

User manual

(Multi Onvif Server)

Declaration

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www.happytimesoft.com

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Chapter 1 Files Description

Windows version contains the following files:

File name	Description
config.xml	The onvif server configuration file
happytime-rtsp-server	Happytime rtsp server. It can stream several kinds of media file
MultiOnvifServer.exe	Muli onvif server executable file
runme.bat	A batch file, run rtspserver and onvif server
snapshot.jpg	The default snapshot file, for onvif snapshot interface
User manual.pdf	This manual
libeay32.dll	Openssl dynamic library
ssleay32.dll	Openssl dynamic library
ssl.ca	Openssl connection certificate
ssl.key	Openssl connection private key

Linux version contains the following files:

File name	Description
config.xml	The onvif server configuration file
happytime-rtsp-server	Happytime rtsp server. It can stream several kinds of media file
multionvifserver	Muli onvif server executable file
runme.sh	A script file, run rtspserver and onvif server
snapshot.jpg	The default snapshot file, for onvif snapshot interface
User manual.pdf	This manual
ssl.ca	Openssl connection certificate
ssl.key	Openssl connection private key

Chapter 2 Configuration

2.1 Configuration Templates

```
<?xml version="1.0" encoding="utf-8"?>
<config>
  <device>
    <server_ip></server_ip>
    <server_port>10000</server_port>
    <need_auth>0</need_auth>
    <https_enable>0</https_enable>
    <log_enable>1</log_enable>
    <information>
      <Manufacturer>Happytimesoft</Manufacturer>
      <Model>IP Camera</Model>
      <FirmwareVersion>2.4</FirmwareVersion>
      <SerialNumber>123456</SerialNumber>
      <HardwareId>1.0</HardwareId>
    </information>
    <user>
      <username>admin</username>
      <password>admin</password>
      <userlevel>Administrator</userlevel>
    </user>
    <user>
      <username>test</username>
      <password>123456</password>
      <userlevel>User</userlevel>
    </user>
    <profile>
      <video_source>
        <width>1280</width>
        <height>720</height>
      </video_source>
      <video_encoder>
        <width>1280</width>
        <height>720</height>
        <quality>4</quality>
      </video_encoder>
    </profile>
  </device>
</config>
```

```
<session_timeout>10</session_timeout>
<framerate>25</framerate>
<encoding_interval>50</encoding_interval>
<bitrate_limit>2048</bitrate_limit>
<encoding>H264</encoding>
<h264>
  <gov_length>50</gov_length>
  <h264_profile>Main</h264_profile>
</h264>
</video_encoder>
<audio_source></audio_source>
<audio_encoder>
  <session_timeout>10</session_timeout>
  <sample_rate>8</sample_rate>
  <bitrate>64</bitrate>
  <encoding>G711</encoding>
</audio_encoder>
<stream_uri></stream_uri>
</profile>
<profile>
  <video_source>
    <width>1280</width>
    <height>720</height>
  </video_source>
  <video_encoder>
    <width>640</width>
    <height>480</height>
    <quality>4</quality>
    <session_timeout>10</session_timeout>
    <framerate>25</framerate>
    <encoding_interval>50</encoding_interval>
    <bitrate_limit>2048</bitrate_limit>
    <encoding>H264</encoding>
    <h264>
      <gov_length>50</gov_length>
      <h264_profile>Main</h264_profile>
    </h264>
  </video_encoder>
```

```
<audio_source></audio_source>
<audio_encoder>
  <session_timeout>10</session_timeout>
  <sample_rate>8</sample_rate>
  <bitrate>64</bitrate>
  <encoding>G711</encoding>
</audio_encoder>
<stream_uri></stream_uri>
</profile>
<scope>onvif://www.onvif.org/Profile/Streaming</scope>
<scope>onvif://www.onvif.org/Profile/G</scope>
<scope>onvif://www.onvif.org/location/country/china</scope>
<scope>onvif://www.onvif.org/type/video_encoder</scope>
<scope>onvif://www.onvif.org/name/IP-Camera</scope>
<scope>onvif://www.onvif.org/hardware/HI3518C</scope>
<event>
  <renew_interval>60</renew_interval>
  <simulate_enable>1</simulate_enable>
  <simulate_interval>10</simulate_interval>
</event>
</device>
<device>
  <server_ip></server_ip>
  <server_port>10001</server_port>
  <need_auth>0</need_auth>
  <log_enable>1</log_enable>
  <information>
    <Manufacturer>Happytimesoft</Manufacturer>
    <Model>IP Camera</Model>
    <FirmwareVersion>2.4</FirmwareVersion>
    <SerialNumber>123456</SerialNumber>
    <HardwareId>1.0</HardwareId>
  </information>
  <user>
    <username>admin</username>
    <password>admin</password>
    <userlevel>Administrator</userlevel>
  </user>
```

```
<user>
  <username>test</username>
  <password>123456</password>
  <userlevel>User</userlevel>
</user>
<profile>
  <video_source>
    <width>1280</width>
    <height>720</height>
  </video_source>
  <video_encoder>
    <width>1280</width>
    <height>720</height>
    <quality>4</quality>
    <session_timeout>10</session_timeout>
    <framerate>25</framerate>
    <encoding_interval>50</encoding_interval>
    <bitrate_limit>2048</bitrate_limit>
    <encoding>H264</encoding>
    <h264>
      <gov_length>50</gov_length>
      <h264_profile>Main</h264_profile>
    </h264>
  </video_encoder>
  <audio_source></audio_source>
  <audio_encoder>
    <session_timeout>10</session_timeout>
    <sample_rate>8</sample_rate>
    <bitrate>64</bitrate>
    <encoding>G711</encoding>
  </audio_encoder>
  <stream_uri></stream_uri>
</profile>
<profile>
  <video_source>
    <width>1280</width>
    <height>720</height>
  </video_source>
```

```
<video_encoder>
  <width>640</width>
  <height>480</height>
  <quality>4</quality>
  <session_timeout>10</session_timeout>
  <framerate>25</framerate>
  <encoding_interval>50</encoding_interval>
  <bitrate_limit>2048</bitrate_limit>
  <encoding>H264</encoding>
  <h264>
    <gov_length>50</gov_length>
    <h264_profile>Main</h264_profile>
  </h264>
</video_encoder>
<audio_source></audio_source>
<audio_encoder>
  <session_timeout>10</session_timeout>
  <sample_rate>8</sample_rate>
  <bitrate>64</bitrate>
  <encoding>G711</encoding>
</audio_encoder>
<stream_uri></stream_uri>
</profile>
<scope>onvif://www.onvif.org/Profile/Streaming</scope>
<scope>onvif://www.onvif.org/Profile/G</scope>
<scope>onvif://www.onvif.org/location/country/china</scope>
<scope>onvif://www.onvif.org/type/video_encoder</scope>
<scope>onvif://www.onvif.org/name/IP-Camera</scope>
<scope>onvif://www.onvif.org/hardware/HI3518C</scope>
<event>
  <renew_interval>60</renew_interval>
  <simulate_enable>1</simulate_enable>
  <simulate_interval>10</simulate_interval>
</event>
</device>
<device>
  <server_ip></server_ip>
  <server_port>10002</server_port>
```

```
<need_auth>0</need_auth>
<https_enable>0</https_enable>
<log_enable>1</log_enable>
<information>
  <Manufacturer>Happytimesoft</Manufacturer>
  <Model>IP Camera</Model>
  <FirmwareVersion>2.4</FirmwareVersion>
  <SerialNumber>123456</SerialNumber>
  <HardwareId>1.0</HardwareId>
</information>
<user>
  <username>admin</username>
  <password>admin</password>
  <userlevel>Administrator</userlevel>
</user>
<user>
  <username>test</username>
  <password>123456</password>
  <userlevel>User</userlevel>
</user>
<profile>
  <video_source>
    <width>1280</width>
    <height>720</height>
  </video_source>
  <video_encoder>
    <width>1280</width>
    <height>720</height>
    <quality>4</quality>
    <session_timeout>10</session_timeout>
    <framerate>25</framerate>
    <encoding_interval>50</encoding_interval>
    <bitrate_limit>2048</bitrate_limit>
    <encoding>H264</encoding>
    <h264>
      <gov_length>50</gov_length>
      <h264_profile>Main</h264_profile>
    </h264>
  </video_encoder>
</profile>
```

```
</video_encoder>
<audio_source></audio_source>
<audio_encoder>
  <session_timeout>10</session_timeout>
  <sample_rate>8</sample_rate>
  <bitrate>64</bitrate>
  <encoding>G711</encoding>
</audio_encoder>
<stream_uri></stream_uri>
</profile>
<profile>
  <video_source>
    <width>1280</width>
    <height>720</height>
  </video_source>
  <video_encoder>
    <width>640</width>
    <height>480</height>
    <quality>4</quality>
    <session_timeout>10</session_timeout>
    <framerate>25</framerate>
    <encoding_interval>50</encoding_interval>
    <bitrate_limit>2048</bitrate_limit>
    <encoding>H264</encoding>
    <h264>
      <gov_length>50</gov_length>
      <h264_profile>Main</h264_profile>
    </h264>
  </video_encoder>
  <audio_source></audio_source>
  <audio_encoder>
    <session_timeout>10</session_timeout>
    <sample_rate>8</sample_rate>
    <bitrate>64</bitrate>
    <encoding>G711</encoding>
  </audio_encoder>
  <stream_uri></stream_uri>
</profile>
```

```
<scope>onvif://www.onvif.org/Profile/Streaming</scope>
<scope>onvif://www.onvif.org/Profile/G</scope>
<scope>onvif://www.onvif.org/location/country/china</scope>
<scope>onvif://www.onvif.org/type/video_encoder</scope>
<scope>onvif://www.onvif.org/name/IP-Camera</scope>
<scope>onvif://www.onvif.org/hardware/HI3518C</scope>
<event>
  <renew_interval>60</renew_interval>
  <simulate_enable>1</simulate_enable>
  <simulate_interval>10</simulate_interval>
</event>
</device>
</config>
```

2.2 Configuring Node Description

<device> : onvif device, each node represents a onvif device

Note : The demo version maximum support two devices, the release version without limits.

<server_ip>

Specify the IP address onvif server bindings, if not specified, the onvif server will bind to the default routing interface IP address.

<server_port>

Specify the port onvif server binding, providing web service service on this port, the default is 8000.

<https_enable>

Indicates whether enable https connection, 0 is disable, 1 enable

<need_auth>

Indicates whether authentication is required, 0 don't require, 1 require.

<log_enable>

Indicates whether logging is enabled, 0 is not enabled, 1 enable.

<information> : Config the ONVIF device basic information

<Manufacturer>

The manufacturer of the device

<Model>

The device model

<FirmwareVersion>

The firmware version in the device

<SerialNumber>

The serial number of the device

<HardwareId>

The hardware ID of the device

<user> : Contains a list of the onvif users, it can configure multiple nodes

<username>

Username string

<password>

Password string

<userlevel>

User level string, The following values can be configured:

Administrator

Operator

User

Anonymous

<profile> : A media profile maps a video and/or audio source to a video and/or an audio encoder, configurations.

<video_source> : If the media profile contains a video, the video source configuration

<width>

The video source width

<height>

The video source height

<video_encoder>: If the media profile contains a video, the video encoder configuration

<width>

Encoded video width

<height>

Encoded video height

<quality>

Relative value for the video quantizers and the quality of the video. A high value within supported quality range means higher quality

<session_timeout>

The rtsp session timeout for the related video stream

<framerate>

Maximum output framerate in fps

<encoding_interval>

Interval at which images are encoded and transmitted. (A value of 1 means that every frame is encoded, a value of 2 means that every 2nd frame is encoded ...)

<bitrate_limit>

The maximum output bitrate in kbps

<encoding>

Used video codec, either JPEG, MPEG4, H264 or H265

<h264>: Configure H.264 related parameters

<gov_length>

Group of Video frames length. Determines typically the interval in which the I-Frames will be coded. An entry of 1 indicates I-Frames are continuously generated. An entry of 2 indicates that every 2nd image is an I-Frame, and 3 only every 3rd frame, etc. The frames in between are coded as P or B Frames

<h264_profile>

The H.264 profile, either Baseline, Main, Extended or High

<h265>: Configure H.265 related parameters

<gov_length>

Group of Video frames length. Determines typically the interval in which the I-Frames will be coded. An entry of 1 indicates I-Frames are continuously generated. An entry of 2 indicates that every 2nd image is an I-Frame, and 3 only every 3rd frame, etc. The frames in between are coded as P or B Frames

<h265_profile>

The H.265 profile, either Main or Main10

<mpeg4>: Configure MPEG4 related parameters

<gov_length>

Determines the interval in which the I-Frames will be coded. An entry of 1 indicates I-Frames are continuously generated. An entry of 2 indicates that every 2nd image is an I-Frame, and 3 only every 3rd frame, etc. The frames in between are coded as P or B Frames

<mpeg4_profile>

The Mpeg4 profile, either simple profile (SP) or advanced simple profile (ASP)

<audio_source> : If the media profile contains a audio, the audio source configuration

<audio_encoder>:If the media profile contains a audio, the audio encoder configuration

<session_timeout>

The rtsp session timeout for the related audio stream

<sample_rate>

The output sample rate in kHz

<bitrate>

The output bitrate in kbps

<encoding>

Audio codec used for encoding the audio input (either G711, G726 or AAC)

<stream_uri>

The profile RTSP stream address, if not specify, it default to **rtsp://yourip//test.264**

<scope>

Contains a list of URI defining the device scopes

<event> : Event Configuration parameters

<renew_interval>

Event renew interval

<simulate_enable>

Specifies whether to generate simulation event

<simulate_interval>

Simulation event production interval in seconds

Chapter 3 Run Multi Onvif Server

Windows platform:

Run runme.bat, it will run rtspserver as RTSP server and multi onvif server

Linux platform:

Run runme.sh, it will run rtspserver as RTSP server and multi onvif server

Chapter 4 Compatibility test

1. Multi ONVIF SERVER PROFILE S passed the compatibility test version

Windows version download from:

<http://www.happytimesoft.com/downloads/happytime-multi-onvif-server-profiles.zip>

Linux version download from:

<http://www.happytimesoft.com/downloads/happytime-multi-onvif-server-profiles.tar.gz>

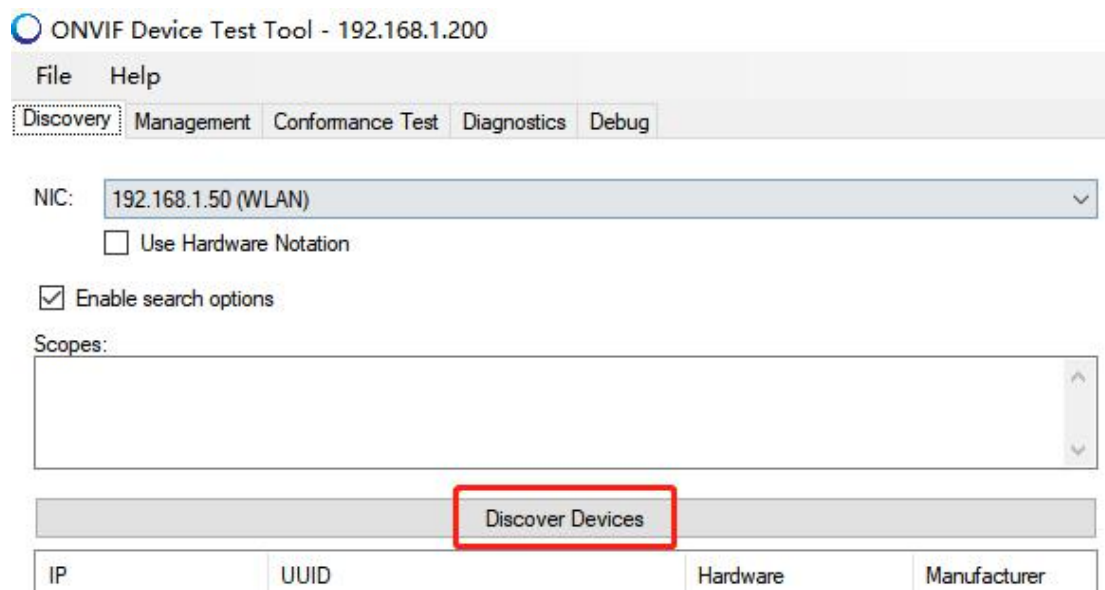
1. Modify the Multi ONVIF SERVER configuration file config.xml and specify the <need_auth> value as 1.

2. Run the rtsp server and multi onvif server.

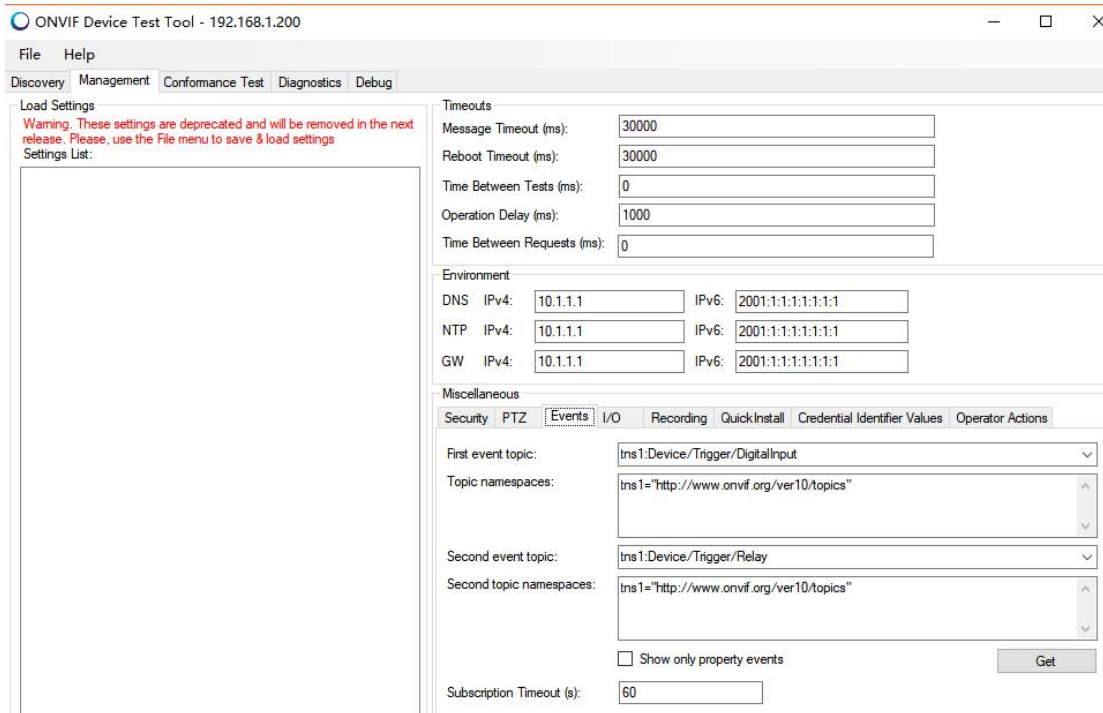
3. Run the ONVIF Device Test Tool V18.06.

Note: Multi ONVIF SERVER and test tools should run on different computers

4. Click “Discover Devices” button, as the following:



5. Switch to “Management” tab, select “Events” tab at “miscellaneous”, then click “Get” button, as the following:



6. Switch to “Conformance Test” tab, click “Start Conformance Test” button:

