

Crestron Fusion[®] Software Enterprise Management Platform

Installation Guide Crestron Electronics, Inc.

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Crestron Fusion Software: Enterprise Management Platform

Introduction

This document is provided as an aid to the installation of Crestron Fusion software for deployment on servers or virtual machines running on-premises or hosted in a data center that has network connectivity to on-premises devices.

Refer to the Crestron[®] website for release notes on the features and fixes added to the latest release of the Crestron Fusion software.

For information regarding best practices for using the Crestron Fusion software, refer to Crestron Fusion Software Best Practices (Doc. 7891) at <u>www.crestron.com/manuals</u>.

Prerequisites

The software or software components described in this section must be installed and available to the system where Crestron Fusion is to be installed. The software must have access to these components either directly or over a network. Be sure that all of the latest updates for the software are also installed.

The prerequisites for a successful Crestron Fusion installation are discussed in this section.

NOTE: This guide assumes that the installer possesses a thorough knowledge of Microsoft[®] Windows Server[®] 2008 R2, Microsoft Windows Server 2012, Microsoft Windows Server 2012 R2, or Microsoft Windows Server 2016 operating systems and that the chosen Windows[®] server is correctly installed.

NOTE: Before installing the Crestron Fusion software, be sure that all Microsoft Windows software updates have been installed.

NOTE: The Crestron Fusion Installer installs all of the required operating system components when the server binaries are present on the server disk.

Installation Requirements

Operating System Requirements

The Crestron Fusion software supports Microsoft Windows Server 2008 R2, Microsoft Windows Server 2012, Microsoft Windows Server 2012 R2, and Microsoft Windows Server 2016 operating systems.

NOTE: Crestron Fusion software is not supported on the Microsoft Windows Server 2008 operating system (released prior to Microsoft Windows Server 2008 R2 operating system).

Operating System Component Requirements

The operating system roles and features (listed below) are required by Crestron Fusion software. The installer automatically installs any components that are not already present.

- Active Directory Lightweight Services for the Lookup Room Alias feature
- The Application Server Role with the following Application Server Role Services must include the following:
 - o .NET Framework 4.5
 - o COM+ Network Access
 - o TCP Port Sharing
 - o Web Server (IIS) support
 - o Windows Process Activation Service Support including all subcomponents
- The Web Server (IIS) Role with the Web Server Role Service must include the following:
 - o Web Server
 - Common HTTP features, including Static Content, Default Document, HTTP Errors, and HTTP Redirection
 - Health and Diagnostics, including HTTP Logging, Logging Tools, Request Monitor, and Tracing
 - o Performance with Static and Dynamic Content Compression
 - Security with Basic Authentication, Windows Authentication, URL Authorization, Request Filtering, and IP and Domain Restrictions
 - Application Development, including ASP.NET, .NET Extensibility, ISAPI Extensions, and ISAPI Filters
 - Management Tools, including Management Console, Management Scripts and Tools, Management Service, Management Compatibility, Metabase Compatibility, WMI Compatibility, Scripting Tools, and Management Console

The following features must be installed:

- .NET Framework 3.5 features
- .NET Framework 4.5 features
- Message Queuing, including Message Queuing Service and Message Queuing Server with HTTP Support

- Remote Server Administration Tools, including Role Administration Tools with Active Directory Domain Services, Active Directory Lightweight Directory Services (AD LDS), AD LDS Snap-ins, Command-Line Tools, Active Directory module for Windows PowerShell[®] software, and Web Server Tools
- RPC over HTTP Proxy
- SMTP Server
- Windows Process Activation Service, including Process Model, .NET Environment, and Configuration APIs

Additional Requirements

Additional requirements for the Crestron Fusion application are shown below.

 SQL Server[®] Version: SQL Server 2008 R2, SQL Server 2012, SQL Server 2014, or SQL Server 2016 database is available to the Crestron Fusion software over the network.

NOTE: SQL Express or Lite versions are not supported.

- Crestron Toolbox[™] software or the Crestron Toolbox Server Edition should be installed using the current version available at <u>www.crestron.com/software</u>.
- Appropriate virtual directories must be set up for the RSS feeds used for publishing data from the CaptureLiveHD[®] system. If the Crestron Fusion software is not used in conjunction with the CaptureLiveHD system, the virtual directories are not required.
- One of these web browsers must be installed on workstations that access the Crestron Fusion server:
 - o Internet Explorer® browser version 10.0 or later
 - o Firefox[®] browser version 42.0 or later
 - o Chrome™ browser version 47.0 or later
 - o Safari® browser version 9.0.1 or later
- Crestron Fusion Insite technology requires that the Java[®] SE Runtime Environment (JRE) must be installed on every Crestron Fusion server to be able to import IFC files as interactive 3D building floor plans. JRE can be downloaded from the Oracle[®] website at <u>http://www.oracle.com/technetwork/java/javase/downloads</u>.

The user must first accept the Oracle Binary Code License Agreement, and then select the Windows x64 EXE download to proceed with the installation. JRE version 7u79 is the minimum version that is compatible with Fusion Insite.

Domain Service Account Requirements

By default, Crestron Fusion software is installed with Local System Accounts. However, it is recommended that the Crestron Fusion services are run from a Domain Service Account. To install the Crestron Fusion software with a Domain Service Account, the following procedure must be performed in addition to meeting the prerequisites described in the "Operating System Component Requirements" section on page 2.

NOTE: If using a Domain Service Account for installation or upgrade, the service account must have the SysAdmin role on the SQL Server database.

- 1. Determine the Domain Service Account to be used.
- 2. Configure the Crestron Fusion services to run using this account.
- 3. Add the account to the SQL Server database with **db_owner** and **public permissions** mapped to the Crestron Fusion catalog.

Windows vs. Forms Authentication

Authentication dictates how a user logs into Crestron Fusion software. User access to the software is based on the group membership and the security policies that have been defined for those groups within the software.

In Windows authentication, users and groups are accessed from the Active Directory. The user accesses Crestron Fusion software with the same credentials that were used to log into the computer. These credentials are passed to the Crestron Fusion software which retrieves a list of groups from Active Directory. The group list is compared to the security access policies defined in Crestron Fusion software. Access is assigned based on the policies for the user's groups. Windows authentication is more secure than Forms authentication. Windows Authentication requires management and configuration from within Active Directory.

In Forms authentication, users and groups are defined within Crestron Fusion. Security is applied the same way as Windows authentication, but it is applied to the groups and users that have been defined within Crestron Fusion. Active Directory is not used.

User access is easily managed by Crestron Fusion administrators and can accommodate users that are not part of the domain or that do not have domain credentials. However, Forms authentication is less secure and entails more management.

Windows Active Directory Integration (Windows Authentication) Requirements

For installations using Windows Authentication, Active Directory groups provide different levels of access to the software. Existing Active Directory groups can be used. For example, Active Directory Domain Groups and Domain User Accounts can be set up as follows:

- For Crestron Fusion administrators, add the Domain User Accounts to the DOMAIN\RoomViewAdmins group.
- For Crestron Fusion users, add the Domain User Accounts to the DOMAIN\RoomViewUsers group.
- For Crestron Fusion managers, add the Domain User Accounts to the DOMAIN\RoomViewManagers group.

Apply these groups to the Functional and Object security policies in Crestron Fusion.

NOTE: When entered into Crestron Fusion software, group names used for Windows Authentication are case sensitive.

E-mail Alert Requirements

For installations using e-mail alerts, an SMTP Server must be available for sending e-mail.

Microsoft Exchange Requirements

For Microsoft Exchange environments, the following must be available:

- Microsoft Exchange 2010 or Microsoft Exchange 2013 with Exchange Web Services (EWS) Managed (preferred)
- Full mailbox access to Microsoft Exchange resource mailboxes using domain credentials or a domain service account that uses EWS impersonation for the resource accounts

Notes® and Domino® Software Requirements

For installations integrating Domino (versions 7.0, 8.0, 8.5, and 9.0) as the scheduling calendar, the following must be present in addition to the prerequisites shown in the "Operating System Component Requirements" section on page 2.

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

Before Installing Crestron Fusion

Before Crestron Fusion software is installed, the SQL Server Agent must be running.

For more information, refer to Crestron True Blue Online Help <u>Answer ID 5429</u>, or contact the Crestron Fusion Support Group (FSG) at 855-754-5962 or e-mail <u>fsg@crestron.com</u> for assistance.

Rights

The account installing Crestron Fusion software must have the following rights:

- Local Administrator's rights on any server where Crestron Fusion components are installed
- SQL Server login with SysAdmin rights (runtime does not require SysAdmin, it requires only db_owner on the Crestron Fusion database)
- A Domino User Account with read access to the Domino Directory and read/write access to the Resource Reservations database (if Lotus Notes[®] software is being used for scheduling)

NOTE: By default, the 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 may be composed of multiple databases spanning Domino servers and domains. Therefore, the user that has access to the Domino database should have access to all necessary resource reservations databases and the main Domino Directory Server.

Installation Procedure

The installation is performed using a setup wizard should take approximately one hour.

NOTE: After the installation procedure is complete, changes to the Crestron Fusion components can be made in Configuration Manager. Refer to the "Configuration Procedure" section on page 12.

- 1. Log in to the Crestron Fusion server with the Domain Service Account or another Local Administrator Account. For more information, refer to the "Domain Service Account Requirements" section on page 3.
- 2. Right-click the Installer icon from the desktop and select Run as administrator.

Installer Icon



The installer checks the system to see if all of the prerequisites to run Crestron Fusion software are in place. If any prerequisites are missing, they are installed at this time.

NOTE: For specific details on prerequisites, refer to the "Prerequisites" section on page 1.

3. If the User Account Control window opens asking the user to allow the program to make changes to the computer, click Yes.

NOTE: The installation of Microsoft .NET Framework 4.5 may require a reboot. The reboot occurs silently without a prompt. If the installation is accepted, be prepared to allow the server to reboot.

Once the process is complete, the **Crestron Fusion Installation** window opens. The progress of the installation is displayed at the bottom of the window.

Crestron Fusion Installation Window



When the **Welcome to the Crestron Fusion Setup Wizard** window opens (after a short delay), review the instructions on the screen.

Welcome to the Crestron Fusion Setup Wizard Window

0	Setup - Crestron Fusion - 🗖 🗙
	Welcome to the Crestron Fusion Setup Wizard This will install Crestron Fusion version 11.0.0001.0050 on your computer. It is recommended that you close all other applications before continuing. Click Next to continue, or Cancel to exit Setup.
	Next > Cancel

4. Click Next to open the License Agreement window.

License Agreement Window

0	Setup - Crestron Fusion	×			
Licen: Ple	se Agreement ase read the following important information before continuing.				
Plea	Please read the following License Agreement. You must accept the terms of this agreement before continuing with the installation.				
	CRESTRON SOFTWARE END-USER LICENSE AGREEMENT Rev. 2.0, 01 August 2014				
TI pr ot	Thank you for using this Crestron end-user software product (the "Software"). By downloading, installing, or otherwise using the Software or any portion thereof, or using a Crestron Device on which the Software is pre-				
) ()	I accept the agreement I do not accept the agreement				
	<back next=""></back>	Cancel			

5. Review the end-user license agreement and then click I accept the agreement.

NOTE: The Crestron Software End-User License Agreement is also available at <u>www.crestron.com/legal/software_license_agreement</u>.

6. Click Next to open the Select Destination Location window.

Select Destination Location Window

0	Setup - Crestron Fusion	-		x
	Select Destination Location Where should Crestron Fusion be installed?		•	
	5etup will install Crestron Fusion into the following folder.			
	To continue, click Next. If you would like to select a different folder, click B	rowse		
	C:\Program Files\Crestron\Fusion	Brows	e]
	At least 1,413 0 MB of free disk space is required			
	Ac lease 1,413.0 Mb or free disk space is required.			
	< Back Next >		Can	cel

- 7. To select an installation location that is different from what is displayed, click **Browse** and then select the desired installation location.
- 8. Click Next to open the Select Start Menu Folder window.

Select Start Menu Folder Window

0	Setup - Crestron Fusion	-		x
Sele: W	ct Start Menu Folder here should Setup place the program's shortcuts?		•	
	Setup will create the program's shortcuts in the following Start Menu folder.			
To) continue, click Next. If you would like to select a different folder, click B	rowse	•	
	restron Fusion	Brows	ə	
]Don't create a Start Menu folder			
	< Back Next >		Can	cel

9. To select a shortcut location that is different from what is displayed, click **Browse** and then select the desired location. To prevent the software from creating a shortcut, ensure the **Don't create a Start Menu folder** check box is not checked.

10. Click Next to open the Select Additional Tasks window.

Select Additional Tasks Window

0	Setup - Crestron Fusion 📃 🗖 🗙
	Select Additional Tasks Which additional tasks should be performed?
	Select the additional tasks you would like Setup to perform while installing Crestron Fusion, then click Next. Additional icons: Create a desktop icon
	< Back Next > Cancel

- 11. Click the Create a desktop icon check box to create a shortcut on the desktop.
- 12. Click Next to open the Ready to Install window.

Ready to Install Window

0	Setup - Crestron Fusion 📃 🗖 🗙
	Ready to Install Setup is now ready to begin installing Crestron Fusion on your computer.
	Click Install to continue with the installation, or click Back if you want to review or change any settings.
	Destination location: C:\Program Files\Crestron\Fusion
	Start Menu folder: Crestron Fusion
	< Back Install Cancel

13. Click Install to continue the installation process and open the Installing window.

Installing Window

0	Setup - Crestron Fusion	- 🗆 X
	Installing Please wait while Setup installs Crestron Fusion on your computer.	• <u>•</u> ••
	Extracting files C:\Program Files\Crestron\Fusion\FSM\FusionApplications.zip	
		Cancel

After the software is installed in the designated folder, the **Completing the Crestron Fusion Setup Wizard** window opens.

Completing the Crestron Fusion Setup Wizard Window



14. Click Finish. After a delay, the Configuration Manager Installation window opens.

Configuration Manager Installation Window

*	Crestron Fusion Configuration Manager	_ D X
Crestron Fusion) Configuration M	lanager (11.0.1.50)
Installation	Service Runtime Credentials Crestron Fusion® Services Manager is not installed as a service. Enter the credentials and press the Install button below. © Use Specified Account Login ID: a Password: ••••••••	
	A Back Next	Exit

The next part of the process is to configure an instance. Proceed to the "Configuration Procedure" section on the following page for instructions.

Configuration Procedure

Crestron Fusion instance configuration is performed using a setup wizard. After configuration is complete, an instance needs to be configured using the FSM (the Crestron Fusion Services Manager).

The Configuration Manager provides an easy-to-use interface for defining or changing certain required settings that allow all installed software components to interact. The Configuration Manager completes the installation and manages the starting and stopping of the FSM. An instance is an environment (files, folders, processes, websites, and services) that represents Crestron Fusion.

NOTE: To change setup and configuration settings after the initial installation and configuration are complete, refer to the applicable sections of this document.

Follow the steps below to configure an instance using the FSM.

*	Crestron Fusion * Configuration Manager	_ 0 X
Crestron Fusion) Configuration M	anager (11.0.1.50)
Installation	Service Runtime Credentials Crestron Fusion® Services Manager is not installed as a service. Enter the credentials and press the Install button below. © Use Specified Account © Local System Account Login ID: sa Password: •••••••••	
		Exit

Installation Window

1. From the Installation window, set the service runtime credentials by clicking either Use Specified Account or Local System Account. Enter a Login ID and Password.

2. Click **Install**. After the FSM is installed as a service and automatically starts, the **Summary** window opens.

Summary Window

÷	Crestron Fusion® Configuration Man	ager 📃 🗖 🗙
Crestron Fusion CLOUD)	Configuration Manager (11.0.1.50)
Summary Authentication Database Licensing Services Apply Settings	About Creatron Fusion® Configuration Manager, Version 11.0.1.50 Crestron Fusion® Services Manager (running), Version 11.0.1.50 Copyright 2016 Creatron Electronics. Inc. All Rights Reserved. No part of this software may be reproduced in any form, machine or natural, without the express written consent of Crestron Electronics. Crestron Support Information Import settings from file Server Server Server Name: RXS-2K12-MANGO Database No information is available because no instance exists	Licensing No information is available because no instance exists Fusion Process No information is available because no instance exists
	Fusion Services Manager:	< Back Next ► Exit

In the **About** section, the user can view information such as how to contact Crestron support and import configuration data. The configuration data is useful in a multiserver environment.

• Click the **Crestron Support Information** link to access support, training, and additional resources for Crestron Fusion.

	Crestron Support		x
CRESTRO	N.		^
Support			
This product is supported by the Cress Email <u>fsg@crestron.com</u> Phone: Crestron True Blue Suppo Outside USA: See <u>http://www.cre</u>	stron Fusion Support Group (FSG): nt team at 1-888-CRESTRON in the US <u>estron.com/contact/phone_and_email_support/</u>		
Training			
To request a training session, pleas and provide three (3) dates/times t	se <u>e-mail FSG</u> with the Subject: Fusion Training . hat are convenient to schedule the training.	Request	
Additional Resources			~
	Close		

• Click the **Import settings from file** link to import all configuration data from a file.

In the **Server**, **Database**, **Licensing**, and **Fusion Process** sections, the user can view the server name, database and licensing information, and application process details.

3. Click **Next** to open the **Authentication** window.

Authentication Window

*	Crestron Fusion® Configuration Manager	_ _ X
Crestron Fusion CLOUD.		Configuration Manager (11.0.1.50)
Summary	Web Application Security	
Authentication	Authentication Method: O Windows O Forms	
Database Licensing	Administrator Group Name: RoomView Administrators	
Services		
Apply Settings		
	Fusion Services Manager:	

- 4. Choose the Authentication method for client access, either Windows or Forms.
- 5. Enter an Administrator Group Name.
- 6. Click **Next** to open the **Database** window.

Database Window

÷	Crestron Fusion ® Configuration Manager
Crestron Fusion	Configuration Manager (11.0.1.50)
Summary	C Database Server
Authentication	Server Name: Port: 1433 Database Name:
Database	
Licensing	Database Install/Update Credentials (SYSADMIN)
Services	Authentication Mode: O Windows O SQL Server
Apply Settings	Login ID: Password:
	Database Runtime Credentials Authentication Mode: O Windows O SQL Server
	Login ID: Password:
	Database Options
	Fusion Services Manager: 🔍 🔳 🔳 📲 🖉 Back 🛛 Next 🕨 🖉 Edit

- 7. In the Database Server section, do the following:
 - a) Enter the Server Name to be used with the main Crestron Fusion database.
 - b) Enter the **Port** (number) for the database server.
 - c) Enter the **Database Name** that Crestron Fusion is to connect to or to create.

- 8. In the **Database Install/Update Credentials (SYSADMIN)** section, do the following:
 - a) Choose the Authentication Mode, either a Windows or SQL Server for client access.
 - b) Enter the Login ID and Password. These credentials are used for test connection.
 - If **Windows** is selected, use the format *user@domain* when entering the login ID. A login ID and password are required.
 - If **SQL Server** is selected, the SQL Server database defines the login ID and password to be authenticated. A login ID and password are required.
- 9. In the Database Runtime Credentials section, do the following:
 - a) Choose the Authentication Mode, either Windows or SQL Server for client access.
 - b) Enter a Login ID for the account that connects to the database at runtime.
 - c) Enter the **Password** for the runtime database account.
- 10. Click **Test Connection** to test the connection to the specified database server using the administrative database credentials, and display the database options.
- 11. In the **Database Options** section, do the following:
 - a) Click the Force DB Update check box to force a database update.
 - b) Click the **Use SQL Disks** check box to create a database. The **Use SQL Disks** feature is used only when creating a new database.

NOTE: For more information on the Force DB Update and Use SQL Disks features, refer to "Appendix A: Forcing a Database Update" on page 22 and "Appendix B: Specifying SQL Server Database Disks" on page 24.

NOTE: When entering credentials, refer to the "Prerequisites" section on page 1.

12. Click Next to open the Licensing window.

Licensing Window

e		Crestr	on Fusion® Configu	ration Manag	er	
Crestron Fusion)					Configuration Man
Summary	Component	Licensed	Date Licensed	Count	Expires	
Authentication	Fusion RV®	License Entered				Update
Database	Fusion EM®	License Entered		-	-	Update
Licensing	Crestron PinPoint™	No		0		Update
Apply Settings	L					
l	usion Services Manager					
	unon services manager					d Back Next b
						Back Next

13. Click **Update** (located next to the product(s) to be licensed) to open the **Crestron** Licensing window.

NOTE: The Crestron Fusion and PinPoint[™] software are individually licensed.

NOTE: For information on licensing a software product at a later date, refer to "Appendix C: Licensing Software" on page 27.

Crestron Licensing Window

	Crestron Licensing	x			
	To obtain the "Site Key", please call Crestron: 888 CRESTRON C License Transfer I. First, "Prepare" a License Transfer File (LTF). 2. Second, open this file on the source computer. 3. Finally, "Transfer" the license here. Transfer In				
OK License Later Help					

14. Enter a Site Key and then click OK.

NOTE: If applying for a new license, contact a Crestron representative to obtain a site key, or send the purchase order (PO) to <u>license@crestron.com</u>.

NOTE: For more information on licensing, refer to Crestron True Blue Online Help <u>Answer ID 5429</u>.

15. From the Licensing window, click Next to open the Services window.

Services Window

*	Crestron Fusion® Configuration Manager	_ 0 X
Crestron Fusion	Confi	iguration Manager (11.0.1.50)
Summary Authentication	Fusion Web Client Web Site Default Web Site	
Database Licensing Services Apply Settings	Web Services Credentials (App Pool)	
	Fusion Services Manager: COO CONTRACTOR	Next ► Exit

- 16. In the **Fusion Web Client** section, click the **Web Site** drop-down list to select the website where the Crestron Fusion Web Client and services are to be installed.
- 17. In the Web Services Credentials (App Pool) section, do the following:
 - a) Choose the account type by clicking either Local System Account or Use Specified Account. For account information, refer to the "Domain Service Account Requirements" section on page 3.
 - b) Enter the Login ID and Password to be used by the Crestron Fusion software.
- 18. Click Next to open the Apply Settings window.

Apply Settings Window Showing Summary Tab

*	Crestron Fusion® Configuration Manager	_ _ X
Crestron Fusion CLOUD)	Configuration Manager (11.0.1.50)
Summary Authentication Database Licensing Services Apply Settings	Summary Messages Configuration manager will use the following settings when you press Apply: Authentication Method: Forms Administrator Group Mame: RoomView Administrators Fusion RM® License: Not Licensed Pusion RM® License: Not Licensed Database Install/Update Credentials (SYSADMIN) User ID: (No authentication) Database Access User ID: (SQL Server authentication) Web Site: Default Web Site Web Service Credentials (App Pool) User ID:	
	Fusion Services Manager:	Back Apply Exit

Apply Settings Window Showing Messages Tab

*	Crestron Fusion® Configuration Manager	_ D X
Crestron Fusion CLOUD.)	Configuration Manager (11.0.1.50)
Summary Authentication Database Licensing Services Apply Settings	Summary Messages 02/29/16 12:41:25:2397 Instance state changed to Stopped 02/29/16 12:43:28:9834 Instance state changed to New	
	O Verbose	
	Fusion Services Manager:	Back Apply Exit

In the Apply Settings window, the user can access the following tabs:

- The **Summary** tab displays a summary of the configuration settings entered.
- The **Messages** tab displays date- and time-stamped messages regarding the software installation. Click the **Verbose** check box to display detailed information about messages.

NOTE: Be sure to review and verify the information shown in the **Summary** tab before clicking **Apply** to commit the changes to the FSM.

19. Click **Apply** to commit the changes to the FSM. It may take several minutes for the FSM to create the instance. The status of the instance creation is shown in the **Messages** tab.

Messages Tab Showing Status

			Configuration Manager (11.
ammani	Summary Messages		
Authentication	02/29/16 13:01:45:9814 ApiService/help/ 02/29/16 13:01:46:0126 ApiService/help/ 02/29/16 13:01:46 1064 ApiService/help/	html/M_Crestron_Fusion_API_Entities_API_vers html/M_Crestron_Fusion_API_Resources_Action html/M_Crestron_Fusion_API_Resources_Action	nResource_DeleteAction.htm nResource_DeleteAction.htm
latabase	02/29/16 13:01:46.1220 ApiService/help/f	html/M_Crestron_Fusion_API_Resources_Action	nResource_GetActions.htm
icensing	02/29/16 13:01:46.1376 ApiService/help/l	html/M_Crestron_Fusion_API_Resources_Action	nResource_PostAction.htm
consing	02/29/16 13:01:46.1689 ApiService/help/l	html/M_Crestron_Fusion_API_Resources_Action	nResource_PutAction.htm
ervices	02/29/16 13:01:46 2158 AniSenvice/help/1	html/M_Crestron_Fusion_API_Resources_Action	nResource_senaacoon.ntm
poly Settings	02/29/16	13:01:46.2470	ApiService/help/html/
	M_Crestron_Fusion_API_Resources_Appoi	intmentResource_DeleteAppointment.htm	
	02/29/16 13:01:46.2626 ApiService/help/l	ntml/M_Crestron_Fusion_API_Resources_Appo	intmentResource_GetAppointment.htm
	02/29/16	13:01:46.2939	ApiService/help/html/
	M_Crestron_Fusion_API_Resources_Appoint	ntmentResource_GetAppointments.htm	AniConsist Ander Astrold
	M Creation Eurion ADI Resources Appoi	intmantParource_BortAppointment.htm	ApiService/heip/html/
	0229/1613.0146.8377 ApiService/help/ 0229/1613.0146.4189 ApiService/help/ 0229/1613.0146.4189 ApiService/help/ 0229/1613.0146.4189 ApiService/help/ 0229/1613.0146.7002 ApiService/help/ 02/29/1613.0146.7314 ApiService/help/ 02/29/1613.0146.7627 ApiService/help/	International Consequences and a second seco	intmentResource_PutAppointment.htm intmentResource_ctor.htm Resource_DeteAsset.htm Resource_GetAsset.htm Resource_GetAsset.htm Resource_PostAsset.htm Resource_PutAsset.htm
	(✔) Verbose		

20. To start the instance, click play located next to the traffic light.

After the instance has been created, a **Tools** option (which accesses additional features) is available on the left side of the screen.

Summary Tab after Instance is Created

*	Crestron Fusion® Configuration Manager	_ O X
Crestron Fusion CLOUD)	Configuration Manager (11.0.1.50)
Summary Authentication Database Licensing Services Apply Settings	Summary Messages Configuration manager will use the following settings when you press Apply: Authentication Method: Forms Administrator Group Name: RoomView Administrators Fusion RV® Licenses Not Licensed Fusion EM® Licenses: Not Licensed Oatabase Install/Update Credentials (SYSADMIN) User ID: (No authentication) Database Access User ID: sa (SQL Server authentification)	
Tools	Web Site: Default Web Site: Web Service Credentials (App Pool) User ID: crestron-engdev/userv	
		Back Apply Exit

21. Click Exit to close the Configuration Manager.

The next part of the process is to validate the installation. Proceed to the "Validating the Installation" section on the following page for instructions.

Validating the Installation

This procedure should be performed after the installation and configuration procedures have been successfully completed.

1. Enter the following URL into a browser to open the Crestron Fusion Login window: https://<YourCrestronFusionServer>/fusion/webclient

NOTE: If the server is not on an internal network, consider setting up IIS for https only and install a certificate on the server.



Crestron Fusion Login Window

2. Enter the default username and password. In the **Username** field enter *admin* and in the **Password** field enter *admin*. Click **Login** to open the **Profile** window.

Profile Window

P rofile		۲
General Email	Monitoring Change Password	
Email Email Format: Oplain Receive Emails: 2	Text OHTML	
Email Address: 1. 3. On Behalf	4.	
	Add user to On Behalf Of list	Remove User
	Save Close	

3. Enter your e-mail address and click **Save**. If the installation is successful, the **Monitoring** window opens.

NOTE: For information on adding a room or asset, refer to the Crestron Fusion On-Premises Software Getting Started (Doc. 7889) at <u>www.crestron.com/manuals</u>.

General Email	Monitoring	Change Password
Refresh Rate: Audio alert for new help requests: Audio alert for new error alerts: Instant Message Color: elect System Tabs to Displa My RoomView FL	15 seconds	s I Rooms I Schedule I WebCam I e-Control I Instant Messaging I Capture

RoomView® Monitoring Window

Croatron Eucion		🕀 Open 📽 🐨 (o) 🚳 (o) 🔣 👫
Crestion rusion		RoomView [®] Monitoring
•••	My RoomView X Fusion InSite X Assets X Rooms X Schedule	X WebCam X e-Control X Instant Messaging X Capture X +
Apply Action	A	
	Critical Status (0) Room ÷ Severity Messag	ge Time stamp
	d Page	1 of 1 ← + 10 ✔ No records to view
	Help Request (0)	
	Offline rooms (0)	

The Crestron Fusion software is ready to use.

Appendix A: Forcing a Database Update

If the schema version of an existing database matches the current version of Crestron Fusion, a database update does not occur. When a database update is forced, the database schema is refreshed. This procedure can be performed during or after the installation and configuration process.

- 1. Double-click the Crestron Fusion icon on the desktop to open the Crestron Fusion Configuration Manager window.
- 2. Click **Database** to open the **Database** window.

Database Window

*	Crestron Fusion® Configuration Manager	- • ×
Crestron Fusion CLOUD	Configuration Manage	r (11.0.1.50)
Summary Authentication	Database Server Server Name: Port: 1433 Database Name:	
Database Licensing Services Apply Settings	Database Install/Update Credentials (SYSADMIN) Authentication Mode: O Windows O SQL Server Login ID: Password:	
	Database Runtime Credentials Authentication Mode: Windows (© SQL Server Login ID: Password:	
	Catabase Options Fusion Services Manager:	tion
	■ Back Next ►	Exit

3. Click **Test Connection** to test the connection to the specified database server.

A message box is displayed to let the user know if the connection was successful or unsuccessful. Click **OK**.

Connection Message Box

×
Administrative credentials were omitted. Admin credential check will be skipped. Connection to server was successful. Database Fusion_11_0_2_UPGRADE_11_0_S exists with version 11.0.5.15.
ОК

4. In the **Database Options** section, click the **Force DB Update** check box.

Force DB Update Check Box

ſ	Database Options		
	Press the Test Connection button to display	your database options.	
-	Force DB Update	 Use SQL Disks 	
- 1			

5. Click Apply Settings to open the Apply Settings window.

Apply Settings Window

*	Crestron Fusion® Configuration Manager	_ 0 X
Crestron Fusion)	Configuration Manager (11.0.1.50)
Summary Authentication Database	Summary Messages 02/29/16 12:41:25.2397 Instance state changed to Stopped 02/29/16 12:43:28.9834 Instance state changed to New	
Licensing Services Apply Settings		
	○ Verbose	
	Fusion Services Manager:	■ Back Apply Exit

6. Click **Apply**. After a few minutes, the database schema is updated.

IMPORTANT NOTE: If **Apply** is not clicked in the **Apply Settings** window, all changes are lost.

Appendix B: Specifying SQL Server Database Disks

The Crestron Fusion Installer typically uses the default SQL Server database settings for the location of the database, file groups, and log files. If the user or the Database Administrator (DBA) requires a different configuration than the default SQL Server database configuration calls for, use the following procedure to specify the locations of the database files.

NOTE: To test an SQL connection the user must have valid credentials, and the database name entered cannot already exist.

- 1. Double-click the Crestron Fusion icon on the desktop. The Crestron Fusion Configuration Manager window opens.
- 2. Click **Database** to open the **Database** window.

Database Window

÷	Crestron Fusion ® Configuration Manager	X
Crestron Fusion	Configuration Manager (11.0.1.5	50)
Summary	Database Server	8
Authentication	Server Name: Port: 1433 Database Name:	
Database		
Licensing	Database Install/Update Credentials (SYSADMIN)	
Services	Authentication Mode: O Windows O SQL Server	
Apply Settings	Login ID: Password:	
	Database Runtime Credentials	
	Authentication Mode: O Windows O SQL Server	
	Login ID: Password:	
	Database Options	•
	Fusion Services Manager:	
	✓ Back Next ► Exit	

- 3. In the **Database Server** section, enter the **Server Name**, **Port**, and **Database Name**.
- 4. In the Database Install/Update Credentials (SYSADMIN) section, click SQL Server. Enter a Login ID and Password.
- Click Test Connection to test the connection to the specified database server. A message box is displayed to let the user know if the connection was successful or unsuccessful. If the connection is successful and the database does not exist, the Use SQL Disks check box is displayed.

Database Window Showing Use SQL Disks Check Box

Database Options		
Press the Test Connection button to display	your database options.	
Force DB Update	🔘 Use SQL Disks 🛛 🥠	

6. Click the Use SQL Disks check box.

7. Scroll down to access the SQL Server Disk Selection for Fusion Database section of the window. Select a File Group and then click the disk icon located to the right of the selected file group. To clear an entry, click the X icon.

File Group	Path	0
Primary	(Server Default)	(= 3)
Logging Group 1	(Server Default)	
Logging Group 2	(Server Default)	8
Logging Group 3	(Server Default)	😑 😆
Logging Group 4	(Server Default)	🚍 😆
Logging Group 5	(Server Default)	🔚 😆
Energy Group 1	(Server Default)	🔚 🔞
Meeting Map Group 1	(Server Default)	8
Values Group 1	(Server Default)	8
Values Group 2	(Server Default)	8

8. If the disk icon was clicked, select the location where the database file is to be stored and then click **Select**.

Select Path for Main Database File

Ø
Cancel

9. In the Database window, click Apply Settings to open the Apply Settings window.

Apply Settings Window

*	Crestron Fusion® Configuration Manager	_ _ X
Crestron Fusion Counter Fusion Summary Authentication Database Licensing Services Apply Settings	Crestron Fusion® Configuration Manager Summary Messages Configuration manager will use the following settings when you press Apply: Authentication Method: Forms Administrators Group Name: Room/New Administrators Fusion RV® License: Not Licensed Crestron Photoin License: Not Licensed Database Install/Update Credentials (SYSADMIN) User ID: (No authentication)	Configuration Manager (11.0.1.50)
Fi	Database Install/Update Credentials (SYSADMIN) User ID: (No authentication) Database Access User ID: (SQL Server authentication) Web Site: Default Web Site Web Service Credentials (App Pool) User ID:	▲ Back Apply Exit

10. Click **Apply**. After a few minutes, the database is created.

IMPORTANT NOTE: If **Apply** is not clicked in the **Apply Settings** window, all changes are lost.

Appendix C: Licensing Software

This appendix contains the procedure to follow when licensing a product at a later date.

NOTE: The Fusion RV[®], Fusion EM[®], and Crestron PinPoint software are licensed separately. Be sure to reference the key code from the correct product license when obtaining a site key.

- 1. Double-click the Crestron Fusion icon on the desktop. The Crestron Fusion Configuration Manager window opens.
- 2. Click Licensing to open the Licensing window.

Licensing Window

b.		Crestr	on Fusion® Configu	ration Manage	er	_	•
. [Component	Licensed	Date Licensed	Count	Expires	Comparation Manager (11.	0.1.
Summary	Fusion RV®	License Entered				Update	
Database	Fusion FM®	License Entered				Update	
Licensing	Crestron DinDoint TM	No		0		Undata	
Services	Crestron PinPoint	NO		0		opuate	
Apply Settings							
F	usion Services Manager						_
						of Back Next Is	
						Next P	ere.

NOTE: Crestron Fusion services need to be stopped before entering license keys. Click the I button to stop the services.

3. Click **Update** (next to the product(s) to be licensed) to open the **Crestron** Licensing window.

Crestron Licensing Window

	Customer Id: JXQT MCEV 94MP GW2X JBDT 0BA5 2JS2 GRJB Site Key:	
[To obtain the "Site Key", please call Crestron: 888 CRESTRON	
	1. First, "Prepare" a License Transfer File (LTF). Prepare 2. Second, open this file on the source computer. Transfer 3. Finally, "Transfer" the license here. Transfer	 In
🗖 Displ	OK License Later Help	

4. Enter the Site Key and click OK.

If applying for a new license, contact a Crestron representative to obtain a license key, or send the purchase order (PO) to <u>license@crestron.com</u>. When the site key is received, copy the key into the **Site Key** field.

NOTE: For more information on licensing, refer to the Crestron True Blue Online Help <u>Answer ID 5429</u>.

- 5. In the Database window (Database Install/Update Credentials (SYSADMIN) section), reenter the Login ID and Password, if they are not displayed.
- 6. Click Apply Settings to open the Apply Settings window.

Apply Settings Window

*	Crestron Fusion® Configuration Manager	_ _ ×
Crestron Fusion)	Configuration Manager (11.0.1.50)
Summary Authentication Database Licensing Services Apply Settings	Summary Messages Configuration manager will use the following settings when you press Apply: Authentication Method: Forms Administrator Group Name: RoomView Administrators Fusion RV® License: Licensed Fusion RV® License: Licensed Database Access: Not Licensed Database Install/Update Credentials (SYSADMIN) User ID: (No authentication) Database Access User ID: sa (SQL Server authentication) Web Site: Definition Site	
Tools	Web Service Credentials (App Pool) User ID: crestron-engdev/ivserv Fusion Services Manager: Fusion:	■ Back Apply Exit

7. Click Apply. After a few minutes, the server is licensed for the selected software(s).

IMPORTANT NOTE: If **Apply** is not clicked in the **Apply Settings** window, all changes are lost.

Appendix D: Common Log File Errors

LOG FILE ERROR	PROBABLE CAUSE	SOLUTION
SqlException in SP CRVSP_GetAllServers: code 18456, Login failed for user '{user id}'.	The Main or Log database SQL runtime credentials are not valid.	Verify that the SQL Server database user IDs and passwords were entered correctly.
SqlException in SP CRVSP_GetAllServers: code 18456, Login failed for user 'CRESTRON-ENGDEV\{server name}\$'.	The user is attempting to access a database using Windows Authentication from FSM installed as LOCALSYSTEM.	Update the FSM to use the service account if the database server is not the Crestron Fusion application server using Windows Authentication method.
SqlException: A network-related or instance-specific error occurred while establishing a connection to the SQL Server.	The Crestron Fusion application server cannot connect to the database server. This may be caused by a network problem or a problem with the database server.	Ping the database server to verify it can be accessed on the network. Check that the SQL Server database is running and accessible.
I/O error There is not enough space on the disk.	There is not enough disk space on the application server to install the Crestron Fusion software.	Use Windows Explorer to determine the amount of disk space available on the file system where Crestron Fusion is to be installed. If necessary, free up disk space or install Crestron Fusion on a different file system or server.
Database credentials provided are not of a sysadmin type. Database operations failed.	The user does not have administrator access for the database server.	Verify (on the SQL Server database) that the user has the role of sysadmin.
SqlException: MODIFY FILE encountered operating system error 112 while attempting to expand the physical file.	The database server file system does not have enough free space to create or update the Crestron Fusion database.	Free up some space by deleting files, or use a different disk on the database server.
SqlException: Cannot alter the table 'aspnet_Applications' because it is being published for replication.	The SQL Server database has replication turned on.	Verify that replication is turned off before upgrading. The Crestron Fusion version 9 software allows replication; version 10 or higher does not allow replication.

NOTE: The FSM and configuration manager log files can be found at C:\Program Files\Crestron\Fusion\Logs.

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