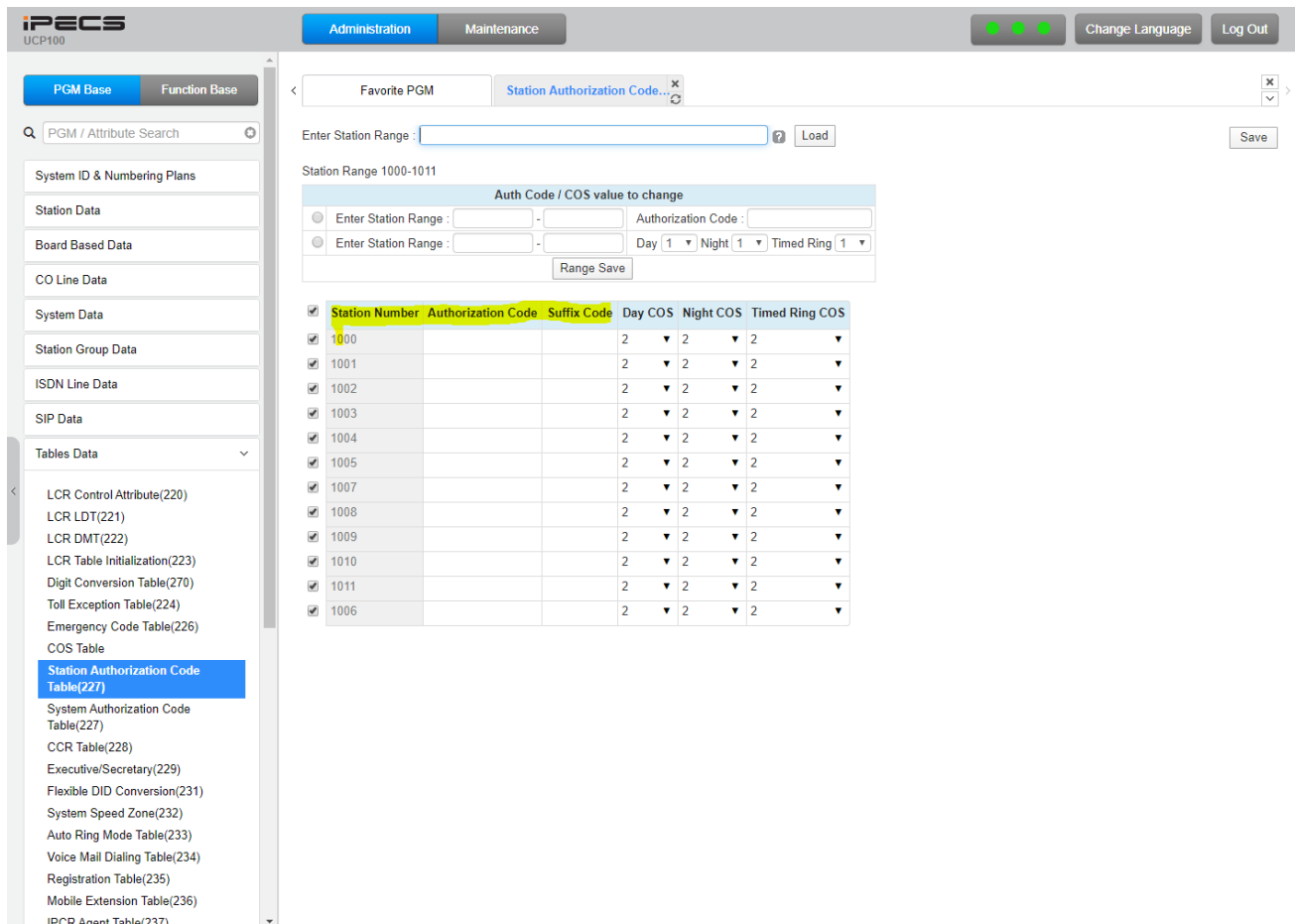
Privilege: ☐ Maint ☐ Admin ☐ User ☐ Custom 1 ☐ Custom 2 ☒ Web API ☐ SMDR ☐ ACD ☐ CTI ☐ ReadOnly

Tenancy Group No: 1 ~ 100, Default All Groups, Range input available, Up to 5 groups, ex) 1,3,5,7,9 or 1-5

User List

User ID	Privilege	Tenancy Group No	
admin	Maint	1-100	Delete
rest	Web API (CTI)		Delete
acd	Web API (ACD)		Delete
smdr	Web API (SMDR)		Delete
acdsmdr	Web API (SMDR,ACD)		Delete
rest2	Web API (CTI)		Delete

The Station user uses the station number as the ID and the password as a combination of the Authentication Code and the Suffix Code in the Administration->Table Data->Station Authentication Code Table(227). For example, if the Authentication Code is *1234 and the Suffix Code is Secr01\$, the password you must enter to log in is *1234Secr01\$. We recommend using a combination of the two code for security reasons. If only one of them is programmed, the other can be omitted. If neither is programmed, login is restricted.



The screenshot shows the IPECS UCP100 Administration interface. The left sidebar contains a tree view of system data tables, with 'Station Authentication Code Table(227)' selected. The main area displays the configuration for this table. At the top, there are tabs for 'Administration' and 'Maintenance'. Below the tabs, there is a search bar and a 'Favorite PGM' dropdown. The 'Station Authentication Code...' dropdown is active. Below this, there are input fields for 'Enter Station Range' and 'Authorization Code', with a 'Load' button. A 'Range Save' button is also present. The table below shows the configuration for station numbers 1000 to 1011. The table has columns for 'Station Number', 'Authorization Code', 'Suffix Code', 'Day COS', 'Night COS', and 'Timed Ring COS'. The 'Station Number' column is highlighted in yellow. The 'Authorization Code' and 'Suffix Code' columns are empty. The 'Day COS', 'Night COS', and 'Timed Ring COS' columns have dropdown menus set to '2', '2', and '2' respectively.

Station Number	Authorization Code	Suffix Code	Day COS	Night COS	Timed Ring COS
1000			2	2	2
1001			2	2	2
1002			2	2	2
1003			2	2	2
1004			2	2	2
1005			2	2	2
1007			2	2	2
1008			2	2	2
1009			2	2	2
1010			2	2	2
1011			2	2	2
1006			2	2	2

2.1.2.Run Web API service

You must start the service to use the web API. Please contact your system administrator. System administrator connects to Web Admin and goes to main program program-> System related data-> System characteristic (160 ~ 161) page. Specifies the web API service port as the port not used by the system from 1024 to 65535. Specifies the web API session duration. The initial value is 2 minutes. This is the time to maintain authentication after closing the connection. 2 minutes after the client makes the last request, the token expires, and the request is rejected. However, if the WebSocket is connected, authentication continues.

iPECS UCP100

Administration Maintenance

PGM Base Function Base

PGM / Attribute Search

System ID & Numbering Plans

Station Data

Board Based Data

CO Line Data

System Data

System Attributes(160~161)

Config Encryption

System Password(162)

Alarm Attributes(163)

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Alarm Relay TNET Access

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Flexible Page Feature

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Pulse Dial (Break/Make) Ratio(176)

SMDR Attributes(177)

System Date & Time(178)

System Multi Language(179)

Favorite PGM System Attributes(160~161)

17	Automatic Privacy	ON	
18	Privacy Warning Tone	ON	
19	ACD Print Enable	ON	
20	ACD Print Timer	10	(*1sec) 001-255
21	CALL TRACKING Enable	ON	
22	Clear ACD Database	OFF	
23	Override First CO Group	ON	
24	Codec Type	G.711	
25	G.711 Packetization	20	(*1ms)
26	G.723 Packetization	30	(*1ms)
27	Network Time & Date	Disable	
28	Incoming Toll Check	ON	
29	Web Server Port / TLS for Web	443	/ Enable 00001-65535
30	Web API Service Port	1024	1024-65535, 0: Unused
31	Web API Session Timeout	2	(*1min) 1-60
32	Auth Retry Count	3	
33	Simple Auth Code Usage	ON	
34	COS 7 when Auth Fail	OFF	
35	Unified Message Format	OFF	
36	Conference Room CO Tel Number		Max 15 Digits
37	Record Warning Tone	ON	
38	UCP DIFF SERVE TOS Route(0), Priority(8), Immediate(16), Flash(24), Flash Override(32), Critic(40), Internetwork Control(48), Network Control(56)	4	00-63(DSCP)
39	Device Upgrade Mode	FTP	
40	CO Transfer Tone	Ring Back Tone	
41	Conference Warning Tone	ON	
42	Dummy Dial Tone	Unused	
43	SIP Station Mode	Routed	
44	SMS Center Number		Max 23 Digits
45	SMS Center CLI		Max 23 Digits
46	SMS Protocol	None	
47	G.722 Packetization	20	(*1ms)
48	Transit out security	Use	
49	Emergency Call ATD Notif	Use	

Save

2.2. API Demo Page (System built-in)

If you install a version that supports the iPECS SME system Web API (4.0 or later, check the detailed version), you can use the API Demo Page. You can try out the API before developing it or debug it during development. Only provide CTI API requests, and events can be used together depending on your account's permissions.

2.2.1. Access Demo Page

After starting the Web API service, use a web browser to connect to the following URI.

```
https://{IP ADDRESS}:{PORT NUMBER}/apidemo.html
```

When connected, the following screen appears.

Web API Demo

You can test web API for call control.

call

Request Menu

- ☐ Get Terminals
- ☐ Monitor Start
- ☐ Monitor Stop
- ☐ Presence Start
- ☐ Presence Stop
- ☐ Make Call
- ☐ Answer
- ☐ Clear Connection
- ☐ Reroute
- ☐ Hold
- ☐ Retrieve
- ☐ Consultation
- ☐ Transfer
- ☐ Single Step Transfer
- ☐ Generate Digit(DTMF)
- ☐ Reconnect
- ☐ Set Forward
- ☐ Get Forward
- ☐ Set DND
- ☐ Get DND
- ☐ Pickup
- ☐ Conference
- ☐ Reject
- ☐ Busy Service
- ☐ Set Call Back
- ☐ Get Call Status
- ☐ Set ACR
- ☐ Get ACR
- ☐ Park
- ☐ Unpark
- ☐ Get MWI

Select feature first and then
content template will be filled.
Please modify request data and
submit.

Request / Response Log

Request: get token
Response: 200 Token p1pF5VW4cR6NLry-83GK8oMOQ2jDuThQRrnShVedcR8

Event Log

Websocket Connected.

2.2.2. Page Layout Description

After entering ID and Password, click “Login & Connect” button to login and WebSocket will try to connect.

If you select Request Menu, the template to be used in each request is displayed in the edit box. After modifying the contents, click the Submit button to send the request.

Request Log is recorded in Request / Response Log box. You can easily copy the contents by pressing the “Copy To Clip Board” button, and erase them all by pressing the “Clear Window” button.

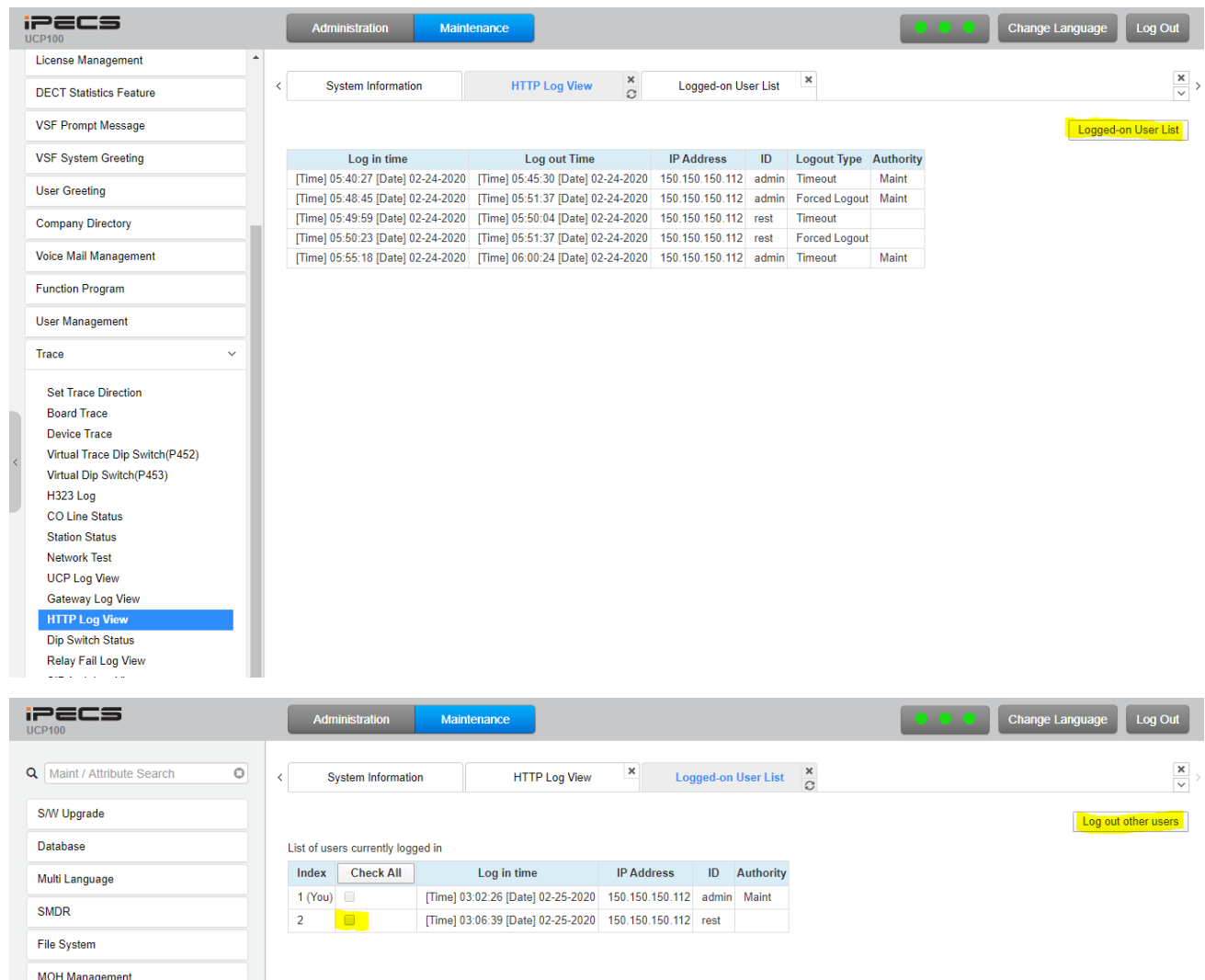
Event data is output to the Event Log box. The functions of the buttons below are the same as the Request / Response Log boxes.

For low level debugging of HTTP, you can use the inspection function provided by web browser.

2.2.3. Trouble Shooting

If you get an "already login" message when you try to login, the web server may be cleaning up the session,

so try again a few seconds later. If it's the same after a few seconds, check Web API sessions at the Web Admin page(Maintenance->Trace->HTTP Log View->Logged-on User List) if you or someone have logged in elsewhere.



The screenshot shows the IPECS UCP100 Web Admin interface. The left sidebar contains a menu with options like License Management, DECT Statistics Feature, VSF Prompt Message, VSF System Greeting, User Greeting, Company Directory, Voice Mail Management, Function Program, User Management, and a 'Trace' section. The 'Trace' section is expanded, showing options like Set Trace Direction, Board Trace, Device Trace, Virtual Trace Dip Switch(P452), Virtual Dip Switch(P453), H323 Log, CO Line Status, Station Status, Network Test, UCP Log View, Gateway Log View, HTTP Log View (highlighted), Dip Switch Status, and Relay Fail Log View.

The main content area shows the 'Logged-on User List' page. It has tabs for System Information, HTTP Log View, and Logged-on User List. The 'Logged-on User List' tab is active, displaying a table of logged-in users.

Log in time	Log out Time	IP Address	ID	Logout Type	Authority
[Time] 05:40:27 [Date] 02-24-2020	[Time] 05:45:30 [Date] 02-24-2020	150.150.150.112	admin	Timeout	Maint
[Time] 05:48:45 [Date] 02-24-2020	[Time] 05:51:37 [Date] 02-24-2020	150.150.150.112	admin	Forced Logout	Maint
[Time] 05:49:59 [Date] 02-24-2020	[Time] 05:50:04 [Date] 02-24-2020	150.150.150.112	rest	Timeout	
[Time] 05:50:23 [Date] 02-24-2020	[Time] 05:51:37 [Date] 02-24-2020	150.150.150.112	rest	Forced Logout	
[Time] 05:55:18 [Date] 02-24-2020	[Time] 06:00:24 [Date] 02-24-2020	150.150.150.112	admin	Timeout	Maint

Below the table, there is a 'Log out other users' button.

If an unknown user is logged in, you can logout that user. Check the user's checkbox and press the "Log out other users" button.

3. Access Web API

Basic information for accessing to the Web API server.

3.1.API URI

(Application Program Interface Uniform Resource Identifier, similar as URL)

{BASE URI} : https://{IP ADDRESS}:{PORT NUMBER}/ipxapi

The base URI consists of IP address and TCP port number for API server and ipxapi string. The API uses HTTPS only for security and ipxapi means IPECS REST API resource. We recommend using certificate issued by Trusted Root Certification Authority or self-signed on your web server (system) for security enhancement when HTTPS session is established.

{FULL URI} : {BASE URI}/{TYPE}/{VERSION}/users/{USER ID}/{RESOURCE}/{FEATURE}

The full URI for service consists of as above.

{TYPE} means resource type for server or client.

{VERSION} means API version to access.

users means user ID will be followed next.

{USER ID} means user ID.

{RESOURCE} means resource name to access.

{FEATURE} means feature of resource. Now CTI uses only.

Example) https://10.10.10.1:1024/ipxapi/server/v1/users/test/login

The example means user ID test tries to login to access and use server type resource.

There is a resource that provides event data when a WebSocket is connected. E.g. SMDR, ACD and CTI. After logging in with an account that has the authority of the relevant resource, if you connect only one WebSocket, you can receive all event data.

{WebSocket URI} : wss://{IP ADDRESS}:{PORT NUMBER}/ipxapi

3.2.Authentication scheme

To access Web API, you can login using the ID and password via HTTP basic authentication (RFC 7235) to get authentication token. If success, you will get token string.

3.2.1.Login

Feature	Login
Description	Get authentication token
Service Type	Server/Client
Method	GET
URI	{BASE URI}/{server client}/{VERSION}/users/{User ID}/login
Request Data	<p>N/A, use HTTP header, Basic Authentication (RFC 7617)</p> <p>- Header example</p> <pre> Accept: */* Accept-Encoding: gzip, deflate, br Accept-Language: ko,en-US;q=0.9,en;q=0.8,he;q=0.7 Authorization: Basic cmVzdDphcGkxMDI0Nzc3 Cache-Control: no-cache Connection: keep-alive Content-type: application/json Cookie: SessionID=14864678+0 DNT: 1 Host: 150.150.150.113:1024 Pragma: no-cache Referer: https://150.150.150.113:1024/apidemo.html Sec-Fetch-Mode: cors Sec-Fetch-Site: same-origin User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/79.0.3945.117 Safari/537.36 </pre>
Return Format	<p>Normal case</p> <p>200 OK in header</p> <pre> { "token": "{Token from system}", "checkConnectionTimer": {second}, </pre>

	<pre> "systemType": "iPECS [XXX]", "systemVersion": "{VERSION}", "apiVersion": "1.0.0" } Error case { "error": { "code": ###, "message": "#Message" } } </pre>
--	---

In case of Positive Response, information about connected system and interface specifications is transmitted.

[Common Attributes]

Parameter	Value	Mandatory/ Optional	Description
token	String	M	Token for Command Request API
checkConnectionTimer	Positive integer	M	Session Timeout after login. You must update the timer within this time to keep the login. Refer Check Connection Request.
systemType	String	M	System Type, ex) iPECS UCP100
systemVersion	String	M	System Version, ex) S-UCP-Rls2001-4.0.11-App
apiVersion	String	M	Web API version, ex) 1.0.0

[Specific Attributes]

Parameter	Value	Resource	Mandatory/ Optional	Description
terminalCount	Positive integer	CTI	M	Terminal total count

In case of Negative Response, return Error value as below.

- Operation (serviceNotSupported) - service not provided

3.2.2. Check Connection Request

Web Client sends periodically Check Connection Request in order to maintain the session which is set by Login Request.

URI	<base_uri>/users/<userid>/checkconnection
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	
Positive Response	HTTP 200 OK Content: <pre>{ }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

[Condition]

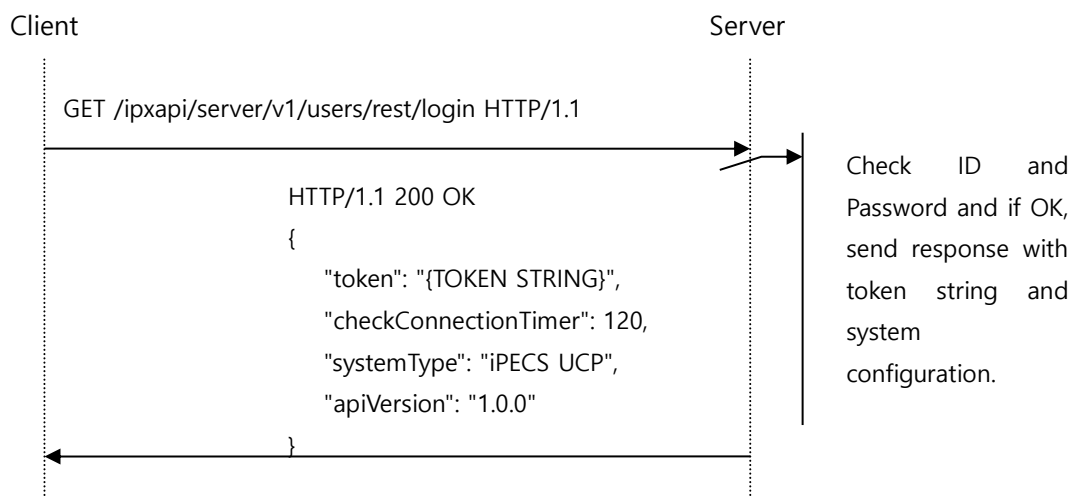
- Web Client must update the session timer by sending a request within checkConnectionTimer value time If nothing else is sent.
- Web Client must re-execute the Login Request authentication procedure for reconnecting after disconnecting the session.
- If the WebSocket is connected, Web Client can keep session using Ping via WebSocket instead of this request.

3.2.3. Logout

Feature	Logout
Description	Logout
Service Type	Server/Client
Method	POST
URI	{BASE URI}/{server client}/{VERSION}/users/{User ID}/logout
Header element	Authorization : bearer {token from system}

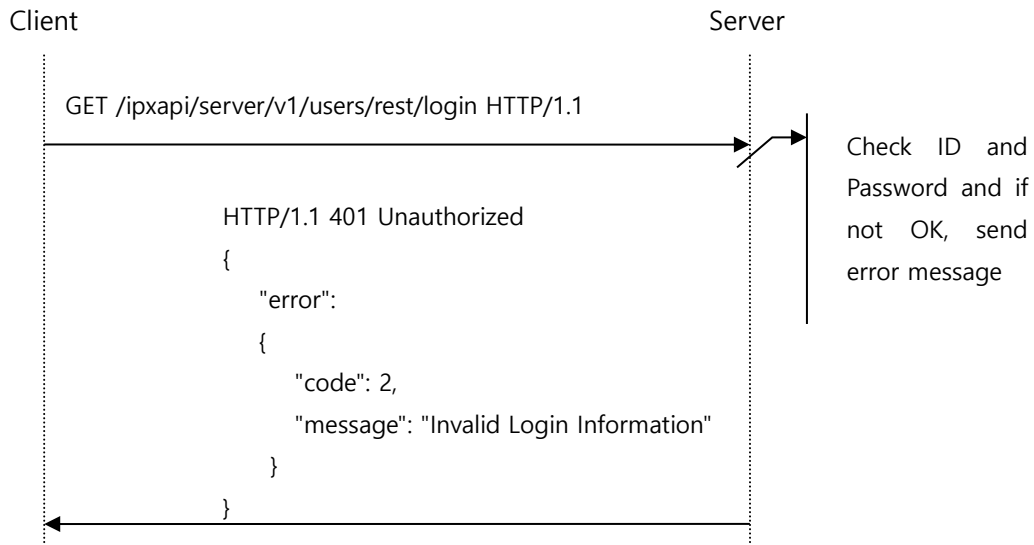
Request Data	N/A
Return Format	<p>Normal case</p> <p>200 OK in header without Content</p> <p>Error case</p> <pre>{ "error": { "code": ###, "message": "#Message" } }</pre>

Case 1) Login OK



* The {TOKEN STRING} is JWT (JSON Web Token, rfc7519) string.

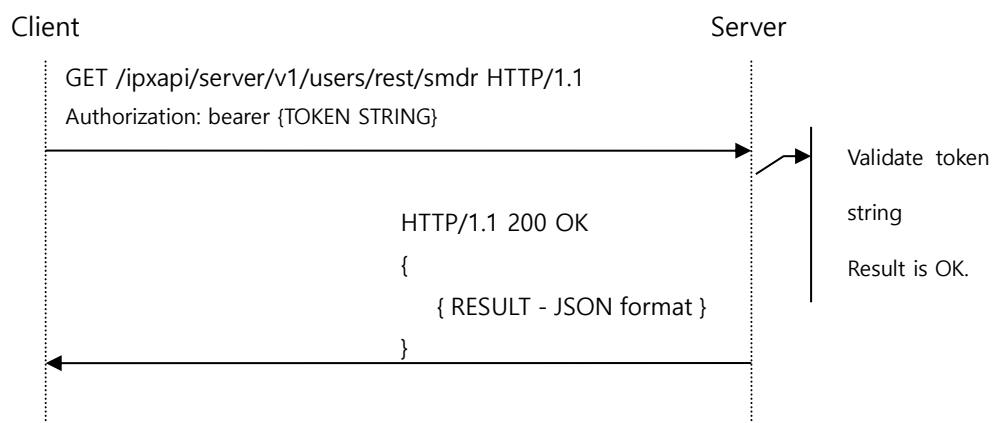
Case 2) Login Failure



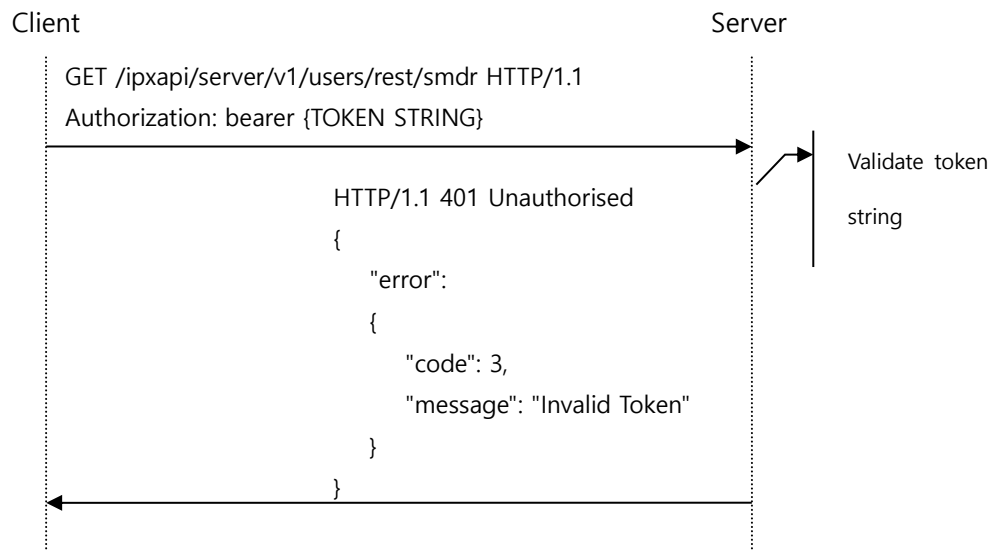
If you receive HTTP response code 401 Unauthorized, please try to login again.

If you fail again, please ask the system administrator.

If you succeed to get token, you can use it to access the system resource. The token should be added like Authorization: bearer {TOKEN STRING} in HTTP header. The server check validation of the token and then response result. If the result is OK, the server will process your request and response result.



If token validation is failed in server, the server will response with error code and message. The error code is explained in error code table.



4. GET query rule

GET method means request to retrieve resource. To classify item from resource, you can (have to) use query string after {FULL URI}.

4.1. Query with JSON data

{FULL URI}?{QUERY}

The query string consists of name-value pairs according to HTTP1.1 standard as follow.

{QUERY} : {NAME#1}={VALUE#1}&{NAME#2}={NAME#2}& ... &q={--JSON DATA--}

The name-value pair is used. If you want to use query in json format, use q={--JSON DATA--} string. For example, if you want to request count of record when you use SMDR resource, use as q={"countOnly":true}. This rule is used throughout the API.

4.2. Regular expression

Regular expressions are available in SMDR resource. SMDR data can be filtered by regular expressions.

Basic query format: { "\$operator" : { "left operand" : "right operand" } }

Operator name started from \$ character in string. The operator is placed in string of JSON object and left operand and right operand pair is placed in object. The supported operators and examples are as below.

Operator	Description	Example
	Match	{"field" : value}
\$not	Not match	{"\$not" : {"field" : value}}
\$or	Or operator	{"\$or": [{"field" : value1}, {"field" : value2}, {"field2" : value3} ...]}
\$and	And operator	{"\$and": [{"field" : value1}, {"field2" : value2} ...]}
\$regex	Match field	{"\$regex" : {"field" : --FORMAT--}}
\$>	Greater	{"\$>" : {"field": 100}}

\$>=	Same or greater	{"\$>=" : {"field": 100}}
\$<	Little	{"\$<" : {"field": 100}}
\$<=	Same or little	{"\$<=" : {"field": 100}}

The regular expression operator is "\$regex". There are two wildcards used in conjunction with --FORMAT-- for regular expression.

* : The asterisk indicates zero or more occurrences of the preceding element.

? : Matches any single character

To match these wildcards by character, use \ first.

Description	format
Finds any values that start with string	"string"
Finds any values that have string in any position	"*string"
Finds any values that end with string	"string"
Finds any values in six length string that starts with s and ends with g	"s????g"
Finds any values that have wildcard characters string like "****" in any position	"***"

* Date format is YYYY-MM-DD hh:mm:ss.

Example)

JSON	Meaning
{ "status" : "normal", "age" : "20" }	status=normal and age=20
{ "\$or": [{ "status": "normal", "age": 20 }, { "status": "idle", "age": 30 }] }	(status=normal and age=20) or (status=idle and age=30)
{ "code" : "XYZ", "\$or": [{ "status": "normal", "age": 20 }, { "status": "idle", "age": 30 }] }	code=XYZ and ((status=normal and age=20) or (status=idle and age=30))
{ "status": "normal", "\$>=" : {"age": 20}, "\$<=" : {"age": 30}, "\$not": {"age": 25} }	(status=normal and age>=20 and age<=30 and age != 25)
{ "\$regex" : {"status": "*L"} }	Find status value that end with 'L'
{ "\$regex" : {"status": "n????l"} }	Find status value that start with 'n' and follow any four characters and end with 'l'

5. API Resource

5.1.SMDR

“SMDR Web API Service” must be set to On in System Data-> SMDR Attributes (117). The output may vary depending on the SMDR Attributes menu setting. Check the SMDR menu. API License – SMDR license is required. Please refer to the manual for other SMDR options. The server account and the station user can use it, but the server account can read and delete data, and the station user can only read their own data. The account for the server can receive SMDR data in real time when the WebSocket is connected.

Feature	SMDR
Description	Get SMDR data and Delete SMDR data
Service Type	Server/Client
Method	GET, DELETE (Server only)
URI	Request: {BASE URI}/{server client}/{VERSION}/users/{User ID}/smdr Event: wss://{IP ADDR}:{PORT}/ipxapi/server/v1/users/{User ID}/acd
Header element	Authorization: bearer {token from system}
Request Data	<p>GET</p> <p>countOnly : request only record count, true or false</p> <p>maxCount : max number of records that can be retrieved at one time, positive integer type, if maxCount value is not requested, default value is 50.</p> <p>{QUERY} : can use fields in items as below return format. Refer example as below.</p> <p>DELETE</p> <p>{QUERY} : can use fields in items as below return format. Refer example as below.</p>
Return Format	<p>Normal case</p> <p>200 OK in header</p> <pre>{ "count": ## "items": [{ "Index": "#",</pre>

	<pre> "callRefID": ### "StationNumber": "####", "CoNumber": "##", "Duration": "hh:mm:ss", "StartTime": "YYYY-MM-DD hh:mm", "Direction": "#", "DialedNumber1": "####", "Cost": "##", "AccountCode": "####", "DialedNumber2": "####", "DisconnectCause": "#CODE-#REASON" }, ...] } Error case { "error": { "code": ###, "message": "#Message" } } </pre>
Meaning of content	<p>count: number of items</p> <p>items: array include each record</p> <p>Index: index of record in SMDR DB</p> <p>callRefID: Call Tracking Number if set "CALL TRACKING Enable" in System Attributes(160~161)</p> <p>StationNumber: Source number, if called from CO, this field will be displayed COxxx.</p> <p>CoNumber: CO line number</p> <p>Duration: Call time serviced</p> <p>StartTime: Call start time, this date format will be controlled by PGM 169.</p> <p>Direction:</p> <p><u>DialedNumber1</u>: CLI/Dialed/CPN number field. This field is not fixed name. It will be controlled by the SMDR Ring/CLI/CPN Service-I value in PGM 177. If the value is set CLI, this name will be displayed "CLI Number".</p> <p>Cost: Call cost</p>

	<p>AccountCode: Account Code entered or Entry number of Authorization Code(Password)</p> <ul style="list-style-type: none"> - STA-P[12341000] : Station 12341000 Authorization Code - SYS-P[1111] : System Auth Table 1111 Authorization Code. <p><u>DialedNumber2</u>: CLI/Dialed/CPN number field. Same as <u>DialedNumber1</u> except that it is not required. It will be controlled by the SMDR Ring/CLI/CPN Service-II value in PGM 177.</p> <p>DisconnectCause: Disconnect cause(reason) if there is cause. It will be controlled by SMDR Disconnect Cause value in PGM 177. Refer Disconnect Cause Code Table.</p>
--	---

Direction Code	Description
t	
I	
O	
T	
H	
R	
G	
E	
S	
P	
o	
X	
V	
N	
n	

Table 1. Direction Code

Disconnect Cause Code	Description
1	UnAllocated Number
3	No Route to Dest
8	Warning Tone
16	Normal Call Clearing
18	No User Responding
19	User No Answer
20	subscriber absent
21	Call Rejected

22	Number Changed
22	User DND
27	Destination Out of Order
28	Invalid Number format
30	Response to STATUS ENQUIRY
31	Normal, Unspecified
34	No Channel Available
38	Network Out Of Order
41	Temporary Failure
42	switching equipment congestion
44	Request Channel Unavailable
47	Resource Unavailable
50	Request Facility Not Subscribed
57	Bearer Capability No Authorized
58	Bearer capability Not Available
63	Service or option not available
65	Bearer capability Not Implemented
66	Channel Type Not Implemented
69	Request Facility Not Implemented
70	Only restricted digital information bearer capability is available
79	Service or option not implemented, unspecified
81	Invalid Call Reference
83	Call ID No exist
84	Call ID In Use
85	No Call Suspended
86	Call ID Cleared
88	Incompatible Destination
91	Invalid transit network selection
97	Message Type No Exist
98	Message Type Not Compatible with Call state
100	Invalid Information Element
102	timer expire
110	message with unrecognized parameter, discarded : Only Russia ISUP
111	Protocol Error
112	SIP Enblock Address Incomplete (LG Only)

Table 2. Disconnect Cause Code

5.1.1. Examples with curl utility application

- 1) Get count of all records
`curl -G https://{IP address}:{port}/ipxapi/server/v1/users/{ID}/smdr -k -v -H "Authorization: bearer $variable" --data-urlencode 'countOnly=true'`
- 2) Get up to 10 from first record
`curl -G https://{IP address}:{port}/ipxapi/server/v1/users/{ID}/smdr -k -v -H "Authorization: bearer $variable" --data-urlencode 'maxCount=10'`
- 3) Get data with StationNumber 1003
`curl -G https://{IP address}:{port}/ipxapi/server/v1/users/smdr/smdr -v -k -H "Authorization: bearer $variable" --data-urlencode "q={\"StationNumber\": \"1003\"}"`
- 4) Get data with StationNumber ending in 3 and up to 10 records
`curl -G https://{IP address}:{port}/ipxapi/server/v1/users/{ID}/smdr -k -H "Authorization: bearer $variable" --data-urlencode "q={\"$regex\": {\"StationNumber\": \"*3\"}}\" --data-urlencode 'maxCount=10'`
- 5) Get data with StationNumber is 1003 and StartTime is since 2018-08-10
`curl -G https://{IP address}:{port}/ipxapi/server/v1/users/{ID}/smdr -v -k -H "Authorization: bearer $variable" --data-urlencode "q={\"StationNumber\": \"1003\", \"$>\": {\"StartTime\": \"2018-08-10\"}}"`
- 6) Delete index 1, 3 and 5
`curl -XDELETE https://{IP address}:{port}/ipxapi/server/v1/users/{ID}/smdr -v -k -H "Authorization: bearer $variable" --data-urlencode "{ \"\$and\": [{\"Index\": 1}, {\"Index\": 3}, {\"Index\": 5}] }"`
- 7) Delete index from 2 to 5
`curl -XDELETE https://{IP address}:{port}/ipxapi/server/v1/users/smdr/smdr -v -k -H "Authorization: bearer $variable" --data-urlencode "{ \"\$>\": {\"Index\": 2}, \"\$<\": {\"Index\": 6} }"`

5.1.2. Service Example

- 1) Request data periodically and delete it
 If you don't need real time data receiving, you can use this way. You only need to periodically get and delete the requested and received data.
- 2) Receive events and delete it
 If you want to receive data in real time, you can receive via WebSocket session and delete it by delete request. If the data is full because it is not deleted, an alarm may occur depending on the system configuration. It may also be missing because the data is no longer stored.

5.2.ACD

“**ACD Manager Print**” must be enabled in System Data->System Attributes(160~161). API License – AMP license is required. The account for the server can receive ACD data in real time when the WebSocket is connected.

Feature	ACD
Description	ACD event
Service Type	Server
Method	Event
URI	wss://{IP ADDR}:{PORT}/ipxapi/server/v1/users/{User ID}/acd
Header element	Authorization : bearer {token from system} Upgrade: WebSocket
Request Data	
Event Data example	<pre>{ "event": "acd", "data": { "time": "2020/01/07 14:47:04", "callRefID": 2, "eventCode": 18, "eventString": "STATION IDLE", "sourceType": "Station", "sourceNumber": "1004", "destType": "", "destNumber": "", "data1": "", "data2": "" } }</pre>
Event Data Description	time: YYYY/MM/DD hh:mm:ss, event occurred time callRefID: call reference ID eventCode: see below table eventString: see below table sourceType: CO or Station sourceNumber: source CO or Station Number destType: CO or Station destNumber: destination CO or Station Number data1,data2: See below table

Event Code	Event String	Description														
01	CO BUSY	CallRefID = Number Event Code = 1 Source = CO Destination = STATION/CO Data1 = N/A Data2 = N/A														
02	CO IDLE	CallRefID = N/A Event Code = 2 Source = CO Destination = N/A Data1 = N/A Data2 = N/A														
03	CO IN RING	CallRefID = Number Event Code = 3 Source = CO Destination = STATION (When group is ringing) Data1 = Group Bin Number or blank (When group is ringing) Data2 = Type of Ringing <table><tr><th>Ring Type</th><th>Value</th></tr><tr><td>Ring Speed Dial</td><td>0</td></tr><tr><td>Ring One or More Phones</td><td>2</td></tr><tr><td>Ring Hunt Group</td><td>4</td></tr><tr><td>Ring Voice mail Group</td><td>3</td></tr><tr><td>Ring UCD Group</td><td>5</td></tr><tr><td>Ring To Modem</td><td>6</td></tr></table>	Ring Type	Value	Ring Speed Dial	0	Ring One or More Phones	2	Ring Hunt Group	4	Ring Voice mail Group	3	Ring UCD Group	5	Ring To Modem	6
Ring Type	Value															
Ring Speed Dial	0															
Ring One or More Phones	2															
Ring Hunt Group	4															
Ring Voice mail Group	3															
Ring UCD Group	5															
Ring To Modem	6															
11	AGENT PRIMARY LOGIN	CallRefID = N/A Event Code = 11 Source = STATION Destination = N/A Data1 = GROUP Bin Number Data2 = User ID (0000 – 9999)														
12	AGENT PRIMARY LOGOUT	CallRefID = N/A Event Code = 12														

		Source = STATION Destination = N/A Data1 = GROUP Bin Number Data2 = N/A
13	AGENT UCD UNAVAIL	CallRefID = N/A Event Code = 13 Source = STATION Destination = N/A Data1 = Blank or Dialed Digit: 1 ~ 9, 0(10), *(11), #(12) Data2 = GROUP Bin Number
14	AGENT UCD AVAIL	CallRefID = N/A Event Code = 14 Source = STATION Destination = N/A Data1 = Blank or Dialed Digit: 1 ~ 9, 0(10), *(11), #(12) Data2 = GROUP Bin Number
15	AGENT UCD WRAP UP START	CallRefID = N/A Event Code = 15 Source = STATION Destination = N/A Data1 = N/A Data2 = N/A
16	AGENT UCD WRAP UP END	CallRefID = N/A Event Code = 16 Source = STATION Destination = N/A Data1 = N/A Data2 = N/A
17	STATION BUSY	CallRefID = Number or blank Event Code = 17 Source = STATION Destination = STATION/CO or Blank Data1 = Blank or Dialed Digit: 1 ~ 9, 0(10), *(11), #(12) Data2 = N/A
18	STATION IDLE	CallRefID = N/A Event Code = 18 Source = STATION Destination = N/A

		Data1 = N/A Data2 = N/A																												
19	STATION DND ACTIVE	CallRefID = N/A Event Code = 19 Source = STATION Destination = N/A Data1 = N/A Data2 = N/A																												
20	STATION DND INACTIVE	CallRefID = N/A Event Code = 20 Source = STATION Destination = N/A Data1 = N/A Data2 = N/A																												
21	STATION FORWARD ACTIVE	CallRefID = N/A Event Code = 21 Source = STATION Destination = N/A Data1 = Forward Type Data2 = N/A <table><tr><td>Station Call Forward Type</td><td>Value</td></tr><tr><td>Station Unconditional</td><td>1</td></tr><tr><td>Station No Answer</td><td>17</td></tr><tr><td>Station Busy</td><td>33</td></tr><tr><td>Station No Answer or Busy</td><td>49</td></tr><tr><td>Station Offnet</td><td>2</td></tr><tr><td>CO Line Offnet</td><td>3</td></tr><tr><td>CO Group Offent</td><td>4</td></tr><tr><td>CO All Offent</td><td>5</td></tr><tr><td>UCD Unconditional</td><td>6</td></tr><tr><td>UCD No Answer</td><td>22</td></tr><tr><td>UCD Busy</td><td>38</td></tr><tr><td>UCD No Answer or Busy</td><td>54</td></tr><tr><td>Hunt Unconditional</td><td>7</td></tr></table>	Station Call Forward Type	Value	Station Unconditional	1	Station No Answer	17	Station Busy	33	Station No Answer or Busy	49	Station Offnet	2	CO Line Offnet	3	CO Group Offent	4	CO All Offent	5	UCD Unconditional	6	UCD No Answer	22	UCD Busy	38	UCD No Answer or Busy	54	Hunt Unconditional	7
Station Call Forward Type	Value																													
Station Unconditional	1																													
Station No Answer	17																													
Station Busy	33																													
Station No Answer or Busy	49																													
Station Offnet	2																													
CO Line Offnet	3																													
CO Group Offent	4																													
CO All Offent	5																													
UCD Unconditional	6																													
UCD No Answer	22																													
UCD Busy	38																													
UCD No Answer or Busy	54																													
Hunt Unconditional	7																													

		Hunt No Answer	23	
		Hunt Busy	39	
		Hunt No Answer or Busy	55	
		Voice Mail Unconditional	8	
		Voice Mail No Answer	24	
		Voice Mail Busy	40	
		Voice Mail No Answer or Busy	56	
22	STATION FORWARD INACTIVE	CallRefID = N/A Event Code = 22 Source = STATION Destination = N/A Data1 = N/A Data2 = N/A		
23	UCD SUPERVISOR LOGIN	CallRefID = N/A Event Code = 23 Source = STATION Destination = N/A Data1 = GROUP Bin Number Data2 = User ID (0000 – 9999)		
24	UCD SUOERVISOR LOGOUT	CallRefID = N/A Event Code = 24 Source = STATION Destination = N/A Data1 = GROUP Bin Number Data2 = N/A		
25	AGENT SECONDARY LOGIN	CallRefID = N/A Event Code = 25 Source = STATION Destination = N/A Data1 = GROUP Bin Number Data2 = User ID (0000 – 9999)		
26	AGENT SECONDARY LOGOUT	CallRefID = N/A Event Code = 26 Source = STATION Destination = N/A Data1 = GROUP Bin Number		

		Data2 = N/A								
41	SEIZE STATION/CO	CallRefID = Number Event Code = 41 Source = STATION/CO Destination = STATION/CO Data1 = N/A Data2 = N/A								
42	SEIZE ACK/CONNECT/ANSWER	CallRefID = Number Event Code = 42 Source = STATION/CO Destination = STATION/CO Data1 = N/A Data2 = N/A								
43	SEIZE NAK/ABANDON	CallRefID = N/A Event Code = 43 Source = STATION/CO Destination = STATION/CO Data1 = N/A Data2 = N/A								
44	DISCONNECT	CallRefID = Number Event Code = 44 Source = STATION/CO Destination = STATION/CO Data1 = 0 is normal, 3 is the disconnection from conference. 1 (Data2 is Disconnect Cause). Data2 = N/A or Disconnect Cause(00~FF)								
45	CONFERENCE ADD	CallRefID = Number Event Code = 45 Source = STATION Destination = STATION/CO when adding to conference, Blank otherwise Data1 = Conference Action Data2 = N/A <table><tr><td>Conference Action Type</td><td>Value</td></tr><tr><td>Terminate Conference</td><td>1</td></tr><tr><td>Enter Conference</td><td>2</td></tr><tr><td>Exit Conference</td><td>3</td></tr></table>	Conference Action Type	Value	Terminate Conference	1	Enter Conference	2	Exit Conference	3
Conference Action Type	Value									
Terminate Conference	1									
Enter Conference	2									
Exit Conference	3									

46	CONFERENCE PARK	<p>Not yet implemented.</p> <p>CallRefID = Number</p> <p>Event Code = 46</p> <p>Source = STATION</p> <p>Destination = STATION/CO</p> <p>Data1 = N/A</p> <p>Data2 = N/A</p>
47	EXECUTIVE OVERRIDE	<p>Not yet implemented.</p> <p>CallRefID = Number</p> <p>Event Code = 47</p> <p>Source = STATION</p> <p>Destination = STATION</p> <p>Data1 = N/A</p> <p>Data2 = N/A</p>
48	FORWARD	<p>CallRefID = Number</p> <p>Event Code = 48</p> <p>Source = STATION</p> <p>Destination = STATION/CO</p> <p>Data1 = N/A</p> <p>Data2 = N/A</p>
49	HOLD	<p>CallRefID = Number</p> <p>Event Code = 49</p> <p>Source = STATION/CO</p> <p>Destination = STATION/CO</p> <p>Data1 = N/A</p> <p>Data2 = N/A</p>
50	HOLD RECALL	<p>CallRefID = Number</p> <p>Event Code = 50</p> <p>Source = STATION</p> <p>Destination = STATION/CO</p> <p>Data1 = Blank or 0</p> <p>Data2 = Blank or 0</p>
51	HUNT GROUP	<p>CallRefID = Number</p> <p>Event Code = 51</p> <p>Source = STATION</p> <p>Destination = STATION</p> <p>Data1 = GROUP Bin Number</p> <p>Data2 = STATION Order Number</p>

52	PAGE ALL	CallRefID = N/A Event Code = 52 Source = STATION Destination = N/A Data1 = N/A Data2 = N/A
53	PAGE EXT	CallRefID = N/A Event Code = 53 Source = STATION Destination = N/A Data1 = ZONE Offset Data2 = N/A
54	PAGE INT	CallRefID = N/A Event Code = 54 Source = STATION Destination = N/A Data1 = ZONE Offset Data2 = N/A
55	PARK GROUP	CallRefID = Number Event Code = 55 Source = STATION Destination = STATION/CO Data1 = GROUP Bin Number Data2 = N/A
56	PARK PERSONAL	Not yet implemented. CallRefID = Number Event Code = 56 Source = STATION Destination = STATION/CO Data1 = N/A Data2 = N/A
57	PICK UP	CallRefID = N/A Event Code = 57 Source = STATION Destination = STATION/CO Data1 = N/A Data2 = N/A
58	TRANSFER HOLD	CallRefID = Number

		Event Code = 58 Source = STATION Destination = STATION/CO Data1 = N/A Data2 = N/A
59	UCD GROUP	CallRefID = Number Event Code = 59 Source = STATION Destination = Number Data1 = GROUP Bin Number Data2 = STATION Order Number
60	UCD NO ANSWER TO	Not yet implemented. CallRefID = Number Event Code = 60 Source = STATION Destination = CO Data1 = N/A Data2 = N/A
61	UCD OVERFLOW TO	CallRefID = N/A Event Code = 61 Source = STATION/CO Destination = STATION Data1 = GROUP Bin Number Data2 = N/A
62	UCD QUE HOLD TO	CallRefID = Number Event Code = 62 Source = STATION/CO Destination = N/A Data1 = ACD GROUP Bin Number (0 indicate it is not a ACD call) Data2 = N/A
63	VM GROUP	CallRefID = Number Event Code = 63 Source = STATION Destination = N/A Data1 = GROUP Bin Number Data2 = STATION Bin Number
64	UCD HELP	CallRefID = Number Event Code = 64

		Source = STATION Destination = STATION Data1 = GROUP Bin Number Data2 = N/A
65	UCD CALL QUALIFIER	Not yet implemented. CallRefID = Number Event Code = 65 Source = STATION Destination = CO Data1 = N/A Data2 = Qualification Code(0000-9999)
66	STATION RING	CallRefID = Number Event Code = 66 Source = STATION Destination = STATION/CO Data1 = ACD GROUP Bin Number (0 indicate it is not a ACD call) Data2 = ACD GROUP Number of Destination Station
67	NUMBER DIALED	CallRefID = Number Event Code = 67 Source = STATION Destination = CO Data1 = N/A Data2 = Number Dialed (Maximum of 32 digits qualified 30 sec. After last digit is dialed)
68	TIME & DATE	CallRefID = N/A Event Code = 68 Source = N/A Destination = N/A Data1 = MMDD Data2 = YY
69	SMDR	CallRefID = Number Event Code = 69 Source = STATION Destination = CO Data1 = HHMMSS (Call Duration) Data2 = Number Dialed (Maximum of 32 digits qualified 30 sec. After last digit is dialed)
70	TRANSFER COMPLETE	CallRefID = Number

		Event Code = 70 Source = STATION/CO Destination = STATION/CO Data1 = N/A Data2 = N/A
71	INCOMMING DID INFO	CallRefID = Number Event Code = 71 Source = CO Destination = STATION Data1 = DID Number (MAX 7 characters) Data2 = N/A
72	INCOMMING CALLER INFO	CallRefID = Number Event Code = 72 Source = CO Destination = STATION Data1 = Phone Number (MAX 18 characters) Data2 = Name (Max 24 characters)
73	CONNECT TX VOICE INFO	CallRefID = Number Event Code = 73 Source = All Destination = All Data1 = High 2 byte of SSRC (4 hex characters) Data2 = low 2 byte of SSRC (4 hex characters)
74	CONNECT RX VOICE INFO	CallRefID = Number Event Code = 74 Source = All Destination = All Data1 = High 2 byte of SSRC (4 hex characters) Data2 = low 2 byte of SSRC (4 hex characters)
75	CONNECT TX VIDEO INFO	CallRefID = Number Event Code = 75 Source = All Destination = All Data1 = High 2 byte of SSRC (4 hex characters) Data2 = low 2 byte of SSRC (4 hex characters)
76	CONNECT RX VIDEO INFO	CallRefID = Number Event Code = 76 Source = All

		Destination = All Data1 = High 2 byte of SSRC (4 hex characters) Data2 = low 2 byte of SSRC (4 hex characters)
77	ACD INFO CHANGED	CallRefID = N/A Event Code = 77 Source = STATION(System Attendant No) Destination = N/A Data1 = GROUP Bin Number Data2 = N/A
80	INCOMMING DIGIT INFO	CallRefID = Number Event Code = 80 Source = CO Destination = Data1 = DIGIT Number (MAX 1 characters) Data2 =
81	AGENT HOTDESK LOGIN	CallRefID = N/A Event Code = 81 Source = STATION (Hotdesk Agent Number that is logged in) Dest = STATION(Dummy Station Number that is logged out) Data1 = N/A Data2 = N/A This Message is sent to application, when a hot desk station is logged in.
82	AGENT OUT OF SERVICE	CallRefID = N/A Event Code = 82 Source = STATION (Out Of Service for all station) Destination = N/A Data1 = N/A Data2 = N/A This Message is sent to application, when a station is turn to Out Of Service status
83	AGENT HOTDESK LOGOUT	CallRefID = N/A Event Code = 83 Source = STATION (Hotdesk Agent Number that is logged out) Dest = STATION (Dummy Station Number that is logged in) Data1 = N/A Data2 = N/A This Message is sent to application, when a hot desk station is

		logged out.
84	AGENT IN SERVICE	CallRefID = N/A Event Code = 84 Source = STATION (In Service for all station) Destination = N/A Data1 = N/A Data2 = N/A This Message is sent to application, when a station is turn to in service status
85	SMDR ACCOUNT CODE	CallRefID = Number Event Code = 85 Source = N/A Destination = N/A Data1 = Account Code(Max 12 digits) Data2 = When SMDR(69) message is sent, if Account Code is available, this message is also sent.
86	SMDR AUTHORIZATION CODE	CallRefID = Number Event Code = 86 Source = N/A Destination = N/A Data1 = Authorization Code(Max 12 digits) Data2 = When SMDR(69) message is sent, if Authorization Code is available, this message is also sent.
87	SMDR COST	(define only, use later) CallRefID = Number Event Code = 87 Source = N/A Destination = N/A Data1 = Cost(Max 10 digits) Data2 =
88	SMDR INCOMING	(define only, use later) CallRefID = Number Event Code = 88 Source = CO Destination = Station

		Data1 = HHMMSS (Call Duration or Ring Duration) Call Duration or Ring Duration is decided by Call Type. Data2 = Caller Number (Maximum of 23 digits)
89	SMDR ICM	(define only, use later) CallRefID = Number Event Code = 89 Source = Destination = Calling Station Data1 = HHMMSS (Call Duration) Data2 = Called Station
90	SMDR CALL TYPE	(define only, use later) CallRefID = Number Event Code = 90 Source = CO Destination = Station Data1 = Call Type (0000 ~ 0015) Data2 = Call Type is defined as below. 0 : SMDR Off hook 1 : SMDR Incoming Call Transfer 2 : SMDR Incoming Call 3 : SMDR Outgoing Call 4 : SMDR Outgoing Call Transfer 5 : SMDR Hold Call Lost 6 : SMDR Ringing Call Lost 7 : SMDR Group Call Lost 8 : SMDR ICM Call 9 : SMDR ICM SMS 10 : SMDR ICM Paging 11 : SMDR Outgoing Unanswered 12 : SMDR Bar Charge 13 : SMDR Voice Mail 14 : SMDR Net Outgoing 15 : SMDR Net Incoming

Table 3 ACD Event Specification

Table 4. ACD event code and description

5.3. CTI (Call Control)

API License – CTI license is required. The account for the server can receive CTI event data in real time when the WebSocket is connected. And API License – CTI-EXT license is required for controlling extensions via this API.

If you want to use callRefID, “**CALL TRACKING Enable**” must be enabled.

5.3.1. Term Description

- Web Client: client connecting to web API service
- callRefID: This is the call identifier number assigned when a new call is generated in the iPECS system. It is used to distinguish the call that is activated by Call Event or Call Command. The data type is a positive integer.
- deviceNumber: Number had a Hardware Phone Device.
- serviceDN: Master number of personal groups
- calledDN, callingDN: the number of the called party and the caller.
- agentId – agentId used to log in to the ACD Group be set in advance in iPECS system.
- transactionID: If the client sends a request with transactionID, it will return it in response. Can be used when needed. The data type is a positive integer.

5.3.2.Call Event Start and Stop Request

Web Client can send Monitor Start to request the transmission of the status information of the Extension and send the Monitor Stop to stop sending the status information of the Extension. Web Client receives the status of the Extension

The CTI Command for status message transmission control of the terminal is as follows.

- Monitor Start
- Monitor Stop

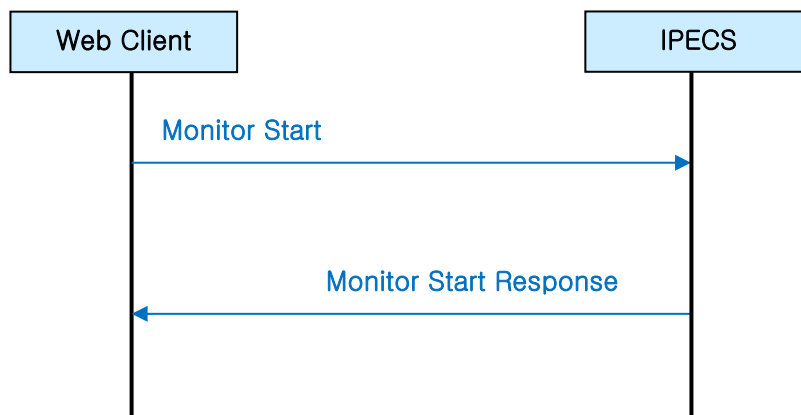
5.3.2.1. Monitor Start

Function Description

Web Client requests CTI event generation to Extension for status report.

Usage

Web Client sends a Monitor Start Service Request to the IPECS SYSTEM. The IPECS SYSTEM issues a positive response if the requesting Command is valid, and a Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/monitor
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<pre>{ "deviceNumber": ["1000", "1001", ..., "9999"] }</pre>
Positive Response	HTTP 200 OK Content: <pre>{ "result": [{"1000": "OK"}, ...] }</pre>

	<pre> {"1001": "generic"}, ... {"9999": "invalidParameterValue"}] } </pre>
Negative Response	<pre> HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: { "error" : { "code": xxx, "message": "xx xxxx" } } </pre>

[Condition]

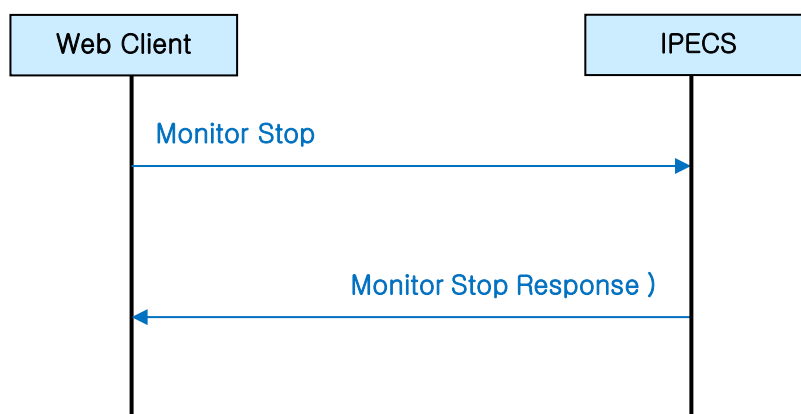
- The deviceNumber count of Monitor Start can't be over 100.
- To request more devices, other Monitor Start request should be sent after receiving response of the request.
- The deviceNumber list can be obtained with a Get Terminal Information request.

5.3.2.2. Monitor Stop**Function Description**

Web Client requests to stop CTI event generation of Extension status.

Usage

Web Client sends a Monitor Stop Service Request to the IPECS system. The IPECS system issues a positive response if the requesting Command is valid, and a negative response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/monitor
------------	---

Method	DELETE
Header	
Parameter	{ "deviceNumber": ["1000", "1001", ..., "9999"] }
Positive Response	HTTP 200 OK Content: { }
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: { "result": [{"1000": "OK"}, {"1001": "generic"}, ... {"9999": "invalidParameterValue"}] }

5.3.2.3. Call Event Message

Function Description

iPECS System sends following CTI events for the Monitor Start requested extensions.

Cause code	Text
3	user_busy
4	call_back
6	forward_immediate
7	forward_busy
8	forward_no_answer
9	forward
10	no_answer
11	pickup
13	invalid_destination
14	dnd
22	new_call
23	no_available_agents
27	recall
28	redirected
31	silent_monitoring
32	screened_transfer
33	trunk_busy
35	blocked
37	consultation
48	normal_clearing

52	blind_transfer
56	timeout
57	conference
58	reroute
59	trunk_call
60	unscreened_transfer
61	bridge_answer
62	branch_answer
63	branch_release
65	group_call
99	callwait
101	mobile_answer
102	madn_answer
103	reject

Table 5 Cause code of Call Event

5.3.2.3.1. Dialing Event

Event to notify the dialing digit of the caller after off-hook

Parameter	Value	Mandatory/ Optional	Description
type	String	M	dialing
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
callRefID	Positive integer	M	call reference identifier
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "dialing",
    "deviceNumber": "601206",
    "serviceDN": "601206",
    "callRefID": 10,
    "evtSerialNum": 42
  }
}
```

5.3.2.3.2. Proceeding Event

Event to notify the call proceeding status of the caller after completion of dialing

Parameter	Value	Mandatory/ Optional	Description
type	String	M	proceeding
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
dialDigit	Digit string	M	Dialed number
callRefID	Positive integer	M	Call reference identifier
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "proceeding",
    "deviceNumber": "601206",
    "serviceDN": "601206",
    "dialDigit": "903180551204#",
    "callRefID": 14,
    "evtSerialNum": 57
  }
}
```

5.3.2.3.3. Alerting Event

Event to notify the alerting status of the caller

Parameter	Value	Mandatory/ Optional	Description
type	string	M	alerting
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
callingDN	Digit string	M	Calling DN
calledDN	Digit string	M	Called DN
causeCode	Int	M	Refer to <Table 5>
causeMsg	string	M	Refer to <Table 5>
callRefID	Positive integer	M	Call reference identifier
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "alerting",
    "deviceNumber": "601206",
    "serviceDN": "605006",
    "callingDN": "605006",
    "calledDN": "+03180551204",
    "causeCode": 22,
    "causeMsg": "new_call",
    "callRefID": 14,
    "evtSerialNum": 58
  }
}
```

5.3.2.3.4. Ringing Event

Event to notify the ringing status of the called

- In order to inform Web Client that a call has been redirected, callType of the Ringing Event is set to 'transfer'.

Parameter	Value	Mandatory/ Optional	Description
type	string	M	ringing
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
callingDN	Digit string	M	Calling DN
calledDN	Digit string	M	Called DN
diversionNum	Digit string	O	Number who redirect the call
causeCode	Int	M	Refer to <Table1>
causeMsg	string	M	Refer to <Table 5>
callRefID	Positive integer	M	Call reference identifier
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "ringing",
    "deviceNumber": "605108",
    "serviceDN": "605001",
    "callingDN": "601206",
    "calledDN": "605001",
    "causeCode": 22,
    "causeMsg": "new_call",
    "callRefID": 17,
    "evtSerialNum": 68
  }
}
```

5.3.2.3.5. Connected Event

Event to notify the connect status

Parameter	Value	Mandatory/ Optional	Description
type	string	M	connected
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
callingDN	Digit string	M	Calling DN
calledDN	Digit string	M	Called DN
diversionNum	Digit string	O	Number who redirect the call
causeCode	Int	M	Refer to <Table1>
causeMsg	string	M	Refer to <Table 5>
callRefID	Positive integer	M	Call reference identifier
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "connected",
    "deviceNumber": "601207",
  }
}
```

```

"serviceDN": "605001",
"callingDN": "601206",
"calledDN": "605001",
"diversionNum": "",
"causeCode": 22,
"causeMsg": "new_call",
"callRefID": 17,
"evtSerialNum": 71
}

```

5.3.2.3.6. Released Event

Event to notify call disconnection

In case of following conditions, the cause value of the Released Event is notified to Web Client, so Web Client can manage missed call notification and call history.

- When the Mobile extension responds the incoming call
- When the other member of MADN answers the incoming call
- When the incoming call is rejected by the user

Parameter	Value	Mandatory/ Optional	Description
type	string	M	released
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
callRefID	Positive integer	M	Call reference identifier
releasedDN	Digit string	M	Released DN
causeCode	Int	M	Refer to <Table 5>
causeMsg	string	M	Refer to <Table 5>
evtSerialNum	Positive integer	M	Event serial number

Event:

```

{
  "event": "call",
  "data": {
    "type": "released",
    "deviceNumber": "601206",
    "serviceDN": "601206",
    "releasedDN": "601206",
    "causeCode": 48,
    "causeMsg": "normal_clearing",
    "callRefID": 16,
    "evtSerialNum": 65
  }
}

```

5.3.2.3.7. ReleasedAsc Event

An event to notify that the party you are calling ended the call.

Parameter	Value	Mandatory/ Optional	Description
-----------	-------	------------------------	-------------

type	string	M	releasedasc
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
releasedAscDN	Digit string	M	Released DN
causeCode	Int	M	Refer to <Table 5>
causeMsg	string	M	Refer to <Table 5>
callRefID	Positive integer	M	Call reference identifier
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "releasedasc",
    "deviceNumber": "601206",
    "serviceDN": "601206",
    "releasedAscDN": "605001",
    "causeCode": 48,
    "causeMsg": "normal_clearing",
    "callRefID": 17,
    "evtSerialNum": 74
  }
}
```

5.3.2.3.8. Rerouted Event

Event to notify that the call diverted to another number and is no longer available

Parameter	Value	Mandatory/ Optional	Description
type	string	M	rerouted
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
calledDN	Digit string	M	Called DN
reroutingDN	Digit string	M	Calling DN
causeCode	Int	M	Refer to <Table 5>
causeMsg	string	M	Refer to <Table 5>
callRefID	Positive integer	M	Call reference identifier
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "rerouted",
    "deviceNumber": "601206",
    "serviceDN": "601206",
    "calledDN": "601208",
    "reroutingDN": "601206",
    "causeCode": 58,
    "causeMsg": "reroute",
    "callRefID": 18,
  }
}
```



```

"evtSerialNum": 83
}
}

```

5.3.2.3.9. Rerouting Event

Event to notify that the call diverted to another number and is no longer available

- Released Event will be transmitted following the Rerouted Event
- Rerouted Event can be sent in ringing and connected state

Parameter	Value	Mandatory/ Optional	Description
type	string	M	rerouting
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
calledDN	Digit string	M	Called DN
reroutingDN	Digit string	M	Calling DN
causeCode	Int	M	Refer to <Table 5>
causeMsg	string	M	Refer to <Table 5>
callRefID	Positive integer	M	Call reference identifier
evtSerialNum	Positive integer	M	Event serial number

Event:

```

{
  "event": "call",
  "data": {
    "type": "rerouting",
    "deviceNumber": "601206",
    "serviceDN": "601206",
    "calledDN": "601208",
    "reroutingDN": "601206",
    "causeCode": 58,
    "causeMsg": "reroute",
    "callRefID": 18,
    "evtSerialNum": 83
  }
}

```

5.3.2.3.10. Failed Event

Event to notify that the call is failed

Parameter	Value	Mandatory/ Optional	Description
type	string	M	fail
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
callingDN	Digit string	M	Calling DN
calledDN	Digit string	M	Called DN
busySvcList	string	O	Busy service list callback, campon, callwait, intrude

			Ex)"busySvcList":["callback", "campon"]
causeCode	Int	M	Refer to <Table 5>
causeMsg	string	M	Refer to <Table 5>
callRefID	Positive integer	M	Call reference identifier
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "fail",
    "deviceNumber": "601207",
    "serviceDN": "601207",
    "callingDN": "601207",
    "calledDN": "601208",
    "busySvcList": ["intrusion", "callback", "callwait"],
    "causeCode": 3,
    "causeMsg": "user_busy",
    "callRefID": 26,
    "evtSerialNum": 143
  }
}
```

5.3.2.3.11. Held Event

Event to notify that call is held

Parameter	Value	Mandatory/ Optional	Description
type	string	M	held
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
holdDN	Digit string	M	Holding DN
callRefID	Positive integer	M	Call reference identifier
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": " held",
    "deviceNumber": "601206",
    "serviceDN": "601206",
    "holdDN": "601207",
    "callRefID": 29,
    "evtSerialNum": 170
  }
}
```

5.3.2.3.12. Hold Event

Event to notify that the user hold the call

Parameter	Value	Mandatory/ Optional	Description
type	string	M	hold
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
holdDN	Digit string	M	Holding DN
callRefID	Positive integer	M	Call reference identifier
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "hold",
    "deviceNumber": "601207",
    "serviceDN": "601207",
    "holdDN": "601207",
    "callRefID": 29,
    "evtSerialNum": 169
  }
}
```

5.3.2.3.13. Retrieved Event

Event to notify that the held call is retrieved

- Retrieved Event is sent to retrieved device

Parameter	Value	Mandatory/ Optional	Description
type	string	M	retrieved
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
retrieveDN	Digit string	M	Retrieve DN
callRefID	Positive integer	M	Call reference identifier
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "retrieved",
    "deviceNumber": "601206",
    "serviceDN": "601206",
    "retrieveDN": "601207",
    "callRefID": 29,
    "evtSerialNum": 172
  }
}
```

5.3.2.3.14. Retrieve Event

Event to notify that the user retrieved the held call

- Retrieve Event is sent to retrieving device

Parameter	Value	Mandatory/Optional	Description
type	string	M	retrieve
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
retrieveDN	Digit string	M	Retrieve DN
callRefID	Positive integer	M	Call reference identifier
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "retrieve",
    "deviceNumber": "601207",
    "serviceDN": "601207",
    "retrieveDN": "601207",
    "callRefID": 29,
    "evtSerialNum": 171
  }
}
```

5.3.2.3.15. Transferred Event

Event to notify that the call is transferred

- Transferred Event is sent to transferee and transfer-to device

Parameter	Value	Mandatory/Optional	Description
type	string	M	transferred
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
transferToDN	Digit string	M	Transfer target DN
transferorDN	Digit string	M	Transferor DN
callRefID	Positive integer	M	Call reference identifier
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "transferred",
    "deviceNumber": "601206",
    "serviceDN": "605006",
    "transferToDN": "605008",
  }
}
```

```

"transferorDN": "605001",
"callRefID": 31,
"evtSerialNum": 197
}
}

```

5.3.2.3.16. Transferring Event

Event to notify that the call is transferring

- Transferring Event is sent to transferrer device

Parameter	Value	Mandatory/ Optional	Description
type	string	M	transferring
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
transferredDN	Digit string	M	Transferred DN
transferToDN	Digit string	M	Transfer target DN
transferorDN	Digit string	M	Transferor DN
callType	string	M	blind unscreened screened
callRefID	Positive integer	M	Call reference identifier
evtSerialNum	Positive integer	M	Event serial number

Event:

```

{
  "event": "call",
  "data": {
    "type": "transferring",
    "deviceNumber": "601207",
    "serviceDN": "605001",
    "transferredDN": "605006",
    "transferToDN": "605008",
    "transferorDN": "605001",
    "callType": "screened",
    "callRefID": 31,
    "evtSerialNum": 194
  }
}

```

5.3.2.3.17. Conferenced Event

Event to notify that conference call is established

- Conferenced Event is sent to all joined member except conference call organizer

Parameter	Value	Mandatory/ Optional	Description
type	string	M	conferenced
deviceNumber	Digit string	M	Terminal number

serviceDN	Digit string	M	Representative number
memberDN[...]	list	M	Conference member (max: eMG 13, UCP 32)
masterDN	Digit string	M	Conference call organizer
newConfMemberDN	Digit string	M	New conference member DN
callRefID	Positive integer	M	Call reference identifier
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "conferenced",
    "deviceNumber": "601206",
    "serviceDN": "601206",
    "memberDN": ["601206", "601207", "601208"],
    "masterDN": "601207",
    "newConfMemberDN": "601208",
    "callRefID": 34,
    "evtSerialNum": 219
  }
}
```

5.3.2.3.18. Conferencing Event

Event to notify that conference call is established (for organizer)

Parameter	Value	Mandatory/Optional	Description
type	string	M	conferencing
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
memberDN[...]	list	M	Conference member (max: eMG 13, UCP 32)
newConfMemberDN	Digit string	M	New conference member DN
callRefID	Positive integer	M	Call reference identifier
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "conferencing",
    "deviceNumber": "601207",
    "serviceDN": "601207",
    "memberDN": ["601206", "601207", "601208"],
    "newConfMemberDN": "601208",
    "callRefID": 34,
    "evtSerialNum": 217
  }
}
```

5.3.2.3.19. DoNotDisturb Event

Event to notify that DND status is changed

Parameter	Value	Mandatory/ Optional	Description
type	string	M	dnd
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
svcType	string	M	enable, disable
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "dnd",
    "deviceNumber": "601207",
    "serviceDN": "601207",
    "svcType": "enable",
    "evtSerialNum": 228
  }
}
```

5.3.2.3.20. Forwarding Event

Event to notify that call forwarding status is changed

Parameter	Value	Mandatory/ Optional	Description
type	string	M	forwarding
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
destination	Digit string	M	Call forward target
svcType	string	M	Call forward type disable uncondition busy no_answer busy_noans DND
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "forwarding",
    "deviceNumber": "601207",
    "serviceDN": "601207",
    "destination": "1208",
    "svcType": "no_answer",
    "evtSerialNum": 230
  }
}
```

```
}
}
```

5.3.2.3.21. Registered Event

Event to notify that the device is registered

- This event is sent only for the devices requested Monitor Start.

Parameter	Value	Mandatory/ Optional	Description
type	string	M	registered
deviceNumber	Digit string	M	Terminal number
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "registered",
    "deviceNumber": "601207",
    "evtSerialNum": 242
  }
}
```

5.3.2.3.22. UnRegistered Event

Event to notify the unregistered state of the phone to Web Client.

- This event is issued only to the terminal that is requested Monitor Start.
- For terminals that are not connected at Monitor Start, the Monitor Start Response is issued as OK and issues UnRegistered Event. By doing this, you can issue a Registered Event when the terminal is connected, and do not have to restart Monitor Start on Web Client.

Parameter	Value	Mandatory/ Optional	Description
type	string	M	unregistered
deviceNumber	Digit string	M	Terminal number
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "unregistered",
    "deviceNumber": "601207",
    "evtSerialNum": 241
  }
}
```


5.3.2.3.23. MWI Event

Event to notify the MWI(Message Wait Indication) information of the phone to Web Client.

Parameter	Value	Mandatory/ Optional	Description
type	string	M	mwi
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
msgStatus	true, false	M	true : new message exists false : new message doesn't exist
newMsg	Positive integer	M	New message count
oldMsg	Positive integer	M	Old message count
newUrgentMsg	Positive integer	M	New urgent message count
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "mwi",
    "deviceNumber": "601207",
    "serviceDN": "601207",
    "msgStatus": "true",
    "newMsg": 34,
    "oldMsg": 2,
    "newUrgentMsg": 4,
    "evtSerialNum": 242
  }
}
```

5.3.2.3.24. ACD Agent LogOn Event

Event to notify agent log on state to Web Client.

Parameter	Value	Mandatory/ Optional	Description
type	string	M	agent_logon
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
primaryAgentId	Digit string	M	Unique id on primary acd group
primaryAcdGroup	Digit string	M	Primary acd group which agent belongs
secondaryAgentId	Digit string	M	Uniqueid on secondary acd group
secondaryAcdGroup	Digit string	M	Secondary acd group which agent belongs
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "agent_logon",
```

```

"deviceNumber": "601207",
"serviceDN": "601207",
"primaryAgentId": "1207"
"primaryAcdGroup": "60304",
"secondaryAgentId": "1207",
"secondaryAcdGroup": "60304",
"evtSerialNum": 241
}

```

5.3.2.3.25. ACD Agent LogOff Event

Event to notify agent log off state to Web Client.

Parameter	Value	Mandatory/Optional	Description
type	string	M	agent_logoff
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
primaryAgentId	Digit string	M	Unique id on primary acd group
primaryAcdGroup	Digit string	M	Primary acd group which agent belongs
secondaryAgentId	Digit string	M	Uniqueid on secondary acd group
secondaryAcdGroup	Digit string	M	Secondary acd group which agent belongs
evtSerialNum	Positive integer	M	Event serial number

Event:

```

{
  "event": "call",
  "data": {
    "type": "agent_logoff",
    "deviceNumber": "601207",
    "serviceDN": "601207",
    "primaryAgentId": "1207"
    "primaryAcdGroup": "60304"
    "secondaryAgentId": "1207"
    "secondaryAcdGroup": "60304"
    "evtSerialNum": 241
  }
}

```

5.3.2.3.26. ACD Agent Ready Event

Event to notify agent Ready state to Web Client.

Parameter	Value	Mandatory/Optional	Description
type	string	M	agent_ready
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
primaryAgentId	Digit string	M	Unique id on primary acd group
primaryAcdGroup	Digit string	M	Primary acd group which agent belongs

secondaryAgentId	Digit string	M	Uniqueid on secondary acd group
secondaryAcidGroup	Digit string	M	Secondary acd group which agent belongs
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "agent_ready",
    "deviceNumber": "601207",
    "serviceDN": "601207",
    "primaryAgentId": "1207",
    "primaryAcidGroup": "60304",
    "secondaryAgentId": "1207",
    "secondaryAcidGroup": "60304",
    "evtSerialNum": 241
  }
}
```

5.3.2.3.27. ACD Agent Not Ready Event

Event to notify agent Not Ready state to Web Client.

Parameter	Value	Mandatory/ Optional	Description
type	string	M	agent_notready
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
primaryAgentId	Digit string	M	Unique id on primary acd group
primaryAcidGroup	Digit string	M	Primary acidgroup which agent belongs
secondaryAgentId	Digit string	M	Uniqueid on secondary acd group
secondaryAcidGroup	Digit string	M	Secondary acd group which agent belongs
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "agent_notready",
    "deviceNumber": "601207",
    "serviceDN": "601207",
    "primaryAgentId": "1207",
    "primaryAcidGroup": "60304",
    "secondaryAgentId": "1207",
    "secondaryAcidGroup": "60304",
    "evtSerialNum": 241
  }
}
```

5.3.2.3.28.ACD Agent Work Event

Event to notify agent Work after call state to Web Client.

Parameter	Value	Mandatory/ Optional	Description
type	String	M	agent_work
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
primaryAgentId	Digit string	M	Unique id on primary acd group
primaryAcdGroup	Digit string	M	Primary acd group which agent belongs
secondaryAgentId	Digit string	M	Uniqueid on secondary acd group
secondaryAcdGroup	Digit string	M	Secondary acd group which agent belongs
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "agent_work",
    "deviceNumber": "601207",
    "serviceDN": "601207",
    "primaryAgentId": "1207",
    "primaryAcdGroup": "60304",
    "secondaryAgentId": "1207",
    "secondaryAcdGroup": "60304",
    "evtSerialNum": 241
  }
}
```

5.3.2.3.29.ACD Agent Busy Event

Event to notify agent Busystate(phone busy)to Web Client.

Parameter	Value	Mandatory/ Optional	Description
type	String	M	agent_busy
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
primaryAgentId	Digit string	M	Unique id on primary acd group
primaryAcdGroup	Digit string	M	Primary acd group which agent belongs
secondaryAgentId	Digit string	M	Uniqueid on secondary acd group
secondaryAcdGroup	Digit string	M	Secondary acd group which agent belongs
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "agent_busy",
    "deviceNumber": "601207",
  }
}
```

```

"serviceDN": "601207",
"primaryAgentId": "1207",
"primaryAcidGroup": "60304",
"secondaryAgentId": "1207",
"secondaryAcidGroup": "60304",
"evtSerialNum": 241
}

```

5.3.2.3.30. ACD Group Queueing Event

Event to notify ACD Group just got a call and wait route to Web Client.

Parameter	Value	Mandatory/ Optional	Description
type	String	M	queueing
deviceNumber	Digit string	M	Terminal Number
serviceDN	Digit string	M	Representative number
callingDN	Digit string	M	Calling DN
calledDN	Digit string	M	Called DN
diversionNum	Digit string	O	Number who redirect the call
qCount	Positive integer	M	Queued Count on ACD Group
primaryAgentId	Digit string	M	Unique id on primary acd group
primaryAcidGroup	Digit string	M	Primary acd group which agent belongs
secondaryAgentId	Digit string	M	Uniqueid on secondary acd group
secondaryAcidGroup	Digit string	M	Secondary acd group which agent belongs
causeCode	Int	M	Refer to <Table 5>
causeMsg	string	M	Refer to <Table 5>
evtSerialNum	Positive integer	M	Event serial number

Event:

```

{
  "event": "call",
  "data": {
    "type": "queueing",
    "deviceNumber": "60304",
    "serviceDN": "60304",
    "callingDN": "601207",
    "calledDN": "60304",
    "diversionNum": "",
    "qCount": 90,
    "primaryAgentId": "1207",
    "primaryAcidGroup": "60304",
    "secondaryAgentId": "1207",
    "secondaryAcidGroup": "60304",
    "causeCode": 23,
    "causeMsg": no_available_agents,
    "evtSerialNum": 241
  }
}

```

5.3.2.3.31. ACD Group Queued Event

Event to notify caller's call has queued on ACD Group to Web Client.

Parameter	Value	Mandatory/ Optional	Description
type	string	M	queueing
deviceNumber	Digit string	M	Terminal number
serviceDN	Digit string	M	Representative number
callingDN	Digit string	M	Calling DN
calledDN	Digit string	M	Called DN
qCount	Positive integer	M	Queued Count on ACD Group
primaryAgentId	Digit string	M	Unique id on primary acd group
primaryAcidGroup	Digit string	M	Primary acd group which agent belongs
secondaryAgentId	Digit string	M	Uniqueid on secondary acd group
secondaryAcidGroup	Digit string	M	Secondary acd group which agent belongs
causeCode	Int	M	Refer to <Table 5>
causeMsg	string	M	Refer to <Table 5>
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "type": "queued",
  "deviceNumber": "601207",
  "serviceDN": "601207",
  "callingDN": "601207",
  "calledDN": "60304",
  "qCount": 90,
  "primaryAgentId": "1207",
  "primaryAcidGroup": "60304",
  "secondaryAgentId": "1207",
  "secondaryAcidGroup": "60304",
  "causeCode": 23,
  "causeMsg": no_available_agents,
  "evtSerialNum": 241
}
```

5.3.2.3.32. ConfGroup Member Event

Event to notify Conference room member has added or changed to Web Client

Parameter	Value	Mandatory/ Optional	Description
type	string	M	confgroupmember
groupIndex	Positive integer	M	Conference Group Index
groupUsage	string	M	Conference Group Usage true, false
memberIndex	Positive integer	M	Member Index on Conference Group
memberDN	Digit string	M	Member number on Conference Group
memberState	String	M	Member state, idle or busy
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "confroommember ",
    "groupIndex": 10,
    "groupUsage": "true",
    "memberIndex": 2,
    "memberDN": "601207",
    "memberState": "idle",
    "evtSerialNum": 241
  }
}
```

5.3.2.3.33. ConfGroup muteOn Event

Information of group call member is Mute or not

Parameter	Value	Mandatory/ Optional	Description
Type	string	M	setmuteon
deviceNumber	Digit string	M	Terminal Number
serviceDN	Digit string	M	Representative number
groupIndex	Positive integer	M	Conference Group Index
memberIndex	Positive integer	M	Member Index on Conference Group
muteOn	string	M	true false
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "muteon",
    "deviceNumber": "60700",
    "serviceDN": "60700",
    "groupIndex": 10,
    "memberIndex": 2,
    "muteOn": "false",
    "evtSerialNum": 241
  }
}
```

5.3.2.3.34. ConfRoom Member Event

Event to notify Conference room member has added or changed to Web Client

Parameter	Value	Mandatory/ Optional	Description
type	string	M	confroommember

deviceNumber	Digit string	M	Terminal Number
serviceDN	Digit string	M	Representative number
roomIndex	Positive integer	M	Conference Room Index
roomUsage	string	M	Conference Room Usage true, false
memberCount	Positive integer	M	Member count on Conference Room, Max eMG: 13, UCP: 32
member	[Digit string]	M	Member list on Conference Room
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "confroommember ",
    "deviceNumber": "603000",
    "serviceDN": "603000",
    "roomIndex": 10,
    "roomUsage": "true",
    "memberCount": 2,
    "member": ["601207", "601208"],
    "evtSerialNum": 241
  }
}
```

5.3.2.3.35. Configuration Changed Event

Numbering Event transmits system information when the Numbering Plan has changed as the deviceNumber, parking , group range and so on.

Parameter	Value	Mandatory/ Optional	Description
type	string	M	numbering
deviceINFO	Json list	M	devicePhy, deviceNumber, deviceType
devicePhy	[Digit string]	M	device physical number
deviceNumber	Digit string	M	deviceNumber
deviceType	string	M	lip dkt slt sip dect
systemINFO	Json list	M	parkStartNumber, groupStartNumber
parkStartNumber	[Digit string]	M	1
parkEndNumber	Digit string	M	100
groupStartNumber	[Digit string]	O	1
groupEndNumber	[Digit string]	O	100
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "type": "numbering",
  "deviceINFO": {
    { "devicePhy": "1", "deviceNumber": "701003", "deviceType": "lip" },
    { "devicePhy": "2", "deviceNumber": "701004", "deviceType": "slt" },
    { "devicePhy": "3", "deviceNumber": "701005", "deviceType": "sip" },
  }

  "systemINFO": {
    { "parkStartNumber": "1", "parkEndNumber": "100" },
    { "groupStartNumber": "1", "groupEndNumber": "200" },
  }
  "evtSerialNum": 251
}
```

[Condition]

5.3.3.Presence Event Start and Stop

This chapter describes messages and procedures that Web Client can request to start or stop the presence information of the DN . When Web Client requests the Presence transmission, the iPECS system start to transmit the status information of DNs. The information will be sent only DNs that the status of terminals changed.

The CTI Command for controlling the status message transmission of the DN is as follows:

- Presence Start
- Presence Stop

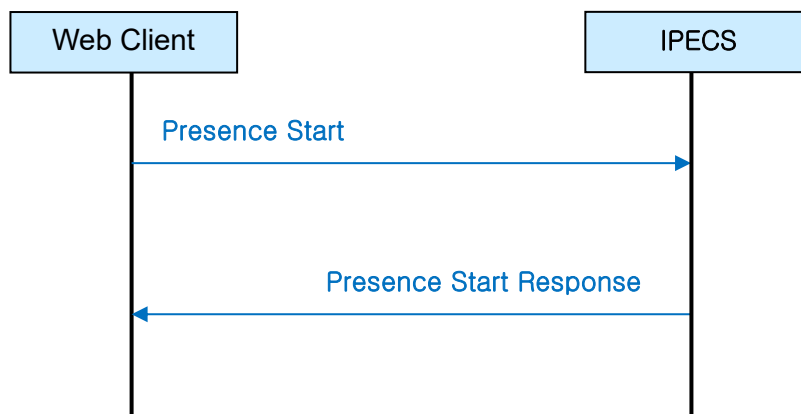
5.3.3.1. Presence Start

Function Description

Web Client can send Presence Start Request to receive presence information. Presence Event is transmitted when DNs that the status of terminals changed.

Usage

Web Client sends a Presence Start Request to the iPECS system, and the iPECS system issues a Positive Response if the request command is valid, and a Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/presence
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	{ "deviceNumber": ["1000","1001", ...] }
Positive Response	HTTP 200 OK Content: { "result":[

	<pre> {"1000": "OK"}, {"1001": "generic"}, ... {"9999": "invalidParameterValue"}] } </pre>
Negative Response	<p>HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content:</p> <pre> { "error" : { "code": xxx, "message": "xx xxxx" } } </pre>

[Condition]

- In case of Positive Response, it issues a Presence Event of the status changed DN.
- The deviceNumber count of Monitor Start can't be over 100.
- To request more devices, other Monitor Start request should be sent after receiving response of the request.
- The deviceNumber list can be obtained with a Get Terminal Information request.

In case of Negative Response, return Error value as followings:

- Operation (serviceNotSupported) - service not provided
- Operation (invalidMonitorObjectType) - invalid type
- Operation (invalidDeviceReferencelIdentifier) - invalid deviceNumber

[Limitation]

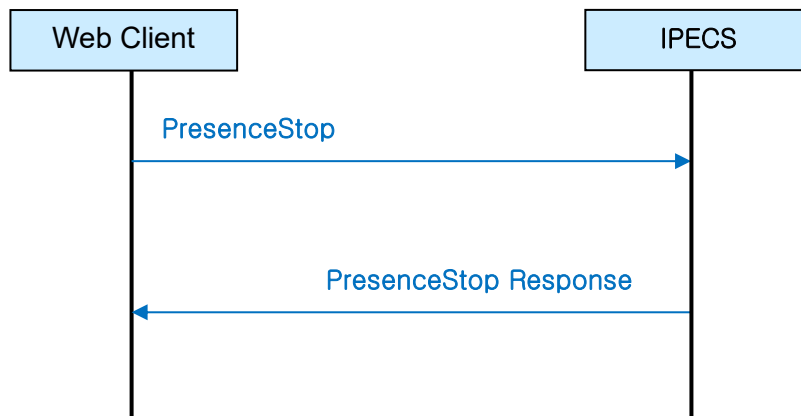
- Presence information is supported only for extensions.

5.3.3.2. Presence Stop**Function Description**

Web Client can send Presence Stop Request to stop presence transmission.

Usage

Web Client sends a Presence Stop Request to the iPECS system, and the iPECS system issues a Positive Response if the request command is valid, and a Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/presence
Method	DELETE
Header	Authorization: Bearer <token from login response>
Parameter	<pre>{ "deviceNumber": ["1000","1001", ...] }</pre>
Positive Response	HTTP 200 OK Content: <pre>{ "result":[{"1000": "OK"}, {"1001": "generic"}, ... {"9999": "invalidParameterValue"}] }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

[Condition]

In case of Negative Response, return Error value as below.

- Operation (serviceNotSupported) - service not provided
- Operation (invalidMonitorObjectType) - invalid type
- Operation (invalidDeviceReferenceIdentifier) - invalid deviceNumber

5.3.3.3. Presence Event

Presence Event transmits status information for the DN which status has changed.

Parameter	Value	Mandatory/Optional	Description
type	string	M	presence
deviceNumber	Digit string	M	Terminal number
deviceType	string	M	ext trk
status	string	M	block idle DND stn_talk trk_talk busy fwd_all fwd_uncond fwd_busy fwd_nans fwd_bsna ring hold conf
evtSerialNum	Positive integer	M	Event serial number

Event:

```
{
  "event": "call",
  "data": {
    "type": "presence",
    "deviceNumber": "1003",
    "deviceType": "ext",
    "status": "busy",
    "evtSerialNum": 1
  }
}
```

[Condition]

The status information of the DN is shown below.

- block: unregistered state
- idle: idle state
- DND: DND setting status
- stn_talk: status of extension call
- trk_talk: Busy state during trunk line
- busy: busy state other than extension / trunk line call
- cfwd_all; Unconditional call forward registration status
- cfwd_busy: call forwarding registration status
- cfwd_nans: No-answer forwarding registration status
- cfwd_bsna: busy / no-answer forwarding registration status

- ring: ringing status
- hold: holding the counter part
- conf: conference status

5.3.4.Call Control Command

Web Client can control the Extension connected to the iPECS system.

5.3.4.1. Get Terminal Information

Function Description

Web Client request to get terminal information.

Usage

Web Client sends Make Call to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.

URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/make
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> startIndex count
Positive Response	HTTP 200 OK Content: <pre>{ "data":{ "terminals":[{ "deviceIndex":1, "deviceNumber":"1000", "deviceType":"LIP-9040C", "tenantNumber":1, "callControl":"enable" }, ...] } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Request Parameter

Parameter	Value	Mandatory/Optional	Description
startIndex	Positive integer	M	Terminal physical number

count	Positive integer	M	Terminal number for request, maximum 100
-------	------------------	---	--

Response Parameter

Parameter	Value	Mandatory/Optional	Description
deviceIndex	Positive integer	M	Terminal physical number
deviceNumber	Digit string	M	Terminal number
deviceType	String	M	Terminal model name
tenantNumber	Positive integer	M	Tenant (ICM) number
callControl	String	M	Enable means the terminal has license and can be controlled.

5.3.4.2. Make Call

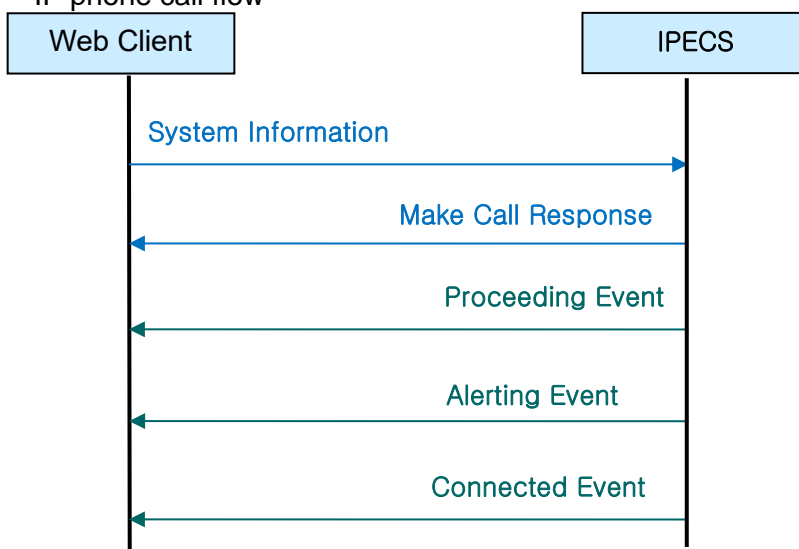
Function Description

Web Client makes one Extension to call.

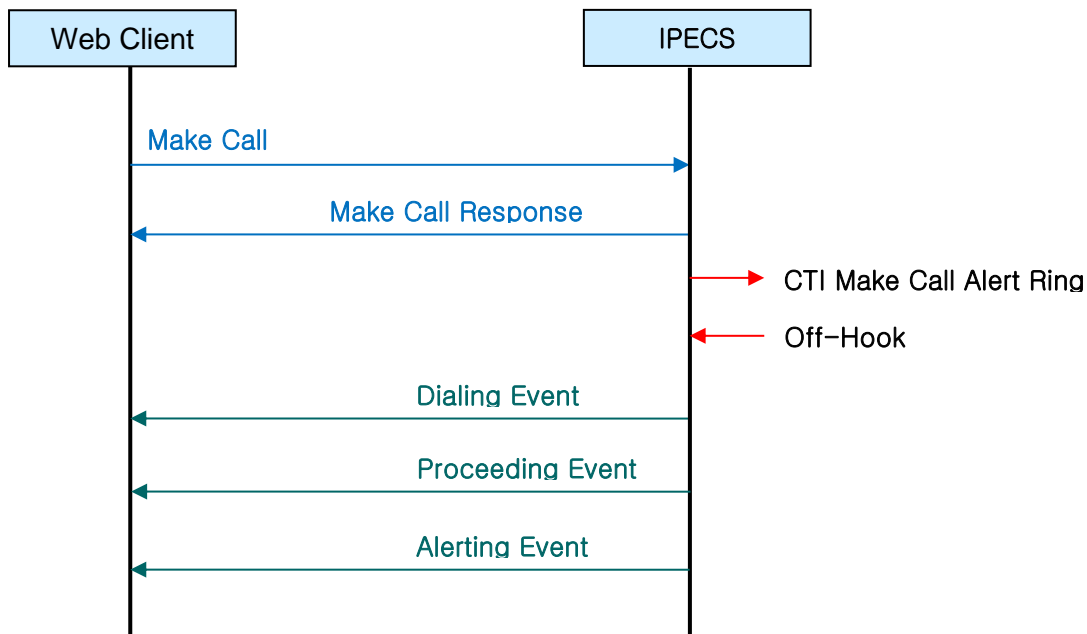
Usage

Web Client sends Make Call to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.

- IP phone call flow



- Analog phone call flow



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/make
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> deviceNumber calledDN
Positive Response	HTTP 200 OK Content: <pre>{ "data":{ "callRefID": 2 } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
calledDN	Digit string	M	Called number

[Condition]

For Positive Response,

- Proceeding/Alerting/Connected Event is generated.

[Limitation]

- Possible calledDirectoryNumber : whole number except most of feature code
- At feature code, Group Pickup and paging code can be accepted

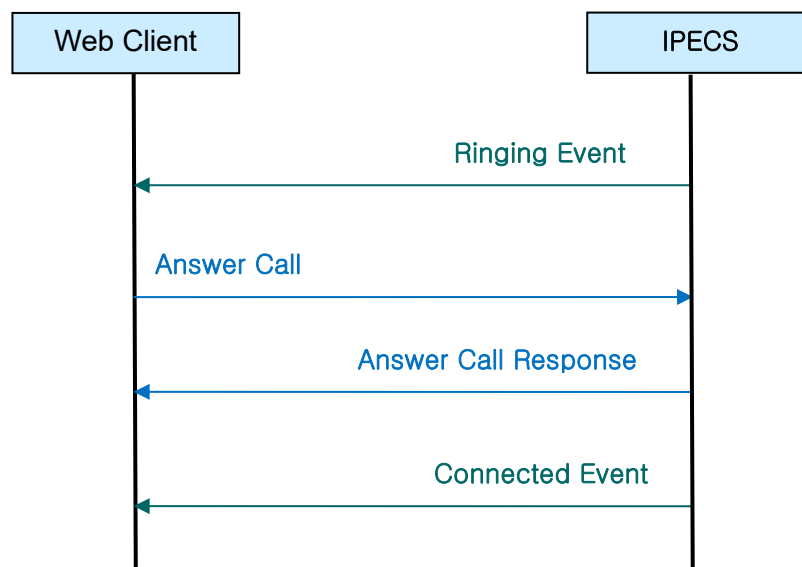
5.3.4.3. Answer Call

Function Description

Web Client detects incoming call and makes Extension to answer call

Usage

Web Client sends Answer Call to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/answer
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • callRefID
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden

	HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>
--	--

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
callRefID	Positive integer	M	call reference identifier

[Condition]

For Positive Response, Connected Event is generated.

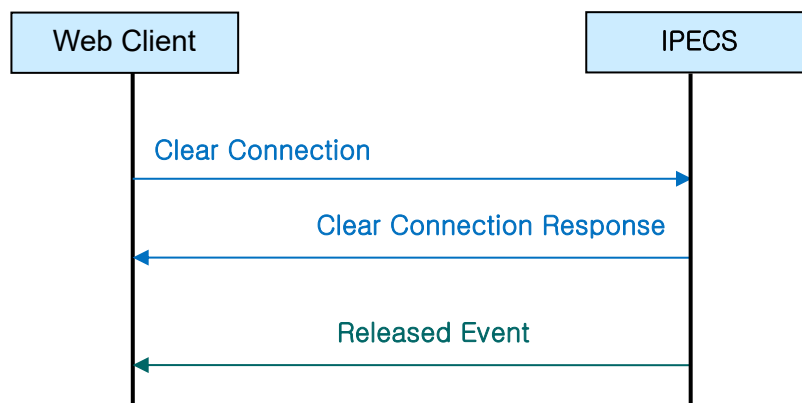
5.3.4.4. Clear Connection

Function Description

Web Client clears call.

Usage

Web Client sends Clear Connection to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/clear_connection
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> deviceNumber callRefID

Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
callRefID	Positive integer	M	Call reference identifier

[Condition]

For Positive Response, Released Event is generated.

For "Negative Responses", following "Error" values are Returned.

- operation (serviceNotSupported) - unsupported service
- operation (invalidConnectionIdentifier) – Connection ID is not valid.
- stateIncompatibility (noConnectionToClear) – No Connection ID to clear

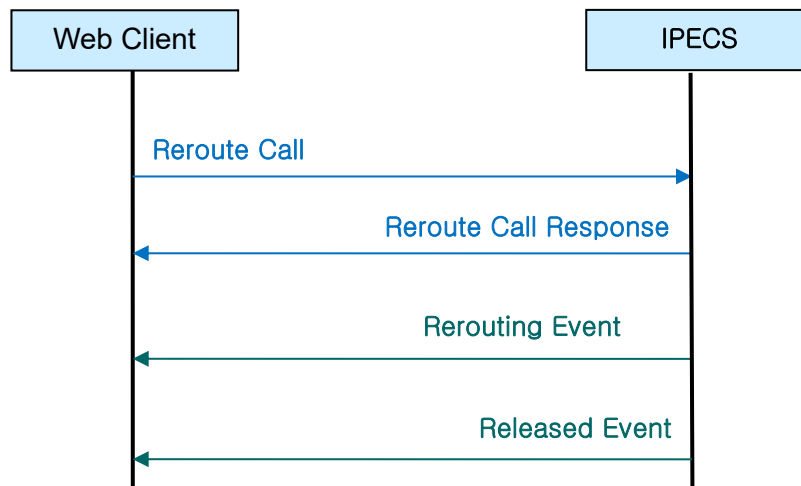
5.3.4.5. Reroute Call

Function Description

diverts call to other extension, trunk, ACD Group ... This Request can be sent to ACD Group

Usage

Web Client sends Reroute Call to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/reroute
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • callRefID • divertToDN
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
callRefID	Positive integer	M	call reference identifier
divertToDN	Digit string	M	Reroute destination number

[Condition]

For Positive Response, Rerouted Event is generated.

For “Negative Responses”, following “Error” values are Returned.

- operation (serviceNotSupported) - unsupported service

- operation (invalidConnectionIdentifier) – Connection ID is not valid.
- operation (invalidDestination)
- operation (invalidDestinationDeviceObject) – newDestination is not valid type.
- operation (invalidDivertingDeviceIdentifier) – Diverting Device ID is not valid.

[Limitation]

- Possible callToBeDiverted: Whole Number except Feature code, Conference Room

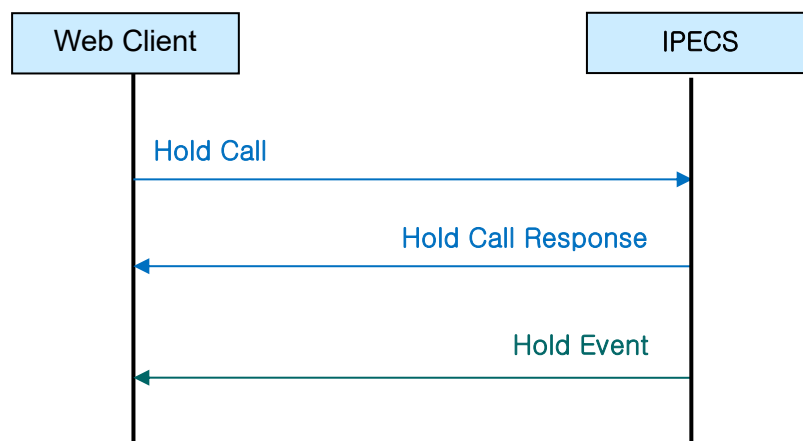
5.3.4.6. Hold Call

Function Description

Web Client places call on hold

Usage

Web Client sends Hold Call to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/hold
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • callRefID
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found

	Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>
--	--

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
callRefID	Positive integer	M	Call reference identifier

[Condition]

For Positive Response, Held Event is generated.

For “Negative Responses”, following “Error” values are Returned.

- operation (serviceNotSupported) - unsupported service
- operation (invalidConnectionIdentifier) – Connection ID is not valid.
- operation (invalidHeldDeviceIdentifier)
- stateIncompatibility (invalidConnectionState) – Not calling status
- stateIncompatibility (invalidHeldDeviceState)
- stateIncompatibility (NoHeldCall)

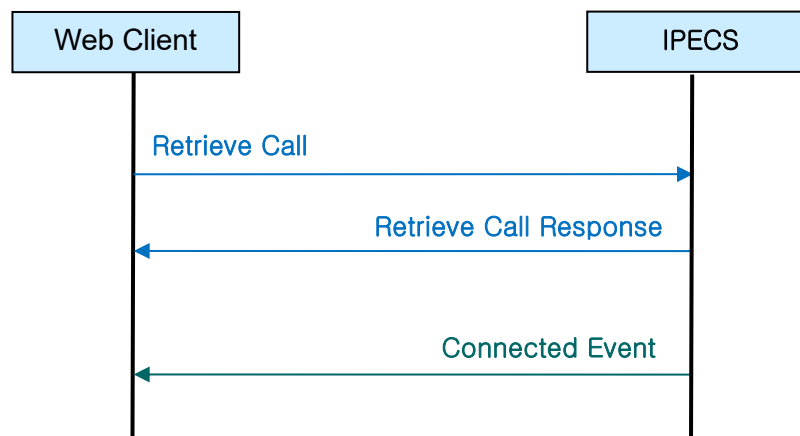
5.3.4.7. Retrieve Call

Function Description

Web Client reconnects held call

Usage

Web Client sends Retrieve Call to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/retrieve
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> deviceNumber callRefID
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
-----------	-------	------------------------	-------------

deviceNumber	Digit string	M	Terminal number
callRefID	Positive integer	M	Call reference identifier

[Condition]

For Positive Response, Retrieved Event is generated.

For “Negative Responses”, following “Error” values are Returned.

- operation (serviceNotSupported) - unsupported service
- operation (invalidConnectionIdentifier) – Connection ID is not valid.
- operation (invalidHeldDeviceIdentifier)
- stateIncompatibility (invalidConnectionState) – Not calling status.
- stateIncompatibility (invalidHeldDeviceState)
- stateIncompatibility (NoHeldCall)

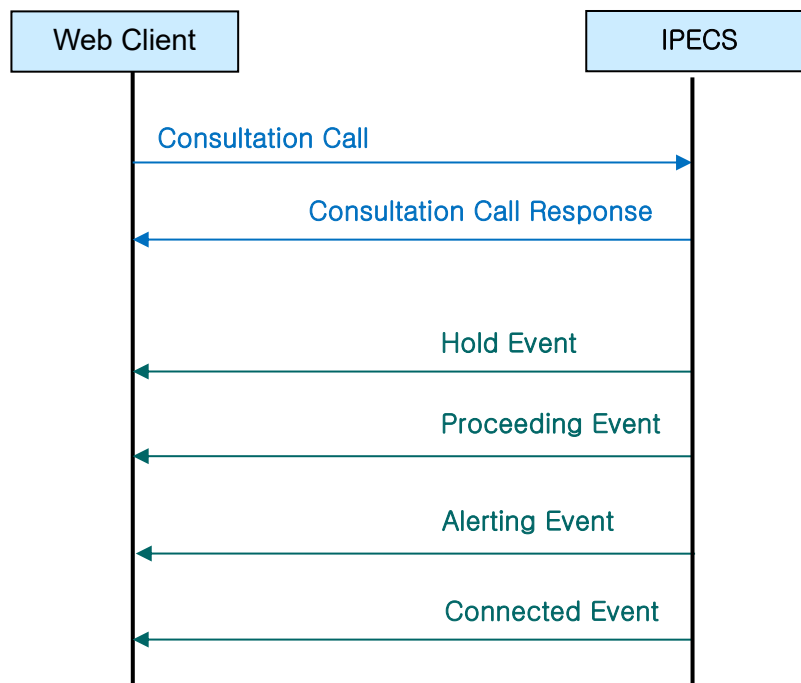
5.3.4.8. Consultation Call

Function Description

Web Client puts call on hold and starts a new call

Usage

Web Client sends Consultation Call to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/consultation
Method	POST
Header	Authorization: Bearer <token from login response>

Parameter	<ul style="list-style-type: none"> • deviceNumber • callRefID • calledDN • svcType
Positive Response	HTTP 200 OK Content: <pre>{ "data": { "callRefID": 3 } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
callRefID	Positive integer	M	Call reference identifier
calledDN	Digit string	M	Called number
svcType	string	M	conference transfer

[Condition]

For Positive Response, Held/Proceeding/Alerting/Connected Event is generated.

For “Negative Responses”, following “Error” values are Returned.

- operation (serviceNotSupported) - unsupported service
- operation (invalidConnectionIdentifier) – Connection ID is not valid.
- operation (invalidDestination)
- operation (invalidDestinationDeviceObject) - newDestination is not valid type.

[Limitation]

- Possible consultedDevice: Whole Number except Feature code, Conference Room

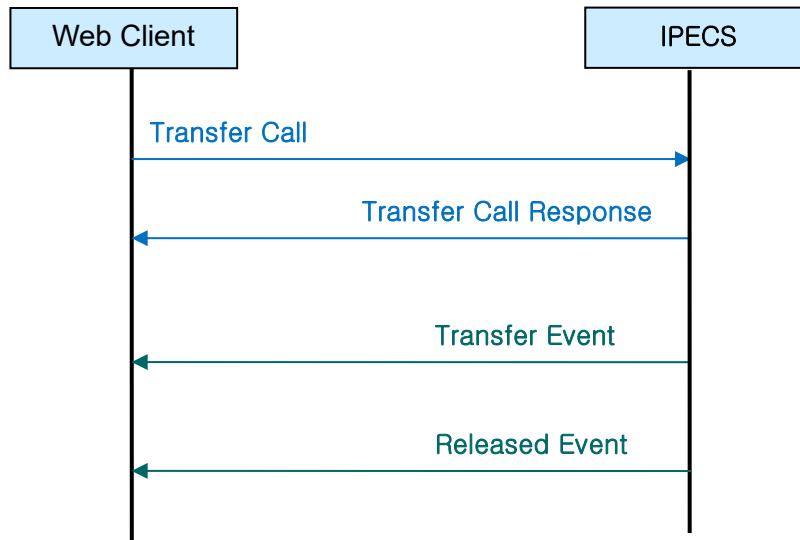
5.3.4.9. Transfer Call

Function Description

Web Client transfers held call to current active call.
 callRefID is reused with that of held call for call tracking.

Usage

Web Client sends Transfer Call to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/transfer
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> deviceNumber callRefID
Positive Response	HTTP 200 OK Content: <pre>{ "data": { "callRefID": 3 } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
callRefID	Positive integer	M	Call reference identifier

[Condition]

For Positive Response, Transferred Event is generated.

For “Negative Responses”, following “Error” values are Returned.

- operation (serviceNotSupported) - unsupported service
- operation (invalidConnectionIdentifier) – Connection ID is not valid.
- operation (invalidDestination)
- operation (invalidDestinationDeviceObject) - newDestination is not valid type.

5.3.4.10. Sigle Step Transfer Call

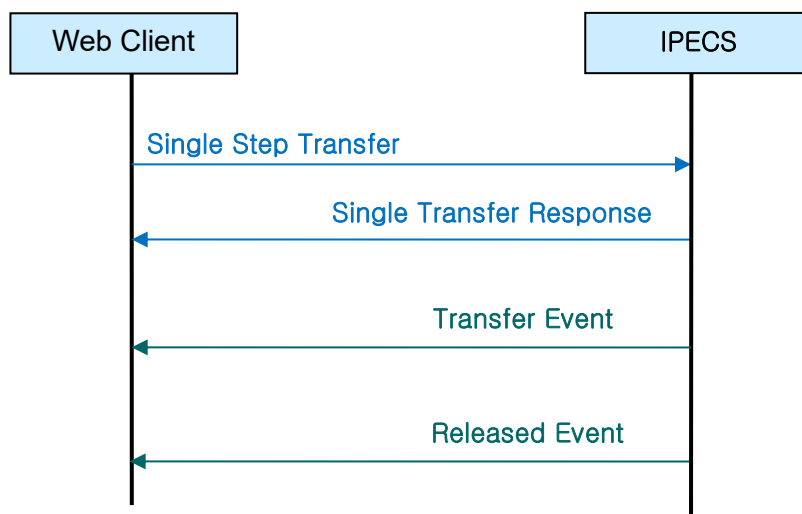
Function Description

Web Client transfer current call to another number.

This is different from Transfer Call. (No need to put call on hold)

Usage

Web Client sends Single Step Transfer Call to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/1step_transfer
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • callRefID • transferDN
Positive Response	HTTP 200 OK Content: { "data": { "callRefID": 3 } }

	<pre> } } </pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre> { "error" : { "code": xxx, "message": "xx xxxx" } } </pre>

Parameter	Value	Mandatory/Optional	Description
deviceNumber	Digit string	M	Terminal number
callRefID	Positive integer	M	Call reference identifier
transferDN	Digit string	M	Destination number to transfer

[Condition]

For Positive Response, Transferred Event is generated.

For "Negative Responses", following "Error" values are Returned.

- operation (serviceNotSupported) - unsupported service
- operation (invalidConnectionIdentifier) – Connection ID is not valid.
- operation (invalidDestination)
- operation (invalidDestinationDeviceObject) - newDestination is not valid type.

[Limitation]

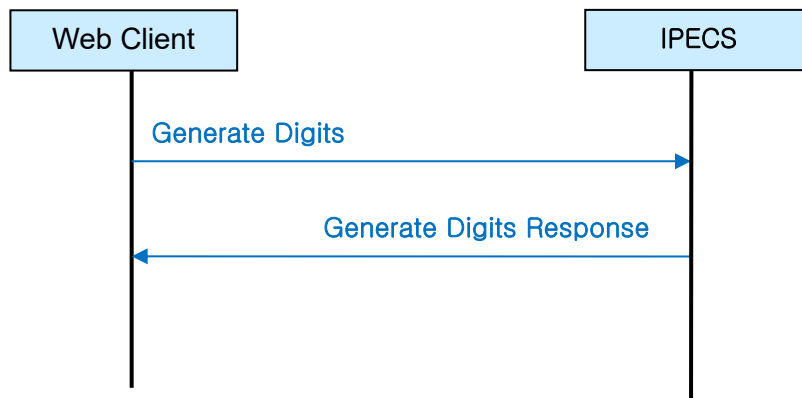
- Possible transferredTo: Whole Number except Feature code, Conference Room

5.3.4.11. Generate Digit(DTMF)**Function Description**

Client sends DTMF digit in talk status.

Usage

Web Client sends Generate Digit to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/dial_digit
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • callRefID • dialDigit
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
callRefID	Positive integer	M	Call reference identifier
dialDigit	0~9,*,#	M	DTMF digit

[Condition]

For “Negative Responses”, following “Error” values are Returned.

- operation (serviceNotSupported) - unsupported service
- operation (invalidConnectionIdentifier) – Connection ID is not valid.
- operation (invalidParameterValue) – DTMF is not valid.
- stateIncompatibility (invalidConnectionState) – Not calling status.

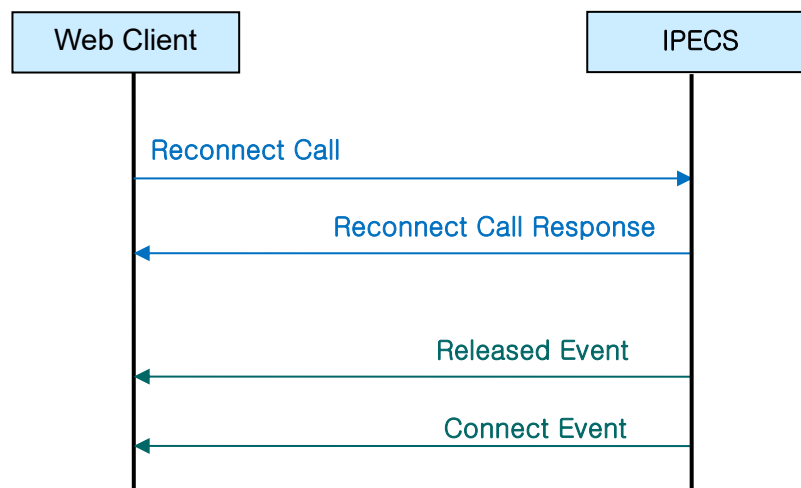
5.3.4.12. Reconnect Call

Function Description

Web Client clears current call and reconnects to held call

Usage

Web Client sends Reconnect Call to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/reconnect
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • callRefID
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
-----------	-------	------------------------	-------------

deviceNumber	Digit string	M	Terminal number
callRefID	Positive integer	M	Call reference identifier

[Condition]

For Positive Response, Connection Cleared/Retrieved Event is generated.

For “Negative Responses”, following “Error” values are Returned.

- operation (serviceNotSupported) - unsupported service
- operation (invalidConnectionIdentifier) – Connection ID is not valid.
- operation (invalidHeldDeviceIdentifier)
- stateIncompatibility (invalidConnectionState) – Not calling status.
- stateIncompatibility (invalidHeldDeviceState)
- stateIncompatibility (NoHeldCall)

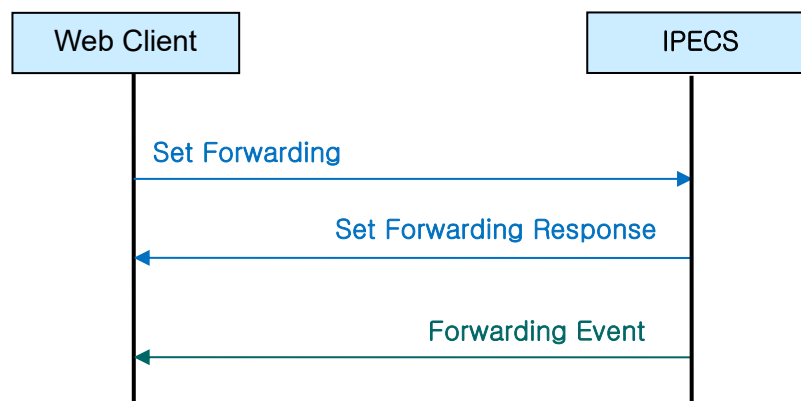
5.3.4.13. Set Forwarding

Function Description

Web Client sets call forwarding.

Usage

Web Client sends Set Forwarding to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/forward
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • DN • cfwdType • destNumber
Positive Response	HTTP 200 OK Content: <pre>{ "data": { </pre>

	}
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/Optional	Description
deviceNumber	Digit string	M	Terminal number
	Digit string	M	Extension number to register call forwarding
cfwdType	string	M	disable uncondition busy no_answer busy_noans DND
destNumber	Digit string	M	Call forward destination

[Condition]

For Positive Response, Forwarding Event is generated.

For “Negative Responses”, following “Error” values are Returned.

- operation (serviceNotSupported) - unsupported service
- operation (invalidForwardingDestination) – Forwarding Destination is not valid.

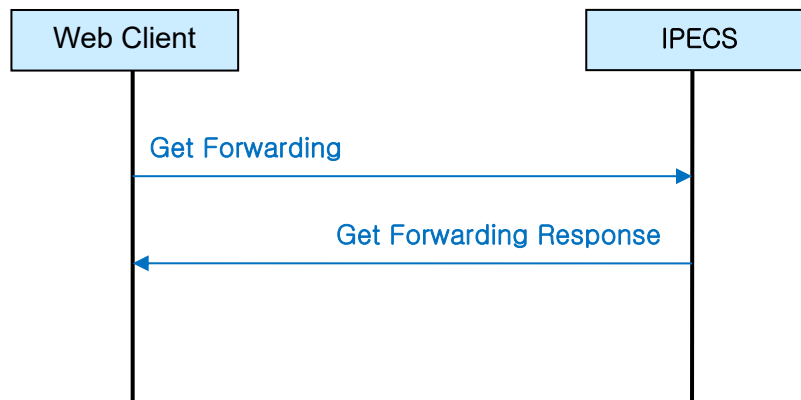
5.3.4.14. Get Forwarding

Function Description

Web Client gets current forwarding status

Usage

Web Client sends Get Forwarding to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/forward
Method	GET
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • DN
Positive Response	HTTP 200 OK Content: <pre>{ "data":{ "cfwdType": "uncondition", "destNumber": "901012345678", "ringTime": 10 } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
	Digit string	M	착신전환조회번호

[Condition]

For Positive Response, following items are required:

Parameter	Value	Mandatory/ Optional	Description
cfwdType	string	M	disable uncondition busy no_answer busy_noans

			DND
destNumber	Digit string	M	Call forwarding destination
ringTime	Int	O	No answer ring time

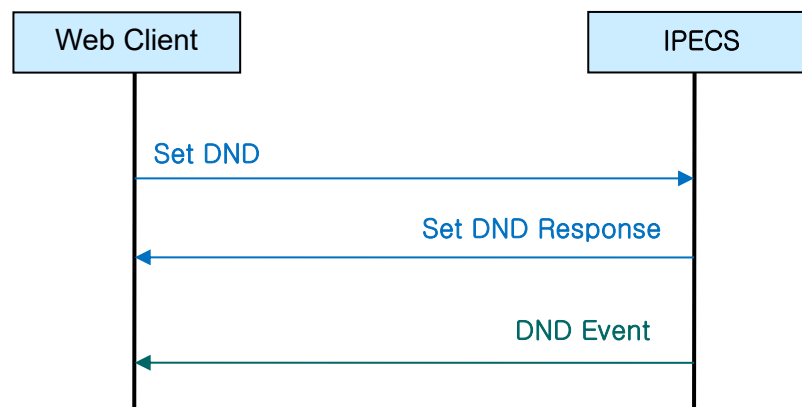
5.3.4.15. Set DND

Function Description

Web Client sets DND for Extension

Usage

Web Client sends Set DND to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/dnd
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • DN • svcType
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
DN	Digit string	M	Extension number to set DND
svcType	string	M	disable enable

[Condition]

For Positive Response, DND Event is generated.

For "Negative Responses", following "Error" values are Returned.

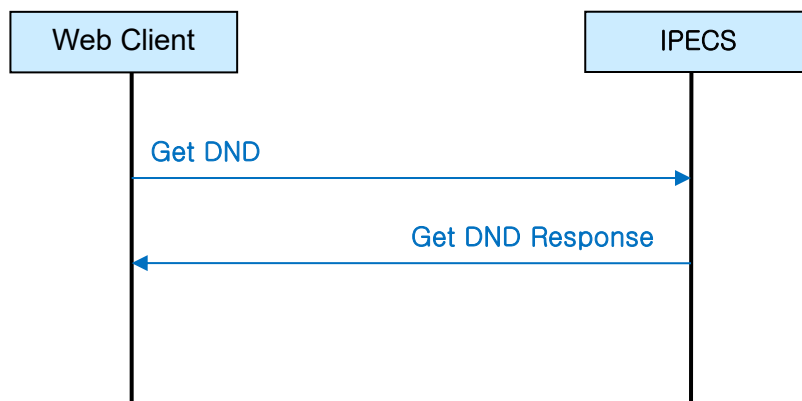
- operation (serviceNotSupported) - unsupported service

5.3.4.16. Get DND**Function Description**

Web Client gets current DND status

Usage

Web Client sends Get DND to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/dnd
Method	GET
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber •
Positive Response	HTTP 200 OK Content: <pre>{ "data":{ "svcType": "enable" } }</pre>

Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>
--------------------------	--

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
	Digit string	M	Extension number to get DND status

[Condition]

For Positive Response, following item is required

Parameter	Value	Mandatory/ Optional	Description
svcType	int	M	disable enable

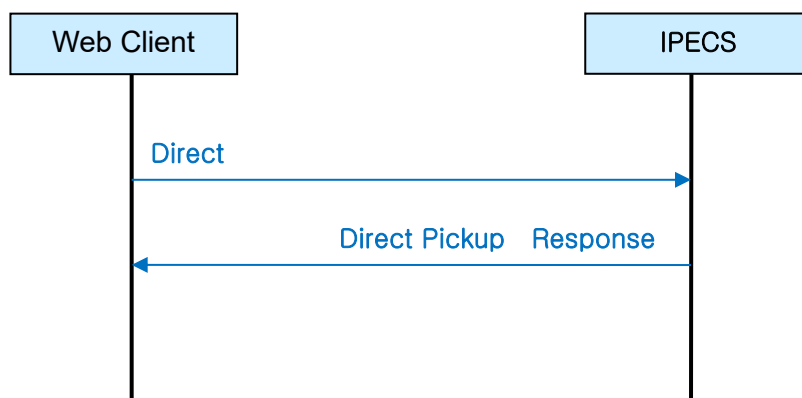
5.3.4.17. Pickup

Function Description

Web Client makes Extension to pickup calls to other phones

Usage

Web Client sends Direct Pickup to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/pickup
Method	POST

Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • callingDN • pickedDN • pickupType
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
callingDN	Digit string	M	Picking-up extension number
pickedDN	Digit string	O	Pick-up destination number
pickupType	string	M	group_pickup direct_pickup

[Condition]

For “Negative Responses”, following “Error” values are Returned.

- operation (serviceNotSupported) - unsupported service
- operation (invalidConnectionIdentifier) – Connection ID is not valid.
- operation (invalidDestination)
- operation (invalidDestinationDeviceObject) – newDestination is not valid type.
- stateIncompatibility (invalidConnectionState) – Not Idle status
- stateIncompatibility (generic)

[Limitation]

- Possible callToBePickedUp: Only ringing device can be picked up

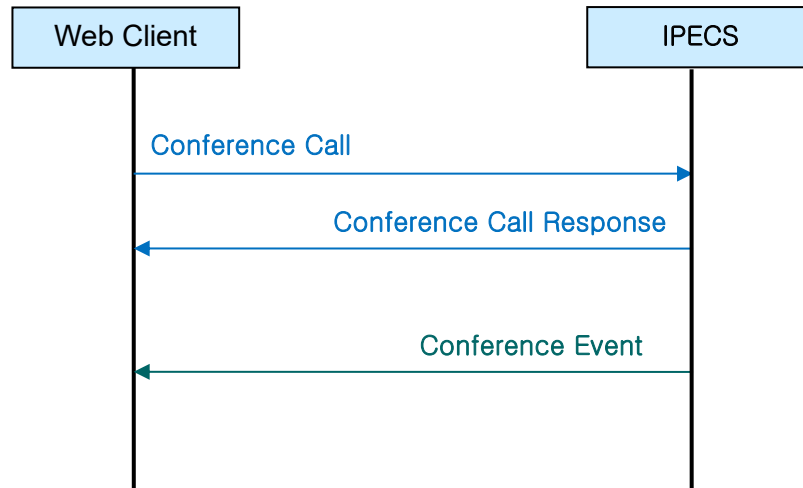
5.3.4.18. Conference Call

Function Description

Web Client can make a conference call with the held call and the active call.

Usage

Web Client sends Conference Call to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/conference
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> deviceNumber callRefID
Positive Response	HTTP 200 OK Content: <pre>{ "data": { "callRefID": 3 } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
callRefID	Positive integer	M	Call reference identifier

[Condition]

For Positive Response, Connection Cleared Event is generated.

For “Negative Responses”, following “Error” values are Returned.

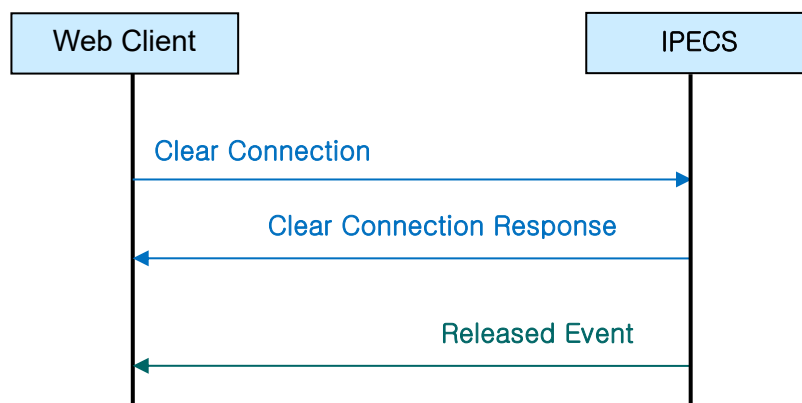
- operation (serviceNotSupported) - unsupported service
- operation (invalidConnectionIdentifier) – Connection ID is not valid.
- operation (invalidConnectionState) – Connection State is not valid

5.3.4.19. Call Reject**Function Description**

Web Client can reject a phone call at ring state

Usage

Send Clear Connection Request message when Extension is ring state



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/clear_connection
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • callRefID
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : {</pre>

	<pre> "code": xxx, "message": "xx xxxx" } </pre>
--	--

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
callRefID	Positive integer	M	Call reference identifier

[Condition]

For Positive Response, Connection Cleared Event is generated.

For “Negative Responses”, following “Error” values are Returned.

- operation (serviceNotSupported) - unsupported service
- operation (invalidConnectionIdentifier) – Connection ID is not valid.
- stateIncompatibility (noConnectionToClear) – No Connection ID to clear

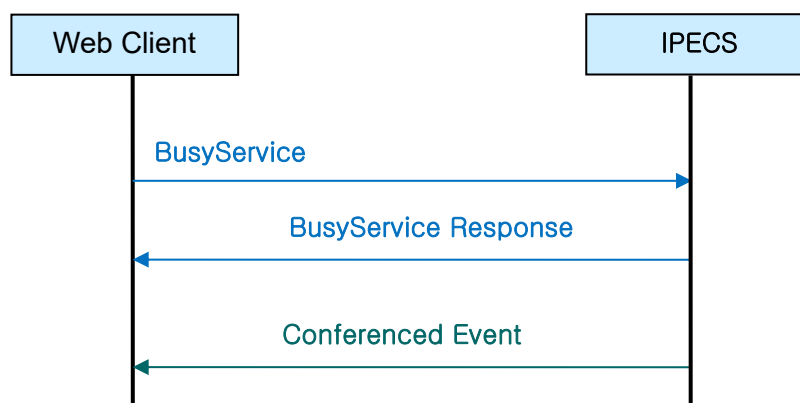
5.3.4.20. BusyService

Function Description

Web Client can request supplementary service in destination busy state.

Usage

Send BusyService Request message to the system when you hear busy tone.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/busy_service
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • callRefID • type
Positive Response	HTTP 200 OK Content:

	<pre>{ "data": { "callRefID": 3 } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
callRefID	Positive integer	M	Call reference identifier
type	string	M	[Busy-service list] intrude callback campon callwait

[Condition]

This request only operated at busy tone state which is just after failed make call.

For "Negative Responses", following "Error" values are Returned.

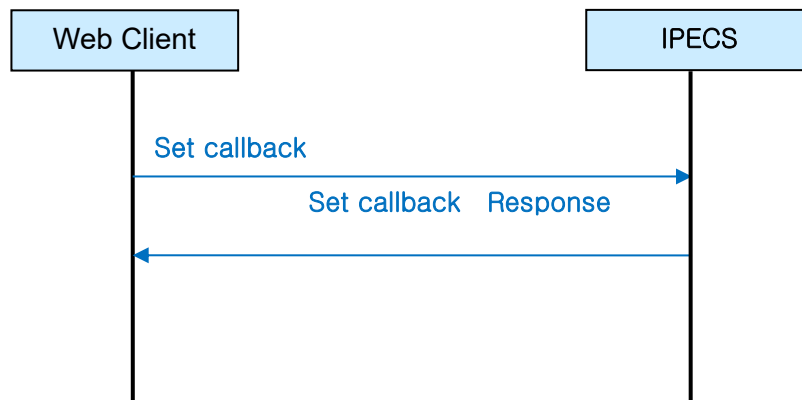
- operation (serviceNotSupported) - unsupported service
- operation (accessDeny) – Check intrusion allowed at iPECS SME
- operation (invalidState) – Phone state is wrong

5.3.4.21. Set Call Back**Function Description**

Cancel CallBack

Usage

Send Set CallBack message to the system.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/call_back
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> deviceNumber svcType
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
svcType	string	M	false

[Condition]

This request only operated at busy tone state which is just after failed make call.

For “Negative Responses”, following “Error” values are Returned.

- operation (serviceNotSupported) - unsupported service
- operation (accessDeny) – Check intrusion allowed at iPECS SME
- operation (invalidState) – Phone state is wrong

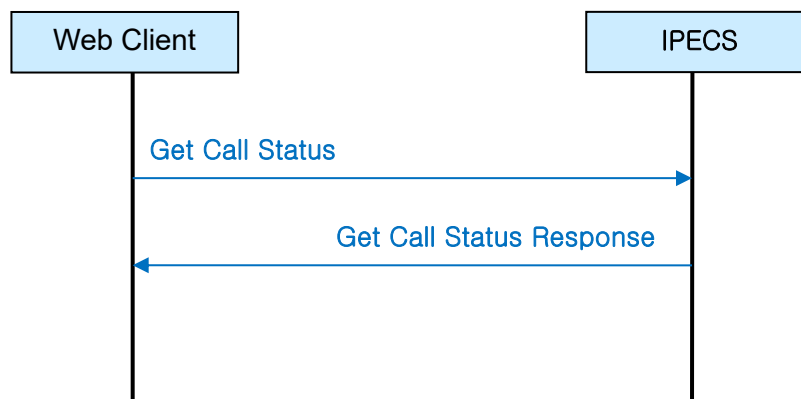
5.3.4.22. Get Call Status

Function Description

Web Client requests the call status of a specific extension.

Usage

Web Client sends Get Call Status to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/status
Method	GET
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> deviceNumber
Positive Response	HTTP 200 OK Content: <pre>{ "data": { "state": "talk" } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number

[Condition]

For Positive Response, following item is required

Parameter	Value	Mandatory/ Optional	Description
State	block idle DND stn_talk trk_talk busy fwd_all fwd_busy fwd_nans fwd_bsna ring hold conf	M	Same with presence status

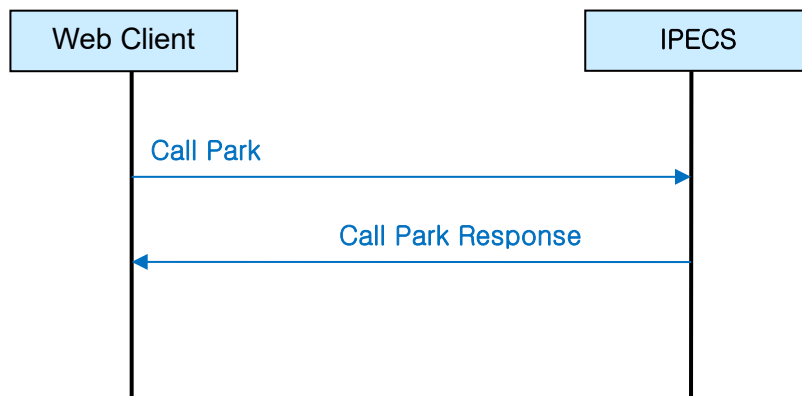
5.3.4.23. Call Park

Function Description

This function is to register call-park

Usage

Web Client sends Call Park to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/park
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> deviceNumber callRefID
Positive Response	HTTP 200 OK Content: {

	<pre> "data": { "parkingLoc": 1 } </pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre> { "error" : { "code": xxx, "message": "xx xxxx" } } </pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
callRefID	Positive integer	M	callRefID to call-park

[Condition]

For "Negative Responses", following "Error" values are Returned.

- operation (serviceNotSupported) - unsupported service
- operation (invalidConnectionIdentifier) – invalid Connection ID
- operation (invalidDestination)
- stateIncompatibility (generic)

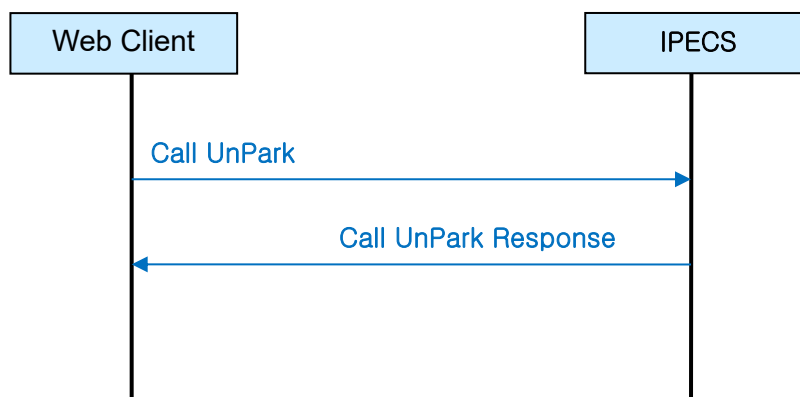
5.3.4.24. Call UnPark

Function Description

This function is to retrieve parked call

Usage

Web Client sends Call UnPark to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/unpark
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • callingDN • parkingLoc
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
callingDN	Digit string	M	DN retrieving parked-call
parkingLoc	int	M	Parking location range (000~999)

[Condition]

For "Negative Responses", following "Error" values are Returned.

- operation (serviceNotSupported) - unsupported service
- operation (invalidConnectionIdentifier) – invalid Connection ID
- operation (invalidDestination)
- stateIncompatibility (generic)

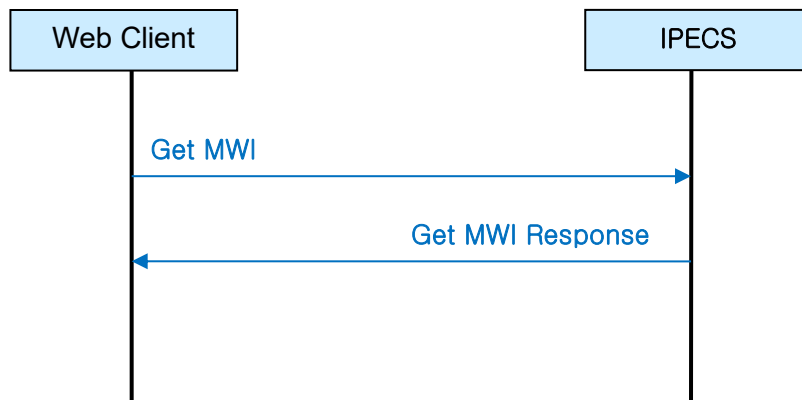
5.3.4.25. Get MWI (Message Waiting Indicator)

Function Description

This function is to get message waiting status

Usage

Web Client sends Get MWI to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/mwi
Method	GET
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> deviceNumber
Positive Response	HTTP 200 OK Content: <pre>{ "data":{ "msgStatus": "true", "newMsg":34, "oldMsg":12, "newUrgentMsg": 56 } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number

[Condition]

For Positive Response, following item is required

Parameter	Value	Mandatory/ Optional	Description
msgStatus	string	M	true : new message exists false :new message doesn't exist
newMsg	Positive integer	M	New message count
oldMsg	Positive integer	M	Old message count

newUrgentMsg	Positive integer	M	New urgent message count
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5.3.4.26. Flexible Page

Function Description

Request Flexible Page according to predefined program

Usage

The system administrator must program “Flexible Page Feature” menu first.

Client sends Flexible Page request with index of “Flexible Page Feature” menu to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.

Program related with paging.

(1) System Data – Flexible Page Feature

Order	Name Max 32 Characters	Page Zone INT(1-100)/INT_ALL(101) EXT1(102)/EXT2(103)/EXT_ALL(104) INT_EXT_ALL(105) SYS_ALL(116)	Action	Annc.No (0,1-200)	Silent Text No. (0, 1-60)	SMS Only	Page Urgency Level (0-255, 0>1>2..>255)
1	Live_Alarm	2	Live Voice ▼	0	0	OFF ▼	0
2	Annc_Alarm	2	Announce Play ▼	70	2	OFF ▼	0
3	Text_Alarm	2	Silent Message ▼	1	1	OFF ▼	0
4	Annc_Alarm2	3	Announce Play ▼	70	0	OFF ▼	0

(2) System Data – Silent Text Messages

Index		Value	Range
1	Subject	<input type="text" value="Text Test"/>	Max 32 Characters
	Contents	<input type="text" value="Help Me"/>	Max 80 Characters
2	Subject	<input type="text" value="Text with Annc"/>	Max 32 Characters
	Contents	<input type="text" value="Text with Annc"/>	Max 80 Characters

URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/flexpage
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> page_index service_num
Positive Response	HTTP 200 OK Content:

	<pre>{ "data":{ } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/Optional	Description
page_index	Positive integer	M	Flexible Page index (order number) in Flexible Page Feature menu
service_num	Digit string	M	extension number related with page

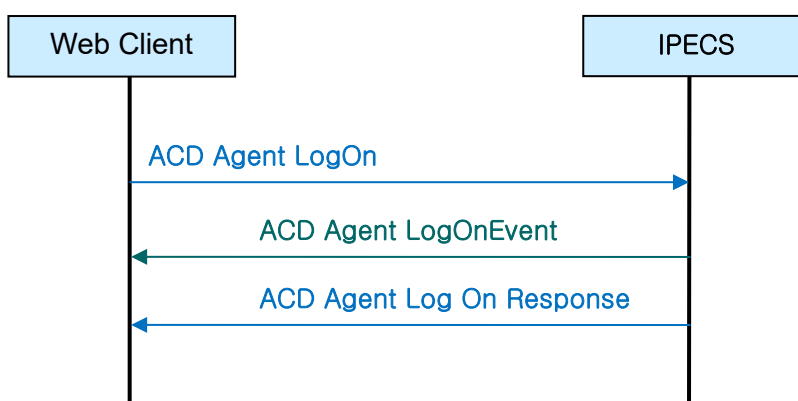
5.3.4.27. ACD Agent LogOn

Function Description

Agent can log on to ACD group by Web API

Usage

Web Client sends ACD Agent LogOn to iPECS system, and iPECS system issues ACD Agent LogOn Event and Positive Response if the request command is valid, and Negative Response if it is not or Agent has already logged on state.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/agent_logon
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> deviceNumber agentId

	<ul style="list-style-type: none"> • groupNumber • loginPrimary • loginPriority
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/Optional	Description
deviceNumber	Digit string	M	Terminal number
agentId	Digit string	M	Agent ID for log in, 4 digits (0~9)
groupNumber	Digit string	M	ACD Group Number
loginPrimary	string	M	primary secondary
loginPriority	Positive integer	M	0~9

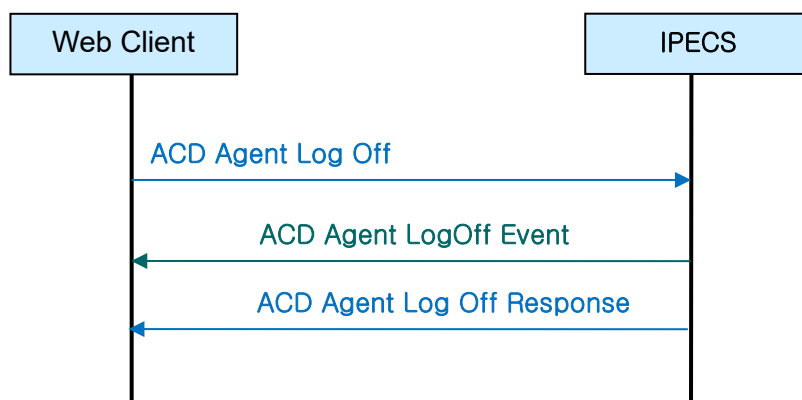
5.3.4.28. ACD Agent LogOff

Function Description

Agent can log off to ACD group by Web API

Usage

Web Client sends AgentLogOff to iPECS system, and iPECS system issues ACD Agent LogOff Event and Positive Response if the request command is valid, and Negative Response if it is not or Agent is not logged on state.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/agent_logoff
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • agentId • groupNumber • loginPrimary
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
agentId	Digit string	M	Agent ID for log in, 4 digits (0~9)
groupNumber	Digit string	M	ACD Group Number
loginPrimary	string	M	primary secondary

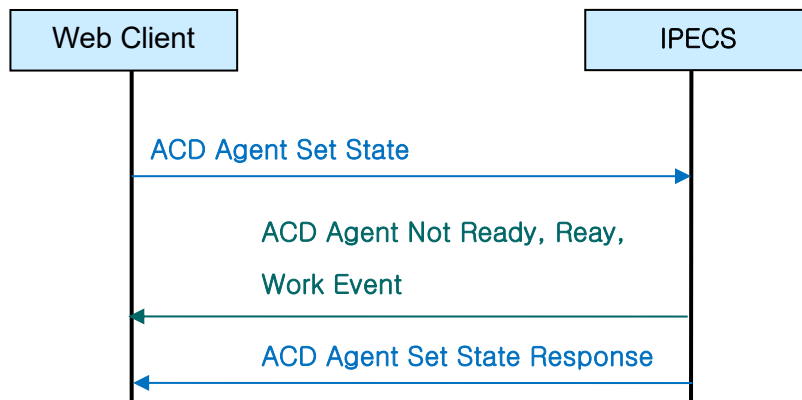
5.3.4.29. ACD Agent Set State

Function Description

Agent can change it's state by Web API,

Usage

Web Client sends Agent LogOff to iPECS system, and iPECS system issues ACD Agent Not Ready, Ready, Work Event and Positive Response if the request command is valid, and Negative Response if it is not or Agent is not logged on state.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/agent_state
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • agentId • groupNumber • agentState • reasonCode
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Terminal number
agentId	Digit string	M	Agent ID for log in, 4 digits (0~9)
groupNumber	Digit string	M	ACD Group Number
agentState	string	M	Choose below string dutyOn dutyOff
reasonCode	Digit string	M	0~9, *, . #

5.3.4.30. ACD Group Control

Function Description

Web API can control ACD Group by Routing queued call to Agent by using “Reroute Call” API. Refer to “Reroute Call”

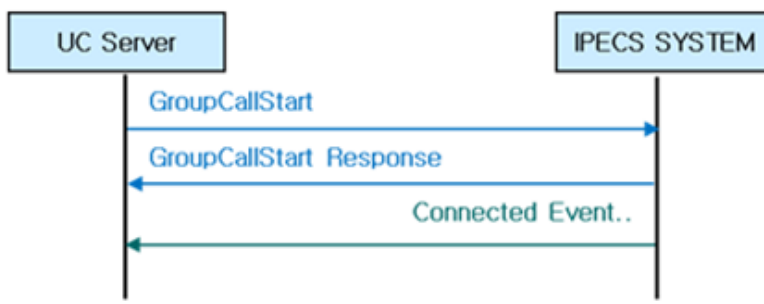
5.3.4.31. Conference Group Call Start

Function Description

Web Client assigns a specific member (extension, trunk line) terminals and make a conference group call.

Usage

Web Client sends Conference Group Call Start Argument to iPECS system and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/confgroup
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • groupIndex
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content:

	<pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>
--	--

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Device Number
groupIndex	Positive integer	M	Station or System conference group index(1~99 : station group/ 100~265 : system group / 999: cancel)

[Condition]

If Positive Response, Proceeding/Alerting/Connected Event will be issued. Alerting will be issued by Caller + Callee Count

[restriction]

- possible called Number: Whole type of number without feature code

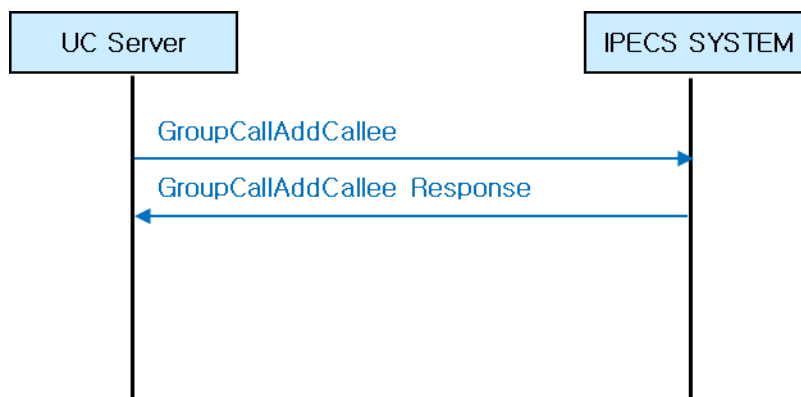
5.3.4.32. Conference Group Call Add Callee

Function Description

Add Specific Member(Extension, Trunk) during Conference Group Call.

Usage

- Web Client sends Conference Group Call Add Callee Argument to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/confgroup_callee
------------	---

Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • groupIndex • memberType • memberIndex • memberDN
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Device Number
groupIndex	Positive integer	M	Station or System conference group index(1~99 : station group/ 100~265 : system group / 999: cancel)
memberType	String	M	Group call member type, station / co / net
memberIndex	Positive integer	M	Member Index on Conference Group
memberDN	Digit string	M	New Member Number

[Condition]

- this request for group call master

[restriction]

- possible called Number: Whole type of number without feature code

5.3.4.33. Conference Group Call Drop Callee

Function Description

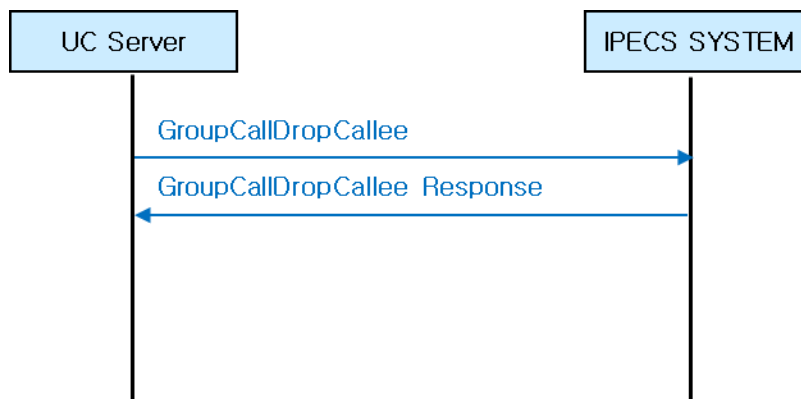
Add Specific Member(Extension, Trunk) during Conference Group Call.

Usage

- Web Client sends Conference Group Call Drop Callee Argument to iPECS system, and iPECS

system issues Positive

Response if the request command is valid, and Negative Response if it is not.



URI	{BASE_URI}/server/{VERSION}/users/{User ID}/call/confgroup_callee
Method	DELETE
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • groupIndex • memberIndex
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error": { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Device Number
groupIndex	Positive integer	M	Station or System conference group index(1~99 : station group/ 100~265 : system group / 999: cancel)
memberIndex	Positive integer	M	Member Index on Conference Group

[Condition]

- this request for group call master

[restriction]

- possible called Number : DN which in group call

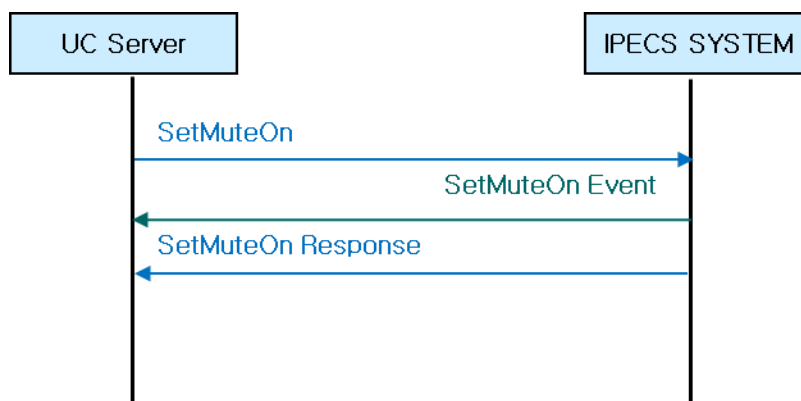
5.3.4.34. Conference Group Call Set Mute On

Function Description

Mute Specific Member(Extension, Trunk) during Group Call.

Usage

- Web Client sends Conference Group Call Drop Callee Argument to iPECS system, and iPECS system issues Positive Response if the request command is valid, and Negative Response if it is not.
- Call flow



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/confgroup_mutecallee
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> deviceNumber groupIndex memberIndex svcType
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content:

	<pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>
--	--

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit string	M	Device Number
groupIndex	Positive integer	M	Station or System conference group index(1~99 : station group/ 100~265 : system group / 999: cancel)
memberIndex	Positive integer	M	Member Index on Conference Group
svcType	String	M	on or off

[Condition]

- this request for group call master

[Restriction]

- possible called Number : DN which in group call

5.3.4.35. Get conference room state

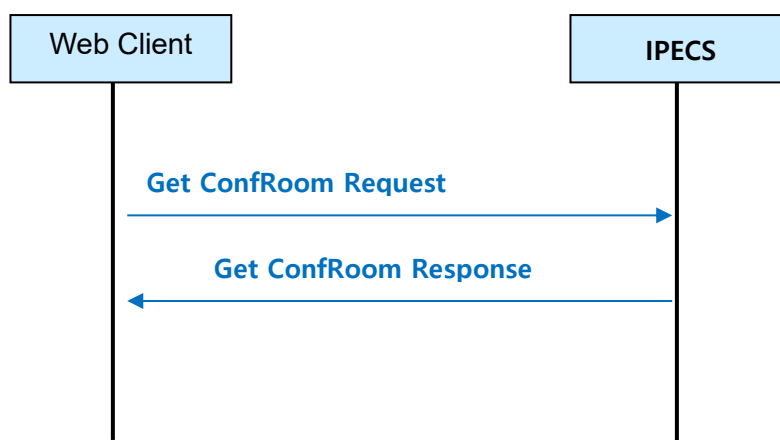
Function Description

Web Client can get Conference Room state which is use or not use.

Usage

Web Client sends Get ConfRoom to iPECS system, and iPECS system issues Positive Response with Conference Room Info, and Negative Response if it is not.

- flow



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/confroom
Method	GET
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • roomIndex
Positive Response	HTTP 200 OK Content: <pre>{ "data": { "roomIndex": 10, "roomUsage": "true", "memberCount": 2, "member": ["601207", "601208"] } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error" : { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
roomIndex	Positive integer	M	Conference Room Index
roomUsage	string	M	Conference Room Usage true, false
memberCount	Positive integer	M	Member count on Conference Room, Max eMG: 13, UCP: 32
member	[Digit string]	M	Member list on Conference Room

5.3.4.36. Conference Room Open/Close

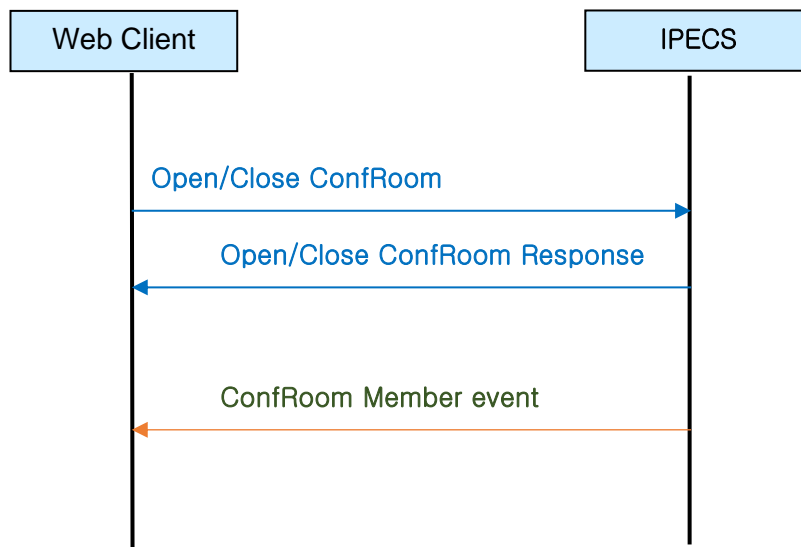
Function Description

Web Client can open/close Conference Room.

Usage

Web Client sends Open/Close ConfRoom to iPECS system, and iPECS system issues Positive Response and ConfRoom Member Event if the request command is valid, and Negative Response if it is not.

- flow



URI	{BASE URI}/server/{VERSION}/users/{User ID}/call/confroom
Method	POST
Header	Authorization: Bearer <token from login response>
Parameter	<ul style="list-style-type: none"> • deviceNumber • roomIndex • roomPwd • roomUsage
Positive Response	HTTP 200 OK Content: <pre>{ "data": { } }</pre>
Negative Response	HTTP 401 Unauthorized, HTTP 403 Forbidden HTTP 404 Not Found Content: <pre>{ "error": { "code": xxx, "message": "xx xxxx" } }</pre>

Parameter	Value	Mandatory/ Optional	Description
deviceNumber	Digit String	M	Conference Room Member Number
roomIndex	Positive Integer	M	Conference Room Index Range) 1 ~ 9 if "Conference Room Expansion" value is set OFF in "System Attributes(160~161)" menu. 1 ~ 100 if "Conference Room Expansion" value is set ON in case of eMG80 or 100

			1 ~ 200 if "Conference Room Expansion" value is set ON in case of eMG800 or UCP
roomPwd	String	M	Conference Room Password
roomUsage	String	M	true or false

5.4.Click to Call

“Click To Call Service” must be enabled in Station Data-> Common Attributes (111).

The user ID is the station number and the password uses Table Data->Station Authentication Code Table(227). ClickCall Application license is required. Only available to station users.

Feature	Clickcall
Description	Click to Call
Service Type	Client
Method	POST
URI	https://{IP ADDR}:{PORT}/ipxapi/client/v1/users/{User ID}/clickcall
Header element	Authorization : bearer {token from system}
Request Data	<p>* User ID is station number in SME system.</p> <pre>{ "From" : "{My Station Number}", "To" : "{Destination Number}" }</pre>
Return Format	<p>Normal case</p> <p>200 OK in header without content</p> <p>Error case</p> <pre>{ "error": { "code": ###, "message": "#Message" } }</pre>

6. Error Code Table

Category	Code	Meaning
Common (0 ~ 99)	1	Parameter error
	2	Version error
	3	License error
	4	Login information mismatch
	99	Unknown
Click to Call (100 ~ 199)	101	Authentication failure
	102	Access denied
	103	Call restricted
	104	Not OK
	105	Parameter error
	106	No access VSF
	107	No VSF group
	108	No access PGM authority
	110	Caller busy
	121	Feature not set
	199	Unknown
SMDR (200 ~ 299)	299	Unknown
CTI	101	generic
	102	serviceNotSupported
	103	invalidMonitorObjectType
	104	invalidCallingDeviceIdentifier
	105	invalidCalledDeviceIdentifier
	106	invalidConnectionIdentifier
	107	invalidDestination
	108	invalidDestinationDeviceObject
	109	invalidDivertingDeviceIdentifier
	110	invalidHeldDeviceIdentifier
	111	invalidParameterValue
	112	invalidForwardingDestination
	140	AssociateBusy
	141	AssociateDND
	142	AssociateFWD

	143	AccessDenied
	144	TimeOut
	145	InvalidAscState
	146	InvalidAscType
	147	InvalidState
	148	InvalidOperation
	149	InvalidPassword
	150	unregistered
	201	NoHeldCall
	202	invalidHeldDeviceState
	203	invalidConnectionState
	204	noCallToAnswer
	205	noConnectionToClear
	301	resourceBusy