VNDP VIVOTEK Network Development Platform

Websocket server of VAST

Version 1.0.0.5

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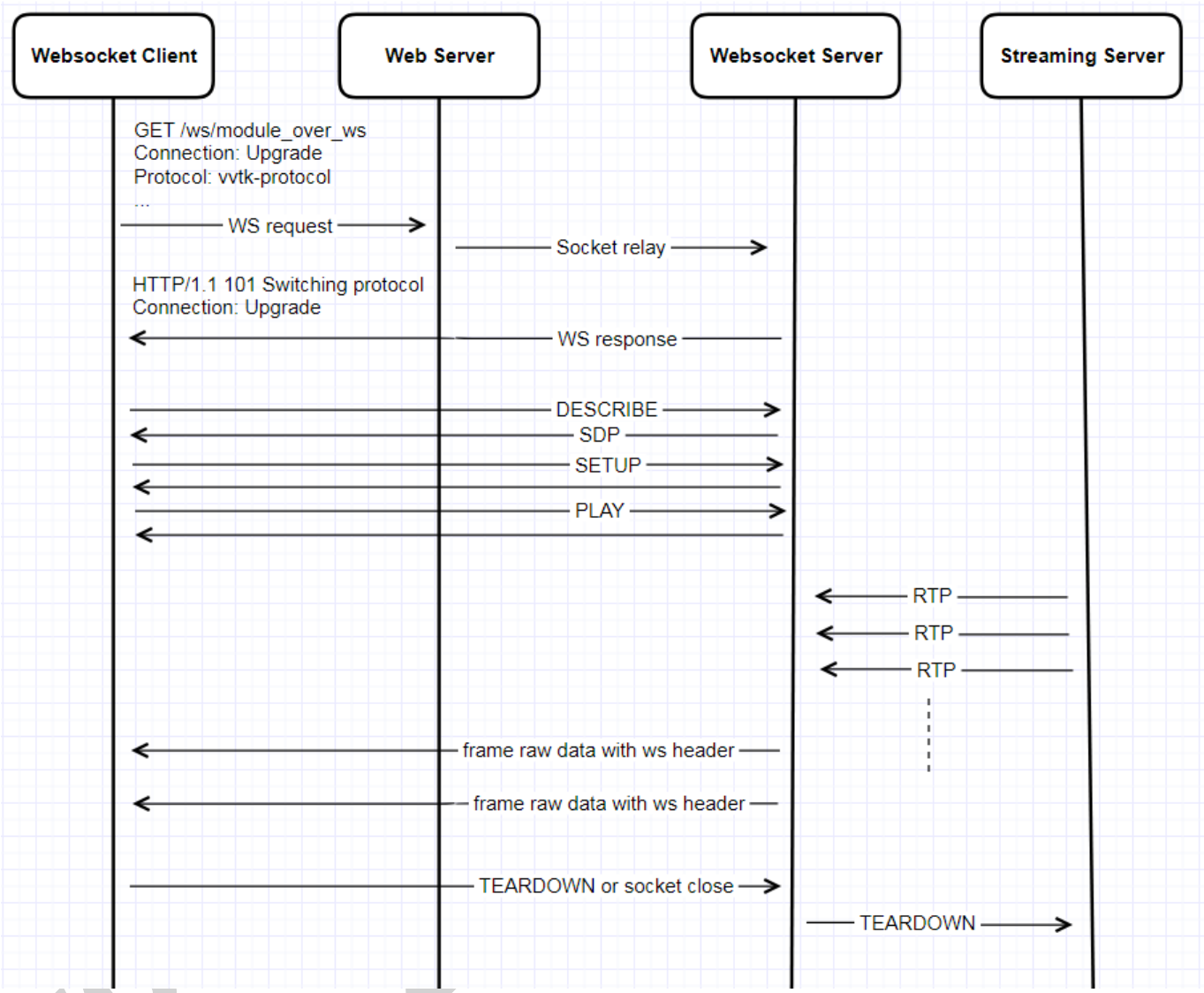
1. Overview

Websocket server can relay streaming from streaming server and doesn't need to create another port to listen connection. Websocket client just needs to send a GET message to http port (VAST default http port is 3454). To specify VIVOTEK format, the GET message must contain "/ws/module_over_ws" and "Protocol: vvtk-protocol".

When sending WS request via GET methd, it needs to carry authentication information which is your username and password for the VAST server. After authentication is accomplished, you should send a user-specified RTSP URL on DESCRIBE message to Websocket server. After RTSP handshake completed, client will receive the frame raw data.

2. Architecture Diagram



3. RTSP URL format

As metioned previously, user should send a user-specified URL on DESCRIBE message to Websocket server after authentication is accomplished. The RTSP URL format is the same as VAST server.

The URL format is

ws://VAST_Account:VAST_Password@VAST_Server_IP:VAST_Server_HTTP_Port/Media/Live/Normal?camera=C_x&streamindex=x.

And here are examples about the format of live and playback.

Live URL is **ws://username:password@172.18.110.88:3454/Media/Live/Normal?camera=C_1&streamindex=1**, where C_1 means connection 1, streamingindex = 1 means streaming index is 1.

Playback URL is **ws://username:password@172.18.110.88:3454/Media/Database/Normal?HNAME=C_1&STIME=20190507_100000_000**, where HNAME=C_1 means connection1, STIME=xxx means playback start time(default use UTC time). User can add parameter "&LOCTIME=1" after URL to use local time for streaming. Here is the request URL: **ws://username:password@172.18.110.88:3454/Media/Database/Normal?HNAME=C_1&STIME=20190507_180000_000 &LOCTIME=1**.

4. Sample

The sample web page in “dist” folder shows how to test Websocket Server.

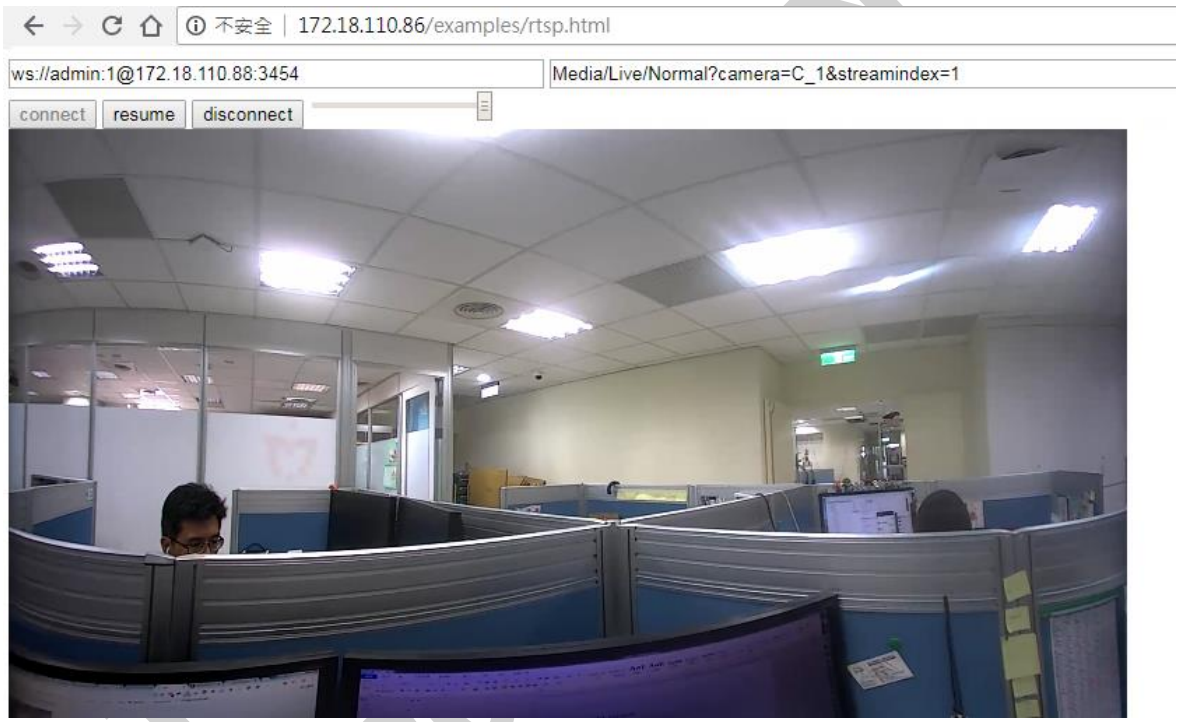
You have to do the following steps to run the sample application.

Step1: Install a web server like Nginx.

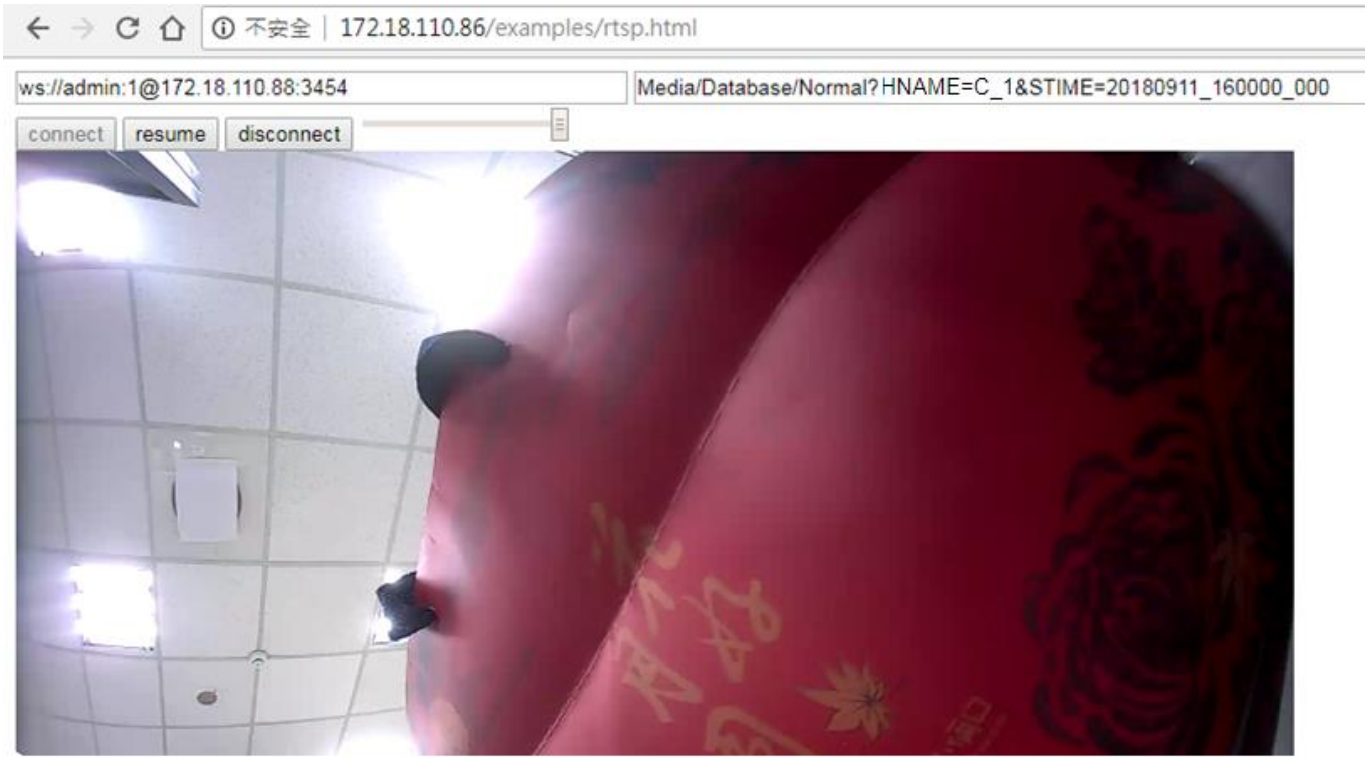
Step2. Copy all files under “dist” folder to /www folder

Step3. Open Chrome and type the address as following snapshot shows.

Live:



Playback:



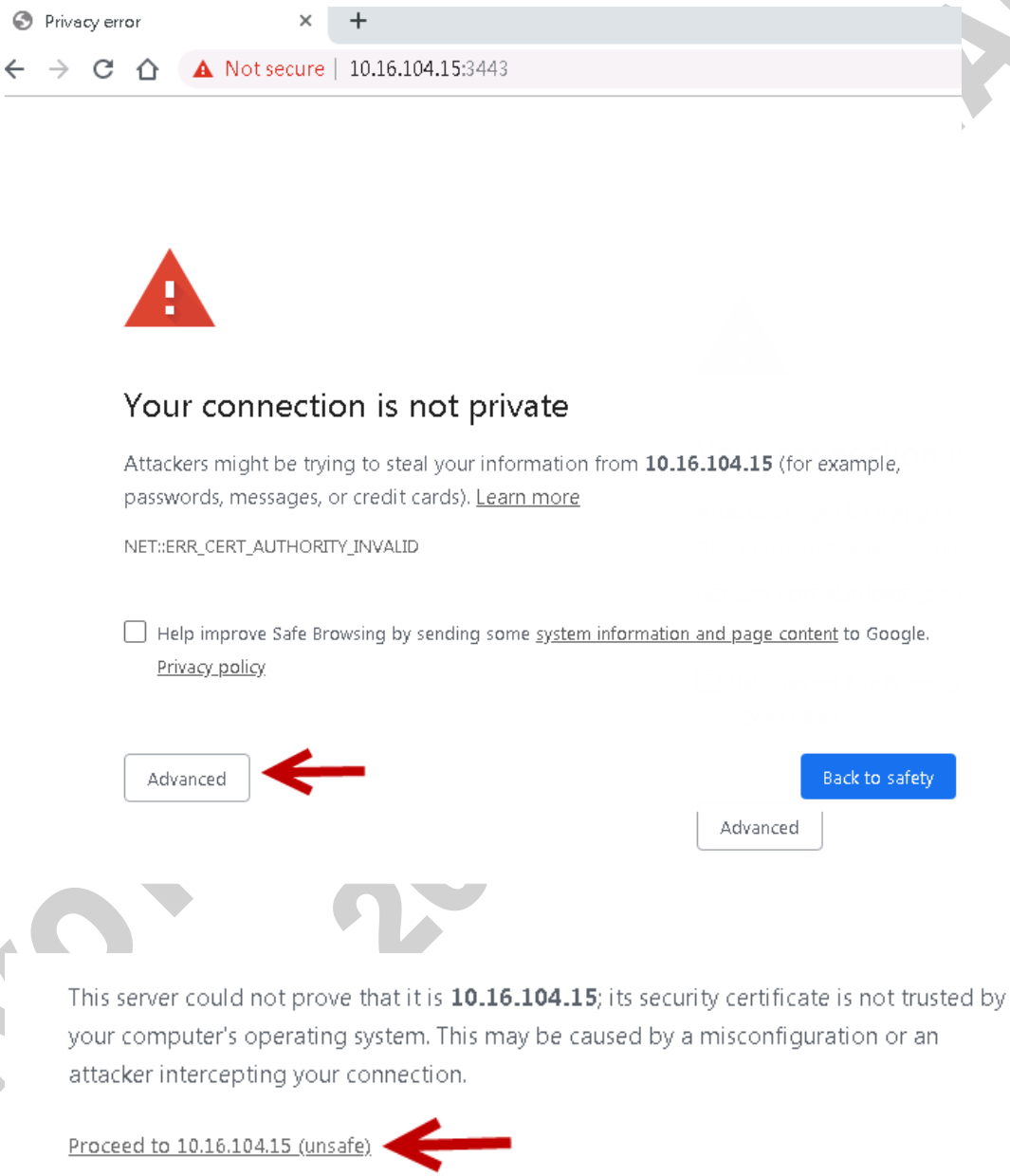
More Information about web page sample please refer to websocket_api.mht.

5. wss connection

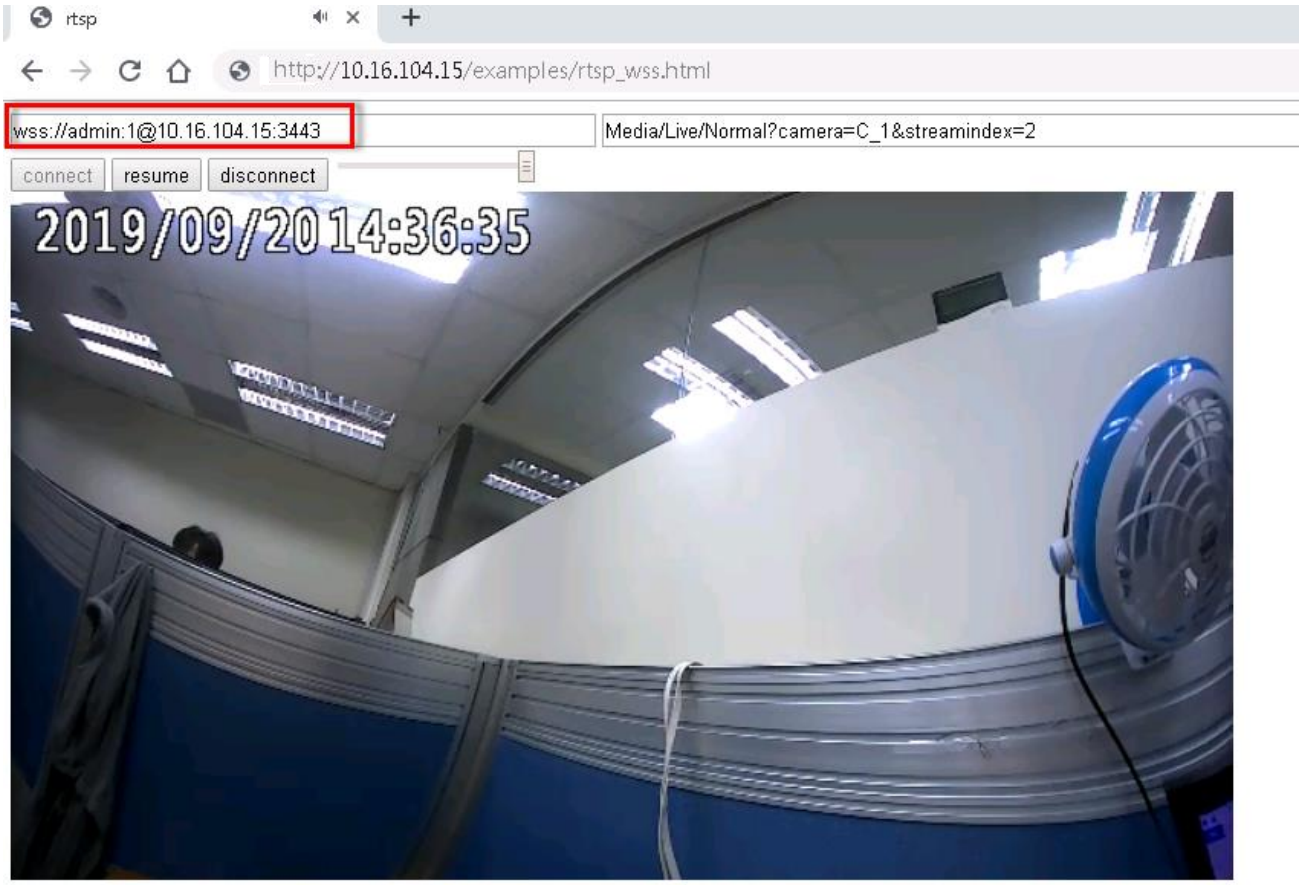
Websocket server supports ws and wss connection and the wss default port is 3443.

The following steps will show you how to connect to websocket server via wss.

1. Visit VAST HTTPS server with browser and accept self-signed SSL certificate.



2. Visit websocket sample webpage and use the protocol wss, port 3443.



6. Restrictions

Websocket server supports all camera supported codecs, but our SDK is base on Media Source Extension so it only supports MP4 ,H264, G711 and G726 due to browser restrctions. Please reference the MDN document for more details.
https://developer.mozilla.org/en-US/docs/Web/API/Media_Source_Extensions_API#The_MSE_standard