



SB-520 API - English

Version

Web Service API Specification

Revision: 1.0.8
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TABLE OF CONTENTS

Revision History	1
1. Introduction	1
1.1 Overview	1
1.1.1 Access SB-520 by WEB.....	1
1.1.2 Authorization Management	1
1.1.3 Configuration Management	2
1.1.4 Facilities Management	3
1.1.5 Profiles Management	4
1.1.6 Stream Profiles Management.....	4
1.1.7 System setting	5
1.1.8 ErrorCode rule	5
1.2 How to setup a Stream Profile	5
1.2.1 Get device list	6
1.2.2 Choose the stream type	6
1.2.3 Choose the encoding profile	6
1.2.4 Manage the Stream Profile.....	6
1.2.5 Set the SB-520 task and start it.	6
1.2.6 Get the SB-520 status.....	7
1.2.7 Network setup	7
1.2.8 System time setting	7
1.3 Heartbeat flow	7
2. Authorization Management	9
2.1 login	9
2.2 logout	10
2.3 checkSession	11
3. Configuration Management	13
3.1 getConfig	13
3.2 setConfig	15
3.3 setUser	17
3.4 getConfigBackup	18
3.5 restoreConfigBackup	19
3.6 getUserLog	21
3.7 downloadLog	22
4. Facilities Management	24
4.1 getDeviceFacilities	24

4.2	getDeviceConfig	26
4.3	setDeviceConfig	29
4.4	inputSignalStatus	31
4.5	getDeviceTask	33
4.6	setDeviceTask.....	36
4.7	startTask.....	38
4.8	stopTask	40
4.9	deleteTask	41
4.10	getTaskStatus	42
5.	Profiles Management	45
5.1	getEncodeProfileList	45
5.2	getEncodeProfile.....	48
5.3	addEncodeProfile.....	56
5.4	modifyEncodeProfile	60
5.5	removeEncodeProfile	63
6.	Stream Profiles Management	65
6.1	getStreamProfileList.....	65
6.2	getStreamProfile	66
6.3	addStreamProfile	76
6.4	modifyStreamProfile.....	83
6.5	removeStreamProfile.....	90
7.	CDN Management	92
7.1	authenticateCDN.....	92
7.2	authenticateOauth.....	93
7.3	getCDNchannellist.....	94
7.4	logoutCDN.....	96
8.	CMS Management	98
8.1	getCMSRegStatus.....	98
8.2	connectToCMS	99
9.	System.....	101
9.1	getSystemTime.....	101
9.2	setSystemTime.....	102
9.3	getNetworkConfig.....	104
9.4	setNetworkConfig	106
9.5	getNetworkStatus	107
9.6	recoveryFactoryConfig	109
9.7	setRebootSchedule	111
9.8	getRebootSchedule.....	112

9.9	checkNetworkConnection	113
9.10	umountDisk.....	114
9.11	reboot	115
9.12	getStoreDeviceList	116
10.	HTTP FW Update API	118
10.1	uploadFW.....	118
10.2	updateFW	119
11.	IR HTTP API	121
11.1	getIRBlasterDeviceList	121
11.2	setIRBlasterDevice	121
11.3	getIRProfileList.....	121
11.4	getIRProfile	122
11.5	removeIRProfile	122
11.6	emitIR.....	122
11.7	uploadIRProfile	123
11.8	irtool	123
12.	Master/Slave Backup API	124
12.1	login0	124
12.2	logout0.....	125
12.3	signalHeartbeat.....	126
12.4	getBackupServerConfig.....	126
12.5	setBackupServerConfig.....	127
12.6	backupHeartbeat	128
12.7	getHeartbeatStatus.....	129
12.8	testSlaveConnection	130
12.9	Errorcode	131
13.	PIP Management	132
13.1	getPIPConfigList	132
13.2	setPIPConfig.....	134
13.3	deletePIPConfig.....	136
13.4	inputSourceThumbnail	138
14.	File System	140
14.1	getDirectorys.....	140
14.2	createDirectorys/deleteDirecotys	142
14.3	modifyDirectorys	143
15.	Panopto System	145
15.1	EnablePANOPTO	145
15.2	CDNControlStatus	146

15.3	PanoptoScheduledddConfig	147
15.4	PanoptoAdHoc	149
16.	Kaltura System	151
16.1	setKalturaStatus	151
16.2	getKalturaStatus.....	153
16.3	kalturaScheduledConfig.....	154
16.4	kalturaScheduledList.....	157
16.5	kalturaAdHoc	160
16.6	getKalturaScheduleEventMode	161
16.7	setKalturaScheduleEventMode.....	162
16.8	uploadKalturaScheduleEvent	164
17.	Crestron api	166
17.1	Crestron api Introduction.....	166
17.2	getCrestron	168
17.3	crestron.....	173
17.4	Test scripts	179
18.	Command api.....	182
18.1	Command api Introduction.....	182
18.2	Command.....	184
18.3	Test scripts	190
19.	Reference	193
19.1	Time zone table.....	193
19.2	Error Code Define	195

Revision History

Revision	Date	Description
0.9.0	2017/10/16	First Version from SE510 1.2.1
0.9.1	2017/11/07	Replace XML to json.
0.9.2	2018/07/04	Rename T533C to SB-520
0.9.3	2018/07/30	Revise for SB-520 UI flow
0.9.4	2018/08/01	Revise getDeviceList, getDeviceConfig , setDeviceConfig and PIP management
0.9.5	2018/08/28	<ol style="list-style-type: none"> 1. Revise to support Restful API(GET, POST/PATCH/PUT.) 2. Revise to http header bearer authentication support. 3. File system management for SD & USB disk.
0.9.6	2018/09/05	1.Revise to support Restful API
0.9.7	2018/09/18	<ol style="list-style-type: none"> 1. fix some name's capital. 2. deviceConfig add brightness, contrast, hue and saturation. 3. Add inputSourceThumbnail.
0.9.8	2018/09/19	<ol style="list-style-type: none"> 1. stream record adding container & storeDevice. 2. Fix getCDNchannelList. 3. getNetwork remove enable, setRebootSchedule change enable to bool. 4. setPIPConfig remove currentPIPIId & sourceReverse. 5. setPIPConfig change to setup single config. 6. Add deletePIPConfig. 7. setConfig/getConfig add mastership.
0.9.9	2018/10/24	<ol style="list-style-type: none"> 1. tune inputSignalStatus. 2. Modify PIP management. 3. Add custom to PIPConfig.
0.9.10	2018/12/06	<ol style="list-style-type: none"> 1. Add userID in authenticateOauth. 2. Add streamType in authenticateCDN & authenticateOauth . 3. Update authenticateCDN & authenticateOauth param to json. 4. Remove null packet. 5. Add video/audio param range and limit.
0.9.11	2018/12/26	<ol style="list-style-type: none"> 1. fix encode profile's videoType, audioType and container. 2. Add micMute & audioMute. 3. Add videoID in CDN. 4. Add width & totalBitrate in encodeProfileList. 5. Update encode profile's nic meaning.

0.9.12	2019/1/21	<ol style="list-style-type: none"> 1. Add frame rate into the api inputSignalStatus. 2. Modify video parameters' range. 3. Add seconds in return json of updateFW. 4. Add umountDisk
0.9.13	2019/1/22	<ol style="list-style-type: none"> 1. add sap in system config. 2. Add enableCms in stream profile.
0.9.14	2019/3/20	<ol style="list-style-type: none"> 1. add getStoreDeviceList. 2. Remove null packet. 3. Add hdmiOutput. 4. Change configuration file extension from .tgz to .bak 5. Add reboot wait time. 6. Add snapshotStorage in SystemConfig. 7. Add error code define.
0.9.15	2019/3/21	<ol style="list-style-type: none"> 1. add facebook category. 2. Add cdnRtmpUrl & cdnRtmpStreamName.
0.9.16	2019/6/6	<ol style="list-style-type: none"> 1. add midinResolution in setDeviceConfig. 2. Add frameRate in ProfileList.
1.0.0	2019/6/24	<ol style="list-style-type: none"> 1. update error code. 2. Add model in SystemConfig
1.0.1	2019/10/16	<ol style="list-style-type: none"> 1. Add Panopto support.
1.0.2	2019/10/17	<ol style="list-style-type: none"> 1. Add Kaltura support.
1.0.3	2019/11/19	<ol style="list-style-type: none"> 1. Add rtmp pull support. 2. Add getKalturaStatus. 3. Modify kalturaScheduledList.
1.0.4	2019/11/26	<ol style="list-style-type: none"> 1. Modify setKalturaStatus & getKalturaStatus
1.0.5	2019/12/04	<ol style="list-style-type: none"> 1. Update file management.
1.0.6	2020/1/10	<ol style="list-style-type: none"> 1. Add crestron api.
1.0.7	2020/2/20	<ol style="list-style-type: none"> 1. use the session id directly in the api command line or json. 2. Add Command api. 3. Modify crestron api.
1.0.8	2020/7/17	<ol style="list-style-type: none"> 1. Update getUserLog

1. Introduction

1.1 Overview

SB-520 provides users manage system configuration, programs scanning, profiles and Stream Profile, etc. Before operating it, you must login it with success. The following is the Use Case diagram of SB-520

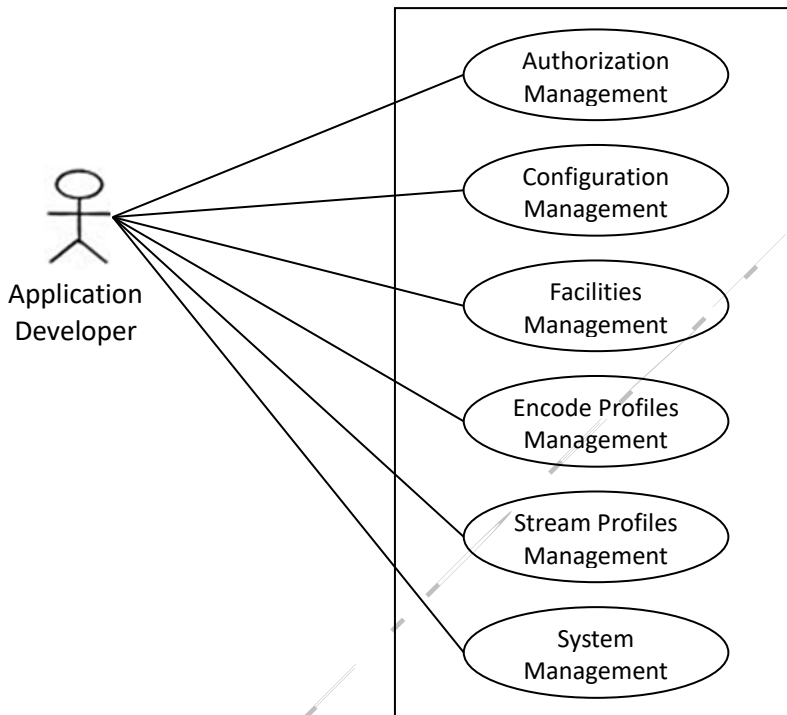


Figure 1: SB-520 API Groups

1.1.1 Access SB-520 by WEB

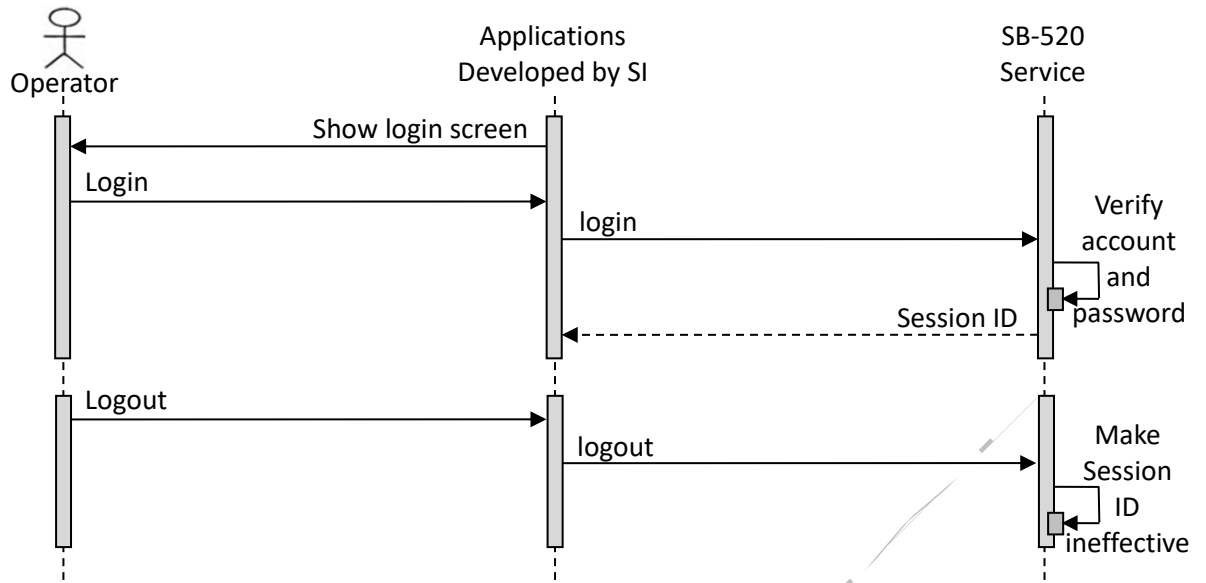
Access SB-520 by WEB need enter SB-520 IP address to browser. Then browser will request SB-520 WEB. When request is finished.WEB will get configuration of SB-520 to set UI setting.

1.1.2 Authorization Management

Users who want to manage SB-520 system will need to login the system first. Once she/he logins successfully, the SB-520 service will create a key called Session ID for their next operations. When they logout, SB-520 service will make the key ineffective.

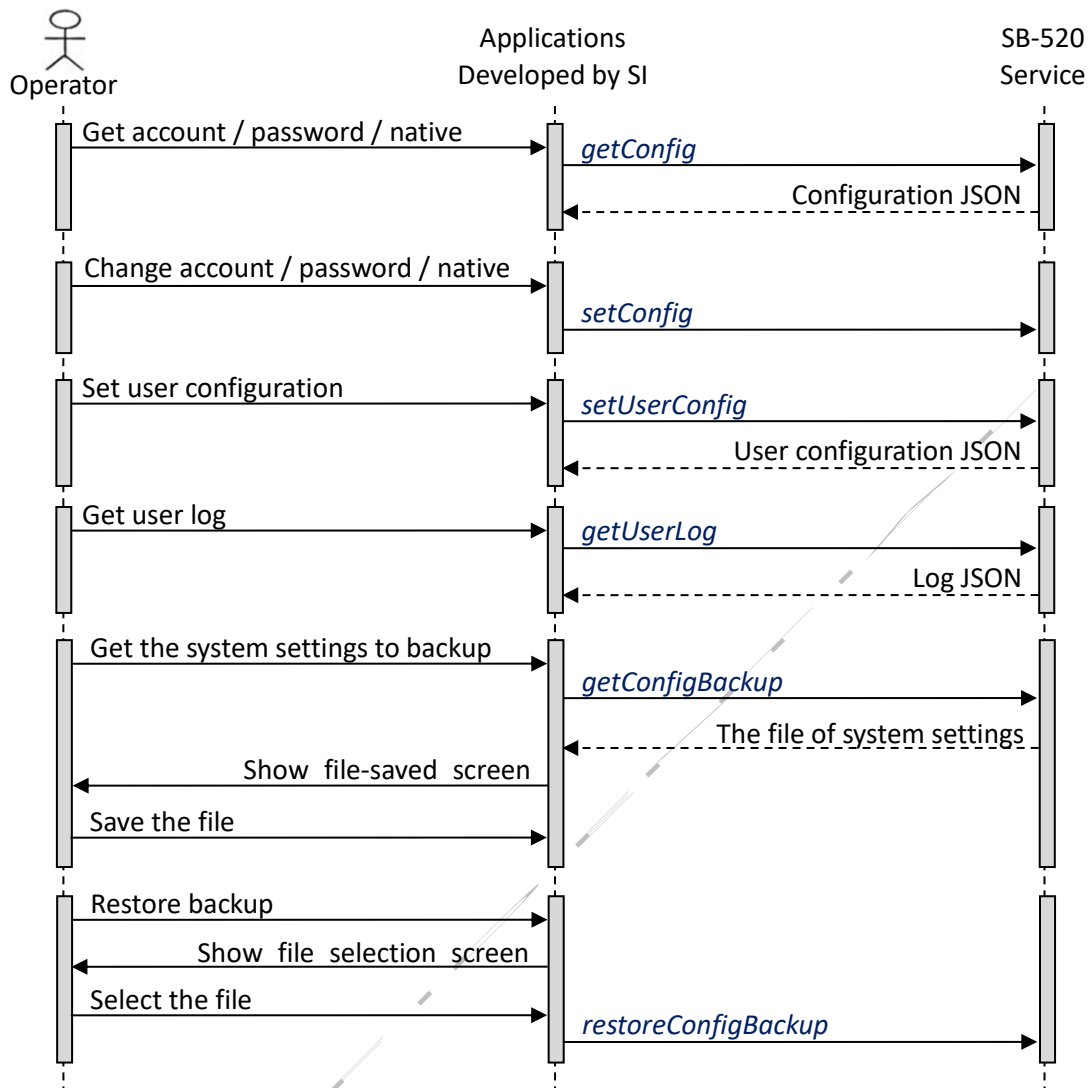
When call cgi successfully. Session will recalculate the life cycle.

The Web server use HTTP bearer authentication to authorize user's privilege. Please put the session id as the bearer authentication's key. **On the other hand, you can also use the session id directly in the api command line or json.**



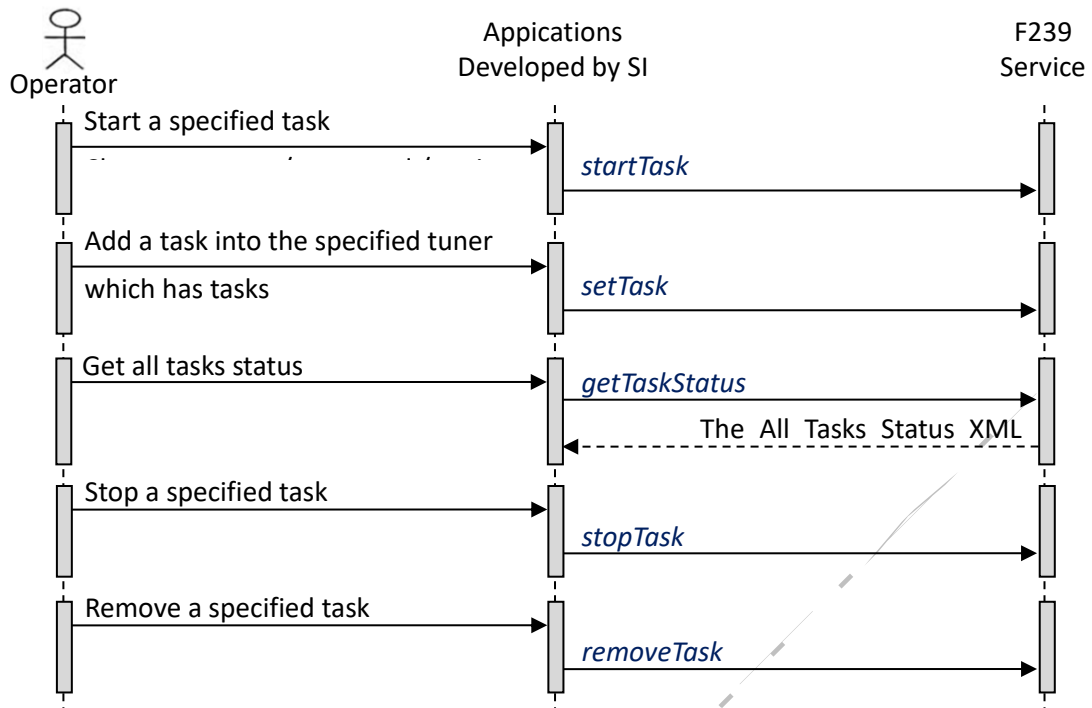
1.1.3 Configuration Management

SB-520 provides users manage system configuration. Before operating it, you must login it with success. Except getConfig. The following is the Use Case diagram of SB-520.



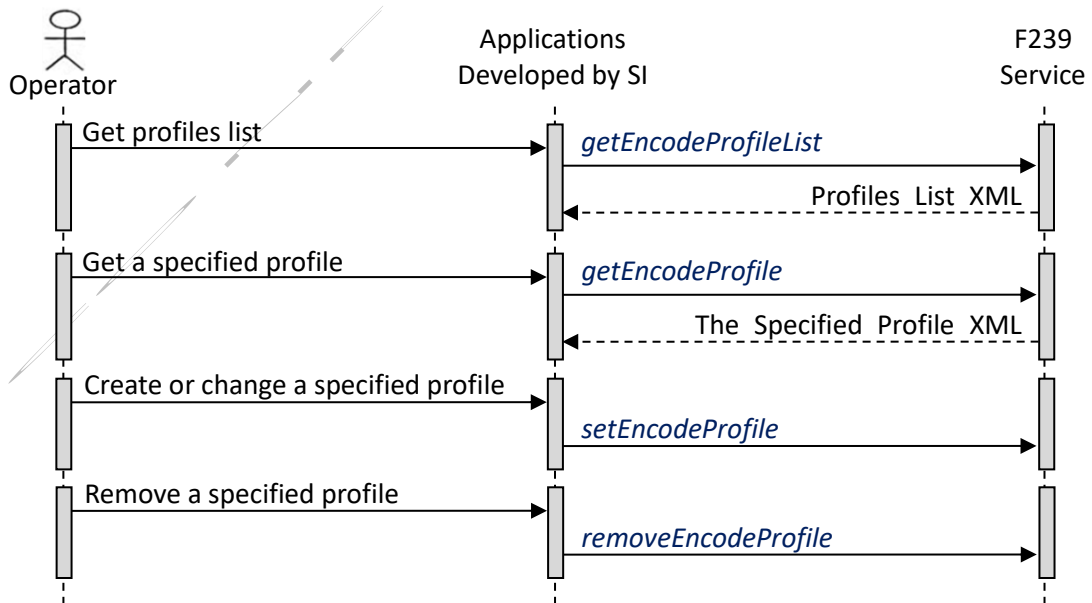
1.1.4 Facilities Management

You can use the APIs of Facilities Management to get the information about SB-520 devices and to provide the functions which let users manage and inquiry the streaming tasks. Besides, you can use the API, `setDeviceConfig`, to set the input of video/audio, etc.



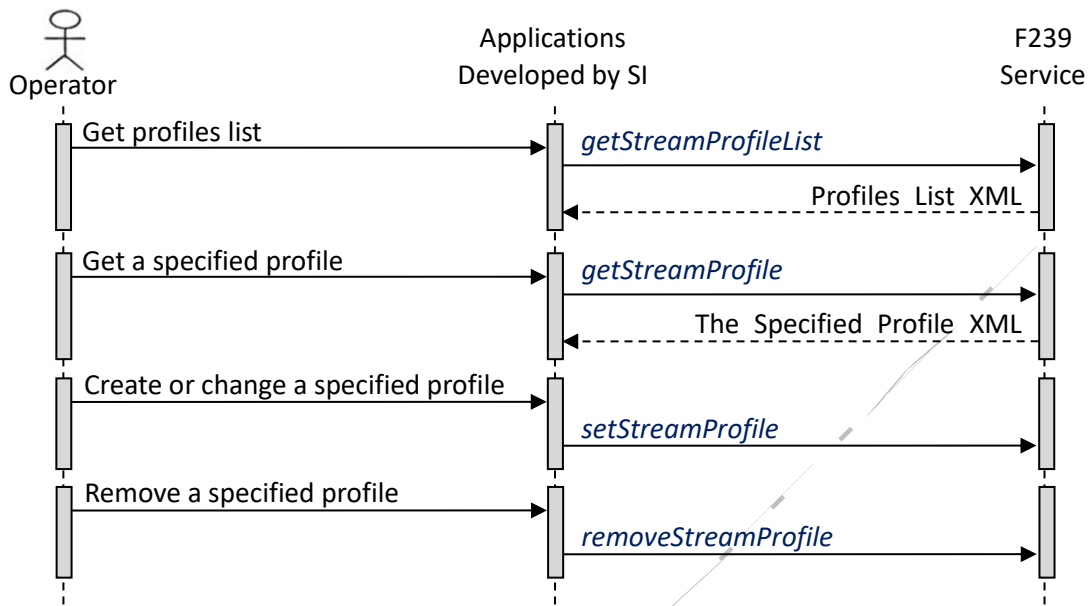
1.1.5 Profiles Management

You can manage your own encoding profiles if you can not find a desired one in system-built.



1.1.6 Stream Profiles Management

The main features of Stream Profiles Management APIs are to provide the functions which let users manage and inquiry the streaming tasks.



1.1.7 System setting

User can manage system or NIC network include set system time, set reboot schedule or get SB-520 IP,dhcp,DNS and set SB-520 netWork setting.

1.1.8 ErrorCode rule

Error code is 4-byte unsigned integer, that is also 8-hex digits as follow:

Hex7	Hex6	Hex5	Hex4	Hex3	Hex2	Hex1	Hex0
Hash code of the module (0x00 ~ 0xff)		The line number of the module. (0~65535)				Error code of the module. (1~254), 0 & 255 reserved.	

So every module has 254 defined error codes at most.

1.2 How to setup a Stream Profile

SB-520 support HDMI, SDI. You can pick one of specified input source type to set the Stream Profile.

1.2.1 Get device list

WEB will capture type of Input sources including HDMI, SDI

- setDeviceConfig: set up the device format used

1.2.2 Choose the stream type

You should decide which type you want to use. Different types have different settings. SB-520 provides the following type:

- TS over TCP
- TS over UDP
- TS Multicast
- TS over RTP
- TS RTP Multicast
- TS over HTTP
- Apple HTTP Live Streaming(HLS)
- RTP/3GP
- RTSP
- FLV over HTTP
- RTMP Publish

1.2.3 Choose the encoding profile

The profiles are combined by a lot of factors including the resolution, level, frame rate, bitrate, and etc. SB-520 provides many built-in profiles and you can create your own.

- getEncodeProfileList: Get the profiles list including system provided and created by yourself
- getEncodeProfile: Get the specified profile detail
- addEncodeProfile: Add new the profile
- modifyEncodeProfile: Modify the profile
- removeEncodeProfile: Remove the specified profile

1.2.4 Manage the Stream Profile

You can manage Stream Profiles by the following APIs.

- getStreamProfileList: Get all basic information of SB-520 task
- getStreamProfile: Get specific task detail information by id
- addStreamProfile: Add a new task
- modifyStreamProfile: modify exist task information
- removeStreamProfile: Remove the Stream Profile regardless of whether it is under streaming or not

1.2.5 Set the SB-520 task and start it.

You can get/set the SB-520 task by the following APIs.

- getDeviceTask: get the device task setting
- setDeviceTask: set the device task setting

- startTask: start the Stream Task regardless of whether it is under streaming or not
- stopTask: stop the StreamTask regardless of whether it is under streaming or not

1.2.6 Get the SB-520 status

You can get the SB-520 status by the following APIs.

- getInputSignalStatus: Get device input signal status of SB-520 device
- getTaskStatus: Get stream status by device id

1.2.7 Network setup

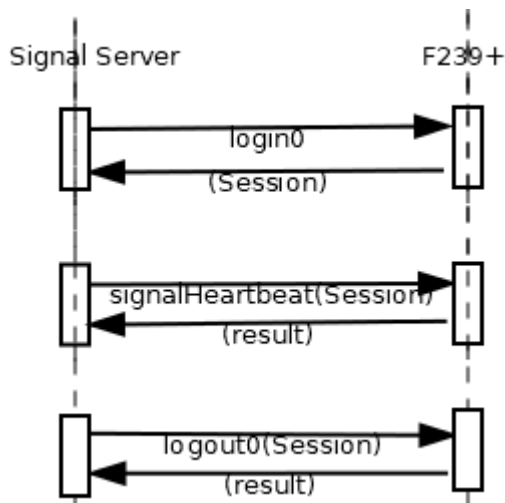
Different network setup will fill out according to the stream type specified. You can get your network card settings through the getNetworkConfig. And modify through the setNetworkConfig. Use getCurrentNetworkStatus to get current network card status

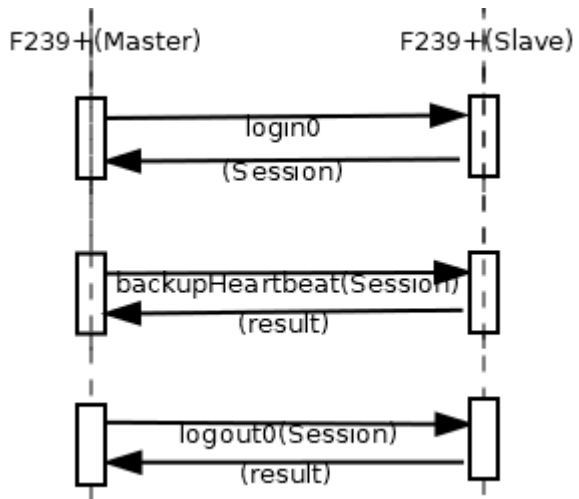
1.2.8 System time setting

You can Change SB-520 time by this API.

- getSystemTime: get SB-520 system time
- setSystemTime: User set SB-520 system time manually.

1.3 Heartbeat flow





2. Authorization Management

2.1 login

■ Description

- BOX provides a set of user identifier and password for the administration.
- A user will get a number, called session, when he login the system successfully, and BOX will only store the last session for verification.
- Besides, every BOX HTTP Request needs to verify the session.

■ Note

Support multi account (SB-520 : single account)

■ URL

http://HostName:Port/api/login

■ HTTP Method

- POST
- Parameters

Name	type	Description
username	String	The user identifier
password	String	The password for the user identifier
keepLogin	Integer	0 : disable, 1 : enable.

- cURL Exmpale

```
curl -d "{\"username\":\"admin\", \"password\":\"avermedia\", \"keepLogin\":0}"  
192.168.1.100/api/login
```

■ Response

- JSON

```
{  
  "session":%d  
  "result":%d  
}
```

- Error

```
{  
  "result": %d,  
  "message":"invalid arg ..."  
}
```

Description

Name	Description
session	A set of number sent by box when the user login successfully (Login fail don't return session data)
result	result = 0, it meant that execution is successful result = 101, it meant the logging is failed result = 102, it meant session is ineffective
message	Return which parameters occur error.

- Example

```
{  
  "session": 12569,  
  "result": 0  
}
```

Error

```
{  
  "result": 101,  
  "message": "invalid arg ..."  
}
```

```
{  
  "result": 102,  
  "message": "invalid arg ..."  
}
```

2.2 logout

- Description

Logout the BOX Web Management System, and make the session ineffective.

Notice : Logout must reset keepLogin to 0.

- Note

Support multi account (SB-520 : single account)

- URL

http://HostName:Port/api/logout

- HTTP Method

- POST

- cURL Example
curl -X POST 192.168.1.100/api/logout

■ Response

- JSON

```
{
  "result":%d
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

Description

Name	Description
result	result = 0, it meant that execution is successful result = 102, it meant session is ineffective
message	Return which parameters occur error.

- Example

```
{
  "result":0
}
```

- Error

```
{
  "result":102,
  "message":"invalid arg ..."
}
```

2.3 checkSession

■ Description

Check session is alive.

■ URL

http://HostName:Port/api/checkSession

■ HTTP Method

- POST

- cURL Example
curl -X POST 192.168.1.100/api/checkSession

■ Response

- JSON

```
{  
  "result":%d  
}
```

Error

```
{  
  "result": %d,  
  "message":"invalid arg ..."  
}
```

Description

Name	Description
result	result = 0, it meant session is alive result = 102, it meant session is ineffective
message	Return which parameters occur error.

- Example

```
{  
  "result":0  
}
```

Error

```
{  
  "result":102,  
  "message":"invalid arg ..."  
}
```

3. Configuration Management

3.1 getConfig

■ Description

Get the box configuration settings

■ URL

http://HostName:Port/api/configuration

■ HTTP Method

- GET
- cURL Example

curl 192.168.1.100/api/configuration

■ Response

- JSON

```
{
  "result":%d,
  "mastership":%s,
  "hdmiOutput":%d,
  "snapshotStorage":%s,
  "config":{
    "language":%s,
    "deviceName":%s
    "version":%s,
    "SKU":%s,
    "keepLogin":%d,
    "sn": "%s"
    "model":%s,
    .....
  },
  "streamSetting" : {
    "autoStart" : %d,
  }
}
```

Error

```
{
  "result": %d,
```

```

    "message":"invalid arg ..."
}

```

Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result =102, it meant session is ineffective
message	Return which parameters occur error.
mastership	Master ship : “web” or “remoteController”
hmdiOutput	1 or 2
snapshotStorage	“”, “usb” or “sd”
config	Contain setting of BOX basic parameters setting
language	Language system of UI
deviceName	Device name
version	Firmware version
SKU	SKU version
keepLogin	Keep login enable:1/disable:0.
sn	sn: Serial number of Device, encrypted by AES128 with key “avermediat035000”
model	Model name, ex:”SB-520”
sap	Sap name
streamSetting	Global stream attribute setting
autoStart	=1, mean auto start when boot up =0, mean do not auto start

- Example

```

{
  "result":0,
  "mastership":"web",
  "config":{
    "language":"en_us",
    "deviceName":"SB-520_myCaster",
    "version":"1.0.0"
  },
}

```

```
"streamSetting":{
  "autoStart":1,
},
}
```

- Error

```
{
  "result":102,
  "message":"invalid arg ..."
}
```

3.2 setConfig

■ Description

Set the specified parameters new value including native settings.

■ URL

http://HostName:Port/api/configuration

■ HTTP Method

- PATCH/POST
- JSON

```
{
  "mastership" : %s,
  "hdmiOutput":%d,
  "snapshotStorage":%s,
  "config":{
    "language":%s,
    "deviceName":%s
    .....
  },
  "streamSetting" : {
    "autoStart" : %d,
  }
}
```

- Parameters

Name	type	Description
mastership	string	master ship : "web" or "remoteController"

hdmiOutput	integer	1 or 2
snapshotStorage	string	"","usb" or "sd"
config	Contain setting of BOX basic parameters setting	
language	String	Language system of UI
deviceName	String	Device name, Default is the 6 hex codes of the last 3 MAC codes of eth2.
version	String	Firmware version
streamSetting	Global stream attribute setting	
autoStart	int	=1, mean auto start when boot up =0, mean do not auto start

- cURL Example

curl -d

```
{
  "mastership" : "remoteController",
  "config":{
    "language":"en_us",
    "deviceName":"SB-520_myCaster",
    "version":"1.0.0"
  },
  "streamSetting":{
    "autoStart":1,
  },
}
```

192.168.1.100/api/configuration

■ Response

- JSON

```
{
  "result":%d
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
```

```
}
```

Description

Name	Description
result	result = 0, it meant that execution is successful result = 103 , it meant that parameter value invalid result = 102, it meant session is ineffective
message	Return which parameters occur error.

- Example

```
{  
  "result":0  
}
```

- Error

```
{  
  "result":103,  
  "message":"invalid arg ..."  
}
```

3.3 setUser

- Description

Change user password and account.

- Note

Support multi account (SB-520 : single account)

- URL

http://HostName:Port/api/setUser

- HTTP Method

- PATCH/POST

- Parameters

Name	type	Description
oldUsername	String	Old user account of box
oldPassword	String	Old user password of box
username	String	New user account of box
password	String	New user password of box

- cURL Example

curl -d "

"oldUsername=oldname&oldPassword=oldpw&username=newUser&password=newPW"

192.168.1.100/api/setUser

■ Response

- JSON

```
{
  "result":%d
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

Description

Name	Description
result	result = 0, it meant that execution is successful. result = 103 , it meant that parameter value invalid result = 102, it meant session is ineffective Failed case:
message	Return which parameters occur error.

- Example

```
{
  "result":0
}
```

- Error

```
{
  "result":103,
  "message":"invalid arg ..."
}
```

3.4 getConfigBackup

■ Description

Download the file of configuration from SB-520

■ URL

http://HostName:Port/ api /getConfigBackup

■ HTTP Method

- POST
- cURL Example

curl -o "SB-520_201201010101_cfg.bak" 192.168.1.100/api/getConfigBackup

■ Response

JSON

```
{
  "result":%d,
  "downloadFile": " /download/SB-520_YYYYMMDDHHII_cfg.bak"
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

- HTTP File Download
- HTTP/1.1 HEADER:
Content-Disposition: attachment; filename=SB-520_YYYYMMDDHHII_cfg.bak;
and,
filename – SB-520_YYYYMMDDHHII.bak for SB-520
YYYY - Year
MM - Month
DD - Days of the month
HH - Hours
II – Minutes

PS: Above is system time

3.5 restoreConfigBackup

■ Description

Restore the file of configuration to SB-520 server

■ URL

http://HostName:Port/api/restoreConfigBackup

■ HTTP Method

- POST
multipart/form-data

• Parameters

Name	Type	Description
config	file	The file contained SB-520 configuration to be restored

• cURL Example

curl --form config=@SB-520_201211261735.bak 192.168.1.100/api/restoreConfigBackup

■ Response

• JSON

```
{  
  "result":%d  
}
```

Error

```
{  
  "result": %d,  
  "message":"invalid arg ..."  
}
```

• Description

Name	Description
result	result = 0, it meant that execution is successful result = 103 , it meant that parameter value invalid result = 102, it meant session is ineffective(Expired)
message	Return which parameters occur error.

• Example

```
{  
  "result":0  
}
```

• Error

```
{  
  "result":102,  
  "message":"invalid arg ..."  
}
```

3.6 getUserLog

■ Description

Get the user log

■ URL

http://HostName:Port/api/ userLog

■ HTTP Method

- GET
- Parameters

Name	type	Description
startLine	Int	The start line that user wants.
getLines	Int	The line count of response.

- cURL Example

```
curl 192.168.1.100/api/userLog?startLine=1&getLines=25
```

■ Response

- JSON

```
{
  "result":%d,
  "totalLines":%d,
  "currentLine":%d,
  "logs":[
    {
      "time" : "%s",
      "event" : "%s",
      "desc" : "%s"
    },
    ...
  ]
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result = 102, it meant that session ineffective ineffective(Expired)
totalLines	The total lines of user log.
currentLine	After get log, the current line position.
logs	String array of logs.
time	time
event	Event level
desc	description
message	Return which parameters occur error.

- Example

```
{
  "result":0,
  "totalLines":300,
  "currentLine":26,
  "logs":[
    {
      "time" : "2015/02/06 16:30:00",
      "event" : "warn",
      "desc" : "ethernet plug out"
    },
    ...
  ]
}
```

- Error

```
{
  "result": 102,
  "message":"invalid arg ..."
}
```

3.7 downloadLog

- Description

Download the file of log from SB-520

■ URL

http://HostName:Port/ api /downloadLog

■ HTTP Method

- POST
- cURL Example

curl -o "SB-520_201201010101_log.tgz" 192.168.1.100/api/downloadLog

■ Response

- JSON

```
{
  "result":%d,
  "downloadFile": "/download/SB-520_YYYYMMDDHHII_log.tgz"
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

- HTTP File Download

- HTTP/1.1 HEADER:

Content-Disposition: attachment; filename=SB-520_YYYYMMDDHHII_log.tgz;

and,

YYYY - Year

MM - Month

DD - Days of the month

HH - Hours

II - Minutes

PS: Above is system time

4. Facilities Management

4.1 getDeviceFacilities

■ Description

Get the device list from box system

■ URL

http://HostName:Port/api/deviceFacilities

■ HTTP Method

- GET
- cURL Example

curl 192.168.1.100/api/deviceFacilities

■ Response

- JSON

```
{
  "result":%d,
  "devices":
  [
    {
      "id":%d,
      "videoInput":[%s, ...],
      "audioInput": [%s,...],
      "mixInput": [%s,...],
      "audioMix":%b
    }...
  ]
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful. result =102, it meant that session ineffective(Expired)
message	Return which parameters occur error.
devices	Contain parameter id and sourceType
id	The output device identifier
videoInput	Video Supported input source "hdmi1" "hdmi2" "sdi1" "sdi2"
audioInput	Audio Supported input source "hdmi1" "hdmi2" "sdi1" "sdi2"
mixInput	Mix Audio Supported input source "3.5mm" "xlr"
audioMix	Audio mix is true or false

- Example

```
{
  "result":0,
  "devices":[
    {
      "id":1,
      "videoInput":["hdmi1","hdmi2","sdi1","sdi2"],
      "audioInput": [ "hdmi1", "hdmi2", "sdi1", "sdi2"],
      "mixInput": ["3.5mm","xlr"],
      "audioMix":true
    },
    {
      "id":2,
      "videoInput":["hdmi1","hdmi2","sdi1","sdi2"],
      "audioInput": [ "hdmi1", "hdmi2", "sdi1", "sdi2"]
      "mixInput": [],
      "audioMix":false
    }
  ]
}
```

- Error

```
{
  "result":102
  "message":"invalid arg ..."
}
```

4.2 getDeviceConfig

- Description

Get the detail data of device

- URL

http://HostName:Port/api/deviceConfig

- HTTP Method

- GET
- Parameters

Name	type	Description
id	Int	Identify of the device config. To get the spcific data

- cURL Example

curl 192.168.1.100/api/deviceConfig?id=1

- Response

- JSON

```
{
  "result":%d,
  "device":
  {
    "id":%d,
    "videoInput":[%s,...],
    "videoParma":{
      "brightness":%d,
      "contrast":%d,
      "hue":%d,
      "saturation":%d
    }
  }
  "audioInput":%s,
  "audioParam":{
    "micMix":%b,
    "mixInput":%s,
```

```

        "soundControl":%d,
        "micPercentage":%d,
        "audioPercentage":%d,
        "micMute":%b,
        "audioMute":%b
    }
    "format":%s,
    "deInterlace":%s,
    "currentPIPID":%d,
    "reverseInputSource":%b,
    "midinResolution":[%d,%d]
}
}

```

Error

```

{
  "result": %d,
  "message":"invalid arg ..."
}

```

Description

Name	Description
result	result = 0, it meant that execution is successful result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
device	Contain parameter {id, hdmi} or {id , dsub}
id	the device identifier
videoInput	videoInput = maximum choose two of ["hdmi1","hdmi2","sdi1","sdi2"]
videoParam	
brightness	Brightness : -100~100 (default:0)
contrast	Contrast : 50~200(default:100)
hue	Hue : -90~90(default:0)
saturation	Saturation : 0~200(default:100)
audioInput	<i>audioInput = embed audio of videoInput choosed, or audioInput=3.5mm</i>
audioParam	
micMix	<i>Mic mix enable/disable</i>
mixInput	mixInput =xlr mixInput =3.5mm

soundControl	<i>Sound quantity : 0~100</i>
micPercentage	<i>Mic mix percentage : 0~100</i>
audioPercentage	<i>Audio input mix percentage : 0~100</i>
micMute	<i>Mic mute : true or false</i>
audioMute	<i>Audio mute : true or false</i>
format	<i>"ntsc" or "pal"</i>
deInterlace	<i>"none","weave","bob" or "blend"</i>
currentPIPID	<i>Current pip Id</i>
reverseInputSource	<i>Reverse PIP input source.</i>
midinResolution	<i>mdin 2 subtask's encode profile id</i>

- Example

```

{
  "result":0,
  "device":
  {
    "id":1,
    "videoInput":["hdmi1","hdmi2"]
    "videoParma":{
      "brightness":0,
      "contrast":100,
      "hue":0,
      "saturation":100
    }
  }
  "audioInput": "hdmi1"
  "audioParam":{
    "micMix":true,
    "mixInput":"xlr",
    "soundControl":60,
    "micPercentage":60,
    "audioPercentage":60,
    "micMute":false,
    "audioMute":false
  },
  "format":"ntsc",
  "deInterlace":"none",
  "currentPIPID":1,

```

```
    "reverseInputSource":false
  }
}
```

- Error

```
{
  "result":102,
  "message":"invalid arg ..."
}
```

4.3 setDeviceConfig

- Description

Set up the device input data

- URL

<http://HostName:Port/api/deviceConfig>

- HTTP Method

- PATCH
- JSON

```
{
  "device":
  {
    "id":%d,
    "videoInput":[%s,...],
    "videoParma":{
      "brightness":%d,
      "contrast":%d,
      "hue":%d,
      "saturation":%d
    }
  }
  "audioInput":%s,
  "audioParam":{
    "micMix":%b,
    "mixInput":%s,
    "soundControl":%d,
    "micPercentage":%d,
    "audioPercentage":%d,
```

```

        "micMute":%b,
        "audioMute":%b
    },
    "format":%s,
    "deInterlace":%s,
    "currentPIPID":%d
    "reverseInputSource":%b,
    "midinResolution":[%d,%d]
}
}

```

Description

Name	Description
device	Contain parameter {id, hdmi} or {id , dsub}
id	the device identifier
videoInput	videoInput = maximum choose two of ["hdmi1","hdmi2","sdi1","sdi2"]
videoParam	
brightness	Brightness : -100~100 (default:0)
contrast	Contrast : 50~200(default:100)
hue	Hue : -90~90(default:0)
saturation	Saturation : 0~200(default:100)
audioInput	<i>audioInput = embed audio of videoInput choosed, or audioInput=3.5mm</i>
audioParam	
micMix	<i>Mic mix enable/disable</i>
mixInput	<i>mixInput = xlr mixInput =3.5mm</i>
soundControl	<i>Sound quantity : 0~100</i>
micPercentage	<i>Mic mix percentage : 0~100</i>
audioPercentage	<i>Audio input mix percentage : 0~100</i>
micMute	<i>Mic mute : true or false</i>
audioMute	<i>Audio mute : true or false</i>
format	<i>"ntsc" or "pal"</i>
deInterlace	<i>"none","weave","bob" or "blend"</i>
currentPIPID	<i>Current pip Id</i>
reverseInputSource	<i>reverse PIP input source</i>
midinResolution	<i>mdin 2 subtask's encode profile id</i>

- cURL Example

```
curl -X PATCH -d '{"device":{"id":2,"videoInput":"sdi1","audioInput":
"3.5mm","format":"pal","deInterlace":"blend"}}' 192.168.1.100/api/setDeviceConfig
```

■ Response

- JSON

```
{
  "result":%d,
  "message":"invalid arg ..."
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful. result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
message	Return which parameters are invalid.

- Example

```
{
  "result":0
}
```

- Error

```
{
  "result":103,
  "message":"invalid arg ..."
}
```

4.4 inputSignalStatus

■ Description

Get the current input signals' status

■ URL

http://HostName:Port/api/inputSignalStatus

■ HTTP Method

- GET
- cURL Example

curl 192.168.1.100/api/InpuSignalStatus

■ Response

- JSON

```
{
  " result ":%d,
  " signalStatuses ":
  [
    {
      "sourceType":%s,
      "hdcP":%b,
      "sourceChange":%b,
      " quality ":%d,
      " height ":%d,
      " width ":%d,
      " frameRate ":%d,
      " isInterlaced ":%b,
      "currentBitrate":%d
    },
    ...
  ]
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful. result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
signalStatuses	

sourceType	Which source type is streaming at this task
Hdcp(reserved)	Hdcp=true, it meant protect on Hdcp=false, it meant protect off
sourceChange(reserved)	false = not changed, true = changed.
quality	The strength of stream signal. Between 0 and 100
height	The height of the stream resolution
width	The width of the stream resolution
frameRate	The frame rate of the stream
isInterlaced	false = Progressive, true = Interlaced
currentBitrate(reserved)	Current streaming bitrate.(kbit)

- Example

```

{
  " result ":0,
  " signalStatuses":
  [
    {
      "sourceType":"hdmi1",
      "hdcp":true,
      " quality ":100,
      " height ":1024,
      " width ":768,
      " frameRate ":60,
      " isInterlaced ":false,
      " currentBitrate ":2000,
    },
    ...
  ]
}

```

4.5 getDeviceTask

- Description

Get the ID data of device

■ URL

http://HostName:Port/api/deviceTask

■ HTTP Method

- GET
- Parameters

Name	type	Description
deviceID	Int	Identify of the device(1 or 2) config. To get the spcific data, id = 0, mean get all device tasks
taskID	Int	Identify of the task(1 or 2) config. To get the spcific data, id = 0, mean get all device tasks

- cURL Example

curl 192.168.1.100/api/deviceTask?deviceID=1&tasked=0

■ Response

- JSON

```
{
  "result":%d,
  "devices":
  [{
    "id":%d,
    "tasks" : [{
      "id" : %d,
      "streamID":%d,
      "profileID":%d
    },
    {
      "id" : %d,
      "streamID":%d,
      "profileID":%d
    }
  ]
},
...
]
```

Error

```
{
```

```

"result": %d,
  "message": "invalid arg ..."
}

```

Description

Name	Description
result	result = 0, it meant that execution is successful result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
devices	Contain parameter
id	the device identifier
streamID	The ID of Stream Profile.
profileID	The ID of encode profile.
message	Return which parameters are invalid.

- Example

```

{
  "result":0,
  "devices":
  [{
    "id":1,
    "tasks" : [{
      "id" : 1,
      "streamID":0,
      "profileID":0
    },
    {
      "id":2,
      "streamID":0,
      "profileID":0
    }
  ]
}

```

- Error

```

{

```

```
"result":102,  
  "message":"invalid arg ..."  
}
```

4.6 setDeviceTask

■ Description

Set the ID data of device

■ URL

http://HostName:Port/api/deviceTask

■ HTTP Method

- PATCH(modify)/POST(new)
- Parameters

Name	type	Description
id	Int	Identify of the device config. To get the spcific data
streamID	Int	The ID of Stream Profile. ID = 1001 mean preview stream profile.
profileID	Int	The ID of encode profile.

- cURL Example
POST(new)

```
curl -d "{  
  "devices":  
  [{  
    "id":1,  
    "tasks": [{  
      "streamID":1,  
      "profileID":1001  
    }],  
    {  
      "streamID":2,  
      "profileID":1001  
    }  
  ]  
}"
```

192.168.1.100/api/deviceTask

PATCH(modify)

```
curl -d "{
  \"devices\":
  [
    {
      \"id\":1,
      \"tasks\": [{
        \"id\" : 1,
        \"streamID\":1,
        \"profileID\":1001
      },
      {
        \"id\" : 2,
        \"streamID\":2,
        \"profileID\":1001
      }
    ]
  ]
}"
```

192.168.1.100/api/deviceTask

■ Response

- JSON

```
{
  \"result\":%d,
  \"tasks\":[
    {
      \"deviceID\": 1,
      \"taskID\": 1
    },
    {
      \"deviceID\": 1,
      \"taskID\": 2
    },
  ]
}
```

Error

```
{
  \"result\": %d,
  \"message\":\"invalid arg ...\"
}
```

Description

Name	Description
result	result = 0, it meant that execution is successful result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
message	Return which parameters are invalid.

- Example

```
{  
  "result":0,  
}
```

- Error

```
{  
  "result":103,  
  "message":"invalid arg ..."  
}
```

4.7 startTask

- Description

Start the specified streaming task

- URL

http://HostName:Port/api/startTask

- HTTP Method

- POST
- Parameters JSON

```
{  
  "tasks" : [  
    {  
      "deviceID" : %d,  
      "taskID" : %d  
    },  
  ],  
}
```

```
{
  "deviceID" : %d,
  "taskID" : %d
}
}}
```

- cURL Example
curl -d '{"tasks":[{"deviceID":1,"taskID":1},{"deviceID":1,"tasks":2}]}' 192.168.1.100/api/startTask

■ Response

- JSON

```
{
  "result":%d
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
message	Return which parameters occur error.

- Example

```
{
  "result":0
}
```

- Error

```
{
  "result":103,
  "message":"invalid arg ..."
}
```

4.8 stopTask

■ Description

Stop the specified streaming task

■ URL

http://HostName:Port/api/stopTask

■ HTTP Method

- POST
- Parameters

```
{ "tasks" : [  
  {  
    "deviceID" : %d,  
    "taskID" : %d  
  },  
  {  
    "deviceID" : %d,  
    "taskID" : %d  
  }  
]}
```

• cURL Example

```
curl -d '{"tasks":[{"deviceID":1,"taskID":1},{"deviceID":1,"taskID":2}]}'  
192.168.1.100/api/stopTask
```

■ Response

• JSON

```
{  
  "result":%d  
}
```

Error

```
{  
  "result": %d,  
  "message":"invalid arg ..."  
}
```

• Description

Name	Description
result	result = 0, it meant that execution is successful result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
message	Return which parameters occur error.

- Example

```
{
  "result":0
}
```

- Error

```
{
  "result":103,
  "message":"invalid arg ..."
}
```

4.9 deleteTask

- Description

Delete the specified streaming task

- URL

http://HostName:Port/api/deleteTask

- HTTP Method

- Delete
- Parameters

```
{ "tasks" : [
  {
    "deviceID" : %d,
    "taskID" : [%d]
  },
  {
    "deviceID" : %d,
    "taskID" : [%d]
  }
]}
```

- cURL Example

```
curl -d '{"tasks":[{"deviceID":1,"taskID":1},{"deviceID":1,"tasks":2}]}'
192.168.1.100/api/deleteTask
```

■ Response

- JSON

```
{
  "result":%d
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
message	Return which parameters occur error.

- Example

```
{
  "result":0
}
```

- Error

```
{
  "result":103,
  "message":"invalid arg ..."
}
```

4.10 getTaskStatus

■ Description

Get the current stream task status

■ URL

http://HostName:Port/api/taskStatus

■ HTTP Method

- GET
- Parameters

Name	type	Description
id	Int	Get data by device id Id =0, mean all

- cURL Example
curl 192.168.1.100/api/taskStatus?id=1

■ Response

- JSON

```
{  
  "result": %d,  
  "tasks": [  
    {  
      "deviceID": %d,  
      "taskID": %d,  
      "errorCode": "%s",  
      "isStart": %d,  
      "status": %d,  
      "streamTime": %d  
    }  
  ]  
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful. result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
isStart	Task streaming set to start or not. isStart =1 mean this stream is set to start. isStart = 0 mean this stream is not start.
status	Task streaming status. status =1 mean this stream is under streaming status = 2, prepare streaming status = 0 mean this stream is paused status = -1 mean error
errorCode	Error code of this streaming

streamTime	Streaming running time (seconds) from start.
------------	--

- Example

```
{
  "result": 0,
  "tasks": [
    {
      "dievceID": 1,
      "taskID": 1,
      "errorCode": "",
      "isStart": 1,
      "status": -1,
      "streamTime": 300
    }
  ]
}
```

5. Profiles Management

5.1 getEncodeProfileList

■ Description

Get the all profiles list

■ URL

http://HostName:Port/api/encodeProfileList

■ HTTP Method

- GET
- cURL Example

curl 192.168.1.100/api/encodProfileList

■ Response

- JSON

```
{
  "result":%d,
  "profiles":
  [
    {
      "id": %d,
      "videoType":%s,
      "audioType":%s,
      "container":%s,
      "streamType": [%d,%d...],
      " category ": %d,
      " name ": "%s",
      "width":%d,
      "totalBitrate":%d,
      "frameRate":%d
    },
    ...
  ]
}
```

Error

```

{
  "result": %d,
  "message":"invalid arg ..."
}

```

- Description

Name	Description
result	result = 0, it meant that execution is successful. result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired) result = 104, it meant that config is empty
message	Return which parameters occur error.
profiles	Contain multiple sets of profile
id	the profile identifier
videoType	the encoding type of the profile, its value would be 1: "h264" 2: "h265"
audioType	3: "aac" 4: "mp3"
container	["flv","avi","mp4","mov","ts","aac","mp3"]
streamType	Filter by specific protocol."TCP,RTMP..." 1: TS over TCP 2: TS over UDP 3: TS Multicast 4: TS over RTP 5: TS RTP Multicast 6: RTMP publish 7: HLS(Maximum of 5 people watching) 8:RTSP 11: ustream 12: twitch 13:youtube 14.CDNvideo 15:Facebook 16:Panopto 17:Kaltura 21:TS over Http 22:MPEG-DASH Push 23:RTMP Pull 51:Record
category	Box define group. Filter by specific category 0: the custom profile (id from 1001 ~) 1: the best quality (id from 1 ~ 10,41~50,200~210) 2: high quality (id from 11 ~ 20,51~60)

	3: medium quality (id from 21 ~ 30,61~70) 4: low quality (id from 31 ~ 40) 5: ustream group (id from 101 ~ 110) 6: twitch group (id from 91 ~ 100) 7: youtube (id from 81~90) 8:facebook(id from 71~80) 11:Kaltura(id from 301~310)
name	Name of this profile
width	Width of video resolution
totalBitrate	Total bitrate of video and audio.
frameRate	frame rate of video.

- Example

```

{
  "result":0,
  "profiles":
  [
    {
      "id": 202,
      "videoType": "H264",
      "audioType": "AAC",
      "container":["flv","avi","mp4","mov","ts","aac","mp3"]
      "streamType": [1,2,3,4,5,6,7,8,9],
      "category": 6,
      "name": "H.264 Main Profile vbr 720x480 [1.928 Mbps]",
      "width":720,
      "totalBitrate":2000
    },
    {
      "id": 1002,
      "videoType": "H264",
      "audioType": "AAC",
      "container":["flv","avi","mp4","mov","ts","aac","mp3"]
      "streamType": [1,2,3,4,5,6,7,8,9],
      "category": 0,
      "name": "mySetting",
      "width":720,
      "totalBitrate":2500,
      "frameRate":60
    }
  ]
}

```

```
}
]
}
```

Error

```
{
  "result": %d,
  "message": "invalid arg ..."
}
```

5.2 getEncodeProfile

■ Description

Get the specified profile detail

■ URL

http://HostName:Port/api/encodeProfile

■ HTTP Method

- GET
- Parameters

Name	type	Description
id	Int	The specified profile's id

- cURL Example

curl 192.168.1.100/api/getEncodProfile? id=2

■ Response

- JSON

Video

```
{
  "result":%d,
  "profile":{
    "id":%d,
    "videoType": %s,
    "audioType": %s,
    "container":[%s,%s...]
  }
}
```

```

        "streamType":[%d,%d...],
        "category":%d,
        "name":"%s",
        "dropFrameMode":%d,
        "delayTime":%d,
        "lastFrameMode":%d,
        "videoInfo":
        {
"width":%d,
        "height":%d,
        "bitrate":%d,
        "profile":%d,
        "level":%d,
        "encodeMode":%d,
"entropyMode":%d,
        "frame":%d,
        "bframeNum":%d,
        "outputRatio":%d
        },
        "audioInfo": {
        "channel":%d,
        "sampleRate":%d,
        "bitrate":%d,
        "encodeMode":%d
        }
    }
}

```

Video Only

```

{
    "result":%d,
    "profile":{
        "id":%d,
        "videoType": %s,
        "audioType": %s,
        "container":[%s,%s...]
        "streamType":[%d,%d...],

```

```
"category":%d,  
"name": "%s",  
"videoInfo":  
{  
  "width":%d,  
  "height":%d,  
  "format":%d,  
  "bitrate":%d,  
  "profile":%d,  
  " level ":%d,  
  "encodeMode":%d,  
  "entropyMode":%d,  
  "frame":%d,  
  "bframeNum":%d,  
  "outputRatio":%d  
}  
}  
}
```

Audio Only

```
{  
  "result":%d,  
  "profile":{  
    "id":%d,  
    "videoType": %s,  
    "audioType": %s,  
    "container":[%s,%s...]  
    "streamType":[%d,%d...],  
    "category":%d,  
    "name": "%s",  
    "audioInfo": {  
      "channel":%d,  
      "sampleRate":%d,  
      "bitrate":%d,  
      "encodeMode":%d  
    }  
  }  
}  
}
```

Error

```
{
  "result": %d,
  "message": "invalid arg ..."
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful. result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
message	Return which parameters occur error.
profile	Profile of encoding contain id,type,streamType,category,name,vedioInfo,audioInfo
Id	the profile identifier
videoType	the encoding type of the profile, its value would be 0: "none" 1: "h264" 2: "h265"
audioType	0: "none" 1: "aac" 2: "mp3"
container	["flv","avi","mp4","mov","ts","aac","mp3"]
streamType	Filter by specific protocol."TCP,RTMP..." 1: TS over TCP 2: TS over UDP 3: TS Multicast 4: TS over RTP 5: TS RTP Multicast 6: RTMP publish 7: HLS(Maximum of 5 people watching) 8:RTSP 11: ustream 12: twitch 13:youtube 14.CDNvideo 15:Facebook 16:Panopto 17:Kaltura 21:TS over Http 22:MPEG-DASH Push 23:RTMP Pull 51:Record

category	<p>Box define group. Filter by specific group <i>0: the custom profile</i> <i>1: the best quality</i> <i>2: high quality</i> <i>3: medium quality</i> <i>4: low quality</i> <i>5: ustream group</i> <i>6: twitch group</i> <i>7: youtube</i> <i>8:facebook</i> 11:Kaltura</p>
name	the name of this profile
videoInfo (optional)	If is exist mean not audio only
width	the width of the video resolution
height	the height of the video resolution
bitrate	the bitrate of the video encoding, its unit is kbps
profile	<p>the profile type of the video encoding <i>profile = "baseline"</i> <i>profile = "high"</i> <i>profile = "main"</i></p>
Level(read only)	<p>the level of the video encoding <i>level = "1"</i> <i>level = "1.1"</i></p> <p><i>level = "1.2"</i></p> <p><i>level = "1.3"</i></p> <p><i>level = "2"</i></p> <p><i>level = "2.1"</i></p> <p><i>level = "2.2"</i></p> <p><i>level = "3"</i></p> <p><i>level = "3.1"</i></p> <p><i>level = "3.2"</i></p>

	<i>level = "4"</i> <i>level = "4.1"</i> <i>level = "4.2"</i> <i>level = "5"</i> <i>level = "5.1"</i>
encodeMode	the mode of the video encoding <i>encodeMode = "cbr"</i> <i>encodeMode = "vbr"</i> <i>encodeMode = " avbr_fixqp"</i>
entropyMode	the Entropy Mode of the video encoding <i>entropyMode = "cavlc"</i> <i>entropyMode = "cabac"</i>
frame	Keyframe: 1~65536
bframeNum	the B frame number of the video encoding : 0~3
frameRate	the frame rate of the video : 30,50,60
outputRatio	<i>0: original ratio</i> <i>1: 16:9</i> <i>2: 4:3</i>
audiInfo (optional)	If is exist mean audio only
channel	the channel number for audio encoding <i>channel = " mono"</i> <i>channel = " stereo"</i>
sampleRate	the sample rate for audio encoding, its unit is 48KHz
bitrate	the bitrate for audio encoding, its unit is bps
encodeMode	the mode of the audio encoding <i>encodeMode = " aac"</i> <i>encodeMode = "mp3"</i> <i>encodeMode = "pcm"</i>

- Example

```

{
  "result":0,
  "profile": {
    "id": 1002,
    "videoType": "H264",
    "audioType": "AAC",

```

```
"container":["flv","avi","mp4","mov","ts","aac","mp3"]
  "name": "cutoms",
  "dropFrameMode":0,
  "delayTime":0,
  "lastFrameMode:0,
  "videoInfo": {
    "width": 1280,
    "height": 720,
    "frameRate": 60
    "bitrate": 2500,
    "profile": "baseline",
    "level": "5.1",
    "encodeMode": "cbr ",
    "entropyMode": "cavlc",
    "frame": 0,
    "outputRatio": 0
  }
}
```

- Error

```
{
  "result":103,
  "message":"invalid arg ..."
}
```

■ Parameter Range & Limit

- Resolution(Width*High) – Profile 對應表

因為 level 由 Resolution 與 Profile 決定, 所以 level 欄為 read only.

Reso l/ Profile	HEVC	AVC		
	main	Baseline	main	high
1920*1080	L4.1	L4.2	L4.2	L4.2
1280*720	L3.1	L3.1	L3.1	L3.1
854*480	L3	L3	L3	L3
720*576	L3	L3	L3	L3
720*480	L3	L3	L3	L3
640*480	L3	L3	L3	L3
640*360	L2.1	L3	L3	L3
480*360	L2.1	L2.1	L2.1	L2.1
426*240	L2	L2.1	L2.1	L2.1
320*240	L2	L2	L2	L2
Entropy	CAVLC	CAVLC	CAVLC	CAVLC
	CABAC		CABAC	CABAC

- Video bitrate(Kbps) : 200k ~ 22M

System: total 22M

Streaming : 11M*2

Recording:22M*1 or 11M*2

- Audio bitrate(Kbps)

AACLC:

Mono: 48000, 64000, 96000, 128000, 256000

Stereo : 48000, 64000, 96000, 128000, 256000,320000

MP3

Stereo : 32000, 40000,48000,

56000,64000,80000,96000,112000,128000,160000,192000,224000,256000,320000

PCM:

Bitrate 不可設

5.3 addEncodeProfile

■ Description

Add the specified profile detail

■ URL

http://HostName:Port/api/encodeProfile

■ HTTP Method

- POST
- JSON

Video

```
{
  "profile":{
    "videoType":%s,
    "audioType":%s,
    "container":%s,
    "streamType":[%d,%d...],
    "category":%d,
    "name":"%s",
    "videoInfo":
    {
      "width":%d,
      "height":%d,
      "bitrate":%d,
      "profile":%d,
      "level":%d,
      "encodeMode":%d,
      "entropyMode":%d,
      "frame":%d,
      "bframeNum":%d,
      "outputRatio":%d
    },
    "audioInfo": {
      "channel":%d,
```

```
        "sampleRate":%d,  
        "bitrate":%d,  
        "encodeMode":%d  
    }  
}  
}
```

- Video Only

```
{  
  "profile": {  
    "videoType":%s,  
    "audioType":%s,  
    "container":%s,  
    "name": "%s",  
    "vdeoInfo": {  
      "width":%d,  
      "height":%d,  
      "bitrate":%d,  
      "profile":%d,  
      "level":%d,  
      "encodeMode":%d,  
      "entropyMode":%d,  
      "frame":%d,  
      "bframeNum":%d  
    },  
  },  
}
```

Audio Only

```
{  
  "profile": {  
    "videoType":%s,  
    "audioType":%s,  
    "container":%s,  
    "name": "%s",  
    "audioInfo": {  
      "type": "%s",  
      "channel":2,  
    },  
  },  
}
```

```

    "sampleRate":%d,
    "bitrate":%d,
    "encodeMode":%d
  },
}
}

```

- Parameters
Please refer the section 5.2.

- cURL Example

```

curl -d
"{\"profile\":{\"videoType\":\"h264\",\"audioType\":\"aac\",\"container\":\"mp4\"},\"id\":1001,\"streamType\":[1,2...],\"category\":0,\"name\":\"my Profile\",
\"videoInfo\":{\"width\":1024,\"height\":768,\"bitrate\":2500,\"profile\":baseline,\"level\":1.1,\"encodeMode\":\"cbr\",\"entropyMode\":\"cavlc\",\"frame\":60,\"bframeNum\":2,\"outputRatio\":1},\"audioInfo\":{\"channel\":\"mono\",\"sampleRate\":48,\"bitrate\":128,\"encodeMode\":\"aac\"}}}"
192.168.1.100/api/encodProfile

```

- Response

- JSON

```

{
  "result":%d,
  "id":%d,
}

```

Error

```

{
  "result": %d,
  "message":"invalid arg ..."
}

```

- Description

Name	Description
result	result = 0, it meant that execution is successful result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
id	Return a identifier for profile

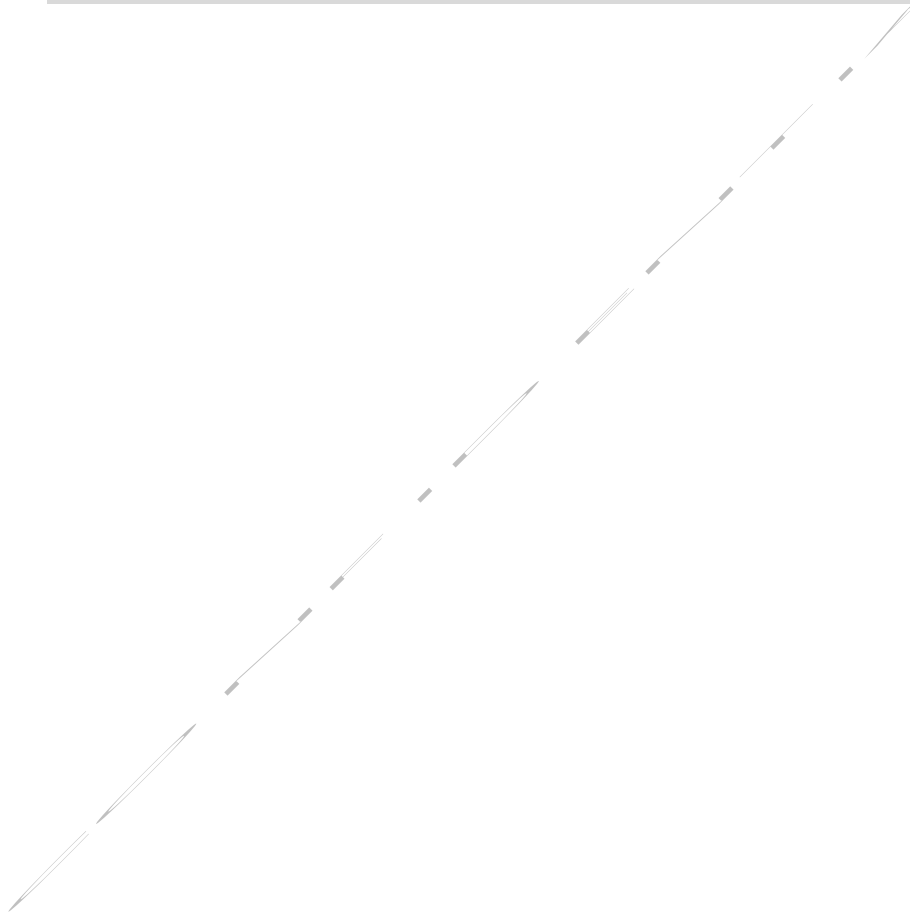
message	Return which parameters occur error.
---------	--------------------------------------

- Example

```
{  
  "result":0,  
  "id":1002,  
}
```

- Error

```
{  
  "result":103,  
  "message":"invalid arg ..."  
}
```



5.4 modifyEncodeProfile

■ Description

Modify the specified profile

■ URL

http://HostName:Port/api/encodeProfile

■ HTTP Method

- PATCH(modify)/PUT(replace)
- JSON

Video

```
{
  "result":%d,
  "profile":{
    "id":%d,
    "videoType":%s,
    "audioType":%s,
    "container":%s,
    "streamType":[%d,%d...],
    "category":%d,
    "name":"%s",
    "videoInfo":
    {
      "width":%d,
      "height":%d,
      "bitrate":%d,
      "profile":%d,
      "level":%d,
      "encodeMode":%d,
      "entropyMode":%d,
      "frame":%d,
      "bframeNum":%d,
      "outputRatio":%d
    },
    "audioInfo":
    {
      "channel":%d,
      "sampleRate":%d,
```

```
"bitrate":%d,  
"encodeMode":%d  
}  
  
}  
}
```

Video Only

```
{  
  "result":%d,  
  "profile":{  
    "id":%d,  
    "videoType":%s,  
    "audioType":%s,  
    "container":%s,  
    "streamType":[%d,%d...],  
    "category":%d,  
    "name": "%s",  
    "videoInfo":  
    {  
      "width":%d,  
      "height":%d,  
      "format":%d,  
      "bitrate":%d,  
      "profile":%d,  
      "level":%d,  
      "encodeMode":%d,  
      "entropyMode":%d,  
      "frame":%d,  
      "bframeNum":%d,  
      "outputRatio":%d  
    }  
  }  
}
```

Audio Only

```
{  
  "result":%d,
```

```
"profile":{
  "id":%d,
  "videoType":%s,
  "audioType":%s,
  "container":%s,
  "streamType":[%d,%d...],
  "category":%d,
  "name":"%s",
  "audiInfo": {
    "channel":%d,
    "sampleRate":%d,
    "bitrate":%d,
    "encodeMode":%d
  }
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

- Parameters

Please refer the section 5.2

- cURL Example

```
curl -X PATCH -d
{"profile":{"id":1001,"videoType":"h264","audioType":"aac","container":["mp4"],"stream
Type":[1,2...],"category":0,"name":"my
profile","videoInfo":{"width":1024,"height":768,"bitrate":2500,"profile":baseline,"level":
1.1,"encodeMode":"cbr","entropyMode":"cavlc","frame":60,"bframeNum":2,"outputRati
o":1},"audiInfo":{"channel":"mono","sampleRate":48,"bitrate":128,"encodeMode":
aac"}}" 192.168.1.100/api/encodProfile
```

■ Response

- JSON

```
{
```

```
"result":%d,
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful. result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
message	Return which parameters are invalid.

- Error

```
{
  "result":103,
  "message":"invalid arg ..."
}
```

5.5 removeEncodeProfile

- Description

Remove the specified profile

- URL

http://HostName:Port/api/encodeProfile

- HTTP Method

- DELETE

- Parameters

Name	type	Description
id	Int	the specified profile identifier

- cURL Example

curl -X DELETE -d "{id=1001}" 192.168.1.100/api/encodProfile

■ Response

- JSON

```
{  
  "result":%d  
}
```

Error

```
{  
  "result": %d,  
  "message":"invalid arg ..."  
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
message	Return which parameters occur error.

- Example

```
{  
  "result":0  
}
```

- Error

```
{  
  "result": "103",  
  "message": "invalid arg ..."  
}
```

6. Stream Profiles Management

6.1 getStreamProfileList

- Description

Get the stream profiles list

- URL

`http://HostName:Port/api/streamProfileList`

- HTTP Method

- GET
- cURL Example

`curl 192.168.1.100/api/streamProfileList`

- Response

- JSON

```
{
  "result":%d,
  "streamProfiles":
  [
    {
      "id":%d,
      " name ": "%s",
    }
    ....
  ]
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful. result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired) result = 104, config is empty
message	Return which parameters occur error.
streamProfiles	A streaming profiles. Contain id and basic streaming profile name
id	Stream profile Identifier
name	Stream profile name

- Example

```
{
  "result":0,
  "streamProfiles":
  [
    {
      "id":1,
      "name":"tcp",
    },
    {
      "id":2,
      "name":"rtmp",
    }
  ]
}
```

- Error

```
{
  "result":"103",
  "message":"invalid arg ..."
}
```

6.2 getStreamProfile

- Description

Get the stream profile detail data

- Note

Get stream profile data by different protocol and get specific data

■ URL

http://HostName:Port/api/streamProfile

■ HTTP Method

- GET
- Parameters

Name	type	Description
id	int	Get corresponding id of stream profile

- cURL Example
curl 192.168.1.100/api/streamProfile? id=1

■ Response

- JSON

```
{
  "result":%d,
  "streamProfile ":
  {
    "id":%d,
    "name":"%s ",
    "streamType":%d,
    "uri":"%s ",
    "nic":"%s ",
    "enableCms":%b,
    "ustream": {
      "userID:%s,
      "password": %s
      "channelID:%d,
      "videoID":%s,
    },
    "cdnVideo": {
      "userID:%s,
      "password": %s
      "channelID:%d,
      "videoID":%s,
    },
    "facebook": {
      "userID:%s,
      "videoID":%s,
```

```

},
"twitch": {
    "userID":%s,
"videoID":%s,
},
    "youtube":{
        "userID":%s,
"videoID":%s,
        "title": "%s",
        "description": "%s",
        "privacy": "%s",
        "tag": "%s,"
}

    "rtmp":{
        "rtmpUrl": "%s ",
        "cdnRtmpUrl": "%s ",
        "playBackUrl": "%s ",
        "rtmpBackupUrl": "%s ",
        "rtmpStreamName": "%s ",
        "cdnRtmpStreamName": "%s ",
        "enableAuthorize": %b ,
        "rtmpUser": "%s",
        "rtmpPasswd": "%s",
    },
    "tcp":
    {
        "port":%d,
        "setPid":%b,
        "videoPid":%d,
        "audioPid":%d,
        "pmtPid":%d,
        "pcrPid":%d,
    },
    "udp":
    {
        "ip":%s,
        "port":%d,
        "ttl":%d,

```

```
"sap":%d,  
"sapName":%s,  
"setPid":%b,  
"videoPid":%d,  
"audioPid":%d,  
"pmtPid":%d,  
"pcrPid":%d,  
},  
"rtsp":  
{  
"ip":%s,  
"port":%d,  
"ttl":%d,  
"sap":%d,  
"sapName":%s,  
"setPid":%b,  
"videoPid":%d,  
"audioPid":%d,  
"pmtPid":%d,  
"pcrPid":%d,  
},  
"hls":  
{  
"hlsSegmentFileNumbe":%d,  
"hlsChunkDuration":%d,  
"hlsPushMode":%b,  
"hlsUrl":%s,  
"hlsLocation":%s,  
"username":%s,  
"password":%s  
},  
"rtsp":  
{  
"maxClient": %d,  
"rtspUrl" : %s,  
"port": %d  
},  
"record":
```

```

    {
        "container":%s,
        "storeDevice":%s,
        "recordPath":%s,
        "filePath":%s,
        "username":%s,
        "password":%s
        "segmentDuration":%d
    },
    "cms":
    {
        "cmsType":%d,
        "playBackUrl":"%s ",
        "title":%s,
        "description":%s,
    },
    "sourceDevice":%s,
    "sourceParam": {
        "filePath":%s,
        "tcpSrcIP":%s,
        "tcpSrcPort":%d
    }
}

```

■Optional decide by streamType

Error

```

{
    "result": %d,
    "message":"invalid arg ..."
}

```

- Description

Name	Description
------	-------------

result	result = 0, it meant that execution is successful result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
message	Return which parameters occur error.
streamProfile	A streaming task. Contain streaming data
id	Task Identifier
name	Stream name.
streamType	use which kind of the streamType to transport the stream 1: TS over TCP 2: TS over UDP 3: TS Multicast 4: TS over RTP 5: TS RTP Multicast 6: RTMP publish 7: HLS(Maximum of 5 people watching) 8:RTSP 11: ustream 12: twitch 13:youtube 14.CDNvideo 15:Facebook 16:Panopto 17:Kaltura 21:TS over Http 22:MPEG-DASH Push 23:RTMP Pull 51:Record
nic	the interface of network card to output the stream "eth0" or "eth1"
enableCms	enable CMS (true or false)
\$CDN	Container of cdn parameter : youtube, twitch,ustream, etc.
userID	CDN user id, default ""
channelID	Cdn Channel id
videoID	After streaming, CDN will give a embed video ID for user watching.
title	Youtube title
description	Youtube description
privacy	Youtube privacy
tag	Youtube tag
rtmp	Container of rtmp parameter

info	Container of task parameter
cmsType	Cms type
title	Cms title
description	Cms description
ip	the IP of the stream setting
port	the port of the stream setting
record	
container	container of the recorded file. "flv","avi","mp4","mov","ts","aac" and "mp3"
storeDevice	Store device. "nas","sd" and "usb"
recordPath	Recording path
filePath	File name
username	username
password	password
segmentDuration	segmentDuration, minutes. Eg. 120
sap	1:enable,0:disable
sapName	Sap name
tTl	the time to live of the stream, and its value is between 1 and 255
uri	the stream uri, for example udp://@239.1.1.1:1234 for UDP protocol
hlsSegmentFileNumbe	specifies the HLS Segmenter value is between 8 and 30
hlsChunkDuration	The file duration for each transport stream file, The value "-1" is used for generating single transport stream file for HLS. value is between 1 and 60000
hlsUrl	Hls url string.
maxClient	Max client of rtsp
rtspUrl	rtsp url string.
sourceDevice	="file", mean file source ="tcpSrc", mean tcp source ="appSrc", mean app source
sourceParam	Container of source parameter
filePath	File path if sourceDevice="file"

tcpSrcIP	Tcp source IP if sourceDevice="tcpSrc"
tcpSrcPort	Tcp source port if sourceDevice="tcpSrc"

- Option case

streamType = 1 "TCP"

```

"tcp":
{
  "port":%d,
  "setPid":%b,
  "videoPid":%d,
  "audioPid":%d,
  "pmtPid":%d,
  "pcrPid":%d
}

```

streamType = 2,4 "UDP, ,RTP"

```

"udp"|"rtp":
{
  "ip":%s,
  "port":%d,
  "setPid":%b,
  "videoPid":%d,
  "audioPid":%d,
  "pmtPid":%d,
  "pcrPid":%d
}

```

streamType = 3,5 "Multicast, RTP Multicast"

```

"udp"|"rtp":
{
  "ip":%s,
  "port":%d,
  "ttl":%d,
  "sap":%d,
  "sapName":%s,
  "setPid":%b,
  "videoPid":%d,
  "audioPid":%d,
}

```

```
"pmtPid":%d,  
"pcrPid":%d,  
}
```

streamType = 6 "RTMP"

```
"rtmp":  
{  
  "rtmpUrl": "%s",  
  "cdnRtmpUrl": "%s",  
  "playBackUrl": "%s",  
  "rtmpBackupUrl": "%s",  
  "rtmpStreamName": "%s",  
  "cdnRtmpStreamName": "%s",  
  "enableAuthorize": %b,  
  "rtmpUser": "%s",  
  "rtmpPasswd": "%s",  
},
```

streamType = 7 "HLS"

```
"hls":  
{  
  "hlsSegmentFileNumbe": %d,  
  "hlsChunkDuration": %d,  
  "hlsPushMode": %b,  
  "hlsUrl": %s,  
  "hlsLocation": %s,  
  "username": %s,  
  "password": %s  
}
```

streamType = 8 "RTSP"

```
"rtsp":  
{  
  "maxClient": %d,  
  "rtspUrl": %s,  
  "port": %d  
}
```

streamType = 11 "ustream"

```
"ustream": {  
  "userID " : %s,  
  "password" " : %s ,  
  "channelID":%d ,  
  "videoID":%s,  
}
```

streamType = 13 "youtube"

```
"youtube": {  
  "userID " : %s,  
  "videoID":%s,  
  "title": "%s",  
  "description": "%s",  
  "privacy": "%s",  
  "tag": "%s,"  
}
```

streamType = 23 "rtmpPull"

```
"rtmpPull":  
{  
  "urlDirectory": "%s ",  
  "streamName": "%s "  
},
```

sourceDevice = "file"

```
"sourceParam":  
{  
  "filePath": %s  
}
```

sourceDevice = "tcpSrc"

```
"sourceParam":  
{  
  "tcpSrcIP": %s,  
  "tcpSrcPort": %d  
}
```

```
sourceDevice = "appSrc" // use app source
```

- Error

```
{  
  "result":103,  
  "message":"invalid arg ..."  
}
```

6.3 addStreamProfile

■ Description

Add a new stream profile. every time add one stream profile.

■ Note

Add stream profile by different protocol and add specific data

■ URL

http://HostName:Port/api/streamProfile

■ HTTP Method

- POST
- JSON

```
{  
  "streamProfile":  
  {  
    "id":%d,  
    "name":"%s",  
    "streamType":%d,  
    "nic":"%s",  
    "$CDN": {  
      "userID":%s,  
      "cdnChannelID":%d,  
      "cdnAccount":%s,  
      "cdnChannel":%s,  
      "videoID":%s  
    },  
    "rtmp":{  
      "infoID":%d,  

```

```

    "rtmpUrl": "%s ",
    "cdnRtmpUrl": "%s ",
    "playBackUrl": "%s ",
    "rtmpBackupUrl": "%s ",
    "rtmpStreamName": "%s ",
    "cdnRtmpStreamName": "%s ",
    "enableAuthorize": %b ,
    "rtmpUser": "%s",
    "rtmpPasswd": "%s",
},
"tcp":
{
    "port": %d,
    "setPid": %b,
    "videoPid": %d,
    "audioPid": %d,
    "pmtPid": %d,
    "pcrPid": %d,
},
"udp":
{
    "ip": %s,
    "port": %d,
    "ttl": %d,
    "sap": %d,
    "sapName": %s,
    "setPid": %b,
    "videoPid": %d,
    "audioPid": %d,
    "pmtPid": %d,
    "pcrPid": %d,
},
"rtp":
{
    "ip": %s,
    "port": %d,
    "ttl": %d,
    "sap": %d,

```

```

        "sapName":%s,
        "setPid":%b,
        "videoPid":%d,
        "audioPid":%d,
        "pmtPid":%d,
        "pcrPid":%d,
    },
    "hls":
    {
        "hlsSegmentFileNumbe":%d,
        "hlsChunkDuration":%d,
        "hlsPushMode":%b,
        "hlsUrl":%s,
        "hlsLocation":%s,
        "username":%s,
        "password":%s
    },
    "rtsp":
    {
        "maxClient": %d,
        "rtspUrl" : %s,
        "port": %d
    },
    "record":
    {
        "container":%s,
        "storeDevice":%s,
        "recordPath":%s,
        "filePath":%s,
        "username":%s,
        "password":%s
        "segmentDuration":%d
    },
    "cms":
    {
        "cmsType":%d,
        "playBackUrl": "%s ",
        "title":%s,

```

```

        "description":%s,
    },
    "sourceDevice" : %s,
    "sourceParam":
    {
        "filePath":%s,
        "tcpSrcIP":%s,
        "tcpSrcPort":%d
    }
}

```

■Optional

- cURL Example

```

curl -d '{"streamProfile":{"id":3,"name":"HDMI", "streamType":1, "tcp":{"port":1235,
"videoPid":8176,"audioPid":87177,"pmtPid":256,"pcrPid":257 },
"sourceDevice":
"file","sourceParam":{"filePath": "/mnt/usb/AverMedia-HDMI.ts"}}}'
192.168.1.100/api/streamProfile

```

- Parameters

Please refer to section 6.2

- Option case

streamType = 1 "TCP"

```

"tcp":
{
    "port":%d,
    "setPid":%b,
    "videoPid":%d,
    "audioPid":%d,
    "pmtPid":%d,
    "pcrPid":%d
}

```

streamType = 2,4 "UDP ,RTP"

```

"udp"|"rtp":
{

```

```
"ip":%s,  
"port":%d,  
"setPid":%b,  
"videoPid":%d,  
"audioPid":%d,  
"pmtPid":%d,  
"pcrPid":%d  
}
```

streamType = 3,5 "Multicast, RTP Multicast"

```
"udp"|"rtp":  
{  
  "ip":%s,  
  "port":%d,  
  "ttl":%d,  
  "sap":%d,  
  "sapName":%s,  
  "setPid":%b,  
  "videoPid":%d,  
  "audioPid":%d,  
  "pmtPid":%d,  
  "pcrPid":%d,  
}
```

streamType = 6 "RTMP"

```
"rtmp":  
{  
  "infoID":%d,  
  "rtmpUrl": "%s ",  
  "cdnRtmpUrl": "%s ",  
  "playBackUrl": "%s ",  
  "rtmpBackupUrl": "%s ",  
  "rtmpStreamName": "%s ",  
  "cdnRtmpStreamName": "%s ",  
  "enableAuthorize": %b ,  
  "rtmpUser": "%s",  
  "rtmpPasswd": "%s",  
},
```

streamType = 7 "HLS"

```
"hls":  
{  
  "hlsSegmentFileNumbe":%d,  
  "hlsChunkDuration":%d,  
  "hlsPushMode":%b,  
  "hlsUrl":%s,  
  "hlsLocation":%s,  
  "username":%s,  
  "password":%s  
}
```

streamType = 8 "RTSP"

```
"rtsp":  
{  
  "maxClient": %d,  
  "rtspUrl" : %s,  
  "port": %d  
}
```

streamType = 11 "ustream"

```
"ustream": {  
  "accountID" : %d,  
  "cdnChannelID":%d,  
  "cdnAccount":%s,  
  "cdnChannel":%s,  
  "videoID":%s  
},  
"rtmp":  
{  
  "infoID":%d,  
  "rtmpUrl": "%s ",  
  "cdnRtmpUrl": "%s ",  
  "playBackUrl": "%s ",  
  "rtmpBackupUrl": "%s ",  
  "rtmpStreamName": "%s ",  
  "cdnRtmpStreamName": "%s ",
```

```
" enableAuthorize":%b ,  
"rtmpUser": "%s",  
"rtmpPasswd": "%s",  
},
```

sourceDevice = "file"

```
"sourceParam":  
{  
  "filePath":%s  
}
```

sourceDevice = "tcpSrc"

```
"sourceParam":  
{  
  "tcpSrcIP":%s,  
  "tcpSrcPort":%d  
}
```

sourceDevice = "appSrc" // use app source

■ Response

- JSON

```
{  
  "result":%d  
  "id":%d  
}
```

Error

```
{  
  "result": %d,  
  "message": "invalid arg ..."  
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful. result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
message	Return which parameters occur error.
id	stream profile Identifier

- Example

```
{
  "result":0
  "id":1
}
```

- Error

```
{
  "result":103,
  "message":"invalid arg ..."
}
```

6.4 modifyStreamProfile

- Description

Update stream profile data

- Note

Modify stream profile by different protocol and modify specific data

- URL

http://HostName:Port/api/streamProfile

- HTTP Method

- PATCH(modify)/PUT(replace)
- JSON

```
{
  "streamProfile":
  {
    "id":%d,
```

```

"name": "%s ",
"streamType": %d,
"nic": "%s ",
"$CDN": {
    "accountID": %d,
    "cdnChannelID": %d,
    "cdnAccount": %s,
    "cdnChannel": %s,
    "videoID": %s
},
"rtmp": {
    "infoID": %d,
    "rtmpUrl": "%s ",
    "cdnRtmpUrl": "%s ",
    "playBackUrl": "%s ",
    "rtmpBackupUrl": "%s ",
    "rtmpStreamName": "%s ",
    "cdnRtmpStreamName": "%s ",
    "enableAuthorize": %b ,
    "rtmpUser": "%s",
    "rtmpPasswd": "%s",
},
"tcp":
{
    "port": %d,
    "setPid": %b,
    "videoPid": %d,
    "audioPid": %d,
    "pmtPid": %d,
    "pcrPid": %d,
},
"udp":
{
    "ip": %s,
    "port": %d,
    "ttl": %d,
    "sap": %d,
    "sapName": %s,

```

```

        "setPid":%b,
        "videoPid":%d,
        "audioPid":%d,
        "pmtPid":%d,
        "pcrPid":%d,
    },
    "rtsp":
    {
        "ip":%s,
        "port":%d,
        "nic":"%s ",
        "ttl":%d,
        "sap":%d,
        "sapName":%s,
        "setPid":%b,
        "videoPid":%d,
        "audioPid":%d,
        "pmtPid":%d,
        "pcrPid":%d,
    },
    "hls":
    {
        "hlsSegmentFileNumbe":%d,
        "hlsChunkDuration":%d,
        "hlsPushMode":%b,
        "hlsUrl":%s,
        "hlsLocation":%s,
        "username":%s,
        "password":%s
    },
    "rtsp":
    {
        "maxClient": %d,
        "rtspUrl" : %s,
        "port": %d
    },
    "record":
    {

```

```

        "container":%s,
        "storeDevice":%s,
        "recordPath":%s,
        "filePath":%s,
        "username":%s,
        "password":%s
        "segmentDuration":%d
    },
    "cms":
    {
        "cmsType":%d,
        "playBackUrl":"%s ",
        "title":%s,
        "description":%s,
    },
    sourceDevice = %s,
    "sourceParam":
    {
        "filePath":%s,
        "tcpSrcIP":%s,
        "tcpSrcPort":%d
    }
}
}
}

```

■Optional

- cURL Example


```

curl -X PATCH -d '{"streamProfile":{"name":"HDMI", "streamType":1, "nic":"eth0", "tcp":{"port":1235, "videoPid":8176, "audioPid":87177, "pmtPid":256, "pcrPid":257}, "sourceDevice": "file", "sourceParam": {"filePath": "/mnt/usb/AverMedia-HDMI.ts"}}' "192.168.1.100/api/streamProfile"

```
- Parameters

Please refer the section 6.2
- Option case

streamType = 1 "TCP"

```
"tcp":
{
  "port":%d,
  "videoPid":%d,
  "audioPid":%d,
  "pmtPid":%d,
  "pcrPid":%d
}
```

streamType = 2,4 "UDP, ,RTP"

```
"udp"|"rtp":
{
  "ip":%s,
  "port":%d,
  "videoPid":%d,
  "audioPid":%d,
  "pmtPid":%d,
  "pcrPid":%d
}
```

streamType = 3,5 "Multicast, RTP Multicast"

```
"udp"|"rtp":
{
  "ip":%s,
  "port":%d,
  "ttl":%d,
  "sap":%d,
  "sapName":%s,
  "videoPid":%d,
  "audioPid":%d,
  "pmtPid":%d,
  "pcrPid":%d,
}
```

streamType = 6 "RTMP"

```
"rtmp":
{
```

```
"infoID":%d,  
"rtmpUrl":"%s ",  
"cdnRtmpUrl":"%s ",  
"playBackUrl":"%s ",  
"rtmpBackupUrl":"%s ",  
"rtmpStreamName":"%s ",  
"cdnRtmpStreamName":"%s ",  
" enableAuthorize":%b ,  
"rtmpUser":"%s",  
"rtmpPasswd":"%s",  
},
```

streamType = 7 "HLS"

```
"hls":  
{  
  "hlsSegmentFileNumbe":%d,  
  "hlsChunkDuration":%d,  
  "hlsPushMode":%b,  
  "hlsUrl":%s,  
  "hlsLocation":%s,  
  "username":%s,  
  "password":%s  
}
```

streamType = 8 "RTSP"

```
"rtsp":  
{  
  "maxClient": %d,  
  "rtspUrl" : %s,  
  "port": %d  
}
```

streamType = 11 "ustream"

```
"ustream": {  
  "accountID" : %d,  
  "cdnChannelID":%d,  
  "cdnAccount":%s,  
  "cdnChannel":%s,
```

```
    "videoID":%s
  },
  "rtmp":
  {
    "infoID":%d,
    "rtmpUrl":"%s ",
    "cdnRtmpUrl":"%s ",
    "playBackUrl":"%s ",
    "rtmpBackupUrl":"%s ",
    "rtmpStreamName":"%s ",
    "cdnRtmpStreamName":"%s ",
    "enableAuthorize":%b,
    "rtmpUser":"%s",
    "rtmpPasswd":"%s",
  },
}
```

sourceDevice = "file"

```
"sourceParam":
{
  "filePath":%s
}
```

sourceDevice = "tcpSrc"

```
"sourceParam":
{
  "tcpSrcIP":%s,
  "tcpSrcPort":%d
}
```

sourceDevice = "appSrc" // use app source

■ Response

- JSON

```
{
  "result":%d
}
```

Error

```
{
  "result": %d,
  "message": "invalid arg ..."
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful. result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
message	Return which parameters occur error.

- Example

```
{
  "result":0
}
```

- Error

```
{
  "result":103,
  "message": "invalid arg ..."
}
```

6.5 removeStreamProfile

- Description

Remove the specified streaming profile

- URL

http://HostName:Port/api/streamProfile

- HTTP Method

- DELETE

- Parameters

Name	type	Description
id	Int	the identifier of the task allow multi task EX: taskID = 1,2,3

- cURL Example
`curl -X DELETE -d "id=1,2,3" 192.168.1.100/api/removeStreamProfile`

■ Response

- JSON

```
{
  "result":%d
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
message	Return which parameters occur error.

- Example

```
{
  "result":0
}
```

- Error

```
{
  "result":103,
  "message":"invalid arg ..."
}
```

7. CDN Management

7.1 authenticateCDN

■ Description

Authenticate CDN

■ URL

http://HostName:Port/ api/authenticateCDN

HTTP Method

POST

• Parameters

Name	Type	Description
streamType	int	6 RTMP 14.CDNvideo 11.Ustream 106 RTMP CMS
username	String	Login username
password	String	Login password

• cURL Exmpale

```
curl -d '{"streamType":14,"username":"admin","password":"avercaster"}' 192.168.1.100/api/authenticateCDN
```

■ Response

• JSON

```
{  
  "result":%d,  
}
```

Error

```
{  
  "result": %d,  
  "message":"invalid arg ..."  
}
```

Name	Type	Description
------	------	-------------

result	Int	result = 0, it meant that execution is successful. result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired) result = 105, it meant authenticate failed
message	array	Return which parameters occur error.

- Example

```
{
  "result":0
}
```

- Error

```
{
  "result":"103",
  "message":["invalid arg ..."]
}
```

7.2 authenticateOAuth

- Description

Authenticate CDN for youtube, facebook, twitch

- URL

http://HostName:Port/ api/authenticateOAuth

HTTP Method

POST

- Parameters

Name	Type	Description
streamType	int	6 RTMP 14.CDNvideo 11.Ustream 106 RTMP CMS
code	String	Authenticate code

- cURL Exmpale

```
curl -d '{"streamType":11,"cod"e=
4/qmUyDB9xYd7Ukdl-k5pwBYS3xaAtjW2GvuantmXwcWQ}'
192.168.1.100/api/authenticateOAuth
```

- Response

- JSON

```
{
  "result":%d,
```

```
    "userID":%s
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

Name	Type	Description
result	Int	result = 0, it meant that execution is successful. result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired) result = 105, it meant authenticate failed
userID	string	User id.
message	array	Return which parameters occur error.

• Example

```
{
  "result":0,
  "userID":"0"
}
```

• Error

```
{
  "result":"103",
  "message":"invalid arg ..."
}
```

7.3 getCDNchannelList

■ Description

Get CDN Channel name list

■ URL

http://HostName:Port/ api/CDNchannelList

HTTP Method

GET

- Parameters

Name	Type	Description
streamType	int	11.ustream 14.CDNvideo

- cURL Example

curl 192.168.1.100/api/CDNchannelList? streamType=11

■ Response

- JSON

```
{
  "result":%d,
  "channelList":{
    "streamType":%d,
    "channels":[
      {
        "channelID":%d,
        "channelName":%s
        "channelUrl":%s,
        "channelStreamName":%s,
        "embedVideoID":%s
      },
      ...
    ],
  }
}
```

- Description

Name	Type	Description
result	Int	result = 0, it meant that execution is successful. result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
channelList	object	Channel list object
streamType	int	11.ustrem 13.youtube
channels	array	Channel list objects array
channelID	int	Channel ID.
channelName	string	Channel name
channelUrl	string	Channel url
channelStreamName	string	Channel Streamname
embedVideoID	string	After streaming, CDN will give a embed video ID for user watching.

- Example

```
{
  "result":0,
  "channelList":
  {
    "streamType":1 1,
    "channels": [
      {
        "channelID":1,
        "channelName":"cdn_name1",
        "channelUrl":"channel_ur11",
        "channelStreamName":"stream_name1",
        "embedVideoID ":"rtmp:// channel_ur11/stream_name1"
      },
      {
        "channelID":2,
        "channelName":"cdn_name2",
        "channelUrl":"channel_ur12",
        "channelStreamName":"stream_name2",
        "embedVideoID ":" rtmp:// channel_ur12/stream_name2"
      }
    ]
  }
}
```

- Error

```
{
  "result":"103",
  "message":"invalid arg ..."
}
```

7.4 logoutCDN

- Description

Logout the CDN System, and make the token ineffective

- URL

<http://HostName:Port/api/logoutCDN>

■ HTTP Method

- POST
- Parameters

Name	type	Description
streamType	int	6.RTMP 11.ustrem 12.twitch TV 13.youtube 14.CDNvideo 106.RTMP CMS

- cURL Example
curl -d "streamType=11" 192.168.1.100/api/logoutCDN

■ Response

- JSON

```
{
  "result":%d
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

Description

Name	Description
result	result = 0, it meant that execution is successful result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired) result = 106, cdn error
message	Return which parameters occur error.

- Example

```
{
  "result":0
}
```

- Error

```
{
  "result":102,
  "message":"invalid arg ..."
}
```

8. CMS Management

8.1 getCMSRegStatus

■ Description

Get the CMS register status of SB-520

■ URL

http://HostName:Port/ api/getCMSRegStatus

HTTP Method

GET

• cURL Example

curl 192.168.1.100/api/getCMSRegStatus

■ Response

• JSON

```
{
  "result":%d,
  "instInfo":{
    "cmsDomain":%s,
    "streamConnect":%d
  }
}
```

Error

```
{
  "result": %d
}
```

Name	Type	Description
result	Int	result = 0, it meant that execution is successful result = 107, error occurs result = 102, it meant that session ineffective(Expired)
cmsDomain	string	If cmsdomain has no value , it has not registered to CMS server.

streamConnect	int	0 : disconnect 1 : connect
---------------	-----	-------------------------------

- Example

```
{
  "result":0
  "instInfo":{
    "email":"avercms@avermedia.com",
    "id":1,
    "institution":"AverMedia",
    "organization":"CRD",
    "cmsDomain":"10.1.9.122:80",
    "streamConnect":0
  }
}
```

- Error

```
{
  "result":"112"
}
```

8.2 connectToCMS

- Description

Information of box connect to CMS server

- URL

http://HostName:Port/cgi-bin/connectToCMS

- HTTP Method

- POST

- Parameters

Name	Type	Description
connect	int	1=connect , 2=disconnect
cmsDomain	String	CMS server IP and port ex: 10.1.9.102:80

- Response

- Success

```
{
  'result':0
}
```

```
}
```

- Error

```
{  
'result':%d,  
"message":%s  
}
```

9. System

9.1 getSystemTime

- Description

Get local system time

- URL

http://HostName:Port/api/systemTime

- HTTP Method

- GET
- cURL Example

curl 192.168.1.100/cgi-bin/systemTime

- Response

- JSON

```
{
  "result":%d,
  "isSet":%d,
  "time": {
    "year": %d,
    "month": %d,
    "day": %d,
    "hour": %d,
    "minute": %d,
    "second": %d,
    "timezone": %d,
    "timezoneid": %d
  }
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

- Parameter

Name	Description
result	result = 0, it meant that execution is successful. result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
message	Return which parameters occur error.
isSet	Return the system time is set already (1) or not(0).
time	Data of SB-520 system time. Contain parameter year,month etc...
year	Get year of SB-520
month	Get month of SB-520
day	Get day of SB-520
hour	Get hour of SB-520
minute	Get minute of SB-520
second	Get second of SB-520
timezone	Define country time zone <i>Reference time zone table (19.1)</i>
timezoneid	Set time zone id to SB-520 <i>Reference time zone table (19.1)</i>

- Error

```
{
  "result":102,
  "message":"invalid arg ..."
}
```

9.2 setSystemTime

- Description

Set system time

- URL

http://HostName:Port/cgi-bin/systemTime

- HTTP Method

- POST
- Parameters

Name	Type	Description
year	Number	Set year to SB-520
month	Number	Set month to SB-520

day	Number	Set day to SB-520
hour	Number	Set hour to SB-520
minute	Number	Set minute to SB-520
second	Number	Set second to SB-520
timezone	Number	Define country time zone <i>Reference time zone table (19.1)</i>
timezoneid	Number	Set time zone id to SB-520 <i>Reference time zone table (19.1)</i>

- cURL Example

```
curl -X PATCH-d "year=2018&month=8&day=28" 192.168.1.100/cgi-bin/systemTime
```

■ Response

- JSON

```
{
  "result":%d
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
seconds	Reboot wait time
message	Return which parameters occur error.

- Example

```
{
  "result":0,
  "seconds":60
}
```

- Error

```
{
  "result":103,
  "message":"invalid arg ..."
}
```

```
}
```

9.3 getNetworkConfig

■ Description

Get the data of current nic

■ URL

`http://HostName:Port/ api/ networkConfig`

■ HTTP Method

- GET
- cURL Example

curl 192.168.1.100/api/networkConfig

■ Response

- JSON

```
{
  "result": 0,
  "nic": [
    {
      "dhcp": "%s",
      "dns": ["%s", "%s",],
      "gateway": "%s ",
      "id": "%s",
      "ip": "%s",
      "mask": "%s",
      "name": "%s"
    },
    {
      "dhcp": "%s",
      "dns": ["%s", "%s",],
      "gateway": "%s ",
      "id": "%s",
      "ip": "%s",
      "mask": "%s",
      "name": "%s"
    }
  ]
}
```

```
}
```

Error

```
{  
  "result": %d,  
  "message": "invalid arg ..."  
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
message	Return which parameters occur error.
nic	Contain ip setting information
id	MAC address Ex: 000c56789012
dhcp	<i>dhcp = "auto_ip", auto get ip & dns</i> <i>dhcp = "auto_ip_dns", auto get ip & manual set dns</i> <i>dhcp = "static_ip"</i>
ip	IP address Ex:10.1.9.25
mask	IP Mask Ex:255.255.255.0
gateway	gateway
dns	DNS addresss Ex: ["10.1.1.57","10.1.1.55"]

- Example

```
{  
  "result":0,  
  "nic": [  
    {  
      "id":"000c56789012",  
      "dhcp":"auto_ip",  
      "name":"eth0",  
      "ip":"10.1.9.25",  
      "mask":"255.255.255.0",  
      "gateway":"10.1.9.254",  
      "dns":["10.1.1.57","10.1.1.55"]  
    },  
  ]  
}
```

```

    "id":"000c23456789",
    "dhcp":" auto_ip",
    "name":"eth1",
    "ip":"0.0.0.0",
    "mask":"0.0.0.0",
    "gateway":"",
    "dns":[]
  }
]
}

```

- Error

```

{
  "result":103,
  "message":"invalid arg ..."
}

```

9.4 setNetworkConfig

- Description

Set data about NIC

- URL

http://HostName:Port/api/networkConfig

- HTTP Method

- POST
- Parameters

Name	type	Description
id	String	MAC address Ex: 000c56789012
dhcp	int	<i>dhcp = " auto_ip"</i>
		<i>dhcp = "auto_ip_dns"</i> <i>dhcp = "static_ip"</i>
ip	String	IP address Ex:10.1.9.25
mask	String	IP Mask Ex:255.255.255.0
gateway	String	gateway
dns	String	DNS addresss

Ex: ["10.1.1.57","10.1.1.55"],

- cURL Example

```
curl -d
{"nic":{"id":"000c56789012","dhcp":"auto_ip","name":"eth0","ip":"10.1.9.25","mask":"255
.255.255.0","gateway":"10.1.9.254","dns":["10.1.1.57","10.1.1.55,"]}}
192.168.1.100/api/networkConfig
```

- Response

- JSON

```
{
  "result":%d
}
```

- Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
message	Return which parameters occur error.

- Example

```
{
  "result":0
}
```

- Error

```
{
  "result":103,
  "message":"invalid arg ..."
}
```

9.5 getNetworkStatus

- Description

Get the set nic data(get setting date)

■ URL

http://HostName:Port/ api/ networkStatus

■ HTTP Method

- GET
- cURL Example

curl 192.168.1.100/api/networkStatus

■ Response

- JSON

```
{
  "result":%d,
  "nic":
    {
      "id": "%s",
      "dhcp": %s,
      "name": "%s",
      "ip": "%s",
      "mask": "%s",
      "gateway": "%s ",
      "dns": ["%s, %s,"],
      "isConnected": %d
    }
}
```

Error

```
{
  "result": %d,
  "message": "invalid arg ..."
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result = 102, it meant that session ineffective
message	Return which parameters occur error.
nic	Contain ip setting information

id	MAC address Ex: 000c56789012
dhcp	<i>dhcp = "auto_ip"</i> <i>dhcp = "auto_ip_dns"</i> <i>dhcp = "static_ip"</i>
ip	IP address Ex:10.1.9.25
mask	IP Mask Ex:255.255.255.0
gateway	gateway
dns	DNS addresss Ex: 10.1.1.57,10.1.1.55,
isConnected	isConnected = 0, not connected isConnected = 1, connected

- Example

```
{
  "result": 0,
  "nic":
  [
    {
      "id": "000c56789012",
      "dhcp": "static_ip",
      "name": "LAN A",
      "ip": "10.1.9.25",
      "mask": "255.255.255.0",
      "gateway": "10.1.9.254",
      "dns": ["10.1.1.57", "10.1.1.55", ""],
      "isConnected": 1
    }
  ]
}
```

- Error

```
{
  "result": 102,
  "message": "invalid arg ..."
}
```

9.6 recoveryFactoryConfig

- Description

recovery to default factory config

■ URL

http://HostName:Port/api/recoveryFactoryConfig

■ HTTP Method

- POST
- cURL Example

curl -X POST 192.168.1.100/api/recoveryFactoryConfig

■ Response

- JSON

```
{  
  "result":%d,  
}
```

Error

```
{  
  "result": %d,  
  "message":"invalid arg ..."  
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result = 102, it meant that session ineffective ineffective(Expired)
message	Return which parameters occur error.

- Example

```
{  
  "result":0  
}
```

- Error

```
{  
  "result": 102,  
  "message":"invalid arg ..."  
}
```

9.7 setRebootSchedule

■ Description

Set reboot schedule

■ URL

http://HostName:Port/ api /rebootSchedule

■ HTTP Method

- POST
- Parameters

Name	Type	Description
enable	bool	flase: disable true : enable
day	Number	Restart once every %d days
hour	Number	Restart once every %d days at %d hour
minute	Number	Restart once every %d days at %d hour at %minute

- cURL Example

```
curl -d " enable=true&day=30&hour=0&minute=0" 192.168.1.100/api/setRebootSchedule
```

■ Response

- JSON

```
{  
  "result": %d  
}
```

Error

```
{  
  "result": %d,  
  "message": "invalid arg ..."  
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful result = 102, it meant that session ineffective ineffective(Expired)
message	Return which parameters occur error.

- Example

```
{
  "result":0
}
```

- Error

```
{
  "result": 102,
  "message":"invalid arg ..."
}
```

9.8 getRebootSchedule

■ Description

Get reboot schedule

■ URL

http://HostName:Port/ api /rebootSchedule

■ HTTP Method

- GET
- cURL Example

curl 192.168.1.100/api/rebootSchedule

■ Response

- JSON

```
{
  "result": %d,
  "enable": %b,
  "day": %d,
  "hour": %d,
  "minute": %d,
}
```

Error

```
{
  "result": %d,
```

```

    "message":"invalid arg ..."
  }

```

- Description

Name	Description
result	result = 0, it meant that execution is successful result = 102, it meant that session ineffective ineffective(Expired)
message	Return which parameters occur error.

- Example

```

{
  "result":0
}

```

- Error

```

{
  "result": 102,
  "message":"invalid arg ..."
}

```

9.9 checkNetworkConnection

- Description

Check the record parameter is available or not

- URL

http://HostName:Port/cgi-bin/checkNetworkConnection

- HTTP Method

- POST

- Parameters

Name	Type	Description
recordPath	String	the record PC's path
username	String	the record PC's authority username
password	String	the record PC's authority password

- cURL Example

curl -X POST 192.168.1.100/cgi-bin/checkNetworkConnection

- Response

- json

```

{

```

```
"result":0
}
```

Name	Type	Description
result	Int	0:success 211:bad address 212:path not exist 213:account or password permission denied 214:no space 2158:read only 216:unexpected error

9.10 umountDisk

■ Description

Umount SD or usb disk.

■ URL

<http://HostName:Port/api/umountDisk>

■ HTTP Method

- POST
- Parameters

Name	Type	Description
diskDevice	String	"sd", "usb" or "nas"

- cURL Example

```
curl -d {"diskDevice":"sd"} -X POST 192.168.1.100/api/umountDisk
```

■ Response

- JSON

```
{
  "result": %d
}
```

- Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful result = 102, it meant that session ineffective ineffective(Expired) result = 217, umount fail
message	Return error message.

- Example

```
{
  "result":0
}
```

- Error

```
{
  "result": 217,
  "message":"umount sd fail"
}
```

9.11 reboot

-

- Description

System reboot

- URL

http://HostName:Port/api/reboot

- HTTP Method

- POST
- cURL Example

curl -X POST 192.168.1.100/api/reboot

- Response

- JSON

```
{
  "result":%d,
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
```

```
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result = 102, it meant that session ineffective ineffective(Expired)
seconds	Reboot wait time
message	Return which parameters occur error.

- Example

```
{  
  "result":0,  
  "seconds":60  
}
```

- Error

```
{  
  "result": 102,  
  "message":"invalid arg ..."  
}
```

9.12 getStoreDeviceList

- URL: <http://HostName:Port/api/storeDeviceList>
- Method: GET
- Response

```
{  
  
  "result": %d,  
  
  "storeDevices": ["sd","usb"]  
  
}
```

Only SD

```
{  
  "result": 0,  
  "storeDevices": ["sd"]  
}
```

Only USB

```
{  
  "result": 0,  
  "storeDevices": ["usb"]  
}
```

Empty

```
{  
  "result": 0,  
  "storeDevices": []  
}
```

10. HTTP FW Update API

10.1 uploadFW

■ Description

Upload box firmware

■ URL

http://HostName:Port/api/uploadFW

■ HTTP Method

- POST
- Parameters

Name	type	Description
file	file	

- cURL Example

curl -F file=@obj 192.168.1.100/api/uploadFW

■ Response

- JSON

```
{  
  "result":%d,  
  "size":%d,  
  "version":%s,  
  "fileIsOK":%d,  
  "fileCompatible":%d  
}
```

Error

```
{  
  "result": %d,  
  "message":"invalid arg ..."  
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful

	result = 103, it meant that parameter value invalid result = 102, it meant that session ineffective ineffective(Expired)
message	Return which parameters occur error.
size	Firmware size
version	Firmware version
fileIsOK	file is valid or not. 0: false, 1: true
fileCompatible	file is compatible. 0: false, 1:true

- Example

```
{
  "result":0,
  "size":1000000,
  "version":1.0.0,
  "fileIsOK":1,
  "fileCompatible":1
}
```

- Error

```
{
  "result": 102,
  "message":"invalid arg ..."
}
```

10.2 updateFW

- Description

Update box firmware

- URL

<http://HostName:Port/api/updateFW>

- HTTP Method

- POST
- cURL Example

curl -X POST 192.168.1.100/api/updateFW

- Response

- JSON

```
{
```

```
"result":%d,  
}
```

Error

```
{  
  "result": %d,  
  "message":"invalid arg ..."  
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result = 102, it meant that session ineffective ineffective(Expired)
seconds	Reboot wait time
message	Return which parameters occur error.

- Example

```
{  
  "result":0,  
  "seconds":180  
}
```

- Error

```
{  
  "result": 102,  
  "message":"invalid arg ..."  
}
```

11. IR HTTP API

11.1 getIRBlasterDeviceList

URL	getIRBlasterDeviceList
Method	POST
Response	<pre>{ "IRBlasterDeviceList" : [{"id":1," profile":-1}, {"id":2,"profile":-1 }] }></pre>
Description	Profile : -1 the status that do not apply anything

11.2 setIRBlasterDevice

URL	setIRBlasterDevice
Method	POST
Parameters	irDeviceID=%d&profile=%d
Response	<pre>{ "result":0 }</pre>
Description	assign irDevice use what category of the IR Profile

11.3 getIRProfileList

URL	getIRProfile
Method	POST
Response	<pre>{ "IRProfileList" : [{"id":1, "custom":1, "name": "NEC"}, {" id":2, "custom":0, "name": "SONY"}] }</pre>
Description	custom:0 default profile,can not be deleted

	custom:1 profile by user,can be updated and delete
--	--

11.4 getIRProfile

URL	getIRProfile
Method	POST
Parameters	id=%d
Response	{ "IRProfile" : { "id":2, "key":"010010001010....." } }
Description	use binary descriptor (45 KEY) 1:Enable 0:Disable

11.5 removeIRProfile

URL	removeIRProfile
Method	POST
Parameters	id=%d
Response	{ "result":0 }
Description	Id:Profile id that to be deleted

11.6 emitIR

URL	emitIR
Method	POST
Parameters	irDeviceID=%d&key=%d
Response	{ "result":0 }
Description	key range is 1~45 3~11 indicate number 1 ~ 9 21:camera up 22:camera down 23:camera left 24:camera right 42:camera zoom in

	43:camera zoom out 40:camera seat save 41:camea seat call 127:stop ir action
--	---

11.7 uploadIRProfile

URL	uploadIRProfile
Method	POST multipart
Parameters	irfile=FILE
Response	{ "result":0 }
Description	use filename to look on profile name if the name is the same , recover directly

11.8 irtool

URL	irtool
Method	POST
Parameters	irDeviceID=%d&keyCode=%s&irProtol=%d
Response	{ "result":0 }
Description	irDeviceID : 1 or 2 irProtol: 1 DREAMDVB 2 PHILIPS RC6 MODE6 3 GD2000 4 NEC 5 DIRECTV 6 TOSHIBA 7 RC5 8 DISH keyCode : Use whitespace to interval each keycode ex: 0x47 0x5B 0xFF 0xFF

12. Master/Slave Backup API

12.1 login0

■ Description

- F239 provides a set of user identifier and password for the signal server and master.
- A user will get a number, called session, when he login the system successfully, and F239 will only store the last session (one for signal server, one for master) for verification.
- Besides, every F239 HTTP Request needs to verify the session.

■ URL

http://HostName:Port/cgi-bin/login0

■ HTTP Method

- POST
- Parameters

Name	Type	Description
username	String	The user identifier
password	String	The password for the user identifier
loginDevice	Int	0 : signal server login (default) 1: backup login
heartbeatWaitTime	Int	Wait time period (msec) for signal server heartbeat.

- cURL Exmpale

curl -d

"username=admin&password=avercaster&loginDevice=0&heartbeatWaitTime=3000"

192.168.1.100/cgi-bin/login0

■ Response

- json

```
{
  "session":%s,
  "result":%d
}
```

- Description

Name	Type	Description
session	Tag / String	A set of number sent by F239 when the user login successfully

result	Tag / Int	result = 0, it meant that execution is successful result < 0, it meant that execution is failed
--------	-----------	--

- Example

```
{
  "session":11741,
  "result":0
}
```

12.2 logout0

- Description

Logout the F239 Web Management System, and make the session ineffective

- URL

http://HostName:Port/cgi-bin/logout0

- HTTP Method

- POST
- Parameters

Name	Type	Description
session	String	A set of number sent by F239 when the user login successfully
logoutDevice	Int	0 : signal server logout (default) 1: master logout

- cURL Example

curl -d "session=17297&logoutDevice=0" 192.168.1.100/cgi-bin/logout0

- Response

- json

```
{
  "result":%d
}
```

- Description

Name	Type	Description
result	Tag / Int	result = 0, it meant that execution is successful result < 0, it meant that execution is failed

- Example

```
{
```

```
    "result":0
}
```

12.3 signalHeartbeat

■ Description

signal heartbeat from signal server.

■ URL

http://HostName:Port/cgi-bin/signalHeartbeat

■ HTTP Method

- POST

- Parameters

Name	Type	Description
session	String	A set of number sent by F239 when the user login successfully

- cURL Example

curl -d "session=17297" 192.168.1.100/cgi-bin/ signalHeartbeat

■ Response

- json

```
{
  "result":%d
}
```

- Description

Name	Type	Description
result	Tag / Int	result = 0, it meant that execution is successful result < 0, it meant that execution is failed

12.4 getBackupServerConfig

■ Description

Get backup server config.

■ URL

http://HostName:Port/cgi-bin/getBackupServerConfig

■ HTTP Method

- POST

- Parameters

Name	Type	Description
session	String	A set of number sent by F239 when the user login successfully

- cURL Example

curl -d "session=17297" 192.168.1.100/cgi-bin/getBackupServerConfig

■ Response

- json

```
{
  "backupServerConfig": {
    "activated":%d,
    "IP":%s,
    "heartbeatWaitTime":%d,
    "username":%s,
    "password":%s,
  }
}
```

12.5 setBackupServerConfig

■ Description

Set backup server config.

■ URL

http://HostName:Port/cgi-bin/setBackupServerConfig

■ HTTP Method

- POST
- Parameters

Name	Type	Description
session	String	A set of number sent by F239 when the user login successfully
activated	Int	0 : not activated, 1 : activated.
IP	Int	backup server IP.
heartbeatWaitTime	Int	Check time period (msec) for backup server heartbeat.
username	String	The user identifier of backup server
password	String	The password for the user identifier of backup server

- cURL Example

curl -d

"session=17297&activated=1&IP=192.168.1.200&heartbeatWaitTime=3000&username=admin&password=admin" 192.168.1.100/cgi-bin/setBackupServerConfig

- Response

- json

```
{
  "result":%d
}
```

- Description

Name	Type	Description
result	Int	result = 0, it meant that execution is successful result < 0, it meant that execution is failed

- Example

```
{
  "result":0
}
```

12.6 backupHeartbeat

- Description

backup heartbeat from master server.

- URL

http://HostName:Port/cgi-bin/backupHeartbeat

- HTTP Method

- POST

- Parameters

Name	Type	Description
session	String	A set of number sent by F239 when the user login successfully
backupMode	Int	0 : deactivated, 1 : master mode, 2 : slave mode
signalStatus	Int	0 : signal abnormal, 1 : signal normal
backupTimeMark	Int	Time_t (sec), compare this value to compete master mode.

- cURL Example

```
curl -d "session=17297&backupMode=1&signalStatus=1&backupTimeMark=12345"
192.168.1.100/cgi-bin/ backupHeartbeat
```

- Response

- json

```
{
  "result":%d,
  "backupServerStatus":{
    "backupMode":%d,
    "signalStatus":%d,
    "backupTimeMark":%d
  }
}
```

- Description

Name	Type	Description
result	Tag / Int	result = 0, it meant that execution is successful result < 0, it meant that execution is failed

12.7 getHeartbeatStatus

- Description

Get heartbeat status.

- URL

http://HostName:Port/cgi-bin/getHeartbeatStatus

- HTTP Method

- POST

- Parameters

Name	Type	Description
session	String	A set of number sent by F239 when the user login successfully

- cURL Example

curl -d "session=17297" 192.168.1.100/cgi-bin/ getHeartbeatStatus

- Response

- json

```
{
  "result":%d,
  "heartbeatStatus":{
    "backupMode":%d,
    "switchTrigger":%d,
    "signalStatus":%d,
    "backupStatus":%d
  }
}
```

- Parameters

Name	Type	Description
------	------	-------------

result	Tag / Int	result = 0, it meant that execution is successful result < 0, it meant that execution is failed
backupMode	Int	0 : deactivated, 1 : master mode, 2 : slave mode
switchTrigger	Int	0 : switch not trigger, 1 : switch trigger
signalStatus	Int	0 : signal abnormal, 1 : signal normal
backupStatus	Int	0 : heartbeat abnormal, 1 : heartbeat healthy

12.8 testSlaveConnection

■ Description

- Providing a API for WEB to test Slave IP location is corrected.

■ URL

<http://HostName:Port/testSlaveConnection>

■ HTTP Method

- POST
- Parameters

參數名稱	型別	說明
username	String	The user identifier
password	String	The password for the user identifier
ipAddress	String	A slave IP address
heartbeatWaitTime	Int	Wait time period (msec) for signal server heartbeat

- cURL Exmpale

```
curl -d
"username=admin&password=avercaster& ipAddress
=192.168.3.6&heartbeatWaitTime=3000"
192.168.1.100/cgi-bin/testSlaveConnection
```

■ Response

- json

```
{
  "session":%s,
  "result":%d
}
```

- Description

名稱	型別	說明
session	Tag / String	A set of number sent by F239 when the user login

		successfully
result	Tag / Int	result = 0, it meant that execution is successful result < 0, it meant that execution is failed

- Example

```
{
  "session":11741,
  "result":0
}
```

12.9 Errorcode

Error code	Error value	Error description
E_SETBACKUPSERVERCONFIG_FAIL	221	Set backup server config error.
E_GETBACKUPSERVERCONFIG_FAIL	222	Get backup server config error.
E_GETHEARTBEATSTATUS_FAIL	223	Get heartbeat status fail.
E_SIGNALHEARTBEAT_FAIL	224	Send signal heartbeat fail.
E_BACKUPHEARTBEAT_FAIL	225	Send backup heartbeat fail.

13. PIP Management

13.1 getPIPConfigList

■ Description

Get the box pip configuration settings

■ URL

http://HostName:Port/api/PIPConfig

■ HTTP Method

- GET
- cURL Example

curl 192.168.1.100/api/PIPConfigList

■ Response

- JSON

```
{
  "result":%d,
  "config":[
    {
      "id":%d,
      "name":%s,
      "windowPosition":{
        "x":%d,
        "y":%d
      }
      "windowSize":%d,
      "keepRatio":%b,
      "duplicable":%b,
      "isPBP":%b,
      "custom":%b
    },
    ...
  ]
}
```

Error

```
{
  "result": %d,
```

```

    "message":"invalid arg ..."
}

```

Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result =102, it meant session is ineffective
message	Return which parameters occur error.
config	Contain setting of BOX basic parameters setting
id	PIP id, 1~6(keep) : editable, 7~9 : custom setting
name	PIP name
windowPosition	Window position
x	X percentage of postion.
y	Y percentage of position
windowSize	Window size : percentage
keepRatio	Keep display ratio
duplicable	Is duplicable?
isPBP	is PBP or not
custom	Is customized?

- Example

```

{
  "result":0
  "currentPIPID":1,
  "config":[
    {
      "id":1,
      "name":%s,
      "windowPosition":{
        "x":0,
        "y":0
      }
    }
  ]
}

```

```
    "windowSize":33,  
    "keepRatio":false,  
    "duplicable":false,  
    "isPBP":false,  
    "custom":false  
  },  
  ...  
]  
}
```

- Error

```
{  
  "result":102,  
  "message":"invalid arg ..."  
}
```

13.2 setPIPConfig

- Description

Set the specified parameters new value including PIP settings.

- URL

<http://HostName:Port/api/PIPConfig>

- HTTP Method

- POST/PATCH
- JSON

```
{  
  "config":  
  {  
    "id":%s,  
    "name":%s,  
    "windowPosition":{  
      "x":%d,  
      "y":%d  
    }  
    "windowSize":%d,  
    "keepRatio:%b",  
    "duplicable:%b",  
  }  
}
```

```

        "isPBP:%b",
        "custom":%b
    }
}

```

- Parameters

Name	type	Description
config		Contain setting of PIP basic parameters setting
id	Int	PIP id, 1~6(keep) : valid, 7~9 : custom setting
name	String	PIP name
windowPosition		Window position
x	Int	X percentage of postion.
y	Int	Y percentage of position
windowSize		Window size : percentage
keepRatio	bool	Keep display ratio
duplicable	bool	is duplicable
isPBP	bool	is PBP
custom	bool	Is customized?

- cURL Example

curl -d

```

{
  "config":
  {
    "id":7,
    "name":%s,
    "windowPosition":{
      "x":0,
      "y":0
    }
  }
  "windowSize":33,
  "keepRatio":false,
  "duplicable":false,

```

```
        "isPBP":false,
        "custom":true
    }
}"
```

192.168.1.100/api/PIPConfig

■ Response

- JSON

```
{
  "result":%d,
  "id":%s
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result = 102, it meant session is ineffective
message	Return which parameters occur error.

- Example

```
{
  "result":0,
  "id":7
}
```

- Error

```
{
  "result":103,
  "message":"invalid arg ..."
}
```

13.3 deletePIPConfig

■ Description

Delete the PIP configuration.

■ URL

http://HostName:Port/api/deletePIPConfig

■ HTTP Method

- Delete
- Parameters

```
{ "ids" : [%d,%d
]}
```

• cURL Example

```
curl -d '{"ids":[7,8,9]}' 192.168.1.100/api/deletePIPConfig
```

■ Response

• JSON

```
{
  "result":%d
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

• Description

Name	Description
result	result = 0, it meant that execution is successful result = 103 , it meant that parameter value invalid result = 102, it meant that session ineffective(Expired)
message	Return which parameters occur error.

• Example

```
{
  "result":0
}
```

• Error

```
{
```

```

"result":103,
"message":"invalid arg ..."
}

```

13.4 inputSourceThumbnail

■ Description

Get the pip's thumbnail

■ URL

http://HostName:Port/api/inputSourceThumbnail

■ HTTP Method

- GET
- cURL Example

curl 192.168.1.100/api/inputSourceThumbnail?id=1

■ Response

- A jpeg file.

Error

```

{
  "result": %d,
  "message":"invalid arg ..."
}

```

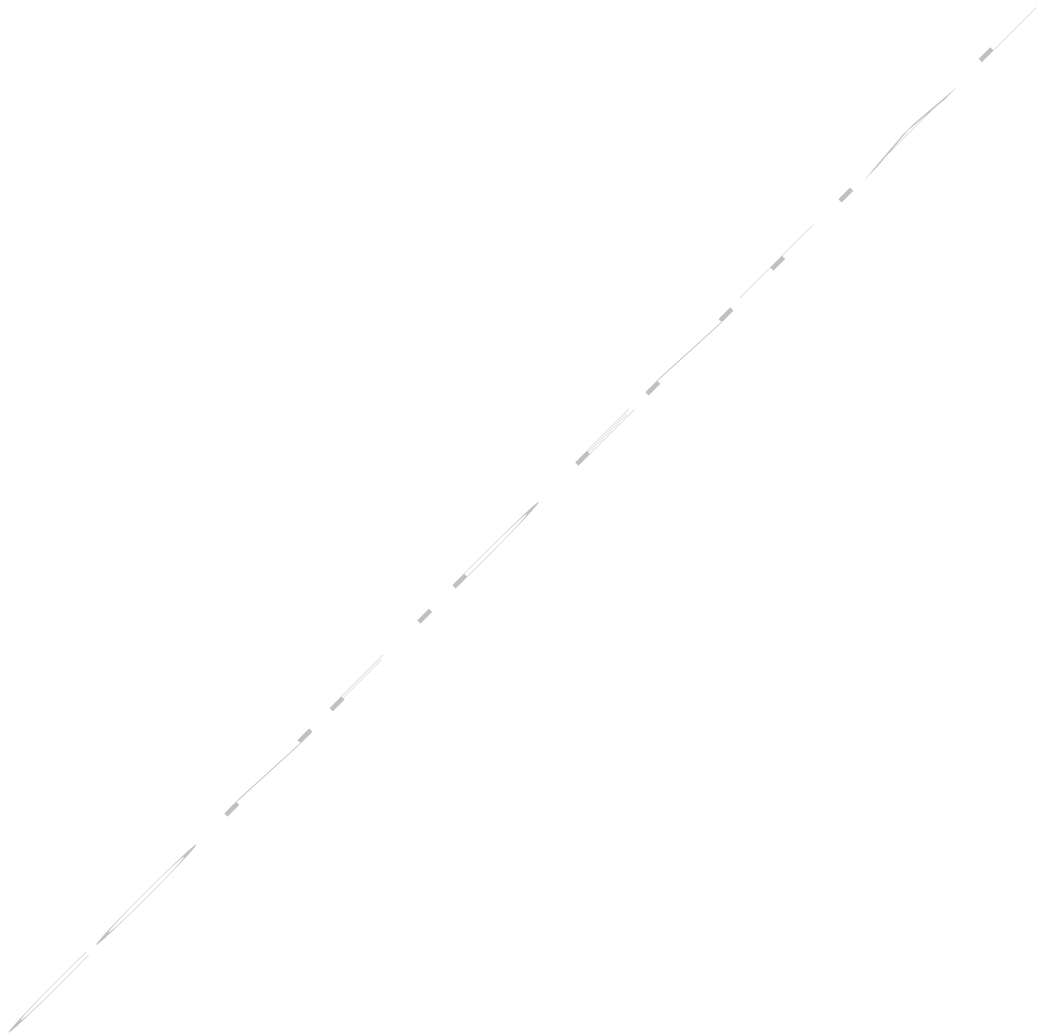
Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result =102, it meant session is ineffective
message	Return which parameters occur error.
id	PIP id, 1~6 : default, 7~9 : custom setting

- Example
- Error

```
{
```

```
"result":102,  
  "message":"invalid arg ..."  
}
```



14. File System

14.1 getDirectorys

■ Description

Get the directory of SD and USB disk.

■ URL

http://HostName:Port/api/directorys

■ HTTP Method

- GET
- Parameter

Name	type	Description
type	string	"usb" or "sd"
directory	string	\: get file list of root directory, \dir: git file list of directory dir.

- cURL Example

curl -d "type=sd&directory=/" 192.168.1.100/api/directory

■ Response

- JSON

```
{
  "result":%d,
  "empty":%d,
  "directory":[{"name":%s,
    "subdirectory":%d,
    "time":%d
  },...]
  "files":[{"name":%s,
    "size":%d,
    "time":%d,
    "duration":%d,
    "videoCodec":%s,
    "audioCodec":%s,
    "thumbnail":%s
```

```

    },...]
}

```

Error

```

{
  "result": %d,
  "message": "invalid arg ..."
}

```

Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result =102, it meant session is ineffective
empty	0:empty folder, 1:non empty folder
directory	Contain directories
name	Directory name
subdirectory	Contain sub directory, 0:no, 1:yes
time	Directory modification time
files	
name	File name
size	File size
time	File modification time
duration	File duration
videoCodec	Video codec format
audioCodec	Audio codec format
thumbnail	Thumbnail url

- **Example**

```

{
  "result":0,
  "empty":1,

```

```

    "directory":[{
      "name":"sd",
      "subDirectory":1,
      "time":%d
    },...]
    "files":[{
      "name":"rec_20180828.mp4,
      "size":1000000,
      "time":%d
      "videoCodec":"H264",
      "audioCodec":"AAC",
      "thumbnail":"nail/rec_20180828.nail"
    },...]
  }

```

- Error

```

{
  "result":102,
  "message":"invalid arg ..."
}

```

14.2 createDirectorys/deleteDirecotys

- Description

Create/delete directory.

- URL

http://HostName:Port/api/directorys

- HTTP Method

- POST(create)/DELETE(delete)

- Parameter

Name	type	Description
type	string	"usb" or "sd"
directory	string	\: get file list of root directory, \dir: git file list of directory dir.

- cURL Example

curl -d "type=sd&directory=\mydir" 192.168.1.100/api/directory

- Response

- JSON

```
{
  "result": %d,
}
```

Error

```
{
  "result": %d,
  "message": "invalid arg ..."
}
```

Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result =102, it meant session is ineffective
message	Return which parameters occur error.

- Example

```
{
  "result":0,
}
```

- Error

```
{
  "result":102,
  "message": "invalid arg ..."
}
```

14.3 modifyDirectorys

■ Description

modify the directory of SD and USB disk.

■ URL

http://HostName:Port/api/directorys

■ HTTP Method

- PUT
- Parameter

Name	type	Description
type	string	"usb" or "sd"
directory	string	\: get file list of root directory, \dir: git file list of directory dir.
name	string	Modified name

- cURL Example

curl -d "type=sd&directory=\SD&name=\mySD" 192.168.1.100/api/directory

■ Response

- JSON

```
{
  "result":%d,
}
```

Error

```
{
  "result": %d,
  "message":"invalid arg ..."
}
```

Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result =102, it meant session is ineffective
message	Return which parameters occur error.

- Example

```
{
  "result":0,
}
```

- Error

```
{
  "result":102,
  "message":"invalid arg ..."
}
```

15. Panopto System

15.1 EnablePANOPTO

■ Description

Set registration key and server name of user and connect or disconnect for panopto

■ URL

http:// HostName:Port/api/setPanoptoStatus

■ HTTP Method

- POST
- Parameter

Name	type	Description
registrationKey	string	Registration key of user
serverName	string	Site name of user
enable	int	Enable or disable panopto enable :1 disable :0

• cURL Example

curl -d "type=0&directory=/" 192.168.1.100/api/setPanoptoStatus

■ Response

- JSON

```
{  
  "result":0  
}
```

Error

```
{  
  "result": %d,  
}
```

Description

Name	Description
result	result = 0, it meant that execution is successful

Example

```
{  
  "result":0,  
}
```

- Error

```
{  
  "result":102,  
}
```

15.2 CDNControlStatus

- Description

cdn connect state

- URL

http:// HostName:Port/api/cdnControlStatus

- HTTP Method

- GET
- Parameter
none
- cURL Example

curl -d "type=0&directory=/" 192.168.1.100/api/cdnControlStatus

- Response

- JSON

```
{  
  "result" : %d  
  "cdnType" : "%s"  
  "enable" : %d  
}
```

Error

```
{  
  "result": %d,  
}
```

```
}
```

Description

Name	Description
result	Success : 0 failed: !=0
cdnType	CDN Type(panopto or kaltura) or nothing
enable	If "cdn" is link, it is equal to 1

Example

```
{  
  "result":0,  
  "cdnType": "panopto"  
  "enable":1  
}
```

- Error

```
{  
  "result":102,  
}
```

15.3 PanoptoScheduledConfig

- Description

Get Panopto stream mode and scheduled status

- URL

http:// HostName:Port/api/panoptoScheduledConfig

- HTTP Method

- GET
- Parameter
 none
- cURL Example

curl -d "type=0&directory=/" 192.168.1.100/api/panoptoScheduledConfig

- Response

- JSON

```

{
  "result" : %d
  "devices":[
    {
      "id":%d
      "mode":%s
      "schedules":%d
      "status":%d
      "audioBitrate":%d
      "frameRate":%d
      "resolution":%s
      "videoBitrate":%d
    }
    {
      "id":%d
      "mode":%s
      "schedules":%d
      "status":%d
      "audioBitrate":%d
      "frameRate":%d
      "resolution":%s
      "videoBitrate":%d
    }
  ]
}

```

Error

```

{
  "result": %d,
}

```

Description

Name	Description
result	Success : 0 failed: !=0
Id	Device id
mode	"none", "live", "record", "ad_hoc_record"
scheduled	Panopto scheduled. Type is timestamp
status	Connected : 0 record : 1 stream :2 other error: !=0
AudioBitrate	unit is kbp
Framerate	unit is kbp

resolution	Video Resolution
VideoBitrate	unit is kbp

Example

```
{
  "result" : %d
  "devices":[
    {
      "id":0
      "mode":record
      "schedules":12345678
      "status":0
      "audioBitrate":48000
      "frameRate":30
      "resolution":1920x1080
      "videoBitrate":15000
    }
    {
      "id":1
      "mode": record
      "schedules":12345678
      "status":0
      "audioBitrate":48000
      "frameRate":60
      "resolution":1920x720
      "videoBitrate":15000
    }
  ]
}
```

- Error

```
{
  "result":102,
}
```

15.4 PanoptoAdHoc

- Description

Enable Ad Hoc for panopto

■ URL

http:// HostName:Port/api/ panoptoAdHoc

■ HTTP Method

- POST
- Parameter
none
- cURL Example

curl -d "type=0&directory=/" 192.168.1.100/api/panoptoAdHoc

■ Response

- JSON

```
{  
  "adHocRecord":%d  
  "schedule":%d  
}
```

Error

none

Description

Name	Description
adHocRecord	0: stop, 1: ad hoc record
scheduled	Set next record time. unit is second

Example

```
{  
  "adHocRecord":1  
  "schedule":12345678  
}
```

16. Kaltura System

16.1 setKalturaStatus

■ Description

Set registration key and server name of user and connect or disconnect for kaltura

■ URL

http:// HostName:Port/api/setKalturaStatus

■ HTTP Method

- POST
- Parameter

Name	type	Description
Enable(internal used)	int	Enable or disable kaltura enable :1 disable :0
loginStatus	string	"enable", : do normal login, and response resourceStatus "reused" : reuse resource. "disable" : disable resource and keep login. "remove" : remove resource and logout.
partnerId	string	Kaltura partner id
secret	string	Kaltura administration secret
userId	string	User id
serviceUrl	string	Service url, "https://www.kaltura.com"
storeDevice	string	File Recording storage: "sd", "usb"
resourceName	string	resource name of device

Note :

- ◆ when loginStatus ="enable" : mean normal login. When response resourceStatus = "existed", then show reused dialog, else if resourceStatus = "created", then mean a new resource created and login successfully.
- ◆ When loginStatus ="reused": mean login with reused resource.

- ◆ When loginStatus = "disable": mean disable kaltura.
- ◆ When loginStatus = "remove": mean remove resource and logout kaltura.

- cURL Example

curl -d

```
“{“partnerId”:“...”,“secret”:“...”,“userId”:“Steve.Chang@avermedia.com”,“serverName”:“https://www.kaltura.com”,“resourceName”:“SB-520_steve”,“loginStatus”:“disable”,“storeDevice”:“sd”}” 192.168.1.100/api/setKalturaStatus
```

- Response

- JSON

```
{
  "result":0,
  "resourceStatus" : "%s"
}
```

Error

```
{
  "result": %d,
}
```

Description

Name	Description
result	result = 0, it meant that execution is successful result !=0, login error.
resourceStatus	“created”, it mean that resource is new created. “existed”, it mean that resource is existed.

Example

```
{
  "result":0,
  "resourceStatus":“existed”
}
```

- Error

```
{
  "result":102,
}
```

16.2 getKalturaStatus

■ Description

get login information of kaltura

■ URL

http:// HostName:Port/api/getKalturaStatus

■ HTTP Method

- GET

- cURL Example

curl 192.168.1.100/api/getKalturaStatus

■ Response

- JSON

```
{
  "result":0,
  "userId":%s,
  "secret":%s,
  "userId":%s,
  "serverName":%s,
  "resourceName":%s,
  "enable":%d,
  "storeDevice":%s,
  "loginStatus":%s
}
```

Error

```
{
  "result": %d,
}
```

Description

Name	Description
result	result = 0, it meant that execution is successful
Enable(internal used)	Enable or disable kaltura enable :1 disable :0
loginStatus	"disable" : disable kaltura, but keep login status

	“enable” : normal login, “reused” : reused resource “remove” : remove resource and complete logout
partnerId	Kaltura partner id
secret	Kaltura administration secret
userId	User id
serviceUrl	Service url, “https://www.kaltura.com”
storeDevice	File Recording storage: “sd”, “usb”
resourceName	resource name of device

Note :

- whenoginStatus=“remove” : mean complete logout.
- When loginStatus=“disable”: mean disable kaltura.
- When loginStatus=“reused”: mean enter reused state
- When loginStatus=“enable”: mean login and resource is defined (existed or created).

Example

```
{
  "result":0,
  "userId":"...",
  "secret":"...",
  "userId":"Steve.Chang@avermedia.com"
  "serverName":"https://www.kaltura.com",
  "resourceName":"SB-520_steve",
  "enable":1,
  "storeDevice":"sd",
  "loginStatus":"enable"
}
```

- Error

```
{
  "result":102,
}
```

16.3 kalturaScheduledConfig

- Description

Get Kaltura stream mode and scheduled status

■ URL

http:// HostName:Port/api/kalturaScheduledConfig

■ HTTP Method

- GET
- Parameter
none
- cURL Example

curl 192.168.1.100/api/kalturaScheduledConfig

■ Response

- JSON

```
{
  "result" : %d,
  "adHocRecordTime" : %d,
  "devices":[
    {
      "id":%d
      "mode":%s
      "schedules":%d
      "status":%d
      "audioBitrate":%d
      "frameRate":%d
      "resolution":%s
      "videoBitrate":%d
    }
    {
      "id":%d
      "mode":%s
      "schedules":%d
      "status":%d
      "audioBitrate":%d
      "frameRate":%d
      "resolution":%s
      "videoBitrate":%d
    }
  ]
}
```

Error

```
{
  "result": %d,
}
```

Description

Name	Description
result	Success : 0 failed: !=0
adHocRecordTime	Adhoc recording time
id	Device id
mode	"none", "live", "record", "ad_hoc_record"
scheduled	Kaltura scheduled. Type is timestamp
status	Connected : 0 record : 1 stream :2 other error: !=0
AudioBitrate	unit is kbp
Framerate	
resolution	Video Resolution
VideoBitrate	unit is kbp

Example

```
{
  "result" : 0
  "devices":[
    {
      "id":0
      "mode": "record"
      "schedules":12345678
      "status":0
      "audioBitrate":48000
      "frameRate":30
      "resolution": "1920x1080"
      "videoBitrate":15000
    }
  ]
}
```

```
"resolution": "1920x720"
"videoBitrate": 15000
}
]
```

- Error

```
{
  "result": 102,
}
```

16.4 kalturaScheduledList

■ Description

Get Kaltura scheduled events of the calendar.

■ URL

http:// HostName:Port/api/kalturaScheduledList?start={%d}&end={%d}

■ HTTP Method

- GET

• Parameter

Name	type	Description
manual	integer	1: manual update, 0 : normal update
start	timestamp	Start date of the scheduled period
end	timestamp	end date of the scheduled period

• cURL Example

curl 192.168.1.100/api/kalturaScheduledList?start={0}&end={0}&manual=1

■ Response

- JSON

```
{
  "result" : %d
  "schedules" : [
    {
```

```

    "id" : %d,
    "name" : %s,
    "startDate" : %d,
    "endDate": %d,
    "description": %s,
    "status": %d,
    "recurrenceType": 0
  },
  {
    "id" : %d,
    "name" : %s,
    "startDate" : %d,
    "endDate": %d,
    "description": %s,
    "status": %d,
    "recurrenceType":1,
    "recurrence": {
      "frequency" : "weeks",
      "interval" : %d,
      "count" : %d,
      "byDay": ["MO","TU","WE","TH","FR"],
      "until": %d
    }
  }
]
}

```

Error

```

{
  "result": %d,
}

```

Description

Name	Description
result	Success : 0 failed: !=0
Id	event id
name	Event name
startDate	Start date of the schedule
endDate	End date of the schedule
description	Event description

status	0:none, 1:recording, 2:streaming
recurrenceType	Event type, 0 : single, 1 : recurrence
frequency	By "days", "weeks" or "months"
interval	The interval frequencies
count	Continue count times
byDay	By which weekday, "MO", "TU", "WE", "TH", "FR"
until	Until what time.

Example

```
{
  "result" :0
  "schedules" : [
    {
      "id" : 0,
      "name" : "test0",
      "startDate" : 12345678,
      "endDate": 87654321,
      "description": "",
      "status": 0,
      "recurrenceType": 0
    },
    {
      "id" : 1,
      "name" : "test1",
      "startDate" : 12345678,
      "endDate": 87654321,
      "description": "",
      "status": 1,
      "recurrenceType":1,
      "recurrence": {
        "frequency" : "weeks",
        "interval" : 1,
        "count" : 0,
        "byDay": ["MO", "TU", "WE", "TH", "FR"],
        "until": 87654321
      }
    }
  ]
}
```

- Error

```
{
  "result":102,
}
```

16.5 kalturaAdHoc

- Description

Enable Ad Hoc for kaltura

- URL

http:// HostName:Port/api/ kalturaAdHoc

- HTTP Method

- POST

```
{
  "adHocRecord": %d,
  "recordTime": %d,
  "scheduled" : %d
}
```

- Parameter

Name	type	Description
adHocRecord	int	0:stop, 1:adhoc record
recordTime	int	Set record time. Unit second.
scheduled	timestamp	Set current time. Unit is second while schedule conflict

- cURL Example

```
curl -d '{"adHocRecord":1,"recordTime":900,"scheduled": 1567069645}'  
192.168.1.100/api/kalturaAdHoc
```

- Response

- JSON

```
{
  "adHocRecord":%d
  "scheduled":%d
}
```

Error

none

Description

Name	Description
adHocRecord	0: stop, 1: ad hoc record
scheduled	Set next record time. unit is second

Example

```
{
  "adHocRecord":1
  "scheduled":12345678
}
```

16.6 getKalturaScheduleEventMode

■ Description

Get kaltura schedule event mode.

■ URL

http:// HostName:Port/api/ getKalturaScheduleEventMode

■ HTTP Method

- GET

- Parameter

none

- cURL Example

curl 192.168.1.100/api/getKalturaScheduleEventMode

■ Response

- JSON

```
{
  "result" : %d,
  "mode" : %s,
  "url" : %s,
}
```

Error

```
{
  "result": %d,
}
```

Description

Name	Description
mode	“auto”, “url” or “file”
url	The url of the ics import file.

Example

```
{
  "result" : 0,
  "mode" : "url",
  "url" : "https://test.com/test.ics",
}
```

• Error

```
{
  "result":102,
}
```

16.7 setKalturaScheduleEventMode

■ Description

set kaltura schedule event mode.

■ URL

[http:// HostName:Port/api/ setKalturaScheduleEventMode](http://HostName:Port/api/setKalturaScheduleEventMode)

■ HTTP Method

- POST

```
{
  "mode" : %s,
  "url" : %s,
}
```

- Parameter

Name	Description
mode	“auto”, “url” or “file”
url	The url of the ics import file.

- cURL Example

curl -d '{"mode":"auto"}' 192.168.1.100/api/setKalturaScheduleEventMode

■ Response

- JSON

```
{
  "result" : %d
}
```

Error

```
{
  "result": %d,
}
```

Description

None

Example

```
{
  "result" : 0
}
```

- Error

```
{
  "result":102
}
```

16.8 uploadKalturaScheduleEvent

■ Description

Upload kaltura schedule event ics.

■ URL

http://HostName:Port/api/uploadKalturaScheduleEvent

■ HTTP Method

- POST
- Parameters

Name	type	Description
file	file	

- cURL Example

```
curl -F file=@obj 192.168.1.100/api/uploadKalturaScheduleEvent
```

■ Response

- JSON

```
{  
  "result":%d,  
  "fileIsOK":%d  
}
```

Error

```
{  
  "result": %d,  
  "message":"invalid arg ..."  
}
```

- Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result = 102, it meant that session ineffective ineffective(Expired)
message	Return which parameters occur error.
fileIsOK	file is valid or not. 0: false, 1: true

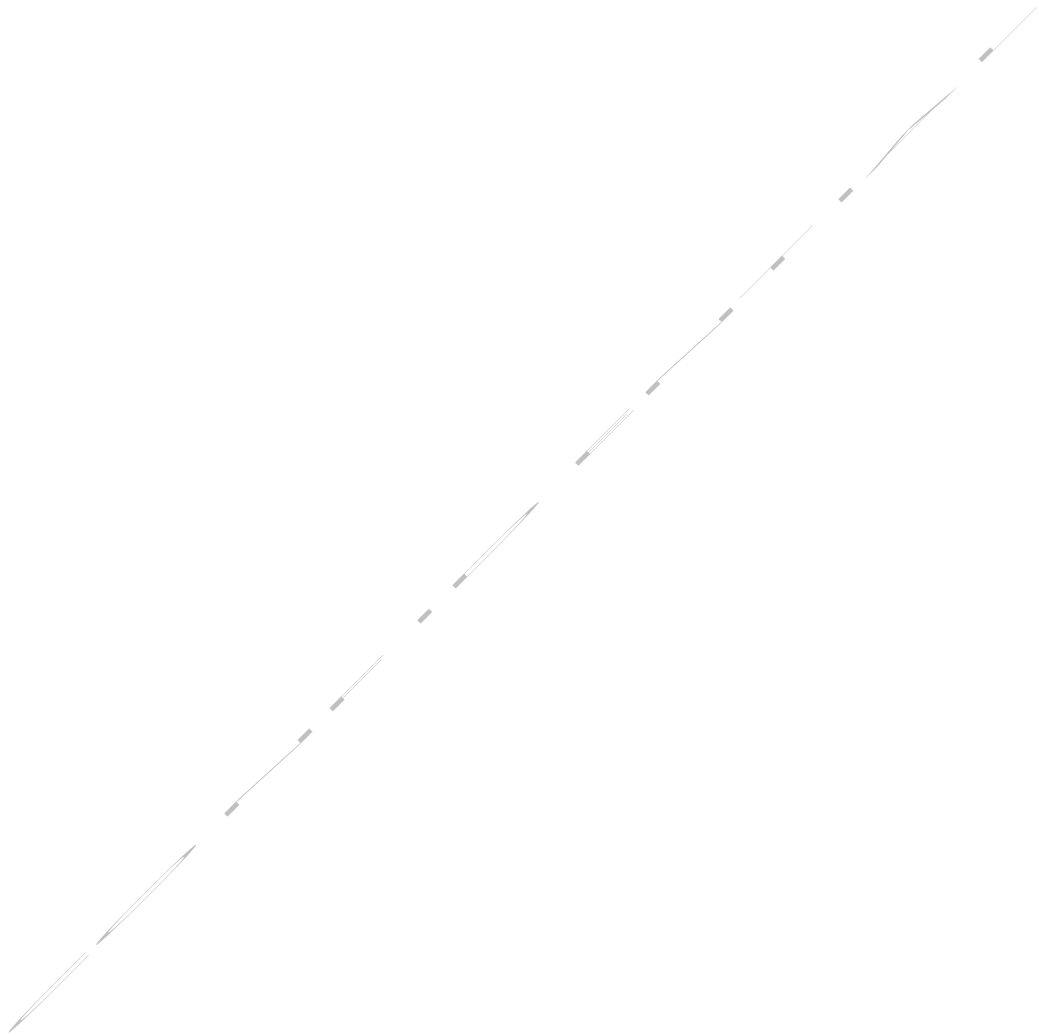
- Example

```
{  
  "result":0,
```

```
"fileIsOK":1  
}
```

- Error

```
{  
  "result": 102,  
  "message":"invalid arg ..."  
}
```



17. Crestron api

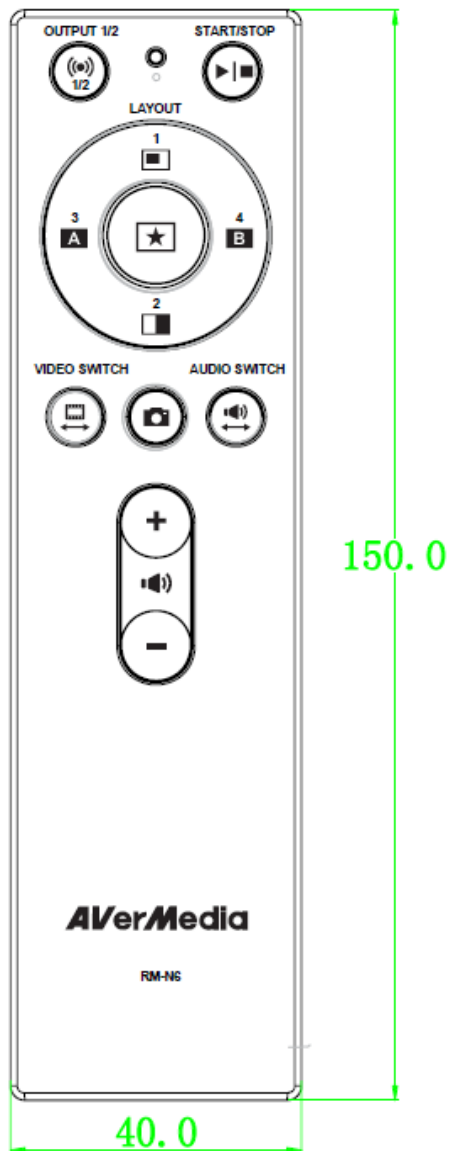
17.1 Crestron api Introduction

- Description

Crestron api is a set of apis for crestron control. It defines crestron control via webapi as ir remote controller.

- SB-520 IR controller

SB-520 IR controller is defined as below:



■ IR Key definition

Key	description
OUTPUT 1/2	Change HDMI output to output1 or output2
START/STOP	Start streaming or recording tasks of current output selected.
LAYOUT:1	PIP
LAYOUT:2	PBP
LAYOUT:3	Output1
LAYOUT:4	Output2
LAYOUT:CUSTOMIZED	Customized layout
VIDEO SWITCH	Switch video between the selected channels
SNAPSHOT	Snapshot of the current output
AUDIO SWITCH	Switch audio between the selected channels and 3.5mm line in.
VOLUMN UP	Tune volumn up
VOLUMN DOWN	Tune volumn down

17.2 getCrestron

■ Description

getCrestron can return the current status of SB-520..

■ URL

http://HostName:Port/api/crestron

■ HTTP Method

- GET
- Parameter : none
- cURL Example

curl -X GET 192.168.1.100/api/crestron

■ Response

- JSON

```
{
  "result":%d,
  "hdmiOutput":%d,
  "signalStatuses":
  [
    {
      "sourceType":%s,
      "hdcv":%b,
      "sourceChange":%b,
      "quality":%d,
      "height":%d,
      "width":%d,
      "frameRate":%d,
      "isInterlaced":%b,
      "currentBitrate":%d
    },
    ...
  ],
  "tasks":[{
    "devceID": 1,
    "taskID": 1,
    "errorCode": "",
    "isStart": 1,
```

```

        "status": -1,
        "streamTime": 300
    },
    ...
],
"device":
{
    "id":%d,
    "videoInput":[%s,...],
    "videoParam":{
        "brightness":%d,
        "contrast":%d,
        "hue":%d,
        "saturation":%d
    }
    "audioInput":%s,
    "audioParam":{
        "micMix":%b,
        "mixInput":%s,
        "soundControl":%d,
        "micPercentage":%d,
        "audioPercentage":%d,
        "micMute":%b,
        "audioMute":%b
    }
    "format":%s,
    "deInterlace":%s,
    "currentPIPID":%d,
    "reverseInputSource":%b,
    "midinResolution":[%d,%d]
}
}

```

Error

```

{
    "result": %d,
    "invalidArg":"invalid arg ..."
}

```

Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result = 102, it meant session is ineffective result%256 = error code.
hdmiOutput	1 or 2, output channel
signalStatuses	
sourceType	Which source type is streaming at this task
Hdcp(reserved)	Hdcp=true, it meant protect on Hdcp=false, it meant protect off
sourceChange(reserved)	false = not changed, true = changed.
quality	The strength of stream signal. Between 0 and 100
height	The height of the stream resolution
width	The width of the stream resolution
frameRate	The frame rate of the stream
isInterlaced	false = Progressive, true = Interlaced
currentBitrate(reserved)	Current streaming bitrate.(kbit)
tasks	
deviceID	Channel 1 or 2
taskID	Task 1 or 2
isStart	Task streaming set to start or not. isStart =1 mean this stream is set to start. isStart = 0 mean this stream is not start.
status	Task streaming status. status =1 mean this stream is under streaming status = 2, prepare streaming status = 0 mean this stream is paused status = -1 mean error
errorCode	Error code of this streaming
streamTime	Streaming running time (seconds) from start.
device	Contain parameter {id, hdmi} or {id , dsub}
id	the device identifier
videoInput	videoInput = maximum choose two of ["hdmi1","hdmi2","sdi1","sdi2"]
videoParam	
brightness	Brightness : -100~100 (default:0)

contrast	Contrast : 50~200(default:100)
hue	Hue : -90~90(default:0)
saturation	Saturation : 0~200(default:100)
audioInput	<i>audioInput = embed audio of videoInput choosed, or audioInput=3.5mm</i>
audioParam	
micMix	<i>Mic mix enable/disable</i>
mixInput	<i>mixInput =xlr mixInput =3.5mm</i>
soundControl	<i>Sound quantity : 0~100</i>
micPercentage	<i>Mic mix percentage : 0~100</i>
audioPercentage	<i>Audio input mix percentage : 0~100</i>
micMute	<i>Mic mute : true or false</i>
audioMute	<i>Audio mute : true or false</i>
format	<i>"ntsc" or "pal"</i>
deInterlace	<i>"none","weave","bob" or "blend"</i>
currentPIPID	<i>Current pip Id</i>
reverseInputSource	<i>Reverse PIP input source.</i>
midinResolution	<i>mdin 2 subtask's encode profile id</i>
Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result =102, it meant session is ineffective
output	1 or 2, output id
currentPIPID	1~5, 5:customized, current layout id
video	<i>"hdmi1", "hdmi2", "sdi1" or "sdi2" , video selected</i>
audio	<i>"hdmi1", "hdmi2", "sdi1", "sdi2" or "3.5mm" ,audio selected</i>
volume	0 ~ 20(max)
tasks	
id	1 or 2
isStart	0:stop, 1:start

status	Task streaming status. <i>status = 1</i> mean this stream is under streaming <i>status = 2</i> , prepare streaming <i>status = 0</i> mean this stream is paused <i>status = -1</i> mean error
--------	---

- Example

```

{
  "result":0,
  "hdmiOutput":1,
  "signalStatuses": [{...},...],
  "tasks":[{...},...],
  "device":
  {
    "id":1,
    "midinResolution":[],
    "videoInput":["hdmi1","sdi1"],
    "videoParam":
    {
      "brightness":0,
      "contrast":100,
      "hue":0,
      "saturation":100
    },
    "audioInput":"hdmi1",
    "audioParam":
    {
      "micMix":false,
      "mixInput":"3.5mm",
      "soundControl":50,
      "micPercentage":100,
      "audioPercentage":100,
      "micMute":false,
      "audioMute":false
    },
    "format":"","
    "deInterlace":"","
    "currentPIPID":2,
    "reverseInputSource":false
  }
}

```

```
}  
}
```

Error

```
{  
  "result":102,  
  " invalidArg ":"invalid arg ..."  
}
```

17.3 crestron

■ Description

Crestron api.

■ URL

http://HostName:Port/api/crestron

■ HTTP Method

- POST
- Parameter

Name	type	Description
command	string	"Output1/2" , "Start/Stop", "Layout1", "Layout2", "Layout3", "Layout4", "Layout5", "VideoSwitch", "Snapshot", "AudioSwitch", "VolumnUp", "VolumnDown"
args	string	"arg1,arg2..."

- cURL Example

curl -d "command=Start/Stop" 192.168.1.100/api/crestron

■ Response

- JSON

```
{
```

```

"result":%d,
"hdmiOutput":%d,
" signalStatuses ":
[
{
"sourceType":%s,
"hdcp":%b,
"sourceChange":%b,
" quality ":%d,
" height ":%d,
" width ":%d,
" frameRate ":%d,
" isInterlaced ":%b,
"currentBitrate":%d
},
...
],
"tasks":[{
"devceID": 1,
"taskID": 1,
"errorCode": "",
"isStart": 1,
"status": -1,
"streamTime": 300
},
...
],
"device":
{
"id":%d,
"videoInput":[%s,...],
"videoParma":{
"brightness":%d,
"contrast":%d,
"hue":%d,
"saturation":%d
}
}
"audiolInput":%s,

```

```

    "audioParam":{
        "micMix":%b,
        "mixInput":%s,
        "soundControl":%d,
        "micPercentage":%d,
        "audioPercentage":%d,
        "micMute":%b,
        "audioMute":%b
    }
    "format":%s,
    "deInterlace":%s,
    "currentPIPID":%d,
    "reverseInputSource":%b,
    "midinResolution":[%d,%d]
}
}

```

Error

```

{
    "result": %d,
    " invalidArg ":"invalid arg ..."
}

```

Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result =102, it meant session is ineffective result%256 = error code.
hdmiOutput	1 or 2, output channel
signalStatuses	
sourceType	Which source type is streaming at this task
Hdcp(reserved)	Hdcp=true, it meant protect on Hdcp=false, it meant protect off
sourceChange(reserved)	false = not changed, true = changed.
quality	The strength of stream signal. Between 0 and 100
height	The height of the stream resolution
width	The width of the stream resolution

frameRate	The frame rate of the stream
isInterlaced	false = Progressive, true = Interlaced
currentBitrate(reserved)	Current streaming bitrate.(kbit)
tasks	
deviceID	Channel 1 or 2
taskID	Task 1 or 2
isStart	Task streaming set to start or not. isStart =1 mean this stream is set to start. isStart = 0 mean this stream is not start.
status	Task streaming status. status =1 mean this stream is under streaming status = 2, prepare streaming status = 0 mean this stream is paused status = -1 mean error
errorCode	Error code of this streaming
streamTime	Streaming running time (seconds) from start.
device	Contain parameter {id, hdmi} or {id , dsub}
id	the device identifier
videoInput	videoInput = maximum choose two of ["hdmi1","hdmi2","sdi1","sdi2"]
videoParam	
brightness	Brightness : -100~100 (default:0)
contrast	Contrast : 50~200(default:100)
hue	Hue : -90~90(default:0)
saturation	Saturation : 0~200(default:100)
audioInput	audioInput = embed audio of videoInput choosed, or audioInput=3.5mm
audioParam	
micMix	Mic mix enable/disable
mixInput	mixInput =xlr mixInput =3.5mm
soundControl	Sound quantity : 0~100
micPercentage	Mic mix percentage : 0~100
audioPercentage	Audio input mix percentage : 0~100
micMute	Mic mute : true or false
audioMute	Audio mute : true or false

format	"ntsc" or "pal"
deInterlace	"none","weave","bob" or "blend"
currentPIPID	Current pip Id
reverseInputSource	Reverse PIP input source.
midinResolution	mdin 2 subtask's encode profile id
Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result =102, it meant session is ineffective
output	1 or 2, output id
currentPIPID	1~5, 5:customized, current layout id
video	"hdmi1", "hdmi2", "sdi1" or "sdi2" , video selected
audio	"hdmi1", "hdmi2", "sdi1", "sdi2" or "3.5mm" ,audio selected
volume	0 ~ 20(max)
tasks	
id	1 or 2
isStart	0:stop, 1:start
status	Task streaming status. <i>status =1</i> mean this stream is under streaming <i>status = 2</i> , prepare streaming <i>status = 0</i> mean this stream is paused <i>status = -1</i> mean error

- Example

```

{
  "result":0,
  "hdmiOutput":1,
  "device":
  {
    "id":1,
    "midinResolution":[],
    "videoInput":["hdmi1","sdi1"],
    "videoParam":
    {

```

```
    "brightness":0,  
    "contrast":100,  
    "hue":0,  
    "saturation":100  
  },  
  "audioInput":"hdmi1",  
  "audioParam":  
  {  
    "micMix":false,  
    "mixInput":"3.5mm",  
    "soundControl":50,  
    "micPercentage":100,  
    "audioPercentage":100,  
    "micMute":false,  
    "audioMute":false  
  },  
  "format": "",  
  "deInterlace": "",  
  "currentPIPID":2,  
  "reverseInputSource":false  
}
```

}

Error

```
{  
  "result":102,  
  "invalidArg ":"invalid arg ..."  
}
```

17.4 Test scripts

● login-post-test.sh

```
#!/bin/sh
```

```
HOST=$1
```

```
curl -v --proxy " -d "{\"username\":\"admin\",\"password\":\"admin\"}" http://\$HOST/api/login
```

● crestron-post-test.sh

```
#!/bin/sh
```

```
HOST=$1
```

```
SESSION=$2
```

```
COMMAND=$3
```

```
ARGS=$4
```

```
if [ "x$COMMAND" == "x" ] ; then
```

```
curl -v --proxy " -X GET http://$HOST/api/crestron?session=$SESSION
```

```
else
```

```
if [ "x$ARGS" == "x" ] ; then
```

```
echo "session=$SESSION&command=$COMMAND"
```

```
curl -v --proxy " -d "session=$SESSION&command=$COMMAND" http://$HOST/api/crestron
```

```
else
```

```
echo "session=$SESSION&command=$COMMAND&args=$ARGS"
```

```
curl -v --proxy " -d "session=$SESSION&command=$COMMAND&args=$ARGS"
```

```
http://$HOST/api/crestron
```

```
fi
```

```
fi
```

● test-crestron/test-crestron.sh

```
#!/bin/bash
```

```
HOST=10.1.9.87
```

```
REPLY_JSON=`../login-post-test.sh $HOST`
```

```
echo REPLY_JSON=$REPLY_JSON
```

```
SESSION=`echo $REPLY_JSON | jq .session`
```

```
echo SESSION=$SESSION
```

```
../crestron-post-test.sh $HOST $SESSION
```

```
sleep 3
```

```
../crestron-post-test.sh $HOST $SESSION Output1/2
```

```
sleep 3
```

```
../crestron-post-test.sh $HOST $SESSION Start/Stop
```

```
sleep 3
```

```
../crestron-post-test.sh $HOST $SESSION Start/Stop
```

```
sleep 3
```

```
../crestron-post-test.sh $HOST $SESSION Layout1
```

```
sleep 3
```

```
../crestron-post-test.sh $HOST $SESSION Layout2
```

```
sleep 3
```

```
../crestron-post-test.sh $HOST $SESSION Layout3
```

```
sleep 3
```

```
../crestron-post-test.sh $HOST $SESSION Layout4
```

```
sleep 3
```

```
../crestron-post-test.sh $HOST $SESSION Layout5
```

```
sleep 3
```

```
../crestron-post-test.sh $HOST $SESSION VideoSwitch
```

```
sleep 3
```

```
../crestron-post-test.sh $HOST $SESSION Snapshot
```

```
sleep 3
```

```
../crestron-post-test.sh $HOST $SESSION AudioSwitch
```

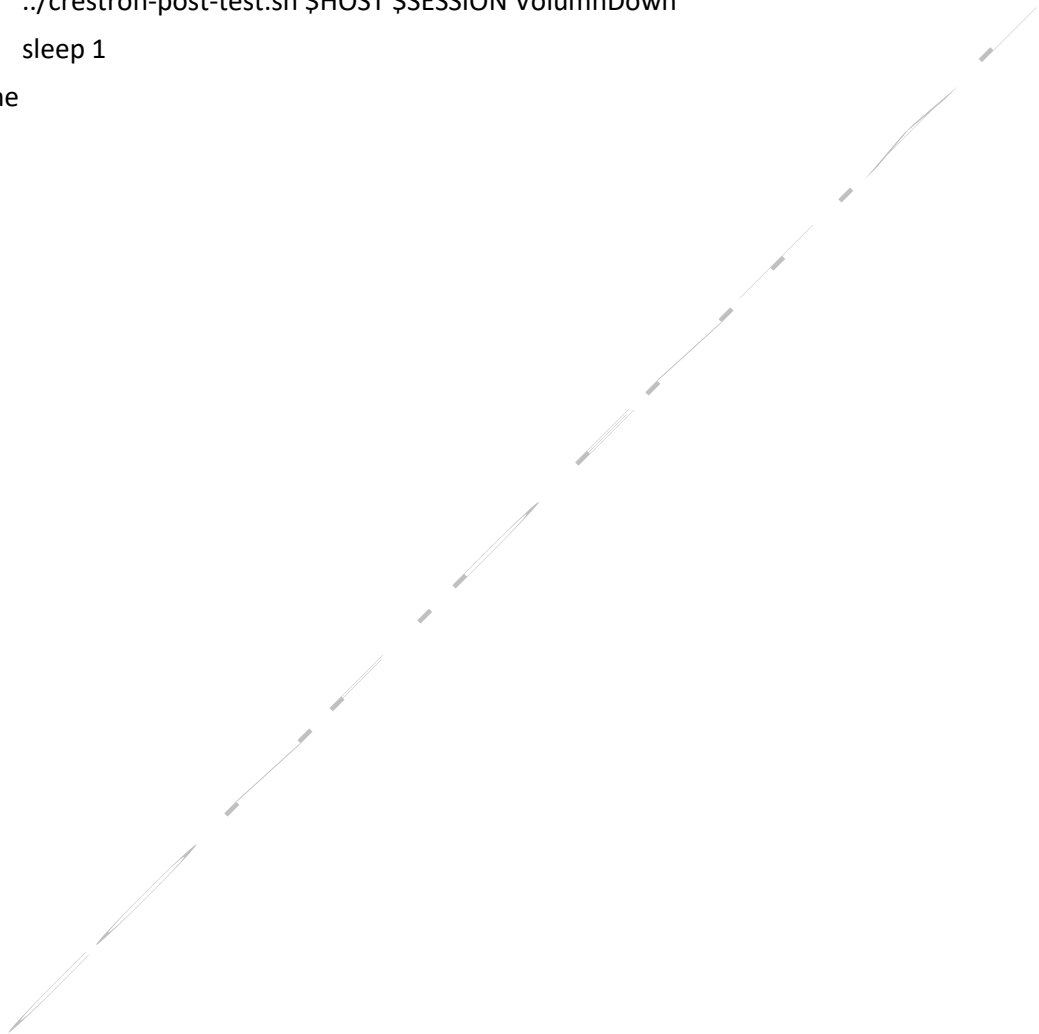
```
sleep 3
```

```
../crestron-post-test.sh $HOST $SESSION AudioSwitch
```

```
sleep 3
```

```
../crestron-post-test.sh $HOST $SESSION AudioSwitch
```

```
sleep 3
for i in $(seq 0 10)
do
    ../crestron-post-test.sh $HOST $SESSION VolumnUp
    sleep 1
done
for (( i=10; i > 0; i=i-1 ))
do
    ../crestron-post-test.sh $HOST $SESSION VolumnDown
    sleep 1
done
```



18. Command api

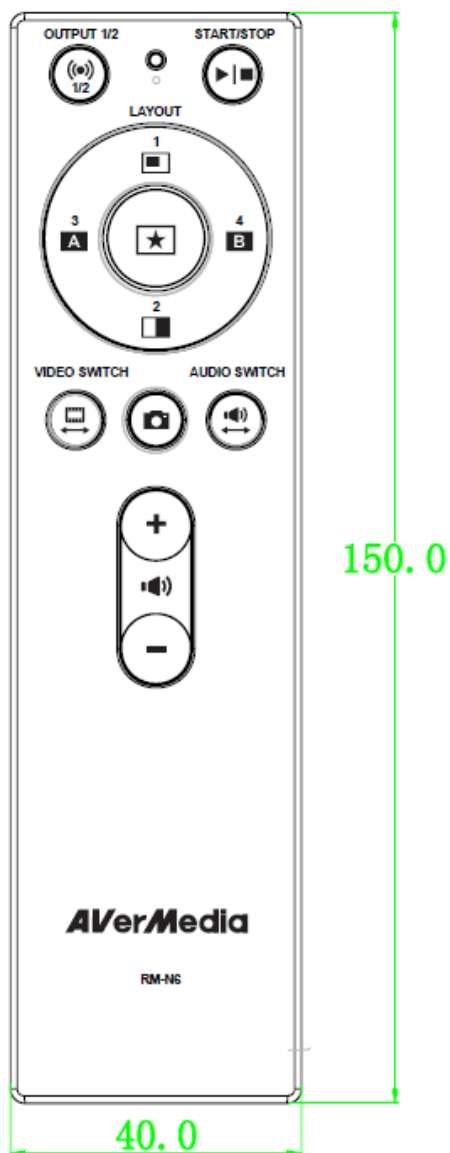
18.1 Command api Introduction

■ Description

Command api is a set of apis for simple webapi control. It use username and password in the api command line directly by pass the session id checking. The functions of the Command api follow the functions of the remote control.

■ SB-520 IR controller

SB-520 IR controller is defined as below:



■ IR Key definition

Key	description
OUTPUT 1/2	Change HDMI output to output1 or output2
START/STOP	Start streaming or recording tasks of current output selected.
LAYOUT:1	PIP
LAYOUT:2	PBP
LAYOUT:3	Output1
LAYOUT:4	Output2
LAYOUT:CUSTOMIZED	Customized layout
VIDEO SWITCH	Switch video between the selected channels
SNAPSHOT	Snapshot of the current output
AUDIO SWITCH	Switch audio between the selected channels and 3.5mm line in.
VOLUMN UP	Tune volumn up
VOLUMN DOWN	Tune volumn down

18.2 Command

- Description

Command api for simple webapi control.

- URL

http://HostName:Port/api/Command?User=\$USER&Password=\$PASS&TargetChannel=\$CHANNEL&Action=\$ACTION&Param=\$PARAM

- HTTP Method

- POST
- Parameter

Name	type	Description
\$CHANNEL	integer	0: mean toggle output for OutputSwitch, mean all for InputStatus, DeviceStatus, TaskStatus, StartTask & StopTask Mean Current channel for the others. 1: mean channel 1 2: mean channel2
\$ACTION	String	"OutputSwitch", "StartTask", "StopTask", "Layout", "VideoSwitch", "Snapshot", "AudioSwitch", "VolumnUp", "VolumnDown", "InputStatus", "DeviceStatus", "TaskStatus"
\$PARAM	Integer String	For "Layout" : Param mean PIPId, value is 1~5 For "VideoSwitch" : -1 : mean toggle video, 0 : mean video1, 1 : mean video2 For "AudioSwitch" : "3.5mm", "hdmi1", "hdmi2", "sdi1" or "sdi2" For "VolumnUp" : no Param mean volumn up 5 Param Mean Volumn, value is 0~100 For "VolumnDown" : no Param mean volumn down 5 Param Mean Volumn, value is 0~100

- cURL Example

curl -d "User=admin&Password=admin&TargetChannel=0&Action=OutputSwitch" 192.168.1.100/api/Command

■ Response

- JSON

```
{
  "result":%d,
  "hdmiOutput":%d,
  "signalStatuses ":
  [
    {
      "sourceType":%s,
      "hdcp":%b,
      "sourceChange":%b,
      "quality ":%d,
      "height ":%d,
      "width ":%d,
      "frameRate ":%d,
      "isInterlaced ":%b,
      "currentBitrate":%d
    },
    ...
  ],
  "tasks":[{
    "devceID": 1,
    "taskID": 1,
    "errorCode": "",
    "isStart": 1,
    "status": -1,
    "streamTime": 300
  },
  ...
  ],
  "device":
  {
    "id":%d,
    "videoInput":[%s,...],
    "videoParma":{
      "brightness":%d,
      "contrast":%d,
```

```

        "hue":%d,
        "saturation":%d
    }
    "audioInput":%s,
    "audioParam":{
        "micMix":%b,
        "mixInput":%s,
        "soundControl":%d,
        "micPercentage":%d,
        "audioPercentage":%d,
        "micMute":%b,
        "audioMute":%b
    }
    "format":%s,
    "deInterlace":%s,
    "currentPIPID":%d,
    "reverseInputSource":%b,
    "midinResolution":[%d,%d]
}
}

```

Error

```

{
    "result": %d,
    " invalidArg ":["invalid arg", ... ]
}

```

Description

Name	Description
result	result = 0, it meant that execution is successful result = 103, it meant that parameter value invalid result =102, it meant session is ineffective result%256 = error code.
hdmiOutput	1 or 2, output channel
signalStatuses	
sourceType	Which source type is streaming at this task
Hdcp(reserved)	Hdcp=true, it meant protect on Hdcp=false, it meant protect off
sourceChange(reser	false = not changed, true = changed.

ved)	
quality	The strength of stream signal. Between 0 and 100
height	The height of the stream resolution
width	The width of the stream resolution
frameRate	The frame rate of the stream
isInterlaced	false = Progressive, true = Interlaced
currentBitrate(reserved)	Current streaming bitrate.(kbit)
tasks	
deviceID	Channel 1 or 2
taskID	Task 1 or 2
isStart	Task streaming set to start or not. isStart =1 mean this stream is set to start. isStart = 0 mean this stream is not start.
status	Task streaming status. status =1 mean this stream is under streaming status = 2, prepare streaming status = 0 mean this stream is paused status = -1 mean error
errorCode	Error code of this streaming
streamTime	Streaming running time (seconds) from start.
device	Contain parameter {id, hdmi} or {id , dsub}
id	the device identifier
videoInput	videoInput = maximum choose two of ["hdmi1","hdmi2","sdi1","sdi2"]
videoParam	
brightness	Brightness : -100~100 (default:0)
contrast	Contrast : 50~200(default:100)
hue	Hue : -90~90(default:0)
saturation	Saturation : 0~200(default:100)
audioInput	audioInput = embed audio of videoInput choosed, or audioInput=3.5mm
audioParam	
micMix	Mic mix enable/disable
mixInput	mixInput =xlr mixInput =3.5mm
soundControl	Sound quantity : 0~100
micPercentage	Mic mix percentage : 0~100
audioPercentage	Audio input mix percentage : 0~100

micMute	<i>Mic mute : true or false</i>
audioMute	<i>Audio mute : true or false</i>
format	<i>"ntsc" or "pal"</i>
deInterlace	<i>"none","weave","bob" or "blend"</i>
currentPIPID	<i>Current pip Id</i>
reverseInputSource	<i>Reverse PIP input source.</i>
midinResolution	<i>mdin 2 subtask's encode profile id</i>

- Example

```

{
  "result":0,
  "hdmiOutput":1,
  "device":
  {
    "id":1,
    "midinResolution":[],
    "videoInput":["hdmi1","sdi1"],
    "videoParam":
    {
      "brightness":0,
      "contrast":100,
      "hue":0,
      "saturation":100
    },
    "audioInput":"hdmi1",
    "audioParam":
    {
      "micMix":false,
      "mixInput":"3.5mm",
      "soundControl":50,
      "micPercentage":100,
      "audioPercentage":100,
      "micMute":false,
      "audioMute":false
    }
  }
}

```

```
    },  
    "format": "",  
    "deInterlace": "",  
    "currentPIPID": 2,  
    "reverseInputSource": false  
  }  
}
```

Error

```
{  
  "result": 119320679,  
  "invalidArg": ["InvalidAudio", "hdmi1"]  
}
```

18.3 Test scripts

● Command-post-test.sh

```
#!/bin/sh

HOST=$1
TARGET_CHANNEL=$2
ACTION=$3
PARAM=$4

if [ "x$PARAM" == "x" ] ; then
echo "TargetChannel=$TARGET_CHANNEL&Action=$ACTION"
curl -v --proxy " -d
"User=admin&Password=admin&TargetChannel=$TARGET_CHANNEL&Action=$ACTION"
http://$HOST/api/Command
else
echo "TargetChannel=$TARGET_CHANNEL&Action=$ACTION&Param=$PARAM"
curl -v --proxy " -d
"User=admin&Password=admin&TargetChannel=$TARGET_CHANNEL&Action=$ACTION&Param=$P
ARAM" http://$HOST/api/Command
fi
```

● test-command/test-command.sh

```
#!/bin/bash
```

```
HOST=10.1.9.87
```

```
for CHANNEL in $(seq 0 2)
```

```
do
```

```
  ../Command-post-test.sh $HOST $CHANNEL OutputSwitch
```

```
  sleep 3
```

```
  ../Command-post-test.sh $HOST $CHANNEL InputStatus
```

```
  sleep 3
```

```
  ../Command-post-test.sh $HOST $CHANNEL TaskStatus
```

```
  sleep 3
```

```
  ../Command-post-test.sh $HOST $CHANNEL DeviceStatus
```

```
  sleep 3
```

```
  ../Command-post-test.sh $HOST $CHANNEL StartTask
```

```
  sleep 3
```

```
  ../Command-post-test.sh $HOST $CHANNEL StopTask
```

```
  sleep 3
```

```
  if [ "x$CHANNEL" == "x0" ]; then
```

```
    continue
```

```
  fi
```

```
  for PIPID in $(seq 0 6)
```

```
  do
```

```
    ../Command-post-test.sh $HOST $CHANNEL Layout $PIPID
```

```
    sleep 3
```

```
  done
```

```
  for REVERSE in $(seq -1 1)
```

```
  do
```

```
    ../Command-post-test.sh $HOST $CHANNEL VideoSwitch $REVERSE
```

```
    sleep 3
```

```
  done
```

```
  ../Command-post-test.sh $HOST $CHANNEL Snapshot
```

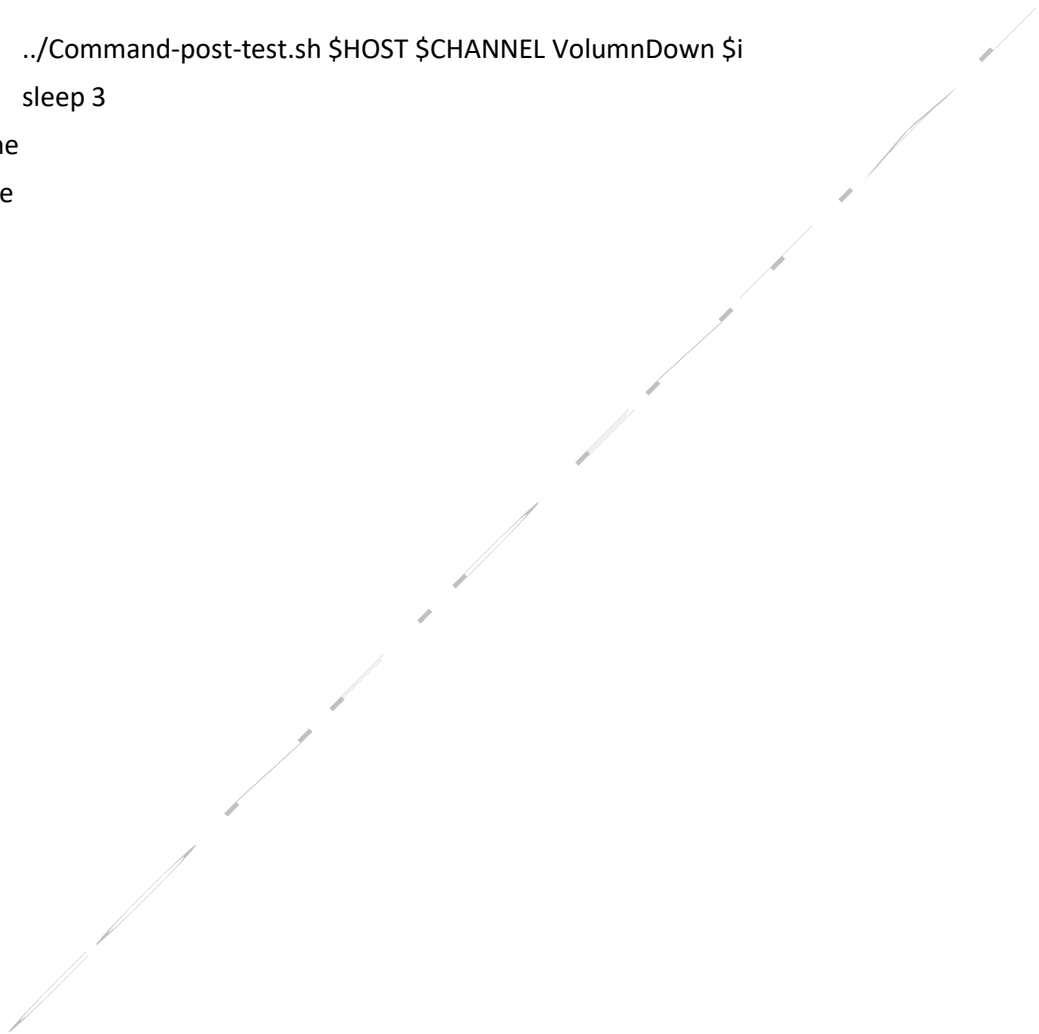
```
  sleep 3
```

```
  for AUDIO in 3.5mm sdi1 sdi2 hdmi1 hdmi2
```

```
  do
```

```
    ../Command-post-test.sh $HOST $CHANNEL AudioSwitch $AUDIO
```

```
    sleep 3
done
for VOLUMN in $(seq 0 100 100)
do
    ../Command-post-test.sh $HOST $CHANNEL VolumnUp $VOLUMN
    sleep 3
done
for (( i=100; i > 0; i=i-100 ))
do
    ../Command-post-test.sh $HOST $CHANNEL VolumnDown $i
    sleep 3
done
done
```



19. Reference

19.1 Time zone table

timeZoneID	Area	timezone
1	(GMT-12:00) International Date Line West	-12
2	(GMT-11:00) Midway Island, Samoa	-11
3	(GMT-10:00) Hawaii	-10
4	(GMT-09:00) Alaska	-9
5	(GMT-08:00) Pacific Time (US & Canada)	-8
6	(GMT-08:00) Tijuana, Baja California	-8
7	(GMT-07:00) Arizona	-7
8	(GMT-07:00) Chihuahua, La Paz, Mazatlan	-7
9	(GMT-07:00) Mountain Time (US & Canada)	-7
10	(GMT-06:00) Central America	-6
11	(GMT-06:00) Central Time (US & Canada)	-6
12	(GMT-06:00) Guadalajara, Mexico City, Monterrey	-6
13	(GMT-06:00) Saskatchewan	-6
14	(GMT-05:00) Bogota, Lima, Quito, Rio Branco	-5
15	(GMT-05:00) Eastern Time (US & Canada)	-5
16	(GMT-05:00) Indiana (East)	-5
17	(GMT-04:00) Atlantic Time (Canada)	-4
18	(GMT-04:00) Caracas, La Paz	-4
19	(GMT-04:00) Manaus	-4
20	(GMT-04:00) Santiago	-4
21	(GMT-03:30) Newfoundland	-3.5
22	(GMT-03:00) Brasilia	-3
23	(GMT-03:00) Buenos Aires, Georgetown	-3
24	(GMT-03:00) Greenland	-3
25	(GMT-03:00) Montevideo	-3
26	(GMT-02:00) Mid-Atlantic	-2
27	(GMT-01:00) Cape Verde Is.	-1
28	(GMT-01:00) Azores	-1
29	(GMT+00:00) Casablanca, Monrovia, Reykjavik	0

30	(GMT+00:00) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London	0
31	(GMT+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna	1
32	(GMT+01:00) Belgrade, Bratislava, Budapest, Ljubljana, Prague	1
33	(GMT+01:00) Brussels, Copenhagen, Madrid, Paris	1
34	(GMT+01:00) Sarajevo, Skopje, Warsaw, Zagreb	1
35	(GMT+01:00) West Central Africa	1
36	(GMT+02:00) Amman	2
37	(GMT+02:00) Athens, Bucharest, Istanbul	2
38	(GMT+02:00) Beirut	2
39	(GMT+02:00) Cairo	2
40	(GMT+02:00) Harare, Pretoria	2
41	(GMT+02:00) Helsinki, Kyiv, Riga, Sofia, Tallinn, Vilnius	2
42	(GMT+02:00) Jerusalem	2
43	(GMT+02:00) Minsk	2
44	(GMT+02:00) Windhoek	2
45	(GMT+03:00) Kuwait, Riyadh, Baghdad	3
46	(GMT+03:00) Moscow, St. Petersburg, Volgograd	3
47	(GMT+03:00) Nairobi	3
48	(GMT+03:00) Tbilisi	3
49	(GMT+03:30) Tehran	3.5
50	(GMT+04:00) Abu Dhabi, Muscat	4
51	(GMT+04:00) Baku	4
52	(GMT+04:00) Yerevan	4
53	(GMT+04:30) Kabul	4.5
54	(GMT+05:00) Yekaterinburg	5
55	(GMT+05:00) Islamabad, Karachi, Tashkent	5
56	(GMT+05:30) Sri Jayawardenapura	5.5
57	(GMT+05:30) Chennai, Kolkata, Mumbai, New Delhi	5.5
58	(GMT+05:45) Kathmandu	5.75
59	(GMT+06:00) Almaty, Novosibirsk	6
60	(GMT+06:00) Astana, Dhaka	6
61	(GMT+06:30) Yangon (Rangoon)	6.5
62	(GMT+07:00) Bangkok, Hanoi, Jakarta	7
63	(GMT+07:00) Krasnoyarsk	7

64	(GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi	8
65	(GMT+08:00) Kuala Lumpur, Singapore	8
66	(GMT+08:00) Irkutsk, Ulaan Bataar	8
67	(GMT+08:00) Perth	8
68	(GMT+08:00) Taipei	8
69	(GMT+09:00) Osaka, Sapporo, Tokyo	9
70	(GMT+09:00) Seoul	9
71	(GMT+09:00) Yakutsk	9
72	(GMT+09:30) Adelaide	9.5
73	(GMT+09:30) Darwin	9.5
74	(GMT+10:00) Brisbane	10
75	(GMT+10:00) Canberra, Melbourne, Sydney	10
76	(GMT+10:00) Hobart	10
77	(GMT+10:00) Guam, Port Moresby	10
78	(GMT+10:00) Vladivostok	10
79	(GMT+11:00) Magadan, Solomon Is., New Caledonia	11
80	(GMT+12:00) Auckland, Wellington	12
81	(GMT+12:00) Fiji, Kamchatka, Marshall Is.	12
82	(GMT+13:00) Nuku'alofa	13

19.2 Error Code Define

```

typedef enum _WEB_RESULT //return to web error code
{
    WEB_SUCCESS = 0, // success

    // web login error
    WEB_LOGIN_FAIL = 101, // username or password error
    WEB_SESSION_INEFFECTIVE = 102, // session error
    WEB_PARAM_INVALID = 103, // no complete param
    WEB_DOWNGRADE_INVALID = 104, // downgrade disallowed

    // network
    WEB_NET_STAT_ERROR = 111, // network status file error
    WEB_NET_ERROR = 112,

```

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WEB_NET_ETH_UNPLUG =          113,
WEB_NET_NO_IP =              114,

// signal error
WEB_GET_INPUT_SIGNAL_STATUS_FAIL = 121,      // get input signal status fail
WEB_CHANGE_INPUT_SOURCE_FAIL =    122,
WEB_INPUT_NO_SIGNAL =            123,

// streaming error
WEB_GET_STREAM_STATUS_FAIL =      131,      // get stream status fail
WEB_START_STREAM_TASK_FAIL =      132,      // start stream status fail
WEB_STOP_STREAM_TASK_FAIL =       133,      // stop stream status fail
WEB_STREAMING_ERROR =            134,
WEB_RTMP_AUTHORIZED_FAIL =        135,
WEB_RTMP_HOST_CONNECT_FIAL =      136,
WEB_RTMP_NEED_AUTHORIZE =         137,
WEB_RTMP_INTERNAL_ERROR =         138,
WEB_STREAMING_PARAM_ERROR =       139,
WEB_STREAMING_TCP_ERROR =          140,
WEB_STREAMING_UDP_ERROR =          141,
WEB_STREAMING_RTP_ERROR =          142,
WEB_STREAMING_HLS_ERROR =          143,
WEB_STREAMING_PREVIEW_ERROR =     144,
WEB_STREAMING_GET_DEV_STATUS_ERROR = 145,
WEB_STREAMING_INPUT_SIGNAL_ERROR = 146,
WEB_RTMP_URL_ERROR =              147,
WEB_STREAMING_NOT_READY =         148,

// ustream error
WEB_USTREAM_AUTHENTICATION_FAIL =  151,      // cdn authentication fail
WEB_USTREAM_API_ERROR =           152,      // cdn error
WEB_USTREAM_TOKEN_EXPIRED =       153,
WEB_USTREAM_CONNECT_ERROR =       154,
WEB_USTREAM_CHANNEL_ERROR =       155,
WEB_USTREAM_INIT_FAIL =           156,

// youtube error
WEB_OAUTH_PERMISSION_FAIL =       161,

```

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WEB_YOUTUBE_API_ERROR =          162,          // cdn error
WEB_YOUTUBE_TIME_ERROR =        163,
WEB_YOUTUBE_CONNEECT_ERROR =    164,
WEB_YOUTUBE_AUTHENTICATION_FAIL = 165,
WEB_YOUTUBE_CHANNEL_ERROR =     166,
WEB_YOUTUBE_INIT_FAIL =        167,

// twitch error
WEB_TWITCH_AUTHENTICATION_FAIL = 171,          // cdn authentication fail
WEB_TWITCH_API_ERROR =          172,          // cdn error
WEB_TWITCH_CONNECT_ERROR =     173,
WEB_TWITCH_CHANNEL_ERROR =     174,
WEB_TWITCH_INIT_FAIL =         175,

// CMS error
WEB_CMS_API_ERROR =             181,          // cms api error

// internal error
WEB_HTTP_INTERNAL_SERVER_ERROR = 191,          // http internal server error
WEB_UPLOAD_ERROR =              192,          // http internal server error
WEB_CONFIG_EMPTY =              193,          // config error
WEB_CFG_ERROR =                 194,          // config file error
WEB_CFG_FIND_ERROR =            195,
WEB_CFG_ASSIGN_ERROR =          196,
WEB_CFG_SAVE_ERROR =            197,
WEB_CFG_FIND_ARRAY_ERROR =      198,
WEB_CFG_STREAMING_SET_ERROR =   199,
WEB_CFG_DRIVER_SET_ERROR =      200,
WEB_SET_TO_DEFAULT_CONFIG_FAIL = 201,          // set to default system config fail
WEB_NAME_TOO_LONG =            202,
WEB_BUF_OVERFLOW =              203,
WEB_CFG_OVERFLOW =              204,
WEB_SD_FULL =                   205,
WEB_USB_FULL =                  206,

// network storage
WEB_NS_BAD_ADDR =               211,
WEB_NS_PATH_NOT_EXIST =        212,

```

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WEB_NS_PERMISSION_DENY =          213,
WEB_NS_NO_SPACE =                214,
WEB_NS_READ_ONLY =              215,
WEB_NS_UNEXPECTED_ERROR =       216,
WEB_NS_UMOUNT_ERROR =           217,

// master/slave
E_SETBACKUPSERVERCONFIG_FAIL =   221,
E_GETBACKUPSERVERCONFIG_FAIL =   222,
E_GETHEARTBEATSTATUS_FAIL =     223,
E_SIGNALHEARTBEAT_FAIL =        224,
E_BACKUPHEARTBEAT_FAIL =        225,

WEB_FACEBOOK_AUTHENTICATION_FAIL = 226,
WEB_FACEBOOK_API_ERROR =        227,
WEB_FACEBOOK_TOKEN_EXPIRED =    228,
WEB_FACEBOOK_CONNECT_ERROR =    229,
WEB_FACEBOOK_CHANNEL_ERROR =    230,
WEB_FACEBOOK_INIT_FAIL =        231,

// max error no.
WEB_NO_DEFINE =                  255
}WEB_RESULT;

```