Installation GscStreamer / preliminary version

Important information

The present documentation is only a preliminary version and should only facilitate the installation of “GscStreamer” for evaluation purposes.

Mode of operation

The “GscStreamer” supports simple integration of GeViScope video streams (actually only live video footage is supported!) in third-party systems based on the http protocol.

Four independent video streams are available. Accessing the streams is similar to accessing video data from Axis IP cameras. To realize this parts of the “VAPIX, http API Specification” are implemented by “GscStreamer”.

The four different streams can be accessed by using different port numbers. Controlling the streams is done by actions that have to be sent to the GeViScope server independent from “GscStreamer”. This is possible by using the TACI interface of GeViScope for example.

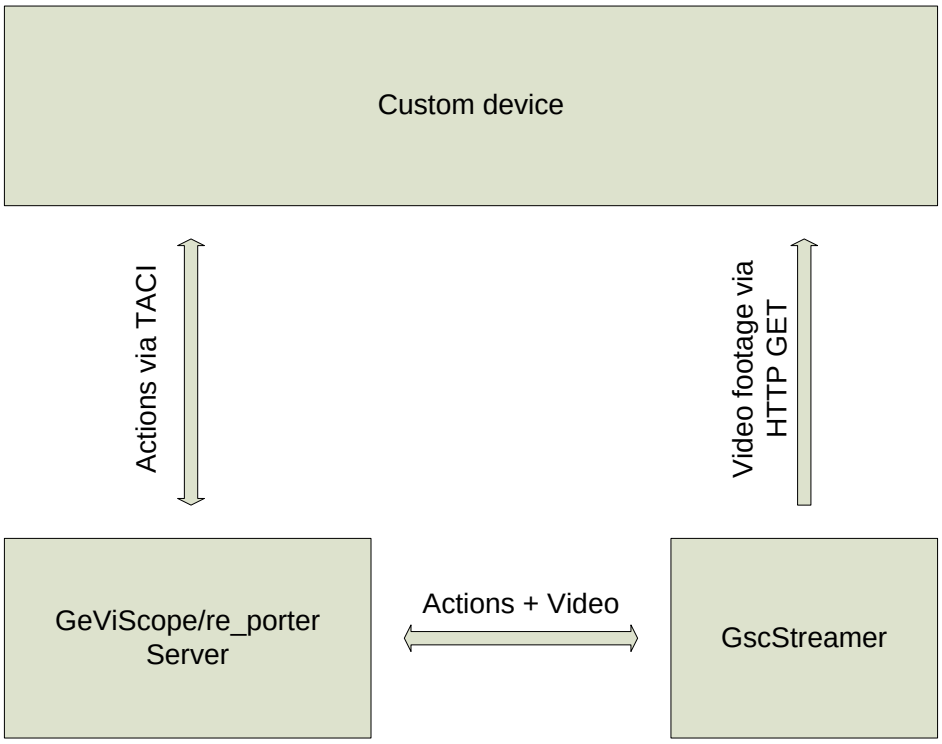

Figure 1: System overview

Configuring the “GscStreamer”

The “GscStreamer” consists of three files. “GscStreamer.EXE” is the windows service application and “GscStreamerSetup.EXE” is the configuration tool for this service. Additional the file “GscJPEGEncoder.DLL” is needed.

The files have to be copied into the GeViScope root folder:

C:\Program Files\GEVISCOPE

At first the service has to be installed and started. The following commands should be called at the command prompt:

C:\Program Files\GEVISCOPE\GscStreamer.exe /install

C:\Program Files\GEVISCOPE\GscStreamer.exe /start

In case of a successful installation in the future the service will start automatically during the boot up of the windows OS.

To configure “GscStreamer” the setup user interface “GscStreamerSetup.EXE” has to be started.

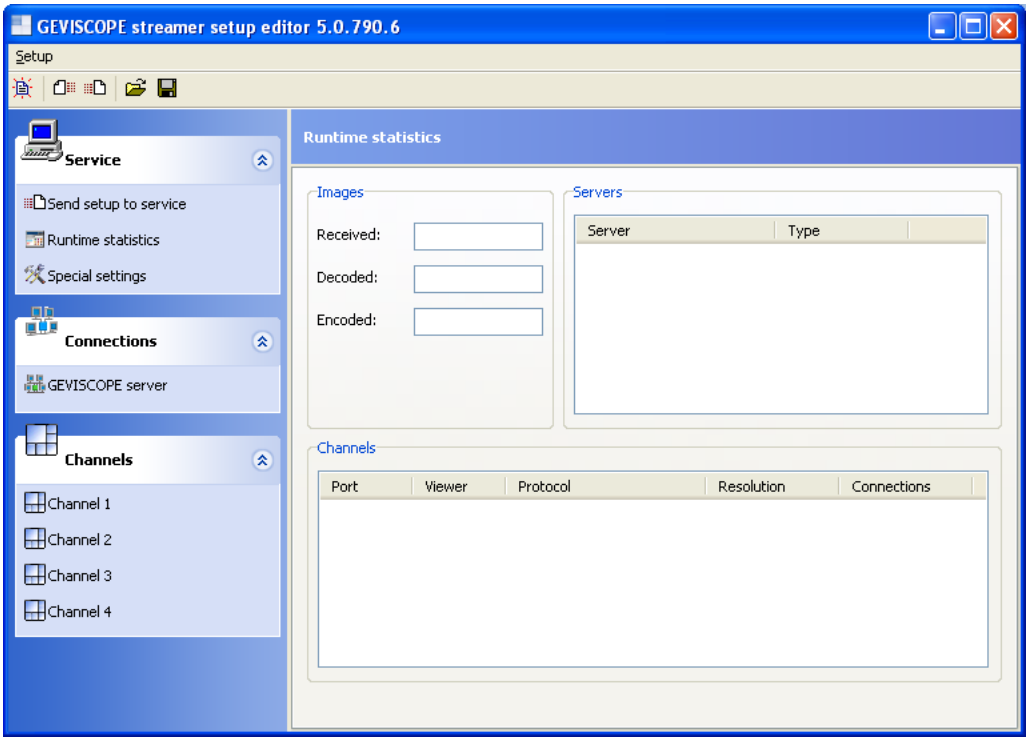

Figure 2: Setup user interface of "GscStreamer"

To ensure that a connection to GeViScope can be established, connection parameters have to be specified. The according settings have to be assigned in the section **“GEVISCOPE server”** of category **“Connections”**.

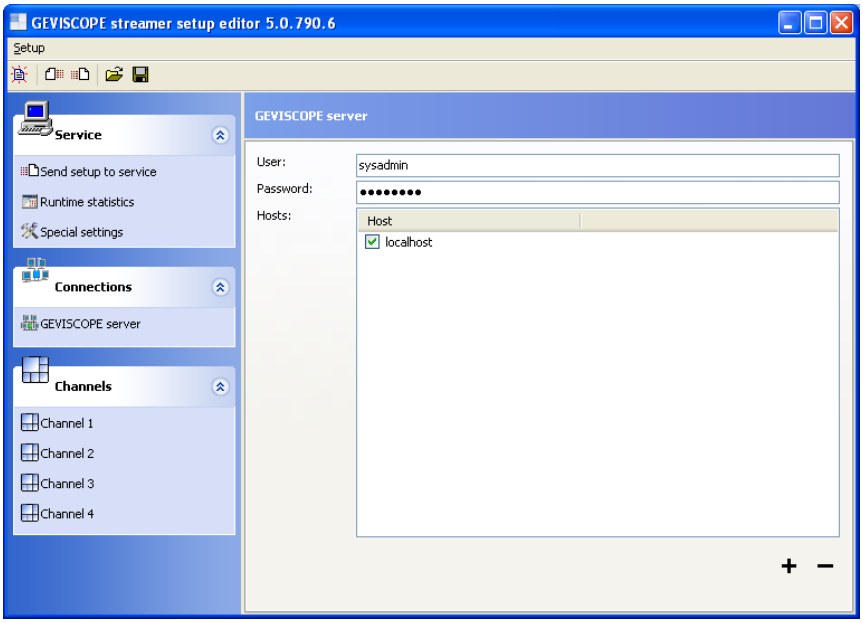

Figure 3: Connection settings

The default settings belong to a local server connection.

Settings for the individual streams are done in the section **“Channel X”** of the category **“Channels”**.

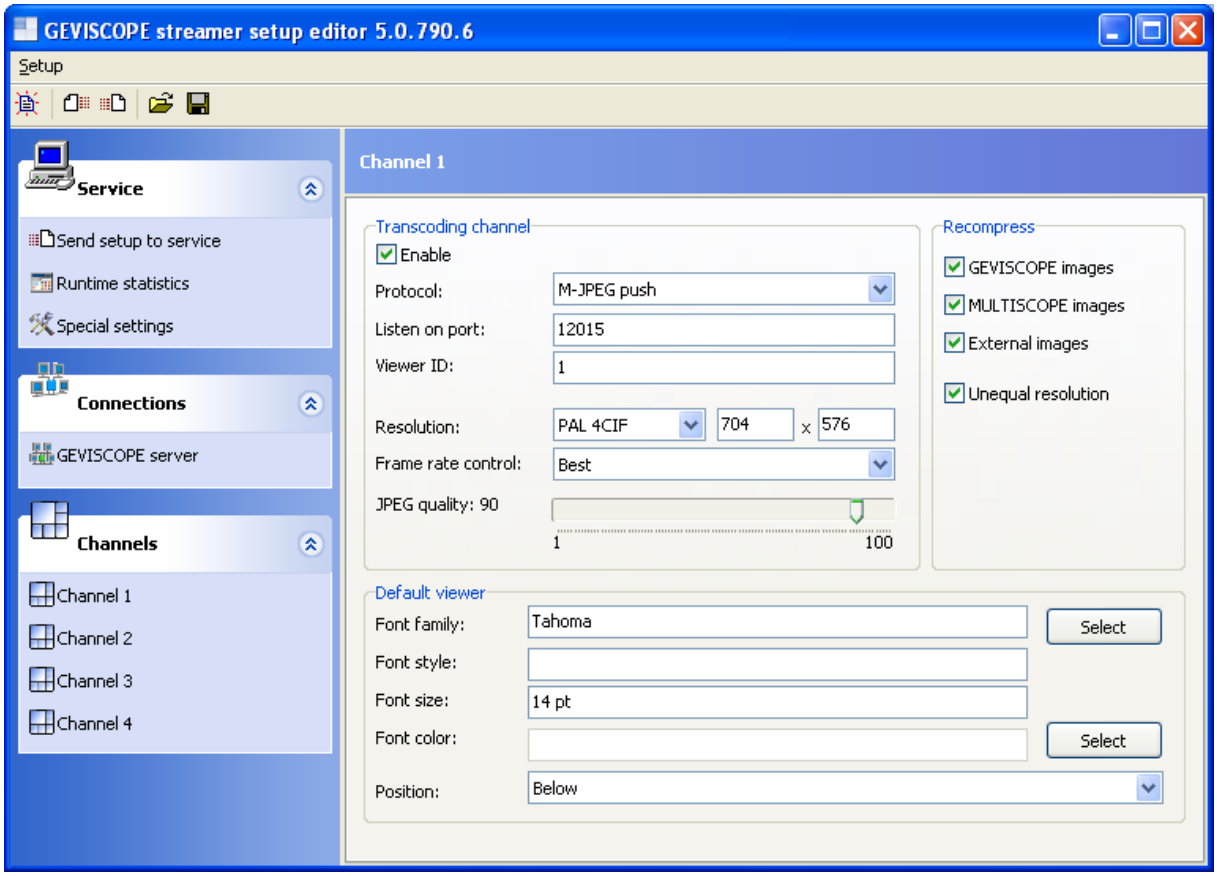

Figure 4: Stream settings

The relevant settings are the port number and the viewer ID. The port number defines the TCP/IP port that is used to provide the stream and the viewer ID is a system global number that is used to control the stream by GeViScope actions. If possible the default settings should be used.

The third-party system has to use the defined port number to access the video footage instead of port 80 that is used for normal IP cameras.

The viewer ID should be a unique global number in the whole system. Then live footage of a GeViScope camera can be streamed by a ViewerConnectLive action using the global viewer ID.

After changing the settings the function **"Send setup to service"** has to be activated to apply the changes.

Configuring the third-party system

To access the streams of "GscStreamer" the third-party system has to be able to display video footage of Axis IP cameras by using the Axis http protocol.

"GscStreamer" offers the following http requests:

Single picture request: http://<*ip*>:<*port*>/jpg/image.jpg

MJPEG request: http://<*ip*>:<*port*>/mjpg/video.mjpg

Function test

To ensure "GscStreamer" delivering video streams the function should be proofed via a standard web browser.

At first a camera should be switched on a streaming output channel of the "GscStreamer". This can be realized by using the GeViScope tool "GscPLCSimulator.EXE" to send an action to the GeViScope server:

ViewerConnectLive (1, 1)

Afterwards single pictures should be requested by sending the following command out of a standard browser:

http://localhost:12015/jpg/image.jpg

List of supported URLs

The following URLs are supported in the browser to display the video streams:

- http://host
  Home page in web interface mode
- http://host:port/image.html
  Simple HTML page with image play back
- http://host:port/jpg/image.jpg
  Single JPEG picture
- http://host:port/mjpg/video.mjpg
  M-JPEG video stream

The following "VAPIX® HTTP API" URLs are supported:

- http://host:port/axis-cgi/param.cgi
  § 5.1.1 Add, update, remove and list parameters and their values
  Query of the GscStreamer parameters (only the parameters "action=list" and "group" are supported)
- http://host:port/axis-cgi/date.cgi
  § 5.1.9 System date and time
  Query of the system date and time (only the parameter "action=list" is supported)
- http://host:port/axis-cgi/imagesize.cgi
  § 5.2.1 Image size
  Query of the image size (resolution)
- http://host:port/jpg/image.jpg
  http://host:port/axis-cgi/jpg/image.cgi
  § 5.2.4 JPEG/MJPG (part 1 JPEG)
  Transfer of a single picture
- http://host:port/mjpg/video.mjpg
  http://host:port/axis-cgi/mjpg/video.cgi
  § 5.2.4 JPEG/MJPG (part 2 MJPG)
  Transfer of a M-JPEG video stream
- http://host:port/axis-cgi/com/ptz.cgi
  § 5.3.3 PTZ control
  The following PTZ parameters are supported:

Command	Description
auxiliary=<string>	User-defined GeViScope actions. Please consider the URL code. You can use **0** as a place holder for the current camera and viewer number.
whoami	Query of the GscStreamer version
pan=<float>&tilt<float>	Go to an absolute position
rpan=<float>&rtilt<float>	Go to a relative position
riris=<int>	Open iris (parameter value > 0) Close iris (parameter value < 0) Stop iris (parameter value = 0)
autofocus=<string>	Turn on or off the auto focus with the parameter values “on” or “off”.
autoiris=<string>	Turn on or off the auto iris with the parameter values “on” or “off”.
continuouspantiltmove=<int>,<int>	Pan/tilt movement
continuouszoommove=<int>	Zoom movement
continuousfocusmove=<int>	Focus movement
move=home	Go to default (home) position
gotoserverpresetno=<int>	Go to preset position
home=yes	Save the default position
setserverpresetno=<int>	Save a preset position, 0 – default position
removeserverpresetno=<int>	Remove a preset position, 0 – default position

- http://host:port/axis-cgi/com/ptzconfig.cgi
  § 5.3.4 PTZ configuration
  The following PTZ parameters are supported:

Command	Description
home=yes	Save the default position
setserverpresetno=<no>	Save a preset position, 0 – default position
removeserverpresetno=<no>	Remove a preset position, 0 – default position

- http://host:port/axis-cgi/videocontrol.cgi
  § 5.9 AXIS 292 Network Video Decoder in specification version 2
  Herewith the switching of the cameras to the channel was implemented. The following parameters are supported: “action=goto” and “sourcename=<no>” (with <no> is the camera number)

Show camera on viewer

http://<host>:<port>/axis-cgi/videocontrol.cgi?action=goto&sourcename=<camera number>

Database display starting at time t

http://<host>:<port>/axis-cgi/com/ptz.cgi?auxiliary=ViewerPlayFromTime(0,<channel>,<play mode>,"2010/12/08 14:19:43,720 GMT+01:00")

http://<host>:<port>/axis-cgi/com/ptz.cgi?auxiliary=ViewerSetPlayMode(0,<play mode>,<play speed>)

Play mode	Value
play stop	1
play forward	2
play backward	3
fast forward	4
fast backward	5
step forward	6
step backward	7
play BOD	8
play EOD	9
live	11
next event	12
prev event	13
peek live picture	14

Supported viewer actions that can be sent via URL

- ViewerConnectLive()
- ViewerConnect()
- ViewerClear()
- VCShowViewerText()
- ViewerJumpByTime()
- ViewerPlayFromTime()
- ViewerSetPlayMode()
- ViewerClearTextOutput()
- ViewerTextOutput()

Switch resolution

http://<host>:<port>/mjpg/video.mjpg?width=720&height=576

Parameter	Value range
width	32-2048
height	23-2048
quality	0-100 (JPEG compression quality)