

Crestron **Fusion RV Version 8.5**
Remote Asset Management Software

Installation Guide



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Remote Asset Management Software: Fusion RV Version 8.5

Introduction

This document is provided as an aid to the installation of Fusion RV™ with Media Services, Version 8.5; Remote Asset Management Software (formerly named RoomView Server Edition). This new version of Fusion RV incorporates a direct interface to the Crestron Capture HD™ High Definition Capture Device.

For information regarding overall “best practices” for Fusion RV 8.5, refer to the latest version of the Fusion RV Version 8.5, Best Practices Guide which is available from the web site (www.crestron.com/manuals).

Prerequisites

The software or software components described in the following sections must be installed and/or available to the system where Fusion RV services are to be installed. Fusion RV, or parts of Fusion RV, must have access to these applications or components either directly or over a network. Be sure that all of the latest updates for these applications are also installed.

Prerequisites for a successful Fusion RV installation are broken down on the following pages.

NOTE: This guide assumes that the installer possesses a thorough knowledge of Windows Server 2008 or Windows Server 2008 R2 and that the chosen Windows Server is correctly installed.

Operating System Requirements

Fusion RV supports the following operating systems:

- Microsoft Windows Server 2008 (32 or 64-bit version)
- Microsoft Windows Server 2008 R2 (64-bit version)

Operating System Component Requirements

Both Windows Server 2008 and Windows Server 2008 R2 require the following applications be present on each server where Fusion RV components are installed:

CAUTION: It is extremely important that the correct roles be installed on the Server 2008 machine *before* Fusion RV is installed. Failure to do so will result in a failed Fusion RV installation.

- .NET Framework 3.5 SP1 Features including .NET Framework 3.5 SP1, WCF Activation, HTTP Activation and Non-HTTP Activation
- Application Server Role
- Active Directory Lightweight Services (required for Lookup Room Alias feature)
- The Web Server (IIS) Role with the Web Server Role Service must be installed and it must include:
 1. Common HTTP Features including Static Content, Default Document, Directory Browsing, HTTP Errors and HTTP Redirection
 2. Application Development including ASP.NET, .NET Extensibility, ISAPI Extensions and ISAPI Filters
 3. Health and Diagnostics including HTTP Logging, Logging Tools, Request Monitor and Tracing
 4. Security with Basic Authentication, Windows Authentication, Digest Authentication, Client Certificate Mapping Authentication, IIS Certificate Mapping Authentication, URL Authorization, Request Filtering and IP and Domain Restrictions
 5. Performance with Static and Dynamic Content Compression
 6. Management Tools including IIS Management Console, IIS Management Scripts and Tools, Management Service, IIS 6 Management Compatibility, IIS 6 Metabase Compatibility, IIS 6 WMI Compatibility, IIS 6 Scripting Tools and IIS 6 Management Console
- The following features must be installed:
 1. Remote Server Administration Tools including Role Administration Tools including Active Directory Domain Services, Active Directory Lightweight Directory Services (AD LDS), AD LDS Snap-ins and Command-Line Tools, Active Directory module for Windows PowerShell, and Web Server (IIS) Tools
 2. RPC over HTTP Proxy
 3. Message Queuing including Message Queuing Service, Message Queuing Server with HTTP Support
 4. Feature Administration Tools including SMTP Server Tools
 5. SMTP Server
 6. Windows Process Activation Service including Process Model, .NET Environment and Configuration APIs
- Microsoft Internet Information Server (IIS) 7.0 (on machine(s) with web or security components installed)
- IIS 6 Management Compatibility Pack with all of its sub-options must be installed.

- Microsoft .NET Runtime Environment 3.5, Service Pack 1 for Server 2008 or .NET Runtime Environment 3.5.1 for Server 2008 R2.
- Microsoft ASP.NET 3.5 with AJAX Extensions. (AJAX Extensions are now installed as part of ASP.NET 3.5)

Additional Requirements

- Microsoft SQL Server 2008 (Standard or Enterprise versions only) available to Fusion RV over the network.
- Crestron Toolbox™ or Toolbox SE, version 1.12.133 or higher is available from the Crestron web site (www.crestron.com/software) and is required to support symbol auto-discovery and direct device assets.
- Appropriate virtual directories must be set up for the RSS feeds used for publishing Capture data.

One of these web browsers must be installed on workstations where the web client will be used:

- Microsoft Internet Explorer 8.0 or later
- Firefox 1.5 or later
- Safari 2.0.3 or later

Domain Service Account Requirements

By default, Fusion RV is installed with local system accounts. However it is recommended that Fusion RV's application services be run from a Domain Service Account. If you are going to install Fusion RV with a Domain Service Account, the following procedure must be performed *in addition to* the prerequisites described in Operating System Component Requirements:

1. Determine the Domain Service Account to be used.
2. Configure the Fusion RV services to run using this account.
3. Add the account to SQL Server with "db_owner" and "public" permissions mapped to the Fusion RV catalog.
4. Register the account from the command line by using the following commands:
 - a) `cd C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727`
 - b) `aspnet_regiis -ga DomainName\AccountName`
5. Using IIS, configure the identity of the Fusion RV Application Pool to use the Domain Service Account.

Windows Active Directory Integration (Windows Authentication) Requirements

For installations using Windows Authentication, the following Active Directory domain groups and domain user accounts should be set up *in addition to* the prerequisites described in Operating System Component Requirements:

- Three Active Directory Groups: DOMAIN\RoomViewAdmins, DOMAIN\RoomViewManagers and DOMAIN\RoomViewUsers.
- Add Admins domain user accounts to the RoomViewAdmins group, Users domain user accounts to the RoomViewUsers group and Managers domain user accounts to the RoomViewManagers group.

NOTE: It may be possible to use existing groups already containing user accounts.

NOTE: Group names used for Windows Authentication are case sensitive when entered into Fusion RV.

Email Alert Requirements

For installations where Email alerts will be used, the following must be available in addition to the prerequisites described in Operating System Component Requirements.

- SMTP Mail Server.

Microsoft Exchange Requirements

For Microsoft Exchange environments, the following must be available in addition to the prerequisites described in Operating System Component Requirements.

- Microsoft Exchange Server 2003, Exchange 2007 with Exchange Web Services or Exchange 2010.
- Access to Exchange mailboxes using domain credentials.

Lotus Notes Domino Requirements

For installations integrating Lotus Notes Domino (versions 7.0, 8.0 or 8.5) as the scheduling calendar type, the following must be present *in addition to* the prerequisites for Operating System Component Requirements:

- User information must be entered in the *Domino Settings* tab of the Schedule Service settings of the Fusion RV Configuration Web Client.
- The Lotus Notes Client must be installed on the Fusion RV server.

NOTE: The Lotus Notes Client is limited to 32-bit operating systems.

Rights

The account installing Fusion RV must have the following rights:

- Local Administrator's Rights on any server where Fusion RV components will be installed.
- SQL Login with container creation rights and Database Owner Rights.
- SMTP Send Rights.
- If Lotus Notes is being used for scheduling, a Domino User Account with read access to the Domino Directory and Read/Write access to the Resource Reservations databases.

NOTE: By default, the Lotus Notes Domino Resource Reservations database is named "Resource.nsf" and the Domino Directory is named "names.nsf", however in some installations these names may be changed and they may be composed of multiple databases spanning multiple Domino servers and or Domino domains. Therefore, the Fusion RV user that has access to Domino should have access to all necessary resource reservations databases and the main "Domino Directory Server".

Server Side Installation Procedure

Fusion RV installation is performed using a setup wizard launched when the install process begins.

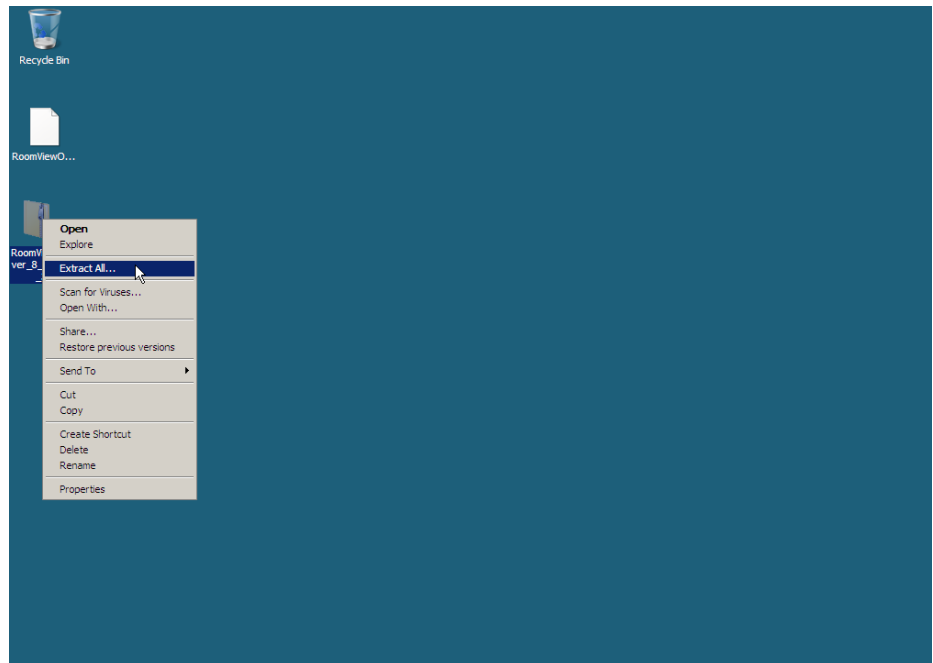
NOTE: A demo program for Fusion RV is copied to the server at the time of installation. Contact your administrator for more information.

1. Download the Fusion RV installer from the Crestron web site to your desktop. The file will be named **FusionRV_8_5_(build number).exe** and will be a compressed, or zipped, folder.

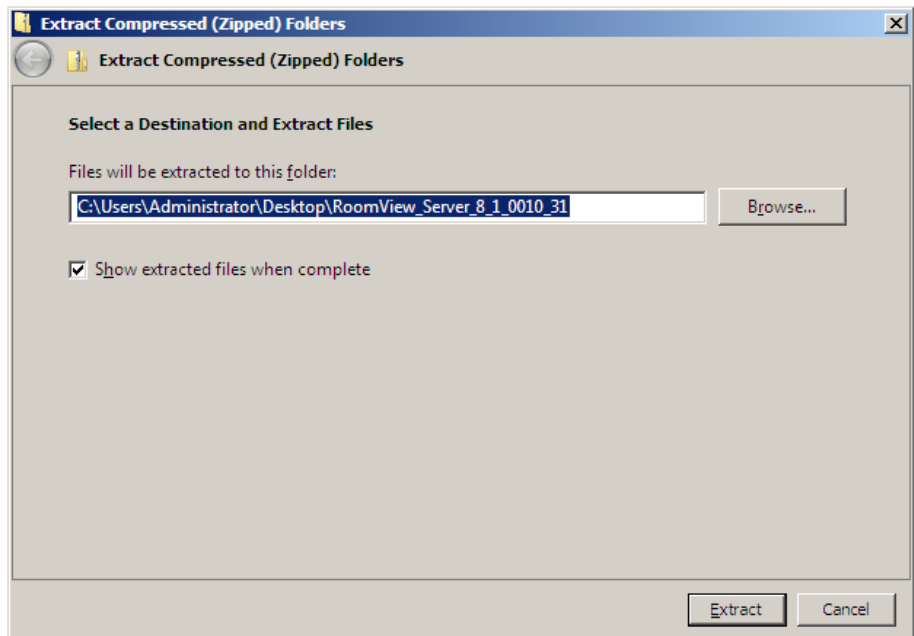
Crestron Fusion RV Installer Icon on Desktop



2. Right click the folder and select **Extract All**.

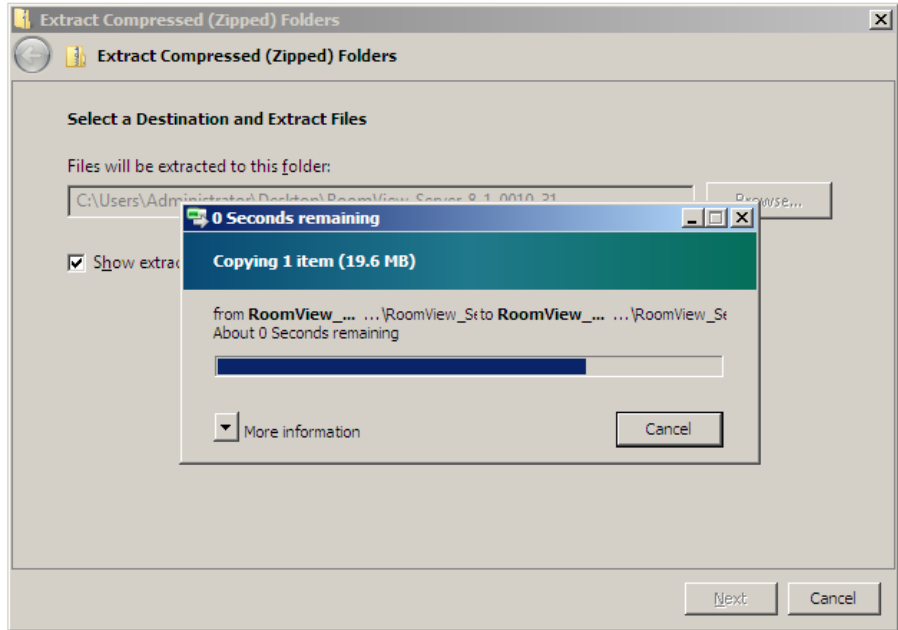
“Extract All” on Right-Click Menu

3. The “Extract Compressed (Zipped) Folders” window will open, prompting you to browse for a destination for the Fusion RV installer. Your desktop is fine.

“Extract Compressed (Zipped) Folders” Window

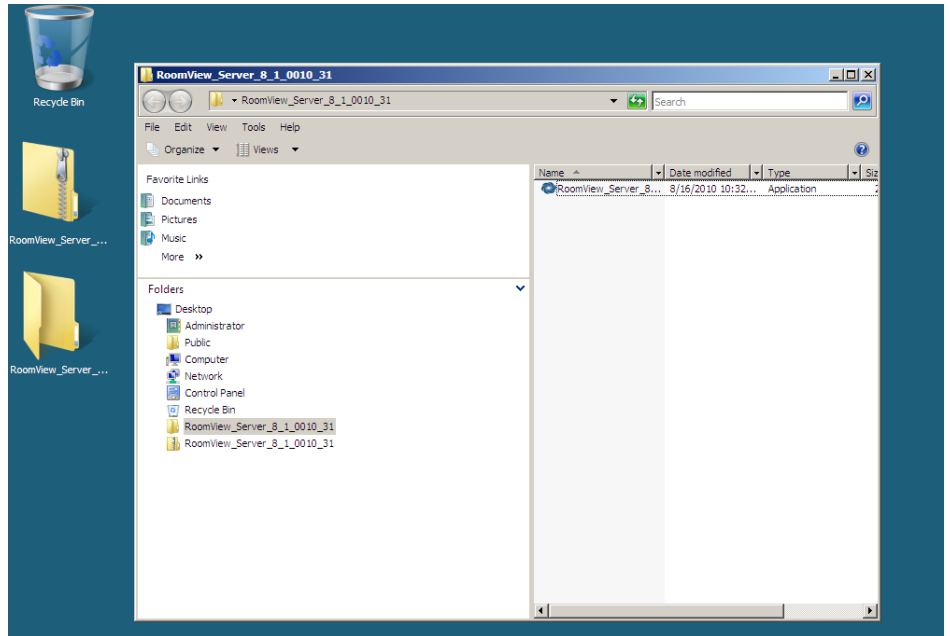
4. Click the **Extract** button. A window showing the progress of the extraction will open as the file is copied to your desktop.

“Extract Progress” Window

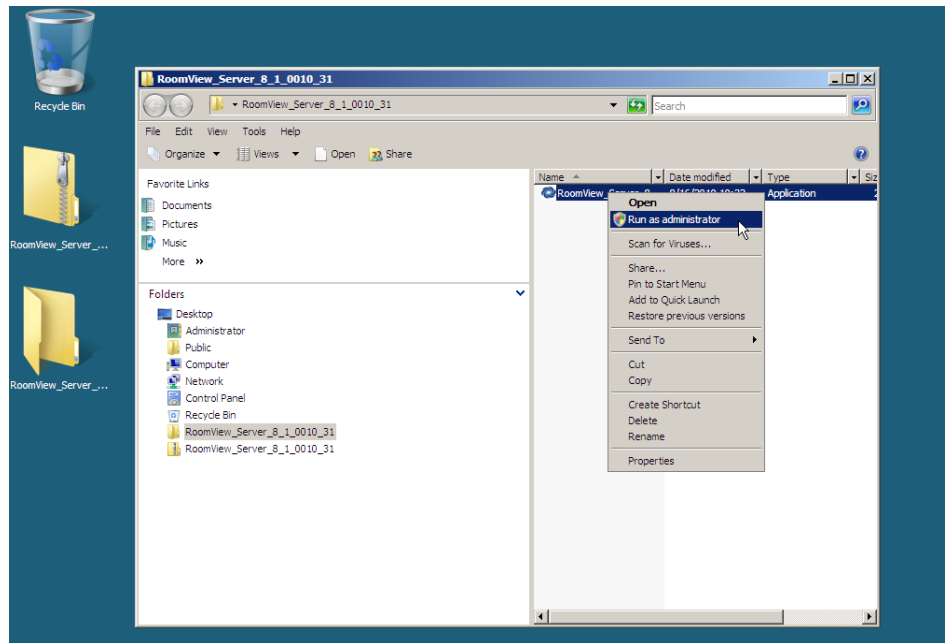


5. When the file is successfully copied to your desktop Windows Explorer will open showing the Fusion RV installer in the right-hand pane. A new folder will also be added to the desktop at the same time.

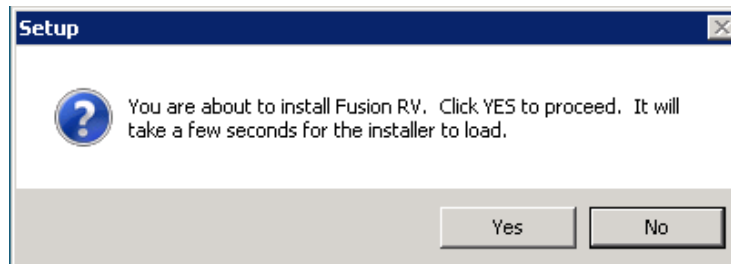
Windows Explorer Showing Fusion Installer



6. Right click the Fusion RV installer and select **Run as Administrator**.

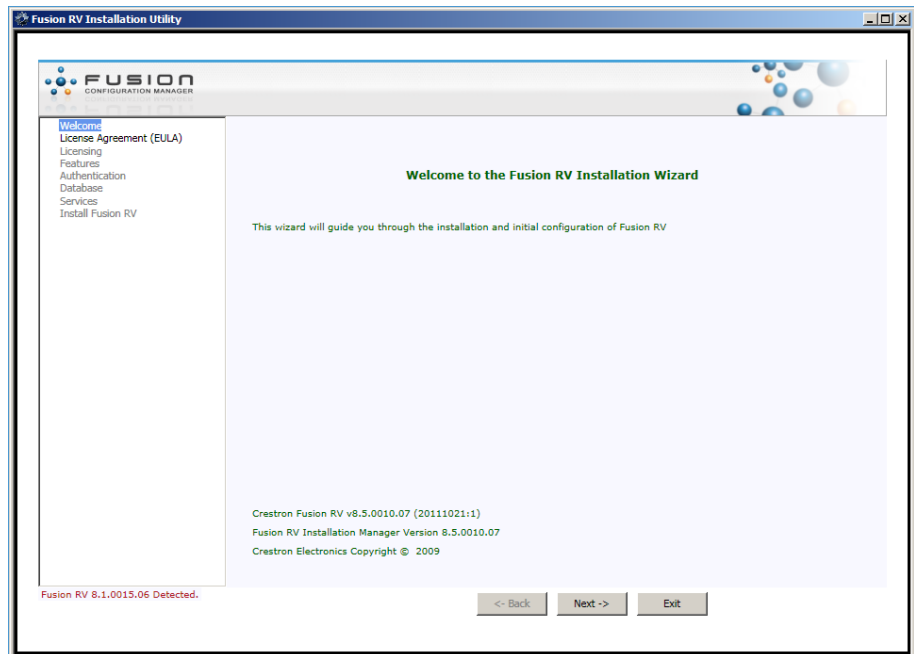
Run As Administrator

7. An alert will open telling you that you are about to begin the Fusion RV install and ask for confirmation that this is what you want to do. Click **Yes** to start the process.

“Install Confirmation” Alert

8. A DOS window will appear briefly, followed by the “Fusion RV Installation Utility Welcome” window.

“Fusion RV Installation Utility Welcome” Window



9. Clicking on the **Next** button will open the “End User License Agreement” window, which you can print for reference by clicking on the **Print** button.

“End User License Agreement” Window



10. Read the End User License Agreement and click the **I accept the terms of the license agreement** radio button. Then click **Next** to advance to the “Licensing” window.

The “Licensing” window displays the Fusion RV license status for the server. An unlicensed server is allowed 5 SIMPL Windows symbol

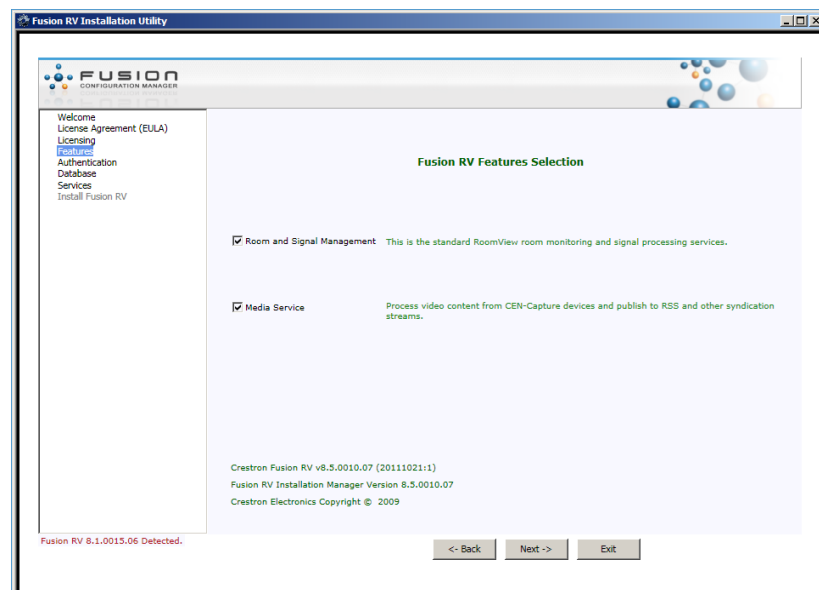
connections. Once properly licensed, the number of connections is unlimited.

Please see **Appendix B: Licensing Fusion RV** for licensing instructions.

11. Click **Next** to continue to the “Fusion RV Features Selection” window.

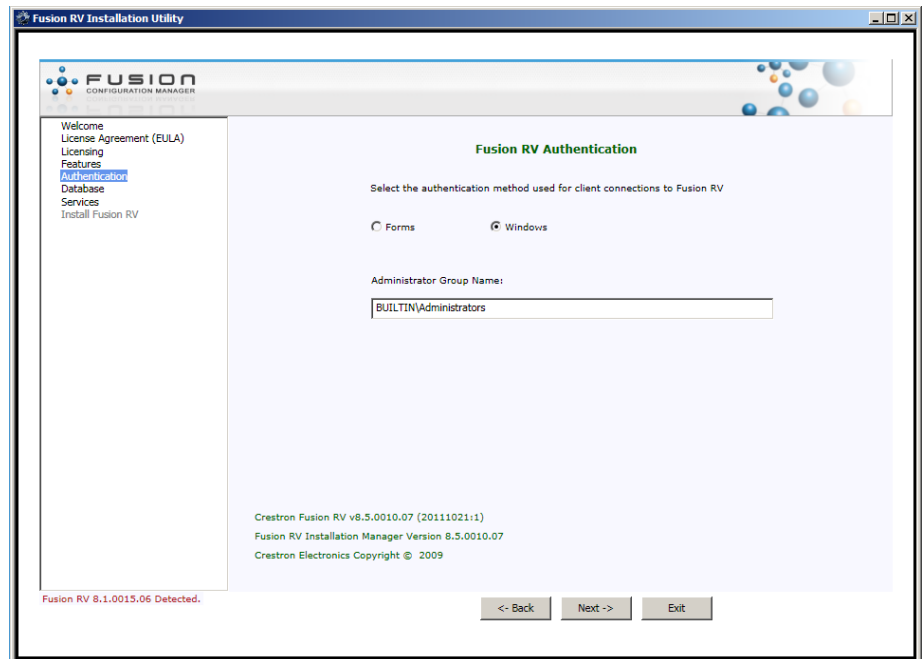
The “Fusion RV Features Selection” window allows you to choose to install the standard RoomView room monitoring and signal processing features as well as media service features allowing the capture, processing and publishing of Crestron CEN-Capture video content. Click the **Room and Signal Management** check box to install the standard RoomView features and the **Media Service** check box to install the media service features.

“Fusion RV Features Selection” Window



12. Click **Next** to continue to the “Fusion RV Authentication” window.

The “Fusion RV Authentication” window displays the authentication method options for client connections to Fusion RV. Forms authentication will authenticate using the username and password supplied by the user, Windows authentication will authenticate against the current user’s Windows OS credentials.

“Fusion RV Authentication” Window

- If Windows Authentication is chosen, the default Administrator Group Name is the Windows default administrator domain group **BUILTIN\Administrators**. This domain group can be changed to anything your installation requires.
 - If Windows Authentication is selected, the Fusion RV server must be part of a domain.
 - Group Names used for Windows Authentication are case sensitive when being entered into Fusion RV.
13. To change the authentication method, click the **Forms** or **Windows** radio button and ensure if selecting Windows Authentication, that the entry in the *Administrators Group Name* field is correct for your selection. Click **Next** to continue to the “Database Credentials” window.

The “Database Credentials” window is broken in to 3 sections, *Main Database Login Credentials*, *Log Database Login Credentials* and *Report Database Login Credentials*. This allows you to create each database in a separate SQL Server environment, providing greater scalability and performance.

“Database Credentials” Window

14. The *Main Database Login Credentials* field: requires you to enter hostname of the SQL server and the name of the database that will be created there by the installer.

- *Database Server*: field: requires the hostname of the SQL server where your database will be created.

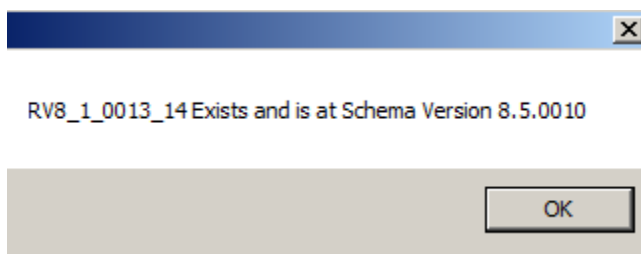
IP Address cannot be used. You must enter the hostname or a Fully Qualified Domain Name of the SQL Server.

- *Database Name*: field requires a name for the database that the Fusion RV installer will create. If this is an upgrade installation, enter the name of your existing Fusion RV database.

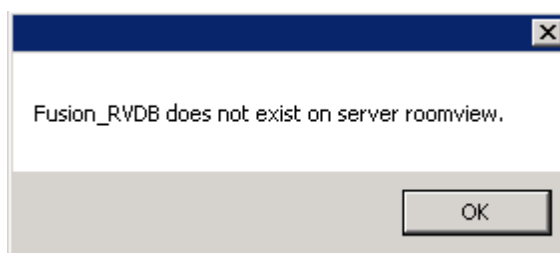
NOTE: If you are upgrading an existing RoomView or Fusion database, make sure to perform a database backup prior to upgrading.

15. Use the **Windows Authentication** and **SQL Authentication** radio buttons, to set an authentication scheme appropriate to your installation. If **Windows Authentication** is selected, the *Database Login ID* and *Database Password* fields will be disabled and Fusion RV will be synchronized with the user’s Windows username and password. If **SQL Authentication** is selected, the *Database Login ID* and *Database Password* fields require the appropriate entries.

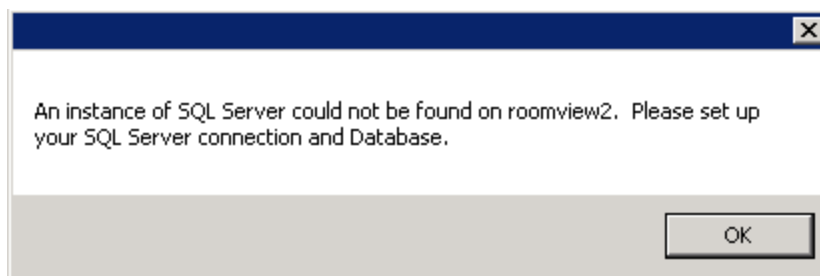
16. Click the **Test Connection** button to run a routine which ensures that the information you entered in the *Database Server* and *Database Name* fields is accurate. This test uses those entries to attempt to attach to the database. If the test is successful, an alert stating that the database exists as well as its current schema version will appear. Click **OK** to dismiss it. (If your database is not at the current schema version, you will be prompted later in the install process to confirm upgrade of the database to the current schema version)

“Database Exists and its current Schema Version” Alert

16. If the connection test is successful and your database does not exist, an alert stating so will appear. Click **OK** to dismiss it. (You will be prompted later in the install process to confirm creation of this new database)

“Database does not exist” Alert

17. If the connection test fails due to invalid credentials, an alert stating that an instance of SQL Server could not be found will appear. Click **OK** to dismiss it. Verify and correct the data for *Database Server* and *Authentication Credentials* and retest.

“SQL Server connection failed” Alert

18. Click the **SQL Server Disks** checkbox to add the “Select SQL Main Disks” window to the installation process. Select this option if you wish to specify alternate disk locations for your database files. This will be covered in detail later in this document.

NOTE: The naming convention for the LOG database is: *MainDBName_LOG*. This is enforced by the Fusion RV installation and cannot be changed. The naming convention for the REPORT database is: *MainDBName_REPORT*. This is also enforced by the Fusion RV installation and cannot be changed.

19. Click the **Set-up Replication** checkbox to allow the install process to set-up replication jobs in your SQL Server environment. These jobs are required to move data from the Main and Log databases to the Reporting database. This is required if you plan on using the Fusion RV Reporting web client. (**TBD** This check box did not display until I ran the Config Manager after install)

Please see **Appendix D: SQL Server Replication**

(Publication/Subscription) for pre-requisites and additional information on SQL Server Replication.

20. If your LOG and REPORT databases will be created on the same SQL Server as the Main Fusion RV Database, click **Next** to display the “Web Service, Web Client and Service Credentials” window, skip steps 20 through 33 and proceed to step 35.

If you are going to create your LOG or REPORT database (or both) on a different SQL Server, remain on the “Database Credentials” window.
21. To change the SQL Server for the LOG database, click the **Different DB Server** checkbox in the *Log Database Login Credentials* field. This enables all of the fields in the *Log Database Login Credentials* field.
22. Enter the hostname of the SQL server where your LOG database will be created into the *Database Server:* field.
23. Use the **Windows Authentication** and **SQL Authentication** radio buttons, to set an authentication scheme appropriate to your installation. If **Windows Authentication** is selected, the *Database Login ID* and *Database Password* fields will be disabled and Fusion RV will be synchronized with the users Windows username and password. If **SQL Authentication** is selected, the *Database Login ID* and *Database Password* fields require the appropriate entries.
24. Click the **Test Connection** button to run a routine that ensures that the information you entered in the *Database Server* and *Database Name* fields is accurate by using those entries to attempt to attach to the database. If the test is successful, an alert stating that the database exists as well as its current schema version will appear. Click **OK** to dismiss it. (If your database is not at the current schema version, you will be prompted later in the install process to confirm upgrade of the database to the current schema version)
25. If the connection test is successful and your database does not exist, an alert stating that the database does not exist will appear. Click **OK** to dismiss it. (You will be prompted later in the install process to confirm creation of this new database)
26. If the connection test fails due to invalid credentials, an alert stating that an instance of SQL Server could not be found will appear. Click **OK** to dismiss it. Verify and correct the data for *Database Server* and *Authentication Credentials* and retest.
27. Click the **SQL Server Disks** checkbox to add the “Select SQL Log Disks” window to the installation process. This will be covered in detail later in this document.
28. To change the SQL Server environment for the REPORT database, click the **Different DB Server** checkbox in the *Report Database Login Credentials* field. This enables all of the fields in the *Report Database Login Credentials* field.
29. Enter the hostname of the SQL server where your LOG database will be created into the *Database Server:* field.
30. Use the **Windows Authentication** and **SQL Authentication** radio buttons, to set an authentication scheme appropriate to your installation. If **Windows Authentication** is selected, the *Database Login ID* and *Database Password* fields will be disabled and Fusion RV will be synchronized with the users Windows username and password. If **SQL Authentication** is selected, the

Database Login ID and *Database Password* fields require the appropriate entries.

31. Click the **Test Connection** button to run a routine that ensures that the information you entered in the *Database Server* and *Database Name* fields is accurate by using those entries to attempt to attach to the database. If the test is successful, an alert stating that the database exists as well as its current schema version will appear. Click **OK** to dismiss it. (If your database is not at the current schema version, you will be prompted later in the install process to confirm upgrade of the database to the current schema version)
32. If the connection test is successful and your database does not exist, an alert stating that the database does not exist will appear. Click **OK** to dismiss it. (You will be prompted later in the install process to confirm creation of this new database)
33. If the connection test fails due to invalid credentials, an alert stating that an instance of SQL Server could not be found will appear. Click **OK** to dismiss it. Verify and correct the data for *Database Server* and *Authentication Credentials* and retest.
34. Click the **SQL Server Disks** checkbox to add the “Select SQL Report Disks” window to the installation process. This will be covered in detail later in this document.
35. Click **Next** to display the “Web Service, Web Client and Service Credentials” window.

“Web Service, Web Client, and Service Credentials” Window

The screenshot displays the 'Web Service, Web Client, and Service Credentials' window within the Fusion RV Installation Utility. The window title is 'Fusion RV Installation Utility'. The main content area is titled 'Web Service, Web Client, and Service Credentials'. It contains several input fields and a dropdown menu:

- Web site:** A dropdown menu currently set to 'Default Web Site'.
- Web Service Virtual Directory:** A text input field containing 'RoomViewSE'.
- Web Client Virtual Directory:** A text input field containing 'RoomViewSEWC'.
- Data Service Host:** A text input field containing 'rv8s-18.rv.crestron.com'.
- Install Path:** A text input field containing 'C:\Program Files\Crestron\RoomViewSE\'. A 'Browse' button is located to the right of this field.

Below these fields is a section for 'Service Login Credentials'. It has two radio buttons: 'Local System Account' (which is selected) and 'This Account'. Below the radio buttons are two input fields: 'App Pool Login ID:' containing 'rv\pvc18' and 'Password:' which is empty.

A red warning message is displayed below the input fields: "Because you have selected Media Services, you CANNOT run under the Local System account".

At the bottom of the window, there are three buttons: '<- Back', 'Next ->', and 'Exit'. The bottom left corner of the window displays the text: 'Fusion RV 8.1.0015.06 Detected.'

36. By default, two virtual directories, “RoomViewSE” and “RoomViewSEWC” will be created on the host server and will be under the IIS Default Web Site folder.
 - If you wish to change the Web Site where Fusion RV will be hosted, make your selection from the “Web Site” dropdown list.

This list will show all Web Sites currently defined on the host server.

- If you wish to change the install path where Fusion RV will be installed, click the “Install Path” **Browse** button and select the desired path.

37. The *Service Login Credentials* field and subfields require settings appropriate to your local requirements and whether or not you have chosen to install Media Services as described in step 11:

- The **Local System Account** and **This Account** radio buttons allow you to choose between using the predefined, existing Local System Account (which is the built-in Network Service account) and This Account, which allows you to create an Application Pool account by enabling the *App Pool Login ID* and *Password* fields.

NOTE: If you have chosen to install the Media Services, the radio button for the Local System Account is disabled and you must use an application pool account.

The Application Pool account you create can be the same as the Local System or Network Service account, or it can be a different account if there are IIS security considerations that would not apply to the Local System or Network Service account.

- *App Pool Login ID* field: this field allows you to enter the login ID credentials for the new Application Pool.
- *Password* field: this field allows you to enter the password required by the App Pool Login ID.

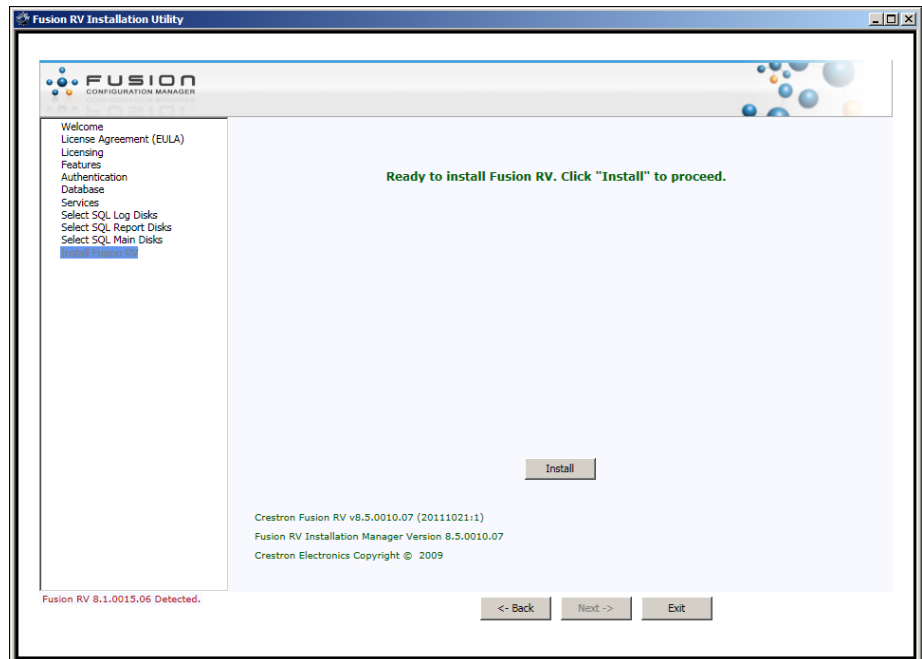
38. Clicking on the **Next** button will open the “SQL Server Disk Selection for Fusion RV Database” window if the **SQL Server Disks** checkbox was selected on the “Database Credentials” window for the Main database.

Clicking **Next** two more times will display the “SQL Server Disk Selection for Report Database” and the “SQL Server Disk Selection for Fusion RV LOG Database” windows if the **SQL Server Disks** checkboxes for these was selected on the “Database Credentials” window for the Report and LOG databases.

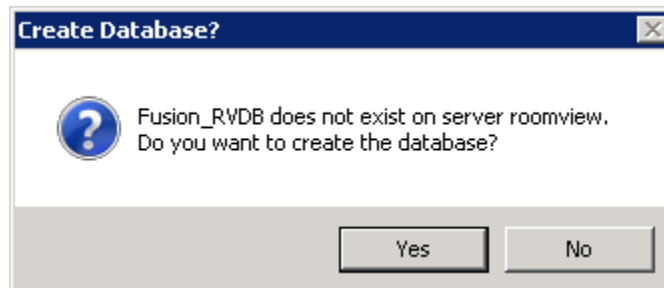
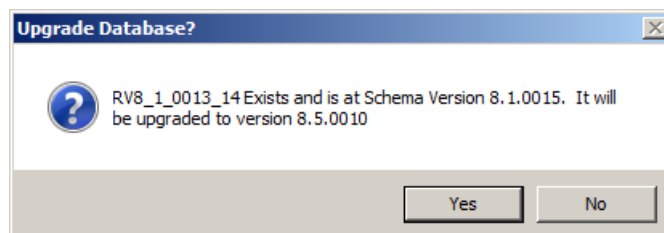
Please see **Appendix C: SQL Server Disk Selection** for additional information on SQL Server Disk Selection and considerations.

NOTE: For performance purposes, it is recommended that the Fusion RV SQL database be isolated on its own, dedicated drive or server.

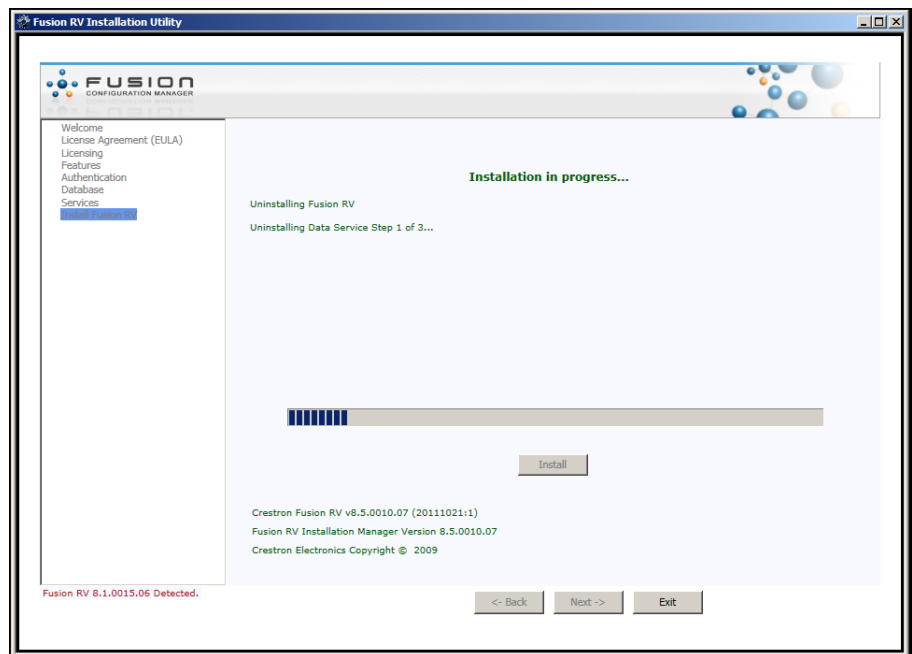
39. When you have completed your selections, click **Next**. The “Ready to Install Fusion RV” window will open.

“Ready to Install Fusion RV” Window

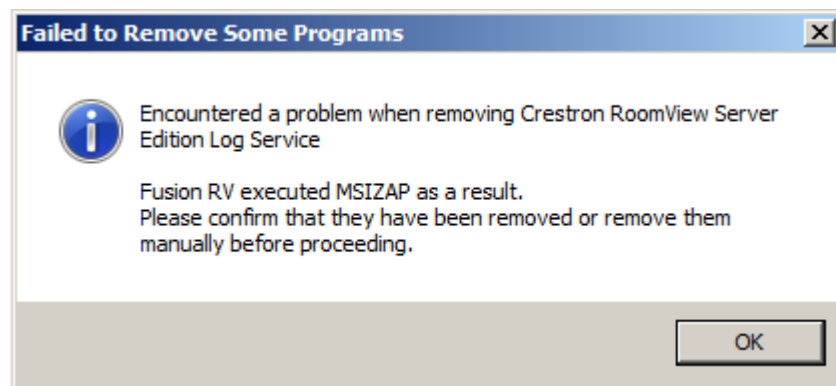
40. Click the **Install** button to begin the installation. The “Create Database?” pop-up window will open if you specified a new database in the “Database Credentials” window. Alternately, an “Upgrade Database?” pop-up window will open if you specified an existing database that is at an earlier schema version.

“Create Database?” Window*“Upgrade Database?” Window*

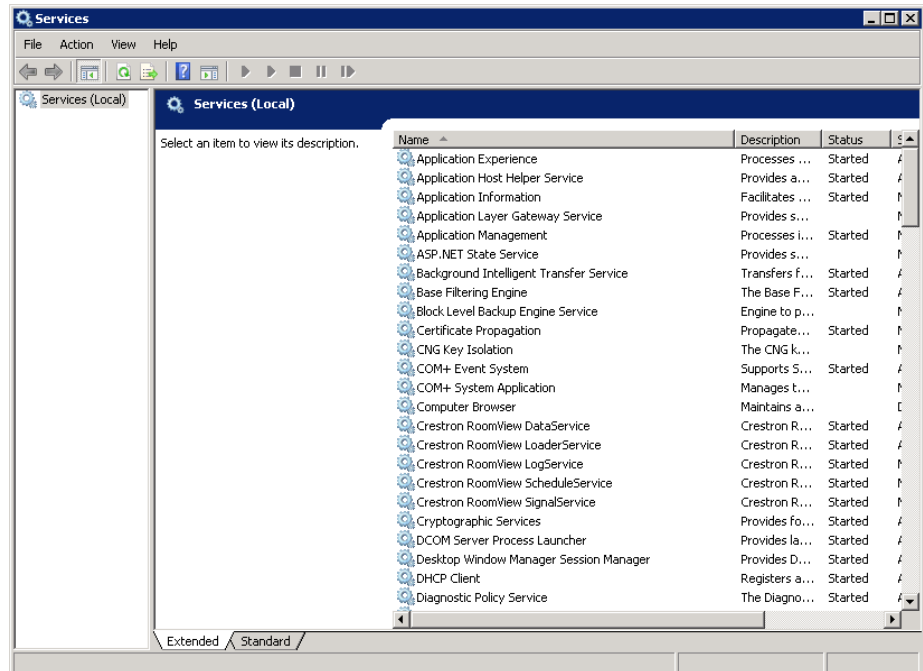
41. Click **Yes**. The “Installation in Progress” window will open. If there is a previous installation of Fusion RV/RoomView on the server, the Fusion RV installer will uninstall it at the start of the installation.

“Installation in Progress” Window—Uninstalling Previous Version (if any)

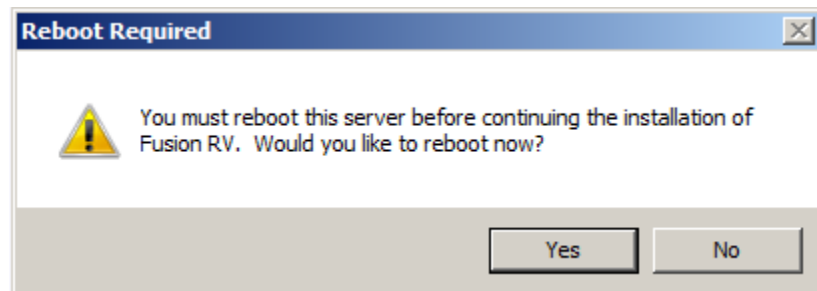
42. If the uninstall encounters any issues, it will execute MSIZAP to force the completion of the uninstall. If this occurs you will see this message:

“Failed to Remove Some Programs” Pop-up— (if any)

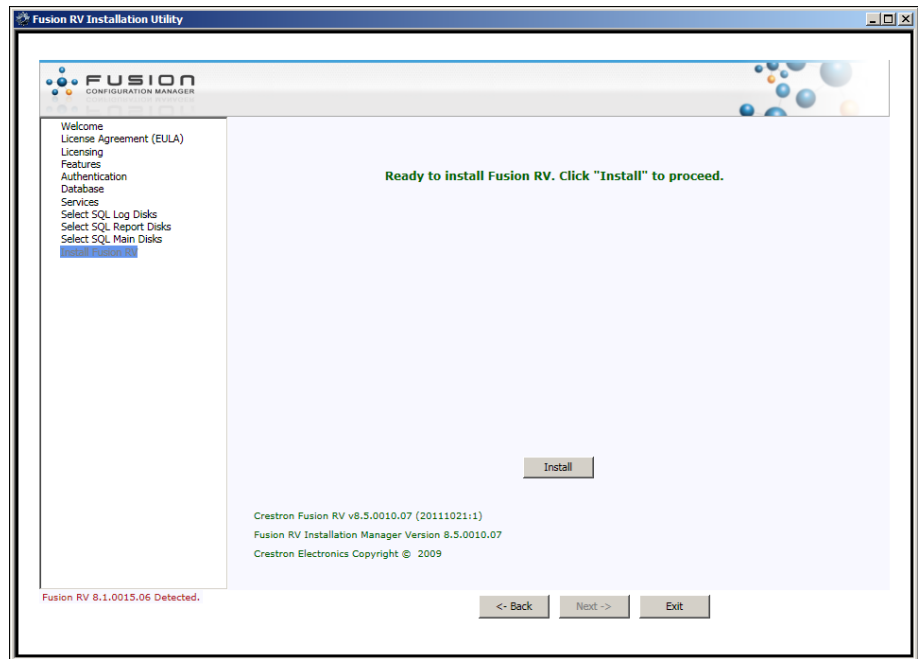
43. Make a note of the services listed on the pop-up, (in the example, “Crestron RoomView Server Edition Log Service”).
44. Open the Windows “Services” application on the server and verify that any services listed in the pop-up have been removed (are no longer listed). If a service is still present in the list, it must be removed manually.

“Windows Services”

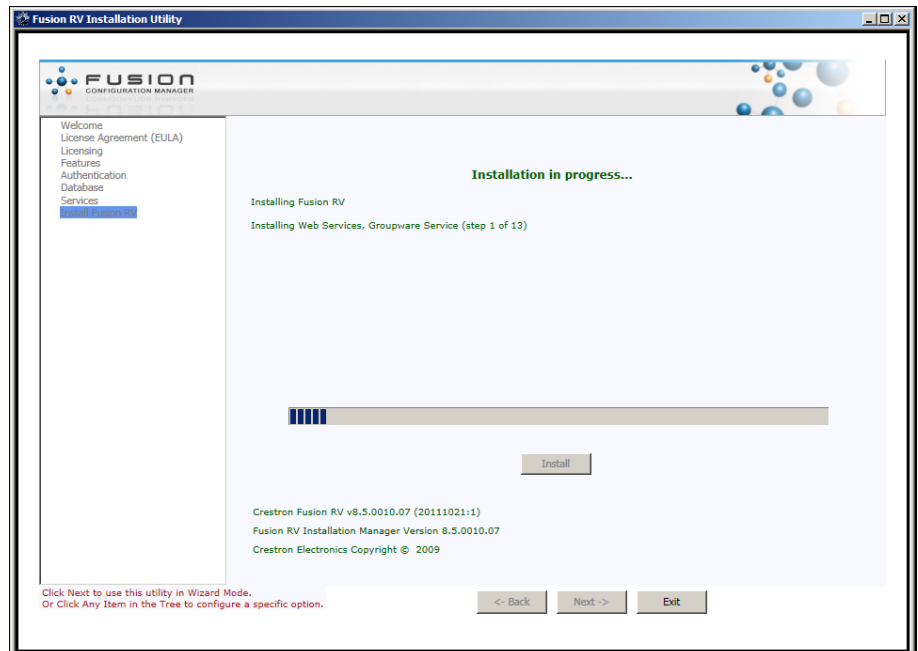
45. Click the **OK** button on the *“Failed to Remove Some Programs”* pop-up (if present).
46. If there was a previous installation of Fusion RV/RoomView, once the uninstall process completes, the installer will require a server reboot and you will see this message:

“Reboot Required” Window

- Click **Yes**. After the server has rebooted, the installation process will resume.
47. When the *“Ready to Install Fusion RV”* window appears again, click the **Install** button to begin the installation. You will be prompted to confirm creation/upgrade of database. Click **YES** to continue.

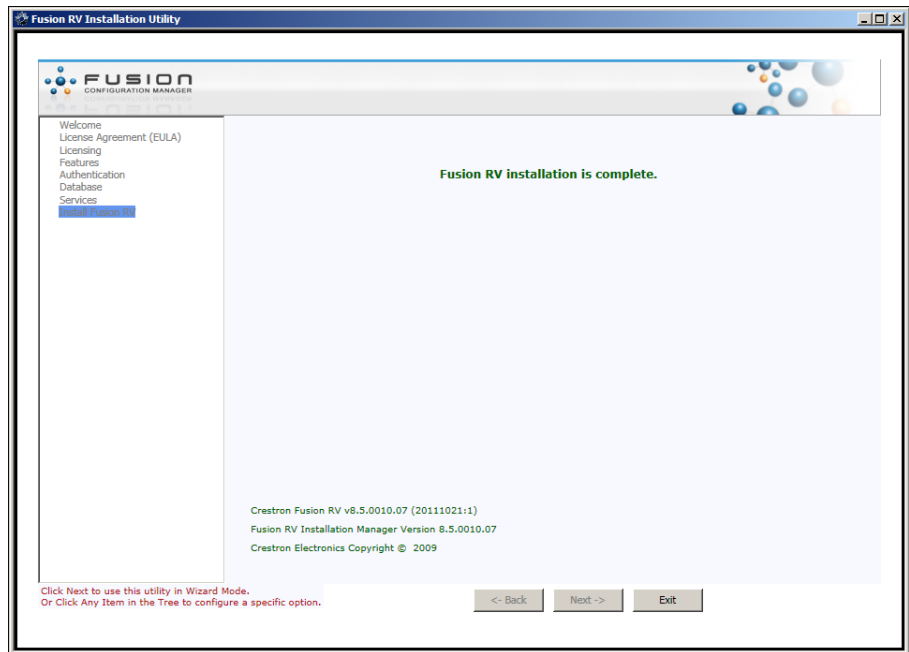
“Ready to Install Fusion RV” Window

48. The “*Installation progress*” window will appear. As each step of the installation is performed, the messages on the page will change accordingly.

“Installation Progress” Window

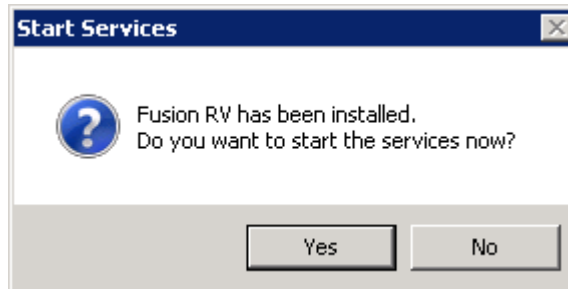
49. When the Fusion RV installer is finished, the “*Installation Progress*” window will indicate that the installation of Fusion RV is complete. Click the **Exit** button to dismiss the window.

“Installation Progress” Window—Installation Complete



50. A pop-up window will open asking if you wish to start the Fusion RV services. Click **Yes**.

“Start Services?” Window



51. Your Fusion RV installation is complete and Fusion RV is running and ready to be used.

Appendix A: Configuration Manager Setup and Configuring Fusion RV

The Configuration Manager provides an easy-to-use interface for defining or changing certain required settings that allow all installed Fusion RV components to interact. The Configuration Manager can be used as a wizard to step through the configuration process or as a tree to set specific variables required for your installation. Many of the fields on the Configuration Manager will be filled automatically during the installation process, but the following procedures are provided in the event that a step-by-step manual configuration becomes necessary.

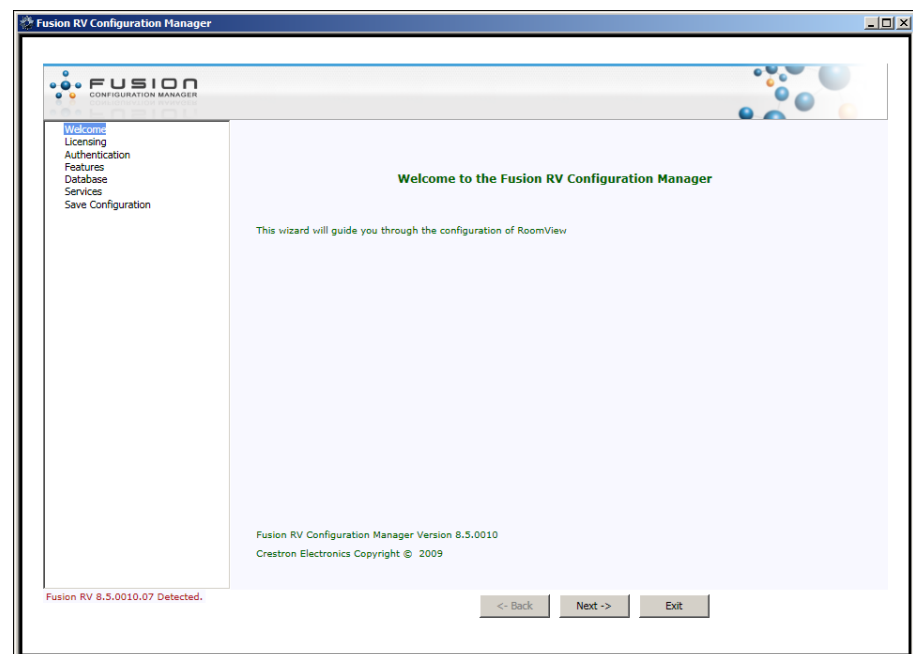
NOTE: When you have completed configuring Fusion RV to your installation, you must click the **Save** button on the “Save Fusion RV Configuration” window before closing the Configuration Manager. After you click **Save** you will be prompted to restart services. Clicking **OK** will restart the Fusion RV services and your changes will take effect.

1. Click **Start\All Programs\Crestron\RoomViewSE\Configure RoomView** to open the Configuration Manager.

Fusion RV Welcome Window

The “Welcome” window of the Configuration Manager introduces you to the Fusion RV Configuration Wizard. From here you can step through the wizard using the **Next** buttons or choose the page you wish to reach by using the tree on the left.

“Welcome” Window



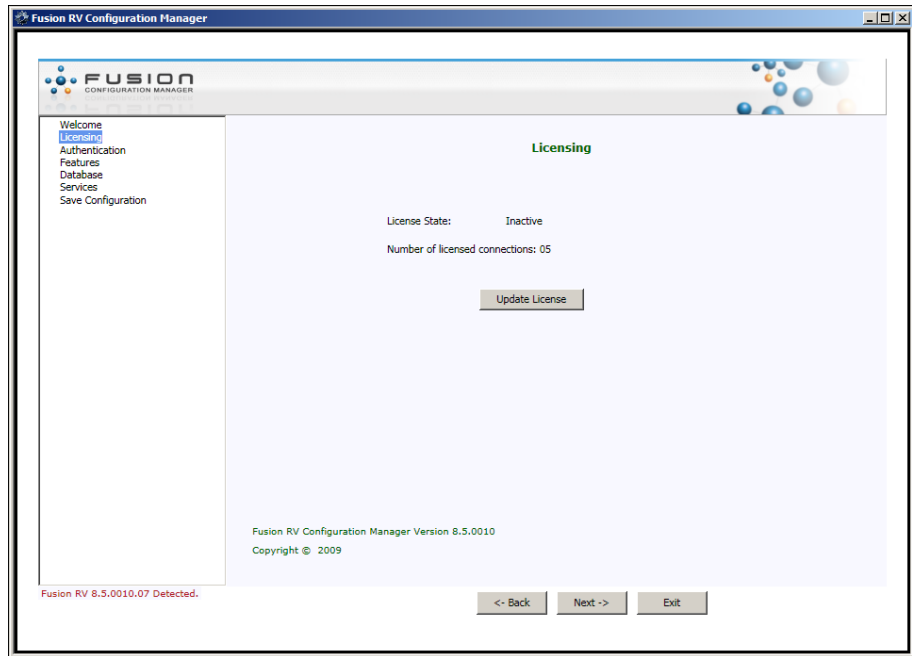
2. To begin stepping through the wizard, click the **Next** button. The “Fusion RV Licensing” window is displayed.

Fusion RV Licensing Window

The “Licensing” window displays the Fusion RV license status for the server. An unlicensed server is allowed 5 SIMPL Windows symbol connections. Once properly licensed, the number of connections is unlimited.

NOTE: Please refer to **Appendix B: Licensing Fusion RV** for licensing instructions.

“Licensing” Window

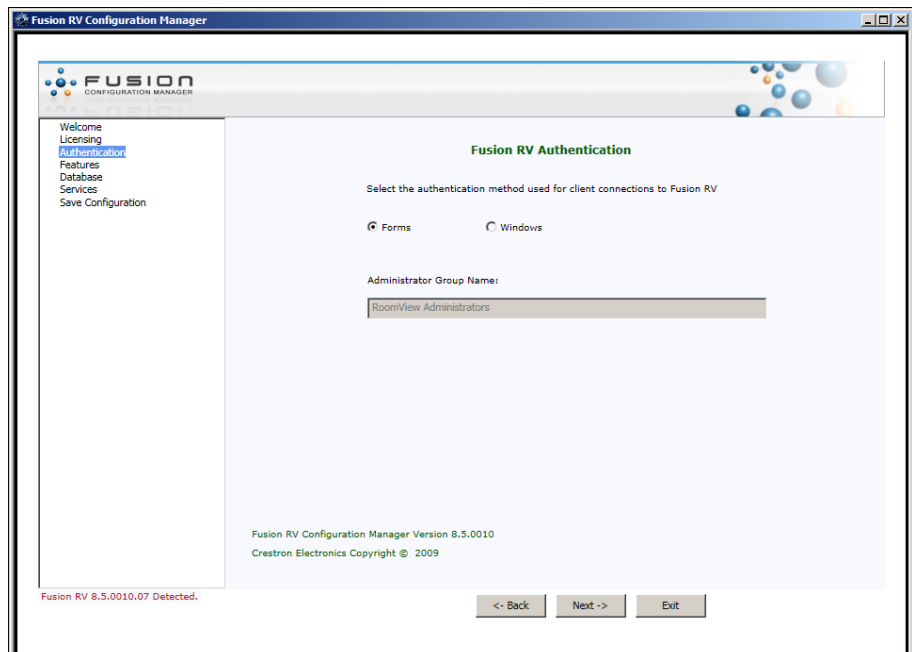


3. Click the **Next** button. The “Fusion RV Authentication” window is displayed.

Fusion RV Authentication Window

As with the “Fusion RV Authentication” window displayed during installation, the Configuration Manager’s “Fusion RV Authentication” window displays the authentication method you chose for client connections to Fusion RV.

“Fusion RV Authentication” Window



- If Windows Authentication is chosen, the default Administrator Group Name is the Windows default administrator domain group **BUILTIN\Administrators**. This domain group can be changed to anything your installation requires.
- If Windows Authentication is selected, the Fusion RV server must be part of a domain.
- Group Names used for Windows Authentication are case sensitive when being entered into Fusion RV.

4. Make any desired changes according to your needs or system requirements and click **Next** to continue to the “Database Credentials” window.

Database Credentials Window

The “Database Credentials” window of the Configuration Manager will be pre-populated with the information you entered during the installation process. This window is provided in the Configuration Manager as a way to make changes after installation should they become necessary. You can create a new Database or point to a different pre-existing Database.

The “Database Credentials” window is broken in to 3 sections, *Main Database Login Credentials*, *Log Database Login Credentials* and *Report Database Login Credentials*. This allows you to create each database in a separate SQL Server environment, providing greater scalability and performance.

“Database Credentials” Window

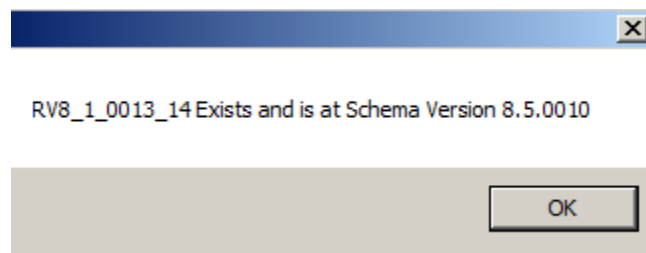
5. Enter the hostname of the SQL server and the name of the database that will be created there by the installer into fields in the *Main Database Login Credentials* field. The hostname of the SQL server where your database will be created belongs in the *Database Server* field. The name of the database belongs in the *Database Name* field. If this is an upgrade installation, enter the name of your existing Fusion RV database.

NOTE: An IP Address cannot be used. The hostname or the fully qualified domain name of the SQL server must be used.

NOTE: If you are upgrading an existing Fusion RV/RoomView database, make sure to perform a database backup prior to upgrading.

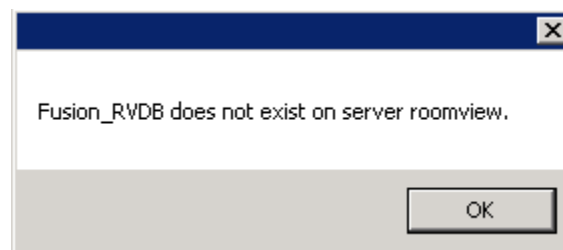
6. Use the **Windows Authentication** and **SQL Authentication** radio buttons, to set an authentication scheme appropriate to your installation. If **Windows Authentication** is selected, the *Database Login ID* and *Database Password* fields will be disabled and Fusion RV will be synchronized with the user's Windows username and password. If **SQL Authentication** is selected, the *Database Login ID* and *Database Password* fields require the appropriate entries.
7. Click the **Test Connection** button to run a routine that ensures that the information you entered in the *Database Server* and *Database Name* fields is accurate by using those entries to attempt to attach to the database. If the test is successful, an alert stating that the database exists as well as its current schema version will appear. Click **OK** to dismiss it. (If your database is not at the current schema version, you will be prompted later in the install process to confirm upgrade of the database to the current schema version)

“Database Exists and is at current Schema Version” Alert

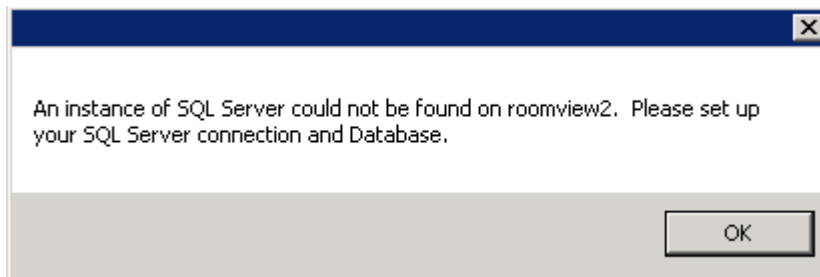


8. If the connection test is successful and your database does not exist, an alert stating that the database does not exist will appear. Click **OK** to dismiss it. (You will be prompted later in the install process to confirm creation of this new database)

“Database does not exist” Alert



9. If the connection test fails due to invalid credentials, an alert stating that an instance of SQL Server could not be found will appear. Click **OK** to dismiss it. Verify and correct the data for *Database Server* and *Authentication Credentials* and retest.

“SQL Server connection failed” Alert

10. Click the **SQL Server Disks** checkbox to add the “Select SQL Main Disks” window to the installation process. Select this option if you wish to specify alternate disk locations for your database files. This will be covered in detail later in this document.

NOTE: The naming convention for the LOG database is *MainDBName_LOG* and the naming convention for the REPORT database is *MainDBName_REPORT*. These naming conventions are enforced by the Fusion RV installation and cannot be changed.

11. If your LOG and REPORT databases will be created on the same SQL Server as the Main Fusion RV Database, click **Next** to display the “Web Service, Web Client and Service Credentials” window and proceed to step 26 of this section.

If you are going to create your LOG or REPORT database (or both) on a different SQL Server, remain on the “Database Credentials” window.
12. To change the SQL Server for the LOG database, click the **Different DB Server** checkbox in the *Log Database Login Credentials* field. This enables all of the fields in the *Log Database Login Credentials* field.
13. Enter the hostname of the SQL server where your LOG database will be created into the *Database Server:* field.
14. Use the **Windows Authentication** and **SQL Authentication** radio buttons, to set an authentication scheme appropriate to your installation. If **Windows Authentication** is selected, the *Database Login ID* and *Database Password* fields will be disabled and Fusion RV will be synchronized with the users Windows username and password. If **SQL Authentication** is selected, the *Database Login ID* and *Database Password* fields require the appropriate entries.
15. Click the **Test Connection** button to run a routine that ensures that the information you entered in the *Database Server* and *Database Name* fields is accurate by using those entries to attempt to attach to the database. If the test is successful, an alert stating that the database exists as well as its current schema version will appear. Click **OK** to dismiss it. (If your database is not at the current schema version, you will be prompted later in the install process to confirm upgrade of the database to the current schema version)
16. If the connection test is successful and your database does not exist, an alert stating that the database does not exist will appear. Click **OK** to dismiss it. (You will be prompted later in the install process to confirm creation of this new database)

17. If the connection test fails due to invalid credentials, an alert stating that an instance of SQL Server could not be found will appear. Click **OK** to dismiss it. Verify and correct the data for *Database Server* and *Authentication Credentials* and retest.
18. Click the **SQL Server Disks** checkbox to add the “Select SQL Log Disks” window to the installation process. This will be covered in detail later in this document.
19. To change the SQL Server environment for the REPORT database, click the “Different DB Server” checkbox in the *Report Database Login Credentials* field.
20. *Database Server*: field: requires the hostname of the SQL server where your LOG database will be created.
21. Use the **Windows Authentication** and **SQL Authentication** radio buttons, to set an authentication scheme appropriate to your installation. If **Windows Authentication** is selected, the *Database Login ID* and *Database Password* fields will be disabled and Fusion RV will be synchronized with the users Windows username and password. If **SQL Authentication** is selected, the *Database Login ID* and *Database Password* fields require the appropriate entries.
22. Click the **Test Connection** button to run a routine that ensures that the information you entered in the *Database Server* and *Database Name* fields is accurate by using those entries to attempt to attach to the database. If the test is successful, an alert stating that the database exists as well as its current schema version will appear. Click **OK** to dismiss it. (If your database is not at the current schema version, you will be prompted later in the install process to confirm upgrade of the database to the current schema version)
23. If the connection test is successful and your database does not exist, an alert stating that the database does not exist will appear. Click **OK** to dismiss it. (You will be prompted later in the install process to confirm creation of this new database)
24. If the connection test fails due to invalid credentials, an alert stating that an instance of SQL Server could not be found will appear. Click **OK** to dismiss it. Verify and correct the data for *Database Server* and *Authentication Credentials* and retest.
25. Click the **SQL Server Disks** checkbox to add the “Select SQL Report Disks” window to the installation process. This will be covered in detail later in this document.
26. Click **Next** to display the “Web Service, Web Client and Service Credentials” window.

Web Service, Web Client and Service Credentials Window

The “Web Service, Web Client and Service Credentials” window of the Configuration Manager should be pre-populated with the information you entered during the installation process. This window is provided in the Configuration Manager as a way to make changes after installation should they become necessary.

“Web service, Web Client and Services Credentials” Window

27. If necessary, enter a new data service host name in the *Data Service Host:* field.

NOTE: The *Install Path* field and its adjacent **Browse** button are disabled because the location of the Fusion RV installation is fixed during the install process. If you need to change the location of Fusion RV, it must be uninstalled and reinstalled.

28. The *Service Login Credentials* field and subfields require settings appropriate to your local requirements:

- The **Local System Account** and **This Account** radio buttons allow you to choose between using the predefined, existing Local System Account (which is the built-in Network Service account) and This Account, which allows you to create an Application Pool account by enabling the *App Pool Login ID* and *Password* fields.

NOTE: If you have chosen to install the Media Services, the radio button for the Local System Account is disabled and you must use an application pool account.

The Application Pool account you create can be the same as the Local System or Network Service account, or it can be a different account if there are IIS security considerations that would not apply to the Local System or Network Service account.

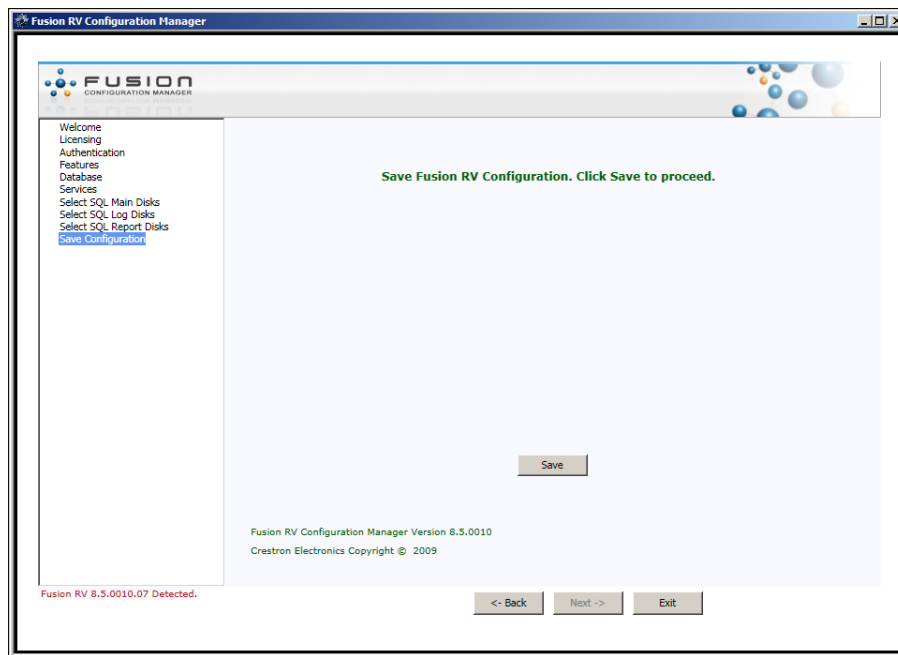
- *App Pool Login ID* field: this field allows you to enter the login ID credentials for the new Application Pool.
- *Password* field: this field allows you to enter the password required by the App Pool Login ID.

29. Clicking on the **Next** button will open the “SQL Server Disk Selection for Fusion RV Database” window if the **SQL Server Disks** checkbox was selected on the “Database Credentials” window for the Main database.

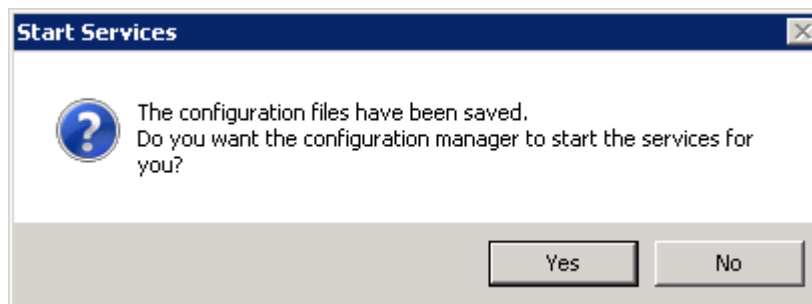
NOTE: Please refer to **Appendix C: SQL Server Disk Selection** for additional information on SQL Server Disk Selection and considerations.

30. Click **Next** to display the “Save Fusion RV Configuration” window.

“Save Fusion RV Configuration” Window



31. If you are satisfied with your changes, click the **Save** button. If you want to exist without saving your changes, click the **Exit** button. Once your changes have been saved, you will see a screen with the message “Fusion RV configuration has been saved.”.
32. Click **Exit** to exit the Configuration Wizard. You will be prompted with this message:



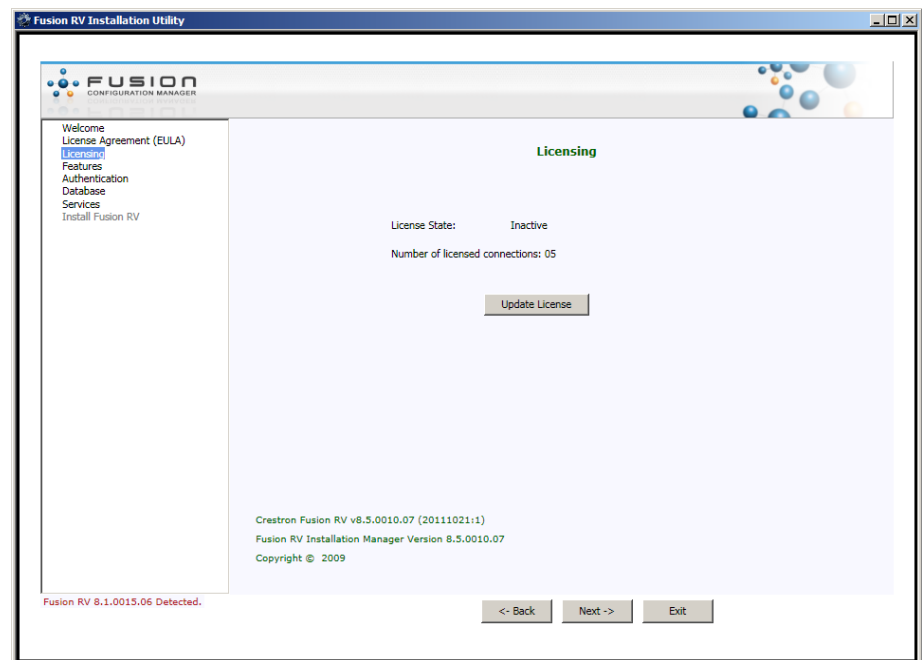
33. Clicking **Yes** will exit the wizard and start the Fusion RV services on the server. Clicking **No** will exit the wizard without starting the Fusion RV service.

Appendix B: Licensing Fusion RV

The “Licensing” window displays the Fusion RV license status for the server. An unlicensed server is allowed 5 SIMPL Windows symbol connections. Once properly licensed, the number of connections is unlimited.

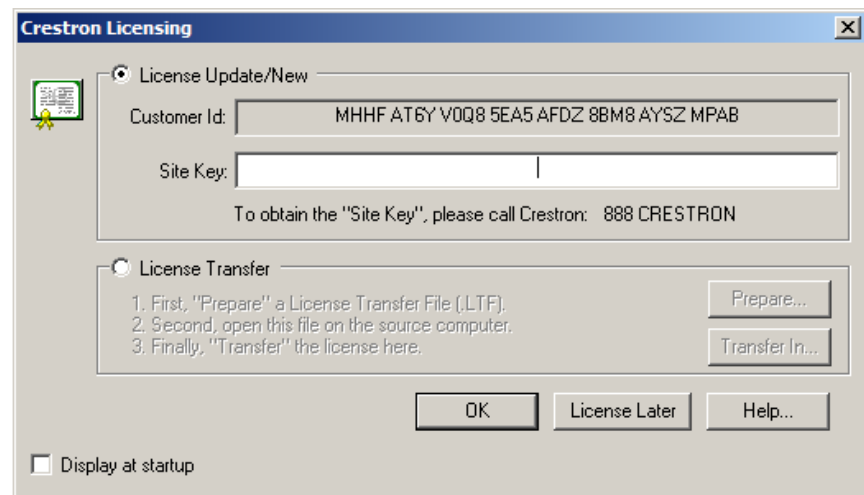
If you are applying a new license, contact your authorized Crestron representative to obtain a license key. The key will be copied in to the site key field of the licensing dialog.

“Licensing” Window



1. To set a license, click the **Update License** button. The “Crestron Licensing” window will display.

“Crestron Licensing” Window

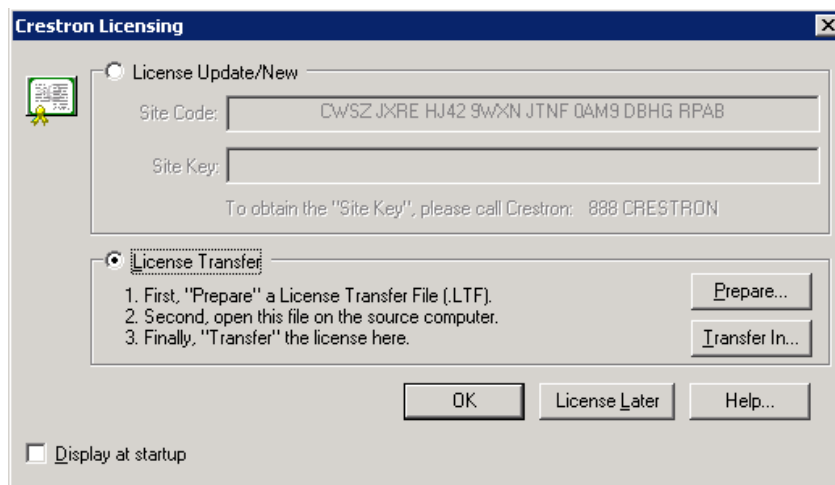


If you are applying a new license, contact your authorized Crestron representative to obtain a license key. The key will be copied in to the “Site Key” field of the licensing dialog.

If a previous license exists on the server where you are now installing Fusion RV, the required License Site Key will be automatically picked up during installation.

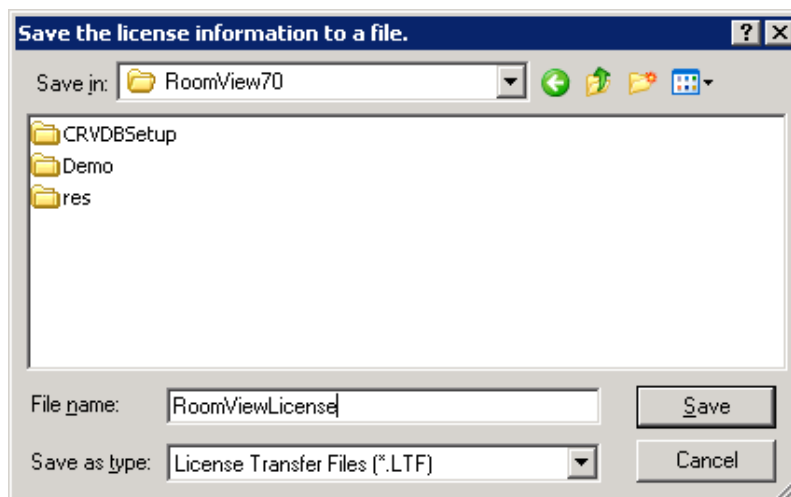
2. If you already have a site key on another computer and wish to transfer it, go to Fusion RV’s *Licensing* tab on the Configuration Manager and click the **Update License** button. This will open the “Crestron Licensing” window as shown below. Click the **License Transfer** radio button and then the **Prepare** button.

“Crestron Licensing” Window on the Unlicensed Server

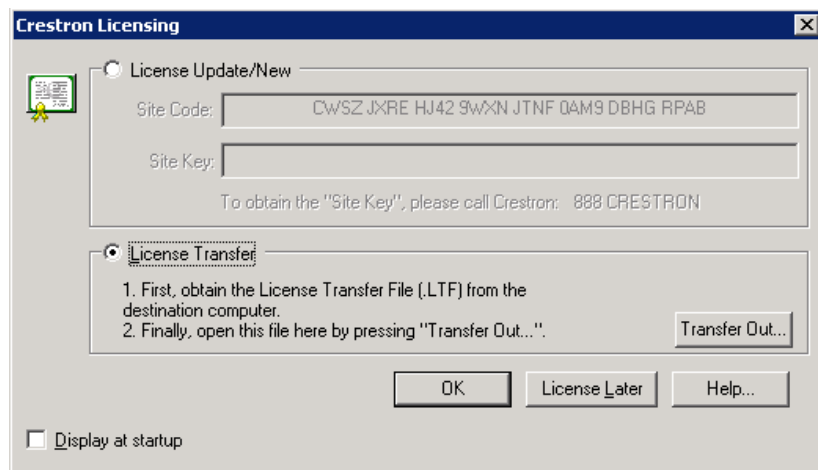


3. The “Save License” window will open. Enter a name for the License Transfer File in the *File Name* field and click **Save**.

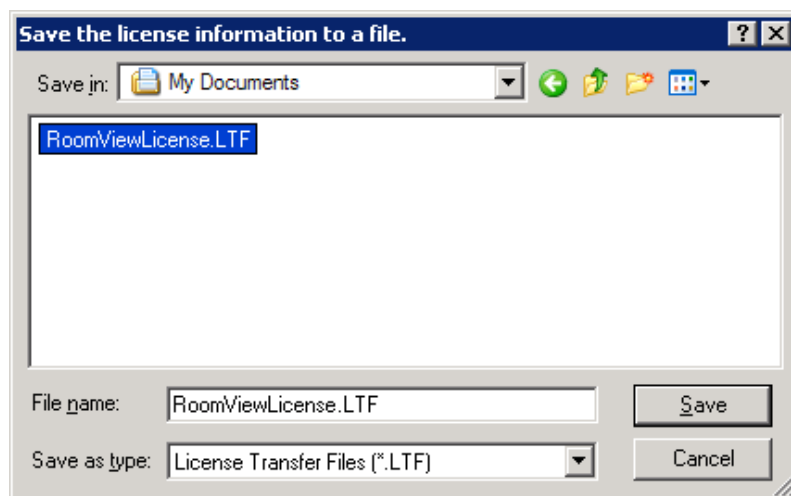
“Save License” Window



4. Move the newly created License Transfer File to the server with the licensed installation of Fusion RV and copy it to the Desktop. Open the Configuration Manager and click the **Update License** button. This will open the “Crestron Licensing” window as shown below.

“Crestron Licensing” Window on the Licensed Server

5. Click the **Transfer Out** button. Browse to the new License Transfer file and click **Open**.

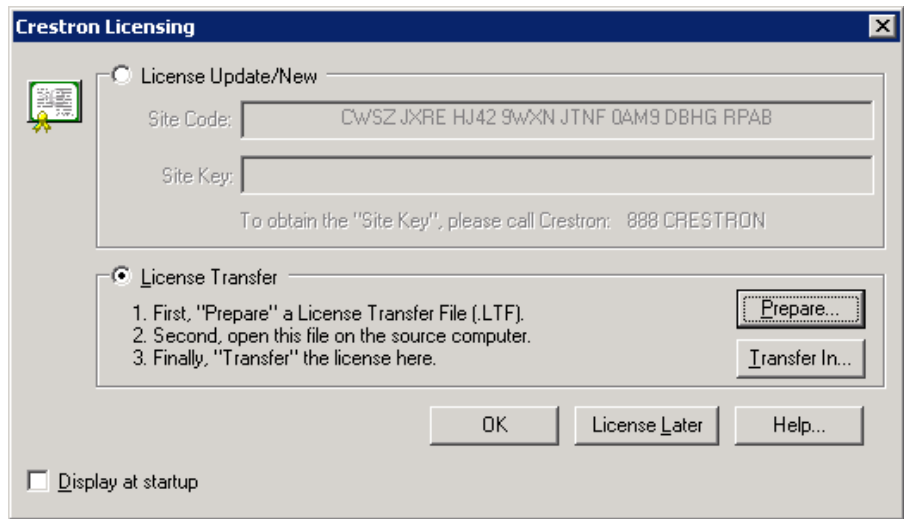
“Open the file with the license information” Window

The new License Transfer file is prepared and ready to be transferred back to the unlicensed computer.

NOTE: Be sure to **not** to click the **Transfer In . . .** button when it becomes enabled.

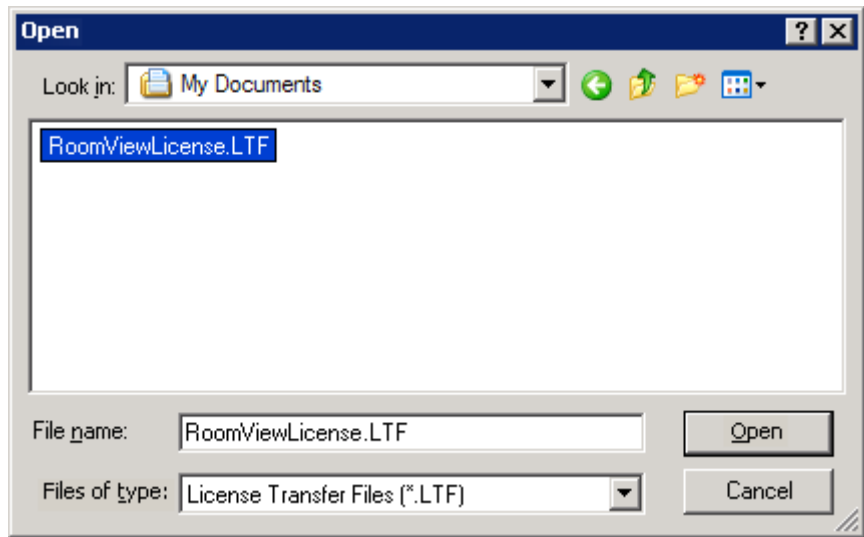
6. Transfer the file to the unlicensed server via your network, USB stick or floppy disk.
7. On the unlicensed server, click **Transfer In** on the “Crestron Licensing” window.

“Crestron Licensing” Window on the Unlicensed Server



- When the “Open” window appears, navigate to the saved License Transfer file, select it, and click **Open**.

“Open” Window



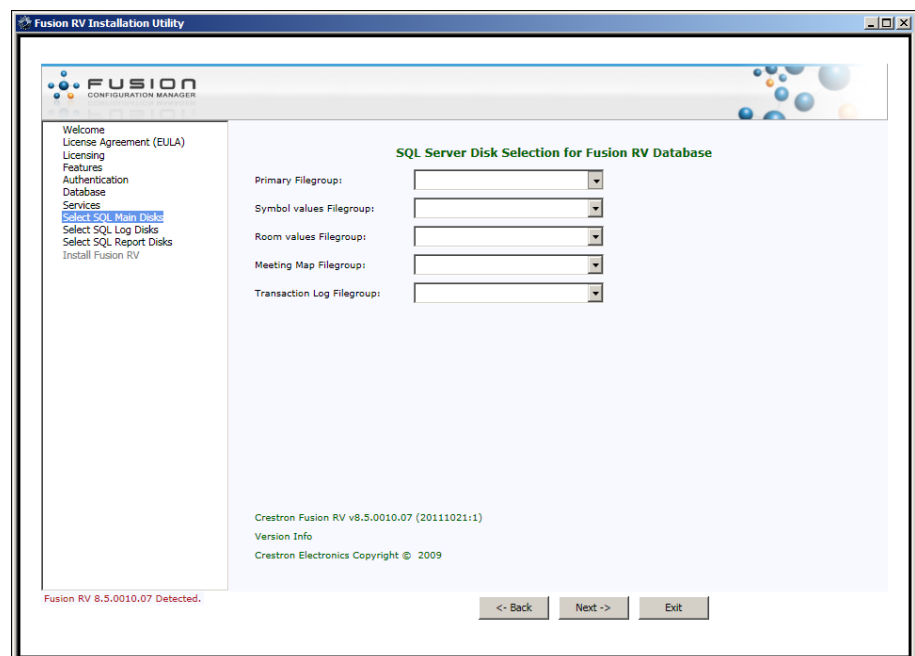
- When the “Open” window closes, click **OK** on the “Crestron Licensing” window. Your license has been transferred. You will see the Number of licensed connections increase to the number of symbol connections you are allowed to use.

Appendix C: SQL Server Disk Selection

The “SQL Server Disk Selection” window allows you to improve Fusion RV performance by breaking out the physical disk location of each filegroup for the three Fusion RV databases: Main Database, Log Database and Report Database. For a small installation however, separate disk drives should not be necessary.

The order in which the SQL server disk selection windows appear depends on the order in which the **SQL Server Disks** check box for each database was clicked on the “Database Credentials” window.

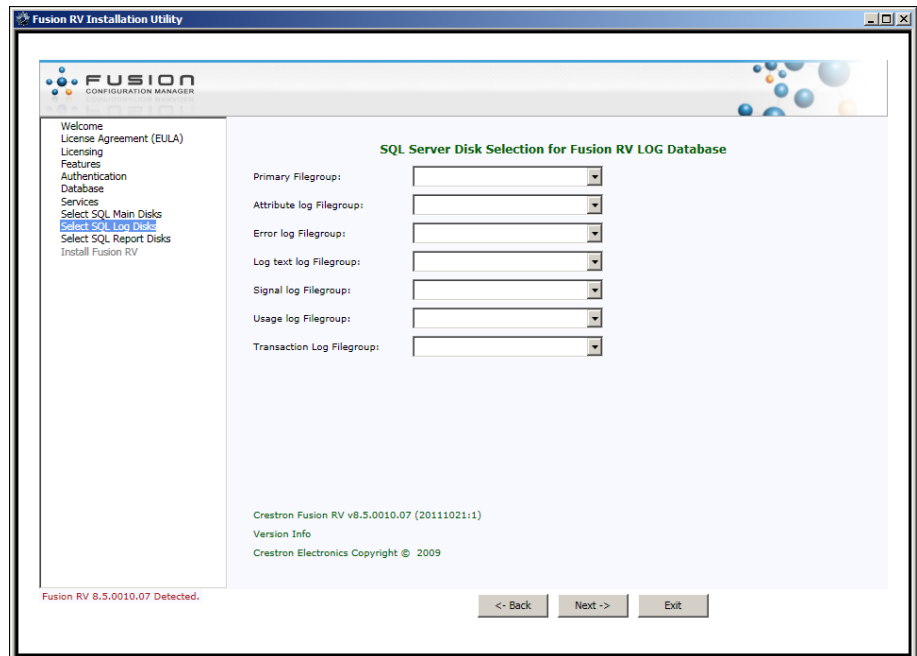
“SQL Server Disk Selection for Fusion RV Database” Window



1. Click the drop down adjacent to each filegroup and choose the destination for that file group keeping in mind the storage and performance requirements of your installation.

Each drop down box displays the available drives (either locally or over a network) and the free space on each drive.

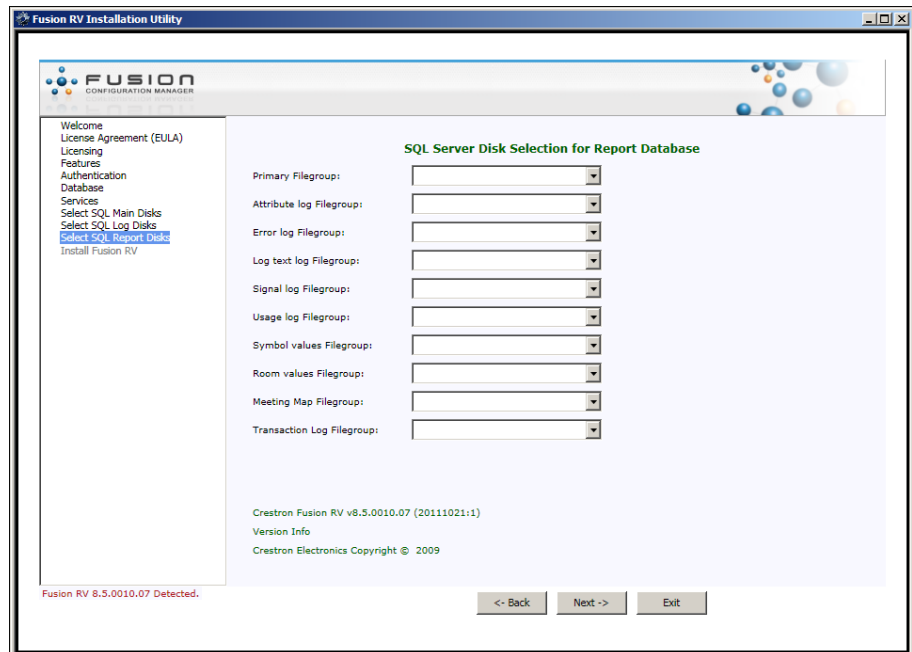
2. This window is provided to maximize Fusion RV storage and performance by allowing you to isolate the various filegroups on their own dedicated drives or drives with sufficient storage capacity.
3. When you have completed your selections, click **Next**. The “SQL Server Disk Selection for Fusion RV LOG Database” window will display if you selected the **SQL Server Disks** checkbox on the “Database Credentials” window for the LOG database.

“SQL Server Disk Selection for Fusion RV LOG Database” Window

4. Click the drop down adjacent to each filegroup, choose the destination for that file group, keeping in mind the storage and performance requirements of your installation.

Each drop down box displays the available drives (either locally or over a network) and the free space on each drive.

5. This window is provided to maximize Fusion RV storage and performance by allowing you to isolate the various filegroups on their own dedicated drives or drives with sufficient storage capacity.
6. When you have completed your selections, click **Next**. The “SQL Server Disk Selection for Fusion RV REPORT Database” window will display if you selected the **SQL Server Disks** checkbox on the “Database Credentials” window for the REPORT database.

“SQL Server Disk Selection for Report Database” Window

7. Click the drop down adjacent to each filegroup, choose the destination for that file group, keeping in mind the storage and performance requirements of your installation.

Each drop down box displays the available drives (either locally or over a network) and the free space on each drive.

This window is provided to maximize Fusion RV storage and performance by allowing you to isolate the various filegroups on their own dedicated drives or drives with sufficient storage capacity.

Appendix D: SQL Server Replication (Publication/Subscription)

Replication is the process of sharing information between databases (or any other type of server) to ensure that the content is consistent between systems. Replication is normally used to increase the number of database servers available to clients, thereby reducing the load on each. In Fusion RV, replication is required for Reporting. Records written to the Main database are moved to the Reporting database through replication. Records written to the Log database are moved to the Reporting database through stored procedures. Generating reports from a reporting database ensures that the primary database is not impacted by potentially large report queries.

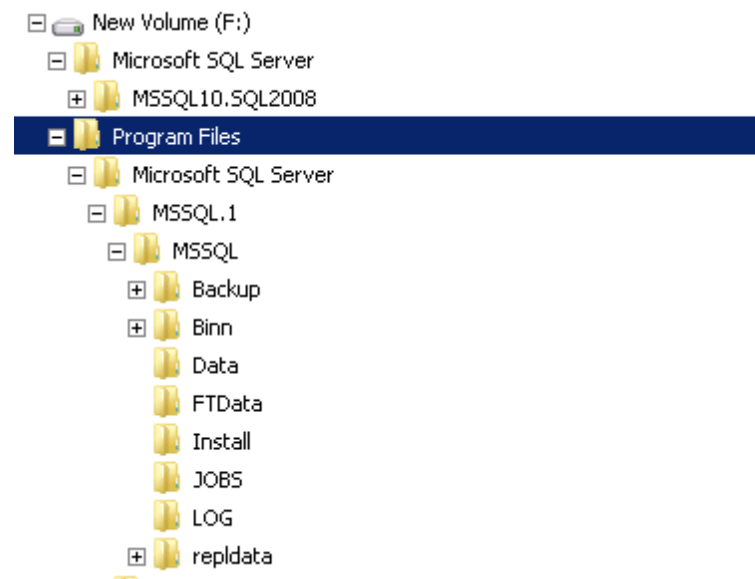
If all three databases (crestronroomview, crestronroomview_Log and crestronroomview_Report) are on a single SQL server, which is the simplest case, then the first four bullet points are most important.

If you do not set up replication, Fusion RV Reporting will not work.

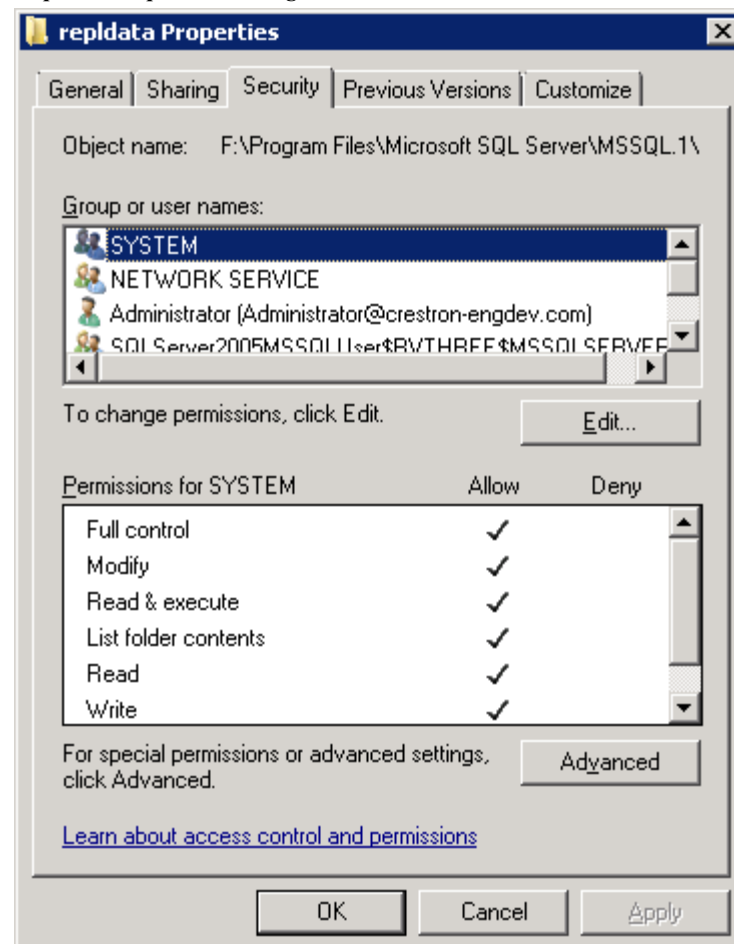
Failure to comply with these points will result in a Fusion RV installation where Reporting will not work.

- The SQL Server account that Fusion RV is being installed under must be sysadmin on the SQL Server.
- The SQL Server Service account must have adequate permissions to perform the following steps:
 - Create REPLDATA directory if it does not already exist.
 - Grant full access of the REPLDATA directory to the SQL Server Service Login account.
 - Start the SQL Server Agent if it is not already started.
- Installing Fusion RV requires 'sysadmin' privileges on the SQL Server.
- The service account that runs the SQL Server service must have full control of the "REPLDATA" directory.
- If any of the three databases reside on a physically different SQL Server or even a different SQL Server instance on the same server, "REPLDATA" must be a shared directory named "REPLDATA".
- If any of the three databases reside on a physically different SQL Server and the SQL Servers are in different Windows Domains, a Domain trust must exist so that the scheduled jobs have adequate permission to run.
- The SQL Agent service must be running and set to automatic.

Typically the "REPLDATA" directory is created in the path of SQL Server's data as shown in the figure on the following page. This occurs when SQL Server is installed.

Repldata Directory Location

If the SQL Server service is running under the “Local System” account, then be sure that the “Local System” account has full control of the “REPLDATA” directory.

“repldata Properties” Dialog Box

Capture-HD Software Installation and Testing

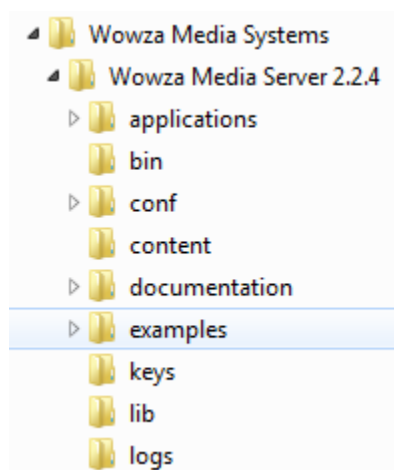
Installation of WOWZA (CaptureLiveHD Streaming Server)

Complete installation instructions can be found here:

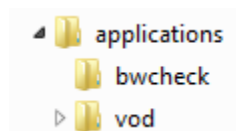
<http://www.wowza.com/forums/content.php?217#installWowza>

NOTE: Before installing WOWZA you MUST install the latest version of Java. Failure to do so will require a manual edit of the WOWZA Java configuration field.

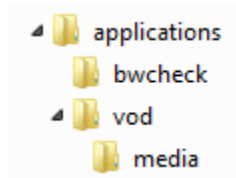
1. Install WOWZA using the installer from <http://www.wowza.com>.
2. Locate the “examples” folder under the “Wowza Media Server” installed location.



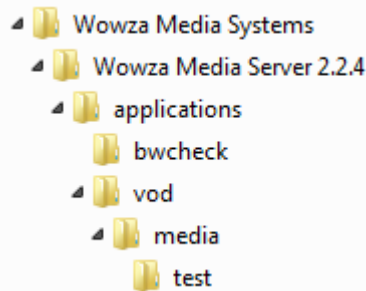
3. Run the .bat file inside “examples/SimpleVideoStreaming”.
4. Run the .bat file inside “examples/BWChecker”.
5. Locate the “applications” folder and check the directory structure. There should be a “vod” folder that was created as a result of running the .bat file from Step 3.



6. Create a folder called “media” inside “vod”.

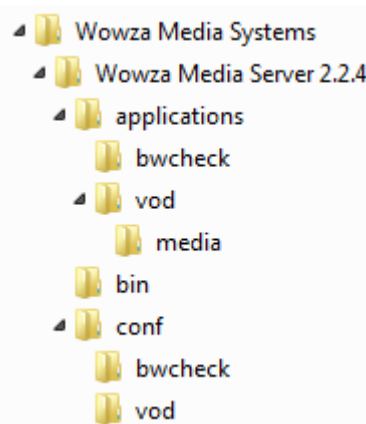


7. Create a folder called “test” inside “media”.



8. Copy the “sample.mp4” file from the “content” folder into “\applications\vod\media\test”. This file will be used to test the Crestron Media Player web interface with the WOWZA server.

9. Locate the “conf/vod” folder.



10. Edit the “Application.xml” file in the “conf/vod” folder.

11. Modify the <StorageDir> tag located under <Streams> to:
 <StorageDir>\${com.wowza.wms.context.VHostConfigHome}/applications/vod/media</StorageDir>

```
- <Streams>
  <StreamType>default</StreamType>
  <StorageDir>${com.wowza.wms.context.VHostConfigHome}/content</StorageDir>
  <KeyDir>${com.wowza.wms.context.VHostConfigHome}/keys</KeyDir>
  <!-- LiveStreamPacketizers (separate with commas): cupertinostreamingpacketizer, smc
  smoothstreamingrepeater, sanjosestreamingrepeater -->
  <LiveStreamPacketizers/>
  <!-- Properties defined here will override any properties defined in conf/Streams.xml for
  <Properties> </Properties>
</Streams>
```

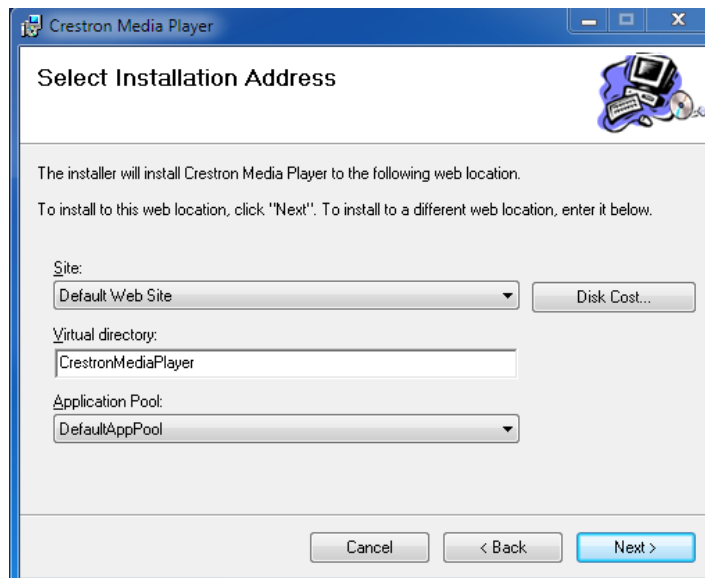
12. Start the WOWZA services if they are not running. Restart them if they are already running.

Installation of the Crestron Media Player web interface

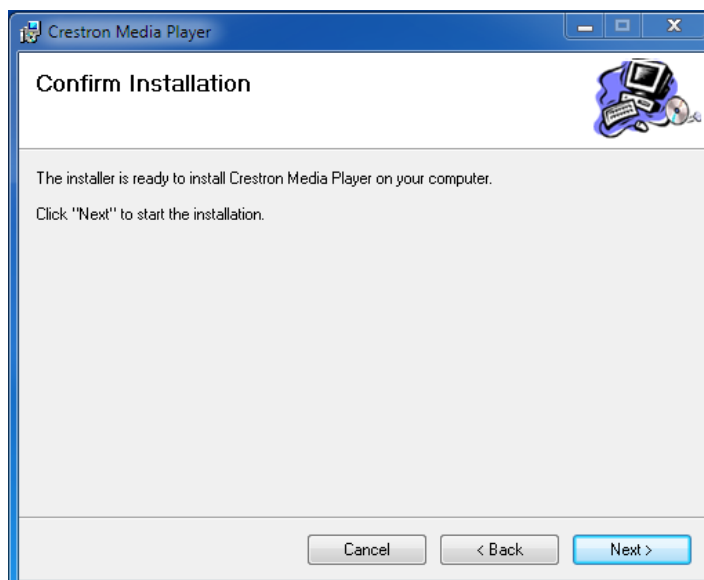
1. Launch the installation wizard. For x86 machines use “CrestronMediaPlayerSetup32.msi”. For x64 machines use “CrestronMediaPlayer64.msi”.



2. Enter the desired virtual web directory. This is the name that will be used in the browser URL. By default, it is "CrestronMediaPlayer". Select the Application Pool. By default, "DefaultAppPool" is selected.



3. Select Next to begin the installation.



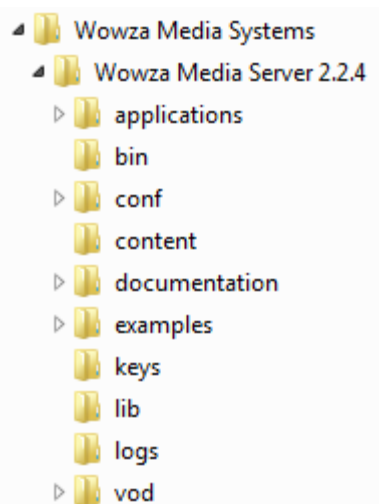
4. A physical directory will be created "inetpub/wwwroot/CrestronMediaPlayer" and all required files will be placed in that directory and sub directories underneath that root.

Testing WOWZA

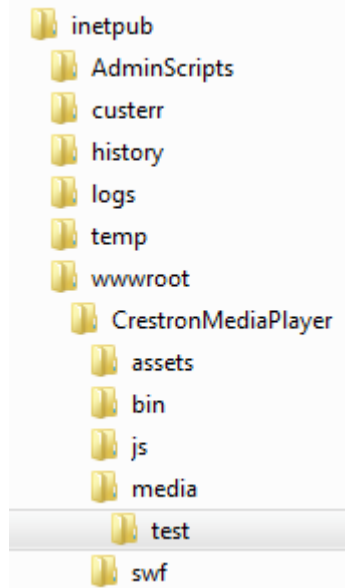
1. To test if the WOWZA services are running, open a web browser and use the following URL:

[http://\[wowza-ip-address\]:1935](http://[wowza-ip-address]:1935)

2. Where [wowza-ip-address] is the ip address of the server running Wowza Media Server. (e.g., <http://my-capture-server:1935/>)
3. A successful response should look something like this: "Wowza Media Server 2 Developer 2.2.4 build27452"
4. To test the Crestron Media Player web interface with WOWZA:WOWZA installs with a sample MP4 video file.
5. Locate the "content" folder under the "Wowza Media Server" installed location.



6. Copy the “sample.mp4” file from that folder to “applications/vod/media/test”.
7. Locate the Crestron “test.xml” meta-data file that was installed with the Crestron Media Player web interface. The file will be located in “inetpub/wwwroot/CrestronMediaPlayer/media/test”.



8. Modify the following field:
<NetConnectionURL>rtmp://localhost/vod/media</NetConnectionURL>
Replace “localhost” with either the machine name where WOWZA was installed or a resolvable domain. (e.g.,
<NetConnectionURL>rtmp://crestron_streaming.com/vod/media</NetConnectionURL><NetConnectionURL>rtmp://svr-cres-stream/vod/media</NetConnectionURL>
9. Use the following URL to test the Crestron Media Player with the WOWZA server:

[http://\[your-web-server\]/CrestronMediaPlayer/cplayer.htm?info=media/test/test.xml](http://[your-web-server]/CrestronMediaPlayer/cplayer.htm?info=media/test/test.xml)

Where “[you-web-server]” is the server where Crestron Media Player was installed.

(e.g.,
<http://crestron.media.com/CrestronMediaPlayer/cplayer.htm?info=media/test/test.xml>)

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