exacqVision

RTSP Server Guide

Overview

This guide describes how to install and configure the exacq Technologies RTSP (Real Time Streaming Protocol) Server. You can connect an RTSP Server to one or more exacqVision servers and provide an RTSP stream for connected cameras.

Most third party analytics applications can utilize the RTSP streams to increase the capabilities of your video security.

Supported Platforms

The following platforms support the Exacq RTSP Server:

- Windows 8 or newer, 64-bit only.

- Ubuntu 14.04 Linux or newer, 32 or 64-bit.

Installing the RTSP Server

If you want to install the RTSP Server on a Windows operating system, see **Installation using Windows**. If you want to install the RTSP Server on a Linux operating system, see **Installation using Linux**.

Requirements

To use the RTSP Server, you need the following hardware and software requirements:

- A licensed and operating exacqVision (VMS) Server.

  Note: Download the Exacq RTSP server for Windows and Linux from the Integration Plugins section on the Exacq website at: https://www.exacq.com/support/downloads.php.

- The IP address of the exacqVision server.

- The hostname of the exacqVision server.

- The logon credentials for the server.

Installing using Windows

To install the RTSP Server using Windows, choose from one of the following two options:

- Installation using the executable file using Windows.

- Installation using Command Prompt using Windows.

Installing with the executable file using Windows

To install the RTSP Server using Windows, complete the following steps:

  Note: You need administrator permissions to install this file.

1. Select the .exe executable file, and press Enter.

2. Click **Run**.

3. In the **exacqVision RTSP Server** window, click **Next**.

4. Select the **Destination Folder** where you want to install the RTSP Server, and click **Install**.

5. Click **Finish**.

Installing with Command Prompt using Windows

To install RTSP Server on Windows using the command prompt, complete the following steps:

1. Click on the **Start** icon, and type `command prompt` into the **Search** field.

2. Select **Command Prompt**.

3. Type the name of the downloaded installer into the Command Prompt window.

4. Press Enter.

Installing using Linux

To install the RTSP Server using Linux, choose from one of the following two options:

- **Installation using the Ubuntu package on Linux**

- **Installation using Terminal on Linux**

Installing with the Ubuntu package using Linux

To install the RTSP Server using Linux, complete one of the following steps:

1. Double click on the .deb Ubuntu package icon.

2. Follow the steps in the Linux exacqVision RTSP Server installation wizard.

   Note: You need administrator permissions to install this file.

Installing with Terminal using Linux

To install the RTSP Server using Windows using the command prompt, complete the following steps:

1. Go to Dash and search for `terminal.` You can also use the shortcut Ctrl+Alt+T.

2. Navigate to the directory with the .deb file.

3. Type `sudo dpkg -i filename` into the terminal.

4. Press Enter.

Configuring the RTSP Server

To provide RTSP streams, you must configure the RTSP Server with the necessary credentials and servers.

> **Note:** The RTSP Server does not have an access control capability, so do not host it on a machine directly connected to the Internet. Connect the RTSP Server to a local network with access protection such as a firewall.

To configure the RTSP Server, locate the configuration file using one of the following locations:

- **Windows:** %ProgramFiles%\exacqVision\rtsp-server\rtsp-server.conf

- **Linux**: /usr/local/exacq/rtsp-server/rtsp-server.conf

Editing the configuration file using Windows

To configure the RTSP Server using Windows, choose from one of the following two options:

- Editing the configuration file using the cfgedit tool using Windows

- Editing the configuration file using a text editor using Windows

Editing the configuration file with the cfgedit tool using Windows

To configure the RTSP Server using Windows, complete the following steps:

1. Navigate to `Program Files\exacqVision\rtsp-server.`

2. Select the **cfgedit.exe** file, and press Enter.

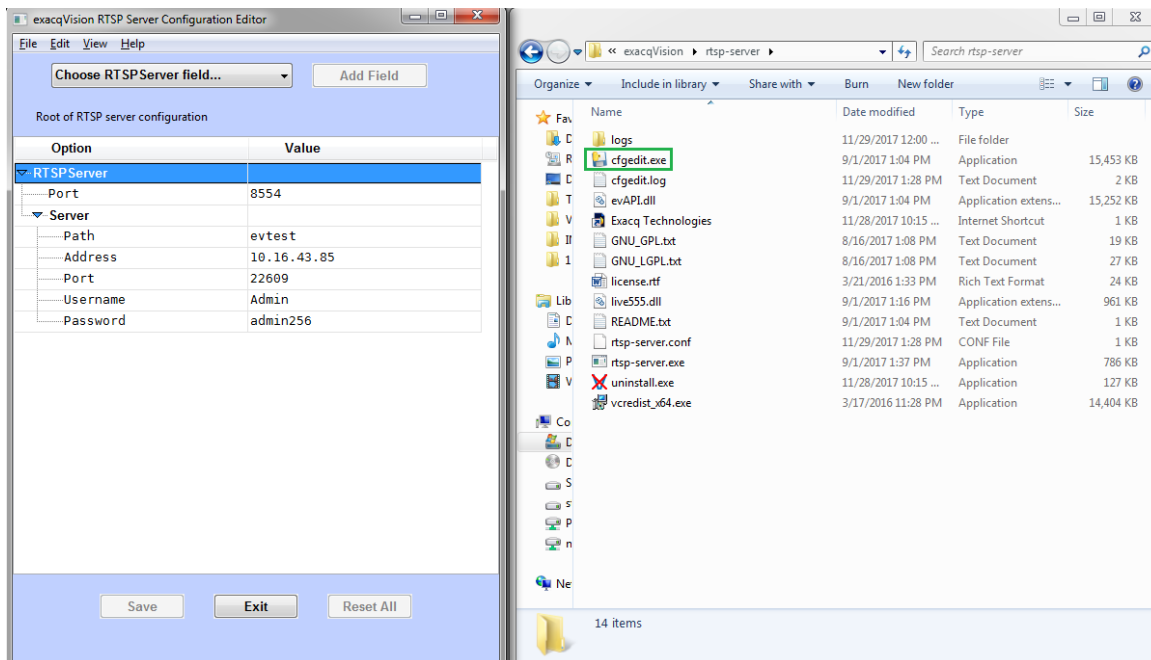3. Right click the **Value** field to open up the available options for editing.

Figure 1. exacqVision RTSP Server Configuration Editor window, and the location of the cfgedit.exe file on Windows.

Editing the configuration file with a text editor using Windows

The configuration file uses an XML format. To configure the RTSP Server using a text editor, complete the following steps:

1. Right click **rtsp-server.conf**, and open it using a text editor.

2. In the text editor, edit the configuration file.

Editing the configuration file using Linux

To configure the RTSP Server using Linux, choose from one of the following two options:

- **Editing the configuration file using the cfgedit tool using Linux**

- **Editing the configuration file using a text editor using Linux**

Editing the configuration file with the cfgedit tool using Linux

To configure the RTSP Server using Linux, complete the following steps:

1. Run `/usr/local/exacq/rtsp-seerver/cfgedit`.

2. Right click the **Port Value** field to open up the available options for editing.

Editing the configuration file with a text editor using Linux

The configuration file uses an XML format. To configure the RTSP Server using a text editor, complete the following steps:

1. Right click `rtsp-server.conf`, and open it using a text editor.

2. In the text editor, edit the configuration file.

Adding a server using the cfgedit tool

To add a server in the top level of the exacqVision RTSP Server Configuration Editor, complete the following steps:

1. From the **Choose RTSPServer field** dropdown menu, select **Server**.

2. Click **Add Field.**

3. Right click a **Value** field to open up the available options for editing.

4. In the **Path Value** field, enter the short name of the server that the RTSP path uses, and press Enter.

5. In the **Address Value** field, enter the hostname or IP address of the exacqVision VMS server, and press Enter.

6. In the **Username Value** field, enter the username that the RTSP server will use to authenticate to exacqVision VMS server, and press Enter.

7. In the **Password Value** field, enter the password used to authenticate the exacqVision VMS server, and press Enter.

    Note: To save the new server, you must enter details into all the fields provided.

8. **Optional:** Edit the **Port Value** field if the server is on a non-standard port, and is different to the default value of 22609.

    Note: Create a dedicated, non-administration account on your exacqVision VMS server for the RTSP Server to use. The RTSP Server needs to have live and search permissions for the cameras you wish to stream.

    Note: You must restart the server after a configuration change.

Starting and stopping the RTSP Server

To stop, start or restart the RTSP Server, choose from one of the following options:

- **Starting and stopping the RTSP Server using Windows**

- **Stopping and starting the RTSP Server using Command Prompt using** Windows

- **Starting and stopping the RTSP Server using** Linux

Starting and stopping the RTSP Server using Windows

To stop, start or restart the Exacq RTSP Server using the Service Control Manager on Windows, complete the following steps:

1. Open the Services application.

2. Select **exacq RTSP Server**.

3. Choose one of the following options:

   - Click the **Stop** icon in the menu bar to stop the server.

   - Click the **Play** icon in the menu bar to start the server.

   - To restart, click the **Stop** icon to stop, and then click the **Play** icon to start the server.
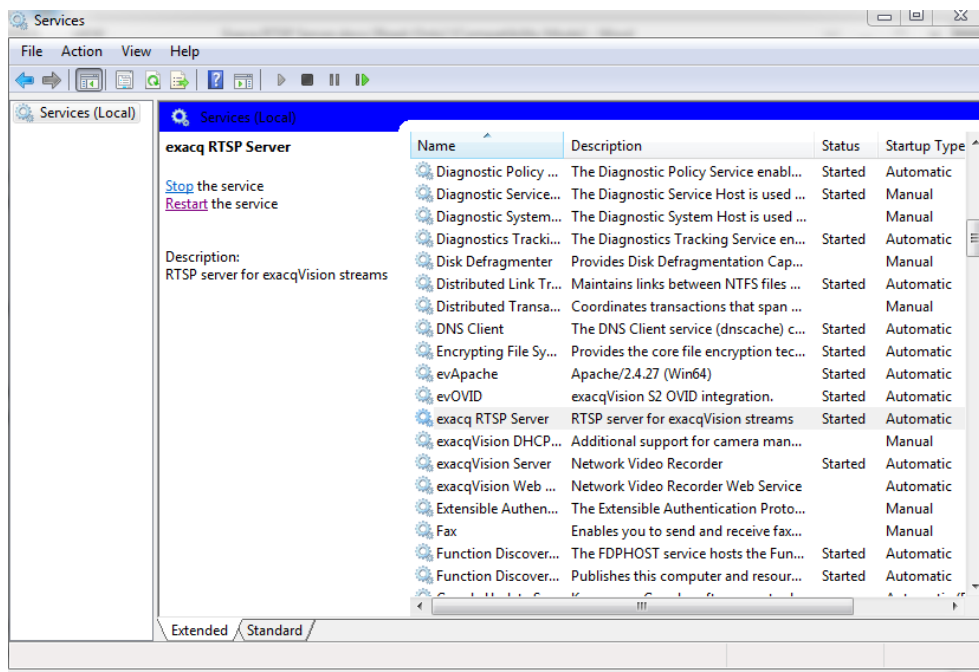

Figure 2. Stopping/starting the RTSP server using Service Control Manager.

Stopping and starting the RTSP Server using Command Prompt using Windows

To stop, start or restart the Exacq RTSP Server using Command Prompt on Windows, choose one of the following steps:

- To stop the server, type `sc stop exacqRTSPServer`.

- To start the server, type `sc start exacqRTSPServer`.

- To restart the server, type `sc stop exacqRTSPServer` to stop, then type `sc start exacqRTSPServer` to start the server.

Figure 3. Starting and stopping the RTSP Server using Command Prompt.

Starting and stopping the RTSP Server using Linux

To stop, start or restart the Exacq RTSP Server using the Systemd Command Line tool on Linux, choose one of the following steps:

- To start the server, type `systemctl start rtsp-server`.

- To stop the server, type `systemctl stop rtsp-server`.

- To restart the server, type `systemctl restart rtsp-server`.

Viewing log files

The RTSP Server stores system log files, and names them using the following format: YYYYMMDD.txt.

Viewing log files using Windows

To view the logs using Windows, open the file with a text editor. The system stores the system log files in the installation folder:

`%ProgramFiles%\exacqVision\rtsp-server\logs`

Viewing log files using Linux

To view the logs using Linux, you can use systemd's log viewer, journalctl. To view the most recent system log files, type the following:

`journalctl -eu rtsp-server`

> **Note:** You can use other tools to view the system log files if your system does not have systemd/journalctl.

Connecting to a stream

To connect to a stream, you can input the RTSP URL of a camera into a third party video application. The following factors determine the RTSP URL for a camera's live RTSP stream:

- The value given in the **Path** field. You can find this in the configuration file of the VMS server hosting the stream.

- The hostname or IP address of the computer running the RTSP server.

- The ID of the camera.

    Note: You can find the base URL and list of available cameras in the log file. To view the logs, see **Viewing log**.

```
Aug 18 00:03:49 machine rtsp-server[1986]: Server: hybrid
Aug 18 00:03:49 machine rtsp-server[1986]: ID=    459264 Name=M3204        Format=H264
Aug 18 00:03:49 machine rtsp-server[1986]: ID=   1114624 Name=IQEye IQ762N   Format=JPEG
Aug 18 00:03:49 machine rtsp-server[1986]: ID=   1180672 Name=Sony SNC-CH140  Format=H264
Aug 18 00:03:49 machine rtsp-server[1986]: ID=   1442304 Name=ACTi KCM5511    Format=H264
Aug 18 00:03:49 machine rtsp-server[1986]: connect URL is
rtsp://10.16.14.13:8554/<server>/<camera id>
```

Figure 4. Example of RTSP log files

Connecting to a stream with a third party video application

To view streams, you can use a third party video application.

To connect to a stream with VideoLAN's VLC Media Player, complete the following steps:

1. Open VLC player.

2. Select the **Media** tab, and select **Open Network Stream**.

3. Type the RTSP URL into the **Please enter a network URL** or **Address** field.

4. Click **Play**.

    Note: If you can not connect to a stream, ensure that you can view the video from the exacqVision Client using the same username, password, and camera. Check the log files for any failure messages.
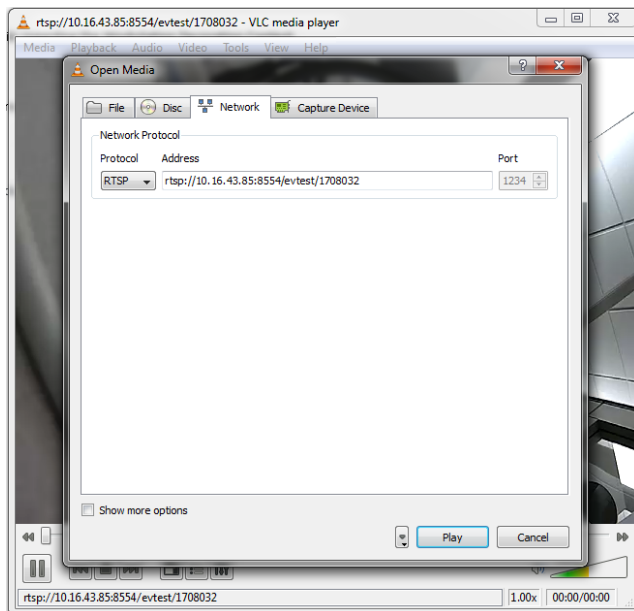

Figure 5. Connecting to a stream using the RTSP URL in the VLC media player

Testing an RTSP IP camera on the exacqVision server

To test the RTSP Server, you can create an RTSP IP camera on the exacqVision server. To create an RTSP IP camera on the server, complete the following:

1. In the exacqVision client, click the **Configuration** (setup) icon.

2. From the navigation tree, expand the exacqVision server.

3. Expand the Configure System node, and then select Add IP Cameras.

4. Click **New.**

5. In the IP Camera Information pane, select a device from the **Device Type** list.

6. Type the RTSP URL in the **Hostname/IP Address** field.

7. In the **Username** field, enter a username.

8. In the **Password** field, enter a password. To confirm the password, enter it again in the **Password Confirm** field.

9. To connect to the cameras and to save the camera configuration, click **Apply**.

    Note: You can not change the **Port** field. The main URL provides the port number.