VAPIX® version 3

Stream Profile API

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1 Overview

1.1 Description

A stream profile is a set of video stream parameters suitable for different applications, devices or situations. Stream profiles can be used when retrieving a video stream from Axis network cameras and video encoders using the HTTP API, the RTSP API or the web GUI. All parameters that can be set in a video stream request can also be saved in a stream profile.

A few stream profiles are included at startup. The included stream profiles are designed according to basic requirements and can be customized by users with appropriate access rights. Users can easily create new stream profiles when needed. User-created profiles may also be removed.

Stream profiles are also used to define special image stream settings, for example for instant replay and events recording.

1.2 History

Version	Date	Comment
1.00	2008-Sep-18	Initial version

2 Prerequisites

2.1 Identification

Property: Properties.API.Version=3

Firmware: 5.00 and above

2.2 Dependencies

The stream profile API is an extension to the video stream CGI's defined in the VAPIX® HTTP API specification. Stream profiles parameters are added, updated, listed and removed using the parameter management CGI (param.cgi).

3 Common Examples

Note: Some lines in the examples below have been broken.

Example 1: Add a new stream profile. In this example the new profile is the 5th stream profile so it will be referred to as StreamProfile.S4.

```
http://myserver/axis-cgi/param.cgi?action=add
&template=streamprofile
&group=StreamProfile
```

Response

```
S4 OK
```

Example 2: Configure a stream profile. In this example the profile is named myprofile and contains the following parameters: resolution=CIF, text=1 and textstring=CIF profile. Characters in the Parameters string must be URL-encoded, so

resolution=CIF&text=1&textstring=CIF%20profile

becomes

resolution%3dCIF%26text%3d1%26textstring%3dCIF%2520profile

The blank space is encoded as %20, the equal sign (=) as %3d, the ampersand (&) as %26 and the percent sign is encoded as %25.

```
http://myserver/axis-cgi/param.cgi?action=update
&StreamProfile.S4.Name=myprofile
&StreamProfile.S4.Description=My%20CIF%20profile
&StreamProfile.S4.Parameters=resolution%3dCIF%26text%3d1%26textstring%
3dCIF%2520profile
```

Response

```
OK
```

Example 3: Add and configure a stream profile in one request. Here the profile is named myprofile2 and the Parameters string is

videocodec=h264&resolution=4CIF&text=1&textstring=4CIF%20profile

Note that characters in the Parameters string must be URL-encoded (see example above).

```
http://myserver/axis-cgi/param.cgi?action=add
&template=streamprofile
&group=StreamProfile
&StreamProfile.S.Name=myprofile2
&StreamProfile.S.Description=My%204CIF%20profile
&StreamProfile.S.Parameters=videocodec%3dh264%26resolution%3d4CIF%26te
xt%3d1%26textstring%3d4CIF%2520profile
```

Response

```
S5 OK
```

Example 4: List the stream profile parameters.

```
http://myserver/axis-cgi/param.cgi?action=list&group=StreamProfile.S5
```

Response

```
root.StreamProfile.S5.Name=myprofile2
root.StreamProfile.S5.Description=My%204CIF%20profile
root.StreamProfile.S5.Parameters=videocodec%3dh264%26resolution%3d4CIF
%26text%3d1%26textstring%3d4CIF%2520profile
```

Example 5: Request, over HTTP, a MJPEG image stream configured according to the stream profile myprofile.

```
http://myserver/axis-cgi/mjpg/video.cgi?&streamprofile=myprofile
```

Example 6: Stream profiles in RTSP requests. The value of a parameter saved in the stream profile can be overridden by specifying a new parameter value after streamprofile. Here, myprofile2 (defined above) is used but the resolution is changed to 640x480.

```
PLAY rtsp://myserver/axis-media/media.amp
?streamprofile=myprofile2&resolution=640x480 RTSP/1.0
CSeq: 4
User-Agent: Axis AMC
Session: 12345678
Authorization: Basic cm9vdDpwYXNz
```

The VAPIX® RTSP API Specification is available at
http://www.axis.com/techsup/cam_servers/dev/cam_http_api_index.php

4 Stream Profile Parameters

4.1 Stream profile settings

The parameters in the StreamProfile group control stream profile settings.

Security level note: c=create, d=delete, w=write (set), r=read (get). For example, operator:rw means that the operator has read and write access.

[StreamProfile.S#]*

Template: streamprofile

Security level (create/delete): operator:cd; admin:cd

Parameter	Default value	Valid values	Security level (get/set)	Description
Name		A-Z, a-z, 0-9, -, _	admin:rw operator:rw viewer:r	The name of the stream profile. Used in the URL in stream requests. **Note**: Each profile must have a unique name.
Description		string	admin:rw operator:rw viewer:r	User-friendly description of the profile.
Parameters		<parameter1>=<value1> &<parameter2>=<value2> . . .	admin:rw operator:rw viewer:r	List of URL parameters. **Note**: The characters

				must be URL-encoded.

* The # is replaced by a group number, e.g. StreamProfile.S5. The first group numbers are reserved for stream profiles included in the product.

5 HTTP API

5.1 MJPEG video request

Saved stream profiles are convenient when retrieving MJPEG video streams through video.cgi. The value of a parameter saved in a stream profile can be overridden by specifying a new parameter value after the streamprofile argument.

Method: GET
Syntax:

```
http://<servername>/axis-cgi/mjpg/video.cgi
?<argument>=<value>[&<argument>=<value>...]
```

with the following arguments

Argument	Valid values	Description
streamprofile=<string>	name of stream profile	The name of the stream profile. Supported stream profile names are stored in the StreamProfile.S#.Name parameters.
Additional arguments	See VAPIX® HTTP API Specification for a complete list.	

6 RTSP API

6.1 RTSP Request

Saved stream profiles are also convenient when requesting video streams using RTSP. The value of a parameter saved in the stream profile can be overridden in the RTSP request by specifying a new value after the streamprofile argument.

Syntax:

```
COMMAND rtsp://<servername>/axis-media/media.amp
?<argument>=<value>[&<argument>=<value>...] RTSP/1.0
Headerfield1: val1<CRLF>
Headerfield2: val2<CRLF>
...
<CRLF>

[Body]
```

with the following arguments

Argument	Valid values	Description
streamprofile=<string>	name of stream profile	The name of the stream profile. Supported stream profile names are stored in the StreamProfile.S#.Name parameters.
Additional arguments	See VAPIX® RTSP API Specification for a complete list.	

Available commands and header fields are described in VAPIX® RTSP API Specification.

7 References

The documents below are available at
http://www.axis.com/techsup/cam_servers/dev/cam_http_api_index.php

VAPIX® HTTP API

VAPIX® Parameter Specification

VAPIX® RTSP API version 2