



Video Multiprocessing Gateway (VMG)

Release 3.1.0

VMG XML-RPC Message Reference Guide

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VMG XML-RPC Message Reference Guide

Document part number: 250-0158-01 Rev A

Printed 6/7/12

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VMG XML-RPC Message Reference Guide document history

Part Number	Software Release	Release Date	Changes
250-0158-01 Rev A	3.1.0		<ul style="list-style-type: none">• New to VMG customer documentation suite.

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Overview

This reference guide provides the xml-rpc messages used by the VMG for specific method calls. This chapter contains fundamental information about the structure and usage of the XML-RPC methods supported by the VMG.

In This Chapter:

- “General Location Specifications,” next.
- “Message Specifications” on page 3
- “Next Index Hint Message Specifications” on page 4.
- “XML/RPC Library” on page 5..
- “How to create transport streams” on page 7.
- “How to create standard transport—IPTV Video—grooming” on page 14.
- “How to create MBR TS Grooming” on page 19.

General Location Specifications

VMG Chassis and Components

All objects in the VMG chassis are specified by slot and port. The VMG chassis is identified in command syntax by specifying slot 0.

Slot	Port	Transport Stream	Program	Component(s)
0	1			Power Supply 1
0	2			Power Supply 2
0	3			Fan 1
0	4			Fan 2
0	5			Fan 3 (only for large MVP chassis)
slot	port			For NPM, VPM, and ASM card and port: <ul style="list-style-type: none">• NPM: ports 1-8 = GigE, ports 9-10 = 10GigE.• ASM: ports are numbered 1-12.
slot	0			NPM Ethernet port
slot	port	TS Index		Define TS
slot	port	TS Index	Program Index	Define Program

GUI Request ID

Every Query and configuration Command in xml rpc checks for `gui_request id`, which is returned after a successful login. If the request ID does not match, it is then rejected by the GUI.

Message Specifications

Requirements

To write an XML-RPC client call, the following information (which defines an API to the XML-RPC listener) is essential:

- The URL and TCP port of the listener.
- The name of the remote procedure.
- The kind and number of arguments that the procedure expects.
- The kind and number of return values for the procedure.

Request

The request is a combination of XML content (an array of XML-RPC values which encode the calls) and HTTP headers (the transport mechanism), which is sent to the API server that implements the protocol.

To identify the chassis or a components of the chassis in a request call, the syntax would be similar to the following string:

```
http://<IP address of the API server>::<port on API server>/RPC2
<mvp.[method name]>
```

Using the constructs of an xml-rpc command, implementation of the syntax would be similar to the following, which identifies the VMG at IP address 10.32.12.28:8080, and directs the method called 'test' to be used on this VMG's power supplies (ports 1 and 2).

```
Xmlrpc http://10.32.12.28:8080/RPC2 mvp.test i/1 i/2
```

Response

A response message is a XML-RPC structure whose data member consists of name and value.

Using the Request example (above), and if the message is accepted at the server, a response is issued back to the client, similar to the following content:

```
Result:
Struct of 2 members:
Key:String: 'sum'
Value: Integer: 3
Key:String: 'difference'
Value: Integer: -1
```

XML-RPC Parameter Types

The VMG xml-rpc specification supports the data types described in this section.

Type	Tag	Description
java.lang.Integer	i	A 32-bit, signed or unsigned integer value between 2,147,483,648 and 2,147,483,647. Example: <i>27</i>
java.lang.String	s	A sequence of characters: ASCII text or Unicode Example: <s>Hello</s>
java.lang.Boolean	b	true(1), or false(2) Example: 1 0
java.lang.Double	d	A 64-bit floating point number. Examples: <d>27.31415</d> <d>-1.1465</d>
java.util.Date		A timestamp, using format CCYYMMDDTHH:MM:SS Example: <date>20021125T02:20:04</date>
java.util.Hashtable		Implement a hashtable that maps keys to values. Any non-null object can be used as a key or value.
java.util.Vector		Implement a growable array of objects.

Next Index Hint Message Specifications

mvp.getNextIndexHint

REQUEST MESSAGE FORMAT—mvp.getNextIndexHint

Index	Type	Names	Value Instances/Comments
	i	gui_request_id	
	i	indexType	requested Index type <pre>{ VCM_INDEX_IN_TS =0 VCM_INDEX_IN_PG =1 VCM_INDEX_OUT_TS =2 VCM_INDEX_OUT_PG=3 VCM_INDEX_GRM =4 VCM_INDEX_IN_ES=5 VCM_INDEX_OUT_ES=6 }</pre>

RESPONSE MESSAGE FORMAT—`mvp.getNextIndexHint`

Index	Type	Names	Value Instances/Comments
	i	command_id	
	i	session_id	
	i	CMD_ID_QUERY_NEXT_AVAIL_INDEX	
	i	return_value	Return 0 if command is successful. If not successful, return an error code.
	s	error_msg	Error message string
	i	availIndex	Available index ID for requested type

XML/RPC Library

The XMLRPC library must be installed onto the server to enable use of xml-rpc method calls. Assuming that the XMLRPC library is installed onto your server, you will then need to set up the path and LD_LIBRARY_PATH.

```
vi ~/.bashrc

export XMLRPC_HOME=/home/rgb/mvp/xmlrpc/install
export LD_LIBRARY_PATH=${XMLRPC_HOME}/lib
export PATH=/home/apps/p4/bin:${XMLRPC_HOME}/bin:$PATH
```

Retrieving data from host

Use the method—`mvp.getChassisInfo`—to obtain data from the VMG.

The xml-rpc example in this section is written in shell script, to use the XML/RPC library. This example demonstrates how to execute the script to retrieve chassis information. It also provides an example about what to expect in the response content.

1. Log in to VMG Node by calling `mvp.rgbUserLogin` API.
2. Retrieve the GUI ID from step 1 and execute `mvp.getChassisInfo` API to get the chassis information (similar to the Request example shown, below). Results of the retrieval are generated in a display similar to that shown in [“Response Example—Getting chassis information”](#) on page 6.
3. Log off by calling `mvp.rgbUserLogout` API. The example of Logoff is shown in the Request example, below.

Request Example—Retrieving chassis information

```
#!/bin/sh

if [ "$1" == "" ]; then
echo "Usage: $0 <ip_ADDRESS>"
exit 1;
fi
export IP_ADDR=$1
echo "***** Get GUI Request ID"
```

```

result=`xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.rgbUserLogin s/
"674e4e4c4743585a54475e4c57" s/"674e4e4c47" s/"1.1.1.1" `
GUI_ID=`echo $result | gawk -F" " '{print $36}'`

echo "get ChassisInfo..."
xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.getChassisInfo i/${GUI_ID}

echo "***** Close GUI_ID ${GUI_ID} Session"

xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.rgbUserLogout i/${GUI_ID} s/
"674e4e4c4743585a54475e4c57"

```

Response Example—Getting chassis information

```

***** Get GUI Request ID

Result:

Struct of 5 members:
  Key: String: 'command_id'
  Value: Integer: 58720265
  Key: String: 'session_id'
  Value: Integer: 0
  Key: String: 'error_msg'
  Value: String: 'All Ok'
  Key: String: 'return_value'
  Value: Integer: 0
  Key: String: 'gui_request_id'
  Value: Integer: 3

getChassisInfo...
Result:

Struct of 20 members:

  Key: String: 'command_id'
  Value: Integer: 25165825

  Key: String: 'session_id'
  Value: Integer: 3

  Key: String: 'return_value'
  Value: Integer: 0

  Key: String: 'error_msg'
  Value: String: ''

  Key: String: 'chassis_type'
  Value: Integer: 11

  Key: String: 'reset_reason'
  Value: Integer: 0

  Key: String: 'fan1'
  Value: Integer: 1

  Key: String: 'fan2'
  Value: Integer: 1

  Key: String: 'fan3'
  Value: Integer: 0

  Key: String: 'power1'
  Value: Integer: 1

```



```

Key:   String: 'power2'
Value: Integer: 1

Key:   String: 'sysCtrler1'
Value: Integer: 0

Key:   String: 'sysCtrler2'
Value: Integer: 1

Key:   String: 'alarmledMask'
Value: Integer: 4

Key:   String: 'time'
Value: String: '10/5/2010 21:20:29'

Key:   String: 'time_zone'
Value: String: 'PST8PDT'

Key:   String: 'sys_up_time'
Value: String: '0 days 04:01:41'

Key:   String: 'active_sw_cvv'
Value: String: 'wcai(33299)(2)2010-10-04_16:59:01_VMG2.3_MBR_TS'

Key:   String: 'loaded_sw_version'
Value: String: 'wcai(33299)(2)2010-10-04_16:59:01_VMG2.3_MBR_TS'

Key:   String: 'serial_number'
Value: String: '1392648-002'

***** Close GUI_ID 3 Session
Result:

Struct of 4 members:

Key:   String: 'command_id'
Value: Integer: 58720266

Key:   String: 'session_id'
Value: Integer: 3

Key:   String: 'error_msg'
Value: String: 'All Ok'

Key:   String: 'return_value'
Value: Integer: 0

```

How to create transport streams

This section demonstrates script used to create a transport stream, using XML/RPC API (“[Request Example—Creating a transport stream](#)” on page 8). This script can be used to create four different Transport streams. Each Transport stream requires its own parameters ([Table 1](#)).

Table 1. Transport Stream Parameters—Examples

Type of Transport Stream	Transport Stream Requirements
TRANSCODE_TS_TYPE(1)	Build a standard transport stream.

Table 1. Transport Stream Parameters—Examples

Type of Transport Stream	Transport Stream Requirements
TRANSCODE_TS_TYPE(2)	Build an MBR transport stream. This option requires entry for Screen Mode and MBR Group ID in addition to standard TS parameters.
TRANSCODE_TS_TYPE(3)	Build an MBR-PIP transport stream. This option requires entry of Screen Mode and MBR GROUP ID in addition to standard TS parameters. This option also requires creation of a main video Transport stream AND a PIP Video transport stream: <ul style="list-style-type: none"> For Main Video, the MBR_GROUP_SUB_TYPE is set to 0. For PIP Video, The MBR_GROUP_SUB_TYPE is set to 1.

The following entry can execute the script:

```
./createTS.sh <IPAddress> <TRANSCODE_TS_TYPE> <GIGE#>
```

Embedded within this `createTS.sh` script are many API(s) which create the Transport stream. In a typical sequence of tasks (as listed below), you would log in and retrieve the GUI ID, then execute any API command. After the API command is completed, you would then log off.

1. Log in to VMG node by calling `mvp.rgbUserLogin` API.
2. Retrieve the GUI ID from Step 1. The GUI ID is using in every API call.
3. Using the example shown in this section, you can perform any of the following tasks:
 - View `getMbrGroupId()` method. Use `mvp.getMbrTSObjectId` API to get MGR GROUP ID.
 - View `setParameters()` method. Use `mvp.getNextIndexHint` API with option 2 to get next available TS. For example:

```
xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.getNextIndexHint i/${GUI_ID}
i/2
```
 - View `getPortID()` to get `PORT_ID`. The `PORT_ID` is defined in bitmask.
 - View `createTS()`. Use `mvp.setOutputTS` to create output TS.
4. Log off.
Use `mvp.rgbUserLogout()` API to log off the session.

Request Example—Creating a transport stream

```
#!/bin/sh
#set -x
# ****
# **** Function usageText()
# ****
usageText() {
    echo " "
    echo "Usage: $0 <iP_ADDRESS> <TRANSCODE_TS_TYPE> <GIGEPort#> "
    echo " "
    echo "    TRANSCODE_TS_TYPE    = 1 for Standard TS (Video Transcoding)"
    echo "                        = 2 for MBR TS"
    echo "                        = 3 for MBR-PIP TS"
```

```

    echo "                                = 4 for Standard TS (Audio/Video Transcoding)"
    echo "        GIGEPort# = [1..8]"
    echo " "
}

# ****
# **** Function getNextMBRID()
# ****
getNextMBRID() {
    echo "***** Get Next MBR ID..."
    result=`xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.getMVRTSObjectId i/${GUI_ID} i/1`
    echo ${result}
    MBR_NEXT_ID=`echo $result | gawk -F" " '{print $23}'`
}

# ****
# **** Function getTsNextID()
# ****
getTsNextID() {
    echo "***** Get TS Next Index ..."
    result=`xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.getNextIndexHint i/${GUI_ID} i/2`
    TS_NEXT_ID=`echo $result | gawk -F" " '{print $42}'`
}

# ****
# **** Function getPortId()
# ****
getPortId() {
    #Determine GIGE Port
    if [ "${GIGE_PORT_NO}" == 1 ]; then
        PORT_ID=277090305
    elif [ "${GIGE_PORT_NO}" == 2 ]; then
        PORT_ID=277094401
    elif [ "${GIGE_PORT_NO}" == 3 ]; then
        PORT_ID=277098497
    elif [ "${GIGE_PORT_NO}" == 4 ]; then
        PORT_ID=277102593
    elif [ "${GIGE_PORT_NO}" == 5 ]; then
        PORT_ID=277106689
    elif [ "${GIGE_PORT_NO}" == 6 ]; then
        PORT_ID=277110785
    elif [ "${GIGE_PORT_NO}" == 7 ]; then
        PORT_ID=277114881
    elif [ "${GIGE_PORT_NO}" == 8 ]; then
        PORT_ID=277118977
    fi
}

# ****
# **** Function getScreenMode()
# ****
getScreenMode(){
    # ****
    # SCREEN_MODE is 1 for Video Transcoding
    # Screen_MODE is 2 for Audio and Video Transcoding
    # ****
    if [ "${TRANSCODE_TS_TYPE}" == 2 -o "${TRANSCODE_TS_TYPE}" == 4 ]; then
        SCREEN_MODE=2
    else

```

```

        SCREEN_MODE=1
    fi
}

# ****
# **** Function getMbrGroupId()
# ****
getMbrGroupId() {
    # Only get MBRGroup ID when MBR TS or MBR_PIP TS only
    if [ "${TRANSCODE_TS_TYPE}" == 2 -o "${TRANSCODE_TS_TYPE}" == 3 ]; then
        result=`xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.getMBRTSObjectId i/${GUI_ID} i/1`
        MBR_TS_ID=`echo $result | gawk -F" " '{print $23}'`
    else
        MBR_TS_ID=0
    fi
    echo "***** Get MBR GROUP ID ${MBR_TS_ID} "
}

# ****
# **** Function getMbrGroupType()
# ****
getMbrGroupType() {
    # ****
    # MBR GROUP TYPE = 0 for non-MBR PIP TS
    # MBR GROUP TYPE = 1 for MBR-PIP TS
    # ****
    if [ "${TRANSCODE_TS_TYPE}" == 3 ]; then
        MBR_GROUP_TYPE=1
    else
        MBR_GROUP_TYPE=0
    fi
}

# ****
# **** Function getMbrGroupSubTypeMainVideo()
# ****
getMbrGroupSubTypeMainVideo() {
    # ****
    # MBR_GROUP_SUB_TYPE = 0 for Main TS Video
    # MBR_GROUP_SUB_TYPE = 1 for PIP TS Video
    # ****
    MBR_GROUP_SUB_TYPE=0
}

# ****
# **** Function getMbrGroupSubTypePipVideo()
# ****
getMbrGroupSubTypePipVideo() {
    # ****
    # MBR_GROUP_SUB_TYPE = 0 for Main TS Video
    # MBR_GROUP_SUB_TYPE = 1 for PIP TS Video
    # ****
    MBR_GROUP_SUB_TYPE=1
}

# ****
# **** Function setParameters()
# ****
setParameters() {

```

```

getTsNextID

#*****
# TS_TYPE = 1 for MPEG-2
# TS_TYPE = 2 for ASTC
# TS_TYPE = 3 for SCTE
# TS_TYPE = 4 for DVB
#*****
TS_TYPE=1

BITRATE=12000000
RESERVED_BW=0
TS_ID=0
NETWORK_PID=8175
TS_NAME=SCRIPT_${TS_NEXT_ID}

SLOT_ID=1
getPortId

DEST_IP_ADDR="224.5.6.8"
SUBNET_MASK="0.0.0.0"
MAC_ADDRESS="00:00:00:00:00:00"
UDP_PORT=${GIGE_PORT_NO}${TS_NEXT_ID}
ARP_CODE=1
VLAN_ENABLE=0
VLAN_ID=0
DIFF_SERVE=0
DIFFSERVER_ENABLE=0
RTP_ENABLE=0
DPI_FLAG=0
P_DPI_FLAG=0
FEC_ENABLE=0
FEC_COLUMN=0
FEC_ROW=0
LARGE_BUFFER=0
SPTS_ONLY=1

#BITRATE_THRESHOLD2=${BITRATE}/2
BITRATE_THRESHOLD=6000000
MOD_FIELDS=0
ACTION_TYPE=0

TRANSCODE_ENABLE=1
getScreenMode
getMbrGroupType
MBR_GROUP_NAME=" "
}
# ****
# **** Function createTS()
# ****
createTS() {
    xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.setOutputTs i/${GUI_ID} \
        i/0 i/${TS_NEXT_ID} i/${TS_TYPE} i/${BITRATE} \
        i/${RESERVED_BW} i/${TS_ID} \

```

```

i/${NETWORK_PID}                i/-1 \
s/"${TS_NAME}"                  i/${SLOT_ID}                i/${PORT_ID} \
s/"${DEST_IP_ADDR}"             s/"${SUBNET_MASK}" \
s/"${MAC_ADDRESS}"              i/${UDP_PORT} \
i/${ARP_CODE}                   i/${VLAN_ENABLE}        i/${VLAN_ENABLE} \
i/${DIFF_SERVE}                 i/${DIFFSERVER_ENABLE}  i/${RTP_ENABLE} \
i/${DPI_FLAG}                   i/${P_DPI_FLAG}         i/${FEC_ENABLE} \
i/${FEC_COLUMN}                 i/${LARGE_BUFFER}       i/0 \
i/${SPTS_ONLY} \
i/${BITRATE_THRESHOLD} \
i/${MOD_FIELDS}                 i/${ACTION_TYPE} \
i/${TRANSCODE_ENABLE}           i/${SCREEN_MODE}        i/${MBR_TS_ID} \
i/${MBR_GROUP_TYPE}             i/${MBR_GROUP_SUB_TYPE} \
s/${MBR_GROUP_NAME}
}

# ****
# **** Function createMainTS()
# ****
createMainTS() {
    getMbrGroupSubTypeMainVideo
    createTS
}

# ****
# **** Function createPipTS()
# ****
createPipTS() {

    getMbrGroupSubTypePipVideo
    createTS
}

# ***** Main *****
if [ "$1" == "" -o "$2" == "" -o "$3" == "" ]; then
    echo " "
    echo "[ERR] Missing arguments "
    usageText
    exit 1;
fi

export IP_ADDR=$1
if [ $2 -lt 1 -o $2 -gt 4 ] ; then
    echo " "
    echo "[ERR] Invalid MBR-TYPE. Please try it again"
    usageText
    exit 1;
fi
TRANSCODE_TS_TYPE=$2
if [ $3 -lt 1 -o $3 -gt 8 ] ; then
    echo " "
    echo "[ERR] Invalid GIGE Port number. Please try it again"
    usageText
    exit 1;
fi

```

```

GIGE_PORT_NO=$3

echo "***** Get GUI Request ID "
result=`xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.rgbUserLogin s/
"674e4e4c4743585a54475e4c57" s/"674e4e4c47" s/"1.1.1.1" `
GUI_ID=`echo $result | gawk -F" " '{print $36}'`
echo "***** GUI Request ID = ${GUI_ID}"

getMbrGroupId
if [ "${TRANSCODE_TS_TYPE}" == 3 ]; then
    echo "Create MBR PIP TS"
    setParameters
    createMainTS
    setParameters
createPipTS
elif [ "${TRANSCODE_TS_TYPE}" == 2 ]; then
    echo "Create MBR TS"
    setParameters
    MBR_GROUP_NAME="SC100"${GIGE_PORT_NO}${MBR_TS_ID}
    createMainTS
    setParameters
    MBR_GROUP_NAME="SC100"${GIGE_PORT_NO}${MBR_TS_ID}
    createMainTS
elif [ "${TRANSCODE_TS_TYPE}" == 4 ]; then
    echo "Create Standard IPTV TS"
    setParameters
    createMainTS
else
    echo "Create Standard IPTV AV TS"
    setParameters
    createMainTS
fi

echo "***** Close GUI_ID ${GUI_ID} Session"
xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.rgbUserLogout i/${GUI_ID} s/
"674e4e4c4743585a54475e4c57"

```

Response—Creating a transport stream

```

> ./createTS 10.32.97.181 2 6
***** Get GUI Request ID
***** GUI Request ID = 4
***** Get MBR GROUP ID {17}
Create MBR TS
***** Get TS Next Index ...
Result:

Struct of 6 members:
Key: String: 'command_id'
Value: Integer: 41943052
Key: String: 'session_id'
Value: Integer: 4
Key: String: 'CMD_ID_OUTPUT_TS_CONFIG'

```

```

Value: Integer: 41943052
Key:   String: 'return_value'
Value: Integer: 0
Key:   String: 'error_msg'
Value: String: 'All Ok'
Key:   String: 'ts_index'
Value: Integer: 20
***** Get TS Next Index ...
Result:

Struct of 6 members:
Key:   String: 'command_id'
Value: Integer: 41943052
Key:   String: 'session_id'
Value: Integer: 4
Key:   String: 'CMD_ID_OUTPUT_TS_CONFIG'
Value: Integer: 41943052
Key:   String: 'return_value'
Value: Integer: 0
Key:   String: 'error_msg'
Value: String: 'All Ok'
Key:   String: 'ts_index'
Value: Integer: 21
***** Close GUI_ID 4 Session
Result:
Struct of 4 members:
Key:   String: 'command_id'
Value: Integer: 58720266
Key:   String: 'session_id'
Value: Integer: 4
Key:   String: 'error_msg'
Value: String: 'All Ok'
Key:   String: 'return_value'
Value: Integer: 0

```

How to create standard transport—IPTV Video—grooming

This section demonstrates script used to create Standard IPTV Output Program/Grooming, which uses XML/RPC API `createOutProgramGroom_IPTV.sh`. To perform this grooming, you first create the TS, then run the `createOutProgramGroom_IPTV.sh` script to perform grooming on the TS.

1. Create standard TS with one entry of Transport stream, similar to the following example.

```
> ./createTS.sh 10.32.98.180 1 1
```

2. Use `createOutGroom_IPTV.sh` script to create the Output Program and Grooming with the TS ID specified from Step 1, and similar to the following example:

```
> ./createOutProgramGroom_IPT.sh 10.32.98.180 7
```


createOutProgramGroom_IPTV

```

#
# createOutProgramGroom_IPTV.sh
#
#!/bin/sh
set -x

if [ "$1" == "" ]; then
    echo "Usage: $0 <iP_ADDRESS>"
    exit 1;
fi

export IP_ADDR=$1
# ***
# *** Function getProgramIndex()
# ***
getProgramIndex() {
    echo "***** Get Program Next Index ..."
    result=`xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.getNextIndexHint i/${GUI_ID} i/3`
    PROGRAM_INDEX_2=`echo $result | gawk -F" " '{print $42}'`

    echo "PROGRAM_INDEX_2 = ${PROGRAM_INDEX_2}"
}

# ***
# *** Function setParameters()
# ***
setProgramParameters() {
    TS_INDEX_1=7
    getProgramIndex

    PROGRAM_NUMBER_3=1
    PMT_PID_4=100
    EAS_ENABLE_5=-1
    SCTE_30_35_CONVERT_6=-1
    MAJOR_CHANNEL_7=-1
    MINOR_CHANNEL_8=-1

    PORT_NO=3
    # Program is required to be unique
    PROGRAM_NAME_9="GIGE-"${PORT_NO}"-TS-"${PROGRAM_INDEX_2}

    DPIFLAG_10=0
    PGSUBFLAG_11=0
    MODFIELDS_12=127
    CMD_TYPE_13=0
}
# ***
setVideoParameters() {
    ENCODE_FORMAT_14=3
    RESOLUTION_CLASS_15=2
    GOP_STRUCT_16=0
    GOPM_17=1
    GOPN_18=32
    IDR_INTERVAL_19=160
}

```

```

RESOLUTION_20=0
PIP_ENABLE_21=0
BITRATE_TYPE_22=0
MAX_RATE_23=15000000
MCTF_NOISE_REDUCTION_24=0
TELECINE_25=0
CLOSE_CAPTION_26=0
CFG_HRES_27=0
CFG_VRES_28=0
RPM_RESOLUTION_29=21
PROFILE_30=2
IDR_ALIGNMENT_31=0
A6_SUBID_39=0
PGSUBNO_PMT_FLAG_40=0
PIP_RESOLUTION_41=0
ACTIVE_FORMAT_42=0
}

setAudioParameters() {
    PCM_SESSION_ID_32="group100"
    AUDIO_BITRATE_33=80
    AUDIO_CODE_34=0
    AUDIO_CHANNEL_35=1
    SAMPLING_RATE_36=4
    TRANSCODING_MODE_37=1
    ASPECT_RATIO_38=1
    AUDIO_GAIN_43=2
}

# ***
# *** Function createProgram()
# ***
createProgram() {
# [2] = program_index
xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.setOutProgram i/${GUI_ID} \
    i/${TS_INDEX_1}                i/${PROGRAM_INDEX_2}    i/${PROGRAM_NUMBER_3} \
    i/${PMT_PID_4}                  i/${EAS_ENABLE_5}      \
    i/${SCTE_30_35_CONVERT_6} \
    i/${MAJOR_CHANNEL_7}            i/${MINOR_CHANNEL_8}    s/${PROGRAM_NAME_9} \
    i/${DPIFLAG_10}                 i/${PGSUBFLAG_11}      i/${MODFIELDS_12} \
    i/${CMD_TYPE_13}                i/${ENCODE_FORMAT_14}  \
    i/${RESOLUTION_CLASS_15} \
    i/${GOP_STRUCT_16}              i/${GOPM_17}           i/${GOPN_18} \
    i/${IDR_INTERVAL_19}            i/${RESOLUTION_20}     i/${PIP_ENABLE_21} \
    i/${BITRATE_TYPE_22}            i/${MAX_RATE_23}       \
    i/${MCTF_NOISE_REDUCTION_24}    \
    i/${TELECINE_25}                i/${CLOSE_CAPTION_26}  i/${CFG_HRES_27} \

    i/${CFG_VRES_28}                i/${RPM_RESOLUTION_29} i/${PROFILE_30} \
    i/${IDR_ALIGNMENT_31}           s/${PCM_SESSION_ID_32} i/${AUDIO_BITRATE_33} \
    i/${AUDIO_CODE_34}              i/${AUDIO_CHANNEL_35}  i/${SAMPLING_RATE_36} \
    i/${TRANSCODING_MODE_37}        i/${ASPECT_RATIO_38}   i/${A6_SUBID_39} \
    i/${PGSUBNO_PMT_FLAG_40}        i/${PIP_RESOLUTION_41} i/${ACTIVE_FORMAT_42} \
    i/${AUDIO_GAIN_43}

```

```

}

# ***
# *** Function getGroomIndex()
# ***
getGroomIndex() {
    echo "***** Get Groom Next Index ..."
    result=`xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.getNextIndexHint i/${GUI_ID} i/4`
    GROOM_INDEX_1=`echo $result | gawk -F" " '{print $42}'`

    echo "GROOM_INDEX_1= ${GROOM_INDEX_1}"
}

# ***
# *** Function setGroomingParameters()
# ***
setGroomingParameters() {
    getGroomIndex
    GROOM_MODE_2=65537
    #GROOM_MODE_2=131073
    INPUT_TS_INDEX_3=1
    INPUT_PROGRAM_INDEX_4=14
    OUTPUT_TS_INDEX_5=7
    OUTPUT_TS_PROGRAM_INDEX_6=5
    BACKUP_INPUT_TS_INDEX_7=-1
    BACKUP_INPUT_PROGRAM_INDEX_8=0
    PROGRAM_NAME_SYNC_9=0
    SCTE_35_CUE_FORWARD_10=0
    VIDEO_BITRATE_MIN_11=-1
    VIDEO_BITRATE_MAX_12=-1
    QOS_LEVEL_13=18
    START_TIME_14=0
    END_TIME_15=0
    GROOM_INFO_ES_EXCLUSION_16=""
    CMD_MODFIELD_17=127
    CMD_TYPE_18=0
    BACKUP_SPECIFIED_19=0
    MAN_RECOVERY_20=0
    STAY_UNREFERENCED_21=0
}

# ***
# *** Function setGrooming()
# ***
createGrooming() {
    xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.setGroomingConfig i/${GUI_ID} \
        i/${GROOM_INDEX_1} i/${GROOM_MODE_2} \
        i/${INPUT_TS_INDEX_3} i/${INPUT_PROGRAM_INDEX_4} \
        i/${OUTPUT_TS_INDEX_5} \
        i/${OUTPUT_TS_PROGRAM_INDEX_6} i/${BACKUP_INPUT_TS_INDEX_7} \
        i/${BACKUP_INPUT_PROGRAM_INDEX_8} i/${PROGRAM_NAME_SYNC_9} \
        i/${SCTE_35_CUE_FORWARD_10} i/${VIDEO_BITRATE_MIN_11} \
        i/${VIDEO_BITRATE_MAX_12} i/${QOS_LEVEL_13} \
        i/${START_TIME_14} i/${END_TIME_15} \
        s/${GROOM_INFO_ES_EXCLUSION_16} i/${CMD_MODFIELD_17} \
        i/${CMD_TYPE_18} i/${BACKUP_SPECIFIED_19} \

```

```

i/${MAN_RECOVERY_20}

i/${STAY_UNREFERENCED_21}

}
#*****MAIN *****
echo "Get GUI Request ID"
result=`xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.rgbUserLogin s/"674e4e4c4743585a54475e4c57"
s/"674e4e4c47" s/"1.1.1.1" `
GUI_ID=`echo $result | gawk -F" " '{print $36}'`

# SetProgramParameters
setProgramParameters
setVideoParameters
setAudioParameters

# CreateProgram
createProgram

# setGroomingParameters
setGroomingParameters

#createGrooming
createGrooming

# Close GUI
echo "Close GUI_ID ${GUI_ID} Session"
xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.rgbUserLogout i/${GUI_ID} s/
"674e4e4c4743585a54475e4c57"

```

How to create MBR TS Grooming

The script, that is shown in “[createOutProgramGroom_IPTVAV.sh](#),” (below), demonstrates how to create MBRTS Output Program/Grooming via XML/RPC API. The script is required the existing output TS to be created.

1. In the example of createTS.sh, it demonstrates on how to create MBR_TS with one entry of Transport stream.

```
> ./createTS.sh 10.32.98.180 2 1
```

2. Use createOutGroom_IPTVAV.sh script to create Output Program and Grooming with existing TS ID. If you want to create MBR_TS with N entries of TS, you needs to execute the createoutProgramGroom_IPTVAV.sh N times. The max of N entries is 4 times.

```
> ./createOutProgramGroom_IPTVAV.sh 10.32.98.180 10
```

If requires more than 1 entry within MBR, you need to perform the step a with different TS ID. For example,

```
> ./createOutProgramGroom_IPTVAV.sh 10.32.98.180 11
```

createOutProgramGroom_IPTVAV.sh

```
#
# createOutProgramGroom_IPTVAV
#
#!/bin/sh
#set -x

if [ "$1" == "" -o "$2" == "" ]; then
    echo "Usage: $0 <IP_ADDRESS> <TS_INDEX>"
    exit 1;
fi

export IP_ADDR=$1
export TS_INDEX=$2

# ***
# *** Function getProgramIndex()
# ***
getProgramIndex() {
    echo "***** Get Program Next Index ..."
    result=`xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.getNextIndexHint i/${GUI_ID} i/3`
    PROGRAM_INDEX_2=`echo $result | gawk -F" " '{print $42}'`

    echo "PROGRAM_INDEX_2 = ${PROGRAM_INDEX_2}"
}

# ***
# *** Function setParameters()
# ***
setProgramParameters() {

    TS_INDEX_1=$TS_INDEX
```

```

getProgramIndex

PROGRAM_NUMBER_3=1
PMT_PID_4=100
EAS_ENABLE_5=-1
SCTE_30_35_CONVERT_6=-1
MAJOR_CHANNEL_7=-1
MINOR_CHANNEL_8=-1
PORT_NO=3
# Program is required to be unique
PROGRAM_NAME_9="GIGE-"{PORT_NO}"-TS-"{PROGRAM_INDEX_2}

DPIFLAG_10=0
PGSUBFLAG_11=0
MODFIELDS_12=127
CMD_TYPE_13=0

getTSInfo
setVideoParameters
setIPTVAudioParameters
if [ "$SCREEN_MODE" == "2" ]; then
    setIPTVAVAudioParameters
fi

# CreateProgram
}

# ***
setVideoParameters() {
    ENCODE_FORMAT_14=3
    RESOLUTION_CLASS_15=2
    GOP_STRUCT_16=0
    GOPM_17=1
    GOPN_18=32
    IDR_INTERVAL_19=160
    RESOLUTION_20=0
    PIP_ENABLE_21=0
    BITRATE_TYPE_22=0
    MAX_RATE_23=1500000
    MCTF_NOISE_REDUCTION_24=0
    TELECINE_25=0
    CLOSE_CAPTION_26=0
    CFG_HRES_27=0
    CFG_VRES_28=0
    RPM_RESOLUTION_29=21
    PROFILE_30=2
    IDR_ALIGNMENT_31=0
    A6_SUBID_39=0
    PGSUBNO_PMT_FLAG_40=0
    PIP_RESOLUTION_41=0
    ACTIVE_FORMAT_42=0
}
etIPTVAudioParameters() {
    PCM_SESSION_ID_32=" "

```

```

    AUDIO_BITRATE_33=0
    AUDIO_CODE_34=0
    AUDIO_CHANNEL_35=0
    SAMPLING_RATE_36=0
    TRANSCODING_MODE_37=0
    ASPECT_RATIO_38=0
    AUDIO_GAIN_43=0
}

setIPTVAVAudioParameters() {
    PCM_SESSION_ID_32="group1002"
    AUDIO_BITRATE_33=80
    AUDIO_CODE_34=0
    AUDIO_CHANNEL_35=1
    SAMPLING_RATE_36=4
    TRANSCODING_MODE_37=1
    ASPECT_RATIO_38=1
    AUDIO_GAIN_43=2
}

# ***
# *** Function createProgram()
# ***
createProgram() {

# [2] = program_index
xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.setOutProgram i/${GUI_ID} \
    i/${TS_INDEX_1}                i/${PROGRAM_INDEX_2}    i/${PROGRAM_NUMBER_3} \
    i/${PMT_PID_4}                  i/${EAS_ENABLE_5}      \
    i/${SCTE_30_35_CONVERT_6} \
    i/${MAJOR_CHANNEL_7}            i/${MINOR_CHANNEL_8}    s/${PROGRAM_NAME_9} \
    i/${DPIFLAG_10}                 i/${PGSUBFLAG_11}      i/${MODFIELDS_12} \
    i/${CMD_TYPE_13}                i/${ENCODE_FORMAT_14} \
    i/${RESOLUTION_CLASS_15} \
    i/${GOP_STRUCT_16}              i/${GOPM_17}          i/${GOPN_18} \
    i/${IDR_INTERVAL_19}            i/${RESOLUTION_20}    i/${PIP_ENABLE_21} \
    i/${BITRATE_TYPE_22}            i/${MAX_RATE_23}      \
    i/${MCTF_NOISE_REDUCTION_24} \
    i/${TELECINE_25}                i/${CLOSE_CAPTION_26} i/${CFG_HRES_27} \
    i/${CFG_VRES_28}                i/${RPM_RESOLUTION_29} i/${PROFILE_30} \
    i/${IDR_ALIGNMENT_31}           s/${PCM_SESSION_ID_32} i/${AUDIO_BITRATE_33} \
    i/${AUDIO_CODE_34}              i/${AUDIO_CHANNEL_35} i/${SAMPLING_RATE_36} \
    i/${TRANSCODING_MODE_37}        i/${ASPECT_RATIO_38}  i/${A6_SUBID_39} \
    i/${PGSUBNO_PMT_FLAG_40}        i/${PIP_RESOLUTION_41} i/${ACTIVE_FORMAT_42} \
    i/${AUDIO_GAIN_43}

s
}

# ***
# *** Function getGroomIndex()
# ***
getGroomIndex() {
    echo "***** Get Groom Next Index ..."
    result=`xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.getNextIndexHint i/${GUI_ID} i/4`

```

```

    GROOM_INDEX_1=`echo $result | gawk -F" " '{print $42}'`

    echo "GROOM_INDEX_1= ${GROOM_INDEX_1}"
}

getTSInfo() {

result=`xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.getOutputTs i/${GUI_ID} i/${TS_INDEX}`

#TS_INDEX_ID=`echo $result | gawk -F" " '{print $74}'`
#NUM_OF_PROGRAM=`echo $result | gawk -F" " '{print $92}'`
SCREEN_MODE=`echo $result | gawk -F" " '{print $374}'`
MBR_TS_INDEX=`echo $result | gawk -F" " '{print $380}'`
MBR_GROUP_TYPE=`echo $result | gawk -F" " '{print $386}'`
MBR_GROUP_SUB_TYPE=`echo $result | gawk -F" " '{print $392}'`

#echo NUM_OF_PROGRAM=${NUM_OF_PROGRAM}
echo SCREEN_MODE=${SCREEN_MODE}
echo MBR_TS_INDEX=${MBR_TS_INDEX}
echo MBR_GROUP_TYPE=${MBR_GROUP_TYPE}
echo MBR_GROUP_SUB_TYPE=${MBR_GROUP_SUB_TYPE}

}

# ***
# *** Function setGroomingParameters()
# ***
setGroomingParameters() {

    getGroomIndex
    GROOM_MODE_2=131073
    INPUT_TS_INDEX_3=1
    INPUT_PROGRAM_INDEX_4=2
    OUTPUT_TS_INDEX_5=${TS_INDEX_1}
    OUTPUT_TS_PROGRAM_INDEX_6=${PROGRAM_INDEX_2}
    BACKUP_INPUT_TS_INDEX_7=-1
    BACKUP_INPUT_PROGRAM_INDEX_8=0
    PROGRAM_NAME_SYNC_9=0
    SCTE_35_CUE_FORWARD_10=1
    VIDEO_BITRATE_MIN_11=-1
    VIDEO_BITRATE_MAX_12=0
    QOS_LEVEL_13=18
    START_TIME_14=0
    END_TIME_15=0
    GROOM_INFO_ES_EXCLUSION_16=" "
    CMD_MODFIELD_17=127
    CMD_TYPE_18=0
    BACKUP_SPECIFIED_19=0
    MAN_RECOVERY_20=0
    STAY_UNREFERENCED_21=0
}

# ***
# *** Function setGrooming()
# ***
createGrooming() {

```



```

xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.setGroomingConfig i/${GUI_ID} \
i/${GROOM_INDEX_1} i/${GROOM_MODE_2} \
i/${INPUT_TS_INDEX_3} i/${INPUT_PROGRAM_INDEX_4} \
i/${OUTPUT_TS_INDEX_5} \
i/${OUTPUT_TS_PROGRAM_INDEX_6}
i/${BACKUP_INPUT_TS_INDEX_7} \
i/${BACKUP_INPUT_PROGRAM_INDEX_8} i/${PROGRAM_NAME_SYNC_9} \
i/${SCTE_35_CUE_FORWARD_10} i/${VIDEO_BITRATE_MIN_11} \
i/${VIDEO_BITRATE_MAX_12} i/${QOS_LEVEL_13} \
i/${START_TIME_14} i/${END_TIME_15} \
s/${GROOM_INFO_ES_EXCLUSION_16} i/${CMD_MODFIELD_17} \
i/${CMD_TYPE_18} i/${BACKUP_SPECIFIED_19} \
i/${MAN_RECOVERY_20} i/${STAY_UNREFERENCED_21}

}
#*****MAIN *****

echo "Get GUI Request ID"
result=`xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.rgbUserLogin s/"674e4e4c4743585a54475e4c57"
s/"674e4e4c47" s/"1.1.1.1" `
GUI_ID=`echo $result | gawk -F" " '{print $36}'`

# SetProgramParameters
setProgramParameters
set -x
createProgram

# setGroomingParameters
setGroomingParameters

#createGrooming
set -x
createGrooming

# Close GUI
echo "Close GUI_ID ${GUI_ID} Session"
xmlrpc http://${IP_ADDR}:8080/RPC2 mvp.rgbUserLogout i/${GUI_ID} s/
"674e4e4c4743585a54475e4c57"

```

AAA Configuration Messages

This chapter contains the XML-RPC message components for use with VMG AAA configurations.

In This Chapter:

- “Error Codes for AAA” on page 25.
- “mvp.setAAAGlobals” on page 26.
- “mvp.getAAAGlobals” on page 27.
- “mvp.setAAAServerCfg” on page 28.
- “mvp.modifyAAAServerConfig” on page 29.
- “mvp. getAAAServerBulk” on page 30.
- “mvp.setAAAServerOrder” on page 31.
- “mvp.modifyAAAServerOrder” on page 32.
- “mvp. getAAAServerBulk” on page 30.
- “mvp.setAAAServerOrder” on page 31.
- “mvp.modifyAAAServerOrder” on page 32.
- “mvp.getAAAServerOrder” on page 33.
- “mvp.deleteAAAServerConfig” on page 34.
- “mvp.rgbLocalUserPasswdSet” on page 35.
- “mvp. rgbLocalUserPasswdGet” on page 36.
- “mvp.rgbUserLogin” on page 37.
- “mvp.rgbUserLogout” on page 38.
- “mvp.setNoRespCloseGui (Comment out)” on page 39.
- “mvp. setDisableGUIRequestId” on page 40.
- “mvp. setDisableBitRateFlag” on page 41.

Error Codes for AAA

- | | |
|---------------------------------|---------------------------------------|
| 1. SESSION_ID_DOES_NOT_MATCH -8 | |
| 2. AAA_DUPLICATE_ENTRY -7 | |
| 3. AAA_USER_LOGGED_OUT -6 | // Current user logged out |
| 4. AAA_MAX_USER_LOGGED_IN -5 | // internal or configuration error |
| 5. AAA_ERROR -4 | // internal or configuration error |
| 6. AAA_INVALID -3 | // Invalid parameter |
| 7. AAA_TIMEOUT -2 | // no response or timeout from Server |
| 8. AAA_REJECT -1 | // AAA Login reject |
| 9. AAA_OK 0 | // AAA Login successful |

mvp.setAAAGlobals

Set global parameters for AAA authentication on the VMG.

REQUEST MESSAGE FORMAT—mvp.setAAAGlobals

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id,	
1	i	max_num_retries	Value to define max number of retries for each server. Range = 0 - 2
2	i	time_out	Value, in seconds, to define the time to wait for response from the remote server. Range = 1 - 4
3	i	aaa_status	Value to either enable (2) or disable (1) AAA service.
4	i	remote_only	Value to either enable (2) or disable (1) remote authentication. If enabled, login is authenticated through remote AAA server only (not the local server).
5	i	protocol	Value to identify the preferred protocol to use for AAA server, as one of the following: <ul style="list-style-type: none"> • No Preference (0) • RADIUS(1) • TACACS+ (2)
6	s	default_trail	Default string (rgbnetworks.com)
7	i	global_aaa_set_bit	Global bit mask: <pre>{ aaa_global_max_retry_change 0x01 aaa_global_time_out_change 0x02 aaa_global_status_change 0x04 aaa_global_remote_only_change 0x08 aaa_global_protocol_change 0x10 }</pre>

RESPONSE MESSAGE FORMAT—mvp.setAAAGlobals

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_AAA_GLOBALS_CFG
1	i	session_id	
2	i	error_msg	"error Message"
3	i	return_value	"Return" Value: <ul style="list-style-type: none"> • If command successful, return 0. • If command unsuccessful, return error code.

mvp.getAAAGlobals

Retrieve AAA global configuration information from the VMG.

REQUEST MESSAGE FORMAT—mvp.getAAAGlobals

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.getAAAGlobals

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_AAA_GLOBALS_QUERY
1	i	session_id	
2	i	error_msg	"Error Message"
3	i	return_value	if return is successful other wise an error code.
4	i	max_num_retries	View the configurable for max number of retries. Valid range = 0 - 2
5	i	time_out	View the configurable for timeout server. Valid range = 1 - 4 seconds
6	i	aaa_status	View configuration for AAA service. <ul style="list-style-type: none"> • Disable(1) • Enable(2)
7	i	remote_only	View configuration for remote authentication. <ul style="list-style-type: none"> • Disable(1) • Enable(2)
8	i	protocol	View configuration for protocol to use for AAA server. <ul style="list-style-type: none"> • NoPreference (0) • RADIUS(1) • TACACS+ (2)
9	i	default_realm	default string (rgbnetworks.com)

mvp.setAAAServerCfg

Set parameters for AAA server operations.

REQUEST MESSAGE FORMAT—mvp.setAAAServerCfg

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	set_mask	(set_mask==0x0) Set New AAA Server
2	s	ip_addr	Identifies the AAA Server IP Address (Cannot Modify).
3	i	protocol	Specifies the protocol to be used during communication with the AAA Server. Valid options are: <ul style="list-style-type: none"> • RADIUS(1) • TACACS+(2)
4	i	portNo	Specifies Server Port Address (Unsigned valid port address)
5	s	sharedSecret	The password or passphrase used to authentication with AAA Server.
6	i	server_status	View configuration of the server to find out whether it is enabled or disabled. <ul style="list-style-type: none"> • Disable(1) • Enable(2)
7	i	aaa_server_set_bit	Bit Mask Field <div> aaa_server_port_change 0x01 aaa_server_protocol_change 0x02 aaa_server_shared_secret_change 0x04 aaa_server_status_change 0x08 aaa_server_order_change 0x10 </div>

RESPONSE MESSAGE FORMAT—mvp.setAAAServerCfg

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_AAA_CFG
1	i	session_id	
2	i	error_msg	
3	i	return_value	“Return” Value: <ul style="list-style-type: none"> • If command successful, return 0. • If command unsuccessful, return error code.

mvp.modifyAAAServerConfig

Change parameters in the AAA server configuration.

REQUEST MESSAGE FORMAT—mvp.modifyAAAServerConfig

Index	Type	Comments	Value Instances/Comments
0	i	set_mask	(set_mask== 0x1) Modify Server
1	i	index_id	Identifier for AAA server.
2	s	ipAddr	AAA Server IP Address (Cannot Modify).
3	i	protocol	Specifies the protocol to be used during communication with the AAA Server., as one of the following: <ul style="list-style-type: none"> • RADIUS(1) • TACACS+(2)
4	i	port	Specifies Server Port Address (Unsigned valid port address)
5	s	shared_secret	String that sets the password or passphrase, for use when authenticating with the AAA Server.
6	i	server_status	Enable or disable the AAA server. <ul style="list-style-type: none"> • Disable(1) • Enable(2)
7	i	aaa_server_set_bit	Bit Mask Field <div> aaa_server_port_change 0x01 aaa_server_protocol_change 0x02 aaa_server_shared_secret_change 0x04 aaa_server_status_change 0x08 aaa_server_order_change 0x10 </div>

RESPONSE MESSAGE FORMAT—mvp.modifyAAAServerConfig

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_AAA_MODIFY
1	i	session_id	
2	i	error_msg	
3	i	return_value	“Return” Value: <ul style="list-style-type: none"> • If command successful, return 0. • If command unsuccessful, return error code.

mvp.getAAAServerBulk

REQUEST MESSAGE FORMAT—mvp.getAAAServerBulk

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	num_of_request	Number of requests for the server.

RESPONSE MESSAGE FORMAT—mvp.getAAAServerBulk

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_AAA_BULK_QUERY
1	i	session_id	
2	i	error_msg	
3	i	return_value	if command is successful return 0. Otherwise, an error code.
4	i	number_of_entries	Number of entries.
0 to N entries			
1	i	index_id	Index identifier of the server.
2	s	server_ip	AAA Server IP Address.
3	i	protocol	Protocol to be used during communication with the AAA Server, as one of the following: <ul style="list-style-type: none"> • RADIUS(1) • TACACS+(2)
4	i	server_port	AAA Server Port Address (Unsigned valid port address)
5	s	shared_secret	Alphanumeric string that identifies the Shared Secret Key.
6	i	order_of_server	Order of server.
7	i	server_status	Status of server.

mvp.setAAAServerOrder

Set the AAA server sequence to be used during VMG queries for AAA authentication.

REQUEST MESSAGE FORMAT—mvp.setAAAServerOrder

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	num_of_server	Total number of available servers.
2	s	order_of_server	Server order: <ul style="list-style-type: none"> Specify as string: separate each server name with a space. This string must contain the same number of servers as are configured in the database.
3	i	aaa_server_set_bit	Bit Mask aaa_server_order_change 0x20

RESPONSE MESSAGE FORMAT—mvp.setAAAServerOrder

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_AAA_MODIFY
1	i	session_id	
2	s	error_msg	
3	i	return_value	“Return” Value: <ul style="list-style-type: none"> If command successful, return 0. If command unsuccessful, return error code.

mvp.modifyAAAServerOrder

Change the sequence of the servers queried by the VMG for AAA authentication.

REQUEST MESSAGE FORMAT—mvp.modifyAAAServerOrder

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	set_mask	
2	i	index_id	
3	s	ipAddr	AAA Server IP Address (Cannot Modify).
4	i	cmd.protocol	The protocol to be used during communication with the AAA Server, as one of the following: <ul style="list-style-type: none"> • RADIUS(1) • TACACS+(2)
5	i	portNo	View AAA Server Port Address (Unsigned valid port address).
6	s	sharedSecret	Shared Secret Key.
7	i	serverStatus	Status of server.
8	i	aaa_server_set_bit	

RESPONSE MESSAGE FORMAT—mvp.modifyAAAServerOrder

Index	Type	Key:Value	Comments
4	i	command_id	CMD_ID_AAA_MODIFY
5	i	session_id	
6	s	error_msg	
7	i	return_value	“Return” Value: <ul style="list-style-type: none"> • If command successful, return 0. • If command unsuccessful, return error code.

mvp.getAAAServerOrder

Retrieve the AAA server order configuration.

REQUEST MESSAGE FORMAT—mvp.getAAAServerOrder

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	num_of_server	Number of servers present in the system.

RESPONSE MESSAGE FORMAT—mvp.getAAAServerOrder

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_AAA_SERVER_ORDER_QUERY
1	i	session_id	
2	i	error_msg	
3	i	return_value	"Return" Value: <ul style="list-style-type: none"> • If command successful, return 0. • If command unsuccessful, return error code.
4	s	order_of_server	Order of server in string.

mvp.deleteAAAServerConfig

Remove the AAA server configuration.

REQUEST MESSAGE FORMAT—mvp.deleteAAAServerConfig

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	index_id	Index ID of server to be deleted.

RESPONSE MESSAGE FORMAT—mvp.deleteAAAServerConfig

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_AAA_DELETE
1	i	session_id	
3	i	error_msg	
4	i	return_value	"Return" Value: <ul style="list-style-type: none">• If command successful, return 0.• If command unsuccessful, return error code.

mvp.rgbLocalUserPasswdSet

Set user account name and password for local login.

REQUEST MESSAGE FORMAT—mvp.rgbLocalUserPasswdSet

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
0	s	username	Local User Name in encoded format.
1	s	old_password	Local Old Password in encoded format.
2	s	new_password	Local New Password in encoded format.

RESPONSE MESSAGE FORMAT—mvp.rgbLocalUserPasswdSet

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_LOCAL_PASSWD_CFG
1	i	session_id	
2	i	error_msg	
3	i	return_value	"Return" Value: <ul style="list-style-type: none"> • If command successful, return 0. • If command unsuccessful, return error code.

mvp. rgbLocalUserPasswdGet

Retrieve the account information for a specified user account.



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.rgbLocalUserPasswdGet

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	s	username	Local User Name

RESPONSE MESSAGE FORMAT—mvp.rgbLocalUserPasswdGet

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_LOCAL_PASSWD_QUERY
1	i	session_id	
2	i	error_msg	
3	i	return_value	"Return" Value: <ul style="list-style-type: none"> • If command successful, return 0. • If command unsuccessful, return error code.
4	s	username	Local User Name
5	s	password	Local Password.

mvp.rgbUserLogin

Set user account login for association with a specific GUI network location.

REQUEST MESSAGE FORMAT—mvp.rgbUserLogin

Index	Type	Comments	Value Instances/Comments
0	s	username	String, encoded format.
1	s	password	String, encoded format.
2	s	gui_ip_address	IP Address of GUI login machine

Response Message Format

RESPONSE MESSAGE FORMAT—mvp.rgbUserLogin

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_AAA_LOGIN
1	i	session_id	
2	i	error_msg	
3	i	return_value	"Return" Value: <ul style="list-style-type: none">• If command successful, return 0.• If command unsuccessful, return error code.
4	i	gui_request_id	Gui Request Id, which will be used for query and configuration.

mvp.rgbUserLogout

REQUEST MESSAGE FORMAT—mvp.rgbUserLogout

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	s	username	String, encoded format.

RESPONSE MESSAGE FORMAT—mvp.rgbUserLogout

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_AAA_LOGOUT
1	i	session_id	
2	i	error_msg	
3	i	return_value	"Return" Value: <ul style="list-style-type: none">• If command successful, return 0.• If command unsuccessful, return error code.

mvp.setNoRespCloseGui (Comment out)

REQUEST MESSAGE FORMAT—mvp.setNoRespCloseGui

Index	Type	Comments	Value Instances/Comments
0	i	close_flag	

RESPONSE MESSAGE FORMAT—mvp.setNoRespCloseGui

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_RESP_CLOSE_GUI
1	i	session_id	
2	s	error_msg	
3	i	return_msg	

mvp. setDisableGUIRequestId

REQUEST MESSAGE FORMAT—mvp.setDisableGUIRequestId

Index	Type	Comments	Value Instances/Comments

RESPONSE MESSAGE FORMAT—mvp.setDisableGUIRequestId

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_GUI_REQUEST_DISABLE
1	i	session_id	
2	i	error_msg	
3	i	return_value	"Return" Value: <ul style="list-style-type: none">• If command successful, return 0.• If command unsuccessful, return error code.

mvp. setDisableBitRateFlag

REQUEST MESSAGE FORMAT—mvp.setDisableBitRateFlag

Index	Type	Comments	Value Instances/Comments

RESPONSE MESSAGE FORMAT—mvp.setDisableBitRateFlag

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_GUI_REQUEST_DISABLE
1	i	session_id	
2	i	error_msg	
3	i	return_value	"Return" Value: <ul style="list-style-type: none">• If command successful, return 0.• If command unsuccessful, return error code.

Action Messages

This chapter contains the XML-RPC message components for use with various VMG maintenance operations.

In This Chapter:

- “mvp.reGrooming” on page 43.
- “mvp.setSysReboot” on page 44.
- “mvp.setSwitchOver” on page 45.
- “mvp.getSwitchOver” on page 46.
- “mvp.setSwitchOverInhibit” on page 47.
- “mvp.setSysShutDown” on page 48.
- “mvp.setDbRestore” on page 49.
- “mvp.saveSysCfg” on page 50.
- “mvp.setPgRedSwitch” on page 51.
- “mvp. setLocalTotCfg” on page 52.
- “mvp. getLocalTotCfg” on page 53.

mvp.reGrooming

Set parameters for program regrooming.

REQUEST MESSAGE FORMAT—mvp.reGrooming

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	-1 = global
2	i	pg_index	-1 = all programs in the transport stream.

RESPONSE MESSAGE FORMAT—mvp.reGrooming

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_REGROOM_CONFIG
1	i	session_id	
2	i	CMD_ID_REGROOM_CONFIG	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	

mvp.setSysReboot

Set parameters to control VMG reboot.

REQUEST MESSAGE FORMAT—mvp.setSysReboot

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	flag	Reboot the VMG, using one of the following three options: <ul style="list-style-type: none"> • Reboot (0) • Reboot_ClearDB(1) Reboot with factory default configuration, and remove license • Reboot_ClearDB_RetainLicense(2) Reboot with factory default configuration, and retain license.

RESPONSE MESSAGE FORMAT—mvp.setSysReboot

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_SYSTEM_REBOOT_CFG
1	i	session_id	
2	s	err_str	
3	i	return_value	

mvp.setSwitchOver

REQUEST MESSAGE FORMAT—mvp.setSwitchOver

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	flag	The flag is “1” to switchover.

RESPONSE MESSAGE FORMAT—mvp.setSwitchOver

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_SWITCHOVER_CFG
1	i	session_id	
2	s	err_str	
3	i	return_value	

mvp.getSwitchOver

Retrieve VMG switchover information.

REQUEST MESSAGE FORMAT—mvp.getSwitchOver

Index	Type	Comments	Value Instances/Comments
0	i	gui_session_id	

RESPONSE MESSAGE FORMAT—mvp.getSwitchOver

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_SWITCHOVER_QUERY
1	i	session_id	
2	s	error_msg	
3	i	return_value	
4	i	inhibit_state	Enable or disable switchover inhibit. <ul style="list-style-type: none"> • Enable(0) • Disable(1)
5	i	swo_reason	Switchover Failure Reason.
6	s	swo_time	Switchover Date/Time.
7	i	swo_policy	Version 3.1. Switchover option see also “mvp.setSwitchOverInhibit” on page 47.

mvp.setSwitchOverInhibit

Set conditions for VMG switchover.

REQUEST MESSAGE FORMAT—mvp.setSwitchOverInhibit

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	switchOverMode	Enable or disable switchover. <ul style="list-style-type: none"> • Enable(0) • Disable(1)
2	i	swo_policy	Version 3.1. Switchover options: <ul style="list-style-type: none"> • 0 = Do not perform switchover if link failure detected on port set for link state redundancy. • 1 = Allow switchover if link failure detected on any port set for link state redundancy. • 2 = Allow switchover if link failure detected on all ports set for link state redundancy.

RESPONSE MESSAGE FORMAT—mvp.setSwitchOverInhibit

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_SWITCHOVER_INHIBIT_CFG
1	i	session_id	
2	s	error_str	
3	i	return_value	

mvp.setSysShutDown

REQUEST MESSAGE FORMAT—mvp.setSysShutDown

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.setSysShutDown

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	s	err_str	
3	i	return_value	

mvp.setDbRestore

REQUEST MESSAGE FORMAT—mvp.setDbRestore

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	s	host_url	The path cannot exceed 255 characters.

REQUEST MESSAGE FORMAT—mvp.setDbRestore

Index	Type	Comments	Value Instances/Comments
2	i	with_licenses	Version 2.5.0. Either restore or do not restore the license DB file. <ul style="list-style-type: none"> • 0 = retain license DB • 1 = overwrite license DB

RESPONSE MESSAGE FORMAT—mvp.setDbRestore

Index	Type	Key:Value	Comments
0	i	command_id	CFGM_DB_RESTORE
1	i	session_id	
2	s	error_msg	
3	i	CFGM_DB_RESTORE	
4		return_value	Refer to CMD_RESULT in common_ds.h

mvp.saveSysCfg



Note: *The method documented on this page is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.saveSysCfg

Index	Type	Comments	Value Instances/Comments

RESPONSE MESSAGE FORMAT—mvp.saveSysCfg

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_SYSTEM_SAVE_CFG	
3		return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	

mvp.setPgRedSwitch

Set program redundancy switch parameters.

REQUEST MESSAGE FORMAT—mvp.setPgRedSwitch

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	switchType	Type of Program Redundancy to be switched over, as one of the following options: <ul style="list-style-type: none"> • NONE(0), • ALL(1) Switch all grooming sessions from backup to primary. • GROOM(2) Switch a specific grooming session from backup to primary, and vice versa. • INPROG_PRIMARY(3) Switch all the grooming sessions from Backup Input Program to Primary Input Program.
2	i	cmd.info.gmIndex	This field is required if switchType is equal to GROOM(1).
3	i	cmd.info.tsIndex	Version 2.4.0 This field is required if switchType is equal to INPROG_PRIMARY(2).
4	i	cmd.info.pgIndex	Version 2.4.0 This field is required if switchType is equal to INPROG_PRIMARY(2).

RESPONSE MESSAGE FORMAT—mvp.setPgRedSwitch

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_PROG_RED_SWITCH
1	i	session_id	
2	i	CMD_ID_PROG_RED_SWITCH	
3	i	return_value	
4	s	error_msg	

mvp. setLocalTotCfg

Set TOT parameters on the VMG.

REQUEST MESSAGE FORMAT—mvp.setLocalTotCfg

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	cmd.info.modMask	
2	i	cmd.info.countryRegId	
3	i	cmd.info.dstOffset	
4	i	cmd.info.startSunday	
5	i	cmd.info.startMonth	
6	i	cmd.info.startHour	
7	i	cmd.info.startMins	
8	i	cmd.info.endSunday	
9	i	cmd.info.endMonth	
10	i	cmd.info.endHour	
11	i	cmd.info.endMins	
12	s	countryCode	

RESPONSE MESSAGE FORMAT—mvp.setLocalTotCfg

Index	Type	Key:Value	Comments
5	i	command_id	CMD_ID_LOCAL_TOT
6	i	session_id	
7	i	CMD_ID_LOCAL_TOT	
8	i	return_value	
9	s	error_msg	

mvp.getLocalTotCfg

Retrieve TOT configuration from the VMG.

REQUEST MESSAGE FORMAT—mvp.getLocalTotCfg

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.getLocalTotCfg

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_LOCAL_TOT_GET
1	i	session_id	
2	i	CMD_ID_LOCAL_TOT_GET	
3	i	return_value	
4	s	error_msg	
5	i	countryRegId	
6	i	dstOffset	
7	i	startSunday	
8	i	startMonth	
9	i	startHour	
10	i	startMins	
11	i	endSunday	
12	i	endMonth	
13	i	endHour	
14	i	endMins	
15	s	countryCode	

Alarm/Event Messages

This chapter contains the xml-rpc request and response message components for use with VMG alarms and events.

In This Chapter:

- “mvp.clearAlarm” on page 55.
- “mvp.setEventGlobalCfg” on page 55.
- “mvp.getEventGlobalQuery” on page 56.
- “mvp.getEventTypeBulkQuery” on page 57.
- “mvp.getEventMsgBulkQuery” on page 58.
- “mvp.setAlarmGlobalCfg” on page 59.
- “mvp.getAlarmGlobalQuery” on page 59.
- “mvp.getAlarmTypeBulkQuery” on page 60.
- “mvp.getAlarmActiveOrdBulkQuery” on page 62.
- “mvp.setAlarmAckAction” on page 63.
- “mvp.getSystemStatus” on page 64.
- “mvp.getEvent” on page 65.
- “mvp.createEventFilter” on page 66.
- “mvp.deleteEventFilter” on page 67.
- “mvp.getEventCountByFilter” on page 67.
- “mvp.getEventBulk” on page 68.
- “mvp.getEventByLocation” on page 68.
- “mvp.getStreamError” on page 69.

mvp.clearAlarm

Clear an existing event.



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.clearAlarm

Index	Type	Comments	Value Instances/Comments
0	i	alarm_index	Index of event

RESPONSE MESSAGE FORMAT—mvp.clearAlarm

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_CLEAR_EVENT	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	

mvp.setEventGlobalCfg

REQUEST MESSAGE FORMAT—mvp.setEventGlobalCfg

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	fieldSelect	Mask to specify fields.
2	i	eventMaxMsgCnt	Event read-write config. The valid range is between 50 and 10000.

RESPONSE MESSAGE FORMAT—mvp.setEventGlobalCfg

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_EVENT_GLOBALS_CFG
1	i	session_id	
2	i	return_value	
3	s	error_msg	
4	i	eventMaxMsgCnt	

mvp.getEventGlobalQuery

REQUEST MESSAGE FORMAT—mvp.getEventGlobalQuery

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.getEventGlobalQuery

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_EVENT_GLOBALS_QUERY
1	i	session_id	
2	i	return_val	
3	i	eventMaxMsgCnt	Maximum event message count. Default = 500.
4	i	eventCurMsgCnt	Current event message count.
5	i	eventTotalMsgCnt	Total message count.
6	i	eventPurgedMsgCnt	Total purged message count.
7	i	eventLastRecvTime. tv_sec	Last Received Time, in seconds
8	i	eventLastRecvTime. tv_usec	Last Received Time in microseconds.
9	i	eventUnknownTypeCnt	
10	i	eventAllocFailedCnt	
11	i	eventTooShortCnt	
12	i	eventBadParmValCnt	
13	i	eventTooLongCnt	

mvp.getEventTypeBulkQuery



Note: *The method documented on this page is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getEventTypeBulkQuery

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	eventStartAreald	
2	i	eventStartTypeld	
3	i	maxResults	

RESPONSE MESSAGE FORMAT—mvp.getEventTypeBulkQuery

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_EVENT_TYPE_BULK_QUERY
1	i	session_id	
2	i	CMD_ID_EVENT_TYPE_BULK_QUERY	
3	i	return_val	2
4	i	eventNextAreald	
5	i	eventNextTypeld	
6	i	numResults	
7	i	atEnd	
		0 to N Entries of Following	
1	i	eventAreald	
2	i	eventTypeld	
3	s	eventAreaName	RGB_EVENT_AREA_NAME_SZ
4	s	eventTypeName	RGB_EVENT_TYPE_NAME_SZ
5	i	eventCurSev	current severity
6	i	eventDftSev	default severity.
7	i	eventLastReportTime.tv_sec	
8	i	eventLastReportTime.tv_usec	
9	i	eventReportCnt	

mvp.getEventMsgBulkQuery

REQUEST MESSAGE FORMAT—mvp.getEventMsgBulkQuery

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	occStartId	The field is to set the start event ID to query.
2	i	maxResults	The field is to set the number of record count to be returned within a single request. VMG host currently returns as 15.

RESPONSE MESSAGE FORMAT—mvp.getEventMsgBulkQuery

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_EVENT_CMSG_BULK_QUERY
1	i	session_id	
2	i	return_value	
3	i	occNextId	
4	i	numResults	
5	i	atEnd	
		0 to N Entries of Following	
0	i	occlId	
1	i	eventAreaId	
2	i	eventAreaName	
3	i	eventTypeId	
4	i	eventTypeName	
5	i	eventTimeStamp.tv_sec	
6	i	eventTimeStamp.tv_usec	
7	i	eventSeverity	<ul style="list-style-type: none"> • Critical(2) • Major(3) • Minor(4) • Info(6)
8	i	eventCMsg	

mvp.setAlarmGlobalCfg



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.setAlarmGlobalCfg

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	fieldSelect	
2	i	alarmMaxEntCnt	

RESPONSE MESSAGE FORMAT—mvp.setAlarmGlobalCfg

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_ALARM_GLOBALS_CFG
1	i	session_id	
2	i	return_val	
3	i	alarmMaxEntCnt	

mvp.getAlarmGlobalQuery

REQUEST MESSAGE FORMAT—mvp.getAlarmGlobalQuery

Index	Type	Comments	Value Instances/Comments
0		gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.getAlarmGlobalQuery

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_ALARM_GLOBALS_QUERY
1	i	session_id	
2	i	return_value	
3	i	alarmMaxEntCnt	Max entry count
4	i	alarmCurEntCnt	Current Alarm count
5	i	alarmCurCritCnt	Current Critical Alarm count
6	i	alarmCurMajorCnt	Current Major Alarm count
7	i	alarmCurMinorCnt	Current Minor Alarm count
8	i	alarmCurInfoCnt	Current Info Alarm count
9	i	alarmCurHighest	Current highest alarm
10	i	alarmTotalEntCnt	Total Alarm Count
11	i	alarmPurgedEntCnt	Alarm Purged Count
12	i	alarmPurgedNoSpaceCnt	
13	i	alarmLastChgTime.tv_sec	
14	i	alarmLastChgTime.tv_usec	
15	i	alarmAllocFailedCnt	
16	i	alarmRaiseAgainCnt	
17	i	alarmClearNotRaisedCnt	
18	i	alarmAckAgainCnt	

mvp.getAlarmTypeBulkQuery



Note: *The method documented on this page is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getAlarmTypeBulkQuery

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	alarmStartAreaid	
2	i	alarmStartTypeId	
3	i	maxResults	

RESPONSE MESSAGE FORMAT—mvp.getAlarmTypeBulkQuery

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_ALARM_TYPE_BULK_QUERY
1	i	session_id	
2	i	return_val	
3	i	alarmNextAreaid	
4	l	alarmNextTypeId	
5	i	numResults	
6	i	atEnd	
		0 to N Entries of Following	
1	l	alarmAreaid	
2	i	alarmTypeId	
3	s	alarmAreaName	
4	s	alarmTypeName	
5	i	alarmCurSev	
6	i	alarmDftSev	
7	i	alarmLastRaiseTime.tv_sec	
8	i	alarmLastRaiseTime.tv_usec	
9	i	alarmRaiseCnt	

mvp.getAlarmActiveBulkQuery

REQUEST MESSAGE FORMAT—mvp.getAlarmActiveBulkQuery

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	occStartId	Start ID
2	i	maxResults	Specifies number of alarm entry

RESPONSE MESSAGE FORMAT—mvp.getAlarmActiveBulkQuery

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_ALARM_ACT_CMSG_BULK_QUERY
1	i	session_id	
2	i	return_value	
3	i	occNextId	
4	i	numResults	
5	i	atEnd	
		0 to N Entries of Following	
1	i	occlId	
2	i	eventOcclId	
3	i	alarmAreaId	
4	s	alarmAreaName	
5	i	alarmTypeId	
6	s	alarmTypeName	
7	i	alarmRaiseTimeStamp.tv_sec	
8	i	alarmRaiseTimeStamp.tv_usec	
9	i	alarmAckTimeStamp.tv_sec	
10	i	alarmAckTimeStamp.tv_usec	
11	i	alarmSeverity	<ul style="list-style-type: none"> • Critical(2) • Major(3) • Minor(4) • Info(6)
12	s	alarmCMsg	

mvp.getAlarmActiveOrdBulkQuery

REQUEST MESSAGE FORMAT—mvp.getAlarmActiveOrdBulkQuery

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ordStartNum	Starting number
2	i	maxResults	Specifies the max of alarm entries to be returned.

RESPONSE MESSAGE FORMAT—mvp.getAlarmActiveOrdBulkQuery

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_ALARM_ACT_CMSG_ORD_BULK_QUERY
1	i	session_id	
2	i	return_value	
3	s	error_msg	

RESPONSE MESSAGE FORMAT—mvp.getAlarmActiveOrdBulkQuery

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_ALARM_ACT_CMSG_ORD_BULK_QUERY
1	i	session_id	
2	i	return_value	
3	s	numResults	
4	i	atEnd	
		Num from 0 to Max	
0		occlId	
1		eventOcclId	
2		alarmAreaId	
3		alarmAreaName	
4		alarmTypeId	
5		alarmTypeName	
6		alarmRaiseTimeStamp.tv_sec	
7		alarmRaiseTimeStamp.tv_usec	
8		alarmAckTimeStamp.tv_sec	
9		alarmAckTimeStamp.tv_usec	
10		alarmSeverity	<ul style="list-style-type: none"> • Critical(2) • Major(3) • Minor(4) • Info(6)
11		alarmCMsg	

mvp.setAlarmAckAction

REQUEST MESSAGE FORMAT—mvp.setAlarmAckAction

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	occlId	occurrence ID of an active alarm

RESPONSE MESSAGE FORMAT—mvp.setAlarmAckAction

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_ALARM_ACK_ACTION
1	i	session_id	
2	i	return_value	
3	i	occlId	
4	i	alarmAreId	
5	i	alarmTypeId	
6	i	alarmRaiseTimeStamp.tv_sec	
7	i	alarmRaiseTimeStamp.tv_usec	
8	i	alarmAckTimeStamp.tv_sec	
9	i	alarmAckTimeStamp.tv_usec	

mvp.getSystemStatus

REQUEST MESSAGE FORMAT—mvp.geetSystemStatus

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.geetSystemStatus

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_ELM_SUMMARY_QUERY
1	i	session_id	
2	i	return_value	
3	i	eventTotalMsgCount	Total Event count
4	i	eventLastRecvTime.tv_sec	Last Event received
5	i	alarmCurEntCnt	Active Alarm Count
6	i	alarmCurCritCnt	Active Critical Alarm Count
7	i	alarmCurMajorCnt	Active Major Alarm Count
8	i	alarmCurMinorCnt	Active Minor Alarm Count
9	i	alarmCurInfoCnt	Active Info Alarm Count
10	i	occlIdCurHighest	Last Alarm ID
11	s	alarmMsg	Last Alarm Message associated with occlIdCurHighest
12	i	alarmTotalEntCnt	Total Alarm Count
13	i	alarmLastChgTime.tv_sec	Last Alarm Change Time
14	i	cardStatusChgCnt	Card Status Count
15	i	cardStatusLastChgTime.tv_sec	
16	i	redunStatusChgCnt	Redundant Status Count
17	i	redunStatusLastChgTime.tv_sec	
18	i	inputVideoStatusChgCnt	Input Video Status Count
19	i	inputVideoStatusLastChgTime.tv_sec	
20	i	outputVideoStatusChgCnt	Output Video Status Count
21	i	outputVideoStatusLastChgTime.tv_sec	
22	i	configChgCnt	Configuration Change Count
23	i	configLastChgTime.tv_sec	

mvp.getEvent

Get an event by index



Note: *The method documented on this page is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getEvent

Index	Type	Comments	Value Instances/Comments
0	i	event_index	Index of event

RESPONSE MESSAGE FORMAT—mvp.getEvent

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_GET_EVENT	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	
5	i	event_index	
6	s	event_desc	
7	i	event_type	regular alarm DPI alarm event
8	i	severity	Critical, major, minor
9	i	status	Clear, raised
10	i	source_slot	
11	i	source_port	
12	i	source_ts_index	
13	i	Source_pg_index	
14	i	timestamp	
15	i	clear_timestamp	
16	s	comment	
17	s	user	

mvp.creatEventFilter

Clear event filter.



Note: *The method documented on this page is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.creatEventFilter

Index	Type	Comments	Value Instances/Comments
0	i	event_type	regular alarm DPI alarm event -1 for all
1	i	severity	-1 for all
2	i	status	-1 for all
3	i	source_slot	-1 for all
4	i	sourc_port	-1 for all
5	i	source_ts_index	-1 for all
6	i	Source_pg_index	-1 for all

RESPONSE MESSAGE FORMAT—mvp.creatEventFilter

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_CREATE_FILTER	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	
5	i	filter_index	

mvp.deleteEventFilter

Delete event filter.



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.deleteEventFilter

Index	Type	Comments	Value Instances/Comments
0	i	filter_index	Index of event

RESPONSE MESSAGE FORMAT—mvp.deleteEventFilter

Index	Type	Key:Value	Comments
1	i	command_id	
2	i	session_id	
3	i	CMD_ID_DELETE_FILTER	
4	i	return_value	Refer to CMD_RESULT in common_ds.h
5	s	error_msg	

mvp.getEventCountByFilter

Delete event filter.



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getEventCountByFilter

Index	Type	Comments	Value Instances/Comments
0	i	filter_index	Index of event

RESPONSE MESSAGE FORMAT—mvp.getEventCountByFilter

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_FILTER_COUNT	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	
5	l	event_count	Total event

mvp.getEventBulk

Get event bulk



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getEventBulk

Index	Type	Comments	Value Instances/Comments
0	i	filter_index	Index of event
1	i	start_index	
2	i	End_index	

RESPONSE MESSAGE FORMAT—mvp.getEventBulk

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_FILTER_COUNT	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	
5	i	end	
6	i	n_entries	
			N_entries of getEvent

mvp.getEventByLocation

Clear event filter



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getEventByLocation

Index	Type	Comments	Value Instances/Comments
0	i	event_type	regular alarm, DPI alarm, event-1 for all
1	i	source_slot	-1 for all
2	i	sourc_port	-1 for all
3	i	source_ts_index	-1 for all
4	i	Source_pg_index	-1 for all

RESPONSE MESSAGE FORMAT—mvp.getEventByLocation

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_CREATE_FILTER	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	
5	i	highest_severity	
6	i	event_index	

mvp.getStreamError

This method has been available in the VMG since **Version 3.1.0** and higher, to retrieve all errors for Input/Output TS/Program/ES. This API defines a super set of all errors. The client will need to select the correct one to use (as demonstrated in the following examples)

Input Audio ES: tmux_cc_errors, pkts_drop

Input Video ES: a6_cc_errors, pkts_drop, decode_errors, pkt_loss, frame_loss, tei, dts_jumps, pcr_errors, a6_pcr_reset.

Output Audio ES: tmux_cc_errors, cb_overrun_cnt, pkts_drop, underflow_cnt

Output Video ES: idr_jumps, no_Idr, dts_jumps, pcr_errors, underflow_cnt, a6_pcr_reset, a6_cc_errors, decode_errors, stream_reset, pkt_loss, frame_loss, tei, pipe_latency, mal_Formed, idr_720p_miss, cb_overrun_cnt, pkts_drop

REQUEST MESSAGE FORMAT—mvp.getStreamError

Index	Type	Comments	Value Instances/Comments
1	i	gui_request_id	
2	i	ts_index	TS Index
3	i	pg_idx	Program Index
4	i	es_index	ES Index
5	i	Error type	Input(0), or Output(1)
6	i	Error Level	TS(2), Program(1), ES(0)
7	i	monitor	

RESPONSE MESSAGE FORMAT—mvp.getStreamError

Index	Type	Key:Value	Comments
1	i	command_id	CMD_ID_RPM_ALL_SESSION_BULK_QUERY
2	i	session_id	
3	i	return_value	Error code. Ok(0)
4	s	error_msg	
5	i	a6_cc_errors	Video CC Errors
6	i	dts_jumps	DTS Jumps
7	i	decode_errors	Decode Errors
8	i	tei	TEI Errors
9	i	frame_loss	Frame Loss
10	i	pkt_loss	Packet Loss
11	i	a6_pcr_reset	Video PCR Reset
12	i	tmux_pcr_reset	Audio PCR Reset
13	i	stream_reset	Stream Reset
14	i	pipe_latency	Pipe Latency
15	i	idr_jumps	IDR Jumps
16	i	mal_Formed	Malformed IDR
17	i	no_Idr	IDR Gap

RESPONSE MESSAGE FORMAT—mvp.getStreamError (Continued)

Index	Type	Key:Value	Comments
18	i	idr_720p_miss	720P Misalignment
19	i	incomingPkts	Incoming Packets
20	i	outgoingPkts	Outgoing Packets
21	i	decInBytes	Number of bytes decoded
22	i	encOutBytes	Number of bytes encoded
23	i	pcr_errors	PCR Errors
24	i	dts	DTS
25	i	tmux_cc_errors	Audio CC Errors
26	i	cb_overrun_cnt	CB Overrun
27	i	underflow_cnt	Video Underflow
28	i	dts_diff	dts_diff
29	i	dropped_ac	dropped_ac
30	i	pkts_drop	Packet Drop
31	i	ingress_pkt	ingress_pkt

Bitrate Monitor Messages

This chapter contains the XML-RPC message components for use with VMG bitrate monitoring functions.

In This Chapter:

- “mvp.setGroomingBitrateMonitor” on page 72.
- “mvp.getGroomingBitrateMonitorCount” on page 73.
- “mvp.getGroomingBitrateMonitorBulk” on page 74.
- “mvp.getBitRateStatus” on page 75.

mvp.setGroomingBitrateMonitor

Set bitrate monitor on and off.

REQUEST MESSAGE FORMAT—mvp.setGroomingBitrateMonitor

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	
2	i	on_off	

RESPONSE MESSAGE FORMAT—mvp.setGroomingBitrateMonitor

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_GROOMING_ MONITOR_CFG	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String

mvp.getGroomingBitrateMonitorCount

Get total number of program in bitrate monitor.

REQUEST MESSAGE FORMAT—mvp.getGroomingBitrateMonitorCount

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	

RESPONSE MESSAGE FORMAT—mvp.getGroomingBitrateMonitorCount

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_GROOMING_MONITOR_QUERY
1	i	session_id	
2	i	CMD_ID_GROOMING_MONITOR_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	
5	i	n_entries	

mvp.getGroomingBitrateMonitorBulk

Get bitrate monitor data

REQUEST MESSAGE FORMAT—mvp.getGroomingBitrateMonitorBulk

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	
2	i	pg_start	1-based entry number of the first to be returned
3	i	pg_last	1-based entry number of the last to be returned

RESPONSE MESSAGE FORMAT—mvp.getGroomingBitrateMonitorBulk

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_GROOMING_MONITOR_BULK_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	

RESPONSE MESSAGE FORMAT—mvp.getGroomingBitrateMonitorBulk

Index	Type	Key:Value	Comments
5	i	command_id	
6	i	session_id	
7	i	CMD_ID_GROOMING_MONITOR_BULK_QUERY	
8	i	return_value	Refer to CMD_RESULT in common_ds.h
9	s	error_msg	
10	i	n_entries	
N entries			
0	i	ts_index	The first grooming_mon_info.
1	i	pg_index	
2	i	on_off	
3	i	in_program_rate	
4	i	out_program_rate	
5	i	q_level	
6	i	cc_error_cnt	
7	s	grooming_mon_desc	

mvp.getBitRateStatus

Get bitrate Rate Status

REQUEST MESSAGE FORMAT—mvp.getBitRateStatus

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.getBitRateStatus

Index	Type	Key:Value	Comments
11	i	command_id	CMD_ID_GROOMING_MONITOR_QUERY
12	i	session_id	
13	i	CMD_ID_GROOMING_MONITOR_BULK_QUERY	
14	i	return_value	
15	s	error_msg	

Chassis Messages

This chapter contains the request and response messages pertinent to the VMG chassis.

In This Chapter:

- “mvp. getCardQuery,” next.
- “mvp. setCardAdmin” on page 79.
- “mvp. setCardReset” on page 79.
- “mvp. getChassisInfo” on page 80.
- “mvp. getInventoryInfo” on page 82.
- “mvp. setMgmtIp” on page 86.
- “mvp.getMgmtPhyIp” on page 88.
- “mvp.setMgmtDefaultGateway” on page 89.
- “mvp.getMgmtDefaultGateway” on page 90.
- “mvp. getVpmAndXPortGrpRed” on page 91.
- “mvp. getVpmSysRed” on page 92.
- “mvp.setSysLogServer” on page 94.
- “mvp.getSysLogServer” on page 95.
- “mvp.getTraceOutputControl” on page 96.
- “mvp.getAmpParam” on page 97.

mvp. getCardQuery

Get chassis card information.

REQUEST MESSAGE FORMAT—mvp.getCardQuery

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	slot_id	Active NPM card slot

RESPONSE MESSAGE FORMAT—mvp.getCardQuery

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_CARD_QUERY
1	i	session_id	
2	i	return_value	
3	s	error_msg	
4	i	index	
5	i	card_type	<ul style="list-style-type: none"> emCardType_unknown = 0 emCardType_npm = 1 emCardType_vpm = 2 emCardType_tcm = 3 emCardType_asm = 4 emCardType_amp = 5
6	i	presence	<ul style="list-style-type: none"> emModState_notPresent = 0 emModState_present = 1
7	i	admin_state	<ul style="list-style-type: none"> emAdminStEnable = 1 emAdminStDisable = 2
8	i	operation state	<ul style="list-style-type: none"> emOpStatusUnk = 0 emOpStatusUp = 1 emOpStatusDown = 2
9	i	card_active_state	Card state, as one of the following options: <ul style="list-style-type: none"> Unknown(0) Active(1) Standby(2)
10	i	redundant_state	Redundancy state, as one of the following options: <ul style="list-style-type: none"> Not_redundant(0) Redundant(1)
11	i	redundant_slot	-1 for not redundant
12	i	secondary_status	emCardSecondaryStatus_none=0

RESPONSE MESSAGE FORMAT—mvp.getCardQuery (Continued)

Index	Type	Key:Value	Comments
13	i	failure_reason	<ul style="list-style-type: none"> • emCardFailureRn_operator = 0 • emCardFailureRn_software = 1 • emCardFailureRn_hardware=2 • emCardFailureRn_switchOver=3 • emCardFailureRn_disabled=,4 • emCardFailureRn_reset=5 • emCardFailureRn_heartBeatLost=6 • emCardFailureRn_ppc_down=7 • emCardFailureRn_powerOff=8 • emCardFailureRn_cardRemoval=9 • emCardFailureRn_waiting_ppc_ready=10 • emCardFailureRn_initalState=11 • emCardFailureRn_dl_down=12 • emCardFailureRn_cardVersionOld=13 • emCardFailureRn_wrongAMPslot=14
14	s	temperature	
15	i	ledmask.backupLedmask	Card Backup LED bitmask
16	i	ledmask.faultLedmask	Card Fault LED bitmask
17	s	card.info.mfg	Card manufacturer
18	s	card.info.name	Card Name
19	s	card.info.part_num	Card Part number
20	s	card.info.mfg_date	Card manufacture date
21	s	card.info.serial_num	Card Serial Number
22	s	card_err_str	Failure Reason string corresponding to Failure_reason enumeration.

mvp. setCardAdmin

REQUEST MESSAGE FORMAT—mvp.setCardAdmin

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	index	
2	i	admin	Administrative state of the card, as one of the following options: <ul style="list-style-type: none"> emAdminStEnable(1) emAdminStDisable(2)

RESPONSE MESSAGE FORMAT—mvp.setCardAdmin

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_CARD_ADMIN_CFG
1	i	session_id	
2	s	err_str	
3	i	return_value	Refer to CMD_RESULT in common_ds.h

mvp. setCardReset

REQUEST MESSAGE FORMAT—mvp.setCardReset

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	index	

RESPONSE MESSAGE FORMAT—mvp.setCardReset

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_CARD_RESET_CFG
1	i	session_id	
2	s	err_str	
3		return_value	Refer to CMD_RESULT in common_ds.h

mvp.getChassisInfo

Get chassis information.

For fan status, note that VMG6 uses 2 FANs. VMG8 uses 4 FANs. VMG14 uses 3 FANs.

For power supply status, note that VMG6 and VMG14 have two (DC) Power Entry Modules (PEMs).

REQUEST MESSAGE FORMAT—mvp.getChassisInfo

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.getChassisInfo

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2		return_value	Refer to CMD_RESULT in common_ds.h
3	s	error_msg	
4	i	chassis_type	Type of VMG chassis, as one of the following options: <ul style="list-style-type: none"> vmg6 (11) vmg8 (12) vmg14 (14)
5	i	reset_reason	
6	i	fan1	Fan status as either present or not present. <ul style="list-style-type: none"> Not-present(0) Present(1)
7	i	fan2	Fan status as either present or not present. <ul style="list-style-type: none"> Not-present(0) Present(1)
8	i	fan3	Fan status as either present or not present. <ul style="list-style-type: none"> Not-present(0) Present(1)
9	i	power1	Power supply status as either present or not present. <ul style="list-style-type: none"> Not-present(0) Present(1)
10	i	power2	Power supply status as either present or not present. <ul style="list-style-type: none"> Not-present(0) Present(1)
11	i	SysCtrler1	Status of Shelf Controller Card as either present or not present. <ul style="list-style-type: none"> Not-present(0) Present(1)
12	i	SysCtrler2	Status of Shelf Controller Card as either present or not present. <ul style="list-style-type: none"> Not-present(0) Present(1)

RESPONSE MESSAGE FORMAT—mvp.getChassisInfo (Continued)

Index	Type	Key:Value	Comments
13	i	alarmedMask	
14	s	time	mm/dd/yy hh:mm:ss
15	s	time_zone	
16	s	sys_up_time	Chassis system uptime since last reboot of the VMG chassis. N days hh:mm:ss
17	s	active_sw_version	NPM has two flash memories. This field displays the running software version.
18	s	loaded_sw_version	NPM has two flash memories. This field displays loading software version.
19	s	serial_number	Serial number of the VMG chassis.
20	s	fan4	Version 2.5.0. The field returns as follows: <ul style="list-style-type: none"> • Not-present(0) • Present(1)
21	s	power3	Version 2.5.0. This field is represents AC power supply 1. The field returns as follows: <ul style="list-style-type: none"> • Not-present(0) • Present(1)
22	s	power4	Version 2.5.0. This field represents AC power supply 2. The field returns as follows: <ul style="list-style-type: none"> • Not-present(0) • Present(1)
23	s	power5	Version 2.5.0. This field represents AC power supply 3. The field returns as follows: <ul style="list-style-type: none"> • Not-present(0) • Present(1)
24	s	power6	Version 2.5.0. This field represents AC power supply 4. The field returns as follows: <ul style="list-style-type: none"> • Not-present(0) • Present(1)

mvp. getInventoryInfo

REQUEST MESSAGE FORMAT—mvp.getInventoryInfo

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.getInventoryInfo

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_INVENTORY_QUERY
1	i	session_id	
2	i	return_value	Refer to CMD_RESULT in common_ds.h
	s	error_msg	
	s	sysCtrler1.present	This field is system Shelf Controller Card 1 whether it is installed or not. The field returns as follows: <ul style="list-style-type: none"> • Not-present(0) • Present(1)
	s	sysCtrler1.uuid	
	s	sysCtrler1.mfg	The field displays MFG string. For example, Pigeon Point System
3	s	sysCtrler1.name	The field displays system shelf controller name. For example, Pigeon Point System Shelf Management.
4	s	sysCtrler1.part_num	The field displays part number of shelf Controller card.
5	s	sysCtrler1.mfg_date	The field displays MFG date.
6	s	sysCtrler1.serial_num	The field displays serial number for Shelf Controller Card.
7	s	sysCtrler1.SwVersion	The field displays serial number for Shelf Controller Software Version.
8	s	sysCtrler2.present	This field is system Shelf Controller Card 2 whether it is installed or not. The field returns as follows: <ul style="list-style-type: none"> • Not-present(0) • Present(1)
	i	sysCtrler2.uuid	
	s	sysCtrler2.mfg	The field displays MFG string. For example, Pigeon Point System
9	s	sysCtrler2.name	The field displays system shelf controller name. For example, Pigeon Point System Shelf Management.
10	s	sysCtrler2.part_num	The field displays part number of shelf Controller card.
11	s	sysCtrler2.mfg_date	The field displays MFG date.
12	s	sysCtrler1.serial_num	The field displays serial number for Shelf Controller Card.
13	s	sysCtrler1.SwVersion	The field displays serial number for Shelf Controller Software Version.

RESPONSE MESSAGE FORMAT—mvp.getInventoryInfo (Continued)

Index	Type	Key:Value	Comments
	s	power1.present	This field is Power Entry Module (PEM) 1 whether it is installed or not. PEM is normally represents as DC Power Supply. The field returns as follows: <ul style="list-style-type: none"> • Not-present(0) • Present(1)
15	i	power1.uuid	
	s	power1.mfg	The field displays PEM 1 MFG string.
	s	power1.name	The field displays PEM 1 name.
	s	power1.part_num	The field displays part number of PEM 1/
	s	power1.mfg_date	The field displays PEM 1 MFG date.
16	s	power1.serial_num	The field displays serial number for PEM 1.
17	s	power2.present	This field is Power Entry Module (PEM) 2 whether it is installed or not. PEM is normally represents as DC Power Supply. The field returns as follows: <ul style="list-style-type: none"> • Not-present(0) • Present(1)
	i	power2.uuid	
18	s	power2.mfg	The field displays PEM 2 MFG string.
19	s	power2.name	The field displays PEM 2 name.
20	s	power2.part_num	The field displays part number of PEM 2.
21	s	power2.mfg_date	The field displays PEM 2 MFG date.
22	s	power2.serial_num	The field displays serial number for PEM 2.
23	s	fan1.present	This field is FAN 1 whether it is installed or not. The field returns as follows: <ul style="list-style-type: none"> • Not-present(0) • Present(1)
	i	fan1.uuid	
	s	fan1.mfg	The field displays FAN 1 MFG string.
24	s	fan1.name	The field displays FAN name.
25	s	fan1.part_num	The field displays part number of FAN 1.
26	s	fan1.mfg_date	The field displays FAN 1 MFG date, if available.
27	s	fan1.serial_num	The field displays serial number for FAN 1.
28	s	fan2.present	This field is FAN 2 whether it is installed or not. The field returns as follows: <ul style="list-style-type: none"> • Not-present(0) • Present(1)
	i	fan2.uuid	
	s	fan2.mfg	The field displays FAN 2 MFG string.
	s	fan2.name	The field displays FAN 2 name.
	s	fan2.part_num	The field displays part number of FAN 2.
	s	fan2.mfg_date	The field displays FAN 2 MFG date.
	s	fan2.serial_num	The field displays serial number for FAN 2.

RESPONSE MESSAGE FORMAT—mvp.getInventoryInfo (Continued)

Index	Type	Key:Value	Comments
29	s	fan3.present	This field is FAN 3 whether it is installed or not. The field returns as follows: <ul style="list-style-type: none"> • Not-present(0) • Present(1)
30	i	fan3.uuid	
31	s	fan3.mfg	The field displays FAN 3 MFG string
32	s	fan3.name	The field displays FAN 3 name.
33	s	fan3.part_num	The field displays part number of FAN 3.
34	s	fan3.mfg_date	The field displays FAN 3 MFG date.
35	s	fan3.serial_num	
36	s	sap.present	The field returns as follows: <ul style="list-style-type: none"> • Not-present(0) • Present(1)
37	i	sap.uuid	
38	s	sap.mfg	
39	s	sap.name	
40	s	sap.part_num	
	s	sap.mfg_date	
	s	sap.serial_num	
41	s	backplane.present	The field returns as follows: <ul style="list-style-type: none"> • Not-present(0) • Present(1)
	i	backplane.uuid	
	s	backplane.mfg	
	s	backplane.name	
	s	backplane.part_num	
	s	backplane.mfg_date	
42	s	backplane.serial_num	
43	s	fan4.present	Version 2.5.0. This field informs if FAN 4 is installed or not. The field returns as follows: <ul style="list-style-type: none"> • Not-present(0) • Present(1)
44	i	fan4.uuid	Version 2.5.0
45	s	fan4.mfg	Version 2.5.0. The field displays FAN 4 MFG string.
46	s	fan4.name	Version 2.5.0. The field displays FAN 4 name.
47	s	fan4.part_num	Version 2.5.0. The field displays part number of FAN 4.
48	s	fan4.mfg_date	Version 2.5.0. The field displays FAN 4 MFG date.
49	s	fan4.serial_num	Version 2.5.0. The field displays serial number for FAN 4.

RESPONSE MESSAGE FORMAT—mvp.getInventoryInfo (Continued)

Index	Type	Key:Value	Comments
50	s	power4.present	Version 2.5.0 This field informs if AC Power Supply 1 is installed or not. The field returns as follows: <ul style="list-style-type: none"> • Not-present(0) • Present(1)
51	i	power4.uuid	Version 2.5.0
52	s	power4.mfg	Version 2.5.0. The field displays AC Power Supply 1 MFG string.
53	s	power4.name	Version 2.5.0. The field displays AC Power Supply 2 name.
54	s	power4.part_num	Version 2.5.0. The field displays part number of AC Power Supply 2.
55	s	power4.mfg_date	Version 2.5.0. The field displays AC Power Supply 2 MFG Date.
56	s	power4.serial_num	Version 2.5.0. The field displays serial number for AC Power Supply 2.
57	s	power5.present	Version 2.5.0. This field informs if AC Power Supply 3 is installed or not. The field returns as follows: <ul style="list-style-type: none"> • Not-present(0) • Present(1)
58	i	power5.uuid	Version 2.5.0
59	s	power5.mfg	Version 2.5.0. The field displays AC Power Supply 3 MFG string.
60	s	power5.name	Version 2.5.0. The field displays AC Power Supply 3 name.
61	s	power5.part_num	Version 2.5.0. The field displays part number of AC Power Supply 3.
62	s	power5.mfg_date	Version 2.5.0. The field displays AC Power Supply 3 MFG Date.
63	s	power5.serial_num	Version 2.5.0. The field displays serial number for AC Power Supply 3.
64	s	power6.present	Version 2.5.0. This field informs if AC Power Supply 4 is installed or not. The field returns as follows: <ul style="list-style-type: none"> • Not-present(0) • Present(1)
65	i	power6.uuid	Version 2.5.0
66	s	power6.mfg	Version 2.5.0. The field displays AC Power Supply 4 MFG string.
67	s	power6.name	Version 2.5.0. The field displays AC Power Supply 4 name.
68	s	power6.part_num	Version 2.5.0. The field displays part number of AC Power Supply 4.
69	s	power6.mfg_date	Version 2.5.0. The field displays AC Power Supply 4 MFG Date.
70	s	power6.serial_num	Version 2.5.0. The field displays serial number for AC Power Supply 4.

mvp.setMgmtIp

REQUEST MESSAGE FORMAT—mvp.setMgmtIp

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	s	sys_ip_addr	Virtual Mgmt IP Address
2	s	net_mask	Virtual Mgmt Subnet Mask
3	s	def_gw	Default Gateway
4	i	modMask	<pre> typedef enum { IM_IF_MODM_NONE = 0, IM_IF_MODM_IP_ADDR = (1 << 0), IM_IF_MODM_NET_MASK = (1 << 1), IM_IF_MODM_GW = (1 << 2), IM_IF_MODM_NAME = (1 << 3), IM_IF_MODM_STRICT_ARP = (1 << 4), /* Add new masks prior to this line */ IM_IF_MODM_MAX = (1 << 5), IM_IF_MODM_ALL = (IM_IF_MODM_MAX - 1) } imIfModMask_e; </pre>

RESPONSE MESSAGE FORMAT—mvp.setMgmtIp

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	s	error_msg	
3	i	return_value	

mvp. delMgmtIntf

REQUEST MESSAGE FORMAT—mvp.delMgmtIntf

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.delMgmtIntf

Index	Type	Key:Value	Comments
0	i	command_id	IM_CMD_MGMT_INTF_DEL
1	i	session_id	
2	s	error_msg	
3	i	return_value	

mvp. getMgmtIp

REQUEST MESSAGE FORMAT—mvp.getMgmtIp

Index	Type	Comments	Value Instances/Comments
none			

RESPONSE MESSAGE FORMAT—mvp.getMgmtIp

Index	Type	Key:Value	Comments
0	i	command_id	IM_CMD_MGMT_INTF_GET
1	i	session_id	
2	s	error_msg	
3	i	return_value	
4	s	system_ip_addr	System Virtual Mgmt IP Address
5	s	netMask	System Virutal Mgmt Subnet Mask
6	s	defGateway	Default Gateway
7	s	macAddr	System MAC Address

mvp.setMgmtPhyIp

REQUEST MESSAGE FORMAT—mvp.setMgmtPhyIp

Index	Type	Comments	Value Instances/Comments
1	i	gui_request_id	
2	s	sys_ip_addr	Physical Mgmt IP Address
3	s	net_mask	Physical Subnet Mask
4	s	def_gw	Physical Gateway
5	i	modMask	

RESPONSE MESSAGE FORMAT—mvp.setMgmtPhyIp

Index	Type	Key:Value	Comments
0	i	command_id	IM_CMD_CFG_MGMT_PHY_INTF
1	i	session_id	
2	s	error_msg	
3	i	return_value	

mvp.getMgmtPhyIp

REQUEST MESSAGE FORMAT—mvp.getMgmtPhyIp

Index	Type	Comments	Value Instances/Comments
none			

RESPONSE MESSAGE FORMAT—mvp.getMgmtPhyIp

Index	Type	Key:Value	Comments
0	i	command_id	IM_CMD_MGMT_PHY_INTF_GET
1	i	session_id	
2	s	error_msg	
3	i	return_value	
4	s	system_ip_addr	Physical Mgmt IP Address
5	s	netMask	Physical subnet Mask

mvp.setMgmtDefaultGateway

To set Management default Gateway

REQUEST MESSAGE FORMAT—mvp.setMgmtDefaultGateway

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	s	default_gw	The field is for default gateway.

RESPONSE MESSAGE FORMAT—mvp.setMgmtDefaultGateway

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	s	error_msg	Error message String
3	i	IM_CMD_SET_MGMT_DEF_GW	
4	i	return_value	Refer to CMD_RESULT in common_ds.h

mvp.getMgmtDefaultGateway

To get Management Default Gateway

REQUEST MESSAGE FORMAT—mvp.getMgmtDefaultGateway

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.getMgmtDefaultGateway

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	s	error_msg	Error message String
3	i	IM_CMD_GET_MGMT_DEF_GW	
4	i	return_value	Refer to CMD_RESULT in common_ds.h
5	s	mgmt_def_gw	The field represents as Management Default Gateway.

mvp. getVpmAndXPortGrpRed

REQUEST MESSAGE FORMAT—mvp.getVpmAndXPortGrpRed

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	card_id	

RESPONSE MESSAGE FORMAT—mvp.getVpmAndXPortGrpRed

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_VPM_PORT_GRP_RED
1	i	session_id	
2	s	error_msg	
3	i	return_value	
4	i	port_grp1_bw	Port Group 1 BW
5	i	port_grp2_bw	Port Group 2 BW
6	i	max_bw	Max BW: 200000
7	i	redundant	This field represent as redundant. The field returns as follows: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
8	i	port_grp1_enable	This field is to enable Port Group 1. The field returns as follows: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
9	i	port_grp2_enable	This field is to enable Port Group 2. The field returns as follows: <ul style="list-style-type: none"> • Disable(0) • Enable(1)

mvp.getVpmSysRed

REQUEST MESSAGE FORMAT—mvp.getVpmSysRed

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.getVpmSysRed

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_VPM_SYS_RED
1	i	session_id	
2	s	error_msg	
3	i	return_value	
4	i	port_grp1_bw	<p>VPM Port Group 1 Usage is to identify whether it has enough bandwidth to create more TS or not.</p> <p>If the port_grp1_enable = "1", the value returns as</p> <ul style="list-style-type: none"> • green(1) = < 70% • yellow (2) = > 70% • orange(3) = > 90% • red(4) = > 100% • otherwise notApplicable(0)
5	i	port_grp2_bw	<p>VPM Usage is to identify whether it has enough bandwidth to create more TS or not.</p> <p>If the port_grp2_enable = "1", the value returns as</p> <ul style="list-style-type: none"> • green(1) = < 70% • yellow (2) = > 70% • orange(3) = > 90% • red(4) = > 100% • otherwise notApplicable(0)
6	i	bwexceeded	
7	i	port_grp1_enable	<p>This field return Port Group 1 whether it is enabled or not. The field returns:</p> <ul style="list-style-type: none"> • Disable(0) • Enable(1)
8	i	port_grp2_enable	<p>This field return Port Group 2 whether it is enabled or not. The field returns:</p> <ul style="list-style-type: none"> • Disable(0) • Enable(1)

RESPONSE MESSAGE FORMAT—mvp.getVpmSysRed (Continued)

Index	Type	Key:Value	Comments
9	i	port_grp1_xbw	<p>TCM Port Group 1 Usage is to identify whether it has enough bandwidth to create more TS or not.</p> <p>If the port_grp1_enable = "1", the value returns as</p> <ul style="list-style-type: none"> • green(1) = < 70% • yellow (2) = > 70% • orange(3) = > 90% • red(4) = > 100% • otherwise notApplicable(0)
10	i	port_grp2_xbw	<p>TCM Usage is to identify whether it has enough bandwidth to create more TS or not.</p> <p>If the port_grp2_enable = "1", the value returns as</p> <ul style="list-style-type: none"> • green(1) = < 70% • yellow (2) = > 70% • orange(3) = > 90% • red(4) = > 100% • otherwise notApplicable(0)
11	i	xcodeexceeded	

mvp.setSysLogServer

REQUEST MESSAGE FORMAT—mvp.setSysLogServer

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	s	syslog_ip_addr	SYSLOG IP Address
2	i	portId	SYSLOG Port. The standard SYSLOG port is 514.
3	i	fieldSelect	<pre>// identification of fields (2**value is mask bit) SYSLOG2_FILE_SIZE = 0, // field syslogLogfileSize SYSLOG2_FILE_CNT = 1, // field syslogLogFileCnt SYSLOG2_DEBUG_OUTPUT = 2, // field syslogDebugOutput SYSLOG2_SRV_IPADDR = 3, // field syslogSrvAddr SYSLOG2_SRV_UDPPORT = 4 // field syslogSrvUDPPort } SYSLOG2_GLOBAL_FIELD_ENUM;</pre>

RESPONSE MESSAGE FORMAT—mvp.setSysLogServer

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_SYSLOG_GLOBALS_CFG
1	i	session_id	
2	i	return_value	

mvp.getSysLogServer

REQUEST MESSAGE FORMAT—mvp.getSysLogServer

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.getSysLogServer

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_SYSLOG_GLOBALS_QUERY
1	i	session_id	
2	i	return_value	
3	i	syslogSrvCnt	
		multiple of 1 to syslogSrvCnt	
4	i	syslogSrvIndex	SYSLOG Index
5	s	syslog_ip_addr	SYSLOG IP Address
6	i	syslog_port_id	SYSLOG Port

mvp.getTraceOutputControl

This method is for use with VMG version 2.5.1 and higher, to display the RGB trace output logging to destination location.

REQUEST MESSAGE FORMAT—mvp.getTraceOutputControl

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.getTraceOutputControl

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_TRACE_OUTPUT_CONTROL_QUERY
1	i	session_id	
2	s	error_msg	
3	i	output_control	Version 2.5.1. The output control value returns the system trace output logging to destination location. The trace output logging can be routed to either stderr, syslog, console, or all. The return values are: <ul style="list-style-type: none"> • stderr(1) • syslog(2) • console(4) • all(7)
4	i	highest_log_level	Version 2.5.1. The value returns the highest trace output logging from all areas. The return values are: <ul style="list-style-type: none"> • off(0) • Error(1) • Warn(2) • Info(3) • Dbg(4) • Dbg2(5)
5	s	Error_str	Error string
6	i	return_value	

mvp.getAmpParam

Get AMP software version.

REQUEST MESSAGE FORMAT—mvp.getAmpParam

Index	Type	Comments	Value Instances/Comments
10	i	gui_request_id	
11	i	slot_number	

RESPONSE MESSAGE FORMAT—mvp.getAmpParam

Index	Type	Key:Value	Comments
50	i	command_id	
51	i	session_id	
52	i	CMD_ID_AMP_PARM_QUERY	
53	i	return_value	Refer to CMD_RESULT in common_ds.h
54	i	amp_sw_version	AMP software version

GigE Configuration Messages

This chapter contains the xml-rpc request and response message components for use with VMG GigE configuration,

In This Chapter:

- “mvp.getEthportMirror” on page 99.
- “mvp.setEthportMirror” on page 99.
- “mvp.getEthportAutonegCfg” on page 100.
- “mvp.setEthportAutonegCfg” on page 100.

mvp.getEthportMirror



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getEthportMirror

Index	Type	Comments	Value Instances/Comments
0	I	slot_id	
1	I	port_id	

RESPONSE MESSAGE FORMAT—mvp.getEthportMirror

Index	Type	Key:Value	Comments
0	I	command_id	
1	I	session_id	
2	I	CMD_ID_ETH_PORT_MIRROR_QUERY	
3	I	return_value	
4	S	error_msg	
5	I	mirrored_slot_id	
6	I	mirrored_port_id	

mvp.setEthportMirror



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.setEthportMirror

Index	Type	Comments	Value Instances/Comments
0	I	slot_id	
1	I	port_id	
2	I	mirrored_slot_id	
3	I	mirrored_port_id	

RESPONSE MESSAGE FORMAT—mvp.setEthportMirror

Index	Type	Key:Value	Comments
0	I	command_id	
1	I	session_id	
2	I	CMD_ID_ETH_PORT_MIRROR_CFG	
3	I	return_value	
4	S	error_msg	

mvp. getEthportAutonegCfg



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getEthportAutonegCfg

Index	Type	Comments	Value Instances/Comments
0	I	slot_id	
1	I	port_id	

RESPONSE MESSAGE FORMAT—mvp.getEthportAutonegCfg

Index	Type	Key:Value	Comments
0	I	command_id	
1	I	session_id	
2	I	CMD_ID_ETH_PORT_ AUTONEG_QUERY	
3	I	return_value	
4	S	error_msg	
5	I	autoneg	

mvp.setEthportAutonegCfg



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.setEthportAutonegCfg

Index	Type	Comments	Value Instances/Comments
0	I	slot_id	
1	I	port_id	
2	I	autoneg	

RESPONSE MESSAGE FORMAT—mvp.setEthportAutonegCfg

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_ETH_PORT_ AUTONEG_CFG	
3	i	return_value	
4	s	error_msg	

Global Configuration Messages

This chapter contains the XML-RPC message components for use with VMG global configuration functions.

In This Chapter:

- “mvp.getNtpParam” on page 102.
- “mvp.setNtpParam” on page 102.
- “mvp.setSystemParam” on page 103.
- “mvp.getInputGroup” on page 104.
- “mvp.setInputGroup” on page 105.
- “mvp.getInterfaceCount” on page 106.
- “mvp. getInterfaceQuery” on page 107.
- “mvp.getInterfacesBulk” on page 108.
- “mvp.getEthPort” on page 109.
- “mvp.setEthPortCfg” on page 111.
- “mvp.setInterfaceCfg” on page 112.
- “mvp.delIntf” on page 113.
- “mvp. setVirtualMacCfg” on page 113.
- “mvp. getVirtualMac” on page 114.
- “mvp.getEthPortIpCfg” on page 114.
- “mvp. setEthPortIpCfg” on page 115.
- “mvp.getSnmpGlobals” on page 116.
- “mvp.setSnmpGlobals” on page 117.

mvp.getNtpParam

REQUEST MESSAGE FORMAT—mvp.getNtpParam

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.getNtpParam

Index	Type	Key:Value	Comments
0	i	Command_id	
1	i	session_id	
2	s	error_string	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	ntp_ip_0	NTP IP Address 1 (IPv4 format)
5	s	ntp_ip_1	NTP IP Address 2 (IPv4 format)
6	s	ntp_ip_2	NTP IP Address 3 (IPv4 format)
7	s	ntp_ip_3	NTP IP Address 4 (IPv4 format)
8	s	ntp_ip_4	NTP IP Address 5 (IPv4 format)
9	s	active_ntp_address	Active NTP Address

mvp.setNtpParam

REQUEST MESSAGE FORMAT—mvp.setNtpParam

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	s	ntp_ip_0	NTP IP Address 1 (IPv4 format)
2	s	ntp_ip_1	NTP IP Address 2 (IPv4 format)
3	s	ntp_ip_2	NTP IP Address 3 (IPv4 format)
4	s	ntp_ip_3	NTP IP Address 4 (IPv4 format)
5	s	ntp_ip_4	NTP IP Address 5 (IPv4 format)

RESPONSE MESSAGE FORMAT—mvp.setNtpParam

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_NTP_PARAM_CFG
1	i	session_id	
2	i	return_value	Refer to CMD_RESULT in common_ds.h
3	s	error_string	

mvp.setSystemParam

REQUEST MESSAGE FORMAT—mvp.setSystemParam

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	s	systemTime	
2	s	time_zone	
3	i	sys_param_bit	bit mask for system parameters <ul style="list-style-type: none"> • em_sys_param_time_change 0x01 • em_sys_param_time_zone_change 0x02

RESPONSE MESSAGE FORMAT—mvp.setSystemParam

Index	Type	Key:Value	Comments
0	I	command_id	CMD_ID_SYS_PARAM_CFG
1	i	session_id	
2	s	error_msg	
3	i	return_value	Refer to CMD_RESULT in common_ds.h

mvp.getInputGroup

REQUEST MESSAGE FORMAT—mvp.getInputGroup

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.getInputGroup

Index	Type	Key:Value	Comments
0	i	command_id	IM_CMD_SYS_INPUT_GRP_GET
1	i	session_id	
2	i	IM_CMD_SYS_INPUT_GRP_GET	
3	i	admin_8x1gige	The field is to view GIGE Grooming group. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
4	i	admin_10gige1	The field is to view 10GIGE 1 Grooming group. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
5	s	admin_10gige2	The field is to view 10GIGE 2 Grooming group. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)

mvp.setInputGroup

Set input group

REQUEST MESSAGE FORMAT—mvp.setInputGroup

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	admin_8x1gige	Either enable or disable GIGE Grooming group. By default the 1GIGE is enabled. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
2	i	admin_10gige1	The field is to enable 10GIGE Grooming group. By default the 10GIGE1 is disabled. Both admin_10gige1 and admin_10gige2 cannot be enabled at the same time. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
3	i	admin_10gige2	The field is to enable 10GIGE Grooming group. By default the 10GIGE2 is disabled. Both admin_10gige1 and admin_10gige2 cannot be enabled at the same time. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
4	i	portGrp	Use imPortGrpMask_e (imlf.h)

RESPONSE MESSAGE FORMAT—mvp.setInputGroup

Index	Type	Key:Value	Comments
0	i	command_id	IM_CMD_CFG_SYS_INPUT_GRP
1	i	session_id	
2	s	error_msg	
3	i	IM_CMD_CFG_SYS_INPUT_GRP	
4	i	return_value	

mvp.getInterfaceCount

REQUEST MESSAGE FORMAT—mvp.getInterfaceCount

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	group_slot_id	Slot number
2	i	group_port_id	Port number

RESPONSE MESSAGE FORMAT—mvp.getInterfaceCount

Index	Type	Key:Value	Comments
0	i	command_id	IM_CMD_INTF_GET_COUNT
1	i	session_id	
2	s	error_msg	
3	i	IM_CMD_INTF_GET_COUNT	
4	s	return_value	
5	i	ifCount	Return interface count

mvp. getInterfaceQuery

REQUEST MESSAGE FORMAT—mvp.getInterfaceQuery

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	group_slot_id	Slot number
2	i	group_port_id	Port number

RESPONSE MESSAGE FORMAT—mvp.getInterfaceQuery

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	s	error_msg	
3	i	IM_CMD_INTF_GET	
4	i	return_value	
5	i	interface_id	Interface ID is bitmask
6	s	ip_address	This field identifies the virtual Interface IP Address
7	s	net_mask	Interface subnet mask
8	s	default_gateway	Interface gateway
9	s	name	name
10	i	admin_status	Admin status <ul style="list-style-type: none"> • Disable(0) • Enable(1)
11	i	opSts	Operational status <ul style="list-style-type: none"> • Disable(0) • Enable(1)
12	i	rsnCode	
13	i	strictArp	ARP field is whether the ARP is enabled or not. <ul style="list-style-type: none"> • Disable(0) • Enable(1)
14	s	lip_address	Version 3.0.0_NPM1. This field identifies the physical IP Address on slot 1 or slot 7.
15	s	hip_address	Version 3.0.0_NPM1. This field identifies the physical IP Address on slot 2 or slot 8.

mvp.getInterfacesBulk



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getInterfacesBulk

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	group_slot_id	
2	i	group_port_id	
3	i	startIdx	
4	i	ifCnt	

RESPONSE MESSAGE FORMAT—mvp.getInterfacesBulk

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	s	error_msg	
3	i	IM_CMD_INTF_GET_BULK	
4	i	return_value	
5	i	ifCnt	
6	i	done	
	i	iplfIdx_t	
		0 to N entries of Following	
1	i	interface_id	
2	s	ip_Address	
3	s	net_mask	
4	s	default_gateway	
5	i	adminSatus	
6	i	op_status	
7	i	rsnCode	
8	s	lip_address	Version 3.0.0_NPM1. This field identifies the physical IP Address on slot 1 or slot 7.
9	s	hip_address	Version 3.0.0_NPM1. This field identifies the physical IP Address on slot 2 or slot 8.

mvp.getEthPort

REQUEST MESSAGE FORMAT—mvp.getEthPort

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	group_slot_id	Slot number
2	i	group_port_id	Port number

RESPONSE MESSAGE FORMAT—mvp.getEthPort

Index	Type	Key:Value	Comments
5	i	command_id	IM_CMD_PORT_GET
6	i	session_id	
7	s	error_msg	
8	i	IM_CMD_PORT_GET	
9	s	return_value	
10	s	mac_address	Physical MAC Address
11	i	slotType	Slot Type
12	i	slot	Slot number
13	i	portType	Port Type 1GIGE(1)
14	i	port	Port number
15	i	autoNeg	Auto Negotiation <ul style="list-style-type: none"> • Disable(0) • Enable(1)
16	i	opSts	Oper Status <ul style="list-style-type: none"> • Disable(0) • Enable(1)
17	i	adminStatus	Admin Status <ul style="list-style-type: none"> • Disable(0) • Enable(1)
18	s	virMac	Virtual MAC Address
19	i	phyMacAct	Not used
20	i	portMirror	VMG 2.4.0 -1 = no port mirror Identify the mirrored port (destination port).The mirrored port is only valid for 1GIGE. The port is zero based.

RESPONSE MESSAGE FORMAT—mvp.getEthPort (Continued)

Index	Type	Key:Value	Comments
21	i	Loopback	VMG 2.4.0. AMP Loopback is identified whether the interface is used as AMP loopback or not. The AMP loopback requires to have AMP card and ENET cable connected from AMP Card Port {1,2} to NPM Card Port {7,8} This loopback field is only applied on port 7 and port 8. Valid options are: <ul style="list-style-type: none">• Disable(0)• Enable(1)
22	i	port_mode	Version 3.1. Not in use for NPM1
23	i	linkStateRed	Version 3.1. Valid options are: <ul style="list-style-type: none">• Disable(0)• Enable(1)

mvp.setEthPortCfg

REQUEST MESSAGE FORMAT—mvp.setEthPortCfg

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	group_slot_id	Slot number
2	i	group_port_id	Port number
3	i	autoneg	Auto negotiation can be able to enable/disable. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
4	i	portMirror	VMG 2.4.0. Identify the mirrored port (destination port).The mirrored port is only valid for 1GIGE. The port is zero based. -1 = no port mirror
5	i	Loopback	VMG 2.4.0 <ul style="list-style-type: none"> • AMP Loopback is identified whether the interface is used as AMP loopback or not. • The AMP loopback requires to have AMP card and ENET cable connected from AMP Card Port {1,2} to NPM Card Port {7,8} • This loopback field is only applied on port 7 and port 8. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
6	i	modMask	VMG 2.4.0 Use imPortModMask_e (imlf.h)
7	i	port_mode	Version 3.1. Not in use for NPM1
8	i	linkStateRed	Version 3.1. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)

RESPONSE MESSAGE FORMAT—mvp.setEthPortCfg

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	s	error_msg	
3	i	IM_CMD_CFG_PORT	
4	s	return_value	

mvp.setInterfaceCfg

REQUEST MESSAGE FORMAT—mvp.setInterfaceCfg

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	group_slot_id	Slot number
2	i	group_port_id	Port number
3	i	modMask	<pre>typedef enum { IM_IF_MODM_NONE = 0, IM_IF_MODM_IP_ADDR = (1 << 0), IM_IF_MODM_NET_MASK = (1 << 1), IM_IF_MODM_GW = (1 << 2), IM_IF_MODM_NAME = (1 << 3), IM_IF_MODM_STRICT_ARP = (1 << 4), /* Add new masks prior to this line */ IM_IF_MODM_MAX = (1 << 5), IM_IF_MODM_ALL = (IM_IF_MODM_MAX - 1) } imIfModMask_e;</pre>
4	s	ipAddr	Interface IP Address (To Modify, change the Params)
5	s	netMask	Interface subnet mask
6	s	defGateway	default gateway
7	s	name	Interface name
8	i	strictArp	ARP field can be enabled or disabled.
9	s	lip_address	Version 3.0.0_NPM1. Identifies the physical IP Address on slot 1 or slot 7.
10	s	hip_address	Version 3.0.0_NPM1. Identifies the physical IP Address on slot 2 or slot 8.

RESPONSE MESSAGE FORMAT—mvp.setInterfaceCfg

Index	Type	Key:Value	Comments
0	i	command_id	IM_CMD_CFG_INTF
1	i	session_id	
2	s	error_msg	
3	i	IM_CMD_CFG_INTF	
4	s	return_value	
5	i	ipIdx	Return interface Index

mvp.delIntf

REQUEST MESSAGE FORMAT—mvp.delIntf

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	group_slot_id	Slot number
2	i	group_port_id	Port number

RESPONSE MESSAGE FORMAT—mvp.delIntf

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	s	error_msg	
3	i	IM_CMD_DEL_INTF	
4	s	return_value	
5	i	ipIfIdx	

mvp.setVirtualMacCfg

REQUEST MESSAGE FORMAT—mvp.setVirtualMacCfg

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	portGrp	
2	i	virMacAdmin	Virtual MAC Address Admin. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
3	i	modType	Use imVirMacMask_e (imlf.h)
4	s	virtualMac	Virtual MAC Address

RESPONSE MESSAGE FORMAT—mvp.setVirtualMacCfg

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	s	error_msg	
3	i	IM_CMD_CFG_VIR_MAC	
4	s	return_value	
5	i	command_id	

mvp. getVirtualMac

REQUEST MESSAGE FORMAT—mvp.getVirtualMac

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.getVirtualMac

Index	Type	Key:Value	Comments
0	i	command_id	IM_CMD_GET_VIR_MAC
1	i	session_id	
2	s	error_msg	
3	i	return_value	
4	i	admin_8x1	Virtual MAC admin for 1GIGE group.
5	i	admin10_1	Virtual MAC admin for 10GIGE 1 group.
6	i	admin10_2	Virtual MAC admin for 10GIGE 2 group.
7	s	mac_8x1	Virtual MAC Address for 1GIGE group
8	s	mac10_1	Virtual MAC Address for 10GIGE 1 group
9	s	mac10_2	Virtual MAC Address for 10GIGE 2 group

mvp.getEthPortIpCfg



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getEthPortIpCfg

Index	Type	Comments	Value Instances/Comments
1	i	slot_id	

RESPONSE MESSAGE FORMAT—mvp.getEthPortIpCfg

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_ETH_PORT_IP_QUERY	
3	i	return_value	
4	s	error_msg	
5	s	ip_addr	
6	s	net_mask	
7	s	gw	
8	s	mac	
9	i	status	

mvp.setEthPortIpCfg



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.setEthPortIpCfg

Index	Type	Comments	Value Instances/Comments
0	i	slot_id	
1	i	port_group_type	
2	i	group_port_id	
3	s	ip_addr	
4	s	net_mask	
5	s	gw	

RESPONSE MESSAGE FORMAT—mvp.setEthPortIpCfg

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_ETH_PORT_IP_CFG	
3	i	return_value	
4	s	error_msg	

mvp.getSnmpGlobals



Note: *This method is not currently supported. System Information has been moved to [mvp.getChassisInfo](#).*

REQUEST MESSAGE FORMAT—mvp.getSnmpGlobals

Index	Type	Comments	Value Instances/Comments
None			

RESPONSE MESSAGE FORMAT—mvp.getSnmpGlobals

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_SNMP_GLOBALS_QUERY	
3	i	return_value	
4	s	error_msg	
5	s	snmpSysName	
6	s	snmpSysLocation	
7	s	snmpSysContact	
8	i	snmpEnableAuthNotifies	
9	s	snmpSysServices	
10	s	snmpSysObjectID	
11	s	snmpSysDescr	
12	s	snmpEngineId	

mvp.setSnmpGlobals



Note: *This method is not currently supported. System Information has been moved to `mvp.setSystemParam`.*

REQUEST MESSAGE FORMAT—mvp.setSnmpGlobals

Index	Type	Comments	Value Instances/Comments
0	S	snmoSysName	
1	S	snmpSysLocation	
3	S	snmpSysContact	
4	I	snmpEnableAuthNotifies	

RESPONSE MESSAGE FORMAT—mvp.setSnmpGlobals

Index	Type	Key:Value	Comments
0	I	command_id	
1	I	session_id	
2	I	CMD_ID_SNMP_GLOBALS_CFG	
3	I	return_value	
4	S	error_msg	

Grooming Messages

This chapter contains the XML-RPC message components for use with various VMG grooming operations.

In This Chapter:

- “mvp.setGroomingConfig” on page 119.
- “mvp.deleteGroomingConfig” on page 121.
- “mvp. getGroomingConfig” on page 122.
- “mvp. getGroomingBulk” on page 125.

mvp.setGroomingConfig

Create new grooming session

REQUEST MESSAGE FORMAT—mvp.setGroomingConfig

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	groom_info.gm_index	
2	i	groom_info.mode	
3	i	groom_info.input_ts_index	Input TS Index
4	i	groom_info.input_pg_index	Input Program Index
5	i	groom_info.output_ts_index	Output TS Index
6	i	groom_info.output_pg_index	Output Program Index
7	i	groom_info.backup_input_ts_index	Grooming Program Redundancy Backup Input TS Index
8	i	groom_info.backup_input_pg_index	Grooming Program Redundancy Backup Input Program Index
9	i	groom_info.program_name_sync	Enable or disable Follow-Input Program name. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
10	i	groom_info.scte_35_cue_forward	Enable or disable SCTE-35 CUE Forward. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
11	i	groom_info.video_bitrate_min	This field is only used when it is transrating Grooming. If it is transcoding grooming, set video Bitrate Min to -1.
12	i	groom_info.video_bitrate_max	This field is only used when it is transrating Grooming. If it is transcoding grooming, set video Bitrate Max to 0.
13	i	groom_info.qos_level	<ul style="list-style-type: none"> • If VPM (transrating) TS, qos level can be configured between 0-16. • If TCM (transcoding) TS, qos level is 18.
14	i	groom_info.start_time	For scheduling grooming. Valid options are: <ul style="list-style-type: none"> • now(0) • utc_time
15	i	groom_info.end_time	For scheduling grooming. Valid options are: <ul style="list-style-type: none"> • forever(0) • utc_time
16	s	groom_info.es_exclusion	This field is to exclude ES PID. Provide a listing of Exclude PIDs in string using space as separator. For example, "pid1 pid2"
17	i	groom_info.modFiles	Bit Mask

REQUEST MESSAGE FORMAT—mvp.setGroomingConfig (Continued)

Index	Type	Comments	Value Instances/Comments
18	i	groom_info.type	<ul style="list-style-type: none"> • create(0) • modify(1)
19	i	groom_info.backup_specified	Identifies whether it is grooming Redundancy or not. This field will overwrite Input Program Redundancy. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
20		groom_info.manRecovery	Identifies whether it is manual recovery or not. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
21	i	Stay_unreferenced (This Parameter is for Pid Management)	1 indicates that the output program groomed using unreferenced input PID stays unreferenced and 0 indicates that it becomes a referenced pid.
22	i	num_audio_es	Version 2.5.1. Specifies the number of Audio to be configured.
23	i	num_data_es	Version 2.5.1. Specifies the number of data to be configured.
24	i	sdtOption	<ul style="list-style-type: none"> • None(0) • Pass-through(1) • Generate(2)
25	s	sdtServiceName	SDT Service Name

Bit Mask:

```

{
    VCM_OUT_GRM_MASK_CUE_FWD=1,
    VCM_OUT_GRM_MASK_MIN_RATE=2,
    VCM_OUT_GRM_MASK_MAX_RATE=4,
    VCM_OUT_GRM_MASK_QOS_LEVEL=8,
    VCM_OUT_GRM_MASK_START_TIME=16,
    VCM_OUT_GRM_MASK_END_TIME=32,
    VCM_OUT_GRM_MASK_ES_EXCL=64,
    VCM_OUT_GRM_MASK_STAY_UNREF=128,

    VCM_OUT_GRM_MASK_ALL = (VCM_OUT_GRM_MASK_STAY_UNREF << 1) - 1
};

```

RESPONSE MESSAGE FORMAT—mvp.setGroomingConfig

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_GROOMING_CONFIG	
3	i	return_value	Refer to CMD_RESULT in common_ds.h

RESPONSE MESSAGE FORMAT—mvp.setGroomingConfig (Continued)

Index	Type	Key:Value	Comments
4	s	error_msg	Error message String
5	i	gm_index	Program index

mvp.deleteGroomingConfig

Delete grooming

REQUEST MESSAGE FORMAT—mvp.deleteGroomingConfig

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	gm_index	Grooming index
2	i	ts_index	TS Index
3	i	is_user_created	bool :- TRUE, FALSE

RESPONSE MESSAGE FORMAT—mvp.deleteGroomingConfig

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_GROOMING_DELETE
1	i	session_id	
2	i	CMD_ID_GROOMING_DELETE	
3	i	return_value	
4	s	error_msg	

mvp. getGroomingConfig

Get grooming session information given a grooming index.

REQUEST MESSAGE FORMAT—mvp.getGroomingConfig

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	gm_index	Grooming index
2	i	ts_index	

RESPONSE MESSAGE FORMAT—mvp.getGroomingConfig

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_GROOMING_QUERY
1	i	session_id	
2	i	CMD_ID_GROOMING_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String
5	i	mask	
6	i	gm_index	Groom Index
7	i	mode	
8	i	input_ts_index	Input TS Index
9	i	input_pg_index	Input Program Index
10	i	output_ts_index	Output TS Index
11	i	output_pg_index	Output Program Index
12	i	backup_specified	The field is to identify whether it has backup Grooming Program Redundancy. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
13	i	backup_input_ts_index	If backup_specified is enabled, this field is for input TS Index.
14	i	backup_input_pg_number	If backup_specified is enabled, this field is for input Program Number.
15	i	auto_recovery	If backup_specified is enabled, this field is to view the Backup failover to be Automatic recovery or Manual recovery. Valid options are: <ul style="list-style-type: none"> • AutoRecovery(0) • ManualRecovery(1)
16	i	backup_port_id	If backup_specified is enabled, this field is for input GIGE Port number.
17	i	program_name_sync	This field is to perform Follow-Input Program name or not. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)

RESPONSE MESSAGE FORMAT—mvp.getGroomingConfig (Continued)

Index	Type	Key:Value	Comments
18	i	scte_35_cue_forward	The field is to perform SCTE-35 CUE Forward. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
19	i	video_bitrate_min	This field is only used when it is transrating Grooming. If it is transcoding grooming, set video Bitrate Min to -1.
20	i	video_bitrate_max	This field is only used when it is transrating Grooming. If it is transcoding grooming, set video Bitrate Max to 0.
21	i	qos_level	If VPM (transrating) TS, qos level can be configured between 0-16. If TCM (transcoding) TS, qos level is 18.
22	i	start_time	This field is to perform scheduling grooming. Valid options are: <ul style="list-style-type: none"> • now(0) • utc_time
23	i	end_time	This field is to perform scheduling grooming. Valid options are: <ul style="list-style-type: none"> • forever(0) • utc_time
24	s	es_exclusion	This field is to exclude ES PID. Provide a listing of Exclude PIDs in string using space as separator. For example, "pid1 pid2"
25	i	state	This field is to identify the state of Backup Input Program Redundancy. Valid options are: <ul style="list-style-type: none"> • active(0) • backup(1) • expired(2) • scheduled(3)
26	i	backup_input_pg_id	If backup_specified is enabled, this field is for input Program Index.
27	i	is_user_created	
28	i	Stay_unreferenced (This Parameter is for Pid Management)	1 indicates that the output program groomed using unreferenced input PID stays unreferenced and 0 indicates that it becomes a referenced pid.
29	i	redundancy_source	This field is to specific whether the backup Program Redundancy is from Input Program or Grooming. Valid options are: <ul style="list-style-type: none"> • Input_Program(1) • Grooming(2)

RESPONSE MESSAGE FORMAT—mvp.getGroomingConfig (Continued)

Index	Type	Key:Value	Comments
30	i	num_audio_es	Version 2.5.1. The field is to return the number of Audio Elementary Streams that are configured in the system.
31	i	num_data_es	Version 2.5.1. The field is to return the number of Data Elementary Streams that are configured in the system.
32	i	SDTOption	<ul style="list-style-type: none">• None(0)• Pass-through(1)• Generate(2)
33	i	SDTServiceName	<ul style="list-style-type: none">• SDT Service Name

mvp. getGroomingBulk

Get grooming bulk sessions

REQUEST MESSAGE FORMAT—mvp.getGroomingBulk

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	Ts index
2	i	pg_index	Program index
3	i	gm_start_index	Grooming start index
4	i	gm_end_index	Grooming end index

RESPONSE MESSAGE FORMAT—mvp.getGroomingBulk

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_GROOMING_BULK_QUERY
1	i	session_id	
2	i	CMD_ID_GROOMING_BULK_Q UERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String

RESPONSE MESSAGE FORMAT—mvp.getGroomingBulk

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_GROOMING_BULK_QUERY
1	i	session_id	
2	i	CMD_ID_GROOMING_BULK_Q UERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String
5	i	end	
6	i	n_entries	
N entries			
0	i	mask	
1	i	gm_index	
2	i	mode	
3	i	input_ts_index	Input TS Index
4	i	input_pg_index	Input Program Index
5	i	output_ts_index	Output TS Index
6	i	output_pg_index	Output Program Index
7	i	backup_specified	The field is to identify whether it has backup Grooming Program Redundancy. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)

RESPONSE MESSAGE FORMAT—mvp.getGroomingBulk (Continued)

Index	Type	Key:Value	Comments
8	i	backup_input_ts_index	If backup_specified is enabled, this field is for input TS Index.
9	i	backup_input_pg_number	If backup_specified is enabled, this field is for input Program number.
10	i	auto_recovery	If backup_specified is enabled, this field is to view the Backup failover to be Automatic recovery or Manual recovery. Valid options are: <ul style="list-style-type: none"> • AutoRecovery(0) • ManualRecovery(1)
11	i	backup_port_id	If backup_specified is enabled, this field is for backup GIGE Port ID.
12	i	program_name_sync	This field is to perform Follow-Input Program name or not. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
13	i	scte_35_cue_forward	The field is to perform SCTE-35 CUE Forward. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
14	i	video_bitrate_min	This field is only used when it is transrating Grooming. If it is transcoding grooming, set video Bitrate Min to -1.
15	i	video_bitrate_max	This field is only used when it is transrating Grooming. If it is transcoding grooming, set video Bitrate Max to 0.
16	i	qos_level	If VPM (transrating) TS, qos level can be configured between 0-16. If TCM (transcoding) TS, qos level is 18.
17	i	start_time	This field is to perform scheduling grooming. Valid options are: <ul style="list-style-type: none"> • now(0) • utc_time
18	i	end_time	This field is to perform scheduling grooming. Valid options are: <ul style="list-style-type: none"> • forever(0) • utc_time
19	s	es_exclusion	This field is to exclude ES PID. Provide a listing of Exclude PIDs in string using space as separator. For example, "pid1 pid2"

RESPONSE MESSAGE FORMAT—mvp.getGroomingBulk (Continued)

Index	Type	Key:Value	Comments
20	i	state	This field is to identify the state of Backup Input Program Redundancy. Valid options are: <ul style="list-style-type: none"> • active(0) • backup(1) • expired(2) • scheduled(3)
21	i	backup_input_pg_id	If backup_specified is enabled, this field is for input Program Index.
22	i	is_user_created	
23	i	stay_unreferenced	1 indicates that the output program groomed using unreferenced input PID stays unreferenced and 0 indicates that it becomes a referenced pid.
24	i	redundancy_source	This field is to specific whether the backup Program Redundancy is from Input Program or Grooming. Valid options are: <ul style="list-style-type: none"> • Input_Program(1) • Grooming(2)
25	i	input_pg_number	Program number
26	i	num_audio_es	Version 2.5.1. The field is to return the number of Audio Elementary Streams that are configured in the system.
27	i	num_data_es	Version 2.5.1. The field is to return the number of Data Elementary Streams that are configured in the system.
i28	i	SDTOption	<ul style="list-style-type: none"> • None(0) • Pass-through(1) • Generate(2)
29	s	SDTServiceName	SDT Service Name

Input ES Messages

This chapter contains the XML-RPC message components for use with VMG elementary stream operations.

In This Chapter:

- “mvp.setInputEs” on page 129.
- “mvp.deleteInputEs” on page 130.
- “mvp.getInputEs” on page 131.
- “mvp. getInputEsBulk” on page 132.

mvp.setInputEs

Create new input ES

REQUEST MESSAGE FORMAT—mvp.setInputEs

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	TS Index
2	i	pg_index	Program Index
3	i	es_index	ES Index
4	i	es_type	<ul style="list-style-type: none"> • VIDEO = 1 • AUDIO = 2, • OTHER = 3 • DATA = 6
5	i	stream_type	<ul style="list-style-type: none"> • MPEG1_VIDEO = 0x01 • MPEG2_VIDEO = 0x02 • H264_VIDEO = 0x1B • SCTE_VIDEO = 0x80 • AC3_AUDIO = 0x81 • AAC_AUDIO = 0x0F • MPEG1_AUDIO = 0x03 • MPEG2_AUDIO = 0x04 • DATA = 0x82
6	i	pid	ES PID
7	i	type	<ul style="list-style-type: none"> • Create(0) • Modify (1)
8	i	modFileds	Bit Mask user_mod_lang_code_str(2)
9	s	user_mod_lang_code_str	Modified language code (3 letters) Or empty for not modified

RESPONSE MESSAGE FORMAT—mvp.setInputEs

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_INPUT_ES_CONFIG	
3	i	return_value	Refer to CMD_RESULT in common_def.h
4	i	es_index	ES index
5	s	error_msg	Error message String

mvp.deleteInputEs

Delete input ES

REQUEST MESSAGE FORMAT—mvp.deleteInputEs

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	Input TS index
2	i	pg_index	Input Pg index
3	i	es_index	Input ES index

RESPONSE MESSAGE FORMAT—mvp.deleteInputEs

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_INPUT_ES_DELETE
1	i	session_id	
2	i	CMD_ID_INPUT_ES_DELETE	
3	i	return_value	Refer to CMD_RESULT in common_def.h
4	s	error_msg	

mvp.getInputEs

Get input ES information given a es_index.

REQUEST MESSAGE FORMAT—mvp.getInputEs

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	Input TS index
2	i	pg_index	Input Pg index
3	i	es_index	Input ES index

RESPONSE MESSAGE FORMAT—mvp.getInputEs

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_INPUT_ES_QUERY
1	i	session_id	
2	i	CMD_ID_INPUT_ES_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_def.h
	s	err_str	
	i	mask	
	i	es_index	ES Index
3	i	es_type	<ul style="list-style-type: none"> • VIDEO = 1 • AUDIO = 2 • OTHER = 3 • DATA = 6
4	i	stream_type	<ul style="list-style-type: none"> • MPEG1_VIDEO = 0x01 • MPEG2_VIDEO = 0x02 • H264_VIDEO = 0x1B • SCTE_VIDEO = 0x80 • AC3_AUDIO = 0x81 • AAC_AUDIO = 0x0F • MPEG1_AUDIO = 0x03 • MPEG2_AUDIO = 0x04 • DATA = 0x82
5	i	pid	
6	i	pmt_order	
7	i	scrambled	This field is to view scrambled whether it is enabled or disabled.
8	i	sync	
9	s	stream_name	Name of ES
10	i	is_user_created	Created by user?
11.	s	org_lang_code_str	VMG 3.1.0
12	s	user_mod_lang_code_str	VMG 3.1.0

mvp. getInputEsBulk

Get input ES bulk sessions



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getInputEsBulk

Index	Type	Comments	Value Instances/Comments
0	i	ts_index	Ts index
1	i	pg_index	Program index
2	i	es_index	esIndex from which the next is expected. In other words, this was the es index last returned. For first request, this will be 0.

RESPONSE MESSAGE FORMAT—mvp.getInputEsBulk

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_INPUTPUT_ES_BULK_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_def.h
4	s	error_msg	Error message String
5	i	num_entries	Num of entries being returned
6	i	last_es_index	Last es index being returned. For next request start from this value.
7	i	es_type	<ul style="list-style-type: none"> • VIDEO = 1 • AUDIO = 2 • OTHER = 3 • DATA = 6
8	i	stream_type	<ul style="list-style-type: none"> • MPEG1_VIDEO = 0x01 • MPEG2_VIDEO = 0x02 • H264_VIDEO = 0x1B • SCTE_VIDEO = 0x80, • AC3_AUDIO = 0x81 • AAC_AUDIO = 0x0F • MPEG1_AUDIO = 0x03 • MPEG2_AUDIO = 0x04 • DATA = 0x82
9	i	pid	
10	i	Pmt_order	
11	i	scrambled	This field is to view scrambled whether it is enabled or disabled.
12	i	sync	
13	s	Es_name	Name of ES
14	i	Is_user_created	Created by user?



Note: *The entries from 7 – 14 will be repeated number of times based on num_entries.*

Output ES Messages

This chapter contains the XML-RPC message components for use with VMG output elementary operations.

In This Chapter:

- “mvp.setOutputEs” on page 134.
- “mvp.deleteOutputEs” on page 135.
- “mvp.getOutputEs” on page 136.
- “mvp. getOutputEsBulk” on page 137.

mvp.setOutputEs

Create new output elementary stream,

REQUEST MESSAGE FORMAT—mvp.setOutputEs

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	
2	i	pg_index	
3	i	es_index	
4	i	es_type	<ul style="list-style-type: none"> VIDEO = 1 AUDIO = 2 OTHER = 3 DATA = 6
5	i	stream_type	<ul style="list-style-type: none"> MPEG1_VIDEO = 0x01 AC3_AUDIO = 0x81 MPEG2_VIDEO = 0x02 AAC_AUDIO = 0x0F H264_VIDEO = 0x1B MPEG1_AUDIO = 0x03 SCTE_VIDEO = 0x80 MPEG2_AUDIO = 0x04 If es_type = DATA, stream type can be between 5-255
6	i	pid	•
7	i	pmt_order	1 based pmt order
8	s	lang_code	Language code. Only applicable if es_type is Audio
9	s	sub_stream_type	Either “Teletext” or “SubTitle”, only for data es_type and stream type 0x6.
10	i	cmd.type	<ul style="list-style-type: none"> Create(0) Modify(1)
11	i	modFileds	Bit Mask

Bit Mask:

```
{
    OUT_ES_MASK_TYPE=1,
    OUT_ES_MASK_STREAM_TYPE =2,
    OUT_ES_MASK_PID=4,
    OUT_ES_MASK_NAME=8,
    OUT_ES_MASK_ORDER=16,
    OUT_ES_MASK_LANG_CODE=32,
    OUT_ES_MASK_STREAM_SUB_TYPE=64,
    OUT_ES_MASK_ALL = OUT_ES_MASK_STREAM_SUB_TYPE << 1) - 1
};
```

RESPONSE MESSAGE FORMAT—mvp.setOutputEs

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_OUTPUT_ES_CONFIG
1	i	session_id	

RESPONSE MESSAGE FORMAT—mvp.setOutputEs

Index	Type	Key:Value	Comments
2	i	CMD_ID_OUTPUT_ES_CONFIG	
3	i	return_value	Refer to CMD_RESULT in common_def.h
4	i	es_index	ES index
5	s	error_msg	Error message String

mvp.deleteOutputEs

Delete output ES

REQUEST MESSAGE FORMAT—mvp.deleteOutputEs

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	output TS index
2	i	pg_index	output Pg index
3	i	es_index	output ES index

RESPONSE MESSAGE FORMAT—mvp.deleteOutputEs

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_OUTPUT_ES_DELETE
1	i	session_id	
2	i	CMD_ID_OUTPUT_ES_DELETE	
3	i	return_value	Refer to CMD_RESULT in common_def.h
4	s	error_msg	

mvp.getOutputEs

Get input ES information given an es_index.

REQUEST MESSAGE FORMAT—mvp.getOutputEs

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	output TS index
2	i	pg_index	output Pg index
3	i	es_index	output ES index

RESPONSE MESSAGE FORMAT—mvp.getOutputEs

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_OUTPUT_ES_QUERY
1	i	session_id	
2	i	CMD_ID_OUTPUT_ES_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_def.h
4	i	mask	
5	i	es_index	
6	i	es_type	<ul style="list-style-type: none"> • VIDEO = 1 • AUDIO = 2 • OTHER = 3 • DATA = 6
7	i	stream_type	<ul style="list-style-type: none"> • MPEG1_VIDEO = 0x01 • MPEG2_VIDEO = 0x02 • H264_VIDEO = 0x1B • SCTE_VIDEO = 0x80 • AC3_AUDIO = 0x81 • AAC_AUDIO = 0x0F • MPEG1_AUDIO = 0x03 • MPEG2_AUDIO = 0x04 • If es_type == DATA, stream type can be between 5-255
8	i	pid	
9	i	pmt_order	1 based pmt order
10	i	scrambled	This field is to view scrambled whether it is enabled or disabled.
11	i	sync	Language code. Only applicable if es_type is Audio
12	i	lang_code	Can have value "Teletext" or "SubTitle". Is only applicable if es_type is data and stream_type is 0x6.
13	i	stream_sub_type	Is this created by user?
14	i	is_user_created	Is the PID reserved by user?
15	i	is_pid_reserved	Language code. Only applicable if es_type is Audio
16	i	is_order_modified	Is PMT order modified by user?
17	s	stream_name	Name of stream name

mvp. getOutputEsBulk

Get output ES bulk sessions

REQUEST MESSAGE FORMAT—mvp.getOutputEsBulk

Index	Type	Comments	Value Instances/Comments
0		ts_index	Ts index
1		pg_index	Program index
2		es_index	esIndex from which the next is expected. In other words, this was the es index last returned. For first request, this will be 0.

RESPONSE MESSAGE FORMAT—mvp.getOutputEsBulk

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_OUTPUT_ES_BULK_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_def.h
4	s	error_msg	Error message String
5	i	num_entries	Num of entries beng returned
6	i	last_es_index	Last es index being returned. For next request start from this value.
7	i	es_type	<ul style="list-style-type: none"> VIDEO = 1 AUDIO = 2 OTHER = 3 DATA = 6
8	i	stream_type	<ul style="list-style-type: none"> MPEG1_VIDEO = 0x01 MPEG2_VIDEO = 0x02 H264_VIDEO = 0x1B SCTE_VIDEO = 0x80 If es_type == DATA, stream type can be between 5-255 AC3_AUDIO = 0x81 AAC_AUDIO = 0x0F MPEG1_AUDIO = 0x03 MPEG2_AUDIO = 0x04
9	i	pid	
10	s	Es_name	Name of ES
11	i	pmt_order	1 based pmt order
12	i	Stream_sub_type	Can have value "Teletext" or "SubTitle". Is only applicable if es_type is data and stream_type is 0x6.
13	i	Lang_code	Language code, only applicable for es_type = Audio



Note: The entries from 7 – 13 will be repeated number of times based on num_entries.

Input Program Messages

This chapter contains the XML-RPC message components for use with VMG input program operations.

In This Chapter:

- “mvp.setInProgram” on page 139.
- “mvp.deleteInProgram” on page 140.
- “mvp.getInProgram” on page 141.
- “mvp.getInputSi” on page 143.
- “mvp.getInputSiBulk” on page 144.
- “mvp.getInProgramBulk” on page 145.
- “mvp.getInputProgramModifiedLanguageBulk” on page 147.

mvp.setInProgram

Update input program base on ts index.

REQUEST MESSAGE FORMAT—mvp.setInProgram

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	TS index
2	i	program_index	Program index
3	i	program_number	Program number > 65535
4	i	backup_ts_index	Backup TS Index
5	i	backup_pg_index	Backup Program Index
6	i	backup_specified	The field is to identify whether it has backup Input Program Redundancy. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
7	i	man_rec	This field is to identify whether it is manual recovery or not. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
8	s	program_name	
9	i	modFileds	Bit Mask Bit Mask is defined as <pre> { VCM_IN_PG_MASK_NUM=1, VCM_ IN_PG_MASK_NAME =2, VCM_IN_PG_MASK_ALL = (VCM_ IN_PG_MASK_NAME << 1) - 1 }; </pre>
10	i	type	

RESPONSE MESSAGE FORMAT—mvp.setInProgram

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_INPUT_PROGRAM_CONFIG
1	i	session_id	
2	i	CMD_ID_INPUT_PROGRAM_CONFIG	
3	i	return_value	Refer to CMD_RESULT in common_def.h
4	s	error_msg	Error message String
5	i	pg_index	Program index

mvp.deleteInProgram

Delete input program is based on ts index and pg_index.

REQUEST MESSAGE FORMAT—mvp.deleteInProgram

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	TS index
2	i	pg_index	PG index

RESPONSE MESSAGE FORMAT—mvp.deleteInProgram

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_INPUT_PROGRAM_DELETE
1	i	session_id	
2	i	CMD_ID_INPUT_PROGRAM_DELETE	
3	i	return_value	Refer to CMD_RESULT in common_def.h
4	s	error_msg	Error message String

mvp. getInProgram

Get input program operation.

REQUEST MESSAGE FORMAT—mvp.getInProgram

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	TS index
2	i	pg_index	Program index

RESPONSE MESSAGE FORMAT—mvp.getInProgram

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_INPUT_PROGRAM_QUERY
1	i	session_id	
2	i	CMD_ID_INPUT_PROGRAM_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String
5	i	program_index	Program Index
6	i	program_number	Program Number
7	s	program_name	Program Name
8	i	number_of_es	Number of ES
9	i	pmt_pid	PMT PID
10	i	pcr_pid	PCR PID
11	i	scrambled	Identify whether the scrambled is enabled or not.
12	i	bitrate	
13	i	major_channel	Only valid if TS Type is ATSC
14	i	minor_channel	Only valid if TS Type is ATSC
15	i	bitrate_on_off	
16	i	cc_err_cnt	
17	i	cc_err_duration	
18	i	si_tables	Number of si table
19	i	sig_level	This field is to view the Program status whether it is disabled(0) or enabled(1). Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
20	i	is_ghost_prog	1 if created by user and 0 if internally learnt and created by the system This field is to identify whether the ghost program is created by user or is created by system. Valid options are: <ul style="list-style-type: none"> • createdBySystem(0) • createdByUser(1)

RESPONSE MESSAGE FORMAT—mvp.getInProgram (Continued)

Index	Type	Key:Value	Comments
21	i	backup_specified	The field is to identify whether it has backup Input Program Redundancy. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
22	i	backup_ts_index	If backup_specified is enabled, this field is for input TS Index.
23	i	backup_pg_index	If backup_specified is enabled, this field is for input Program Index.
24	i	auto_rec	If backup_specified is enabled, this field is to view the Backup failover to be Automatic recovery or Manual recovery. <ul style="list-style-type: none"> • AutoRecovery(0) • ManualRecovery(1)
25	i	backup_pg_num	If backup_specified is enabled, this field is for input Program number.
26	i	backup_port_id	If backup_specified is enabled, this field is for GIGE Port Index.
27	i	has_still_pic	
28	i	backup_pg_status	Version 2.4.0. If back up_specified is enabled, this field presents as Program Redundancy Active Status, to identify whether the Primary or Backup Program is in active state. Valid options are: <ul style="list-style-type: none"> • none(0) • primaryProgramActive(1) • backupProgramActive(2)

mvp.getInputSi

Get system information table for input ts and input program.

REQUEST MESSAGE FORMAT—mvp.getInputSi

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	TS index
2	i	pg_index	Program index. If index = -1, it should return TS level system information table

RESPONSE MESSAGE FORMAT—mvp.getInputSi

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_INPUT_SI_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String
5	i	number_of_si	

mvp.getInputSiBulk

REQUEST MESSAGE FORMAT—mvp.getInputSiBulk

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	
2	i	pg_index	
3	i	si_start	1 based entry number of the first to be returned
4	i	si_last	1 based entry number of the last to be returned

RESPONSE MESSAGE FORMAT—mvp.getInputSiBulk

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_INPUT_SI_BULK_QUERY
1	i	session_id :	
2	i	CMD_ID_INPUT_SI_BULK_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String

RESPONSE MESSAGE FORMAT—mvp.getInputSiBulk

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_INPUT_SI_BULK_QUERY
1	i	session_id	
2	i	CMD_ID_INPUT_SI_BULK_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String
5	i	end	1: end of table; 0: otherwise
6	i	n_entries	
The n_entries the program_si_info			
0	i	ts_index	The first program_si_info.
1	i	pg_index	
2	i	si_index	
3	i	si_table_id	
4	i	si_table_id_extensioin	
5	i	si_packet_id	
6	i	si_table_status	
7	s	si_desc	

mvp.getInProgramBulk

Get output program element stream information.

REQUEST MESSAGE FORMAT—mvp.getInProgramBulk

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	
2	i	pg_index	
3	i	es_start	1 based entry number of the first to be returned
4	i	es_last	1 based entry number of the last to be returned

RESPONSE MESSAGE FORMAT—mvp.getInProgramBulk

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_INPUT_PROGRAM_BULK_QUERY
1	i	session_id	
2	i	CMD_ID_INPUT_PROGRAM_BULK_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String

RESPONSE MESSAGE FORMATmvp.getInProgramBulk

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_INPUT_PROGRAM_BULK_QUERY
1	i	session_id	
2	i	CMD_ID_INPUT_PROGRAM_BULK_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String
5	i	end	<ul style="list-style-type: none"> 1: end of table 0: otherwise
6	i	number_of_es	
The n_entries th program_si_info			
0	i	es_info.es_index	
1	i	es_info.es_type	
2	i	es_info.stream_type	
3	i	es_info.pid	
4	i	es_info.pmt_order	
5	i	es_info.scrambled	
6	i	es_info.sync	
7	s	es_info.stream_name	
8	i	es_info.in.use	

RESPONSE MESSAGE FORMATmvp.getInProgramBulk (Continued)

Index	Type	Key:Value	Comments
9	s	org_lang_code_str	Version 3.1. Original language code
10	s	user_mod_lang_code_str	Version 3.1. New language code; empty for no new language code

mvp.getInputProgramModifiedLanguageBulk

Get modified language for all audio elementary streams in the input program.

REQUEST MESSAGE FORMAT—mvp.getInputProgramModifiedlanguageBulk

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	TS index
2	i	pg_index	Program index. If index = -1, the TS level system information table should be returned.

RESPONSE MESSAGE FORMAT—mvp.getInputProgramModifiedlanguageBulk

Index	Type	Key:Value	Comments
6	i	command_id	
7	i	session_id	
8	i	CMD_ID_INPUT_PROGRAM_BULK_QUERY	
9	i	return_value	Refer to CMD_RESULT in common_ds.h.
10	s	error_msg	Error message string.
11	i	number_of_es	Quantity of elementary streams.
N_entries: program_si_info			
0	i	es_info.es_type	
1	i	es_info.es_type	
2	i	es_info.stream_type	
3	i	es_info.pid	
4	s	user_mod_lang_code_str	

mvp.resetStreamError

Reset input elementary stream error statistics.

REQUEST MESSAGE FORMAT—mvp.resetStreamError

Index	Type	Comments	Value Instances/Comments
3	i	guig_request_id	
4	i	ts_index	TX index
5	i	pg_index	Program index. If index = -1, the TS level system information table should be returned.
6	i	es_index	Elementary stream index.
7	i	errorType	Type of error.
8	i	errorLevel	Level of error.

RESPONSE MESSAGE FORMAT—mvp.getInputProgramModifiedlanguageBulk

Index	Type	Key:Value	Comments
12	i	command_id	
13	i	session_id	
14	i	CMD_ID_STREAM_ERROR_RESET	
15	i	return_value	Refer to CMD_RESULT in common_ds.h
16	s	error_msg	Error message string.

mvp.getStreamError

Get ES error statistic, for input or output elementary stream.

REQUEST MESSAGE FORMAT—mvp.getStreamError

Index	Type	Comments	Value Instances/Comments
3	i	gui_request_id	
4	i	ts_index	TS index
5	i	pg_index	Program index. If index = -1, it should return TS level system information table
6	i	es_index	Element Stream Index
7	i	errorType	Error Type
8	i	errorLevel	Error Level
9	i	monitor	Real time monitor flag

RESPONSE MESSAGE FORMAT—mvp.getStreamError

Index	Type	Key:Value	Comments
17	i	command_id	
18	i	session_id	
19	i	CMD_ID_STREAM_ERROR_QUERY	
20	i	return_value	Refer to CMD_RESULT in common_ds.h
21	d	a6_cc_errors	Error message String
22	d	dts_jumps	
23	d	decode_errors	
24	d	tei	
25	d	frame_loss	
26	d	pkt_loss	
27	d	a6_pcr_reset	
28	d	stream_reset	
29	d	pipe_latency	
30	d	idr_jumps	
31	d	mal_Formed	
32	d	no_Idr	
33	d	idr_720p_miss	
34	d	incomingPkts	
35	d	outgoingPkts	
36	d	declnBytes	
37	d	encOutBytes	
38	d	pcr_errors	
39	d	dts	
40	d	tmux_cc_errors	
41	d	cb_overrun_cnt	
42	d	underflow_cnt	

RESPONSE MESSAGE FORMAT—mvp.getStreamError

Index	Type	Key:Value	Comments
43	d	dts_diff	
44	d	dropped_ac	
45	d	pkts_drop	
46	d	ingress_pkt	
47	d	tmux_pcr_reset	
48	d	mux_video_or_audio_loss	
49	d	input_ts_missing	

Output Program Messages

This chapter contains the XML-RPC message components for use with VMG output program operations.

In This Chapter:

- “mvp.setOutProgram” on page 152.
- “mvp.getOutProgram” on page 164.
- “mvp.getOutputTsBulk” on page 172.
- “Mvp.setOutputPgEsOrderConfig” on page 180.
- “mvp.getOutputSi” on page 181.
- “mvp.getOutputSiBulk” on page 182.
- “mvp.getOutProgramBulk” on page 183.

mvp.setOutProgram

REQUEST MESSAGE FORMAT—mvp.setOutProgram

	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	TS Index
2	i	program_index	Program Index
3	i	program_number	Program Number
4	i	pmt_pid	PMT PID
5	i	eas_enable	
6	i	scte_30_35_convert	Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
7	i	major_channel	Only valid if TS Type is ATSC
8	i	minor_channel	Only valid if TS Type is ATSC
9	s	program_name	
10	i	dpiFlag	<ul style="list-style-type: none"> • Disable(0) • Enable(1)
11	i	pgSubFlag	<ul style="list-style-type: none"> • TRUE = enable • FALSE = disable
12	i	modFields	Bit Mask
13	i	type	<ul style="list-style-type: none"> • Create(0) • Modify(1)
14	i	program_info.transCodeCfg. encoding_format	<ul style="list-style-type: none"> • Follow_input(1) • mpeg_2(2) • h.264(3)
15	i	program_info.transCodeCfg. resolution_class	The field is to view resolution class. Valid options are: <ul style="list-style-type: none"> • SD(1) • HD(2) • PIP(3)
16	i	program_info.transCodeCfg. gop_structure	Follow_input(1)
17	i	program_info.transCodeCfg. gop_m_value	The valid of GOP M is based on Encoding Format and resolution class. <ul style="list-style-type: none"> • MPEG2, HD, the valid is 1, 2, 3 • MPEG2, HD, the valid is 1,2,3 • H.264, HD, the valid is 1,2,3,4,8 • H.264, SD, the valid is 1,2,3,4,8 • H.264, PIP, the valid is 1,4
18	i	program_info.transCodeCfg. gop_n_value	<ul style="list-style-type: none"> • If MPEG2, the GOP N is multiple of GPM. • If H.264, GOP M={1,2,3}, the GOP N is 36. • If H.264, GOP M={4,8}, the GOP N is 32. • If PIP SD, GOP M={1,4}, then the GOP N=32

REQUEST MESSAGE FORMAT—mvp.setOutProgram (Continued)

	Type	Comments	Value Instances/Comments
19	i	program_info.transCodeCfg. idr_interval	<ul style="list-style-type: none"> • If MPEG2, the idr_interval is 0. • If H.264, GOP M={1,2,3} GOP N=36, then the idr_interval range is multiple of GOP N. • If H.264, GOP M=4, GOP N=36, then the idr_interval range between 0 and 96. • If H.264, GOP M 8, then the idr_interval is 96. • If PIP, GOP M={1,4}, GOP N=32, then the idr_interval is 0.
20	i	program_info.transCodeCfg. resolution	•
21	i	program_info.transCodeCfg. pip_enable	Deprecated field
22	i	program_info.transCodeCfg. bit_rate_type	•
23	i	program_info.transCodeCfg. max_rate	Configure Video bitrate in Mbps. For example, set max_rate to 15000000 as 15 Mbps. <ul style="list-style-type: none"> • If MPEG2 and HD encoding, then Video Bitrate is between 8Mbps and 20Mbps. • If MPEG2 and SD encoding, then Video Bitrate is between 1 Mbps and 7 Mbps. • If H.264 and HD encoding, then Video Bitrate is between 2 mbps and 15 mbps. • If H264 and SD encoding, then Video Bitrate is between .5 Mbps and 7Mbps. • If H264 and PIP encoding, then Video Bitrate is between .1 Mbps and 1Mbps.
24	i	program_info.transCodeCfg. mctf_noise_reduction	<ul style="list-style-type: none"> • Disable(0) • Enable(1)
25	i	program_info.transCodeCfg. telecine	Disable(0)/enable(1)
26	i	program_info.transCodeCfg. close_caption	<ul style="list-style-type: none"> • SCTE_20=1 • SCTE_21=2 • SCTE_20_and_21=3

REQUEST MESSAGE FORMAT—mvp.setOutProgram (Continued)

	Type	Comments	Value Instances/Comments
27	i	cfgHRes	Horizontal Resolution Configure Horizontal Resolution for Output Program <ul style="list-style-type: none"> If MPEG2 and HD encoding, then <ul style="list-style-type: none"> H:Full_res(0) H:1920_RES_3/4_D1(7) H:1440_RES_D1(8) H:1280_3/4_D1(10) H:960_RES_D1(9) If MPEG2 and SD, then <ul style="list-style-type: none"> H:Full D-1_Follow_input(1) H:VGA_3/4_720(5) H: 3 / 4 D-1_720P_Half(4) H: 2/3 D-1_720P_Full(3) H: 1/2 D-1_1080i_Full(2) If PIP, then it is zero.
28	i	cfgVRes	Vertical Resolution <ul style="list-style-type: none"> If SD, it is zero. If PIP, it is zero
29	i	rpm_resolution	Version 2.2.2 and higher. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1). <div> <div>1280x720(4)</div> <div>480x272(14)</div> </div> <div> <div>960x720(5)</div> <div>416x240(15)</div> </div> <div> <div>960x540(28)</div> <div>352x240(37)</div> </div> <div> <div>864x486(29)</div> <div>320x240(12)</div> </div> <div> <div>848x480(17)</div> <div>320x180(31)</div> </div> <div> <div>640x480(9)</div> <div>320x176(18)</div> </div> <div> <div>640x360(30)</div> <div>192x192(26)</div> </div> <div> <div>624x352(13)</div> <div>128x96(19)</div> </div> <div> <div>480x368(10)</div> <div>96x96(20)</div> </div> <div> <div>480x320(11)</div> </div> If Input Resolution Class is “SD”, the available resolution is defined as follows: <div> <div>720x576(38)</div> <div>400x360(34)</div> </div> <div> <div>720x480(2)</div> <div>400x224(35)</div> </div> <div> <div>640x480(9)</div> <div>352x288(39)</div> </div> <div> <div>640x360(30)</div> <div>352x240(37)</div> </div> <div> <div>624x352(13)</div> <div>320x240(12)</div> </div> <div> <div>480x368(10)</div> <div>320x180(31)</div> </div> <div> <div>480x320(11)</div> <div>320x176(18)</div> </div> <div> <div>480x272(14)</div> <div>192x192(26)</div> </div> <div> <div>448x336(33)</div> <div>128x96(19)</div> </div> <div> <div>416x240(15)</div> <div>96x96(20)</div> </div>

REQUEST MESSAGE FORMAT—mvp.setOutProgram (Continued)

	Type	Comments	Value Instances/Comments										
30	i	profile	Version 2.2.2/Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1). Valid options are: as follows: <ul style="list-style-type: none">• Main_high(0)baseline(1)• mainOnly(2)										
31	i	idr_alignment	Version 2.2.2/Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1). Valid options are: as follows: <ul style="list-style-type: none">• No_idr_alignment(0)• idr_alignment(1)										
32	i	pcm_session_id	Version 2.2.2/Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1). It is also named as MBR Group ID. The maximum length is 32.										
33	i	audio_bitrate	Version 2.2.2/Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1).										
34	i	audio_codec	Version 2.2.2/Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1). Valid options are: as follows: <ul style="list-style-type: none">• AAC_LC(0),• HE_AAC(1),• HE_AACV2(2)• MPEG1L2(8)• MPEG2L2(10)• AC3(12)										
35	i	audio_channel	Version 2.2.2/Version 2.3.0. The field is to set Audio Channel. The valid option is as follows: <ul style="list-style-type: none">• STEREO(0)• MONO(1),• CHANNEL51(6)										
36	i	sampling_rate	Version 2.2.2/Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1). Valid options are: as follows: <table><tr><td>48000(0)</td><td>16000(5)</td></tr><tr><td>44100(1)</td><td>11025(6)</td></tr><tr><td>32000(2)</td><td>8000(7)</td></tr><tr><td>24000(3)</td><td>12000(8)</td></tr><tr><td>22050(4)</td><td></td></tr></table>	48000(0)	16000(5)	44100(1)	11025(6)	32000(2)	8000(7)	24000(3)	12000(8)	22050(4)	
48000(0)	16000(5)												
44100(1)	11025(6)												
32000(2)	8000(7)												
24000(3)	12000(8)												
22050(4)													
37	i	transcoding_mode	Version 2.2.2/Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1). Valid options are: as follows: <ul style="list-style-type: none">• IPTV_MODE(0)• PC_MOBILE_MODE(1)										

REQUEST MESSAGE FORMAT—mvp.setOutProgram (Continued)

	Type	Comments	Value Instances/Comments
38	i	program_info.transCodeCfg. aspect_ratio	Version 2.2.2/Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1). Valid options are: as follows: <ul style="list-style-type: none"> Automatic(0) ratio_4:3(1) ratio_16:9(2)
39	i	program_info.transCodeCfg. a6_sub_id	Version 2.2.2/Version 2.3.0. <ul style="list-style-type: none"> In MBR_TS, the a6_sub_id represents the ordering of resolution from high to low. The range is between 0 and 3. The lower a6_sub_id value is high resolution. The highest a6_sub_id value is low resolution. In MBR-PIP_TS, the a6_sub_id represents 0 for Main Video Resolution and 1 for PIP Video Resolution
40	i	program_info.pgSubNoPmtFlag	Version 2.2.2. This field is only used, if the transcoding_mode is IPTV_MODE(0) for non-transcoding. Valid options are: as follows: <ul style="list-style-type: none"> Disable(0) Enable(1)
41	i	program_info.transCodeCfg. pip_resolution	Version 2.2.2. This field is only used, if the transcoding_mode is IPTV_MODE(0) for transcoding with H.264+SD encoding format. If IPTV_MODE(0), H.264, and PIP, then <ul style="list-style-type: none"> H: 1/2 D1 x V: 1 / 2 D1 (27) 192x192 (26) 128x96(19) 96x96(20)
42	i	active_format	Version 2.2.2. This field is only used, if the transcoding_mode is IPTV_MODE(0) for transcoding with MPEG H.264 + SD encoding format. Valid options are <ul style="list-style-type: none"> ACTIVE_FORMAT_16X9_LETTER_BOX(0) ACTIVE_FORMAT_4X3_CENTER_CUT(1)
43	i	audioGain	Version 2.4.0. The audioGain field is to view the configured audio Gain. The valid range is between -24 and 24.
44	i	disableAFD	Version 2.4.0. The field is to view the Output AFD Disabled. Valid options are: <ul style="list-style-type: none"> Disable(0) Enable(1)

REQUEST MESSAGE FORMAT—mvp.setOutProgram (Continued)

	Type	Comments	Value Instances/Comments
45	i	audio_passthrough	Version 3.0.0_NPM1. The field identifies a specific Audio Codec pass-through. Valid options are: <ul style="list-style-type: none"> • AAC_LC(0), • HE_AAC(1), • HE_AACV2(2) • MPEG1L2(8) • MPEG2L2(10) • AC3(12) • PASSTHRU(255)
46	i	start_pid	Version 3.0.0_NPM1. The field identifies a start PID for Audio Codec. By default, it is zero value. <ul style="list-style-type: none"> • If the audio_passthrough field is equal to "PASSTHRU(255)", then this field is zero. • If the audio passthrough field is not equal to "PASSTHRU(255)", then the start PID value identifies the beginning of PID from the Audio Elementary stream based on configured audio_passthrough field. For example, • When the field of audio_passthrough is set to "AC3", then the AMP code matches the Audio AC3 ES to create the start PID value. Then the next Audio AC3 ES is assigned to next start PID value.
47	i	close_caption_sdt	<ul style="list-style-type: none"> • Discard(0) • CEA608(1) • CEA608+708(2)
48	i	ac3_encoder_enabled	Version 3.1. Advanced audio parameters include dd_xxx and dp_xxx. Set to either use, or do not use, AC3 encoder parameters. <ul style="list-style-type: none"> • use(1) • not use(0)
49	i	audio_coding_mode	AC3 encoder param, <ul style="list-style-type: none"> • 1 :1/0 (C) mode • 2 :2/0 (L, R) mode • 7 :3/2 (L, C, R, I, s) mode
50	i	LFE_on_off	AC3 encoder param, LFE enabled: <ul style="list-style-type: none"> • On(1) • Off(0)
51	i	bitstream_mode	AC3 encoder param, Bitstream mode: <ul style="list-style-type: none"> • 0 – main audio service: complete main (CM) • 1 - main audio service: music and effects (ME)" • 2 - associated audio service: visually impaired (VI) • 3 - associated audio service: hearing impaired (HI) • 4 - associated audio service: dialogue (D) • 5 - associated audio service: commentary (C) • 6 - associated audio service: emergency (E) • 7 - associated audio service: voice over (VO)

REQUEST MESSAGE FORMAT—mvp.setOutProgram (Continued)

	Type	Comments	Value Instances/Comments
52	i	dialog_normalization	AC3 encoder param, Dialog normalization Value range 0~31 means 0 to -31 dB <ul style="list-style-type: none"> • 0(passthrough) • 1(loudest input) • 31(quiet input)
53	i	DRC_line_mode_profile	AC3 encoder param, DRC Line mode profile <ul style="list-style-type: none"> • 0 - No compression • 1 - Film standard compression • 2 - Film light compression • 3 - Music standard compression • 4 - Music light compression • 5 - Speech compression
54	i	DRC_RF_mode_profile	AC3 encoder param, DRC RF mode profile Same enum as dd_DRC_line_mode_profile
55	i	DRC_line_mode_profile2	AC3 encoder param, "DRC Line mode profile 2 Same enum as dd_DRC_line_mode_profile
56	i	DRC_RF_mode_profile2	AC3 encoder param, DRC RF mode profile 2 Same enum as dd_DRC_line_mode_profile
57	i	surround_channel_90_phaseshift	AC3 encoder param, Surround phase shift enabled: <ul style="list-style-type: none"> • On(1) • Off(0)
58	i	surround_channel_3db_attenuation	AC3 encoder param, Surround attenuation enabled: <ul style="list-style-type: none"> • On(1) • Off(0)
59	i	dolby_pulse_enabled	Either use or do not use dolby pulse encoder parameters: <ul style="list-style-type: none"> • use(1) • not use(0)
60	i	channel_config	DolbyPulse encoder param, <ul style="list-style-type: none"> • Mono(1) • Stereo(2) • 5.1Channel(11)
61	i	line_compression	DolbyPulse encoder param, Line mode profile : <ul style="list-style-type: none"> • 0 - No compression) • 1 - Film standard compression, • 2 - Film light compression), • 3 - Music standard compression), • 4 - Music light compression), • 5 - Speech compression
62	i	rf_compression	DolbyPulse encoder param, RF compression profile: Same enums as dp_line_compression
63	i	dialog_norm	DolbyPulse encoder param, Dialog normalization: Value range 0~31 means 0dB to -31dB 0:passthrough

REQUEST MESSAGE FORMAT—mvp.setOutProgram (Continued)

	Type	Comments	Value Instances/Comments
64	i	phase_shift	DolbyPulse encoder param, 90 degree Surround phase shift enabled: <ul style="list-style-type: none"> • On(1) • Off(0)
65	i	lfe_filter	DolbyPulse encoder param, LFE bandwidth filter enabled: <ul style="list-style-type: none"> • On(1) • Off(0)
66	i	surr_attenuation	DolbyPulse encoder param, 3dB Surround attenuation enabled: <ul style="list-style-type: none"> • On(1) • Off(0)
67	i	tCenter_downmix	DolbyPulse encoder param, Lt/Rt Center downmix level: Value range 0~7 means 0dB to -7dB
68	i	tSurround_downmix	DolbyPulse encoder param, Lt/Rt Surround downmix level: Value range 3~7 means -3dB to -7dB
69	i	oCenter_downmix	DolbyPulse encoder param, Lo/Ro Center downmix level: Value range 0~7 means 0dB to -7dB
70	i	oSurround_downmix	DolbyPulse encoder param, Lo/Ro Surround downmix level: Value range 3~7 means -3dB to -7dB
71	i	downmix_pref	DolbyPulse encoder param, Downmix preference: <ul style="list-style-type: none"> • 0 - Not indicated • 1 - Prologic preferred • 2 - Stereo downmix preferred • 3 - Prologic II preferred
72	i	surround_mode	DolbyPulse encoder param, Surround mode: <ul style="list-style-type: none"> • 0 - Not indicated • 1 - Surround enabled • 2 - Surround disabled

Bit Mask:-

```
{
    VCM_OUT_PG_MASK_NAME=1,
    VCM_OUT_PG_MASK_PG_NUM=2,
    VCM_OUT_PG_MASK_PMT_PID=4,
    VCM_OUT_PG_MASK_PG_DPI=8,
    VCM_OUT_PG_MASK_PG_SUB=16,
    VCM_OUT_PG_MASK_PG_SCTE_CONV=32,
    VCM_OUT_PG_MASK_PG_MAJ_CH=64,
    VCM_OUT_PG_MASK_PG_MIN_CH=128,
```

```

VCM_OUT_PG_MASK_ALL = (VCM_OUT_PG_MASK_PG_SCTE_CONV << 1) - 1
}

```

Resolution Enum	Horizontal Resolution	Vertical Resolution	Description
0	0	0	Null
1	H_RES_FOLLOW_INPUT	V_RES_FOLLOW_INPUT	FIELD_FRAME_RATE_FULL (follow both)
2	H_RES_HD_1080i	V_RES_HD_1080i	FIELD_FRAME_RATE_FULL (1080i full rate)
3	H_RES_HD_720P	V_RES_HD_720P	FIELD_FRAME_RATE_FULL (720p full rate)
4	H_RES_HD_720P	V_RES_HD_720P	FIELD_FRAME_RATE_HALF (720p half rate) or 1280x720
5	H_RES_3_4_720P	V_RES_HD_720P	FIELD_FRAME_RATE_HALF ¾ 720p half rate or 960x720
6	H_RES_D1	V_RES_D1	FIELD_FRAME_RATE_FULL (D-1 Interlaced)
7	H_RES_68	V_RES_432	FIELD_FRAME_RATE_HALF 768x432 MBR mode for Comcast
8	H_RES_3_4_D1	V_RES_D1	FIELD_FRAME_RATE_FULL (3/4 D1 interlaced)
9	H_RES_1_2_D1	V_RES_D1	FIELD_FRAME_RATE_FULL (1/2 D1 Interlaced)
10	H_RES_VGA	V_RES_D1	FIELD_FRAME_RATE_HALF (640x480 progressive)
11	H_RES_2_3_D1	V_RES_3_4_D1	FIELD_FRAME_RATE_HALF (480x360 progressive) or (480x352p)
12	H_RES_2_3_D1	V_RES_2_3_D1	FIELD_FRAME_RATE_HALF (480x320 progressive)
13	H_RES_HALF_VGA	V_RES_1_2_D1	FIELD_FRAME_RATE_HALF (320x240 progressive)
14	H_RES_39_45_D1	V_RES_3_4_D1	FIELD_FRAME_RATE_HALF (624x352 progressive)
15	H_RES_2_3_D1	V_RES_17_30_D1	FIELD_FRAME_RATE_HALF (480x272 progressive)
16	H_RES_26_45_D1	V_RES_1_2_D1	FIELD_FRAME_RATE_HALF (416x240 progressive)
17	H_RES_FOLLOW_INPUT	V_RES_FOLLOW_INPUT	FIELD_FRAME_RATE_FULL (Full Res X Follow)
18	H_RES_852	V_RES_D1	FIELD_FRAME_RATE_HALF (852x480 progressive) or (848x480p)

Resolution Enum	Horizontal Resolution	Vertical Resolution	Description
19	H_RES_HALF_VGA	V_RES_LOWRES_176	FIELD_FRAME_RATE_HALF (320x176 progressive)
20	H_RES_LOWRES_128	V_RES_LOWRES_96	FIELD_FRAME_RATE_HALF (128x 96 progressive)
21	H_RES_LOWRES_96	V_RES_LOWRES_96	FIELD_FRAME_RATE_HALF (96x 96 progressive)
22	H_RES_HD_3_4_1080i	V_RES_FOLLOW_INPUT	FIELD_FRAME_RATE_FULL (1440x1080i)
23	H_RES_HD_2_3_1080i	V_RES_FOLLOW_INPUT	FIELD_FRAME_RATE_FULL (1280x1080i)
24	H_RES_HD_1_2_1080i	V_RES_FOLLOW_INPUT	FIELD_FRAME_RATE_FULL (960x1080i)
25	H_RES_3_4_720P	V_RES_FOLLOW_INPUT	FIELD_FRAME_RATE_FULL (960x720p)
26	H_RES_VGA	V_RES_HD_720P	FIELD_FRAME_RATE_HALF (640x720p)
27	H_RES_LOWRES_192	V_RES_LOWRES_192	FIELD_FRAME_RATE_HALF (192x192)
28	H_RES_1_2_D1	V_RES_1_2_D1	FIELD_FRAME_RATE_HALF (H_half_D1x_V_half_D1_p or 352x240)
29	H_RES_HD_1_2_1080i	V_RES_540	FIELD_FRAME_RATE_HALF (960x540 (544))
30	H_RES_864	V_RES_486	FIELD_FRAME_RATE_HALF (864x486 (496))
31	H_RES_VGA	V_RES_360	FIELD_FRAME_RATE_HALF (640x360 (368)) or (640x360p)
32	H_RES_HALF_VGA	V_RES_180	FIELD_FRAME_RATE_HALF (320x180 (192))
33	H_RES_720	V_RES_480	FIELD_FRAME_RATE_HALF (720x480)
34	H_RES_448	V_RES_336	FIELD_FRAME_RATE_HALF (448x336)
35	H_RES_400	V_RES_360	FIELD_FRAME_RATE_HALF (400x360)
36	H_RES_400	V_RES_224	FIELD_FRAME_RATE_HALF (400x224)
37	H_RES_HD_1080i	V_RES_HD_1080i	FIELD_FRAME_RATE_HALF (1920x1088)
38	H_RES_1_2_D1	V_RES_240	FIELD_FRAME_RATE_HALF (352x240)

Resolution Enum	Horizontal Resolution	Vertical Resolution	Description
39	H_RES_720	V_RES_576	FIELD_FRAME_RATE_HALF (720x576)
40	H_RES_352	V_RES_288	FIELD_FRAME_RATE_HALF (352x288)

RESPONSE MESSAGE FORMAT—mvp.setOutProgram

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_OUTPUT_PROGRAM_CONFIG	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String
5	i	pg_index	Program index

mvp.deleteOutProgram

Delete output program based on ts index and program index.

REQUEST MESSAGE FORMAT—mvp.deleteOutProgram

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	TS index
2	i	pg_index	Program index

RESPONSE MESSAGE FORMAT—mvp.deleteOutProgram

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_OUTPUT_PROGRAM_DELETE
1	i	session_id	
2	i	CMD_ID_OUTPUT_PROGRAM_DELETE	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String

mvp.getOutProgram

Get output program based on ts index and program index.

REQUEST MESSAGE FORMAT—mvp.getOutProgram

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	TS index
2	i	pg_index	Program index

RESPONSE MESSAGE FORMAT—mvp.getOutProgram

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_OUTPUT_PROGRAM_QUERY
1	i	session_id	
2	i	CMD_ID_OUTPUT_PROGRAM_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String
5	i	program_index	Program Index
6	i	program_number	Program number
7	i	pmt_pid	PMT PID
8	i	pcr_pid	PCR PID
9	i	eas_enable	
10	i	scte_30_35_convert	Valid options are: Disable(0), Enable(1)
11	i	major_channel	Only valid if TS Type is ATSC
12	i	minor_channel	Only valid if TS Type is ATSC
13	s	program_name	
14	i	number_of_es	Number of ES
15	i	number_of_gm	Number of Grooming
16	i	in_use	The field is to view whether the output program is whether it is in active state or not. If it is in active state, it is indicated as "grooming successfully".
17	i	dpiFlag	This field is to view DPI Flag. Valid options are: Disable(0)/Enable(1)
18	i	PgSubFlag	
19	i	encoding_format	The field is to view the encoding format.
20	i	resolution_class	The field is to view resolution class. Valid options are: <ul style="list-style-type: none"> • SD(1) • HD(2) • PIP(3)
21	i	gop_structure	

RESPONSE MESSAGE FORMAT—mvp.getOutProgram (Continued)

Index	Type	Key:Value	Comments
22	i	gop_m_value	<p>The valid of GOP M is based on Encoding Format and resolution class.</p> <ul style="list-style-type: none"> • MPEG2, HD, the valid is 1, 2, 3 • MPEG2, HD, the valid is 1,2,3 • H.264, HD, the valid is 1,2,3,4,8 • H.264, SD, the valid is 1,2,3,4,8 • H.264, PIP, the valid is 1,4
23	i	gop_n_value	<p>If MPEG2, the GOP N is multiple of GOPM.</p> <ul style="list-style-type: none"> • If H.264, GOP M={1,2,3}, the GOP N is 36. • If H.264, GOP M={4,8}, the GOP N is 32. • If PIP SD, GOP M={1,4}, then the GOP N=32.
24	i	idr_interval	<p>If MPEG2, the idr_interval is 0.</p> <ul style="list-style-type: none"> • If H.264, GOP M={1,2,3} GOP N=36, then the idr_interval range is multiple of GOP N. • If H.264, GOP M=4, GOP N=36, then the idr_interval range between 0 and 96. • If H.264, GOP M 8, then the idr_interval is 96. • If PIP, GOP M={1,4}, GOP N=32, then the idr_interval is 0.
25	i	resolution	
26	i	pip_enable	Deprecated field
27	i	bit_rate_type	
28	i	max_rate	<p>Configure Video bitrate in Mbps. For example, set max_rate to 15000000 as 15 Mbps.</p> <ul style="list-style-type: none"> • If MPEG2 and HD encoding, then Video Bitrate is between 8Mbps and 20Mbps. • If MPEG2 and SD encoding, then Video Bitrate is between 1 Mbps and 7 Mbps. • If H.264 and HD encoding, then Video Bitrate is between 2 mbps and 15 mbps. • If H264 and SD encoding, then Video Bitrate is between .5 Mbps and 7Mbps. • If H264 and PIP encoding, then Video Bitrate is between .1 Mbps and 1Mbps.
29	i	mctf_noise_reduction	<ul style="list-style-type: none"> • Disable(0) • Enable(1)
30	i	telecine	<ul style="list-style-type: none"> • Disable(0) • Enable(1)
31	i	close_caption	<p>This field is only valid when the Video Type is set to MPEG. Valid options are:</p> <ul style="list-style-type: none"> • SCTE_20(1) • SCTE_21(2) • SCTE_20_and_21(3)

RESPONSE MESSAGE FORMAT—mvp.getOutProgram (Continued)

Index	Type	Key:Value	Comments
32	i	cfgHRes	Horizontal Resolution Configure Horizontal Resolution for Output Program <ul style="list-style-type: none"> • If MPEG2 and HD encoding, then <ul style="list-style-type: none"> - H:Full_res(0) - H:1920_RES_3/4_D1(7) - H:1440_RES_D1(8) - H:1280_3/4_D1(10) - H:960_RES_D1(9) • If MPEG2 and SD, then <ul style="list-style-type: none"> - H:Full D-1_Follow_input(1) - H:VGA_3/4_720(5) - H: 3 / 4 D-1_720P_Half(4) - H: 2/3 D-1_720P_Full(3) - H: 1/2 D-1_1080i_Full(2) • If PIP, then it is zero.
33	i	actualHRes	Actual Horizontal Resolution for Output Program
34	i	cfgVRes	Configure Vertical Resolution for Output Program If SD, it is zero. If PIP, it is zero
35	i	actualVRes	Actual Vertical Resolution for Output Program
36	i	sourceHRes	Source Horizontal Resolution from Input Program
37	i	sourceVRes	Source Vertical Resolution from Input Program
38	i	rpmResolution	Version 2.2.2/Version 2.3.0. This field is only used if the transcoding mode is PC_MOBILE_MODE(1).
39	i	Profile	Version 2.2.2/ Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1). Valid options are: as follows: <ul style="list-style-type: none"> • Main_high(0) • baseline(1) • mainOnly(2)
40	i	idrAlignment	Version 2.2.2/ Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1). Valid options are: <ul style="list-style-type: none"> • No_idr_alignment(0) • idr_alignment(1)
41	i	pcmMobileSessionId	Version 2.2.2/ Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1).
42	i	audioBitrate	Version 2.2.2/ Version 2.3.0. This field is only used, if the transcoding mode is PC_MOBILE_MODE(1).
43	i	audioCodec	Version 2.2.2/ Version 2.3.0. This field is only used, if the transcoding mode is PC_MOBILE_MODE(1). Valid options are: <ul style="list-style-type: none"> • AAC(0), • HE_AAC(1) • HE_AACV2(2),

RESPONSE MESSAGE FORMAT—mvp.getOutProgram (Continued)

Index	Type	Key:Value	Comments
44	i	audioChannel	Version 2.2.2/ Version 2.3.0. The field is to view Audio Channel. Valid options are: <ul style="list-style-type: none"> • STEREO(0) • MONO(1)
45	i	audioSamplingRate	Version 2.2.2/ Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1).
46	i	transcodingMode	Version 2.2.2/ Version 2.3.0. This field is only used, if the transcoding mode is PC_MOBILE_MODE(1). Valid options are: <ul style="list-style-type: none"> • IPTV_MODE(0) • PC_MOBILE_MODE(1)
47	i	aspectRatio	Version 2.2.2/ Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1). Valid options are: <ul style="list-style-type: none"> • Automatic(0) • ratio_4:3(1) • ratio_16:9(2)
48	i	a6_sub_id	Version 2.2.2/ Version 2.3.0 <ul style="list-style-type: none"> • In MBR_TS, the a6_sub_id represents the ordering of resolution from high to low. The range is between 0 and 3. • In MBR-PIP_TS, the a6_sub_id represents 0 for Main Video Resolution and 1 for PIP Video Resolution.
49	i	PgSubNoPmtFlag	Version 2.2.2. This field is only used, if the transcoding_mode is IPTV_MODE(0) for non-transcoding. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
50	i	actual_rate	Version 2.2.2. This field is only used to display the actual Video rate.
51	i	pipResolution	Version 2.2.2. This field is only used, if the transcoding_mode is IPTV_MODE(0) for transcoding with H.264+SD encoding format. If IPTV_MODE(0) and PIP, then <ul style="list-style-type: none"> • H: 1/2 D1 x V: 1 / 2 D1 (27) • 192x192 (26) • 128x96(19) • 96x96(20)
52	i	activeFormat	Version 2.2.2. This field is only used, if the transcoding_mode is IPTV_MODE(0) for transcoding with MPEG H.264 + SD encoding format. In Version 2.2.2, valid options are: <ul style="list-style-type: none"> • ACTIVE_FORMAT_16X9_LETTER_BOX(0) • ACTIVE_FORMAT_4X3_CENTER_CUT(1)

RESPONSE MESSAGE FORMAT—mvp.getOutProgram (Continued)

Index	Type	Key:Value	Comments
53	i	audioGain	Version 2.4.0. The audioGain field is to view the configured audio Gain. The valid range is between -24 and 24.
54	i	disableAFD	Version 2.4.0. The field is to view the Output AFD Disabled. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
55	i	runtime_error_code	Version 3.0.0_NPM1
56	i	runtime_error_code	Version 3.0.0_NPM1
57	i	audio_passthrough	Version 3.0.0_NPM1. The field identifies a specific Audio Codec pass-through. Valid options are: <ul style="list-style-type: none"> • AAC_LC(0), • HE_AAC(1), • HE_AACV2(2) • MPEG1L2(8) • MPEG2L2(10) • AC3(12) • PASSTHRU(255)
58	i	start_pid	Version 3.0.0_NPM1. The field identifies a start PID for Audio Codec. By default, it is zero value. <ul style="list-style-type: none"> • If the audio_passthrough field is equal to "PASSTHRU(255)", then this field is zero. • If the audio_passthrough field is not equal to "PASSTHRU(255)", then the start PID value identifies the beginning of PID from the Audio Elementary stream based on configured audio_passthrough field. For example, • When the field of audio_passthrough is set to "AC3", then the AMP code matches the Audio AC3 ES to create the start PID value. Then the next Audio AC3 ES is assigned to next start PID value.
57	i	close_caption_sdt	<ul style="list-style-type: none"> • Discard(0) • CEA608(1) • CEA608+708(2)
58	i	dd_ac3_encoder_enabled	Version 3.1. Advanced audio parameters include dd_xxx and dp_xxx. Either use or do not use AC3 encoder parameters <ul style="list-style-type: none"> • use(1) • not use(0)
59	i	dd_audio_coding_mode	AC3 encoder param, <ul style="list-style-type: none"> • 1 :1/0 (C) mode • 2 :2/0 (L, R) mode • 7 :3/2 (L, C, R, I, s) mode
60	i	dd_LFE_on_off	AC3 encoder param, LFE enabled,: <ul style="list-style-type: none"> • On(1) • Off(0)

RESPONSE MESSAGE FORMAT—mvp.getOutProgram (Continued)

Index	Type	Key:Value	Comments
61	i	dd_bitstream_mode	AC3 encoder param, Bitstream mode: <ul style="list-style-type: none"> • 0 – main audio service: complete main (CM) • 1 - main audio service: music and effects (ME)" • 2 - associated audio service: visually impaired (VI) • 3 - associated audio service: hearing impaired (HI) • 4 - associated audio service: dialogue (D) • 5 - associated audio service: commentary (C) • 6 - associated audio service: emergency (E) • 7 - associated audio service: voice over (VO)
62	i	dd_dialog_normalization	AC3 encoder param, Dialog normalization: Value range 0~31 means 0 to -31 dB <ul style="list-style-type: none"> • 0(passthrough) • 1(loudest input) • 31(quiet input)
63	i	dd_DRC_line_mode_profile	AC3 encoder param, DRC Line mode profile: <ul style="list-style-type: none"> • 0 - No compression • 1 - Film standard compression • 2 - Film light compression • 3 - Music standard compression • 4 - Music light compression • 5 - Speech compression
64	i	dd_DRC_RF_mode_profile	AC3 encoder param, DRC RF mode profile: Same enum as dd_DRC_line_mode_profile
65	i	dd_DRC_line_mode_profile2	AC3 encoder param, "DRC Line mode profile 2: Same enum as dd_DRC_line_mode_profile
66	i	dd_DRC_RF_mode_profile2	AC3 encoder param, DRC RF mode profile 2: Same enum as dd_DRC_line_mode_profile
67	i	dd_surround_channel_90_phase shift	AC3 encoder param, Surround phase shift enabled: <ul style="list-style-type: none"> • On(1) • Off(0)
68	i	dd_surround_channel_3db_attenuation	AC3 encoder param, Surround attenuation enabled: <ul style="list-style-type: none"> • On(1) • Off(0)
69	i	dp_dolby_pulse_enabled	Either use or do not use dolby pulse encoder parameters <ul style="list-style-type: none"> • use(1) • not use(0)
70	i	dp_channel_config	DolbyPulse encoder param, <ul style="list-style-type: none"> • Mono(1) • Stereo(2) • 5.1Channel(11)

RESPONSE MESSAGE FORMAT—mvp.getOutProgram (Continued)

Index	Type	Key:Value	Comments
71	i	dp_line_compression	DolbyPulse encoder param, Line mode profile : <ul style="list-style-type: none"> • 0 - No compression) • 1 - Film standard compression, • 2 - Film light compression), • 3 - Music standard compression), • 4 - Music light compression), • 5 - Speech compression
72	i	dp_rf_compression	DolbyPulse encoder param, RF compression profile Same enums as dp_line_compression
73	i	dp_dialog_norm	DolbyPulse encoder param, Dialog normalization Value range 0~31 means 0dB to -31dB 0:passthrough
74	i	dp_phase_shift	DolbyPulse encoder param, 90 degree Surround phase shift enabled. <ul style="list-style-type: none"> • On(1) • Off(0)
75	i	dp_lfe_filter	DolbyPulse encoder param, LFE bandwidth filter enabled: <ul style="list-style-type: none"> • On(1) • Off(0)
76	i	dp_surr_attenuation	DolbyPulse encoder param, 3dB Surround attenuation enabled: <ul style="list-style-type: none"> • On(1) • Off(0)
77	i	dp_tCenter_downmix	DolbyPulse encoder param, Lt/Rt Center downmix level: Value range 0~7 means 0dB to -7dB
78	i	dp_tSurround_downmix	DolbyPulse encoder param, Lt/Rt Surround downmix level: Value range 3~7 means -3dB to -7dB
79	i	dp_oCenter_downmix	DolbyPulse encoder param, Lo/Ro Center downmix level: Value range 0~7 means 0dB to -7dB
80	i	dp_oSurround_downmix	DolbyPulse encoder param, Lo/Ro Surround downmix level: Value range 3~7 means -3dB to -7dB

RESPONSE MESSAGE FORMAT—mvp.getOutProgram (Continued)

Index	Type	Key:Value	Comments
81	i	dp_downmix_pref	DolbyPulse encoder param, Downmix preference: <ul style="list-style-type: none">• 0 - Not indicated• 1 - Prologic preferred• 2 - Stereo downmix preferred• 3 - Prologic II preferred
82	i	dp_surround_mode	DolbyPulse encoder param, Surround mode: <ul style="list-style-type: none">• 0 - Not indicated• 1 - Surround enabled• 2 - Surround disabled

mvp.getOutputTsBulk

Get output program bulk based on ts index

REQUEST MESSAGE FORMAT—mvp.getOutputTsBulk

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	TS index
2	i	start_number	Start position
3	i	end_number	End position

RESPONSE MESSAGE FORMAT—mvp.getOutputTsBulk

Index	Type	Comments	Value Instances/Comments
0	i	command_id	CMD_ID_OUTPUT_TS_BULK_QUERY
1	i	session_id	
2	i	CMD_ID_OUTPUT_TS_BULK_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String
5	i	dpiFlag	<ul style="list-style-type: none"> • Disable(0) • Enable(1)
6	i	p_dpiFlag	<ul style="list-style-type: none"> • Disable(0) • Enable(1)
7	i	end	
8	i	n_entries	
		1 to N entries	N entries
73	i	pg_info.program_index	Program Index
74	i	pg_info.program_number	Program Number
75	i	pg_info.pmt_pid	PMT PID
76	i	pcr_pid	PCR PID
77	i	pg_info.eas_enable	
78	i	pg_info.scte_30_35_convert	Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
79	i	pg_info.major_channel	Only valid if TS Type is ATSC
80	i	pg_info.minor_channel	Only valid if TS Type is ATSC
81	s	pg_info.program_name	Number of groom
82	i	pg_info.number_of_es	Number of ES
83	i	pg_info.number_of_gm	

RESPONSE MESSAGE FORMAT—mvp.getOutputTsBulk (Continued)

Index	Type	Comments	Value Instances/Comments
84	i	pg_info.in_use	The field is to view whether the output program is in active state or not. If it is in active state, it is indicated as "grooming successfully". Valid options are: <ul style="list-style-type: none"> • 0=not active • 1=active
85	i	pg_info.dpiFlag	<ul style="list-style-type: none"> • Disable(0) • Enable(1)
86	i	pg_info.pgSubFlag	<ul style="list-style-type: none"> • Disable(0) • Enable(1)
87	i	encoding_format	The field is to view encoding format. Valid options are: <ul style="list-style-type: none"> • Follow_input(1) • MPEG2(2) • H.264(3)
88	i	resolution_class	The field is to view resolution class. Valid options are: <ul style="list-style-type: none"> • SD(1) • HD(2) • PIP(3)
89	i	gop_structure	Follow_input(1)
90	i	gop_m_value	The valid of GOP M is based on Encoding Format and resolution class. <ul style="list-style-type: none"> • MPEG2, HD, the valid is 1, 2, 3 • MPEG2, HD, the valid is 1,2,3 • H.264, HD, the valid is 1,2,3,4,8 • H.264, SD, the valid is 1,2,3,4,8 • H.264, PIP, the valid is 1,4
91	i	gop_n_value	<ul style="list-style-type: none"> • If MPEG2, the GOP N is multiple of GOPM. • If H.264, GOP M={1,2,3}, the GOP N is 36. • If H.264, GOP M={4,8}, the GOP N is 32. • If PIP SD, GOP M={1,4}, then the GOP N=32.
92	i	idr_interval	<ul style="list-style-type: none"> • If MPEG2, the idr_interval is 0. • If H.264, GOP M={1,2,3} GOP N=36, then the idr_interval range is multiple of GOP N. • If H.264, GOP M=4, GOP N=36, then the idr_interval range between 0 and 96. • If H.264, GOP M 8, then the idr_interval is 96. • If PIP, GOP M={1,4}, GOP N=32, then the idr_interval is 0.
93	i	resolution	
94	i	pip_enable	Deprecated field
95	i	bit_rate_type	

RESPONSE MESSAGE FORMAT—mvp.getOutputTsBulk (Continued)

Index	Type	Comments	Value Instances/Comments
96	i	max_rate	<ul style="list-style-type: none"> Configure Video bitrate in Mbps. For example, set max_rate to 15000000 as 15 Mbps. If MPEG2 and HD encoding, then Video Bitrate is between 8Mbps and 20Mbps. If MPEG2 and SD encoding, then Video Bitrate is between 1 Mbps and 7 Mbps. If H.264 and HD encoding, then Video Bitrate is between 2 mbps and 15 mbps. If H264 and SD encoding, then Video Bitrate is between .5 Mbps and 7Mbps. If H264 and PIP encoding, then Video Bitrate is between .1 Mbps and 1Mbps.
97	i	mctf_noise_reduction	Disable(0)/enable(1)
98	i	telecine	Disable(0)/enable(1)
99	i	close_caption	<ul style="list-style-type: none"> SCTE_20=1 SCTE_21=2 SCTE_20_and_21=3
100	i	cfgHRes	Horizontal Resolution Configure Horizontal Resolution for Output Program <ul style="list-style-type: none"> If MPEG2 and HD encoding, then <ul style="list-style-type: none"> H:Full_res(0) H:1920_RES_3/4_D1(7) H:1440_RES_D1(8) H:1280_3/4_D1(10) H:960_RES_D1(9) If MPEG2 and SD, then <ul style="list-style-type: none"> H:Full D-1_Follow_input(1) H:VGA_3/4_720(5) H: 3 / 4 D-1_720P_Half(4) H: 2/3 D-1_720P_Full(3) H: 1/2 D-1_1080i_Full(2) If PIP, then it is zero.
101	i	actualHRes	The field is Actual Horizontal Resolution
102	i	cfgVRes	The field is configured Vertical Resolution.
103	i	actualVRes	Actual Vertical Resolution for Output Program
104	i	sourceHRes	Source Horizontal Resolution from Input Program
105	i	sourceVRes	Source Vertical Resolution from Input Program
106	i	rpmResolution	Version 2.2.2/ Version 2.3.0 This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1).
107	i	Profile	Version 2.2.2/ Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1). Valid options are: as follows: <ul style="list-style-type: none"> Main_high(0) baseline(1) mainOnly(2)

RESPONSE MESSAGE FORMAT—mvp.getOutputTsBulk (Continued)

Index	Type	Comments	Value Instances/Comments
108	i	idrAlignment	Version 2.2.2/ Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1). Valid options are: as follows: <ul style="list-style-type: none"> • No_idr_alignment(0) • idr_alignment(1)
109	i	pcmMobileSessionId	Version 2.2.2/ Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1).
110	i	audioBitrate	Version 2.2.2/ Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1).
111	i	audioCodec	Version 2.2.2/ Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1). <ul style="list-style-type: none"> • The valid option in Version 2.3.0 is as follows: <ul style="list-style-type: none"> - AAC_LC(0) - HE_AAC(1) - HE_AACV2(2) • The valid option in Version 2.5.0 is as follows: <ul style="list-style-type: none"> - AAC_LC(0), - HE_AAC(1) - HE_AACV2(2) - MPEG1L2(8) - MPEG2L2(10) • The valid option in Version 3.0.0 is as follows: <ul style="list-style-type: none"> - AAC_LC(0), - HE_AAC(1) - HE_AACV2(2) - MPEG1L2(8) - MPEG2L2(10) - AC3(12)
112	i	audioChannel	Version 2.2.2/ Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1). Valid options are: as follows: <ul style="list-style-type: none"> • STEREO(0) • MONO(1) • CHANNEL51(6)
113	i	audioSamplingRate	Version 2.2.2/ Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1). Valid options are: <ul style="list-style-type: none"> • 48000(0) • 44100(1) • 32000(2) • 24000(3) • 22050(4) • 16000(5) • 11025(6) • 8000(7) • 12000(8)

RESPONSE MESSAGE FORMAT—mvp.getOutputTsBulk (Continued)

Index	Type	Comments	Value Instances/Comments
114	i	transcodingMode	Version 2.2.2/ Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1). Valid options are: <ul style="list-style-type: none"> • IPTV_MODE(0) • PC_MOBILE_MODE(1)
115	i	aspectRatio	Version 2.2.2/ Version 2.3.0. This field is only used, if the transcoding_mode is PC_MOBILE_MODE(1). Valid options are: <ul style="list-style-type: none"> • Automatic(0) • ratio_4:3(1) • ratio_16:9(2)
116	i	a6_sub_id	Version 2.2.2/ Version 2.3.0 <ul style="list-style-type: none"> • In MBR_TS, the a6_sub_id represents the ordering of resolution from high to low. The range is between 0 and 3. • In MBR-PIP_TS, the a6_sub_id represents 0 for Main Video Resolution and 1 for PIP Video Resolution.
117	i	pg_info.pgSubNoPmtFlag	Version 2.2.2. This field is only used, if the transcoding_mode is IPTV_MODE(0) for non-transcoding. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
118	i	actual_rate	Version 2.2.2. This field is only used to display the actual rate.
119	i	pipResolution	Version 2.2.2. This field is only used, if the transcoding_mode is IPTV_MODE(0) for transcoding with H.264+SD encoding format. If IPTV_MODE(0) and PIP, then <ul style="list-style-type: none"> • H: 1/2 D1 x V: 1 / 2 D1 (27) • 192x192 (26) • 128x96(19) • 96x96(20)
120	i	activeFormat	Version 2.2.2. This field is only used, if the transcoding_mode is IPTV_MODE(0) for transcoding with MPEG H.264 + SD encoding format. Valid options are: <ul style="list-style-type: none"> • ACTIVE_FORMAT_16X9_LETTER_BOX(0) • ACTIVE_FORMAT_4X3_CENTER_CUT(1)
121	i	audioGain	Version 2.4.0. The audioGain field is to view the configured audio Gain. The valid range is between -24 and 24.
122	i	disableAFD	Version 2.4.0. The field is to view the Output AFD Disabled. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)

RESPONSE MESSAGE FORMAT—mvp.getOutputTsBulk (Continued)

Index	Type	Comments	Value Instances/Comments
123	i	audio_passthrough	Version 3.0.0_NPM1. The field identifies a specific Audio Codec pass-through. Valid options are: <ul style="list-style-type: none"> • AAC_LC(0), • HE_AAC(1), • HE_AACV2(2) • MPEG1L2(8) • MPEG2L2(10) • AC3(12) • PASSTHRU(255)
124	i	start_pid	Version 3.0.0_NPM1. The field identifies a start PID for Audio Codec. By default, it is zero value. <ul style="list-style-type: none"> • If the audio_passthrough field is equal to "PASSTHRU(255)", then this field is zero. • If the audio_passthrough field is not equal to "PASSTHRU(255)", then the start PID value identifies the beginning of PID from the Audio Elementary stream based on configured audio_passthrough field. For example, • When the field of audio_passthrough is set to "AC3", then the AMP code matches the Audio AC3 ES to create the start PID value. Then the next Audio AC3 ES is assigned to next start PID value.
125	i	close_caption_sdt	<ul style="list-style-type: none"> • Discard(0) • CEA608(1) • CEA608+708(2)
126	i	dd_ac3_encoder_enabled	Since version 3.1, advanced audio parameters include dd_xxx and dp_xxx. Either use or do not use AC3 encoder parameters. <ul style="list-style-type: none"> • use(1) • not use(0)
127	i	dd_audio_coding_mode	AC3 encoder param, <ul style="list-style-type: none"> • 1 :1/0 (C) mode • 2 :2/0 (L, R) mode • 7 :3/2 (L, C, R, I, s) mode
128	i	dd_LFE_on_off	AC3 encoder param, LFE enabled: <ul style="list-style-type: none"> • On(1) • Off(0)
129	i	dd_bitstream_mode	AC3 encoder param, Bitstream mode: <ul style="list-style-type: none"> • 0 – main audio service: complete main (CM) • 1 - main audio service: music and effects (ME)" • 2 - associated audio service: visually impaired (VI) • 3 - associated audio service: hearing impaired (HI) • 4 - associated audio service: dialogue (D) • 5 - associated audio service: commentary (C) • 6 - associated audio service: emergency (E) • 7 - associated audio service: voice over (VO)

RESPONSE MESSAGE FORMAT—mvp.getOutputTsBulk (Continued)

Index	Type	Comments	Value Instances/Comments
130	i	dd_dialog_normalization	AC3 encoder param, Dialog normalization Value range 0~31 means 0 to -31 dB <ul style="list-style-type: none"> • 0(passthrough) • 1(loudest input) • 31(quiet input)
131	i	dd_DRC_line_mode_profile	AC3 encoder param, DRC Line mode profile <ul style="list-style-type: none"> • 0 - No compression • 1 - Film standard compression • 2 - Film light compression • 3 - Music standard compression • 4 - Music light compression • 5 - Speech compression
132	i	dd_DRC_RF_mode_profile	AC3 encoder param, DRC RF mode profile Same enum as dd_DRC_line_mode_profile
133	i	dd_DRC_line_mode_profile2	AC3 encoder param, "DRC Line mode profile 2 Same enum as dd_DRC_line_mode_profile
134	i	dd_DRC_RF_mode_profile2	AC3 encoder param, DRC RF mode profile 2 Same enum as dd_DRC_line_mode_profile
135	i	dd_surround_channel_90_phase shift	AC3 encoder param, Surround phase shift enabled: <ul style="list-style-type: none"> • On(1) • Off(0)
136	i	dd_surround_channel_3db_attenuation	AC3 encoder param, Surround attenuation enabled <ul style="list-style-type: none"> • On(1) • Off(0)
137	i	dp_dolby_pulse_enabled	Use dolby pulse encoder parameters <ul style="list-style-type: none"> • use(1) • not use(0)
138	i	dp_channel_config	DolbyPulse encoder param, <ul style="list-style-type: none"> • Mono(1) • Stereo(2) • 5.1Channel(11)
139	i	dp_line_compression	DolbyPulse encoder param, Line mode profile : <ul style="list-style-type: none"> • 0 - No compression) • 1 - Film standard compression, • 2 - Film light compression), • 3 - Music standard compression), • 4 - Music light compression), • 5 - Speech compression
140	i	dp_rf_compression	DolbyPulse encoder param, RF compression profile: Same enums as dp_line_compression
141	i	dp_dialog_norm	DolbyPulse encoder param, Dialog normalization: Value range 0~31 means 0dB to -31dB 0:passthrough

RESPONSE MESSAGE FORMAT—mvp.getOutputTsBulk (Continued)

Index	Type	Comments	Value Instances/Comments
142	i	dp_phase_shift	DolbyPulse encoder param, 90 degree Surround phase shift enabled: <ul style="list-style-type: none"> • On(1) • Off(0)
143	i	dp_lfe_filter	DolbyPulse encoder param, LFE bandwidth filter enabled: <ul style="list-style-type: none"> • On(1) • Off(0)
144	i	dp_surr_attenuation	DolbyPulse encoder param, 3dB Surround attenuation enabled: <ul style="list-style-type: none"> • On(1) • Off(0)
145	i	dp_tCenter_downmix	DolbyPulse encoder param, Lt/Rt Center downmix level: Value range 0~7 means 0dB to -7dB
146	i	dp_tSurround_downmix	DolbyPulse encoder param, Lt/Rt Surround downmix level: Value range 3~7 means -3dB to -7dB
147	i	dp_oCenter_downmix	DolbyPulse encoder param, Lo/Ro Center downmix level: Value range 0~7 means 0dB to -7dB
148	i	dp_oSurround_downmix	DolbyPulse encoder param, Lo/Ro Surround downmix level: Value range 3~7 means -3dB to -7dB
149	i	dp_downmix_pref	DolbyPulse encoder param, Downmix preference: <ul style="list-style-type: none"> • 0 - Not indicated • 1 - Prologic preferred • 2 - Stereo downmix preferred • 3 - Prologic II preferred
150	i	dp_surround_mode	DolbyPulse encoder param, Surround mode: <ul style="list-style-type: none"> • 0 - Not indicated • 1 - Surround enabled • 2 - Surround disabled

Mvp.setOutputPgEsOrderConfig

REQUEST MESSAGE FORMAT—mvp.setOutputPgEsOrderConfig

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	
2	i	program_index	
0	i	Num_entries	Number of ESes in the string below
1	s	es_order_string	<p>A string containing the indices of all the ESes in the program corresponding in order of user specified PMT order. The elements in the string are separated by a space. For ex, if a program is 3 ESes with indexes 400, 500 and 600 respectively and the user has specified the order as follows:</p> <ul style="list-style-type: none"> • EsIndex 600 order 1 • EsIndex 400 order 2 • EsIndex 500 order 3 <p>The es_order_string should look like following:</p> <ul style="list-style-type: none"> • “600 400 500” <p>The command for Tsindex 100 and PgIndex 200 should look like following:</p> <ul style="list-style-type: none"> • TsIndex 100 • PgIndex 200 • Num_entries = 3 • Es_order_string = “600 400 500”

RESPONSE MESSAGE FORMAT—mvp.setOutputPgEsOrderConfig

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_OUTPUT_PROGRAM_PMT_ORDER_MOD
1	i	session_id	
2	i	CMD_ID_OUTPUT_PROGRAM_PMT_ORDER_MOD	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String

mvp.getOutputSi

Get output system information table count information

REQUEST MESSAGE FORMAT—mvp.getOutputSi

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	
2	i	pg_index	If program index is 0, it will get TS level system information table

RESPONSE MESSAGE FORMAT—mvp.getOutputSi

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_OUTPUT_SI_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_message	
5	u	number_of_si	

mvp.getOutputSiBulk

Get output system information table bulk operation.

REQUEST MESSAGE FORMAT—mvp.getOutputSiBulk

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	
2	i	pg_index	
3	i	si_start	1 based entry number of the first to be returned
4	i	si_last	1 based entry number of the last to be returned

RESPONSE MESSAGE FORMAT—mvp.getOutputSiBulk

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_OUTPUT_SI_BULK_QUERY
1	i	session_id	
2	i	CMD_ID_OUTPUT_SI_BULK_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_message	

RESPONSE MESSAGE FORMAT—mvp.getOutputSiBulk

Index	Type	Key:Value	Comments
5	i	command_id	
6	i	session_id	
7	i	CMD_ID_OUTPUT_SI_BULK_QUERY	
8	i	return_value	Refer to CMD_RESULT in common_ds.h
9	s	error_message	
10	i	end	1: end of table; 0: otherwise
11	i	n_entries	
n_entries			
0	i	ts_index	The entry of program_si_info.
1	i	pg_index	
2	i	si_index	
3	i	si_table_id	
4	i	si_table_id_extension	
5	i	si_packet_id	
6	i	si_table_status	
7	s	si_desc	

mvp.getOutProgramBulk

Get program element stream information

REQUEST MESSAGE FORMAT—mvp.getOutProgramBulk

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	
2	i	pg_index	
3	i	es_start	1 based entry number of the first to be returned
4	i	es_last	1 based entry number of the last to be returned

RESPONSE MESSAGE FORMAT—mvp.getOutProgramBulk

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_OUTPUT_PROGRAM_BULK_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String

RESPONSE MESSAGE FORMAT—mvp.getOutProgramBulk

Index	Type	Key:Value	Comments
5	i	command_id	
6	i	session_id	
7	i	CMD_ID_OUTPUT_PROGRAM_BULK_QUERY	
8	i	return_value	Refer to CMD_RESULT in common_ds.h
9	s	error_msg	Error message String
10	i	dpiFlag	
11	i	pgSubFlag	
12	i	end : i	<ul style="list-style-type: none"> 1: end of table 0: otherwise
13	i	n_entries	
The n_entries the es_info			
0	i	es_index	
1	i	es_type	
2	i	stream_type	
3	i	pid	ES PID
4	i	pmt_order	
5	i	scrambled	This field is to view scrambled whether it is enabled or disabled.
6	i	sync	

RESPONSE MESSAGE FORMAT—mvp.getOutProgramBulk (Continued)

Index	Type	Key:Value	Comments
7	s	stream_name	
8	i	in_use	<p>The field is to view whether the output program is whether it is in active state or not. If it is in active state, it is indicated as “grooming successfully”. Valid options are:</p> <ul style="list-style-type: none"> • 0=not active • 1=active
9	s	lang_code	
10	s	sub_stream_type	
11	i	is_user_created	
12	i	is_pid_reserved	
13	i	is_order_modified	
14	i	in_pid	<p>—mvp.getOutProgramBulk Return Input PID value</p>

Input TS Messages

This chapter contains the XML-RPC message components for use with VMG input transport stream operations.

In This Chapter:

- “mvp.getVideoInPort” on page 186.
- “mvp.getVideoInPortBulk” on page 187.
- “mvp.getInputTs” on page 189.
- “mvp.setInputTs” on page 190.
- “mvp.deleteInputTs” on page 191.
- “mvp.getInputTsPerType” on page 192.
- “mvp.getInputTsPerTypeBulk” on page 193.
- “mvp.getInputTsBulk” on page 194.

mvp.getVideoInPort

Get TS count at specific port

REQUEST MESSAGE FORMAT—mvp.getVideoInPort

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	slot	Slot number (user slot 1 for 6 chassis and 7 for 14 slot)
2	i	port	unsigned port no. valid range 1 – 10
3	i	tsType	unused

RESPONSE MESSAGE FORMAT—mvp.getVideoInPort

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_INPUT_PORT_QUERY	
3	i	return_value	Return 0 if command is successful; otherwise an error code.
4	s	error_msg	Error message String
5	i	number_of_input_ts	Number of input TS

mvp.getVideoInPortBulk

Get partial TS at specific port from start position to end position

REQUEST MESSAGE FORMAT—mvp.getVideoInPortBulk

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	slot	Slot number
2	i	port	Port number
3	i	bulk_start	TS start number
4	i	bulk_end	TS end number. (difference of start and end is <= 50)
5	i	tsType	unused

RESPONSE MESSAGE FORMAT—mvp.getVideoInPortBulk

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_INPUT_PORT_BULK_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String
5	i	end	1: end of table; 0: otherwise
6	i	number_of_input_ts	Number of return ts
0 to N entries of the following			
0	i	mask	is not being used.
1	i	ts_index	TS index
2	i	input_port.group_slot_id	Slot index
3	i	input_port.group_port_id	Port index
4	s	input_port_u.eth.ip_addr	Ip address – Multicast/Unicast IP address of video stream.
5	s	input_port_u.eth.src_ip_addr	Source IP address
6	i	input_port_u.eth.udp_port	UDP port
7	s	ts_name	TS Name
8	i	number_of_programs	Number of program under input ts
9	i	ts_id	TS ID
10	i	type	TS type
11	i	rtp_enable	The field is to view on Real-Time Transport Protocol configuration. Valid options are: <ul style="list-style-type: none"> • 1 for enable. • 0 for disable

RESPONSE MESSAGE FORMAT—mvp.getVideoInPortBulk (Continued)

Index	Type	Key:Value	Comments
12	i	fec_enable	The field is to view FEC configuration. Valid options are: <ul style="list-style-type: none"> • 1 for enable • 0 for disable
13	i	enableDvbTabProc	Valid options are: <ul style="list-style-type: none"> • 1 for enable • 0 for disable
14	i	orig_netwk_id	
15	i	rpm_enable	Valid options are: <ul style="list-style-type: none"> • 1 for enable • 0 for disable
16	i	enableSdtTableProc	Version 3.0.3. Enable(1) SDT table processing Disable(0) SDT table processing.

mvp.getInputTs

Get input TS by ts index

REQUEST MESSAGE FORMAT—mvp.getInputTs

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	Ts index

Refer to the response session of command getVideoInPortBulk

RESPONSE MESSAGE FORMAT—mvp.getInputTs

Index	Type	Key:Value	Comments

mvp.setInputTs

Create or modify input ts

REQUEST MESSAGE FORMAT—mvp.setInputTs

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	mask	
2	i	ts_index	Use mvp_getnextIndexHint to get the next available TS Index. “mvp_getnextIndexHint i/\${GUI_ID} i/0” command to get TS next available ID.
3	i	rtp_enable	The field is to enable/disable on Real-Time Transport Protocol. Valid options are: <ul style="list-style-type: none"> • 1 for enable • 0 for disable
4	i	fec_enable	The field is to enable/disable FEC. Valid options are: <ul style="list-style-type: none"> • 1 for enable • 0 for disable
5	i	input_port.group_slot_id	Slot index
6	i	input_port.group_port_id	Port index
7	s	input_port_u.eth.ip_addr	Specify multicast/unicast IP address
8	s	input_port_u.eth.src_ip_addr	Source IP address is only valid if the u.eth.ip_addr is defined as multicast IP Address
9	i	input_port_u.eth.udp_port	UDP port
10	s	ts_name	TS Name
11	i	enableDvbTabProc	true/false default :- false
12	i	enableAtscTabProc	true/false default:-false
13	i	modFields	bitmask field Bit Mask for set: <ul style="list-style-type: none"> • VCM_IN_TS_MASK_NAME =1, • VCM_IN_TS_MASK_FEC = 2, • VCM_IN_TS_MASK_SRC_IP = 4, • VCM_IN_TS_MASK_ALL = (VCM_IN_TS_MASK_SRC_IP << 1) – 1
14	i	type	Create (0)/Modify(1)
17	i	rpm_enable	Version 2.2.2. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
18	i	enableSdtTableProc	Version 3.0.3. <ul style="list-style-type: none"> • Enable(1) SDT table processing. • Disable (0) SDT table processing.

RESPONSE MESSAGE FORMAT—mvp.setInputTs

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_INPUT_TS_CONFIG	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String
5	i	ts_index	TS Index

mvp.deleteInputTs

Delete input ts based on ts index.

REQUEST MESSAGE FORMAT—mvp.deleteInputTs

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	TS index

RESPONSE MESSAGE FORMAT—mvp.deleteInputTs

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_INPUT_TS_DELETE	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String

mvp.getInputTsPerType

Get total count of input TS based on the ts type



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getInputTsPerType

Index	Type	Comments	Value Instances/Comments
0	i	ts_type	DVB/MPEG2/ATSC/SCTE

RESPONSE MESSAGE FORMAT—mvp.getInputTsPerType

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_INPUT_TS_PER_TYPE_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String
5	i	number_of_input_ts	

mvp.getInputTsPerTypeBulk

Get input ts bulk operation



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getInputTsPerTypeBulk

Index	Type	Comments	Value Instances/Comments
0	i	ts_type	DVB/MPEG2/ATSC/SCTE
1	i	ts_start	Start entry
2	i	ts_last	End entry

RESPONSE MESSAGE FORMAT—mvp.getInputTsPerTypeBulk

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_INPUT_TS_PER_TYPE_BULK_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String
5	i	end	1: end of table ; 0: otherwise
6	i	number_of_input_ts	
7			N entry
8	i	mask	
9	i	ts_index	TS index
10	i	input_port.slot_id	Slot index
11	i	input_port.port_id	Port index
12	s	input_port_u.eth.ip_addr	Ip address
13	s	input_port_u.eth.src_ip_addr	Source IP address
14	i	input_port_u.eth.udp_port	UDP port
15	s	ts_name	TS Name
16	i	number_of_programs	Number of program under input ts
17	i	ts_id	TS ID
18	i	type	TS type
19	i	rtp_enable	1 for enable. 0 for disable
20	i	fec_enable	1 for enable. 0 for disable
21	i	enableDvbTabProc	
22	i	enableAtscTabProc	

mvp.getInputTsBulk

REQUEST MESSAGE FORMAT—mvp.getInputTsBulk

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	ts_index	TS index
2	i	bulk_start_number	Starting number
3	i	bulk_end_number	Ending number

RESPONSE MESSAGE FORMAT—mvp.getInputTsBulk

Index	Type	Key:Value	Comments
5	i	command_id	
6	i	session_id	
7	i	CMD_ID_INPUT_TS_BULK_QUERY	
8	i	return_value	Refer to CMD_RESULT in common_ds.h
9	s	error_msg	Error message String

RESPONSE MESSAGE FORMAT—mvp.getInputTsBulk

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_INPUT_TS_BULK_QUERY	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String
5	i	end	
6	i	number_of_programs	Number of program
		Number of Program from 0 to N	
0	i	program_index	Program Index
1	i	program_number	Program number
2	s	program_name	Program name
3	i	number_of_es	Number of ES
4	i	pmt_pid	PMT PID
5	i	pcr_pid	PCR PID
6	i	scrambled	This field is to view scrambled whether it is enabled(1) or disabled(0). Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
7	i	bitrate	
8	i	major_channel	This field is only valid for TS Type ATSC.

RESPONSE MESSAGE FORMAT—mvp.getInputTsBulk (Continued)

Index	Type	Key:Value	Comments
9	i	minor_channel	This field is only valid for TS Type ATSC.
10	i	bitrate_on_off	
11	i	cc_err_cnt	
12	i	cc_err_duration	
13	i	si_tables	
14	i	sig_level	This field is to view the Program status whether it is disabled(0) or enabled(1). Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
15	i	is_ghost_prog	This field is to identify whether the ghost program is created by user or is created by system. Valid options are: <ul style="list-style-type: none"> • createdBySystem(0) • createdByUser(1)
16	i	backup_specified	The field is to identify whether it has backup Input Program Redundancy. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
17	i	backup_ts_index	If backup_specified is enabled, this field is for Backup input TS Index.
18	i	backup_pg_index	If backup_specified is enabled, this field is for Backup input Program Index.
19	i	auto_rec	If backup_specified is enabled, this field is to set the Backup failover to be Automatic recovery or Manual recovery. <ul style="list-style-type: none"> • AutoRecovery(0) • ManualRecovery(1)
20	i	backup_pg_num	If backup_specified is enabled, this field is for Backup input Program number.
21	i	backup_port_id	If backup specified is enabled, this field is for Backup input GIGE Port number.
22	i	has_still_pic	Version 2.4.0
23	i	backup_pg_status	Version 2.4.0. If backup_specified is enabled, this field presents as Program Redundancy Active Status to identify whether the Primary or Backup Program is in active state. Valid options are: <ul style="list-style-type: none"> • none(0) • primaryProgramActive(1) • backupProgramActive(2)

Output TS Messages

This chapter contains the XML-RPC message components for use with VMG output transport stream operations.

In This Chapter:

- “mvp.getMVRTSObjectId” on page 197.
- “mvp.setOutputTs” on page 198.
- “mvp.getOutputTs” on page 212.
- “mvp.getVideoOutPort” on page 217.
- “mvp. getVideoOutPortBulk” on page 218.
- “mvp.deleteOutputTs” on page 223.

mvp.getMBRTSObjectld

This method is used with VMG Version 2.2.2 and higher, to get the next available MBR TS Index.

REQUEST MESSAGE FORMAT—mvp.getMBRTSObjectld

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	object_type	It is a bitmask to query the Index from VP processor.

RESPONSE MESSAGE FORMAT—mvp.getMBRTSObjectld

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_MBR_TS_OBJECT_INDEX_CREATE
1	i	session_id	
2	i	mbr_ts_object_id	Return value of MBR TS Index
3	i	return_value	Refer to CMD_RESULT in common_ds.h

mvp.setOutputTs

Create or update output ts.

- Allowable output TS ts_types are MPEG2, DVB, ATSC and SCTE
- VMG Slot types are Gige, 10 Gige or ASI.



Note: *The ASI port type struct is not currently defined.*

REQUEST MESSAGE FORMAT—mvp.setOutputTs—MPEG2 / SCTE TS Parameters

Index	Type	Comments	Value Instances/Comments
0	i	transaction_id/gui_session_id	
1	i	ts_info.mask	
2	i	ts_info.ts_index	The ts_index—generated by host—is a unique ID. Use “mvp_getnextIndexHint i/{GUI_ID} i/2” command to get TS next available ID.
3	i	ts_info.ts_type	Valid options are: <ul style="list-style-type: none"> • 1:MPEG2 • 2:DVB • 3:ATSC • 4:SCTE
4	i	ts_info.bit_rate	The bitrate is based on the type of screen_mode: <ul style="list-style-type: none"> • If screen mode is OUTPUT_IPTV(1) for standard TS and MBR-PIP TS, the bitrate range is between .1 to 160 Mbps. • If screen mode is OUTPUT_PC_MOBIL(2) for MBR TS, bitrate range is between .1 and .5 Mbps.
5	i	ts_info.reserved_bandwidth	
6	i	ts_info.ts_id	The TS ID is 0 for system to create the TS ID. The valid range is between 0 and 65535.
7	i	ts_info.network_pid	The network PID is between 16 and 8175.
8	i	ts_info.pass_through	-1 is pass_through
9	s	ts_info.ts_name	This field is optional to configure TS name.
10	i	output_port.slot_id	Active NPM Card Slot. For VMG 6 or VMG 8,: <ul style="list-style-type: none"> • slot_id=1 for NPM card on slot 1 • slot_id=2 for NPM Card on slot 2 For VMG 14,: <ul style="list-style-type: none"> • slot_id=7 for NPM Card on slot 7 • slot_id=8 for NPM Card on slot 8

REQUEST MESSAGE FORMAT—mvp.setOutputTs—MPEG2 / SCTE TS Parameters (Continued)

Index	Type	Comments	Value Instances/Comments
11	i	output_port.port_id	Port_id is bitmask to contain the shelf/slot/port. <ul style="list-style-type: none"> • GIGE 1: port_id =277090305 • GIGE 2: port_id =277094401 • GIGE 3: port_id =277098497 • GIGE 4: port_id =277102593 • GIGE 5: port_id =277106689 • GIGE 6: port_id =277110785 • GIGE 7: port_id =277114881 • GIGE 8: port_id =277118977
12	s	eth.dest_ip	The output Destination IP Address is IPv4 Address. Multicast IP Address range is between 224.0.0.1 and 239.255.255.255.
13	s	eth.dest_net_mask	<ul style="list-style-type: none"> • If multicast destination IP Address is configured, this field is 0.0.0.0. • If unicast destination IP Address is configured, this field is required to provide.
14	s	eth.dest_mac	<ul style="list-style-type: none"> • If ARP is disabled, provide dest_mac field. • If ARP is enabled, dest_mac is not mandatory field.
15	i	eth.udp_port	The output UDP port field is between 1 and 65535.
16	i	eth.arp_code	If arp_code is -1, then destination mac is
17	i	eth.vlanEnable	vlanEnable field is always zero.
18	i	eth.vlan_id	vlan_id field is always zero.
19	i	eth.diffServe	diffServe Code is always zero.
20	i	eth.diffServerEnable	diffServe is always zero.
21	i	eth.rtpEnable	Enable/disable Real-Time Transport Protocol. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
22	i	dpi_flag	Only valid if it is transrating TS: enable/disable TS DPI.Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
23	i	p_dpiFlag	Only valid if it is transrating TS: enable/disable Program DPI.Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
24	i	eth.fecEnable	Only valid if it is transrating TS: enable/disable FEC. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
25	i	eth.fecColumn	Only valid if the fecEnable field is enabled. The valid range is between 4 and 20. From GUI, the label is 'D'.
26	i	eth.fecRow	Only valid if the fecEnable field is enabled. The valid range is between 1 and 20. From GUI, the label is 'L'.

REQUEST MESSAGE FORMAT—mvp.setOutputTs—MPEG2 / SCTE TS Parameters (Continued)

Index	Type	Comments	Value Instances/Comments
27	i	ts_info.large_buffer	Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
28	i	ts_info.spts_only	The SPTS is standard for Single Program Transport stream. <ul style="list-style-type: none"> • If it is transcoding Transport stream, the spts_only field is always configured as "1". <ul style="list-style-type: none"> - If it is transrating Transport stream, the spts_only field can be enable/disable. - If enable is configured, the TS supports 1 Program only. - If the field is disabled, the TS can support multiple programs. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
29	i	ts_info.bitrate_threshold	Default is ½ of configured bitrate for the output TS. The value cannot exceed the bitrate configured for the output TS.
30	i	cmd.modFileds	
31	i	cmd.type	<ul style="list-style-type: none"> • Create(0) • Modify(1)
32	i	ts_info.transCodeEn	Version 2.2.2/ Version 2.3.0 : enable/ disable Transcoding. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
33	i	screen_mode	Version 2.2.2/ Version 2.3.0 The screen_mode is as Video transcoding or Video/ Audio Transcoding. <ul style="list-style-type: none"> • When the field is configured as OUTPUT_IPTV(1), a TCM card is required. • When the field is configured as OUTPUT_PC_MOBIL(2), TCM and AMP cards are required. Valid options are: <ul style="list-style-type: none"> • OUTPUT_IPTV(1) • OUTPUT_PC_MOBIL(2)
34	i	mbr_ts_id	Version 2.2.2/ Version 2.3.0 : unique number obtained from mvp.getMBrtsid at creation. <ul style="list-style-type: none"> • When the mbr_ts_id is 0, it does not have any grouping. • When the mbr_ts_id is higher than 1, it belongs to a grouping.
35	i	mbr_group_type	Version 2.2.2 : Type of MBR group, as one of the following: <ul style="list-style-type: none"> • MBR TS(0), • MBR-PIP TS(1)

REQUEST MESSAGE FORMAT—mvp.setOutputTs—MPEG2 / SCTE TS Parameters (Continued)

Index	Type	Comments	Value Instances/Comments
36	i	mbr_group_sub_type	Version 2.2.2: Transport stream type, as either Main (Full Resolution) TS or PIP (PIP resolution). Valid options are: <ul style="list-style-type: none"> • MAIN(0), • PIP(1)
37	i	input_video_std	Version 2.4.0: input Video standard format, as one of the following options: <ul style="list-style-type: none"> • NTSC(1) • PAL(2)
38	i	input_video_resolution_class	Version 2.4.0: Input Video resolution Class (GUI named as Encoding Template), as one of the following options: <ul style="list-style-type: none"> • SD(1) • HD(2)
39	i	input_video_encoding_format	Version 2.4.0: Incoming video encoding format (GUI named as Video Type), as one of the following options: <ul style="list-style-type: none"> • mpeg_2(2), • h.264(3)
40	i	output_video_encoding_format	Version 2.4.0: Outgoing video encoding format (GUI named as Video Type), as one of the following options: <ul style="list-style-type: none"> • mpeg_2(2), • h.264(3)
41	i	async_data_bandwidth	Version 3.0.0_NPM1: Data bitrate. The value cannot be higher than TS bitrate.
43	i	output_video_resolution_class	Version 3.0.0_NPM1: Output Video Resolution Class, as one of the following options: <ul style="list-style-type: none"> • SD(1) • HD(2) • PIP(3)
43	i	max_rate	Version 3.0.0_NPM1: Video bitrate in Mbps. For example, set max_rate to 15000000 as 15 Mbps. 0 for auto rate.
44	i	Generate SDT	<ul style="list-style-type: none"> • Enable(1) SDT features • Disable(0) SDT features
45	s	dest_ip_red	Version 3.1.0_NPM1
46	s	net_mask_red	Version 3.1.0_NPM1
47	s	dest_mac_red	Version 3.1.0_NPM1
48	i	ts_info.arp_code_red	Version 3.1.0_NPM1

DVB Transport Type Additional Parameters

REQUEST MESSAGE FORMAT—mvp.setOutputTs—DVB Transport—Additional Parameters

Index	Type	Comments	Value Instances/Comments
0	i	Transaction id/gui_session_id	
1	i	ts.info.mask	
2	i	ts.info.ts_index	The ts_index, that are generated by host, is generated unique ID. Use "mvp_getnextIndexHint i/\${GUI_ID} i/ 2" command to get TS next available ID.
3	i	ts.info.ts_type	0:MPEG2; 1:DVB; 2:ATSC; 3:SCTE
4	i	ts.info.bit_rate	The bitrate, based on the type of screen_mo: <ul style="list-style-type: none"> If screen mode is OUTPUT_IPTV(1) for standard TS and MBR-PIP TS, the range of bitrate is between .1 to 160 Mbps. If screen mode is OUTPUT_PC_MOBIL(2) for MBR TS, the range of bitrate is between .1 and .5 Mbps.
5	i	ts.info.reserved_bandwidth	
6	i	ts.info.ts_id	The TS ID is 0 for system to create the TS ID. The valid range is between 0 and 65535.
7	i	ts.info.network_pid	The network PID is between 16 and 8175.
8	i	ts.info.pass_through	-1 is pass_through
9	s	ts.info.ts_name	Options: configure transport stream name.
10	i	output_port.slot_id	Active NPM Card Slot. For VMG 6 or VMG 8: <ul style="list-style-type: none"> slot_id=1 for NPM card on slot 1 slot_id=2 for NPM Card on slot 2 For VMG 12, <ul style="list-style-type: none"> slot_id=7 for NPM Card on slot 7 slot_id=8 for NPM Card on slot 8
11	i	output_port.port_id	Port_id is bitmask to contain the shelf/slot/port: <ul style="list-style-type: none"> GIGE 1: port_id =277090305 GIGE 2: port_id =277094401 GIGE 3: port_id =277098497 GIGE 4: port_id =277102593 GIGE 5: port_id =277106689 GIGE 6: port_id =277110785 GIGE 7: port_id =277114881 GIGE 8: port_id =277118977
12	s	eth.dest_ip	<ul style="list-style-type: none"> Output Destination IP Address is IPv4 Address. Multicast IP Address range is between 224.0.0.1 and 239.255.255.255.
13	s	eth.dest_net_mask	<ul style="list-style-type: none"> If multicast destination IP Address is configured, this field is 0.0.0.0. If unicast destination IP Address is configured, this field is required to provide.
14	s	eth.dest_mac	<ul style="list-style-type: none"> If ARP is disabled, provide dest_mac field. If ARP is enabled, dest_mac is not mandatory field.
15	i	eth.udp_port	The output UDP port field is between 1 and 65535.

REQUEST MESSAGE FORMAT—mvp.setOutputTs—DVB Transport—Additional Parameters (Continued)

Index	Type	Comments	Value Instances/Comments
16	i	eth.arp_code	If arp_code is -1, then destination mac is
17	i	eth.vlanEnable	vlanEnable field is always zero.
18	i	eth.vlan_id	Vlan_id field is always zero.
19	i	eth.diffServe	diffServe Code is always zero.
20	i	eth.diffServerEnable	diffServe is always zero.
21	i	eth.rtpEnable	Enable or disable Real-Time Transport Protocol. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
22	i	dvb.network_id	The network PID is between 16 and 8175.
23	i	dvb.modulation_mode	Valid options are: <ul style="list-style-type: none"> • SCTE_64_QAM(1) • SCTE_256_QAM(2)
24	i	dvb.nit_source	0 - disabled; tsIndex otherwise default=0
25	i	dvb.tdt_tot_source	0 - disabled; tsIndex otherwise default=0
26	i	dvb.nitLocal	Set to TRUE if it is local NIT else FALSE
27	i	dvb.totLocal	Set to TRUE if it is local NIT else FALSE
28	i	dvb.sdt_source	0 - disabled; 1 - locally generated default=1
29	i	dvb.eit_source	0 - disabled; 1 - from groomed input default=1
30	i	dvb.orig_network_id	The original network PID is between 16 and 8175.
31	i	dpiFlag	Only valid if transrating TS: enable/disable TS DPI: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
32	i	p_dpiFlag	Only valid if transrating TS: enable/disable Program DPI: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
33	i	eth.fecEnable	Only valid if transrating TS:enable/disable FEC: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
34	i	eth.fecColumn	Only valid if the fecEnable field is enabled. The valid range is between 4 and 20. From GUI, the label is 'D'.
35	i	eth.fecRow	Only valid if the fecEnable field is enabled. The valid range is between 1 and 20. From GUI, the label is 'L'.
36	i	cmd.ts_info.large_buffer	<ul style="list-style-type: none"> • Disable(0) • Enable(1)

REQUEST MESSAGE FORMAT—mvp.setOutputTs—DVB Transport—Additional Parameters (Continued)

Index	Type	Comments	Value Instances/Comments
37	i	cmd.ts_info.spts_only	<p>The SPTS is standard for Single Program Transport stream.</p> <ul style="list-style-type: none"> If it is transcoding Transport stream, the spts_only field is always configured as “1”. If it is transrating Transport stream, the spts_only field can be enable/disable. If enable is configured, the TS is only support 1 single Program. If the field is disabled, the TS can support multiple programs. <p>Valid options are:</p> <ul style="list-style-type: none"> Disable(0) Enable(1)
38	i	cmd.ts_info. Bitrate_threshold	<p>Default is ½ of configured bitrate for the output TS. The value cannot exceed the bitrate configured for the output TS.</p>
39	i	dvbModFields	
40	i	cmd.modFilelds	Bit Mask
41	i	cmd.type	create(0)/modify(1)
42	i	ts_info.transCodeEn	<p>Version 2.2.2/ Version 2.3.0: enable/ disable Transcoding. Valid options are:</p> <ul style="list-style-type: none"> Disable(0) Enable(1)
43	i	screen_mode	<p>Version 2.2.2/ Version 2.3.0: either Video transcoding or Video/Audio Transcoding.</p> <ul style="list-style-type: none"> When the field is configured as OUTPUT_IPTV(1), it requires to have TCM card. When the field is configured as OUTPUT_PC_MOBIL(2), it requires to have TCM and AMP card. <p>Valid options are:</p> <ul style="list-style-type: none"> OUTPUT_IPTV(1)/ OUTPUT_PC_MOBIL(2)

REQUEST MESSAGE FORMAT—mvp.setOutputTs—DVB Transport—Additional Parameters

Index	Type	Comments	Value Instances/Comments
44	i	mbr_ts_id	<p>Version 2.2.2/ Version 2.3.0: Unique number that can get from mvp.getMbrTsid at creation.</p> <ul style="list-style-type: none"> When the mbr_ts_id is 0, it does not have any grouping. When the mbr_ts_id is higher than 1, it belongs to a grouping.
45	i	mbr_group_type	<p>Version 2.2.2: MBR group type, as one of the following options:</p> <ul style="list-style-type: none"> MBR TS(0), MBR-PIP TS(1)

REQUEST MESSAGE FORMAT—mvp.setOutputTs—DVB Transport—Additional Parameters (Continued)

Index	Type	Comments	Value Instances/Comments
46	l	mbr_group_sub_type	Version 2.2.2: Transport stream, as either Main (Full Resolution) TS or PIP (PIP resolution). <ul style="list-style-type: none"> MAIN(0), PIP(1)
47	i	input_video_std	Version 2.5.0: Input Video standard format, as one of the following options: <ul style="list-style-type: none"> NTSC(1) PAL(2)
48	i	input_video_resolution_class	Version 2.5.0: Video resolution Class (GUI named as Encoding Template), as one of the following options: <ul style="list-style-type: none"> SD(1) HD(2)
49	i	input_video_encoding_format	Version 2.5.0: Incoming video encoding format (GUI named as Video Type), as one of the following options: <ul style="list-style-type: none"> mpeg_2(2), h.264(3)
50	i	output_video_encoding_format	Version 2.5.0 : Outgoing video encoding format (GUI named as Video Type), as one of the following options: <ul style="list-style-type: none"> mpeg_2(2), h.264(3)
51	i	async_data_bandwidth	Version 3.0.0_NPM1: Data bitrate. The value cannot be higher than TS bitrate.
52	i	output_video_resolution_class	Version 3.0.0_NPM1: Output Video Resolution Class, as one of the following options: <ul style="list-style-type: none"> SD(1) HD(2) PIP(3)
53	i	max_rate	Version 3.0.0_NPM1: Video bitrate, in Mbps. For example, set max_rate to 15000000 as 15 Mbps.
54	i	Generate SDT	<ul style="list-style-type: none"> Enable(1) SDT features Disable (0) SDT features
55	s	dest_ip_red	Version 3.1.0_NPM1. Redundant Dest IP address
56	s	dest_net_mask_red	Version 3.1.0_NPM1. Redundant Dest Net address mask.
57	s	dest_mac_red	Version 3.1.0_NPM1. Redundant Dest MAC address
58	i	arp_code_red	Version 3.1.0_NPM1. Redundant ARP code.

ATSC Transport type Additional Parameters

REQUEST MESSAGE FORMAT—ATSC Transport—Additional Parameters

Index	Type	Comments	Value Instances/Comments
	i	Transaction id/ gui_session	
	i	ts_info.mask	
	i	ts_info.ts_index	The ts_index—generated by host—which is unique ID. Use “mvp_getnextIndexHint i/\${GUI_ID} i/2” command to get TS next available ID.
	i	ts_info.ts_type	Valid options are: <ul style="list-style-type: none"> • 1:MPEG2 • 2:DVB • 3:ATSC • 4:SCTE
	i	ts_info.bit_rate	The bitrate, based on the type of screen_mode: <ul style="list-style-type: none"> • If screen mode is OUTPUT_IPTV(1) for standard TS and MBR-PIP TS, the range of bitrate is between .1 to 160 Mbps. • If screen mode is OUTPUT_PC_MOBIL(2) for MBR TS, the range of bitrate is between .1 and .5 Mbps.
	i	ts_info.reserved_bandwidth	
	i	ts_info.ts_id	The TS ID is 0 for system to create the TS ID. The valid range is between 0 and 65535.
	i	ts_info.network_pid	The network PID is between 16 and 8175.
	i	ts_info.pass_through	-1 is pass_through
	s	ts_info.ts_name	This field is optional to configure TS name.
	i	output_port.slot_id	Active NPM Card Slot. For VMG 6 or VMG 8: <ul style="list-style-type: none"> • slot_id=1 for NPM card on slot 1 • slot_id=2 for NPM Card on slot 2 For VMG 14: <ul style="list-style-type: none"> • slot_id=7 for NPM Card on slot 7 • slot_id=8 for NPM Card on slot 8
	i	output_port.port_id	Port_id is bitmask to contain the shelf/slot/port: <ul style="list-style-type: none"> • GIGE 1: port_id =277090305 • GIGE 2: port_id =277094401 • GIGE 3: port_id =277098497 • GIGE 4: port_id =277102593 • GIGE 5: port_id =277106689 • GIGE 6: port_id =277110785 • GIGE 7: port_id =277114881 • GIGE 8: port_id =277118977
	s	eth.dest_ip	The output Destination IP Address is IPv4 Address. Multicast IP Address range is between 224.0.0.1 and 239.255.255.255.

REQUEST MESSAGE FORMAT—ATSC Transport—Additional Parameters (Continued)

Index	Type	Comments	Value Instances/Comments
	s	eth.dest_net_mask	If multicast destination IP Address is configured, this field is 0.0.0.0. If unicast destination IP Address is configured, this field is required to provide.
	s	eth.dest_mac	<ul style="list-style-type: none"> If ARP is disabled, provide dest_mac field. If ARP is enabled, dest_mac is not mandatory field.
	i	eth.udp_port	The output UDP port field is between 1 and 65535.
	i	eth.arp_code	vlanEnable field is always zero.
	i	eth.vlanEnable	Vlan_id field is always zero.
	i	eth.vlan_id	diffServe Code is always zero.
	i	eth.diffServe	diffServe is always zero.
	i	eth.diffServerEnable	<p>The rtpEnable field is to turn on Real-Time Transport Protocol. Valid options are:</p> <ul style="list-style-type: none"> Disable(0) Enable(1)
	i	eth.rtpEnable	vlanEnable field is always zero.
	i	atsc.eit0_pid	The valid range is between 48 and 8175.
	i	atsc.eit1_pid	The valid range is between 48 and 8175.
	i	atsc.eit2_pid	The valid range is between 48 and 8175.
	i	atsc.eit3_pid	The valid range is between 48 and 8175.
	i	atsc.eit0_interval	The valid range is between 10 and 500 in ms
	i	atsc.eit1_interval	The valid range is between 1000 and 3000 in ms
	i	atsc.eit2_interval	The valid range is between 30000 and 60000 in ms
	i	atsc.eit3_interval	The valid range is between 30000 and 60000 in ms
	i	atsc.mgt_interval	The valid range is between 10 and 150 msecs.
	i	atsc.cvct_interval	The valid range is between 10 and 400 in msec.
	i	atsc.rrt_interval	-1
	i	atsc.stt_interval	-1
	i	atsc.modulation_mode	<p>Valid options are: as follows:</p> <ul style="list-style-type: none"> Analog (1), SCTE_64_QAM(2), SCTE_256_QAM(3), ATSC_8_VSB (4), ATSC_16_VSB(5)
	i	atsc.stt_source	
	i	atsc.rrt_source	
	i	dpiFlag	<p>Only valid if ransrating TS: enable/disable TS DPI. Valid options are:</p> <ul style="list-style-type: none"> Disable(0) Enable(1)
	i	p_dpiFlag	<p>Only valid if transrating TS: enable/disable Program DPI. Valid options are:</p> <ul style="list-style-type: none"> Disable(0) Enable(1)

REQUEST MESSAGE FORMAT—ATSC Transport—Additional Parameters (Continued)

Index	Type	Comments	Value Instances/Comments
	i	eth.fecEnable	Only valid if transrating TS: enable/disable FEC. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
	i	eth.fecColumn	Only valid if the fecEnable field is enabled. The valid range is between 4 and 20. From GUI, the label is 'D'.
	i	eth.fecRow	Only valid if the fecEnable field is enabled. The valid range is between 1 and 20. From GUI, the label is 'L'.
	i	ts_info.large_buffer	<ul style="list-style-type: none"> • Disable(0) • Enable(1)
	i	ts_info.spts_only	<p>The SPTS is standard for Single Program Transport stream.</p> <ul style="list-style-type: none"> • If it is transcoding Transport stream, the spts_only field is always configured as "1". • If it is transrating Transport stream, the spts_only field can be enable/disable. <ul style="list-style-type: none"> - If enable is configured, the TS supports only 1 Program. - If the field is disabled, the TS can support multiple programs. <p>Valid options are:</p> <ul style="list-style-type: none"> • Disable(0) • Enable(1)
	i	ts_info.bitrate_threshold	Default is ½ of configured bitrate for the output TS. The value cannot exceed the bitrate configured for the output TS.
	i	ts_info.modFields	Bit Mask Field
	i	ts_info.outTsTypeMask.atscModFields	
	i	type	create/modify
	i	ts_info.transCodeEn	<p>Version 2.2.2/ Version 2.3.0: enable/ disable Transcoding. Valid options are:</p> <ul style="list-style-type: none"> • Disable(0) • Enable(1)
	i	screen_mode	<p>Version 2.2.2/ Version 2.3.0: Screen_mode, as either Video transcoding or Video/Audio Transcoding.</p> <ul style="list-style-type: none"> • When the field is configured as OUTPUT_IPTV(1), a TCM card is required. • When the field is configured as OUTPUT_PC_MOBIL(2) the TCM and AMP cards are required. <p>Valid options are:</p> <ul style="list-style-type: none"> • OUTPUT_IPTV(1) • OUTPUT_PC_MOBIL(2)

REQUEST MESSAGE FORMAT—ATSC Transport—Additional Parameters (Continued)

Index	Type	Comments	Value Instances/Comments
	i	mbr_ts_id	Version 2.2.2/ Version 2.3.0: Unique number obtained from mvp.getMBRtsid at creation. <ul style="list-style-type: none"> When the mbr_ts_id is 0, it does not have any grouping. When the mbr_ts_id is higher than 1, it belongs to a grouping.
	i	mbr_group_type	Version 2.2.2: MBR group type, as one of the following options: <ul style="list-style-type: none"> MBR TS(0), MBR-PIP TS(1)
	i	Mbr_group_sub_type	Version 2.2.2: Transport stream, as either Main (Full Resolution) TS or PIP (PIP resolution). Valid options are: <ul style="list-style-type: none"> MAIN(0), PIP(1)
	i	input_video_std	Version 2.5.0: Input Video standard format, as one of the following options: <ul style="list-style-type: none"> NTSC(1) PAL(2)
	i	input_video_resolution_class	Version 2.5.0: Input Video resolution Class (GUI named as Encoding Template), as one of the following options: <ul style="list-style-type: none"> SD(1) HD(2)
	i	input_video_encoding_format	Version 2.5.0: Incoming video encoding format (GUI named as Video Type), as one of the following options: <ul style="list-style-type: none"> mpeg_2(2), h.264(3)
	i	input_video_std	Version 2.5.0: Input Video standard format, as one of the following options: <ul style="list-style-type: none"> NTSC(1) PAL(2)
	i	input_video_resolution_class	Version 2.5.0: Input Video resolution Class (GUI named as Encoding Template), as one of the following options: <ul style="list-style-type: none"> SD(1) HD(2)
	i	input_video_encoding_format	Version 2.5.0: Incoming video encoding format (GUI named as Video Type), as one of the following options: <ul style="list-style-type: none"> mpeg_2(2), h.264(3)

REQUEST MESSAGE FORMAT—ATSC Transport—Additional Parameters (Continued)

Index	Type	Comments	Value Instances/Comments
	i	output_video_encoding_format	Version 2.5.0: Outgoing video encoding format (GUI named as Video Type), as one of the following options: <ul style="list-style-type: none"> • mpeg_2(2), • h.264(3)
	i	async_data_bandwidth	Version 3.0.0_NPM1: Data bitrate. The value cannot be higher than TS bitrate.
	i	output_video_resolution_class	Version 3.0.0_NPM1: Output Video Resolution Class, as one of the following options: <ul style="list-style-type: none"> • SD(1) • HD(2) • PIP(3)
	i	max_rate	Version 3.0.0_NPM1: Video bitrate, in Mbps. For example, set max_rate to 15000000 as 15 Mbps. 0 for auto rate.
	i	Generate SDT	<ul style="list-style-type: none"> • Enable(1) SDT features • Disable(0) SDT features

Bit Mask:

```
typedef enum
{
    VCM_OUT_TS_MASK_NAME =1,
    VCM_OUT_TS_MASK_TS_DPI=2,
    VCM_OUT_TS_MASK_PG_DPI=4,
    VCM_OUT_TS_MASK_FEC=8,
    VCM_OUT_TS_MASK_BIT_RATE=16,
    VCM_OUT_TS_MASK_TS_ID=32,
    VCM_OUT_TS_MASK_UNICAST=64,
    VCM_OUT_TS_MASK_ARP=128,
    VCM_OUT_TS_MASK_SUBNET=256,
    VCM_OUT_TS_MASK_DEST_MAC=512,
    VCM_OUT_TS_MASK_TYPE=1024,
    VCM_OUT_TS_MASK_NET_PID=2048,

    VCM_OUT_TS_MASK_ALL= (VCM_OUT_TS_MASK_BIT_RATE << 1) - 1
}

typedef enum
{
    VCM_OUT_TS_ATSC_MASK_EIT0_PID=1,
    VCM_OUT_TS_ATSC_MASK_EIT1_PID=2,
    VCM_OUT_TS_ATSC_MASK_EIT2_PID=4,
    VCM_OUT_TS_ATSC_MASK_EIT3_PID=8,
    VCM_OUT_TS_ATSC_MASK_EIT0_INTV=16,
```

```

VCM_OUT_TS_ATSC_MASK_EIT1_INTV=32,
VCM_OUT_TS_ATSC_MASK_EIT2_INTV=64,
VCM_OUT_TS_ATSC_MASK_EIT3_INTV=128,
VCM_OUT_TS_ATSC_MASK_MOD_MODE=256,
VCM_OUT_TS_ATSC_MASK_MGT_INTV=512,
VCM_OUT_TS_ATSC_MASK_CVCT_INTV=1024,
VCM_OUT_TS_ATSC_MASK_RRT_SRC=2048,
VCM_OUT_TS_ATSC_MASK_STT_SRC=4096,

VCM_OUT_TS_ATSC_MASK_ALL= (VCM_OUT_TS_ATSC_MASK_STT_SRC << 1) - 1
}vcmOutTsAtscCfgMask_e;

typedef enum {
    OUT_TS_DVBCFGM_NONE = 0,
    OUT_TS_DVBCFGM_NW_ID = (1 << 0),
    OUT_TS_DVBCFGM_ORIG_NW_ID = (1 << 1),
    OUT_TS_DVBCFGM_MOD_MODE = (1 << 2),
    OUT_TS_DVBCFGM_NIT_SRC = (1 << 3),
    OUT_TS_DVBCFGM_TDT_TOT_SRC = (1 << 4),
    OUT_TS_DVBCFGM_SDT_SRC = (1 << 5),
    OUT_TS_DVBCFGM_EIT_SRC = (1 << 6),

    /* Add new masks prior to this line and increment
    * max accordingly */
    OUT_TS_DVBCFGM_MAX = (1 << 7),
    OUT_TS_DVBCFGM_ALL = (OUT_TS_DVBCFGM_MAX - 1)
} outTsDvbCfgMask_e;

```

RESPONSE MESSAGE FORMAT—ATSC Transport

Index	Type	Key:Value	Comments
	i	command_id	
	i	session_id	
	i	CMD_ID_OUTPUT_TS_CONFIG :	
	i	return_value	Refer to CMD_RESULT in common_ds.h
	s	error_msg	Error message String
	i	ts_index	

mvp.getOutputTs

Get output TS by TS index.

REQUEST MESSAGE FORMAT—mvp.getOutputTs

Index	Type	Comments	Value Instances/Comments
	i	gui_request_id	
	i	ts_index	TS Index

RESPONSE MESSAGE FORMAT—mvp.getOutputTs

Index	Type	Key:Value	Comments
	i	command_id	
	i	session_id	
	i	CMD_ID_OUTPUT_TS_QUERY	
	i	return_value	Refer to CMD_RESULT in common_ds.h
	s	error_msg	Error message String
	i	mask	
	i	ts_index	TS Index
	i	ts_type	
	i	bit_rate	
	i	reserved_bandwidth	
	i	ts_id	TS ID
	i	network_pid	The network PID is between 16 and 8175.
	i	pass_through	-1 is pass_through
	i	number_of_programs	Number of Program
	s	ts_name	
	i	output_port.slot_id	Active NPM Card Slot. For VMG 6 or VMG 8: <ul style="list-style-type: none"> slot_id=1 for NPM card on slot 1 slot_id=2 for NPM Card on slot 2 For VMG 14: <ul style="list-style-type: none"> slot_id=7 for NPM Card on slot 7 slot_id=8 for NPM Card on slot 8
	i	output_port.port_id	Port_id is bitmask to contain the shelf/slot/port. <ul style="list-style-type: none"> GIGE 1: port_id =277090305 GIGE 2: port_id =277094401 GIGE 3: port_id =277098497 GIGE 4: port_id =277102593 GIGE 5: port_id =277106689 GIGE 6: port_id =277110785 GIGE 7: port_id =277114881 GIGE 8: port_id =277118977

RESPONSE MESSAGE FORMAT—mvp.getOutputTs (Continued)

Index	Type	Key:Value	Comments
	s	eth.destination_ip	The output Destination IP Address is IPv4 Address. Multicast IP Address range is between 224.0.0.1 and 239.255.255.255.
	s	eth.destination_netmask	<ul style="list-style-type: none"> If multicast destination IP Address is configured, this field is 0.0.0.0. If unicast destination IP Address is configured, this field is required to provide.
	s	eth.destination_mac	<ul style="list-style-type: none"> If ARP is disabled, provide dest_mac field. If ARP is enabled, dest_mac is not mandatory field.
	i	eth.udp_port	The output UDP port field is between 1 and 65535.
	i	eth.arp_code	
	i	eth.vlan_enable	vlan_enable field is always zero.
	i	eth.vlan_id	vlan_id field is always zero.
	i	eth.diffServe	diffServe Code is always zero.
	i	eth.diffServer_enable	diffServe is always zero.
	i	eth.rtp_enable	View Real-Time Transport Protocol configuration.
	i	eth.fec_enable	<p>This fecEnable field is only valid if it is transrating TS. The field is to enable/disable FEC. Valid options are:</p> <ul style="list-style-type: none"> Disable(0) Enable(1)
	i	eth.fec_row	<p>Only valid if the fecEnable field is enabled. The valid range is between 1 and 20. From GUI, the label is 'L'.</p>
	i	eth.fec_column	<p>Only valid if the fecEnable field is enabled. The valid range is between 4 and 20. From GUI, the label is 'D'.</p>
	i	dvb.network_id	The network PID is between 16 and 8175.
	i	dvb.modulation_mode	<p>Valid options are:</p> <ul style="list-style-type: none"> SCTE_64_QAM(1) SCTE_256_QAM(2),
	i	dvb.nit_source	0 - disabled; tsIndex otherwise default=0
	i	dvb.tdt_tot_source	0 - disabled; tsIndex otherwise default=0
	i	dvb.nitLocal	Set to TRUE if it is local NIT else FALSE
	i	dvb.totLocal	Set to TRUE if it is local NIT else FALSE
	i	dvb.sdt_source	0 - disabled; 1 - locally generated default=1
	i	dvb.eit_source	0 - disabled; 1 - from groomed input default=1
	i	dvb.orig_network_id	The original network PID is between 16 and 8175.
	i	atsc.eit0_pid	The valid range is between 48 and 8175.
	i	atsc.eit1_pid	The valid range is between 48 and 8175.
	i	atsc.eit2_pid	The valid range is between 48 and 8175.
	i	atsc.eit3_pid	The valid range is between 48 and 8175.
	i	atsc.eit0_interval	The valid range is between 10 and 500 in ms
	i	atsc.eit1_interval	The valid range is between 1000 and 3000 in ms

RESPONSE MESSAGE FORMAT—mvp.getOutputTs (Continued)

Index	Type	Key:Value	Comments
	i	atsc.eit2_interval	The valid range is between 30000 and 60000 in ms
	i	atsc.eit3_interval	The valid range is between 30000 and 60000 in ms
	i	atsc.mgt_interval	The valid range is between 10 and 150 msecs.
	i	atsc.cvct_interval	The valid range is between 10 and 400 in msec.
	i	atsc.rrt_interval	-1
	i	atsc.rrt_interval	-1
	i	atsc.stt_interval	-1
	i	atsc.modulation_mode	Valid options are: <ul style="list-style-type: none"> • Analog (1), • SCTE_64_QAM(2) • SCTE_256_QAM(3) • ATSC_8_VSB (4) • ATSC_16_VSB(5)
	i	atsc.stt_source	
	i	atsc.rrt_source	
	i	dpiFlag	Only valid if transrating TS: enable/disable TS DPI. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
	i	p_dpiFlag	Only valid if transrating TS: enable/disable Program DPI. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
	i	large_buffer	<ul style="list-style-type: none"> • Disable(0) • Enable(1)
	i	spts_only	<p>The SPTS is standard for Single Program Transport stream.</p> <ul style="list-style-type: none"> • If it is transcoding Transport stream, the spts_only field is always configured as "1". • If it is transrating Transport stream, the spts_only field can be enable/disable. <ul style="list-style-type: none"> - If enable is configured, the TS is only support 1 single Program. - If the field is disabled, the TS can support multiple programs. <p>Valid options are:</p> <ul style="list-style-type: none"> • Disable(0) • Enable(1)
	i	bitrate_threshold	Default is ½ of configured bitrate for the output TS. The value cannot exceed the bitrate configured for the output TS.
	i	transCodeEn	Version 2.2.2/ Version 2.3.0: enable/ disable Transcoding. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)

RESPONSE MESSAGE FORMAT—mvp.getOutputTs (Continued)

Index	Type	Key:Value	Comments
	i	screen_mode	Version 2.2.2/ Version 2.3.0: Video transcoding or Video/Audio Transcoding. <ul style="list-style-type: none"> When the field is configured as OUTPUT_IPTV(1), it requires to have TCM card. When the field is configured as OUTPUT_PC_MOBIL(2), it requires to have TCM and AMP card. Valid options are: <ul style="list-style-type: none"> OUTPUT_IPTV(1) OUTPUT_PC_MOBIL(2)
	i	mbr_ts_index	Version 2.2.2/ Version 2.3.0: MBR TS Index
	i	mbr_group_type	Version 2.2.2: MBR group type, as one of the following options: <ul style="list-style-type: none"> MBR TS(0), MBR-PIP TS(1)
	i	mbr_group_sub_type	Version 2.2.2: Transport stream type, as either Main (Full Resolution) TS, or PIP (PIP resolution). Valid options are: <ul style="list-style-type: none"> MAIN(0), PIP(1)
	i	input_video_std	Version 2.5.0: View the input Video standard format. The valid value is: <ul style="list-style-type: none"> NTSC(1) PAL(2)
	i	input_video_resolution_class	Version 2.5.0: View input Video resolution Class (GUI named as Encoding Template). Valid options are: <ul style="list-style-type: none"> SD(1) HD(2)
	i	input_video_encoding_format	Version 2.5.0: View the incoming video encoding format (GUI named as Video Type). Valid options are: <ul style="list-style-type: none"> mpeg_2(2), h.264(3)
	i	output_video_encoding_format	Version 2.5.0: View the outgoing video encoding format (GUI named as Video Type). Valid options are: <ul style="list-style-type: none"> mpeg_2(2), h.264(3)
	i	async_data_bandwidth	Version 3.0.0_NPM1: Data bitrate. The value cannot be higher than TS bitrate.
	i	output_video_resolution_class	Version 3.0.0_NPM1: Video Resolution Class. Valid options are: <ul style="list-style-type: none"> SD(1) HD(2) PIP(3)
	i	max_rate	Version 3.0.0_NPM1: Video bitrate, in Mbps. For example, set max_rate to 15000000 as 15 Mbps.

RESPONSE MESSAGE FORMAT—mvp.getOutputTs (Continued)

Index	Type	Key:Value	Comments
	i	actual_video_rate	Version 3.0.0_NPM1 The field displays zero. It returns the actual value when the grooming between input TS and output TS is successfully groomed.
	i	genSdt	<ul style="list-style-type: none"> • Generate(1) • Not Generate(0)
	s	output_type_u.eth.destination_ip_red	Version 3.1: Redundant IP
	s	"output_type_u.eth.destination_netmask_red	Version 3.1: Redundant subnet mask
	s	output_type_u.eth.destination_mac_red	Version 3.1: Redundant MAC address
	i	output_type_u.eth.arp_code_red	Version 3.1 <ul style="list-style-type: none"> • Redundant ARP • Disable(0) • Enable(1)

mvp.getVideoOutPort

Get output TS count at specific port

REQUEST MESSAGE FORMAT—mvp.getVideoOutPort

Index	Type	Comments	Value Instances/Comments
	i	gui_request_id	
	i	slot	Slot number
	i	port	Port number

RESPONSE MESSAGE FORMAT—mvp.getVideoOutPort

Index	Type	Key:Value	Comments
	i	command_id	
	i	session_id	
	i	CMD_ID_OUTPUT_PORT_QUERY	
	i	return_value	Refer to CMD_RESULT in common_ds.h
	s	error_msg	Error message String
	i	number_of_output_ts	

mvp. getVideoOutPortBulk

Get partial TS at specific port from start position to end position

REQUEST MESSAGE FORMAT—mvp.getVideoOutPortBulk

Index	Type	Comments	Value Instances/Comments
	i	gui_request_id	
	i	slot	Slot number
	i	port	Port number
	i	bulk_start	TS start position
	i	bulk_end	TS end position

RESPONSE MESSAGE FORMAT—mvp.getVideoOutPortBulk

Index	Type	Key:Value	Comments
	i	command_id	
	i	session_id	
	i	CMD_ID_OUTPUT_PORT_BULK_QUERY	
	i	return_value	Refer to CMD_RESULT in common_ds.h
	s	error_msg	Error message String

RESPONSE MESSAGE FORMATmvp.getVideoOutPortBulk

Index	Type	Key:Value	Comments
	i	command_id	
	i	session_id	
	i	CMD_ID_OUTPUT_PORT_BULK_QUERY	
	i	return_value	Refer to CMD_RESULT in common_ds.h
	s	error_msg	Error message String
	i	end	
	i	number_of_output_ts	Number of return ts
Number of entries from 0 to N entries.			
N Entries.			
	i	mask	
	i	ts_index	
	i	ts_type	Transport stream type, as one of the following options: 1:MPEG2 2:DVB 3: ATSC 4:SCTE
	i	bit_rate	TS Bitrate
	i	reserved_bandwidth	

RESPONSE MESSAGE FORMATmvp.getVideoOutPortBulk (Continued)

Index	Type	Key:Value	Comments
	i	ts_id	The TS ID is 0 for system to create the TS ID. The valid range is between 0 and 65535.
	i	network_pid	The network PID is between 16 and 8175.
	i	pass_through	-1 is pass_through for transcoding.
	i	number_of_programs	Number of program with TS.
	s	ts_name	This field is optional to configure TS name.
	i	output_port.slot_id	Destination Slot number
	i	output_port.port_id	Destination Port number
	s	eth.destination_ip	Destination IP Address
O	s	eth.destination_netmask	If multicast destination IP Address is configured, this field return 0.0.0.0.
	s	eth.destination_mac	If ARP is disabled, return dest_mac field. If ARP is enabled, return zero MAC Address.
	i	eth.udp_port	Destination UDP Port
	i	eth.arp_code	ARP return enable or disable. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
	i	eth.vlan_enable	VLAN enable field
	i	eth.vlan_id	VLAN ID field
	i	eth.diffServe	diffServe Code field
	i	eth.diffserve_enable	diffServe Enable field
	i	eth.rtp_enable	The field is to enable/disable on Real-Time Transport Protocol.
	i	eth.fec_enable	This fecEnable field is only valid if it is transrating TS. The field is to enable/disable FEC.
	i	eth.fec_row	The valid range is between 1 and 20. From GUI, the label is 'L'.
	i	eth.fec_column	The valid range is between 4 and 20. From GUI, the label is 'D'.
	i	dvb.network_id	
	i	dvb.modulation_mode	Valid options are: SCTE_64_QAM(1), SCTE_256_QAM(2),
	i	dvb.nit_source	0 - disabled; tsIndex otherwise default=0
	i	dvb.tdt_tot_source	0 - disabled; tsIndex otherwise default=0
	i	u.dvb.nitLocal	set to TRUE if it is local NIT else FALSE
	i	u.dvb.totLocal	set to TRUE if it is local NIT else FALSE
	i	u.dvb.sdt_source	0 - disabled; 1 - locally generated default=1
	i	dvb.eit_source	0 - disabled; 1 - from groomed input default=1
	i	dvb.orig_network_id	The original network PID is between 16 and 8175.
	i	atsc.eit0_pid	The valid range is between 48 and 8175.
	i	atsc.eit1_pid	The valid range is between 48 and 8175.

RESPONSE MESSAGE FORMATmvp.getVideoOutPortBulk (Continued)

Index	Type	Key:Value	Comments
	i	atsc.eit2_pid	The valid range is between 48 and 8175.
	i	atsc.eit3_pid	The valid range is between 48 and 8175.
	i	atsc.eit0_interval	The valid range is between 10 and 500 in ms
	i	atsc.eit1_interval	The valid range is between 1000 and 3000 in ms
	i	atsc.eit2_interval	The valid range is between 30000 and 60000 in ms
	i	atsc.eit3_interval	The valid range is between 30000 and 60000 in ms
	i	atsc.mgt_interval	The valid range is between 10 and 150 msecs.
	i	atsc.cvct_interval	The valid range is between 10 and 400 in msec.
	i	atsc.rrt_interval	-1
	i	atsc.stt_interval	-1
	i	atsc.modulation_mode	Valid options are: <ul style="list-style-type: none"> • Analog (1) • SCTE_64_QAM(2), SCTE_256_QAM(3) • ATSC_8_VSB (4), • ATSC_16_VSB(5)
	i	atsc.stt_source	
	i	atsc.rrt_source	
	i	dpiFlag	Only valid if transrating TS, to identify the TS DPI as either enabled or disabled. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
	i	p_dpiFlag	Only valid if transrating TS, to identify the Program DPI as either enabled or disabled. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
	i	large_buffer	<ul style="list-style-type: none"> • Disable(0) • Enable(1)
	i	spts_only	<ul style="list-style-type: none"> • Disable(0) • Enable(1)
	i	bitrate_threshold	Default is ½ of configured bitrate for the output TS. The value cannot exceed the bitrate configured for the output TS.
	i	transCodeEn	Version 2.2.2/ Version 2.3.0: View status of transcoding as either enable/disable. Valid options are: <ul style="list-style-type: none"> • Disable(0) • Enable(1)

RESPONSE MESSAGE FORMATmvp.getVideoOutPortBulk (Continued)

Index	Type	Key:Value	Comments
	i	screen_mode	Version 2.2.2/ Version 2.3.0: Identifies if screen mode is Video transcoding or Video/Audio transcoding. <ul style="list-style-type: none"> When the field is configured as OUTPUT_IPTV(1), it requires to have TCM card. When the field is configured as OUTPUT_PC_MOBIL(2), it requires to have TCM and AMP card. Valid options are: <ul style="list-style-type: none"> OUTPUT_IPTV(1) OUTPUT_PC_MOBIL(2)
	i	mbr_ts_index	Version 2.2.2/ Version 2.3.0: MBR TS ID is identified as a grouping of TS. The ID is generated from mvp.getMVRTSObjectID.
	i	mbr_group_type	Version 2.2.2: MBR group type, as one of the following options: <ul style="list-style-type: none"> MBR TS(0) MBR-PIP TS(1)
	i	mbr_group_sub_type	Version 2.2.2: Transport stream type, as either Main (Full Resolution) TS or PIP (PIP resolution) TS. Valid options are: <ul style="list-style-type: none"> MAIN(0), PIP(1)
	i	input_video_std	Version 2.5.0: Input Video standard format, as one of the following options: <ul style="list-style-type: none"> NTSC(1) PAL(2)
i	i	input_video_resolution_class	Version 2.5.0: Input Video resolution Class (GUI named as Encoding Template). Valid options are: <ul style="list-style-type: none"> SD(1) HD(2)
	i	input_video_encoding_format	Version 2.5.0: Incoming video encoding format (GUI named as Video Type). Valid options are: <ul style="list-style-type: none"> mpeg_2(2), h.264(3)
	i	output_video_encoding_format	Version 2.5.0: Outgoing video encoding format (GUI named as Video Type). Valid options are: <ul style="list-style-type: none"> mpeg_2(2), h.264(3)
	i	async_data_bandwidth	Version 3.0.0_NPM1: Data bitrate. The value cannot be higher than TS bitrate. When the value is zero, the ASYNC data feature is disabled.

RESPONSE MESSAGE FORMAT mvp.getVideoOutPortBulk (Continued)

Index	Type	Key:Value	Comments
	i	output_video_resolution_class	Version 3.0.0_NPM1: Output Video Resolution Class. Valid options are: <ul style="list-style-type: none"> • SD(1) • HD(2) • PIP(3)
	i	max_rate	Version 3.0.0_NPM1 Configure Video bitrate in Mbps. For example, set max_rate to 15000000 as 15 Mbps.
	i	actual_video_rate	Version 3.0.0_NPM1 The field displays zero. It returns the actual value when the grooming between input TS and output TS is successfully groomed.
	i	genSdt	<ul style="list-style-type: none"> • Generate(1) • Not Generate(0)
	s	output_type_u.eth.destination_ip_red	Version 3.1: Redundant IP.
	s	output_type_u.eth.destination_netmask_red	Version 3.1: Redundant subnet mask.
	s	output_type_u.eth.destination_mac_red	Version 3.1: Redundant MAC address
	i	output_type_u.eth.arp_code_red	Version 3.1 Redundant ARP <ul style="list-style-type: none"> • Disable(0) • Enable(1)

mvp.deleteOutputTs

Delete output ts based on ts index.

REQUEST MESSAGE FORMAT—mvp.deleteOutputTs

Index	Type	Comments	Value Instances/Comments
	i	gui_request_id	
	i	ts_index	TS index

RESPONSE MESSAGE FORMAT—mvp.deleteOutputTs

Index	Type	Key:Value	Comments
	i	command_id	CMD_ID_OUTPUT_TS_DELETE
	i	session_id	
	i	CMD_ID_OUTPUT_TS_DELETE	
	i	return_value	Refer to CMD_RESULT in common_ds.h
	s	error_msg	Error message String

License Messages

This chapter contains the XML-RPC message components for use with VMG license management operations.

In This Chapter:

- “mvp.setEulaAccept” on page 225.
- “mvp.getEulaStatus” on page 225.
- “mvp.setLicenseKey” on page 226.
- “mvp.getLicenseKeyQuery” on page 227.
- “mvp. deleteLicenseKey” on page 229.

mvp.setEulaAccept

REQUEST MESSAGE FORMAT—mvp.setEulaAccept

Index	Type	Comments	Value Instances/Comments

RESPONSE MESSAGE FORMAT—mvp.setEulaAccept

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_LICENSE_UPDATE
1	i	session_id	
2	i	CMD_ID_LICENSE_UPDATE	
3	i	return_value	
4	s	error_msg	

mvp.getEulaStatus

REQUEST MESSAGE FORMAT—mvp.getEulaStatus

Index	Type	Comments	Value Instances/Comments

RESPONSE MESSAGE FORMAT—mvp.getEulaStatus

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_EULA_STATUS
1	i	session_id	
2	i	CMD_ID_EULA_STATUS	
3	i	return_value	
4	s	error_msg	

mvp.setLicenseKey

REQUEST MESSAGE FORMAT—mvp.setLicenseKey

Index	Type	Comments	Value Instances/Comments
0	s	gui_request_id	
1	s	license_key	License Key.
2	i	type	License Key type.

RESPONSE MESSAGE FORMAT—mvp.setLicenseKey

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_LICENSE_KEY_CFG
1	i	session_id	
2	i	CMD_ID_LICENSE_KEY_CFG	
3	s	licenseKey	
4	s	return_value	
5	s	err_str	

mvp.getLicenseKeyQuery

REQUEST MESSAGE FORMAT—mvp.getLicenseKeyQuery

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.getLicenseKeyQuery

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_QUERY_LICENSE_INFO
1	i	session_id	
2	i	return_value	
3	s	err_str	
4	s	baseLicense	Base License
5	s	groomingLicense	Grooming License
6	s	bwDpiLicense	Bandwidth Dpi license
7	s	numDpi_license	num dpi lcnese
8	s	numPgSubLicense	
9	s	numMpeg2Sd_license	
10	s	numMpeg2Hd_license	
11	s	numH264Sd_license	
12	s	numH264Hd_license	
13	d	allocGrBw	Allocated Grooming bandwidth
14	d	availGrBw	Available Grooming bandwidth
15	d	allocDpiBw	Allocated Dpi bandwidth.
16	d	availDpiBw	Available Dpi bandwidth
17	i	allocNumDpi	Allocated number of Dpi.
18	i	availNumDpi	Available number of dpi.
19	i	baseLicEnabled	
20	i	baseLicState	
21	i	groomingLicState	
22	i	bwDpiLicState	
23	i	numDpiLicState	
24	i	numPgSubLicState	
25	i	numMpeg2SdLicState	
26	i	numMpeg2HdLicState	
27	i	numH264SdLicState	
28	i	numH264HdLicState	
29	d	usedGrBw	
30	d	usedDpiBw	
31	i	usedNumDpi	
32	i	allocNumPgSub	

RESPONSE MESSAGE FORMAT—mvp.getLicenseKeyQuery (Continued)

Index	Type	Key:Value	Comments
33	i	availNumPgSub	
34	i	usedNumPgSub	
35	i	allocNumMpeg2Sd	
36	i	availNumMpeg2Sdb	
37	i	usedNumMpeg2Sd	
38	i	allocNumMpeg2Hd	
39	i	availNumMpeg2Hd	
40	i	usedNumMpeg2Hd	
41	i	allocNumH264Sd	
42	i	availNumH264Sd	
43	i	usedNumH264Sd	
44	i	allocNumH264Hd	
45	i	availNumH264Hd	
46	i	usedNumH264Hd	

mvp.deleteLicenseKey

REQUEST MESSAGE FORMAT—mvp.deleteLicenseKey

Index	Type	Comments	Value Instances/Comments
0		gui_request_id	
1		cmd.type	

RESPONSE MESSAGE FORMAT—mvp.deleteLicenseKey

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_LICENSE_KEY_DELETE
1	i	session_id	
2	i	CMD_ID_LICENSE_KEY_DELETE	
3	i	return_value	
4	s	error_msg	

RPM Session Messages

This chapter contains the XML-RPC message components for use with VMG RPM session operations.

In This Chapter:

- “mvp. setRpmSession” on page 231.
- “mvp. setRpmSession” on page 231.
- “mvp. getRpmSessionBulk” on page 232.
- “mvp.getRpmAllSessionBulk” on page 233.
- “mvp.getRpmActiveSessionBulk” on page 234.
- “mvp. getRpmInputSessionBulk” on page 235.
- “mvp.checkRpmSessionId” on page 240.
- “mvp.getOutputTSBySessionIDBulk” on page 242.
- “mvp.getOutputTSBySessionIDBulk” on page 243.
- “mvp.setDolbyCfg” on page 245.
- “mvp.getDolbyCfg” on page 246.

mvp. setRpmSession

This method is only available in Version 2.2.2, Version 2.3.0 and higher.

REQUEST MESSAGE FORMAT—mvp.setRpmSession

Index	Type	Comments	Value Instances/Comments
15	i	gui_request_id	
16	s	rpm_session_ID	
17	i	cmd.session.targetFormat	
18	i	cmd.session.chunkDuration	

RESPONSE MESSAGE FORMAT—mvp.setRpmSession

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_RPM_SESSION_ADD
1	i	session_id	
3	s	error_msg	
4	i	return_value	

mvp. setRpmSession

This method is only available in Version 2.2.2, 2.3.0 and higher version.

REQUEST MESSAGE FORMAT—mvp.setRpmSession

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	s	rpm_session_ID	
2	i	cmd.session.targetFormat	
3	i	cmd.session.chunkDuration	

RESPONSE MESSAGE FORMAT—mvp.setRpmSession

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_RPM_SESSION_ADD
1	i	session_id	
3	s	error_msg	
4	i	return_value	

mvp. getRpmSessionBulk

This method is only available in Version 2.2.2, 2.3.0 and higher.

REQUEST MESSAGE FORMAT—mvp.getRpmSessionBulk

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.getRpmSessionBulk

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_RPM_ALL_SESSION_BULK_QUERY
1	i	session_id	
2	i	CMD_ID_RPM_ALL_SESSION_BULK_QUERY	
3	s	return_value	
4	i	error_msg	

RESPONSE MESSAGE FORMAT—mvp.getRpmSessionBulk

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_RPM_SESSION_BULK_QUERY
1	i	session_id	
2		CMD_ID_RPM_SESSION_BULK_QUERY	
3	i	return_value	
4	s	error_msg	
5	i	n_entries	
		number of N to Max	
0	s	rpm_session_id	
1	s	in_ts_index	
2	i	in_pg_index	
3	i	out_ts_index	
4	i	out_pg_index	

mvp.getRpmAllSessionBulk

This method is only available in Version 2.2.2, 2.3.0 and higher

REQUEST MESSAGE FORMAT—mvp.getRpmAllSessionBulk

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.getRpmAllSessionBulk

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_RPM_SESSION_BULK_QUERY
1	i	session_id	
2	i	CMD_ID_RPM_SESSION_BULK_QUERY	
3	s	return_value	
4	i	error_msg	

RESPONSE MESSAGE FORMAT—mvp.getRpmAllSessionBulk

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_RPM_SESSION_BULK_QUERY
1	i	session_id	
2		CMD_ID_RPM_SESSION_BULK_QUERY	
3	i	return_value	
4	s	error_msg	
5	i	n_entries	
		number of N to Max	
0	s	rpm_session_id	
1	s	grooming_mon_desc	

mvp.getRpmActiveSessionBulk

This method is only available in Version 2.2.2 and 2.3.0.

REQUEST MESSAGE FORMAT—mvp.getRpmActiveSessionBulk

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	gui_request_id

RESPONSE MESSAGE FORMAT—mvp.getRpmActiveSessionBulk

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_RPM_ACTIVE_SESSION_BULK_QUERY
1	i	session_id	
2		CMD_ID_RPM_ACTIVE_SESSION_BULK_QUERY	
3	s	return_value	
4	i	error_msg	

RESPONSE MESSAGE FORMAT—mvp.getRpmActiveSessionBulk

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_RPM_ACTIVE_SESSION_BULK_QUERY
1	i	session_id	
2		CMD_ID_RPM_ACTIVE_SESSION_BULK_QUERY	
3	i	return_value	
4	s	error_msg	
5	i	n_entries	
		number of N to Max	
0	s	rpm_session_id	
1	s	url	
2	i	target_format	
3	i	chunk_duration	

mvp. getRpmInputSessionBulk

This method is only available in Version 2.2.2, 2.3.0 and higher.

REQUEST MESSAGE FORMAT—mvp.getRpmInputSessionBulk

Index	Type	Comments	Value Instances/Comments
0	i		gui_request_id
1	i		in_ts_idx
2	i		in_pg_idx
3	i		sub_type

RESPONSE MESSAGE FORMAT—mvp.getRpmInputSessionBulk

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_RPM_ACTIVE_SESSION_BULK_QUERY
1	i	session_id	
2		CMD_ID_RPM_ACTIVE_SESSION_BULK_QUERY	
3	s	return_value	
4	i	error_msg	

RESPONSE MESSAGE FORMAT—mvp.getRpmInputSessionBulk

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_RPM_INPUT_SESSION_BULK_QUERY
1	i	session_id	
2		CMD_ID_RPM_INPUT_SESSION_BULK_QUERY	
3	i	return_value	
4	s	error_msg	
5	i	n_entries	
		number of N to Max	
0	s	rpm_session_id	The rpm_session_id is to view MBR Group ID.
1	s	flag	Version 2.5.0. This field identifies if the MBR group ID belongs to MBR-TS or non MBR-TS. <ul style="list-style-type: none"> • 0 = non MBR-TS • 1 = MBR-TS
2	i	gop_m_value	View GOP M value, which is based on Encoding Format and resolution class. Valid options are: <ul style="list-style-type: none"> • MPEG2, HD: 1, 2, 3 • MPEG2, HD: ,2,3 • H.264, HD: 1,2,3,4,8 • H.264, SD: 1,4
3	i	gop_n_value	
4	i	idr_interval	View IDR Interval.

RESPONSE MESSAGE FORMAT—mvp.getRpmInputSessionBulk (Continued)

Index	Type	Key:Value	Comments
5	i	idr_alignment	
6	i	audio_bitrate	View audio Bitrate.
7	i	audio_sampling	View Audio Sampling.
8	i	audio_codec	<p>View Audio Codec.</p> <p>The valid option in Version 2.4.0 is:</p> <ul style="list-style-type: none"> • AAC(0) <p>Valid options in Version 2.5.0 are:</p> <ul style="list-style-type: none"> • AAC(0) • HE_AAC(1), • HE_AACV2(2), • AMR(3), - not used • WB_AMR(4), • HE_DOLBYPULSE(5) – not used • HE_DOLBYPULSEV2(6)– not used • LC_DOLBYPULSE(7) – not used • MPEG1L2(8) • MPEG1L3(9) – not used • MPEG2L2(10) • MPEG2L3(11) – not used
9	i	audio_channel	<p>View Audio Channel.</p> <p>The valid options in Version 2.3.0/2.4.0 are:</p> <ul style="list-style-type: none"> • STEREO(0) • MONO(1) <p>The valid options in Version 2.5.0 are:</p> <ul style="list-style-type: none"> • STEREO(0) • MONO(1) • 5.1Surround(6)
10	i	exclude_ES	A list of Excluded Elementary Stream.
11	i	audioGain	<p>Version 2.4.0. View the configured audio Gain.</p> <p>The valid range is between -24 and 24.</p>
12	i	audio_passthrough	<p>Version 3.0.0_NPM1. The field identifies a specific Audio Codec pass-through. Valid options are:</p> <ul style="list-style-type: none"> • AAC_LC(0), • HE_AAC(1), • HE_AACV2(2) • MPEG1L2(8) • MPEG2L2(10) • AC3(12) • PASSTHRU(255)

RESPONSE MESSAGE FORMAT—mvp.getRpmInputSessionBulk (Continued)

Index	Type	Key:Value	Comments
13	i	start_pid	<p>Version 3.0.0_NPM1. The field identifies a start PID for Audio Codec. By default, it is zero value.</p> <ul style="list-style-type: none"> • If the audio_passthrough field is equal to "PASSTHRU(255)", then this field is zero. • If the audio_passthrough field is not equal to "PASSTHRU(255)", then the start PID value identifies the beginning of PID from the Audio Elementary stream based on configured audio_passthrough field. For example, • When the field of audio_passthrough is set to "AC3", then the AMP code matches the Audio AC3 ES to create the start PID value. Then the next Audio AC3 ES is assigned to next start PID value.
14	i	dd_ac3_encoder_enabled	<p>Version 3.1.0. Advanced audio parameters include dd_xxx and dp_xxx. use AC 3 encoder parameters:</p> <ul style="list-style-type: none"> • use(1) • not use(0)
15	i	dd_audio_coding_mode	<p>AC encoder parameter, as one of the following options:</p> <ul style="list-style-type: none"> • 1: 1/0 (C) mode • 2: 2/0 (L,R) mode • 7: 3/2 (L, C, R, 1, s) mode
16	i	dd_LFE_on_off	<p>AC3 encoder parameter:</p> <p>LFE enabled.</p> <ul style="list-style-type: none"> • On(1) • Off(0)
17	i	dd_bitstream_mode	<p>AC3 encoder parameter, bitstream mode:</p> <ul style="list-style-type: none"> • 0 - main audio service: complete main (CM) • 1 - main audio service: music and effects (ME) • 2 - associated audio service: visually impaired (VI) • 3 - associated audio service: hearing impaired (HI) • 4 - associated audio service: dialog (D) • 5 - associated audio service: commentary (C) • 6 - associated audio service: emergency (E) • 7 - associated audio service: voice over (VO)
18	i	dd_dialog_normalization	<p>AC3 encoder parameter for dialog normalization:</p> <p>Value range 0~31 = 0 - 31 dB.</p> <ul style="list-style-type: none"> • 0 = passthrough • 1 = loudest input • 31 = quiet input
19	i	dd_DRC_line_mode_prodiafolife	<p>AC3 encoder parameters for DRC line mode profile.</p> <ul style="list-style-type: none"> • 0 = no compression • 1 = film standard compression • 2 = film light compression • 3 = music standard compression • 4 = music light compression • 5 = speech compression

RESPONSE MESSAGE FORMAT—mvp.getRpmInputSessionBulk (Continued)

Index	Type	Key:Value	Comments
20	i	dd_DRC_RF_mode_profile	AC3 encoder parameters, for DRC RF mode profile Same enum as dd_DRC_line_mode_profile;
21	i	dd_DRC_line_mode_profile2	AC3 encoder parameters for DRC Line mode profile 2. Same enum as dd_DRC_line_mode_profile.
22	i	dd_DRC_RF_mode_profile2	AC3 encoder parameter, for DRC RF mode profile 2. Same enum as dd_DRC_line_mode_profile.
23	i	dd_surround_channel_90_phase shift	AC3 encoder parameter, for surround phaseshift, as one of the following options: <ul style="list-style-type: none"> • On(1) • Off(0)
24	i	dd_surround_channel_3db_atten uation	AC3 encoder parameter, for surround attenuation, as one of the following options: <ul style="list-style-type: none"> • On(1) • Off(0)
25	i	dd_ac3_decoder_enabled	Usage of dolby pulse encoder, as one of the following options: <ul style="list-style-type: none"> • use(1) • not use(0)
26	i	dd_compression_mode	DolbyPulse encoder, as one of the following options: <ul style="list-style-type: none"> • Mono(1) • Stereo(2) • 5.1Channel(11)
27	i	dd_dynamic_range_scale_low	
28	i	dd_dynamic_range_scale_high	
29	i	dd_downmix_mode	
30	i	dp_dolby_pulse_enabled	DolbyPulse encoder parameter for Line mode profile, as one of the following options: <ul style="list-style-type: none"> • 0 - No compression) • 1 - Film standard compression, • 2 - Film light compression), • 3 - Music standard compression), • 4 - Music light compression), • 5 - Speech compression
31	i	dp_channel_config	
32	i	dp_line_compression	
33	i	dp_rf_compression	DolbyPulse encoder param, RF compression profile Same enums as dp_line_compression
34	i	dp_dialog_norm	DolbyPulse encoder param, Dialog normalization Value range 0~31 means 0dB to -31dB 0:passthrough

RESPONSE MESSAGE FORMAT—mvp.getRpmInputSessionBulk (Continued)

Index	Type	Key:Value	Comments
35	i	dp_phase_shift	DolbyPulse encoder param,—90 degree Surround phase shift, as one of the following options: <ul style="list-style-type: none"> • On(1) • Off(0)
36	i	dp_lfe_filter	DolbyPulse encoder param—LFE bandwidth filter, as one of the following options: <ul style="list-style-type: none"> • On(1) • Off(0)
37	i	dp_surr_attenuation	DolbyPulse encoder param—3dB Surround attenuation, as one of the following options: <ul style="list-style-type: none"> • On(1) • Off(0)
38	i	dp_tCenter_downmix	DolbyPulse encoder param, Lt/Rt Center downmix level Value range 0~7 means 0dB to -7dB
39	i	dp_tSurround_downmix	DolbyPulse encoder param, Lt/Rt Surround downmix level Value range 3~7 means -3dB to -7dB
40	i	dp_oCenter_downmix	DolbyPulse encoder param, Lo/Ro Center downmix level Value range 0~7 means 0dB to -7dB
41	i	dp_oSurround_downmix	DolbyPulse encoder param, Lo/Ro Surround downmix level Value range 3~7 means -3dB to -7dB
42	i	dp_downmix_pref	DolbyPulse encoder param,—Downmix preference, as one of the following options: <ul style="list-style-type: none"> • 0 - Not indicated • 1 - Prologic preferred • 2 - Stereo downmix preferred • 3 - Prologic II preferred
43	i	dp_surround_mode	DolbyPulse encoder param,—Surround mode, as one of the following options: <ul style="list-style-type: none"> • 0 - Not indicated • 1 - Surround enabled • 2 - Surround disabled
44	i	num_audio_es	Version 3.1.0_NPM1 Num audio es
45	i	num_data_es	Version 3.1.0_NPM1 Num data es

mvp.checkRpmSessionId

Version 2.5.0 +

To check the unique MBR Group ID/Audio Profile.

REQUEST MESSAGE FORMAT—mvp.checkRpmSessionId (Version 2.5.0+)

Index	Type	Comments	Value Instances/Comments
1	i	gui_request_id	
2	i	in_ts_idx	Input TS Index
3	i	in_pg_idx	Input Program Index
4	i	session_id	Provide MBR Group ID/Audio Profile
5	i	ts_category	Transport stream category, as one of the following options:: <ul style="list-style-type: none"> • Non-mbr-ts(0) • Mbr-TS(1)

RESPONSE MESSAGE FORMAT—mvp.checkRpmSessionId (Version 2.5.0+)

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_RPM_SESSION_ID
1	i	session_id	
		CMD_ID_RPM_CHECK_SESSION_ID	
3	s	return_value	
4	i	error_msg	

Version 3.0.1 +

To retrieve all TSs that shared the same MBR Group ID/audio Profile.

REQUEST MESSAGE FORMAT—mvp.checkRpmSessionId (Version 3.0.1+)

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	in_ts_idx	Input TS Index
2	i	in_pg_idx	Input Program Index
3	s	profileID	MBR Group ID/Audio Profile
4	i	forMBR	Valid options are: <ul style="list-style-type: none"> • Non-mbr-ts(0) • Mbr-TS(1)
5	i	bulk_start_number	Always be 1
6	i	bulk_end_number	Always be 200

RESPONSE MESSAGE FORMAT—mvp.checkRpmSessionId (Version 3.0.1+)

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_RPM_ALL_SESSION_BULK_QUERY
1	i	session_id	

RESPONSE MESSAGE FORMAT—mvp.checkRpmSessionId (Version 3.0.1+) (Continued)

Index	Type	Key:Value	Comments
		CMD_ID_RPM_CHECK_SESSION_ID	
3	s	return_value	
4	i	error_msg	

mvp.getOutputTSBySessionIDBulk

This method is available in since Version 3.0.1 and higher to retrieve all TSs sharing the same MBR Group ID/Audio Profile.

REQUEST MESSAGE FORMAT—mvp.getOutputTSBySessionIDBulk

Index	Type	Comments	Value Instances/Comments
5	i	gui_request_id	
6	i	in_ts_idx	Input TS Index
7	i	in_pg_idx	Input Program Index
8	s	profileID	MBR Group ID/Audio Profile
9	i	forMBR	Valid options are: <ul style="list-style-type: none"> • Non-mbr-ts(0) • Mbr-TS(1)
10	i	bulk_start_number	Always be 1
11	i	bulk_end_number	Always be 200

RESPONSE MESSAGE FORMAT—mvp.getOutputTSBySessionIDBulk

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_RPM_ALL_SESSION_BULK_QUERY
1	i	session_id	
		CMD_ID_RPM_CHECK_SESSION_ID	
3	s	return_value	
4	i	error_msg	

mvp.getOutputTSBySessionIDBulk

This method is available in since Version 3.0.1 and higher to retrieve all TSs sharing the same MBR Group ID/Audio Profile.

REQUEST MESSAGE FORMAT—mvp.getOutputTSBySessionIDBulk

Index	Type	Comments	Value Instances/Comments
5	i	gui_request_id	
6	i	in_ts_idx	Input TS Index
7	i	in_pg_idx	Input Program Index
8	s	profileID	MBR Group ID/Audio Profile
9	i	forMBR	Valid options are: <ul style="list-style-type: none"> • Non-mbr-ts(0) • Mbr-TS(1)
10	i	bulk_start_number	Always be 1
11	i	bulk_end_number	Always be 200

RESPONSE MESSAGE FORMAT—mvp.getOutputTSBySessionIDBulk

Index	Type	Key:Value	Comments
5	i	command_id	CMD_ID_RPM_ALL_SESSION_BULK_QUERY
6	i	session_id	
7	i	return_value	Error code. Ok(0)
8	s	error_msg	
9	i	ts_index	Input TS Index
10	i	output_port.slot_id	Slot id
11	i	output_port.port_id	Port Index
12	s	output_type_u.eth.destination_ip	IP Address
13	i	output_type_u.eth.udp_port	UDP Port
14	i	ts_id	Output TS ID
15	s	ts_name	Output TS Name
16	i	transCodeEn	Status of transcoding, as one of the following options: <ul style="list-style-type: none"> • Disable(0) • Enable(1)
17	i	screen_mode	Status of screen_mode, as either Video transcoding or Video/Audio Transcoding. <ul style="list-style-type: none"> • When the field is configured as OUTPUT_IPTV(1), it requires to have TCM card. • When the field is configured as OUTPUT_PC_MOBIL(2), it requires to have TCM and AMP card. Valid options are: <ul style="list-style-type: none"> • OUTPUT_IPTV(1) • OUTPUT_PC_MOBIL(2)

RESPONSE MESSAGE FORMAT—mvp.getOutputTSBySessionIDBulk (Continued)

Index	Type	Key:Value	Comments
18	i	mbr_ts_index	Unique number obtained from mvp.getMbrTsid at creation. <ul style="list-style-type: none">• When the mbr_ts_id is 0, it does not have any grouping.• When the mbr_ts_id is higher than 1, it belongs to a grouping.
19	i	mbr_group_type	Type of MBR group, as one of the following options: <ul style="list-style-type: none">• MBR TS(0)• MBR-PIP TS(1)
20	i	mbr_group_sub_type	MBR group sub-type—which identifies whether the TS is Main (Full Resolution) TS, or PIP (PIP resolution) TS. Valid options are: <ul style="list-style-type: none">• MAIN(0)• PIP(1)

mvp.setDolbyCfg

This method is available in since 3.1.0 to set dolby decoder configuration

REQUEST MESSAGE FORMAT—mvp.setDolbyCfg

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	profile_index	Profile Index. for 3.1, only support 1 profile. So this profile index must be 1
2	i	decoder_enabled	<ul style="list-style-type: none"> Enabled (1) Disabled (0)
3	i	compression_mode	Enum: <ul style="list-style-type: none"> AC3_COMPRES_MODE_CUST_NO_NORMALIZE = 0, AC3_COMPRES_MODE_CUST_NORMALIZE, AC3_COMPRES_MODE_LINE_OUT, AC3_COMPRES_MODE_RF
4	i	dynamic_range_scale_low	Range 1 -10
5	i	dynamic_range_scale_high	Range 1 -10
6	i	downmix_mode	Enum: <ul style="list-style-type: none"> AC3_DOWNMIX_MODE_AUTO = 0, AC3_DOWNMIX_MODE_SURROUND, AC3_DOWNMIX_MODE_STEREO
7	i	amp_resource_allocation	

RESPONSE MESSAGE FORMAT—mvp.setDolbyCfg

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_SET_DOLBY_CFG
1	i	session_id	
2	i	CMD_ID_SET_DOLBY_CFG	
3	i	return_value	Error code OK(0)
4	s	error_msg	

mvp.getDolbyCfg

This method is available in since 3.1.0 to set dolby decoder configuration

REQUEST MESSAGE FORMAT—mvp.getDolbyCfg

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	i	profile_index	Profile Index. for 3.1, only support 1 profile. So this profile index must be 1

RESPONSE MESSAGE FORMAT—mvp.getDolbyCfg

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_GET_DOLBY_CFG
1	i	return_value	
2	i	CMD_ID_GET_DOLBY_CFG	
3.	i	return_value	Error code. OK(0)
4		error_msg	
5	i	dd_ac3_decoder_index	
6	i	dd_ac3_decoder_enabled	
7	i	dd_compression_mode	<ul style="list-style-type: none"> Enum: AC3_COMPRES_MODE_CUST_NO_NORMALIZE = 0, AC3_COMPRES_MODE_CUST_NORMALIZE, AC3_COMPRES_MODE_LINE_OUT, AC3_COMPRES_MODE_RF
8	i	dd_dynamic_range_scale_low	Range 1 - 10
9	i	dd_dynamic_range_scale_high	Range 1 - 10
10	i	dd_downmix_mode	<ul style="list-style-type: none"> Enum: AC3_DOWNMIX_MODE_AUTO = 0, AC3_DOWNMIX_MODE_SURROUND, AC3_DOWNMIX_MODE_STEREO
11	i	amp_resource_allocation	
4		profile_index	Profile Index. for 3.1, only support 1 profile. So this profile index must be 1.
5		decoder_enabled	<ul style="list-style-type: none"> Enabled (1) Disabled (0)
6		compression_mode	<ul style="list-style-type: none"> Enum: AC3_COMPRES_MODE_CUST_NO_NORMALIZE = 0 AC3_COMPRES_MODE_CUST_NORMALIZE AC3_COMPRES_MODE_LINE_OUT AC3_COMPRES_MODE_RF
7		dynamic_range_scale_low	Range 1 - 10

RESPONSE MESSAGE FORMAT—mvp.getDolbyCfg (Continued)

Index	Type	Key:Value	Comments
8		dynamic_range_scale_high	Range 1 - 10
9		downmix_mode	Enum: <ul style="list-style-type: none">• AC3_DOWNMIX_MODE_AUTO = 0,• AC3_DOWNMIX_MODE_SURROUND,• AC3_DOWNMIX_MODE_STEREO

Search TS and Prog Messages

This chapter contains the XML-RPC message components for use with VMG search operations.



Note: *The messages documented in this chapter are not currently supported.*

In This Chapter:

- “mvp.getTSSearchCount” on page 249.
- “mvp. getTSSearchBulk” on page 250.
- “mvp.getProgramSearchCount” on page 251.
- “mvp. getProgramSearchBulk” on page 252.

mvp.getTSSearchCount

Get ts count base on search condition.



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getTSSearchCount

Index	Type	Comments	Value Instances/Comments
0	i	mode	Input ts = 1 Output ts = 1
1	s	ip_address	
2	i	udp_port	
3	i	tid	

RESPONSE MESSAGE FORMAT—mvp.getTSSearchCount

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_TS_SEARCH_COUNT	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String

mvp. getTSSearchBulk

Get ts search result bulk operation.



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getTSSearchBulk

Index	Type	Comments	Value Instances/Comments
	i	mode	Input ts = 1 Output ts = 1
	s	ip_address	
	i	udp_port	
	i	tid	

RESPONSE MESSAGE FORMAT—mvp.getTSSearchBulk

Index	Type	Key:Value	Comments
	i	command_id	
	i	session_id :	
	i	CMD_ID_TS_SEARCH_BULK	
	i	return_value	Refer to CMD_RESULT in common_ds.h
	s	error_msg	Error message String
	i	end : i	1: end of table; 0: otherwise
	i	n_entries	
			The n_entries th program_si_info
	i	slot	The first program_si_info.
	i	Port	
	i	ts_index	
	i	ip_address	
	i	udp_port	
	i	pid	

mvp.getProgramSearchCount

Get program count base on search condition



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getProgramSearchCount

Index	Type	Comments	Value Instances/Comments
0	i	mode	Input ts = 1 Output ts = 1
1	s	program_name	
2	i	program_number	

RESPONSE MESSAGE FORMAT—mvp.getProgramSearchCount

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_PG_SEARCH_COUNT	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String
5	i	pg_count	

mvp. getProgramSearchBulk

Get program search result bulk operation.



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getProgramSearchBulk

Index	Type	Comments	Value Instances/Comments
0	i	mode	Input ts = 1 Output ts = 1
1	s	program_name	
2	i	program_number	

RESPONSE MESSAGE FORMAT—mvp.getProgramSearchBulk

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id :	
2	i	CMD_ID_PG_SEARCH_BULK	
3	i	return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	Error message String
5	i	end : i	1: end of table 0: otherwise
6	i	n_entries	
			The n_entries th program_si_info
0	i	slot	The first program_si_info.
1	i	Port	
2	i	ts_index	
3	i	program_index	
4	i	program_number	
5	i	program_name	

SNMP Configuration Messages

This chapter contains the XML-RPC message components for use with VMG SNMP configurations.

In This Chapter:

- “mvp.getSnmpCsBulk” on page 254.
- “mvp.setSnmpCs” on page 255.
- “mvp. deleteSnmpCs” on page 256.
- “mvp.getSnmpUserBulk” on page 257.
- “mvp.setSnmpUser” on page 258.
- “mvp.deleteSnmpUser” on page 259.
- “mvp.getSnmpUserBulk” on page 257.
- “mvp.setSnmpUser” on page 258.
- “mvp.deleteSnmpUser” on page 259.
- “mvp.getSnmpNotifyBulk” on page 260.
- “mvp.setSnmpNotify” on page 261.
- “mvp. deleteSnmpNotify” on page 262.

mvp.getSnmpCsBulk



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getSnmpCsBulk

Index	Type	Comments	Value Instances/Comments
0	i	ctxSig	context signature
1	i	ctxGen	context generation
2	i	ctxVal+	context value
3	i	ctxCheck	context check
4	i	numResults	number of results

RESPONSE MESSAGE FORMAT—mvp.getSnmpCsBulk

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_SNMP_CS_BULK_QUERY	
3	i	return_value	
4	s	error_msg	
		0 to N entries of Following	
0	i	index	
1	i	snmpProtocol	
2	s	snmpCommStr	
3	i	snmpRole	

mvp.setSnmpCs



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.setSnmpCs

Index	Type	Comments	Value Instances/Comments
0	i	index	
1	i	fieldSelect	
2	i	snmpProtocol	
3	s	snmpCommStr	
4	i	snmpRole	

RESPONSE MESSAGE FORMAT—mvp.setSnmpCs

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_SNMP_CS_CFG	
3	i	return_value	
4	s	error_msg	

mvp. deleteSnmPcs



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.deleteSnmPcs

Index	Type	Comments	Value Instances/Comments
0	i	index	

RESPONSE MESSAGE FORMAT—mvp.deleteSnmPcs

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_SNMP_CS_DELETE	
3	i	return_value	
4	s	error_msg	

mvp.getSnmpUserBulk



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getSnmpUserBulk

Index	Type	Comments	Value Instances/Comments
0	i	ctxSig	context signature
1	i	ctxGen	context generation
2	i	ctxVal	context value
3	i	ctxCheck	context check
4	i	numResults	number of results

RESPONSE MESSAGE FORMAT—mvp.getSnmpUserBulk

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_SNMP_USER_BULK_QUERY	
3	i	return_value	
4	s	error_msg	
		0 to N entries of Following	
0	i	index	
1	s	snmpUserName	
2	i	snmpSecType	
3	s	snmpPassword	
4	i	snmpAuthProt	
5	i	snmpEncryptProt	
6	i	snmpRole	

mvp.setSnmpUser



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.setSnmpUser

Index	Type	Comments	Value Instances/Comments
0	i	index	
1	i	fieldSelect	
2	s	snmpUserName	
3	i	snmpSecType	
4	s	snmpPassword	
5	i	snmpAuthProt	
6	i	snmpEncryptProt	
7	i	snmpRole	

RESPONSE MESSAGE FORMAT—mvp.setSnmpUser

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_SNMP_USER_CFG	
3	i	return_value	
4	s	error_msg	

mvp.deleteSnmpUser



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.deleteSnmpUser

Index	Type	Comments	Value Instances/Comments
0	i	index	

RESPONSE MESSAGE FORMAT—mvp.deleteSnmpUser

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_SNMP_USER_DELETE	
3	i	return_value	
4	s	error_msg	

mvp.getSnmpNotifyBulk



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getSnmpNotifyBulk

Index	Type	Comments	Value Instances/Comments
0	i	ctxSig	context signature
1	i	ctxGen	context generation
2	i	ctxVal	context value
3	i	ctxCheck	context check
4	i	numResults	number of results

RESPONSE MESSAGE FORMAT—mvp.getSnmpNotifyBulk

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_SNMP_NOTIFY_BULK_QUERY	
3	i	return_value	
4	s	error_msg	
		0 to N entries of Following	
0	i	index	
1	s	snmpNotifyTargetIPv4Addr	
2	i	snmpNotifyTargetUDPport	
3	i	snmpNotifyProt	
4	s	snmpNotifyID	
5	i	snmpNotifySecType	
6	i	snmpNotifyType	
7	i	snmpNotifyTimeout	
8	i	snmpNotifyRetries	
9	i	snmpNotifyProfile	

mvp.setSnmpNotify



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.setSnmpNotify

Index	Type	Comments	Value Instances/Comments
0	i	index	
1	i	fieldSelect	
2	s	snmpUserName	
3	i	snmpSecType	
4	s	snmpPassword	
5	i	snmpAuthProt	
6	i	snmpEncryptProt	
7	i	snmpRole	

RESPONSE MESSAGE FORMAT—mvp.setSnmpNotify

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_SNMP_NOTIFY_CFG	
3	i	return_value	
4	s	error_msg	

mvp. deleteSnmpNotify



Note: *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.deleteSnmpNotify

Index	Type	Comments	Value Instances/Comments
0	i	index	

RESPONSE MESSAGE FORMAT—mvp.deleteSnmpNotify

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_SNMP_NOTIFY_DELETE	
3	i	return_value	
4	s	error_msg	

Software Upgrade Messages

This chapter contains the XML-RPC message components for use with VMG software upgrade operations.

In This Chapter:

- “mvp.getSwUpgradeProgress” on page 264.
- “mvp.setSwUpgradeCfg” on page 265.

mvp.getSwUpgradeProgress

REQUEST MESSAGE FORMAT—mvp.getSwUpgradeProgress

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	

RESPONSE MESSAGE FORMAT—mvp.getSwUpgradeProgress

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_SW_UPGRADE_QUERY
1	i	session_id	
2	s	error_msg	
3	i	return_value	
4	i	sw_upgrade_progress	Display status of upgrade, as one of the following: <ul style="list-style-type: none">• Completed(1)• InProgress(2)• Failed(3)

mvp.setSwUpgradeCfg

REQUEST MESSAGE FORMAT—mvp.setSwUpgradeCfg

Index	Type	Comments	Value Instances/Comments
0	i	gui_request_id	
1	s	host_url_str	<pre>ftp:// ftpuser:ftppasswd@ftpServerIpAddress/ <ftppath+sw.tar > ie: ftp://test:abc@10.32.200.61/ftproot/ sw.tar ftp://test:abc@10.32.200.61/ftproot/ AmpBuild_4.3-xxxx.noarch.rgb</pre>
2	i	flag	Version 2.5.0. Identify if sw.tar file or not. Valid options are: <ul style="list-style-type: none"> • 0= NPM sw.tar • 1=AMP software

RESPONSE MESSAGE FORMAT—mvp.setSwUpgradeCfg

Index	Type	Key:Value	Comments
0	i	command_id	CMD_ID_SW_UPGRADE_PARAM_CFG
1	i	session_id	
2	s	return_value	
3	i	error_string	

System Status Update Messages

This chapter contains the XML-RPC message components for use with VMG system status updates.




Note: *The messages documented in this chapter are not currently supported.*

In This Chapter:

- “mvp.getChassisStatus” on page 267.

mvp.getChassisStatus

 **Note:** *This method is not currently supported.*

REQUEST MESSAGE FORMAT—mvp.getChassisStatus

Index	Type	Comments	Value Instances/Comments

RESPONSE MESSAGE FORMAT—mvp.getChassisStatus

Index	Type	Key:Value	Comments
0	i	command_id	
1	i	session_id	
2	i	CMD_ID_SYSTEM_STATUS	
3		return_value	Refer to CMD_RESULT in common_ds.h
4	s	error_msg	
5	i	last_card_update_time	
6	i	last_rds_update_time	
7	i	last_alarm_update_time	
8	i	last_input_update_time	
9	i	last_output_update_time	

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