

# REMOTE CONTROL API 9.2

## SPECIFICATION

---

*Preliminary*

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## 1 Introduction

### 1.1 Description

Remote Control API 9.0 (a.k.a. Remote API) provides an interface for remote devices to communicate with the video conference system. Remote API can be accessed by Command Line Interface using RS232 or Telnet. This document contains information about the use of Remote API, and is intended for system integrators.

Note that Remote Control API 2.0 is only for EVC 900 series , not available on the legacy H & HVC series or EVC 130 series.

## 2 Functionality

### 2.1 Telnet Service

The telnet service provides controls to the video conference system. System integrators can retrieve system state and control the system.

Here is an example of telnet service input and output:

```
login 1234
*r ok
**end
action UI/IR/up
*r ok
**end
get System/MACAddress
*r ok
*r data="01:23:45:67:89:AB"
**end
logout
```

The user connects to the system, logs in with password, sends an up remote control key press, gets MAC address of the system, and then logs out.

#### 2.1.1 Login

For security issues, you need the administration password to access the service first. The password can be set from the system UI.

#### 2.1.2 Action command

An ACTION command triggers a certain system operation. For example, move the PTZ camera leftward a step.

### 2.1.3 Get command

A GET command receives certain information of a system. For example, get MAC address of a system.

### 2.1.4 Set command

A SET command sets a parameter of a system. For example, set IP address of a system.

### 2.1.5 Query command

A QUERY command gets a list of options within a parameter. For example, get a list of all supported languages.

### 2.1.6 Keep alive

For security issues, the system kicks users who have no action in 5 minutes. Once a user has been kicked, he should reconnect to the telnet service, and log in again.

To avoid this situation, users can send an NOP command to keep the session alive.

### 2.1.7 Logout

You have to logout from the telnet service at the end of session. Otherwise, the user management will run out of user quota. The upper limit is 10 users at the same time.

## 3 Caveats

None.

## 4 Other Requirement

None

## 5 Design Details

The full Remote Control API 9.0 syntax is introduced in section 5.1. It is a generic command sets, and can be extended to variety of system controls. These typical cases are listed in the later sections.

### 5.1 Remote API syntax

### 5.1.1 Login

Input:

```
login {password}
```

Output:

```
*r ok
```

```
*r error {reason}
```

Log in to the telnet service.

- password Administration password
- reason Reason of error. Typically:
  - invalid access code Wrong password
  - too many users There are too many users

### 5.1.2 Action command

Input:

```
action {xpath}
```

Output:

```
*r ok
```

```
*r error {reason}
```

Trigger a system operation.

- xpath Which Remote API to trigger. See Table 4.
- reason Reason of error. Typically:

- invalid object
- resource busy
- invalid session

### 5.1.3 Get command

Input:

```
get {xpath}
```

Output:

```
*r ok  
*r data="{data}"  
**end
```

```
*r error {reason}
```

Receive information of a system.

- **xpath** Which Remote API data to get. See Table 4.
- **data** Data got from system.
- **reason** Reason of error.

### 5.1.4 Set command

Input:

```
set {xpath} {data}
```

Output:

```
*r ok  
**end
```

```
*r error {reason}
```

Set parameter of a system.

- xpath Which Remote API parameter to set. See Table 4.
- data Data to be set.
- reason Reason of error.

### 5.1.5 Query command

Input:

```
query {xpath}
```

Output:

```
*r ok
*r value="0" alias="{option #0}"
*r value="1" alias="{option #1}"
...
*r value="{#n}" alias="{option #n}"
**end
```

```
*r error {reason}
```

- xpath Which Remote API options to list. See Table 4.
- #n Number of the item. Starts from 0.
- option#n Option string of Nth item.
- reason Reason of error.

### 5.1.6 Keep alive

Input:

```
nop
```

Output:

```
*r ok
```

```
*r error {reason}
```

- **reason** Reason of error.

### 5.1.7 Logout

Input:

```
logout
```

## 5.2 Remote Control Emulation

You can emulate remote control key presses using Remote API.

### 5.2.1 Key press

Input:

```
action UI/IR/{key}
```

Output:

```
*r ok  
**end
```

- **key** See Table 4 for full key list.

## 5.3 Call Control

You can dial or disconnect to an endpoint using Remote API.

### 5.3.1 Call-out

Input:

```
set Call/CallOutTo {name}|{addr}|{bitrate}|{protocol}
```

Output:

```
*r ok
**end
```

Dial to an endpoint. See also Section 5.3.2.

- name        Name of callee. It only effects GUI display when dialing.
- addr        Address of callee.
- bitrate     Bitrate of the call. Check the manual of the target video conference system to see supported bitrates.
- protocol    h323 / sip

### 5.3.2 Call-out status

Input:

```
get Call/CallOutStatus
```

Output:

```
*r ok
*r data="{status}"
**end
```

Get call-out status. You should periodically read this data (recommended: 1 time/sec.) after a dial command until it is success or fail.

- status        Status code
  - 0            Busy
  - 1            Call success
  - 2            Call fail

### 5.3.3 Address of connected endpoints

Input:

```
get Call/EpAddr[{n}]
```

Output:

```
*r ok  
*r data="{name}"  
**end
```

- n Nth of endpoint, starting from 1.
- name Name of Nth connected endpoint

### 5.3.4 Disconnect

Input:

```
action Call/Disconnect[{n}]
```

Output:

```
*r ok  
**end
```

Disconnect to Nth endpoint. See also 5.3.6.

- n Nth of endpoint, starting from 1, which is identical to Section 5.3.3.

### 5.3.5 Disconnect to all

Input:

```
action Call/DisconnectAll
```

Output:

```
*r ok
**end
```

Disconnect to all connected endpoints. See also 5.3.6.

### 5.3.6 Disconnect status

Input:

```
action Call/DisconnectStatus
```

Output:

```
*r ok
*r data="{status}"
**end
```

Get disconnect status. You should periodically read this data (recommended: 1 time/sec.) after a disconnect command until it is done.

- status      Status code
  - 0          Busy
  - 1          Done

## 5.4 Phonebook

You can access the phonebook using Remote API, such as contacts list, call history, etc.

### 5.4.1 Get contacts list

Input:

```
query Phonebook/ContactList
```

Output:

```
*r ok
*r total="{#n}" *r rev="1"
*r value="0" alias="{JSON of contact #0}"
...
*r value="{#n}" alias="{JSON of contact #n}"
```

- JSON of contact#n      Data of contact #N in JSON format. It contains these fields:

| Field   | Type    | Description  |
|---------|---------|--|
| id      | integer | ID of contact  |
| name    | string  | Name of contact  |
| h323    | string  | H.323 address  |
| sip     | string  | SIP address  |
| bitrate | integer | Bitrate of connection  |
| group   | object  | The group object which the contact belongs to.<br>See Table 2. |

Table 1      JSON format of contact

```
{"id":2,"name":"Aver FAE","h323":"210.242.161.39", "sip": "", "bitrate":
"128", "group":{"id":2,"name":"Groupname"}}
```

### 5.4.2      Get groups list

Input:

```
query Phonebook/GroupList
```

Output:

```
*r ok
*r total="{#n}" *r rev="6"
*r value="0" alias="{JSON of group #0}"
...
*r value="{#n}" alias="{JSON of group #n}"
```

- JSON of group #n      Data of group #N in JSON format. It contains these fields:

| Field | Type    | Description     |
|-------|---------|-----------------|
| id    | integer | ID of contact   |
| name  | string  | Name of contact |

Table 2      JSON format of group

### 5.4.3      Get call history list

Input:

```
query Phonebook/CallHistoryList
```

Output:

```
*r ok
*r total="{#n}" *r rev="2"
*r value="0" alias="{JSON of history #0}"
...
*r value="{#n}" alias="{JSON of history #n}"
```

- JSON of history #n      Data of history #N in JSON format. It contains these fields:

| Field     | Type    | Description   |
|-----------|---------|---|
| name      | string  | Name of contact   |
| addr      | string  | Address of the contact  |
| epoch     | integer | Time of this call since Jan 1, 1980, in seconds.                |
| date      | string  | Date of this call.  |
| time      | string  | Time of day of this call.                                       |
| bitrate   | integer | Bitrate of this call, in Kbps.                                  |
| protocol  | string  | “h323” / “sip”  |
| direction | string  | “Call-in” / “Call-out” / “Call-in failed” / “Call-out failed”   |
| isknown   | integer | 0 / 1, which means the contact has been added in the phonebook. |

Table 3      JSON format of call history

The following is an example of JSON call history data:

```
{ "name": "AVerFAE", "addr": "210.242.161.39", "epoch": 1374127505, "date": "2013\7\18", "time": "06:05", "bit rate": "768", "protocol": "h323", "direction": "Call-out", "isknown": 1 }
```

## 5.5 Xpath of object

Note: The following list is only for reference. Object's xpath and method may be different from versions. The newest updated should be checked using list command.

| Xpath                        | Method        | Type  | Description                            |
|------------------------------|---------------|---|--|
| Audio/HdmiInput              | get set query | type="integer"<br>size="1"<br>min="0"<br>max="2"  | 0: Far site /1: Near site/2: Both site |
| Audio/KeyTone                | get set       | type="boolean"                                    |  |
| Audio/LineinInput            | get set query | type="integer"<br>size="1"<br>min="0"<br>max="2"  | 0: Far site /1: Near site/2: Both site |
| Audio/MicGain                | get set query | type="integer"<br>size="1"<br>min="0"<br>max="8"  |  |
| Audio/MicHdmiOutputPathMerge | get           | type="boolean"                                    |  |
| Audio/MicInput               | get set query | type="integer"<br>size="1"<br>min="0"<br>max="1"  |  |
| Audio/VoiceDetection         | get           | type="boolean"                                    |  |
| Audio/Volume                 | get set       | type="integer"<br>size="1"<br>min="1"<br>max="32" |  |
| Call/AnswerCall              | action        |   |  |
| Call/AnswerCallStatus        | get           | type="integer"<br>size="1"                        | 0: busy / 1: done                      |
| Call/AutoAnswer              | get set query | type="integer"<br>size="1"<br>min="0"<br>max="2"  |  |
| Call/AutoBitrate             | get set query | type="integer"<br>size="1"<br>min="0"<br>max="10" |  |

|                          |               |  |  |
|--------------------------|---------------|--|--|
| Call/BfcpOpMode          | get set query | type="integer"<br>size="1"<br>min="0"<br>max="2" | 0: Off , 1: UDP, 2: TCP  |
| Call/CallDirection[1]    | get           | type="boolean"                                   | true: call-out / false: call-in, no connection                           |
| Call/CallDirection[2]    | get           | type="boolean"                                   | true: call-out / false: call-in, no connection                           |
| Call/CallDirection[3]    | get           | type="boolean"                                   | true: call-out / false: call-in, no connection                           |
| Call/CallDirection[4]    | get           | type="boolean"                                   | true: call-out / false: call-in, no connection                           |
| Call/CallDirection[5]    | get           | type="boolean"                                   | true: call-out / false: call-in, no connection                           |
| Call/CallDirection[6]    | get           | type="boolean"                                   | true: call-out / false: call-in, no connection                           |
| Call/CallDirection[7]    | get           | type="boolean"                                   | true: call-out / false: call-in, no connection                           |
| Call/CallDirection[8]    | get           | type="boolean"                                   | true: call-out / false: call-in, no connection                           |
| Call/CallDirection[9]    | get           | type="boolean"                                   | true: call-out / false: call-in, no connection                           |
| Call/CallInStatus        | get           | type="integer"<br>size="1"                       | 0: busy / 1: done  |
| Call/CallOutCancel       | action        |  |  |
| Call/CallOutStatus       | get           | type="integer"<br>size="1"                       | 0: busy / 1: success / 2: failed   |
| Call/CallOutTo           | get set       | type="string"<br>size="255"                      | Set data "{call-out name}   {call-out address}   {bit-rate}" to call-out |
| Call/Connected[1]        | get           | type="boolean"                                   |  |
| Call/Connected[2]        | get           | type="boolean"                                   |  |
| Call/Connected[3]        | get           | type="boolean"                                   |  |
| Call/Connected[4]        | get           | type="boolean"                                   |  |
| Call/Connected[5]        | get           | type="boolean"                                   |  |
| Call/Connected[6]        | get           | type="boolean"                                   |  |
| Call/Connected[7]        | get           | type="boolean"                                   |  |
| Call/Connected[8]        | get           | type="boolean"                                   |  |
| Call/Connected[9]        | get           | type="boolean"                                   |  |
| Call/CurrentCallDuration | get           | type="string"<br>size="8"                        | {HH:MM}  |
| Call/DisconnectAll       | action        |  |  |
| Call/DisconnectStatus    | get           | type="integer"<br>size="1"                       |  |
| Call/Disconnect[1]       | action        |  |  |
| Call/Disconnect[2]       | action        |  |  |
| Call/Disconnect[3]       | action        |  |  |
| Call/Disconnect[4]       | action        |  |  |
| Call/Disconnect[5]       | action        |  |  |

|                              |         |                             |  |
|------------------------------|---------|-----------------------------|--|
| Call/Disconnect[6]           | action  |                             |  |
| Call/Disconnect[7]           | action  |                             |  |
| Call/Disconnect[8]           | action  |                             |  |
| Call/Disconnect[9]           | action  |                             |  |
| Call/EnableAES               | get set | type="boolean"              |  |
| Call/EnableBFCP              | get set | type="boolean"              |  |
| Call/EnableQoS               | get set | type="boolean"              |  |
| Call/EnableSIP               | get set | type="boolean"              |  |
| Call/EnableSRTP              | get set | type="boolean"              |  |
| Call/EnableSTUN              | get set | type="boolean"              |  |
| Call/EpAddr[1]               | get     | type="string"<br>size="128" |  |
| Call/EpAddr[2]               | get     | type="string"<br>size="128" |  |
| Call/EpAddr[3]               | get     | type="string"<br>size="128" |  |
| Call/EpAddr[4]               | get     | type="string"<br>size="128" |  |
| Call/EpAddr[5]               | get     | type="string"<br>size="128" |  |
| Call/EpAddr[6]               | get     | type="string"<br>size="128" |  |
| Call/EpAddr[7]               | get     | type="string"<br>size="128" |  |
| Call/EpAddr[8]               | get     | type="string"<br>size="128" |  |
| Call/EpAddr[9]               | get     | type="string"<br>size="128" |  |
| Call/EpBitrate[1]/Recv       | get     | type="integer"<br>size="2"  |  |
| Call/EpBitrate[1]/Recv/Audio | get     | type="integer"<br>size="2"  |  |
| Call/EpBitrate[1]/Recv/Video | get     | type="integer"<br>size="2"  |  |
| Call/EpBitrate[1]/Send       | get     | type="integer"<br>size="2"  |  |
| Call/EpBitrate[1]/Send/Audio | get     | type="integer"<br>size="2"  |  |
| Call/EpBitrate[1]/Send/Video | get     | type="integer"<br>size="2"  |  |
| Call/EpBitrate[2]/Recv       | get     | type="integer"<br>size="2"  |  |
| Call/EpBitrate[2]/Recv/Audio | get     | type="integer"<br>size="2"  |  |
| Call/EpBitrate[2]/Recv/Video | get     | type="integer"<br>size="2"  |  |

|                              |     |                            |  |
|------------------------------|-----|----------------------------|--|
| Call/EpBitrate[2]/Send       | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[2]/Send/Audio | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[2]/Send/Video | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[3]/Recv       | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[3]/Recv/Audio | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[3]/Recv/Video | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[3]/Send       | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[3]/Send/Audio | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[3]/Send/Video | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[4]/Recv       | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[4]/Recv/Audio | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[4]/Recv/Video | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[4]/Send       | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[4]/Send/Audio | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[4]/Send/Video | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[5]/Recv       | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[5]/Recv/Audio | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[5]/Recv/Video | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[5]/Send       | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[5]/Send/Audio | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[5]/Send/Video | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[6]/Recv       | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[6]/Recv/Audio | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[6]/Recv/Video | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[6]/Send       | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[6]/Send/Audio | get | type="integer"<br>size="2" |  |

|                              |     |                            |  |
|------------------------------|-----|----------------------------|--|
| Call/EpBitrate[6]/Send/Video | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[7]/Recv       | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[7]/Recv/Audio | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[7]/Recv/Video | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[7]/Send       | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[7]/Send/Audio | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[7]/Send/Video | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[8]/Recv       | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[8]/Recv/Audio | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[8]/Recv/Video | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[8]/Send       | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[8]/Send/Audio | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[8]/Send/Video | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[9]/Recv       | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[9]/Recv/Audio | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[9]/Recv/Video | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[9]/Send       | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[9]/Send/Audio | get | type="integer"<br>size="2" |  |
| Call/EpBitrate[9]/Send/Video | get | type="integer"<br>size="2" |  |
| Call/EpCallType[1]           | get | type="string"<br>size="16" |  |
| Call/EpCallType[2]           | get | type="string"<br>size="16" |  |
| Call/EpCallType[3]           | get | type="string"<br>size="16" |  |
| Call/EpCallType[4]           | get | type="string"<br>size="16" |  |
| Call/EpCallType[5]           | get | type="string"<br>size="16" |  |
| Call/EpCallType[6]           | get | type="string"<br>size="16" |  |
| Call/EpCallType[7]           | get | type="string"<br>size="16" |  |

|                            |     |                            |  |
|----------------------------|-----|----------------------------|--|
| Call/EpCallType[8]         | get | type="string"<br>size="16" |  |
| Call/EpCallType[9]         | get | type="string"<br>size="16" |  |
| Call/EpCodec[1]/Recv/Audio | get | type="string"<br>size="16" |  |
| Call/EpCodec[1]/Recv/Video | get | type="string"<br>size="16" |  |
| Call/EpCodec[1]/Send/Audio | get | type="string"<br>size="16" |  |
| Call/EpCodec[1]/Send/Video | get | type="string"<br>size="16" |  |
| Call/EpCodec[2]/Recv/Audio | get | type="string"<br>size="16" |  |
| Call/EpCodec[2]/Recv/Video | get | type="string"<br>size="16" |  |
| Call/EpCodec[2]/Send/Audio | get | type="string"<br>size="16" |  |
| Call/EpCodec[2]/Send/Video | get | type="string"<br>size="16" |  |
| Call/EpCodec[3]/Recv/Audio | get | type="string"<br>size="16" |  |
| Call/EpCodec[3]/Recv/Video | get | type="string"<br>size="16" |  |
| Call/EpCodec[3]/Send/Audio | get | type="string"<br>size="16" |  |
| Call/EpCodec[3]/Send/Video | get | type="string"<br>size="16" |  |
| Call/EpCodec[4]/Recv/Audio | get | type="string"<br>size="16" |  |
| Call/EpCodec[4]/Recv/Video | get | type="string"<br>size="16" |  |
| Call/EpCodec[4]/Send/Audio | get | type="string"<br>size="16" |  |
| Call/EpCodec[4]/Send/Video | get | type="string"<br>size="16" |  |
| Call/EpCodec[5]/Recv/Audio | get | type="string"<br>size="16" |  |
| Call/EpCodec[5]/Recv/Video | get | type="string"<br>size="16" |  |
| Call/EpCodec[5]/Send/Audio | get | type="string"<br>size="16" |  |
| Call/EpCodec[5]/Send/Video | get | type="string"<br>size="16" |  |
| Call/EpCodec[6]/Recv/Audio | get | type="string"<br>size="16" |  |
| Call/EpCodec[6]/Recv/Video | get | type="string"<br>size="16" |  |
| Call/EpCodec[6]/Send/Audio | get | type="string"<br>size="16" |  |
| Call/EpCodec[6]/Send/Video | get | type="string"<br>size="16" |  |

|                            |     |                             |  |
|----------------------------|-----|-----------------------------|--|
| Call/EpCodec[7]/Recv/Audio | get | type="string"<br>size="16"  |  |
| Call/EpCodec[7]/Recv/Video | get | type="string"<br>size="16"  |  |
| Call/EpCodec[7]/Send/Audio | get | type="string"<br>size="16"  |  |
| Call/EpCodec[7]/Send/Video | get | type="string"<br>size="16"  |  |
| Call/EpCodec[8]/Recv/Audio | get | type="string"<br>size="16"  |  |
| Call/EpCodec[8]/Recv/Video | get | type="string"<br>size="16"  |  |
| Call/EpCodec[8]/Send/Audio | get | type="string"<br>size="16"  |  |
| Call/EpCodec[8]/Send/Video | get | type="string"<br>size="16"  |  |
| Call/EpCodec[9]/Recv/Audio | get | type="string"<br>size="16"  |  |
| Call/EpCodec[9]/Recv/Video | get | type="string"<br>size="16"  |  |
| Call/EpCodec[9]/Send/Audio | get | type="string"<br>size="16"  |  |
| Call/EpCodec[9]/Send/Video | get | type="string"<br>size="16"  |  |
| Call/EpIPv4[1]             | get | type="string"<br>size="128" |  |
| Call/EpIPv4[2]             | get | type="string"<br>size="128" |  |
| Call/EpIPv4[3]             | get | type="string"<br>size="128" |  |
| Call/EpIPv4[4]             | get | type="string"<br>size="128" |  |
| Call/EpIPv4[5]             | get | type="string"<br>size="128" |  |
| Call/EpIPv4[6]             | get | type="string"<br>size="128" |  |
| Call/EpIPv4[7]             | get | type="string"<br>size="128" |  |
| Call/EpIPv4[8]             | get | type="string"<br>size="128" |  |
| Call/EpIPv4[9]             | get | type="string"<br>size="128" |  |
| Call/EpName[1]             | get | type="string"<br>size="128" |  |
| Call/EpName[2]             | get | type="string"<br>size="128" |  |
| Call/EpName[3]             | get | type="string"<br>size="128" |  |
| Call/EpName[4]             | get | type="string"<br>size="128" |  |
| Call/EpName[5]             | get | type="string"<br>size="128" |  |

|                           |     |                             |  |
|---------------------------|-----|-----------------------------|--|
| Call/EpName[6]            | get | type="string"<br>size="128" |  |
| Call/EpName[7]            | get | type="string"<br>size="128" |  |
| Call/EpName[8]            | get | type="string"<br>size="128" |  |
| Call/EpName[9]            | get | type="string"<br>size="128" |  |
| Call/EpResolution[1]/Recv | get | type="string"<br>size="10"  |  |
| Call/EpResolution[1]/Send | get | type="string"<br>size="10"  |  |
| Call/EpResolution[2]/Recv | get | type="string"<br>size="10"  |  |
| Call/EpResolution[2]/Send | get | type="string"<br>size="10"  |  |
| Call/EpResolution[3]/Recv | get | type="string"<br>size="10"  |  |
| Call/EpResolution[3]/Send | get | type="string"<br>size="10"  |  |
| Call/EpResolution[4]/Recv | get | type="string"<br>size="10"  |  |
| Call/EpResolution[4]/Send | get | type="string"<br>size="10"  |  |
| Call/EpResolution[5]/Recv | get | type="string"<br>size="10"  |  |
| Call/EpResolution[5]/Send | get | type="string"<br>size="10"  |  |
| Call/EpResolution[6]/Recv | get | type="string"<br>size="10"  |  |
| Call/EpResolution[6]/Send | get | type="string"<br>size="10"  |  |
| Call/EpResolution[7]/Recv | get | type="string"<br>size="10"  |  |
| Call/EpResolution[7]/Send | get | type="string"<br>size="10"  |  |
| Call/EpResolution[8]/Recv | get | type="string"<br>size="10"  |  |
| Call/EpResolution[8]/Send | get | type="string"<br>size="10"  |  |
| Call/EpResolution[9]/Recv | get | type="string"<br>size="10"  |  |
| Call/EpResolution[9]/Send | get | type="string"<br>size="10"  |  |
| Call/EpSystem[1]          | get | type="string"<br>size="255" |  |
| Call/EpSystem[2]          | get | type="string"<br>size="255" |  |
| Call/EpSystem[3]          | get | type="string"<br>size="255" |  |
| Call/EpSystem[4]          | get | type="string"<br>size="255" |  |

|                             |         |                             |   |
|-----------------------------|---------|-----------------------------|---|
| Call/EpSystem[5]            | get     | type="string"<br>size="255" |   |
| Call/EpSystem[6]            | get     | type="string"<br>size="255" |   |
| Call/EpSystem[7]            | get     | type="string"<br>size="255" |   |
| Call/EpSystem[8]            | get     | type="string"<br>size="255" |   |
| Call/EpSystem[9]            | get     | type="string"<br>size="255" |   |
| Call/FarMuted[1]            | get     | type="boolean"              |   |
| Call/FarMuted[2]            | get     | type="boolean"              |   |
| Call/FarMuted[3]            | get     | type="boolean"              |   |
| Call/FarMuted[4]            | get     | type="boolean"              |   |
| Call/FarMuted[5]            | get     | type="boolean"              |   |
| Call/FarMuted[6]            | get     | type="boolean"              |   |
| Call/FarMuted[7]            | get     | type="boolean"              |   |
| Call/FarMuted[8]            | get     | type="boolean"              |   |
| Call/FarMuted[9]            | get     | type="boolean"              |   |
| Call/GatekeeperIPv4         | get set | type="string"<br>size="16"  |   |
| Call/GatekeeperRegSvrStatus | get     | type="integer"<br>size="1"  | 0:unconnect/1:connecting/2:register                       |
| Call/GatekeeperStatus       | get     | type="integer"<br>size="1"  | 0: busy / 1: done   |
| Call/GrpCalleesName[1]      | get     | type="string"<br>size="128" |   |
| Call/GrpCalleesName [2]     | get     | type="string"<br>size="128" |   |
| Call/GrpCalleesName [3]     | get     | type="string"<br>size="128" |   |
| Call/GrpCalleesName [4]     | get     | type="string"<br>size="128" |   |
| Call/GrpCalleesName [5]     | get     | type="string"<br>size="128" |   |
| Call/GrpCalleesName [6]     | get     | type="string"<br>size="128" |   |
| Call/GrpCalleesName [7]     | get     | type="string"<br>size="128" |   |
| Call/GrpCalleesName [8]     | get     | type="string"<br>size="128" |   |
| Call/GrpCalleesName [9]     | get     | type="string"<br>size="128" |   |
| Call/GrpCalleesStatus[1]    | get     | type="integer"<br>size="1"  | 0: Unused/1:Waiting Call/2:Calling/3:Online<br>/4:Offline |
| Call/GrpCalleesStatus[2]    | get     | type="integer"<br>size="1"  | 0: Unused/1:Waiting Call/2:Calling/3:Online<br>/4:Offline |

|  |         |                             |   |
|--|---------|-----------------------------|---|
| Call/GrpCalleesStatus[3]               | get     | type="integer"<br>size="1"  | 0: Unused/1:Waiting Call/2:Calling/3:Online<br>/4:Offline |
| Call/GrpCalleesStatus[4]               | get     | type="integer"<br>size="1"  | 0: Unused/1:Waiting Call/2:Calling/3:Online<br>/4:Offline |
| Call/GrpCalleesStatus[5]               | get     | type="integer"<br>size="1"  | 0: Unused/1:Waiting Call/2:Calling/3:Online<br>/4:Offline |
| Call/GrpCalleesStatus[6]               | get     | type="integer"<br>size="1"  | 0: Unused/1:Waiting Call/2:Calling/3:Online<br>/4:Offline |
| Call/GrpCalleesStatus[7]               | get     | type="integer"<br>size="1"  | 0: Unused/1:Waiting Call/2:Calling/3:Online<br>/4:Offline |
| Call/GrpCalleesStatus[8]               | get     | type="integer"<br>size="1"  | 0: Unused/1:Waiting Call/2:Calling/3:Online<br>/4:Offline |
| Call/GrpCalleesStatus[9]               | get     | type="integer"<br>size="1"  | 0: Unused/1:Waiting Call/2:Calling/3:Online<br>/4:Offline |
| Call/GrpCalling                        | get set | type="boolean"              |   |
| Call/H239Bitrate/Recv                  | get     | type="integer"<br>size="2"  |   |
| Call/H239Bitrate/Send                  | get     | type="integer"<br>size="2"  |   |
| Call/H239Codec/Recv                    | get     | type="string"<br>size="16"  |   |
| Call/H239Codec/Send                    | get     | type="string"<br>size="16"  |   |
| Call/H239Connected                     | get     | type="boolean"              |   |
| Call/H239Resolution/Recv               | get     | type="string"<br>size="10"  |   |
| Call/H239Resolution/Send               | get     | type="string"<br>size="10"  |   |
| Call/H239RtcpInfo/Recv/Bitrate         | get     | type="integer"<br>size="2"  |   |
| Call/H239RtcpInfo/Recv/Fps             | get     | type="string"<br>size="6"   |   |
| Call/H239RtcpInfo/Recv/PacketLossTotal | get     | type="integer"<br>size="4"  |   |
| Call/H239RtcpInfo/Send/Bitrate         | get     | type="integer"<br>size="2"  |   |
| Call/H239RtcpInfo/Send/Fps             | get     | type="string"<br>size="6"   |   |
| Call/H239RtcpInfo/Send/PacketLossTotal | get     | type="integer"<br>size="4"  |   |
| Call/H323Name                          | get set | type="string"<br>size="128" |   |
| Call/H460Status                        | get     | type="integer"<br>size="1"  | 0: busy / 1: done   |
| Call/IWB                               | action  |                             |   |
| Call/LocalExtension                    | get set | type="string"<br>size="128" |   |
| Call/LocalMuted                        | get     | type="integer"<br>size="4"  |   |
| Call/LoopbackTest                      | action  |                             |   |

|   |                  |   |                        |
|---|------------------|---|------------------------|
| Call/MaxRecvBandwidth                       | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="10" |                        |
| Call/MaxSendBandwidth                       | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="10" |                        |
| Call/NATMode                                | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="2"  | 0: off/1:on/2:auto     |
| Call/NATPublicIPv4                          | get set          | type="string"<br>size="16"                        |                        |
| Call/NetworkTest                            | get              | type="string"<br>size="0"                         |                        |
| Call/NetworkTest/Ack                        | get              | type="string"<br>size="24"                        |                        |
| Call/NetworkTest/Connect                    | get              | type="string"<br>size="24"                        |                        |
| Call/NetworkTest/Recv/Audio                 | get              | type="string"<br>size="24"                        |                        |
| Call/NetworkTest/Recv/Video                 | get              | type="string"<br>size="24"                        |                        |
| Call/NetworkTest/Send/Audio                 | get              | type="string"<br>size="24"                        |                        |
| Call/NetworkTest/Send/Video                 | get              | type="string"<br>size="24"                        |                        |
| Call/ProtocolPriority                       | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="1"  |                        |
| Call/RecordState                            | get              | type="integer"<br>size="1"                        | 0: idle / 1: recording |
| Call/RecordStatus                           | get              | type="integer"<br>size="1"                        | 0: busy / 1: done      |
| Call/RegisterGatekeeper                     | action           |   |                        |
| Call/RegisterSIPServer                      | action           |   |                        |
| Call/RejectCall                             | action           |   |                        |
| Call/ResetStackCapability                   | action           |   |                        |
| Call/RtcpInfo[1]/Recv/Audio/Jitter          | get              | type="integer"<br>size="2"                        |                        |
| Call/RtcpInfo[1]/Recv/Audio/PacketLossRate  | get              | type="string"<br>size="6"                         |                        |
| Call/RtcpInfo[1]/Recv/Audio/PacketLossTotal | get              | type="integer"<br>size="4"                        |                        |
| Call/RtcpInfo[1]/Recv/Video/Bitrate         | get              | type="integer"<br>size="2"                        |                        |
| Call/RtcpInfo[1]/Recv/Video/Fps             | get              | type="string"<br>size="6"                         |                        |
| Call/RtcpInfo[1]/Recv/Video/Jitter          | get              | type="integer"                                    |                        |

|   |     |                            |  |
|---|-----|----------------------------|--|
|   |     | size="2"                   |  |
| Call/RtcpInfo[1]/Recv/Video/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[1]/Recv/Video/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[1]/Send/Audio/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[1]/Send/Audio/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[1]/Send/Audio/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[1]/Send/Video/Bitrate         | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[1]/Send/Video/Fps             | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[1]/Send/Video/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[1]/Send/Video/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[1]/Send/Video/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[2]/Recv/Audio/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[2]/Recv/Audio/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[2]/Recv/Audio/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[2]/Recv/Video/Bitrate         | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[2]/Recv/Video/Fps             | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[2]/Recv/Video/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[2]/Recv/Video/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[2]/Recv/Video/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[2]/Send/Audio/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[2]/Send/Audio/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[2]/Send/Audio/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[2]/Send/Video/Bitrate         | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[2]/Send/Video/Fps             | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[2]/Send/Video/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[2]/Send/Video/PacketLossRate  | get | type="string"<br>size="6"  |  |

|   |     |                            |  |
|---|-----|----------------------------|--|
| Call/RtcpInfo[2]/Send/Video/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[3]/Recv/Audio/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[3]/Recv/Audio/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[3]/Recv/Audio/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[3]/Recv/Video/Bitrates        | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[3]/Recv/Video/Fps             | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[3]/Recv/Video/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[3]/Recv/Video/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[3]/Recv/Video/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[3]/Send/Audio/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[3]/Send/Audio/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[3]/Send/Audio/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[3]/Send/Video/Bitrates        | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[3]/Send/Video/Fps             | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[3]/Send/Video/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[3]/Send/Video/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[3]/Send/Video/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[4]/Recv/Audio/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[4]/Recv/Audio/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[4]/Recv/Audio/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[4]/Recv/Video/Bitrates        | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[4]/Recv/Video/Fps             | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[4]/Recv/Video/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[4]/Recv/Video/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[4]/Recv/Video/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[4]/Send/Audio/Jitter          | get | type="integer"<br>size="2" |  |

|   |     |                            |  |
|---|-----|----------------------------|--|
| Call/RtcpInfo[4]/Send/Audio/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[4]/Send/Audio/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[4]/Send/Video/Bitrate         | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[4]/Send/Video/Fps             | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[4]/Send/Video/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[4]/Send/Video/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[4]/Send/Video/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[5]/Recv/Audio/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[5]/Recv/Audio/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[5]/Recv/Audio/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[5]/Recv/Video/Bitrate         | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[5]/Recv/Video/Fps             | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[5]/Recv/Video/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[5]/Recv/Video/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[5]/Recv/Video/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[5]/Send/Audio/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[5]/Send/Audio/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[5]/Send/Audio/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[5]/Send/Video/Bitrate         | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[5]/Send/Video/Fps             | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[5]/Send/Video/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[5]/Send/Video/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[5]/Send/Video/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[6]/Recv/Audio/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[6]/Recv/Audio/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[6]/Recv/Audio/PacketLossTotal | get | type="integer"<br>size="4" |  |

|   |     |                            |  |
|---|-----|----------------------------|--|
| Call/RtcpInfo[6]/Recv/Video/Bitrate         | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[6]/Recv/Video/Fps             | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[6]/Recv/Video/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[6]/Recv/Video/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[6]/Recv/Video/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[6]/Send/Audio/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[6]/Send/Audio/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[6]/Send/Audio/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[6]/Send/Video/Bitrate         | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[6]/Send/Video/Fps             | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[6]/Send/Video/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[6]/Send/Video/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[6]/Send/Video/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[7]/Recv/Audio/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[7]/Recv/Audio/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[7]/Recv/Audio/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[7]/Recv/Video/Bitrate         | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[7]/Recv/Video/Fps             | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[7]/Recv/Video/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[7]/Recv/Video/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[7]/Recv/Video/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[7]/Send/Audio/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[7]/Send/Audio/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[7]/Send/Audio/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[7]/Send/Video/Bitrate         | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[7]/Send/Video/Fps             | get | type="string"<br>size="6"  |  |

|   |     |                            |  |
|---|-----|----------------------------|--|
| Call/RtcpInfo[7]/Send/Video/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[7]/Send/Video/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[7]/Send/Video/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[8]/Recv/Audio/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[8]/Recv/Audio/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[8]/Recv/Audio/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[8]/Recv/Video/Bitrate         | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[8]/Recv/Video/Fps             | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[8]/Recv/Video/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[8]/Recv/Video/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[8]/Recv/Video/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[8]/Send/Audio/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[8]/Send/Audio/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[8]/Send/Audio/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[8]/Send/Video/Bitrate         | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[8]/Send/Video/Fps             | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[8]/Send/Video/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[8]/Send/Video/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[8]/Send/Video/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[9]/Recv/Audio/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[9]/Recv/Audio/PacketLossRate  | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[9]/Recv/Audio/PacketLossTotal | get | type="integer"<br>size="4" |  |
| Call/RtcpInfo[9]/Recv/Video/Bitrate         | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[9]/Recv/Video/Fps             | get | type="string"<br>size="6"  |  |
| Call/RtcpInfo[9]/Recv/Video/Jitter          | get | type="integer"<br>size="2" |  |
| Call/RtcpInfo[9]/Recv/Video/PacketLossRate  | get | type="string"<br>size="6"  |  |

|   |                  |  |                                     |
|---|------------------|--|-------------------------------------|
| Call/RtcpInfo[9]/Recv/Video/PacketLossTotal | get              | type="integer"<br>size="4"                       |                                     |
| Call/RtcpInfo[9]/Send/Audio/Jitter          | get              | type="integer"<br>size="2"                       |                                     |
| Call/RtcpInfo[9]/Send/Audio/PacketLossRate  | get              | type="string"<br>size="6"                        |                                     |
| Call/RtcpInfo[9]/Send/Audio/PacketLossTotal | get              | type="integer"<br>size="4"                       |                                     |
| Call/RtcpInfo[9]/Send/Video/Bitrate         | get              | type="integer"<br>size="2"                       |                                     |
| Call/RtcpInfo[9]/Send/Video/Fps             | get              | type="string"<br>size="6"                        |                                     |
| Call/RtcpInfo[9]/Send/Video/Jitter          | get              | type="integer"<br>size="2"                       |                                     |
| Call/RtcpInfo[9]/Send/Video/PacketLossRate  | get              | type="string"<br>size="6"                        |                                     |
| Call/RtcpInfo[9]/Send/Video/PacketLossTotal | get              | type="integer"<br>size="4"                       |                                     |
| Call/SIPALGCap                              | get set          | type="integer"<br>size="1"                       |                                     |
| Call/SIPAccountActive                       | get set          | type="boolean"                                   |                                     |
| Call/SIPBindPort                            | get set          | type="integer"<br>size="2"                       |                                     |
| Call/SIPInterProtocol                       | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="1" | 0:IPv4/1:IPv6                       |
| Call/SIPName                                | get set          | type="string"<br>size="128"                      |                                     |
| Call/SIPProxyServer                         | get set          | type="string"<br>size="128"                      |                                     |
| Call/SIPRegSvrStatus                        | get              | type="integer" size=1                            | 0:unconnect/1:connecting/2:register |
| Call/SIPRegistrarServer                     | get              | type="string"<br>size="128"                      |                                     |
| Call/SIPServerAuthMode                      | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="1" | 0: Anonymous mode/1:password mode   |
| Call/SIPServerBusy                          | get              | type="boolean"                                   | 0: idle/1:busy                      |
| Call/SIPServerName                          | get set          | type="string"<br>size="128"                      |                                     |
| Call/SIPServerOpMode                        | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="1" | 0:client mode/1:server mode         |
| Call/SIPServerPassword                      | get set          | type="string"<br>size="128"                      |                                     |
| Call/SIPServerUsers                         | query            | type="string"                                    | {user name }                        |
| Call/SIPTerminalName                        | get set          | type="string"<br>size="128"                      |                                     |

|                                      |                  |  |  |
|--------------------------------------|------------------|--|--|
| Call/SIPTerminalPassword             | get set          | type="string"<br>size="128"                      |  |
| Call/SIPTransportProtocol            | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="1" |  |
| Call/SIPUserName                     | get set          | type="string"<br>size="128"                      |  |
| Call/STUNPort                        | get set          | type="integer"<br>size="16"                      |  |
| Call/STUNServer                      | get set          | type="string"<br>size="128"                      |  |
| Call/ShowCallTimer                   | get set          | type="boolean"                                   |  |
| Call/StackCapability/1080p           | get set          | type="boolean"                                   |  |
| Call/StackCapability/4CIF            | get set          | type="boolean"                                   |  |
| Call/StackCapability/4SIF            | get set          | type="boolean"                                   |  |
| Call/StackCapability/720p            | get set          | type="boolean"                                   |  |
| Call/StackCapability/CIF             | get set          | type="boolean"                                   |  |
| Call/StackCapability/Content/H263    | get set          | type="boolean"                                   |  |
| Call/StackCapability/Content/H263+   | get set          | type="boolean"                                   |  |
| Call/StackCapability/Content/H264    | get set          | type="boolean"                                   |  |
| Call/StackCapability/Content/H264HP  | get set          | type="boolean"                                   |  |
| Call/StackCapability/Content/H264SVC | get set          | type="boolean"                                   |  |
| Call/StackCapability/Content/SVGA    | get set          | type="boolean"                                   |  |
| Call/StackCapability/Content/VGA     | get set          | type="boolean"                                   |  |
| Call/StackCapability/Content/XGA     | get set          | type="boolean"                                   |  |
| Call/StackCapability/G711/aLaw       | get set          | type="boolean"                                   |  |
| Call/StackCapability/G711/uLaw       | get set          | type="boolean"                                   |  |
| Call/StackCapability/G722            | get set          | type="boolean"                                   |  |
| Call/StackCapability/G722.1/24k      | get set          | type="boolean"                                   |  |
| Call/StackCapability/G722.1/32k      | get set          | type="boolean"                                   |  |
| Call/StackCapability/G722.1c/24k     | get set          | type="boolean"                                   |  |
| Call/StackCapability/G722.1c/32k     | get set          | type="boolean"                                   |  |
| Call/StackCapability/G722.1c/48k     | get set          | type="boolean"                                   |  |
| Call/StackCapability/G728            | get set          | type="boolean"                                   |  |
| Call/StackCapability/H261            | get set          | type="boolean"                                   |  |
| Call/StackCapability/H263            | get set          | type="boolean"                                   |  |
| Call/StackCapability/H263+           | get set          | type="boolean"                                   |  |
| Call/StackCapability/H264            | get set          | type="boolean"                                   |  |

|                               |                  |  |                                  |
|-------------------------------|------------------|--|----------------------------------|
| Call/StackCapability/H264HP   | get set          | type="boolean"                                   |                                  |
| Call/StackCapability/H264SVC  | get set          | type="boolean"                                   |                                  |
| Call/StackCapability/QCIF     | get set          | type="boolean"                                   |                                  |
| Call/StackCapability/QSIF     | get set          | type="boolean"                                   |                                  |
| Call/StackCapability/SIF      | get set          | type="boolean"                                   |                                  |
| Call/StartGroupCall           | get set          | type="string"<br>size="128"                      | Get/Set Group id                 |
| Call/StartH239/VGA            | action           |  |                                  |
| Call/StartH239Status          | get              | type="integer"<br>size="1"                       | 0: busy / 1: success / 2: failed |
| Call/StartRecord              | action           |  |                                  |
| Call/StopH239                 | action           |  |                                  |
| Call/StopH239Status           | get              | type="integer" size="1"                          | 0: busy / 1: done                |
| Call/StopRecord               | action           |  |                                  |
| Call/TcpPortLimit             | get set          | type="integer"<br>size="16"                      |                                  |
| Call/TcpPortLimitEnd          | get              | type="integer"<br>size="16"                      |                                  |
| Call/UdpPortLimit             | get set          | type="integer"<br>size="16"                      |                                  |
| Call/UdpPortLimitEnd          | get              | type="integer"<br>size="16"                      |                                  |
| Call/UseGatekeeper            | get set          | type="boolean"                                   |                                  |
| Call/UseH460                  | get set          | type="boolean"                                   |                                  |
| Call/UseUPnP                  | get set          | type="boolean"                                   |                                  |
| Camera/AcceptFecc             | get set          | type="boolean"                                   |                                  |
| Camera/CamPos                 | get set          | type="integer" size="1"                          |                                  |
| Camera/ContinuousMove/Down    | action           |  |                                  |
| Camera/ContinuousMove/Left    | action           |  |                                  |
| Camera/ContinuousMove/Right   | action           |  |                                  |
| Camera/ContinuousMove/Up      | action           |  |                                  |
| Camera/ContinuousMove/ZoomIn  | action           |  |                                  |
| Camera/ContinuousMove/ZoomOut | action           |  |                                  |
| Camera/Coordinate             | set get          | type="integer"<br>size="8"                       |                                  |
| Camera/Denoise                | set get          | type="integer"<br>size="1"                       |                                  |
| Camera/Exposure               | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="9" |                                  |

|                                |                  |  |  |
|--------------------------------|------------------|--|--|
| Camera/FlickerFrequency        | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="2" |  |
| Camera/FocusMode               | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="2" | 0:One Shot/1:Face Detection/2:Auto Focus   |
| Camera/FocusPos                | set get          | type="integer"<br>size="1"                       |  |
| Camera/InputSourceSwitch       | action           |  |  |
| Camera/InputSourceSwitchStatus | get              | type="boolean"                                   | 0: busy / 1: done  |
| Camera/LoadPreset              | set get          | type="integer"<br>size="1" min=0 max=9           |  |
| Camera/SavePreset              | set get          | type="integer"<br>size="1" min=0 max=9           |  |
| Camera/SaveSnapshot            | action           |  |  |
| Camera/Sharpness               | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="3" |  |
| Camera/StepMove/Down           | action           |  |  |
| Camera/StepMove/Left           | action           |  |  |
| Camera/StepMove/Right          | action           |  |  |
| Camera/StepMove/Up             | action           |  |  |
| Camera/StepMove/ZoomIn         | action           |  |  |
| Camera/StepMove/ZoomOut        | action           |  |  |
| Camera/StopMove                | action           |  |  |
| Camera/VgaSource/HDMI          | action           |  |  |
| Camera/ VgaSource/VGA          | action           |  |  |
| Camera/WhiteBalance            | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="4" |  |
| Phonebook/AccountList          | query            | type="string"                                    | Use query to get account array in JSON format:<br>{"id": integer (optional),<br>"name": string, must be unique<br>"mailto": string<br>"backup_name": string<br>"backup_pw": string<br>"backup_type": string, only google now.<br>"smtp_name": string<br>"smtp_pw": string<br>"smtp_server": string(include port),<br>ex:smtp.gmail.com:587<br>"isupload": integer<br>"grp": integer<br>} |

|                               |        |               |  |
|-------------------------------|--------|---------------|--|
| Phonebook/AddAccount          | set    | type="string" | Set JSON-format data to add a new group<br>{"id": integer (optional), given to edit existing group<br>"name": string, must be unique<br>"mailto": string<br>"backup_name": string<br>"backup_pw": string<br>"backup_type": string, only google now.<br>"smtp_name": string<br>"smtp_pw": string<br>"smtp_server": string(include port),<br>ex:smtp.gmail.com:587<br>"isupload": integer<br>"grp": integer<br>} |
| Phonebook/AddContact          | set    | type="string" | Set JSON-format data to add a new contact<br>{"id": integer (optional), given to edit existing contact<br>"name": string, must be unique<br>"bitrate": integer (optional)<br>"h323": string (optional)<br>"e164": string (optional)<br>"sip": string (optional)<br>"group":integer, group ID (optional). If not present, the contact will be assign to the default group<br>}                                  |
| Phonebook/AddGroup            | set    | type="string" | Set JSON-format data to add a new group<br>{"id": integer (optional), given to edit existing group<br>"name": string, must be unique<br>}  |
| Phonebook/CallHistoryList     | query  | type="string" |  |
| Phonebook/ClearHistory        | action |               |  |
| Phonebook/ClearPhonebook      | action |               |  |
| Phonebook/ContactList         | query  | type="string" |  |
| Phonebook/DeleteAccount       | set    | type="string" | Set the ID to delete the account   |
| Phonebook/DeleteContact       | set    | type="string" | Set the ID to delete the contact   |
| Phonebook/DeleteGroup         | set    | type="string" | Set the ID to delete the group   |
| Phonebook/GroupList           | query  | type="string" |  |
| Phonebook/SearchContact       | set    | type="string" | <set> to set the search keyword, and then query Phonebook/SearchContactResult  |
| Phonebook/SearchContactResult | query  | type="string" | <query> to get contacts array in JSON format:<br>{<br>"id": integer,<br>"name": string,<br>"h323": string,<br>"e164": string,<br>"sip": string,<br>"group": {<br>"id": integer,<br>"name": string<br>}}<br>}   |

|                             |                  |  |   |
|-----------------------------|------------------|--|---|
| Phonebook/SearchGroup       | set              | type="string"                                    | <set> to set the search group keyword, and then query Phonebook/SearchGroupResult   |
| Phonebook/SearchGroupResult | query            | type="string"                                    | <query> to get contacts array in JSON format:<br>{"id": integer,<br>"name": string,<br>"h323": string,<br>"e164": string,<br>"sip": string,<br>"group": {<br>"id": integer,<br>"name": string<br>}} |
| Phonebook/SetFavorite       | set              | type="string"                                    | Set JSON-format data to set favorite contact<br>{"id": Integer, must be unique<br>"contact": integer, given to set existing contact<br>}  |
| Playback/Backward           | action           |  |   |
| Playback/DeleteList         | action           |  |   |
| Playback/Forward            | action           |  |   |
| Playback/Pause              | action           |  |   |
| Playback/PlayFile           | action           |  |   |
| Playback/PlaybackList       | query            | type="string"                                    | "{fileName.vc},{fileSize}"<br>File size: Mega   |
| Playback/Resume             | action           |  |   |
| Playback/Status             | get              | type="boolean"                                   | 0: no playback / 1: playing / 2: paused   |
| Playback/Stop               | action           |  |   |
| System/AccessCode           | get set          | type="string"<br>size="16"                       |   |
| System/AspectRatio          | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="2" | 0:auto/1:"1024 x 768(4:3)"/2:"1280 x 720(16:9)"   |
| System/CheckUpdate          | get set          | type="boolean"                                   |   |
| System/CurrentNetworkIPv4   | get              | type="string"<br>size="16"                       |   |
| System/DateFormat           | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="2" | 0:yyyy-mm-dd/1:mm-dd-yyyy/<br>2:dd-mm-yyyy  |
| System/EnableAdmin          | get set          | type="integer"<br>size="1"                       |   |
| System/EnableAverService    | get set          | type="integer"<br>size="1"                       |   |
| System/EnableIwb            | get set          | type="integer"<br>size="1"                       |   |
| System/EnableKeypad         | get set          | type="integer"<br>size="1"                       |   |
| System/EnableNTP            | get set          | type="boolean"                                   |   |

|                           |                  |   |  |
|---------------------------|------------------|---|--|
| System/EnableWebAdmin     | get set          | type="boolean"                                    |  |
| System/FactoryReset       | action           |   |  |
| System/FirmwareVersion    | get              | type="string"<br>size="48"                        |  |
| System/IwbPassword        | get set          | type="string"<br>size="16"                        |  |
| System/Language           | get set<br>query | type="integer"<br>size="1"                        |  |
| System/LocalTime          | get set          | type="integer"<br>size="64"                       | Get / set system time in second format<br>1970/01/01 00:00:00 = 0 sec<br>2014/06/17 10:39:00 = 1403001540 sec                  |
| System/MACAddress         | get              | type="string"<br>size="18"                        |  |
| System/ModelName          | get              | type="string"<br>size="8"                         |  |
| System/NTPServer          | get set          | type="string"<br>size="64"                        |  |
| System/NetworkIPv6Gw      | get set          | type="string"<br>size="255"                       |  |
| System/NetworkSetting     | get set          | type="string"<br>size="255"                       |  |
| System/NetworkSettingIPv6 | get set          | type="string"<br>size="255"                       | get format: {static auto},{IPv6 address}/{prefix length}<br>set format:<br>1. static,{IPv6 address}/{prefix length}<br>2. auto |
| System/PPPoEStatus        | get              | type="boolean"                                    |  |
| System/PowerSaver         | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="5"  |  |
| System/Reboot             | action           |   |  |
| System/SaveSystemLog      | action           |   |  |
| System/ScreenSaver        | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="4"  |  |
| System/Shutdown           | action           |   |  |
| System/StorageReady       | get              | type="boolean"                                    |  |
| System/SystemDate         | get set          | type="string"<br>size="64"                        | Get / set system date in the format 2011/01/01<br>22:22:22   |
| System/TimeFormat         | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="1"  | 0:24-hour/1:12-hour  |
| System/Timezone           | get set<br>query | type="integer"<br>size="1"<br>min="0"<br>max="38" |  |
| System/Underscan          | get set          | type="boolean"                                    |  |

| System/WOL        | get set | type="boolean" |  |
|-------------------|---------|----------------|--|
| UI/IR/0           | action  |                |  |
| UI/IR/1           | action  |                |  |
| UI/IR/2           | action  |                |  |
| UI/IR/3           | action  |                |  |
| UI/IR/4           | action  |                |  |
| UI/IR/5           | action  |                |  |
| UI/IR/6           | action  |                |  |
| UI/IR/7           | action  |                |  |
| UI/IR/8           | action  |                |  |
| UI/IR/9           | action  |                |  |
| UI/IR/back        | action  |                |  |
| UI/IR/blue        | action  |                |  |
| UI/IR/call        | action  |                |  |
| UI/IR/delete      | action  |                |  |
| UI/IR/dot         | action  |                |  |
| UI/IR/down        | action  |                |  |
| UI/IR/dual        | action  |                |  |
| UI/IR/enter       | action  |                |  |
| UI/IR/far         | action  |                |  |
| UI/IR/green       | action  |                |  |
| UI/IR/hangup      | action  |                |  |
| UI/IR/help        | action  |                |  |
| UI/IR/home        | action  |                |  |
| UI/IR/info        | action  |                |  |
| UI/IR/input       | action  |                |  |
| UI/IR/keypad      | action  |                |  |
| UI/IR/layout      | action  |                |  |
| UI/IR/left        | action  |                |  |
| UI/IR/mute        | action  |                |  |
| UI/IR/phonebook   | action  |                |  |
| UI/IR/present     | action  |                |  |
| UI/IR/present_vga | action  |                |  |
| UI/IR/preset      | action  |                |  |

|                                |         |  |                                      |
|--------------------------------|---------|--|--------------------------------------|
| UI/IR/record                   | action  |  |                                      |
| UI/IR/red                      | action  |  |                                      |
| UI/IR/resolution               | action  |  |                                      |
| UI/IR/right                    | action  |  |                                      |
| UI/IR/up                       | action  |  |                                      |
| UI/IR/vol_down                 | action  |  |                                      |
| UI/IR/vol_up                   | action  |  |                                      |
| UI/IR/yellow                   | action  |  |                                      |
| UI/IR/zoom_in                  | action  |  |                                      |
| UI/IR/zoom_out                 | action  |  |                                      |
| UI/IRLong/down                 | action  |  |                                      |
| UI/IRLong/left                 | action  |  |                                      |
| UI/IRLong/preset               | action  |  |                                      |
| UI/IRLong/right                | action  |  |                                      |
| UI/IRLong/up                   | action  |  |                                      |
| UI/IRLong/zoom_in              | action  |  |                                      |
| UI/IRLong/zoom_out             | action  |  |                                      |
| UI/IRRelease/down              | action  |  |                                      |
| UI/IRRelease/left              | action  |  |                                      |
| UI/IRRelease/preset            | action  |  |                                      |
| UI/IRRelease/right             | action  |  |                                      |
| UI/IRRelease/up                | action  |  |                                      |
| UI/IRRelease/zoom_in           | action  |  |                                      |
| UI/IRRelease/zoom_out          | action  |  |                                      |
| Video/DefaultLayoutNoContent   | get set | type="integer"<br>size="1"<br>min="0"<br>max="3" |                                      |
| Video/DefaultLayoutWithContent | get set | type="integer"<br>size="1"<br>min="0"<br>max="5" |                                      |
| Video/SwitchLayout             | action  |  |                                      |
| Video/SwitchSingleDualMonitor  | action  |  |                                      |
| Video/SwitchUserLayout         | get set | type="integer"<br>size="1"                       | 0:Endpoint 1 ~8:Endpoint 9 /17:local |

Table 4 List of supported Remote API Xpath

## 6 Compatibility Issues

## 7 Notes

## 8 Glossary

## 9 Review Comments

## 10 Reference

## 11 Revision History

| Date       | Rev. | Author | Content  |
|------------|------|--------|--|
| 2010.10.28 | 0.0  | Drama  | Draft  |
| 2010.12.06 | 0.1  | Drama  | Ver. 0.1   |
| 2010.12.06 | 0.2  | Drama  | Modify example.  |
| 2010.12.08 | 0.3  | Drama  | Modified login, add logout and add phonebook total count response. |
| 2010.12.10 | 0.4  | Drama  | Modified. Root tag from AVerComm to VC.                            |
| 2010.12.23 | 0.5  | Drama  | Modified block diagram and command line response.                  |
| 2011.01.04 | 0.6  | Drama  | Add GetJpeg  |
| 2011.01.21 | 0.7  | Drama  | Add Error code, object xpath                                       |
| 2011.03.02 | 0.8  | Drama  | Modify example. Add object xpath.                                  |
| 2011.03.08 | 0.9  | Drama  | Modify nop & logout response.                                      |
| 2011.04.18 | 0.10 | Drama  | Modify Xpath of object, session id attach by client.               |
| 2011.04.19 | 0.11 | Drama  | Modify Xpath of object.  |
| 2011.06.24 | 0.12 | Drama  | Add password attribute.  |
| 2011.11.16 | 0.13 | Drama  | Modify logo, and examples.   |
| 2011.11.30 | 0.14 | Leav   | Add Skype box related objects                                      |
| 2012.01.02 | 0.15 | Leav   | Refined objects for VCBridge (previously <b>Skype Box</b> )        |
| 2013.07.17 | 2.00 | Leav   | Refined for 2.0 specification. Add use cases.                      |
| 2013.10.18 | 2.01 | Drama  | Remove not support command.  |
| 2014.06.19 | 9.00 | Iris   | Branch a new version for EVC900                                    |
| 2014.06.20 | 9.01 | Iris   | Remove invalid command   |
| 2015.06.23 | 9.02 | Kevin  | Update commands for FW version 00.01.12.07.                        |