ClareVision API Product Bulletin

Content

Introduction

The ClareVision NVRs and IP cameras are highly advanced surveillance components that have been tested for use with third-party control systems. The ClareVision NVRs supply URLs for each camera and stream. Cameras support six simultaneous connections. The connections can be made via a web browser, NVR, mobile app, or a control system. Cameras only support one HTTP connection over MJPEG.

NVR integration

Use RTSP or HTTP when integrating an NVR with a third-party control system. All NVRs support RTSP and HTTP for mobile devices (iPhones, iPads, Android phones, etc.) via the ClareVision iOS or Android App.

You can establish up to 128 connections with each NVR.

Notes

- In order to stream over HTTP, the sub stream video encoding must be configured to MJPEG.

- Cameras that are directly connected to the NVR are accessible through the NVR's IP address only.

NVR setup

When setting up a ClareVision NVR, reassign the static IP address to fit the network. Use the Startup Wizard that starts automatically when you install the NVR. After using the Startup Wizard, enable the virtual host on the NVR.

To enable virtual host on the NVR:

1. Log into the NVR.

2. Click the **Configuration** tab and browse to Advanced.

   Remote Configuration > **Network Settings** > **Advanced**

3. Select the Enable Virtual Host checkbox.
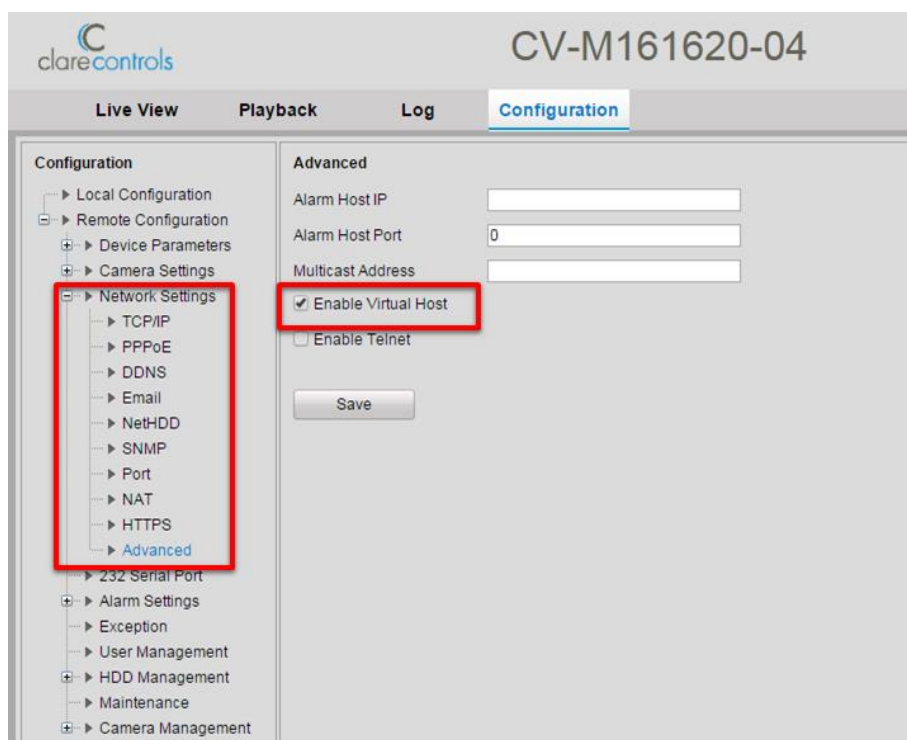
4. Click **Save**.

For more information, refer to the *ClareVision Network Video Recorder Installation Guide* that came with the NVR.
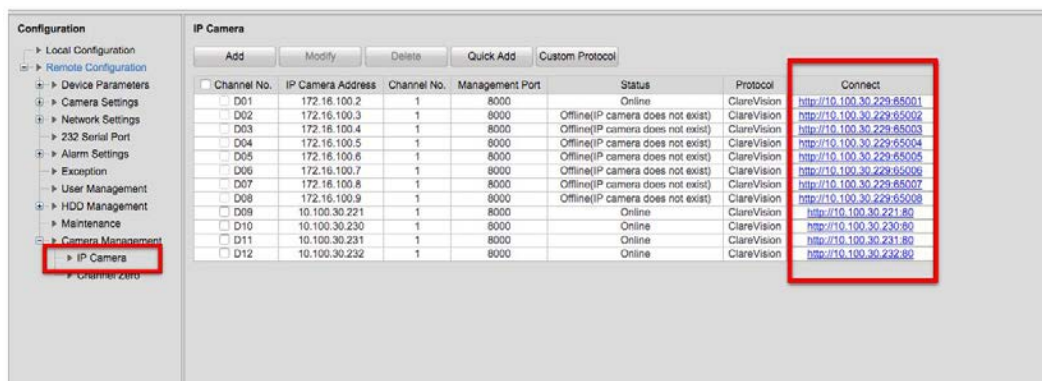
Note: Mobile devices and control systems should use the sub stream and they must have access to the subnet on which the NVR is installed.

Syntax string format

To find the IP address of a camera channel on the NVR:

1. Log into the NVR.

2. Click the **Configuration** tab and browse to IP Camera.

   Remote Configuration > **Camera Management** > **IP Camera**

Note: The camera IP address through the NVR and the port number are combined in the correct format in the Connect column. Use this number to test the connection.

3. Look in the IP Camera Address column and note the desired channel's address.

RTSP URL format:

rtsp://[*username*:*password*]@[*ip-address*:*port#*]/Streaming/Channels/[*Channel#*]

Examples

\# Display channel 4 main stream
rtsp://mysignon:mypassword@10.100.30.229:8554/Streamaing/Channels/401

\# Display channel 4 sub stream
rtsp://mysignon:mypassword@10.100.30.229:8554/Streaming/Channels/402

\# Display channel 11 main stream
rtsp://mysignon:mypassword@10.100.30.229:8554/Streaming/Channels/1101

\# Display channel 11 sub stream
rtsp://mysignon:mypassword@10.100.30.229:8554/Streaming/Channels/1102

HTTP URL format:

http://[*username:password*]@[*ipaddress*]:[*port*]/Streaming/channels/[*channel#*]/httpPreview

Example

http://clareadmin:secure7@10.0.1.229:65001/Streaming/channels/1/httpPreview

Testing RTSP and HTTP

You can test your RTSP and HTTP streams to ensure your cameras are working properly using the Firefox web browser or the VLC media player. VLC is a free and open source cross-platform multimedia player and framework. You can download it at www.videolan.org.

To test RTSP or HTTP:

1. Open VLC Media Player > Media > Open Network Streams.

    – or –

    Open the Firefox browser.

2. Enter either the RTSP or HTTP format string with your username, password, and IP address.

    rtsp://[username:password]@[ip-address:port#]/Streaming/Channels/[Channel#]

    – or –

    http://[username:password@[ipaddress]:[port]/Streaming/channels/[channel#]/http Preview

3. If using the VLC Player, click **Open**.

    – or –

    If using the Firefox browser, click **Enter**.

Video from the camera should display in the media player window. If not, verify that you entered the correct syntax, username, password, and IP address, and then try again.

Note: High frame rates may adversely affect the media player's ability to display video. If necessary, adjust the camera to a lower frame rate when testing.

Playback URL

URL format

rtsp://[*username*:*password*]@[*ip-address*:*port#*]/Streaming/tracks/[*track-id*] (?*parm1=value1*&*parm2=value2…*)

Where:

*   *ip-address* is the IP of the camera, speed dome, or other device
*   *port* is the RTSP port

Example

rtsp://mysignon:mypassword@10.100.30.229:8554/Streaming/tracks/101?starttime=20140214t063812z&endtime=20120802t064816z

Playback the recording files of the first channel from the start time to the end time. The format should meet the requirement of ISO 8601, which is YYYMMDD"T"HHmmSS.fraction"Z". The "Y" represents the year; "M", month; "D", day. The "T" is a separator between the date and time. The "H" represents the hour; "M", minutes, and "S", seconds. The "Z" is optional and represents Zulu (GMT).

Camera integration

ClareVision cameras supply two types of configurable streams, main stream and sub stream. Each camera can support up to six RTSP streams, or up to five RTSP streams and one HTTP stream simultaneously. The following lists the setup and format used when configuring the ClareVision cameras in third-party projects.

Camera setup

When setting up a ClareVision camera, assign it a static IP address. To set the IP address, log into the camera, or use the SADP software tool. The SADP software tool is free and available for download at clarecontrols.com. The SADP software tool requires Windows XP SP1, or later. For more information about setting the IP address, refer to the *Network Camera Installation Guide* that came with your ClareVision camera.

Mobile devices and control systems should use the sub stream and they must have access to the subnet on which the cameras are installed.

Syntax string format

URL format

rtsp://*username*:*password*@[*ip-address*]:[*port#*]/Streaming /Channels/[*stream#*]

Example

\# Display the main stream
rtsp://mysignon:mypassword@192.168.1.250:554/Streaming/Channels/1

\# Display the sub stream
rtsp://mysignon:mypassword@192.168.1.250:554/Streaming/Channels/2

HTTP format

http://*username*:*password*@[*ip-address*]
/Streaming/Channels/[*stream#*]/httpPreview

Example

http://mysignon:mypassword@192.168.1.250
/Streaming/Channels/102/httpPreview

RTSP protocols

Authentication

Use basic authentication over RTSP. For more information, see
http://thompsonng.blogspot.com/2011/01/rtsp-basic-authentication.html

Transmission protocols

ClareVision IP cameras and NVRs support the following protocols.

- RTP over UDP

- Multicast RTP

- RTP over TCP

- Tunneled RTSP over HTTP

Contact information

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