

Polycom RMX 500C/1000C XML API Documentation

Table of Content

General Information	5
Login/Logout	13
Login	13
Logout	13
System information	14
System time	14
Customization setting	14
Security setting	15
Directory service	16
SNMP setting	16
Product activation	16
System Management	17
Signaling monitor	17
System gatekeeper status	17
Hardware monitor	17
System work mode	17
Service IP configuration information	18
IP network service	18
IVR Setting	19
Recording Link	19
Reboot	19
Shut down	20
Users	21
Add user	21
Modify user	21
Change user password	21

Delete user	22
User connection status	22
System alerts	23
Get hardware monitor alert	23
Delete a hardware monitor alert	23
Inactivated configuration alert	23
Error message	24
System Administration	25
Backup system configuration	25
Restore factory default configuration	25
Restore Customization configuration	25
Upgrade system	25
System license information	26
MCS status	26
Resource usage	26
Address book	27
Add participant	27
Modify participant	27
Add group	27
Modify group	28
Delete participant and group	28
Get pts from directory service	29
Conference profile	30
Add / Modify conference profile	30
Set default conference profile	30
Meeting room	31
Add / Modify meeting room	31
Reservation	32
Add / Modify reservation	32
Delete reservation	32

Delete slots	32
Conference	33
Add conference:	33
Modify conference	33
Delete conference:	33
Control conference	34
Add participant to conference manually	34
Add participant to conference from address book	34
Modify disconnected participant in conference	35
Modify connected participant in conference	35
Delete participant in conference	36
Control participant in conference	36
Participant in hall	36
Pts no to actual stream	37
Play/stop play/iframe pts in a conference	37
Detailed error code	39
Description of 4 streams setting	48
Appendix	51

General Information

- 1 The contents of this document will cover the RMX Series RMX 500C and RMX 1000C; All content is applicable to these two products if it is not specified.

RMX: The short form of the RMX 500C/1000C.

- 2 This documentation is to clarify that the details about RMX information packets.

There are three types about RMX information packet: COMMAND, CONFIRM, INDICATION.

COMMAND packets are used by clients to send requests to the server.

In RMX, there are two COMMAND type:

SYS COMMAND, which send to SYS;

MC COMMAND, which send to MC.

CONFIRM packets are used by the server to send replies to the clients in regard to their requests.

CONFIRM packets just used for checking the field's validity of COMMAND packets.

INDICATION packets are used by the server to send any system change information (indications, such as adding or deleting a user account, adding or deleting of a conference, etc.) to the connected clients. INDICATION packets are useful to management software.

- 3 Connection & Communication packet structure:

RMX is ready for client to connect at port **60000** and connection type should be **TCP** type

Packet must agree with the following format:

| 0x03 0x00 | data length | data |

The first two bytes is a flag used to identify right packet.

"Data length" field is also two bytes, same as __int16, which is exactly the value of message length plus 4 bytes.

Here is a c++ example to fill in the field:

```
string szMessage = "... ";  
  
unsigned __int16 nLength = szMessage.size();  
  
nLength += 4;  
  
char* buffer = new char[nLength];  
  
buffer[0] = 0x03;  
  
buffer[1] = 0x00;  
  
buffer[2] = (char)(nLength / 256);  
  
buffer[3] = (char)(nLength %256);  
  
... ..
```

"data" field is just the xml message.

- 4 All XML information is encoded in UTF-8 format. The XML format looks like the following:

```
<INDICATION id="notify_guid_2ui">  
    <SESSION_GUID value="guid"/>  
    <SYS_GUID value="guid"/>  
    <MC_GUID value="guid"/>  
</INDICATION>  
  
<COMMAND id="login">  
    <SOURCE_GUID value="guid"/>  
    <TARGET_GUID value="guid"/>  
    <LOGINNAME value="string"/>  
    <PASSWD value="string"/>  
    <CONSOLE_IP_V4 value="ip"/>  
    <CONSOLE_NAME value="string"/>  
    <IS_NEW_DEVICE value="string"/> <!-- YES/NO -->  
</COMMAND>
```

```
<CONFIRM id="login">
```

```
<SOURCE_GUID value="guid"/>
```

```
<TARGET_GUID value="guid"/>
```

```
<RESULT value="integer"/>
```

```
</CONFIRM>
```

5 SOURCE_GUID, TARGET_GUID in COMMAND, CONFIRM, INDICATION

SOURCE_GUID, TARGET_GUID in COMMAND:

When client connect MCU server successful, server will send INDICATION packet <INDICATION id="notify_guid_2ui">, with fields SESSION_GUID, SYS_GUID, MC_GUID to client.

Client should set the value of SOURCE_GUID in COMMAND to SESSION_GUID value,

Set the value of TARGET_GUID in SYS COMMAND to SYS_GUID value,

And set the value of TARGET_GUID in MC COMMAND to MC_GUID value.

SOURCE_GUID, TARGET_GUID in INDICATION and CONFIRM:

SOURCE_GUID: its value is equals to TARGET_GUID value in COMMAND.

TARGET_GUID: its value is equals to SOURCE_GUID value in COMMAND.

There is a specific TARGET_GUID value in INDICATION, the value is ""00000000000000001111111111111111"", which is used for broadcasting to all session.

6 Example

Below is an example about steps how to add a conference:

a Client connect MCU server

Client should connect MCU server first. When connection is successful, server will send an INDICATION packet <INDICATION id="notify_guid_2ui"> with a field

SESSION_GUID to client.

Capture packet like below:

```
<INDICATION id="notify_guid_2ui">

  <SOURCE_GUID
value="1813b1e7c458db11879e320f559cb616" />

  <TARGET_GUID
value="8085f6de192bde1189f6733eebf40c44" />

  <SESSION_GUID
value="8085f6de192bde1189f6733eebf40c44" />

  <SYS_GUID value="1813b1e7c458db11879e320f559cb616"
/>

  <MC_GUID value="9e5bb13f1e72dd118ed6ab775e107d74"
/>

</INDICATION>
```

b Client login server

After receive packet <INDICATION id="notify_guid_2ui">, a login packet <COMMAND id="login"> will be constructed and sent to login MCU server.

Capture packet like below:

```
<COMMAND id="login">

  <CONSOLE_IP_V4 value="172.21.111.40" />

  <CONSOLE_NAME value="" />

  <IS_NEW_DEVICE value="YES" />

  <LOGINNAME value="POLYCOM" />

  <PASSWD value="POLYCOM" />

  <SOURCE_GUID
value="8085f6de192bde1189f6733eebf40c44" />

  <TARGET_GUID
value="1813b1e7c458db11879e320f559cb616" />

</COMMAND>
```

After server parse the packet <COMMAND id="login">, a CONFIRM packet <CONFIRM id="login"> with field RESULT will be sent to client to indicate whether <COMMAND

id="login"> is valid.

Capture packet like below:

```
<CONFIRM id="login">  
  
<SOURCE_GUID  
value="1813b1e7c458db11879e320f559cb616" />  
  
<TARGET_GUID  
value="8085f6de192bde1189f6733eebf40c44" />  
  
<RESULT value="0" />  
  
</CONFIRM>
```

c Client add conference

After login server successfully, client should construct a COMMAND packet <COMMAND id="add_conf"> to server to request for adding a conference.

Capture packet like below:

```
<COMMAND id="add_conf">  
  
<BILLING_INFO value="" />  
  
<CHAIR_PASSWD value="" />  
  
<CONF_PASSWD value="" />  
  
<DISP_NAME value="testconf" />  
  
<DURATION value="7200" />  
  
<E164 value="1436" />  
  
<EXIST_PTS_COUNT value="0" />  
  
<GUID value="" />  
  
<INFO1 value="" />  
  
<INFO2 value="" />  
  
<INFO3 value="" />  
  
<IS_DIAL_OUT_MANUALLY value="NO" />  
  
<IS_PTS_LIST_DIAL_IN value="NO" />  
  
<LECTURE_NAME value="" />
```

```

<PROFILE_GUID
value="dae853f2e52ddc11a5c08b70dfdb63a3" />

<PTS_COUNT value="0" />

<SEND_EMAIL_NOTICE value="NO" />

<SOURCE_GUID
value="5ab70fef9949dd11883692da5f0ed959" />

<TARGET_GUID
value="a88e75ea2041dd11b0fbb147e0436b73" />

<VIDEO_MODE_1 value="SIMPLE" />

<VIDEO_MODE_2 value="SIMPLE" />

<VIDEO_MODE_3 value="SIMPLE" />

<VIDEO_MODE_4 value="SIMPLE" />

<VIDEO_MODE_5 value="SIMPLE" />

<VIDEO_MODE_6 value="SAME" />

</COMMAND>

```

Then server will send a CONFIRM packet <CONFIRM id="add_conf"> to indicate whether the COMMAND packet is valid.

Capture packet like below:

```

<CONFIRM id="add_conf">

<SOURCE_GUID
value="a88e75ea2041dd11b0fbb147e0436b73" />

<TARGET_GUID
value="5ab70fef9949dd11883692da5f0ed959" />

<RESULT value="0" />

</CONFIRM>

```

If <COMMAND id="add_conf"> is valid, a INDICATION packet <INDICATION id="conf_info"> with conference information will be sent to client, and a new conference will be add in server.

Capture packet like below:

```

<INDICATION id="conf_info">

  <SOURCE_GUID
value="a88e75ea2041dd11b0fbb147e0436b73" />

  <TARGET_GUID
value="00000000000000001111111111111111" />

  <GUID value="a0b139399a49dd11be5bd5ffc55f8a53" />

  <DISP_NAME value="testconf" />

  <PROFILE_GUID
value="dae853f2e52ddc11a5c08b70dfdb63a3" />

  <START_TIME value="1215156262" />

  <END_TIME value="1215163462" />

  <E164 value="1436" />

  <CONF_PASSWD value="" />

  <CHAIR_PASSWD value="" />

  <IS_CONF_LOCK value="NO" />

  <IS_DIAL_OUT_MANUALLY value="NO" />

  <VIDEO_MODE value="SIMPLE" />

  <AUTO_SCAN_INTERVAL value="20" />

  <LECTURE_NAME value="" />

  <LAYOUT_MODE value="-1" />

  <AUTO_LAYOUT_STATUS value="101" />

  <LAYOUT_ROLE_GUID_COUNT value="1" />

  <LAYOUT_CONFIG_GUID_1
value="00000000000000000000000000000003" />

  <LAYOUT_STATUS_GUID_1
value="00000000000000000000000000000003" />

  <SKIN value="0" />

  <IS_SHOW value="YES" />

  <CONTENT value="" />

  <LOOP_NUM value="3" />

```

```

<ALIGN value="BOTTOM" />

<SPEED value="2" />

<VERTICAL value="90" />

<TRANSPARENCY value="50" />

<COLOR value="0x00ffffff" />

<BACK_COLOR value="0x00000000" />

<INFO1 value="" />

<INFO2 value="" />

<INFO3 value="" />

<BILLING_INFO value="" />

<IS_PTS_LIST_DIAL_IN value="NO" />

<STATUS value="EMPTY;" />

<RECORD_STATUS value="STOPPING" />

</INDICATION>

```

d Logout MCU

A COMMAND packet <COMMAND id="logout"> should be constructed to logout to server.

Capture packet like below:

```

<COMMAND id="logout">

  <SOURCE_GUID
value="5ab70fef9949dd11883692da5f0ed959" />

  <TARGET_GUID
value="1813b1e7c458db11879e320f559cb616" />

</COMMAND>

```

Login/Logout

Login

Description: Login to the RMX Server

INDICATION:

<INDICATION id="notify_guid_2ui">

Description: connect MCU server

COMMAND:

<COMMAND id="login">

CONFIRM:

<CONFIRM id="login">

Logout

Description: Logout to the RMX Server. To the logout COMMAND, there are no corresponding CONFIRM and INDICATION messages. A strong suggestion is: a COMMAND packet <COMMAND id="logout"> should be sent to server for client logout to server.

COMMAND:

<COMMAND id="logout">

System information

System time

Description: set system time

COMMAND:

<COMMAND id="set_systime">

CONFIRM:

<CONFIRM id="set_systime">

INDICATION:

<INDICATION id="rmxtime_info">

Customization setting

Set TVUI language

Description: set a customization TVUI language option for endpoint menu

COMMAND:

<COMMAND id="set_tvuilanguage">

CONFIRM:

<CONFIRM id="set_tvuilanguage">

INDICATION:

<INDICATION id="customization_lang_info">

Set system name

Description: set a customization system name for endpoint menu

COMMAND:

<COMMAND id="set_sysname">

CONFIRM:

<CONFIRM id="set_sysname">

INDICATION:

<INDICATION id="customization_sys_info">

Set video standard information

Description: set video standard information.

COMMAND:

<COMMAND id=" set_video_std ">

CONFIRM:

<CONFIRM id=" set_video_std ">

INDICATION:

<INDICATION id=" customization_video_std_info ">

Set maximum bandwidth information

Description: set maximum bandwidth information.

COMMAND:

<COMMAND id=" set_max_bw ">

CONFIRM:

<CONFIRM id=" set_max_bw ">

INDICATION:

<INDICATION id=" customization_max_bw_info ">

Personal skin

Description: set specific background picture

COMMAND:

<COMMAND id="set_specific_bg_picture">

CONFIRM:

<CONFIRM id="set_specific_bg_picture">

Security setting

Description: set access system rule for endpoint

COMMAND:

<COMMAND id="set_secset">

CONFIRM:

<CONFIRM id="set_secset">

INDICATION:

<INDICATION id="secset_info">

Directory service

Set directory service

Description: directory service setting

COMMAND:

<COMMAND id="set_dir_service_setting">

CONFIRM:

<CONFIRM id="set_dir_service_setting">

INDICATION:

<INDICATION id="dir_service_setting_info">

INDICATION:

<INDICATION id="dir_service_status">

SNMP setting

Description: Set SNMP information.

COMMAND:

<COMMAND id=" set_snmp_setting ">

CONFIRM:

<CONFIRM id=" set_snmp_setting ">

INDICATION:

<INDICATION id=" snmp_setting_info ">

Product activation

Description: active current system with available activation key

COMMAND:

<COMMAND id="set_actkey">

CONFIRM:

<CONFIRM id="set_actkey">

INDICATION:

<INDICATION id="set_actkey_info">

System Management

Signaling monitor

Description: system signaling LAN status information

INDICATION:

<INDICATION id="sig_lanstatus">

System gatekeeper status

Description: describe system gatekeepers status information

INDICATION:

<INDICATION id=" sig_gkstatus ">

Hardware monitor

Description: system hardware monitor information

INDICATION:

<INDICATION id="hwmonitor_info">

System work mode

Description: set system work mode

COMMAND:

<COMMAND id=" set_work_mode ">

CONFIRM:

<CONFIRM id=" set_work_mode ">

INDICATION:

<INDICATION id=" work_mode_info ">

Description: relinquish system master work mode

COMMAND:

<COMMAND id=" relinquish_master ">

CONFIRM:

<CONFIRM id=" relinquish_master ">

INDICATION:

<INDICATION id=" work_mode_info ">

Service IP configuration information

Description: directory service configuration information

INDICATION:

< INDICATION id=" service_cfg_info">

IP network service

Set system LAN information

Description: set system LAN IP information

COMMAND:

<COMMAND id="set_ip_lanset">

CONFIRM:

<CONFIRM id="set_ip_lanset">

INDICATION:

<INDICATION id="ip_lanset">

Set system network information

Description: system Routers, Gatekeeper, QoS, Ports, E-mail, SIP setting

COMMAND:

<COMMAND id="set_advset_info">

CONFIRM:

<CONFIRM id="set_advset_info">

INDICATION:

<INDICATION id="advset_info">

IVR Setting

Download IVR file

Description: download IVR file to MCS

COMMAND:

<COMMAND id="set_ivr_downloadfile">

IVR information

Description: get IVRinformation

INDICATION:

<INDICATION id="ivr_info">

Recording Link

Description: set recording link information

COMMAND:

<COMMAND id="set_rcdlink">

CONFIRM:

<CONFIRM id="set_rcdlink">

INDICATION:

<INDICATION id="rcdlink_info">

Reboot

Description: reboot the system

COMMAND:

<COMMAND id="reboot">

CONFIRM:

<CONFIRM id="reboot">

INDICATION:

<INDICATION id="rebooting_indic">

Shut down

Description: shut down the system

COMMAND:

<COMMAND id=" shutdown">

CONFIRM:

<CONFIRM id=" shutdown">

INDICATION:

<INDICATION id=" shutdown_indic">

Users

Add user

Description: add a user account

COMMAND:

<COMMAND id="add_usr">

CONFIRM:

<CONFIRM id="add_usr">

INDICATION:

<INDICATION id="usr_info">

Modify user

Description: modify a user account information

COMMAND:

<COMMAND id="mod_usr">

CONFIRM:

<CONFIRM id="mod_usr">

INDICATION:

<INDICATION id="usr_info">

Change user password

Description: change a user account password

COMMAND:

<COMMAND id="change_usrpwd">

CONFIRM:

<CONFIRM id="change_usrpwd">

INDICATION:

<INDICATION id="usr_info">

Delete user

Description: delete a user account

COMMAND:

<COMMAND id="del_usr">

CONFIRM:

<CONFIRM id="del_usr">

INDICATION:

<INDICATION id="del_usr_info">

User connection status

Description: describe an online user account information

INDICATION:

<INDICATION id="conn_usr_info">

Description: describe a connected user change to be offline

INDICATION:

<INDICATION id="conn_usr_offline">

System alerts

Get hardware monitor alert

Description: get a new system alert information about hardware monitor

INDICATION:

<INDICATION id="alert_info">

Delete a hardware monitor alert

Description: deleted a hardware monitor alert information

INDICATION:

<INDICATION id="del_alert_info">

Inactivated configuration alert

Description: get information about system configuration be activated or inactivated

INDICATION:

<INDICATION id="unactivatedconfig_info">

Error message

Description: if the field RESULT in CONFIRM message is false, then this error_message will indicates the error information

INDICATION:

<INDICATION id="error_message">

System Administration

Backup system configuration

Description: backup system current configuration

COMMAND:

<COMMAND id="backup_config">

CONFIRM:

<CONFIRM id="backup_config">

Restore factory default configuration

Description: restore system configuration from factory default file

COMMAND:

<COMMAND id="restore_factoryconfig">

CONFIRM:

<CONFIRM id="restore_factoryconfig">

Restore Customization configuration

Description: restore system configuration from a Customization configuration file

COMMAND:

<COMMAND id="restore_certainconfig">

CONFIRM:

<CONFIRM id=" restore_certainconfig ">

INDICATION:

<INDICATION id="restore_certainconfig_info">

Upgrade system

Description: upgrade system for a new version

COMMAND:

<COMMAND id=" set_stp_upgradesys ">

CONFIRM:

<CONFIRM id=" set_stp_upgradesys ">

INDICATION:

<INDICATION id=" upgradesys_info ">

System license information

Description: describe system current license information.

INDICATION:

<INDICATION id="licenseinfo">

MCS status

Description: MCS current status includes resource report, hardware version, software version, serial number, software build time, activation status.

INDICATION:

<INDICATION id=" mc_status">

Resource usage

Description: Get resource usage during a period.

COMMAND:

<COMMAND id=" set_resource_usage_graph ">

CONFIRM:

<CONFIRM id=" set_resource_usage_graph ">

INDICATION:

<INDICATION id=" resource_usage_info ">

Address book

Add participant

Description: Add an endpoint account

COMMAND:

<COMMAND id="add_ep">

CONFIRM:

<CONFIRM id="add_ep">

INDICATION:

<INDICATION id="ep_info">

<INDICATION id="error_message">

Description: If there is an error, then the error message will indicated.

Modify participant

Description: Modify an endpoint account information

COMMAND:

<COMMAND id="mod_ep">

CONFIRM:

<CONFIRM id="mod_ep">

INDICATION:

<INDICATION id="ep_info">

<INDICATION id="error_message">

Description: If there is an error , then the error message will indicated.

Add group

Description: add an endpoint group

COMMAND:

<COMMAND id="add_grp">

CONFIRM:

<CONFIRM id="add_grp">

INDICATION:

<INDICATION id="grp_info">

<INDICATION id="error_message">

Description: If there is an error , then the error message will indicated.

Modify group

Description: modify endpoint group

COMMAND:

<COMMAND id="mod_grp">

CONFIRM:

<CONFIRM id="mod_grp">

INDICATION:

<INDICATION id="grp_info">

Delete participant and group

Description: delete endpoint and group

COMMAND:

<COMMAND id="del_pts">

CONFIRM:

<CONFIRM id="del_pts">

INDICATION:

<INDICATION id="grp_info">

Description: group information notification. If the deleted participant belongs to group, this message will be indicated.

<INDICATION id="del_pts_info">

<INDICATION id="error_message">

Description: If there is an error, then the error message will indicated.

Get pts from directory service

Description: get pts from directory service

COMMAND:

<COMMAND id="get_pts_from_service">

CONFIRM:

<CONFIRM id="get_pts_from_service">

INDICATION:

<INDICATION id=" dir_service_pts_info ">

Conference profile

Add / Modify conference profile

Description: add or modify an conference profile

COMMAND:

<COMMAND id="add_mod_conf_profile">

CONFIRM:

<CONFIRM id="add_mod_conf_profile">

INDICATION:

<INDICATION id="conf_profile_info">

Set default conference profile

Description: set a profile to default conference profile

COMMAND:

<COMMAND id="set_default_conf_profile">

CONFIRM:

<CONFIRM id="set_default_conf_profile">

INDICATION:

<INDICATION id="conf_profile_info">

Delete conference profile

Description: delete a conference profile

COMMAND:

<COMMAND id="delete_conf_profile">

CONFIRM:

<CONFIRM id="delete_conf_profile">

INDICATION:

<INDICATION id="delete_conf_profile_info">

Meeting room

Add / Modify meeting room

Description: add or modify a meeting room

COMMAND:

<COMMAND id="add_mod_meeting_room">

CONFIRM:

<CONFIRM id="add_mod_meeting_room">

INDICATION:

<INDICATION id="meeting_room_info">

Delete meeting room

Description: delete a meeting room

COMMAND:

<COMMAND id="delete_meeting_room">

CONFIRM:

<CONFIRM id="delete_meeting_room">

INDICATION:

<INDICATION id="delete_meeting_room_info">

Reservation

Add / Modify reservation

Description: add or modify a reservation

COMMAND:

<COMMAND id="add_mod_reservation">

CONFIRM:

<CONFIRM id="add_mod_reservation">

INDICATION:

<INDICATION id="reservation_info">

Delete reservation

Description: delete a reservation

COMMAND:

<COMMAND id="delete_reservation">

CONFIRM:

<CONFIRM id="delete_reservation">

INDICATION:

<INDICATION id="delete_reservation_info">

Delete slots

Description: delete slots

COMMAND:

<COMMAND id=" del_slots ">

CONFIRM:

<CONFIRM id=" del_slots ">

INDICATION:

<INDICATION id=" reservation_info ">

Conference

Add conference:

Description: add a conference

COMMAND:

<COMMAND id="add_conf">

CONFIRM:

<CONFIRM id="add_conf">

INDICATION:

<INDICATION id="conf_info">

Modify conference

Description: modify a conference

COMMAND:

<COMMAND id="modify_conf">

CONFIRM:

<CONFIRM id="modify_conf">

INDICATION:

<INDICATION id="conf_info">

Delete conference:

Description: delete an on-going conference

COMMAND:

<COMMAND id="delete_conf">

CONFIRM:

<CONFIRM id="delete_conf">

INDICATION:

<INDICATION id="delete_conf_info">

Control conference

Description: Lock/unlock conference

COMMAND:

<COMMAND id="ctrl_conf">

CONFIRM:

<CONFIRM id="ctrl_conf">

INDICATION:

<INDICATION id="ctrl_conf_info">

Add participant to conference manually

Description: add a participant to on-going conference from address book

COMMAND:

<COMMAND id="conf_add_manual_pts">

CONFIRM:

<CONFIRM id=" conf_add_manual_pts ">

INDICATION:

<INDICATION id="conf_pts_info">

<INDICATION id="conf_pts_media_sources">

<INDICATION id="conf_pts_conn_status">

<INDICATION id="conf_pts_channel_status">

<INDICATION id="ep_info">

Add participant to conference from address book

Description: add a participant to on-going conference from address book

COMMAND:

<COMMAND id="conf_add_pts_from_adrbk">

CONFIRM:

<CONFIRM id="conf_add_pts_from_adrbk">

INDICATION:

<INDICATION id="conf_pts_info">

<INDICATION id="conf_pts_media_sources">

<INDICATION id="conf_pts_conn_status">

<INDICATION id="conf_pts_channel_status">

Modify disconnected participant in conference

Description: modify a disconnected participant in on-going conference

COMMAND:

<COMMAND id="conf_modify_disconn_pts">

CONFIRM:

<CONFIRM id="conf_modify_disconn_pts">

INDICATION:

<INDICATION id="conf_pts_info">

<INDICATION id="conf_pts_media_sources ">

<INDICATION id="conf_pts_conn_status ">

<INDICATION id="conf_pts_channel_status ">

Modify connected participant in conference

Description: modify a connected participant in on-going conference

COMMAND:

<COMMAND id="conf_modify_conn_pts">

CONFIRM:

<CONFIRM id="conf_modify_conn_pts">

INDICATION:

<INDICATION id="conf_pts_info">

<INDICATION id="conf_pts_media_sources ">

<INDICATION id="conf_pts_conn_status ">

<INDICATION id="conf_pts_channel_status ">

Delete participant in conference

Description: delete a participant in on-going conference

COMMAND:

<COMMAND id="conf_del_pts">

CONFIRM:

<CONFIRM id="conf_del_pts">

INDICATION:

<INDICATION id="conf_del_pts_info">

Control participant in conference

Description:

CONNECT/DISCONNECT/MUTE_AUDIO/UNMUTE_AUDIO/SUSPEND_VIDEO/RESUME_VIDEO/BLOCK_AUDIO/UNBLOCK_AUDIO/CHAIRPERSON/REGULAR/ABORT_H239/ADD2ADRBK/RECORD_START/RECORD_PAUSE/RECORD_STOP/RECORD_RESUME participant in conference

COMMAND:

<COMMAND id="conf_ctrl_pts">

CONFIRM:

<CONFIRM id="conf_ctrl_pts">

INDICATION:

<INDICATION id="conf_pts_info">

Participant in hall

Description: get participants list in hall

COMMAND:

<COMMAND id="hall_ctrl_pts">

CONFIRM:

<CONFIRM id="hall_ctrl_pts">

INDICATION:

<INDICATION id="hall_pts_list">

Pts no to actual stream

Description: pts not to actual stream.

INDICATION:

<INDICATION id=" pts_no_to_actual_stream ">

Play/stop play/iframe pts in a conference

Play pts in a conference

Description: play pts in a conference

COMMAND:

<COMMAND id="play_pts">

CONFIRM:

<CONFIRM id=" play_pts ">

INDICATION:

<INDICATION id=" play_pts_info ">

Stop play pts in a conference

Description: stop play pts in a conference

COMMAND:

<COMMAND id=" stop_play_pts ">

CONFIRM:

<CONFIRM id=" stop_play_pts ">

INDICATION:

<INDICATION id=" play_pts_info ">

Pts request iframe in a conference

Description: pts request iframe.

COMMAND:

<COMMAND id=" pts_request_iframe ">

CONFIRM:

<CONFIRM id=" pts_request_iframe ">

INDICATION:

<INDICATION id=" play_pts_info ">

Information about pts request to be speaker in a conference

INDICATION:

<INDICATION id="conf_pts_flooring">

Detailed error code

Description: Detailed error code for the inner API.

Rmx report error through the message <INDICATION id="error_message">. You can refer to fields of RESULT and MESSAGE. Field MESSAGE value maybe NULL, in this case, RESULT value is the only reference information. See the example below:

```
10:51:27.781 <?xml version="1.0" encoding="UTF-8" ?>
```

```
<INDICATION id="error_message">

<SOURCE_GUID value="9c431a1fea0dde11b7df68e892417111" />

<TARGET_GUID value="4619a225fc56de11823fbd6687a4f463" />

<RESULT value="20008" />

<MESSAGE value="MEETING_ROOM_NAME_OR_ID_CONFLICT" />

</INDICATION>
```

Error code information:

RESULT	MESSAGE	Description
10001	ERR_GENERAL_PERM_DENIED	session denied.
10002	SYS_ERR_INVALID_MSG_FIELD	Invalid message transmission. The web interface sent an unreadable command to the RMX.
10003	SYS_ERR_ADD_OP_INVALID_GUID	Invalid GUID. Unable to add user.
10004	SYS_ERR_ADD_OP_DUPLICATE_GUID	The GUID has been duplicated. Unable to add user.
10005	SYS_ERR_ADD_OP_DUPLICATE_LOGIN_NAME	Account already exists.
10006	SYS_ERR_ADD_OP_TOO_MANY	Maximum users already configured – users must be

RESULT	MESSAGE	Description
		deleted to add more.
10007	SYS_ERR_ADD_OP_PERM_DENIED	Your login does not have permission to add users.
10012	SYS_ERR_CHG_OP_PASSWORD_PERM_DENIED	Your login does not have permission to change the password.
10013	SYS_ERR_DEL_OP_INVALID_GUID	Unable to delete the operator. Its internal reference ID is invalid.
10014	SYS_ERR_DEL_OP_GUID_NON_EXIST	Unable to delete the operator. Its internal reference ID could not be found.
10015	SYS_ERR_DEL_OP_PERM_DENIED	Your login does not have permission to delete the user.
10016	SYS_ERR_CANNOT_DELETE_ONLINE_OP	This online user can not be deleted.
10017	SYS_ERR_DEL_OP_CANNOT_SUICIDE	An operator cannot delete its own account.
10020	SYS_ERR_LOGIN_OP_NONEXIST	Invalid username, please try again.
10021	SYS_ERR_LOGIN_BAD_PASSWORD	Invalid password.
10023	SYS_ERR_SET_LAN_CONFIG_INVALID_IP_OR_MASK	Invalid IP address or subnet mask.
10024	SYS_ERR_SET_ROUTE_ENTRIES_INVALID_FIELD	Invalid field in the attempted route entry configuration.
10025	SYS_ERR_SET_MC_MISCONFIG_INVALID_FIELD	Invalid system configuration setting.
10028	SYS_ERR_ONGOING_CONF_SYNCHRONIZE_TIM	There are ongoing conferences. Unable to

RESULT	MESSAGE	Description
	E	synchronize time.
20001	ERROR_UI_ADD_ADDR ITEM	Unable to add the address.
20002	ERROR_UI_FIND_ADD RITEM	Address cannot be found.
20003	ERROR_UI_ADD_GROU P	Unable to add the group.
20004	ERROR_UI_FIND_GRO UP	Group cannot be found.
20005	ERROR_UI_ADD_PROF ILE	Unable to add the profile.
20006	ERROR_UI_FIND_PRO FILE	Profile cannot be found.
20007	ERROR_UI_DEL_PROF ILE	Unable to delete the profile - it may be in use.
20008	ERROR_UI_ADD_MEET	Unable to add the meeting room.
20008	MEETING_ROOM_NAME _OR_ID_CONFLICT	Unable to add the meeting room - the name or ID is already in use.
20008	MEETING_ROOM_LIMI TS_REACHED	Maximum meeting rooms exceed - meeting rooms must be deleted to add more.
20008	MULTICAST_REPEATE D_IP	Unable to add the meeting room - the streaming address is already in use.
20009	ERROR_UI_FIND_MEE T	Meeting room cannot be found.
20010	ERROR_UI_DEL_MEET	Unable to delete the meeting room - it may be in use.

RESULT	MESSAGE	Description
20011	ERROR_UI_ADD_SCHEDULE	Unable to add the reservation.
20011	SCHED_CONF_LIMITS_REACHED	Maximum reservations already configured - reservations must be deleted to add more.
20011	SCHED_CONF_NAME_OR_ID_CONFLICT	Unable to add the reservation - the name or ID is already in use.
20011	SCHED_CONF_RESOURCE_NOT_ENOUGH	Unable to add the reservation - insufficient resources at the requested time.
20011	SCHED_CONF_CP_NOT_ENOUGH	Unable to add the reservation - insufficient CP resources.
20011	SCHED_CONF_NO_VALID_TIME_SLOTS	Unable to add the reservation - the scheduled time is in the past.
20011	SCHED_CONF_LICENSE_NOT_SUPPORT	Unable to add the reservation - current licensing does not permit scheduling.
20011	MULTICAST_REPEATED_IP	Unable to add the reservation - the streaming address is already in use.
20012	ERROR_UI_MODIFY_SCHEDULE	Unable to modify the reservation.
20012	SCHED_CONF_NAME_OR_ID_CONFLICT	Unable to modify the reservation - the name or ID is already in use.
20012	SCHED_CONF_RESOURCE_NOT_ENOUGH	Unable to modify the reservation - the requested resources are not

RESULT	MESSAGE	Description
		available.
20012	SCHED_CONF_CP_NOT_ENOUGH	Unable to modify the reservation - insufficient CP resources.
20012	SCHED_CONF_NO_VALID_TIME_SLOTS	Unable to modify the reservation - the scheduled time is in the past.
20012	SCHED_CONF_IS_RUNNING_NOW	Unable to modify the reservation - the conference is ongoing.
20012	SCHED_CONF_NOT_EXIST	Unable to modify the reservation - the reservation doesn't exist.
20012	SCHED_CONF_LICENSE_NOT_SUPPORT	Unable to modify the reservation - current licensing does not permit scheduling.
20012	MULTICAST_REPEATED_IP	Unable to modify the reservation - the streaming address is already in use.
20013	ERROR_UI_FIND_SCHEDULE	This reservation cannot be found.
20014	ERROR_UI_DELETE_SCHEDULE	Unable to delete this reservation.
20015	ERROR_UI_ADD_TEMP_CONF	Unable to add temporary conference.
20015	SCHED_CONF_LIMITS_REACHED	Maximum conferences already configured - conferences must be deleted to add more.
20015	SCHED_CONF_NAME_OR_ID_CONFLICT	Unable to add the conference - the name or ID is already in use.

RESULT	MESSAGE	Description
20015	SCHED_CONF_RESOURCE_NOT_ENOUGH	Unable to add the conference - insufficient resources at the requested time.
20015	SCHED_CONF_CP_NOT_ENOUGH	Unable to add the conference - insufficient CP resources.
20015	SCHED_CONF_NO_VALID_TIME_SLOTS	Unable to add the conference - the scheduled time is in the past.
20015	SCHED_CONF_LICENSE_NOT_SUPPORT	Unable to add the conference - current licensing does not permit this mode.
20015	MULTICAST_REPEAT_IP	Unable to add the conference - the streaming address is already in use.
20016	ERROR_UI_FIND_CONF	This temporary conference cannot be found.
20017	ERROR_UI_CTRL_CONF	There was an error controlling the conference.
20018	ERROR_UI_FIND_ONLINE_EP	This online endpoint cannot be found.
20019	ERROR_UI_FIND_OFFLINE_EP	This offline endpoint cannot be found.
20020	ERROR_UI_ADD_ADDR_ITEM_REPEAT	Duplicate entry - this participant name already exists.
20021	ERROR_UI_MOD_ADDR_ITEM_REPEAT	Unable to modify the participant - the participant name is already in use.
20022	ERROR_UI_ADD_ADDR_ITEM_GROUP_REPEAT	Duplicate entry - this group name already exists.

RESULT	MESSAGE	Description
20023	ERROR_UI_MOD_ADDR ITEM_GROUP_REPEAT	Unable to modify the group – the group name is already in use.
20024	ERROR_UI_MOD_OFFL INE_EP_REPEAT_NAM E	Unable to modify offline participant – its name is in use in a conference.
20025	ERROR_UI_REPATE_A DDR_ITEM	Unable to add conference participant to address book – an entry with this name already exists.
20027	MEETING_ROOM_NAME _OR_ID_CONFLICT	Unable to modify the meeting room – the name or ID is already in use.
20027	MULTICAST_REPEATE D_IP	Unable to modify the meeting room – the streaming address is already in use.
21001	ERROR_UI_INVITE_E P_REPEAT_CONF	Unable to invite the participant – requested participant is already in another conference.
21002	ERROR_UI_INVITE_E P_REPEAT_NAME	Unable to invite the participant – requested participant name is already in use.
21003	ERROR_UI_INVITE_E P_LACK_RESOURCE	Unable to invite the participant – needed resources are unavailable.
21004	ERROR_UI_INVITE_E P_CONFIG_NULL	Unable to invite the participant – incomplete information provided.
21005	ERROR_UI_INVITE_E P_IN_ANOTHER_CONF	Requested participant is already in another conference.
22001	ERROR_UI_CONTROL_	Unable to connect – the

RESULT	MESSAGE	Description
	PTS_CONNECT_EP_EX IST	participant is already connected.
22002	ERROR_UI_CONTROL_ PTS_CONNECT_INVIT E_EP_NULL	Unable to connect the participant - needed information is missing.
22003	ERROR_UI_CONTROL_ PTS_DISCONNECT_EP _NULL	Participant is already disconnected.
22004	ERROR_UI_CONTROL_ PTS_RECORD_LINK_C ANNOT_BE_DISCONNE CT	Recording Links cannot be disconnected.
22005	ERROR_UI_CONTROL_ PTS_ADD_CONFIG_EP _NULL	Incomplete information - failed to add participant.
22006	ERROR_UI_CONTROL_ PTS_RECORD_LINK_N ULL	Recording Link failed to record.
22007	ERROR_UI_CONTROL_ PTS_CONF_NULL	Incomplete information - failed to record.
22008	ERROR_UI_CONTROL_ PTS_EP_NULL	Participant information is incomplete.
22009	ERROR_UI_PROFILE_ NOT_SUPPORT_ENCRY PTION	Profile does not support encryption.
22010	ERROR_UI_PROFILE_ NOT_SUPPORT_HDSWI TCH	Profile does not support encryption and HD video-switching.
22011	ERROR_UI_DURATION	Duration cannot exceed 24 hours - failed to add conference.
22012	ERROR_UI_PROFILE_ NOT_SUPPORT_H2644	Your system does not support H. 264 4CIF.

RESULT	MESSAGE	Description
	CIF	
22013	ERROR_UI_PROFILE_NOT_SUPPORT_H264720P	Your system does not support H.264 720P.
22014	ERROR_UI_ENCRYPTED_PROFILE_NOT_BE_DEFAULT	Encrypted profile can not be set to default profile. Disable encryption to make this a possible default profile.
22015	ERROR_UI_DEFAULT_PROFILE_NOT_BE_ENCRYPTED	Default profile can not enable encryption.
22016	ERROR_UI_CONFERENCE_DURATION_LIMIT_TO_24_HOURS	The conference duration can not exceed 24 hours.
22017	ERROR_UI_ADJUST_CONFERENCE_DURATION_LACK_RESOURCE	Conference duration cannot be extended as requested – resources are not available.
22018	ERROR_UI_PROFILE_NOT_SUPPORT_CLUSTER	Your system does not support Cluster.
22019	ERROR_UI_PROFILE_NOT_SUPPORT_LPR	Your system does not support Lost Packet Recovery.
22020	ERROR_UI_SET_SPECIFIC_BG_PICTURE	Unable to upload the personal skin. Please make sure the file being uploaded is in the correct format.

Description of 4 streams setting

The rules for FIRST_VIDEO_DEFINITION, LINE_RATE, STREAM_VIDEO_PROTOCOL, STREAM_VIDEO_FORMAT, STREAM_LINE_RATE and STREAM_FRAME_RATE related configuration:

- 1 Each 2 streams should not be identical.
- 2 The rules for FIRST_VIDEO_DEFINITION and LINE_RATE:

FIRST_VIDEO_DEFINITION	LINE_RATE
HD_SWITCHING	
UP_TO_H264_CIF/SIF	
UP_TO_H264_4CIF/4SIF	>=256, default value is 512.
UP_TO_H264_720P	>=832, default value is 832.
UP_TO_H264_1080P	>=1728, default value is 1728.

- 3 **The rules for STREAM_VIDEO_PROTOCOL of 4 streams:**
The Protocol of Stream 1 must be not lower than stream 2, stream 2 not lower than stream 3, stream 3 not lower than stream 4.
- 4 **The rules for STREAM_VIDEO_FORMAT of 4 streams:**
 - a The format of stream 3 and 4 up to CIF/SIF.
 - b If Protocols of streams are same, then the Format of these streams should abide following rule:
Format of stream 1 must be not lower than stream 2, stream 2 not lower than stream 3, stream 3 not lower than stream 4.
- 5 The rules for STREAM_LINE_RATE of 4 streams:
 - a The call speed of Stream 1 must be not lower than stream 2, stream 2 not lower than stream 3, stream 3 not lower than stream 4.
 - b The call speed of stream 3 is up to 768 kbps,
 - c The call speed of stream 4 is up to 512 kbps,
- 6 **The rules for STREAM_FRAME_RATE:**
 - a If each 2 streams with fields of Protocol, Format and Call Speed are identical, then the frame rate of these streams should abide

following rule:

Frame rate of stream 1 must be not lower than stream 2, or they are in the same level but not the same value;

stream 2 must be not lower than stream 3, or they are in the same level but not the same value;

stream 3 must be not lower than stream 4, or they are in the same level but not the same value.

b The Frame rate value 25 and 30 are in the same level.

c The Frame rate value 12.5 and 15 are in the same level.

7 The default value setting for STREAM_VIDEO_PROTOCOL, STREAM_VIDEO_FORMAT according to FIRST_VIDEO_DEFINITION:

a CP Mode:

The default value of STREAM_FRAME_RATE is 25.

FIRST_VIDEO_DEFINITION	Default value of [STREAM_VIDEO_PROTOCOL, STREAM_VIDEO_FORMAT]			
	Stream1	Stream2	Stream3	Stream4
UP_TO_H264_CIF/SIF	["H.264", "CIF/SIF"]	["H.264", "CIF/SIF"]	["H.264", "CIF/SIF"]	["H.263", "CIF/SIF"]
UP_TO_H264_4CIF/4SIF	["H.264", "4CIF/4SIF_16:9"]	["H.264", "CIF/SIF"]	["H.264", "CIF/SIF"]	["H.263", "CIF/SIF"]
UP_TO_H264_720P	["H.264", "720P"]	["H.264", "4CIF/4SIF_16:9"]	["H.264", "CIF/SIF"]	["H.263", "CIF/SIF"]
UP_TO_H264_1080P	["H.264", "1080P"]	["H.264", "720P"]	["H.264", "CIF/SIF"]	["H.263", "CIF/SIF"]

b Video Switch Mode Video Switching Highest Common::

Mode	Default value of Stream1[STREAM_VIDEO_PROTOCOL, STREAM_VIDEO_FORMAT, STREAM_FRAME_RATE]
Video Switch Mode	["AUTO", "AUTO", "AUTO"]

8 Default value setting for stream 2, stream 3 and stream 4

STREAM_LINE_RATE according to stream 1
 STREAM_LINE_RATE:

Stream 1	Default value of STREAM_LINE_RATE		
	Stream 2	Stream 3	Stream 4
4096	1920	768	384
3072	1536	768	384
2560	1024	768	384
2048	1024	768	384
1920	1024	768	384
1536	768	512	384
1280	768	512	384
1024	768	512	384
768	512	384	256
512	384	256	128
384	256	128	64
320	256	128	64
256	192	128	64
192	192	128	64
128	128	128	64
64	64	64	64

Appendix

Below linked files include all COMMAND, CONFIRM, INDICATION packets details refer in the documentation. Click the link bellow for more information about RMX packets.

[RMX Dev Proxy2Mcs\(SYS\).xml](#)

[RMX Proxy2Mcs MC.xml](#)