

IVMS Pro TS API Document		
Doc #: 01_05_IVMS_Pro_TS_API_Document	Version: 1.5.1	Page 1 of 15

Title:	IVMS Pro TS API Document
Version:	1.5.1
Doc No:	01_05_IVMS_Pro_TS_API_Document

History			
Date	Version	Modified by	Note
13 June 2017	1.0		Initial draft
	1.5		HLS support
	1.5.1		Websocket data format change

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1 INTRODUCTION

The purpose of this document is to describe the http REST API exposed by the IVMS Pro package for providing HLS stream to any third party application to view Live and Archive stream. Live and archive stream is given as HLS format and can be play in any HLS supported browser.

To get HLS stream source stream must be H264 otherwise it will not generate any HLS stream for Live or Archive.

NB:- The package is NOT a VConnect component and must NOT be deployed at Pro central VConnect server.

2 ABBREVIATIONS

Abbreviation / Object	Description
IVMS / VMS	Intelligent Video Management Software is Videonetics product which is a standalone application and it can connect to IP camera. The video analytics servers configured with IVMS collect live video stream of the camera, record and replay camera video.
IP-Camera	Internet Protocol Camera or IP Camera is a digital camera used for video surveillance complying with ONVIF standards. It can send and receive data over computer networks or internet.
TCP	Transmission Control Protocol
VPN	Virtual Private Network
RTSP	Real Time Streaming Protocol
URL	Uniform Resource Locator
VA	Video Analytics which is Videonetics product that processes live video frames from IP camera and generates events as per the analytics that are configured on the respective IP cameras

3 IVMS API WITHOUT AUTHENTICATION

3.1 GET IVMS ALL CHANNELS

Description:

Fetch all channel details.

Implementation Status:

Available

URL:

/REST/local/channel

Request Method:

GET

Request URL Parameters:**Required**

None

Request Payload:

Required: None

Response Content-Type:

application/json

Success Response:

```
{
  "status": 2000,
  "code": 200,
  "description": "OK",
  "message": "Successfully Retrieved!",
  "uri": "http:// <server-ip>:<port>/V-Pro-IVMS-APIServer/REST/local/channel",
  "result": [{
    "id": 1,
    "model": "Axis",
    "ip": "192.168.1.10",
    "name": "Entry_View",
    ....
    ....
  }],
  ....
  ....
}
```

Failure Response:

```
{"status":1504,"code":500,"description":"Internal Server Error","message":"Cannot connect the site VMS"}
```

```
server.,"uri":" http://<server-ip>:<port>/V-Pro-IVMS-APIServer/REST/local/channel","result":[]}  
{ "status": 3002, "code": 422, "description": "Unprocessable Entity", "message": "Unable to process! Please check  
your request parameters!", "uri": " http://<server-ip>:<port>/V-Pro-IVMS-APIServer/ REST/local/channel", "result":  
[] }
```

3.2 GET IVMS CHANNEL BY ID

Description:

Fetch a channel details by channel id.

Implementation Status:

Available

URL:

/REST/local/channel/{channelid}

Request Method:

GET

Request URL Parameters:

Required

channeled=[Short]

Request Payload:

Required: None

Response Content-Type:

application/json

Success Response:

```
{  
  "status": 2000,  
  "code": 200,  
  "description": "OK",  
  "message": "Successfully Retrieved!",  
  "uri": "http://<server-ip>:<port>/V-Pro-IVMS-APIServer/REST/local/channel/1",  
  "result": [{  
    "id": 1,  
    "model": "Axis",  
    "ip": "192.168.1.10",  
    "name": "Entry_View",  
    ....,  
    ....  
  }]  
}
```

Failure Response:

```
{ "status":1504,"code":500,"description":"Internal Server Error","message":"Cannot connect the site VMS  
server.,"uri":" http://<server-ip>:<port>/V-Pro-IVMS-APIServer/REST/local/channel/1","result":[] }
```

```
{ "status": 3002, "code": 422, "description": "Unprocessable Entity", "message": "Unable to process! Please check your request parameters!", "uri": " http://<server-ip>:<port>/V-Pro-IVMS-APIServer/ REST/local/channel/1", "result": [] }
```

3.3 GET IVMS CHANNELS COUNT

Description:

Fetch total channels count with VMS ip, redundant VMS ip.

Implementation Status:

Available

URL:

/REST/local/channel/count

Request Method:

GET

Request URL Parameters:**Required**

None

Request Payload:

Required: None

Response Content-Type:

application/json

Success Response:

```
{
  "status": 2000,
  "code": 200,
  "description": "OK",
  "message": "Successfully Retrieved!",
  "uri": "http://<server-ip>:<port>/V-Pro-IVMS-APIServer/REST/local/channel/count",
  "result": [{ 501 }]
}
```

Failure Response:

```
{"status":1504,"code":500,"description":"Internal Server Error","message":"Cannot connect the site VMS server.,"uri":" http://<server-ip>:<port>/V-Pro-IVMS-APIServer/REST/local/channel/count","result":[]}
```

```
{ "status": 3002, "code": 422, "description": "Unprocessable Entity", "message": "Unable to process! Please check your request parameters!", "uri": " http://<server-ip>:<port>/V-Pro-IVMS-APIServer/ REST/local/channel/count", "result": [] }
```

3.4 DOWNLOAD IVMS EVENT SNAP

Description:

Fetch and download event snap by event Id.

Implementation Status:

Available

URL:

/REST/local/ event/{eventid}/snap

Request Method:

GET

Request URL Parameters:**Required**

None

Request Payload:

Required: None

Response Content-Type:

NA

Success Response:

NA

Failure Response:

```
{"status":1504,"code":500,"description":"Internal Server Error","message":"Cannot connect the site VMS server.,"uri":" http://<server-ip>:<port>/V-Pro-IVMS-APIServer/REST/local/ event/{eventid}/snap ","result":[]}  
{ "status": 3002, "code": 422, "description": "Unprocessable Entity", "message": "Unable to process! Please check your request parameters!", "uri": " http://<server-ip>:<port>/V-Pro-IVMS-APIServer/ REST/local/ event/{eventid}/snap ", "result": [] }
```

3.5 DOWNLOAD IVMS EVENT CLIP

Description:

Fetch and download event snap by event Id.

Implementation Status:

Available

URL:

/REST/local/ event/{eventid}/clip

Request Method:

GET

Request URL Parameters:**Required**

None

Request Payload:**Required:** None**Response Content-Type:**

NA

Success Response:

NA

Failure Response:

```
{"status":1504,"code":500,"description":"Internal Server Error","message":"Cannot connect the site VMS server.", "uri":" http://<server-ip>:<port>/V-Pro-IVMS-APIServer/REST/local/ event/{eventid}/clip ", "result":[]}  
{ "status": 3002, "code": 422, "description": "Unprocessable Entity", "message": "Unable to process! Please check your request parameters!", "uri": " http://<server-ip>:<port>/V-Pro-IVMS-APIServer/ REST/local/ event/{eventid}/snap ", "result": [] }
```

3.6 GET IVMS CHANNELS STATUS

Description:

Fetch all channels status by VMS ip and redundant VMS ip.

Implementation Status:

Available

URL:

/REST/local/channel/status

Request Method:

GET

Request URL Parameters:**Required**

None

Request Payload:**Required:** None**Response Content-Type:**

application/json

Success Response:

```
{"status":2000,"code":200,"description":"OK","message":"Successfully Retrieved!", "uri":"/V-Pro-IVMS-APIServer/REST/local/channel/status", "result":[{"channelId":10,"channelStatus":1}, {"channelId":9,"channelStatus":1}, {"channelId":8,"channelStatus":0}, {"channelId":7,"channelStatus":0}, {"channelId":6,"channelStatus":0}, {"channelId":13,"channelStatus":1}, {"channelId":12,"channelStatus":0}, {"channelId":11,"channelStatus":1}]}
```



```
]
}
```

Failure Response:

```
{
  "status": 3110,
  "code": 404,
  "description": "Not Found",
  "message": "There is no channel or invalid channel id!",
  "uri": "http:// <server-ip>:<port>/REST/local/startlive/110/800/700/0",
  "result": []
}
```

3.8 KEEP LIVE STREAMING RUNNING

Description:

Keep live play update and the streamed data to be served over HLS.

Implementation Status:

Available

URL:

/REST/local/live/keepalive/{streamsessionid}

Request Method:

GET

Request URL Parameters:**Required**

streamsessionid = [Long]

Request Payload:

Required: None

Response Content-Type:

application/json

Success Response:

```
{"status":2007,"code":200,"description":"OK","message":"Successfully Applied!","uri":"http://
<server-ip>:<port>/REST/local/live/keepalive/1497350824291","result":[]}
```

Failure Response:

```
{"status":1504,"code":500,"description":"Internal Server Error","message":"Cannot connect the site VMS
server.,"uri":" http:// <server-ip>:<port>/REST/local/channel/keepalive","result":[]}
```

```
{ "status": 3002, "code": 422, "description": "Unprocessable Entity", "message": "Unable to process! Please check
your request parameters!", "uri": "http:// <server-ip>:<port>/REST/local/channel/keepalive", "result": [] }
```

3.9 STOP A CAMERA LIVE PLAY

Description:

Stop a camera live play and the streamed data to be served over HLS.

Implementation Status:

Available

URL:

/REST/local/stoplive/{streamsessionid}

Request Method:

GET

Request URL Parameters:**Required**

streamsessionid = [Long]

Request Payload:

Required: None

Response Content-Type:

application/json

Success Response:

dite hobe

Failure Response:

{"status":1504,"code":500,"description":"Internal Server Error","message":"Cannot connect the site VMS server.", "uri":" http://<server-ip>:<port>/V-Pro-IVMS-APIServer/local/stoplive","result":[]}

{"status": 3002, "code": 422, "description": "Unprocessable Entity", "message": "Unable to process! Please check your request parameters!", "uri": "http://<server-ip>:<port>/V-Pro-IVMS-APIServer/local/stoplive", "result": [] }

3.10 START A CAMERA ARCHIVE PLAY

Description:

Start a camera recording video play and the streamed data to be served over HLS.

Implementation Status:

Available

URL:

REST/locla/startarchive/{channelid}/{resolutionwidth}/{resolutionheight}/{starttimestamp}/{iswithaudio}

Request Method:

POST

Request URL Parameters:**Required**

channelid = [short]

resolutionwidth=[Integer]

resolutionheight=[Integer]

starttimestamp=[Long]

withaudio=[0]

Request Payload:**Required:** None**Response Content-Type:**

application/json

Success Response:

dite hobe

Failure Response:

```
{"status":1504,"code":500,"description":"Internal Server Error","message":"Cannot connect the site VMS server.,"uri":" http://<server-ip>:<port>/V-Pro-IVMS-APIServer/REST/local/startarchive","result":[]}
```

```
{ "status": 3002, "code": 422, "description": "Unprocessable Entity", "message": "Unable to process! Please check your request parameters!", "uri": "http://<server-ip>:<port>/V-Pro-IVMS-APIServer/ local/channel/startarchive", "result": [] }
```

3.11 KEEP ARCHIVE SESSION RUNNING

Description:

Keep archive plays update and the streamed data to be served over HLS.

Implementation Status:

Available

URL:

/REST/local/archive/keepalive/{streamsessionid}

Request Method:

GET

Request URL Parameters:**Required**

streamsessionid = [Long]

Request Payload:**Required:** None**Response Content-Type:**

application/json

Success Response:

```
{"status":2007,"code":200,"description":"OK","message":"Successfully Applied","uri":"http://<server-ip>:<port>/REST/local/archive/keepalive/1497350824291","result":[]}
```

Failure Response:

```
{"status":1504,"code":500,"description":"Internal Server Error","message":"Cannot connect the site VMS server.", "uri": "http:// <server-ip>:<port>/REST/local/channel/keepalive","result":[]}
```

```
{ "status": 3002, "code": 422, "description": "Unprocessable Entity", "message": "Unable to process! Please check your request parameters!", "uri": "http:// <server-ip>:<port>/REST/local/archive/keepalive", "result": [] }
```

3.12 STOP A CAMERA ARCHIVE PLAY

Description:

Stop a camera recording video play and the streamed data to be served over HLS.

Implementation Status:

Planned

URL:

REST/local/stoparchive/{streamsessionid}

Request Method:

GET

Request URL Parameters:**Required**

streamsessionid=[Long]

Request Payload:

Required: None

Response Content-Type:

application/json

Success Response:

dite hobe

Failure Response:

```
{"status":1504,"code":500,"description":"Internal Server Error","message":"Cannot connect the site VMS server.", "uri": "http://<server-ip>:<port>/V-Pro-IVMS-APIServer/local/channel/stoparchive/", "result":[]}
```

```
{ "status": 3002, "code": 422, "description": "Unprocessable Entity", "message": "Unable to process! Please check your request parameters!", "uri": "http://<server-ip>:<port>/V-Pro-IVMS-APIServer/ local/channel/stoparchive", "result": [] }
```

4 REAL-TIME EVENTS BROADCASTING BY WEB SOCKET SERVER

This web socket server will be running all the times and any event generated at any IVMS by the Analytics server, the IVMS system will publish a notification with the event details and the same will be received by the Smart Mobile client in real time. Thus the mobile clients or mobile apps will receive the information of the event generated instantly over the web.

The events will be stored in the site IVMS database as it is being saved in the existing IVMS system. But the broadcast of events through the web socket server over the http web, this server is introduced. Thus, in case user will not be logged in to the session, will not receive the notification but once the user logs in, the mobile client will receive latest events.

Following are the endpoint location and the web socket client event listeners.

WebSocket URL:

ws://<domain>:<port>/notification

OnOpen:

```
{"status": 1, "code": 101, "description": "Web Socket Protocol Handshake", "message": "Connection Successful!", "result": []}
```

OnMessage:

```
{"cameraId":2,"cameraName":"192.168.1.47","eventTime":"2017-07-07 11:56:47","alertMessage":"Activity Detection","alertType":209,"base64imageUrl":"..","eventDetails1":"NA"}
```

OnClose:

```
{"status": 1, "code": 101, "description": "Web Socket Protocol Handshake", "message": "Connection Closed!", "result": [] }
```