C3FUSION

- CLIENT INSTALLATION GUIDE

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Overview

The C3fusion Client Installation Guide is intended to provide information on the installation of the C3 Fusion Client for administrators.

C3fusion is a client-server application but this manual is limited to providing information about the Client installation only, and assumes that the Server has been previously installed and properly configured by an Administrator.

Software Installation

Prerequisites

Certain parameters and Windows settings on the computers used to run the C3fusion Client are required for optimum performance.

The minimum computer platform is as follows:

1. 2 GHz Dual-Core CPU minimum, 2.6 GHz quad core recommended.
2. 3 GB RAM minimum, 6 GB recommended with 64-bit hardware.
3. 160 GB Hard drive
4. Dual monitor display with separate video card highly recommended
5. Windows 7 Professional or Windows 10 Professional 64 bit highly recommended.
6. 100 Mbps full duplex network with static IP

System Considerations

Selected screen display theme should be Windows Basic, Aero turned OFF

Install the Dot Net framework 4.5.1 unless an equal or later version is already installed

Verify that you have a valid Administrator account - this is required for a new installation of the Client

Verify that you have the address and port for the C3fusion Server and that the Server is on-line.

Verify that you have the IP address of the machine where you are installing the Client and that you have a port assigned for messages from the Server to your Client, usually port 8777.

Program Installation on Hardware

To begin the installation of the C3fusion Client, run the supplied installer package (.MSI) Double click on the provided file to execute the installation.

Those users who are running Windows 10 will be prompted with the Windows SmartScreen protection window when the C3Fusion Client Installer package is executed.

Click on the *More Info Link* to proceed.
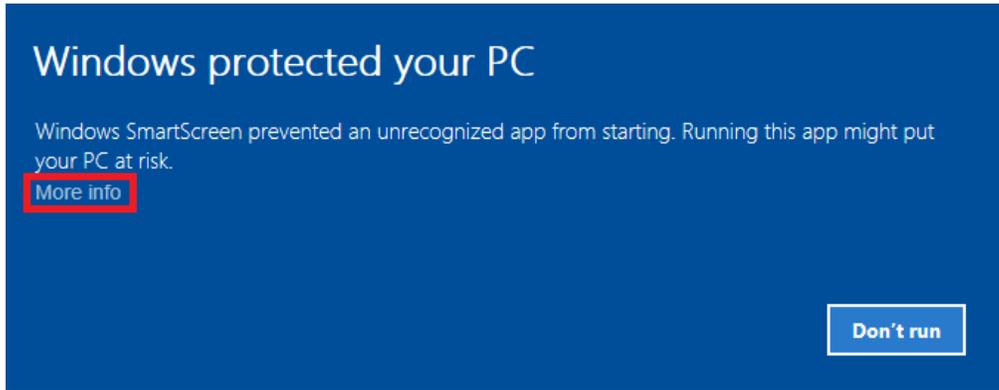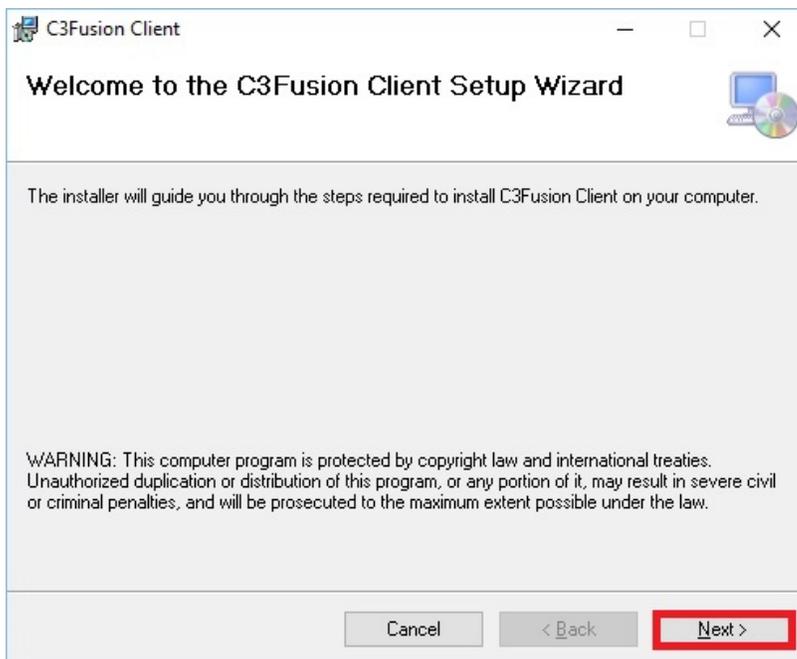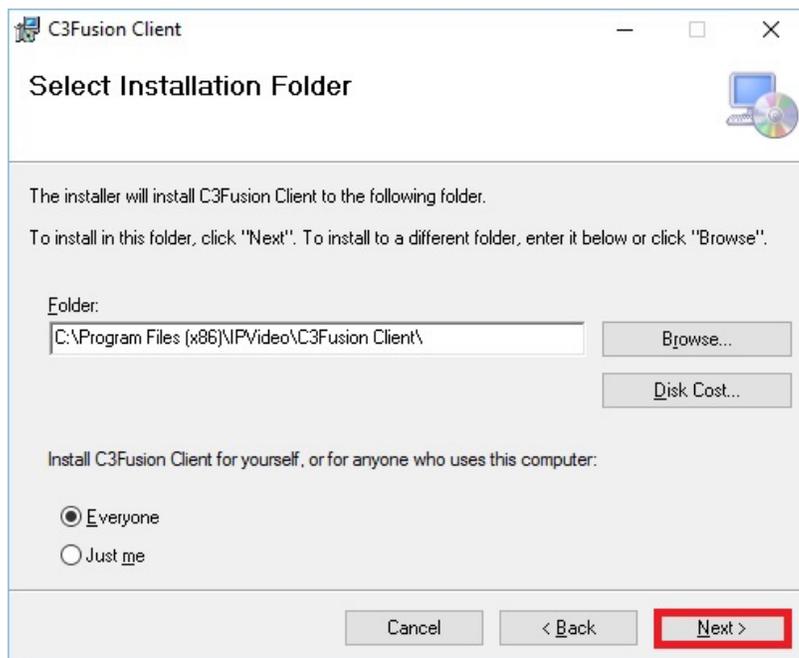

Click on the *Run Anyway* button to proceed.
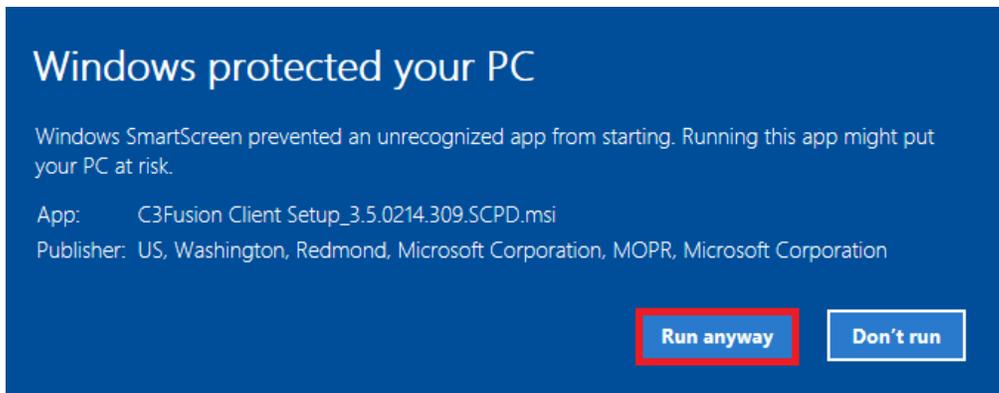
The C3fusion Client Setup Wizard will launch to begin the setup.

Click the *Next* button to proceed with the installation.

Click *Next* to proceed with the default installation folder, or click the Browse button to specify the folder location for the installation.
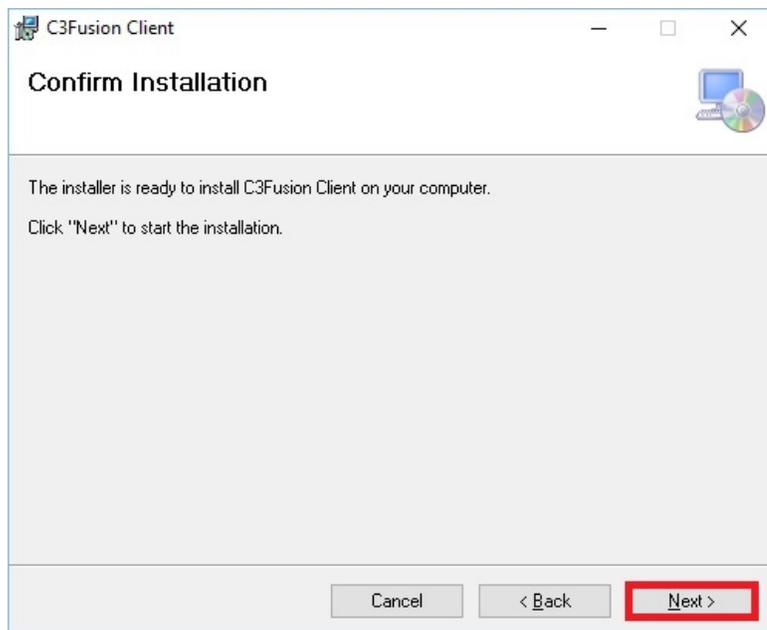
Click *Next* to confirm settings and proceed with the installation.
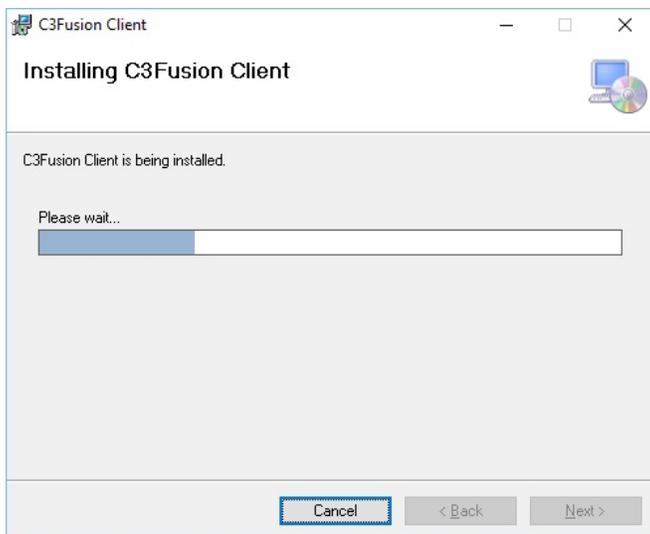
A progress bar will display the current status of the installation.
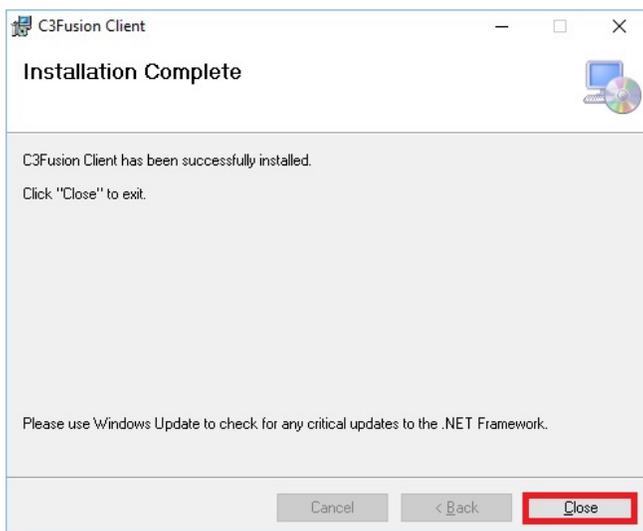
Once the C3fusion Client has been successfully installed, click the *Close* button to complete the installation on your hardware.

There are two types of preferences that control the behavior of the C3fusion Client. **User Preferences** follow the User's ID on whatever Client she is logged into, and **Client preferences** that remain with the Client regardless of which User is logged in.

When logging in to a C3fusion Server with the C3fusion Client for the first time, an Administrator account must be utilized in order to save the required preferences to the local workstation. Once the Client Preferences have been configured and saved, any login can be used to make a client connection to the server.

Software Configuration

This section deals with settings required for basic operation of the C3fusion system. Usage of other optional settings is covered in the C3fusion User's Guide.

Double click on the C3fusion icon on the desktop. You are NOT at this point connected to the Server.
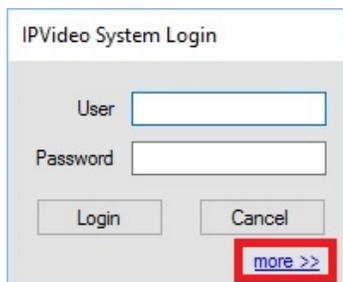
Click on the ***more >>*** link to expose the Advanced Login Settings

Click on ***Adjust Client Preferences*** to configure the C3fusion Client for connection to C3fusion Server. This will launch the C3fusion Client Preferences window shown in full below for reference.

Since this is the first time the C3fusion Client installation is being run on this machine, the information in the Client Preferences is not correct and you will not be able to connect to the server.
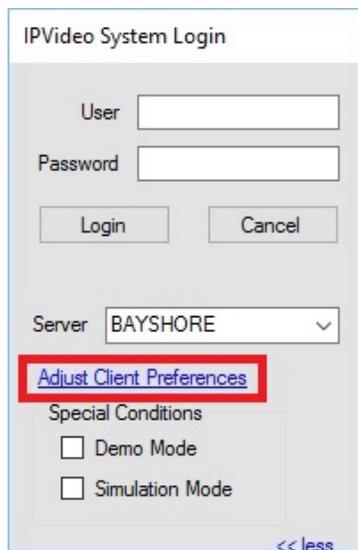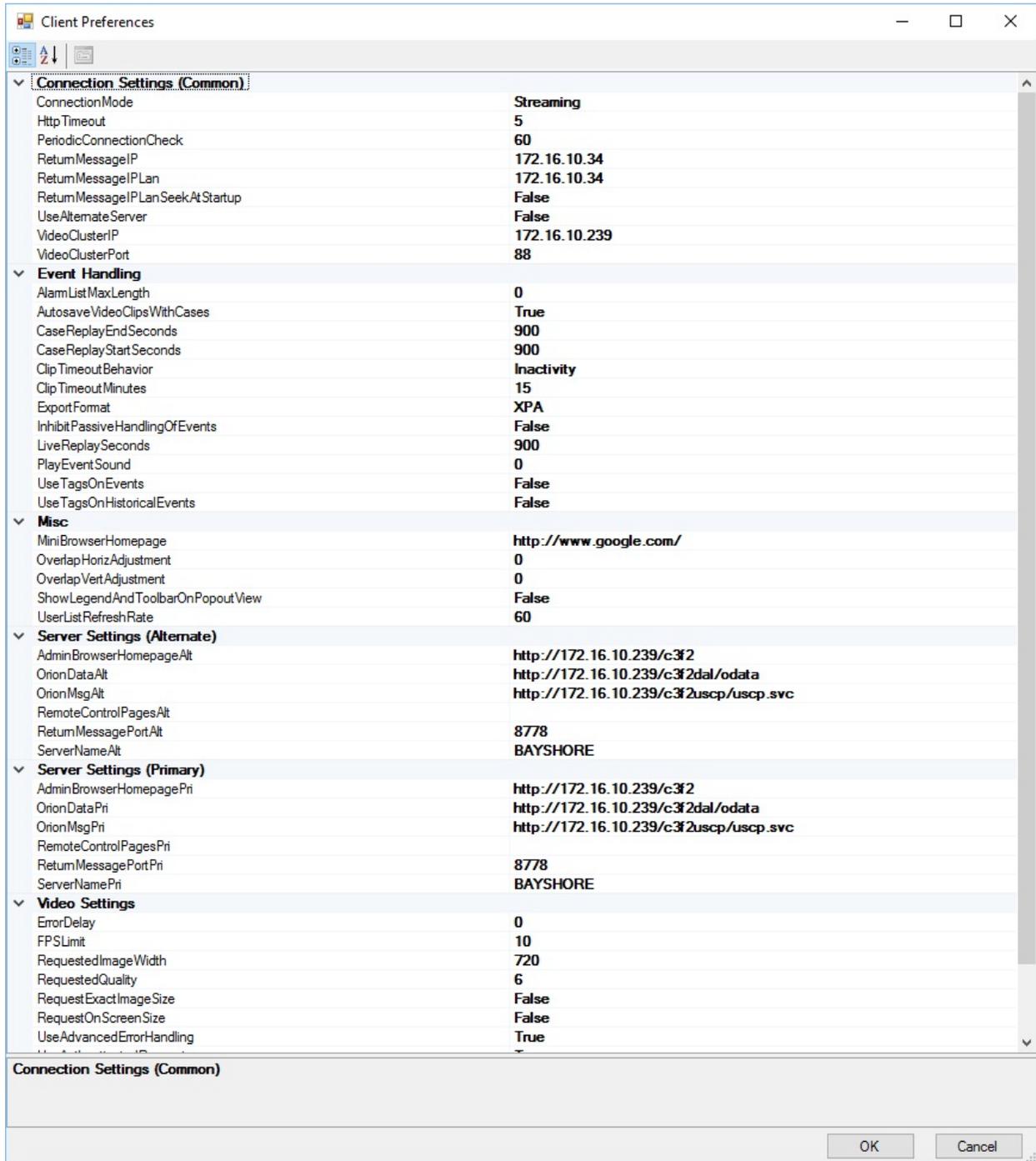
Client Preferences	— □ ✕
Connection Settings (Common)	
ConnectionMode	Streaming
HttpTimeout	5
PeriodicConnectionCheck	60
ReturnMessageIP	172.16.10.34
ReturnMessageIPLan	172.16.10.34
ReturnMessageIPLanSeekAtStartup	False
UseAlternateServer	False
VideoClusterIP	172.16.10.239
VideoClusterPort	88
Event Handling	
AlarmListMaxLength	0
AutosaveVideoClipsWithCases	True
CaseReplayEndSeconds	900
CaseReplayStartSeconds	900
ClipTimeoutBehavior	Inactivity
ClipTimeoutMinutes	15
ExportFormat	XPA
InhibitPassiveHandlingOfEvents	False
LiveReplaySeconds	900
PlayEventSound	0
UseTagsOnEvents	False
UseTagsOnHistoricalEvents	False
Misc	
MiniBrowserHomepage	http://www.google.com/
OverlapHorizAdjustment	0
OverlapVertAdjustment	0
ShowLegendAndToolbarOnPopoutView	False
UserListRefreshRate	60
Server Settings (Alternate)	
AdminBrowserHomepageAlt	http://172.16.10.239/c3f2
OrionDataAlt	http://172.16.10.239/c3f2dal/odata
OrionMsgAlt	http://172.16.10.239/c3f2uscp/uscp.svc
RemoteControlPagesAlt	
ReturnMessagePortAlt	8778
ServerNameAlt	BAYSHORE
Server Settings (Primary)	
AdminBrowserHomepagePri	http://172.16.10.239/c3f2
OrionDataPri	http://172.16.10.239/c3f2dal/odata
OrionMsgPri	http://172.16.10.239/c3f2uscp/uscp.svc
RemoteControlPagesPri	
ReturnMessagePortPri	8778
ServerNamePri	BAYSHORE
Video Settings	
ErrorDelay	0
FPSLimit	10
RequestedImageWidth	720
RequestedQuality	6
RequestExactImageSize	False
RequestOnScreenSize	False
UseAdvancedErrorHandling	True

Connection Settings (Common)

OK   Cancel

Adjust the required Client Preferences to establish a connection to a specified C3fusion server. Only certain settings are required for connection to your Server. These will be discussed in the following sections. The remainder should be left at their default values.

Connection Settings (Common)
The required preferences will be outlined in red. These settings are required for connection to a server.

ReturnMessageIP is the WAN IP Address of the client workstation where C3fusion client is being installed if connecting over an internet connection. Use the LAN IP if the client does not use the internet for connection to server.

ReturnMessageIPLan is the LAN IP Address of the client workstation where C3fusion client is being installed.

Primary Server Connection
This is the Server that will most generally be used with this Client instance.

Edit **OrionData**, **OrionMsg**, and **AdminBrowserHomepage** to reflect the correct address (and optional port) for your primary Server. The IP and optional Port will be provided by your System Administrator. The connection strings should be included as shown.

Edit the **ReturnMessagePort** if necessary meet the following conditions. If there are no other C3fusion components on this machine, 8777 can be used. If any other C3fusion components (such as another Client, Connector or Messager), then each will need a different port and these ports must differ by at least 10 digits (ex. 8777, 8787, 8797, etc). This entire range of inbound ports plus 10 digits must be open on the firewall of this machine.

Edit the **AdminBrowerHomepagePri** to match the primary Server IP address and include /C3f2

Edit the **ServerNamePri** to match the Windows Name of the primary Server.

Alternate Server Connection

If your system includes a secondary Server, then enter its connection information here.

Edit **OrionData**, **OrionMsg**, and **AdminBrowserHomepage** to reflect the correct address (and optional port) for your alternate Server. The IP and optional Port will be provided by your System Administrator. The connection strings should be included as shown.

*The Client Preferences MUST contain both a Primary and Alternate server, however they can both be configured for the same server settings. Once configured, the **more>>** link on the C3fusion login window allows the user to select which of the two servers to login to, Primary or Alternate.*

Edit the **ReturnMessagePort** if necessary meet the following conditions. If there are no other C3fusion components on this machine, 8787 can be used. If any other C3fusion components (such as another Client, Connector or Messager), then each will need a different port and these ports must differ by at least 10 digits, for example 8787, 8807, 8817, etc. This entire range of

The three points to consider here are: The return port assigned to every C3fusion component on a given machine must be different, the return ports must be spaced by at least 10 digits because the components may automatically skip upwards if a connection fails, and all inbound ports that may be used must be open in the local firewall and in the Router in case of WAN operation.

inbound ports plus 10 digits must be open on the firewall of this machine.

Edit the **AdminBrowerHomepageAlt** to match the Alternate Server IP address and include /C3f2

Edit the **ServerNameAlt** to match the Windows Name of the Alternate Server.

First Connection To The Server

Click OK to close this form

Enter your Admin credentials in the highlighted boxes and click Login to start the Client program for the first time. If your login is successful, the Properties you entered are saved and future logins will not require this entire process.

If your login is not successful, your editing will not be saved. In the event of failure to connector, recheck these settings, check that the Server is operating, and check that the network and firewalls are correctly configured.

The C3fusion Client can be further configured by any administrator in a variety of ways.

Optional Client Preferences

The following Client Preferences may be adjusted by an Admin if desired. Many of these are marked deprecated and should be left at default values and are included only for reference. Setting covered previously in this guide are indicated as such.

Connection Mode: (Deprecated) Always set to streaming except for special applications

Http Timeout: How long the video display controls will attempt to retry connection before indicating an error

Orion Data/Msg: (Covered previously)

PeriodicConnectionCheck: Interval in seconds at which Client tests round trip to Server Session. Zero (0) means never.

Return Message IP/Port: (Covered previously)

ReturnMessageIPSeekAtStartup: Obtain LAN address of Client machine automatically

Video Cluster IP/Port: (Deprecated) Address where the display can find the video sources

Admin BrowserHomepage: (Covered previously)

Mini BrowserHomepage: Any desired URL to be displayed as the Mini-browser home page

UserListRefreshRate: Interval in seconds at which Client polls the Server for new User information

WallController(s): Network addresses and ports for one or two video wall controllers that accept Telnet commands

UseCommonServerTime: Use time on video server rather than camera host time

UserTimeZoneOffset: Use calendar based offset for DST

The following settings apply to all Cameras displayed on a particular machine for a particular User.

Http Timeout: (Deprecated) How long the video display controls will attempt to retry connection before indicating an error

RequestedImageWidth: (Deprecated) Standard image width request, can be overridden by on-screen

RequestedQuaility: (Deprecated) Default is 6

ReqeustExactImageSize: (Deprecated) Cause the Server to deliver the exact requested size rather than the next larger cache size

RequestOnScreenSize: (Deprecated) Cause the Server to attempt to deliver the actual pixel size to match the on screen display, either from cache or an exact match

UseDynamicSizeRequest: (Deprecated) Issue a new connection request when the display changes size, only makes sense if RequestOnScreenSize is true.

VideoStreamWaitPeriod: (Deprecated) Interval between connections of successive cameras in a grid of cameras.

User Preferences

These settings determine the look and feel and behavior of this Client for a specific User, whenever and wherever that User is logged in to the Client on any machine. These settings are therefore stored in the C3fusion database. These settings are not essential for basic operation and can be addressed after some experience is gained through use of the C3fusion Client.
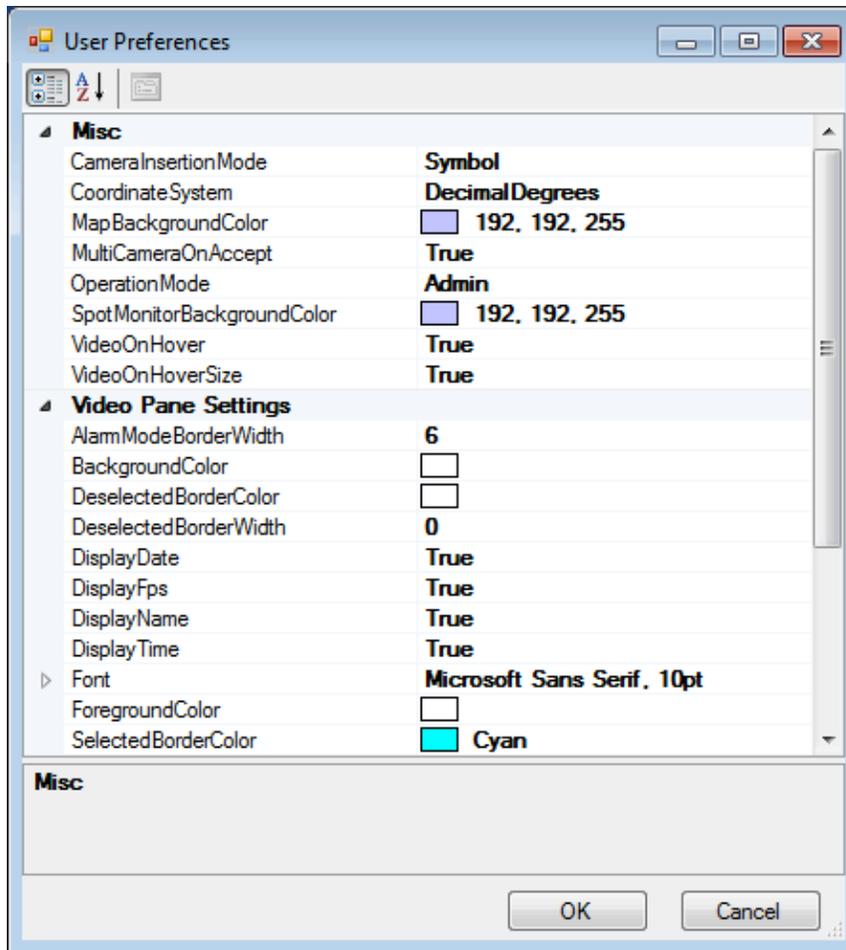
CameraInsertionMode	Symbol, Video Pane or Both
Coordinate System	Decimal Degrees or Universal Transverse Mercator (UTM)
MapBackgroundColor	Any desired color shown where map image is transparent or missing
MultiCameraOnAccept	Cameras on Sensors (as set in the Admin Pages) are displayed in a popup grid window.
OperationMode	Administrator, Operator, Passive - set elsewhere
SpotMonitorBackgroundColor	Any desired color shown where Spot Monitor has an empty space
VideoOnHover	Video Pane is shown when mouse hovers over a camera symbol
VideoOnHoverSize	False = 160 X 120, True = 320 X 240 pixels
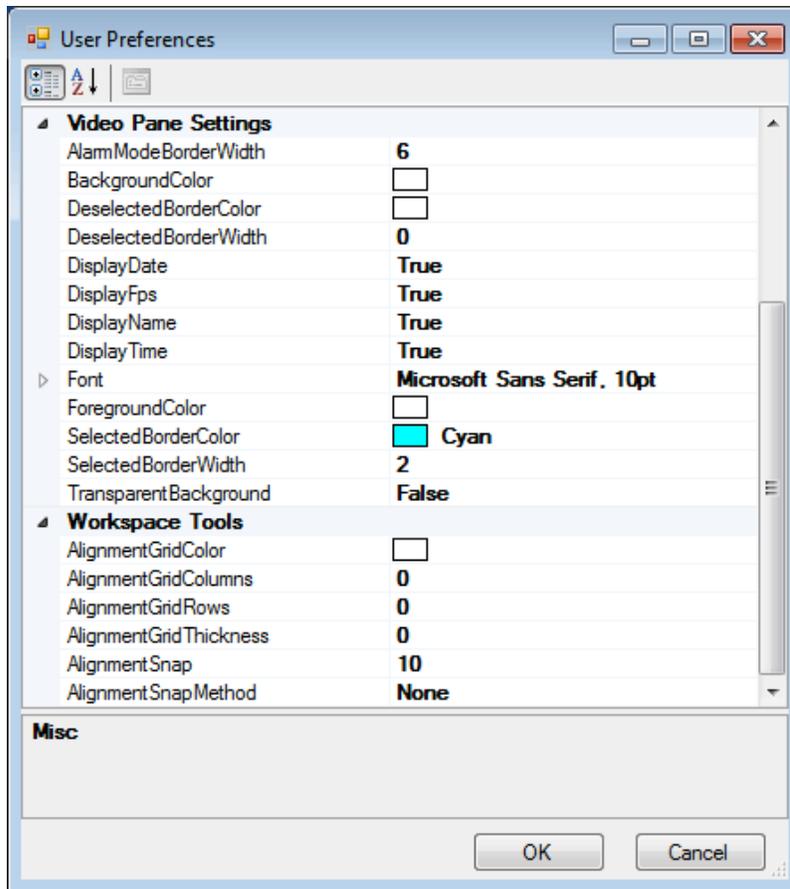
AlarmModeBorderWidth	Video Panes, Alarm areas/zones and Camera symbols display a red border when alarmed. This setting determines the width in pixels of that border. 0 = no alarm indication.
BackgroundColor	Background color for text overlays
DeselectedBorderColor	Any desired color for Video Pane borders
DeselectedBorderWidth	Any desired width for Video Pane unselected indication borders, 0 = no unselected border
Display Date, Fps, Name, Time	Controls visibility of various text overlay data fields
Font	Font of text overlays
ForegroundColor	Controls foreground color of text overlays
SelectedBorderColor	Any desired color for Video Pane selection indication borders
SelectedBorderWidth	Any desired width for Video Pane selection indication borders, 0 = no selection border.
TransparentBackground	For text overlays, when true background color does not matter
AlignmentGrid	Parameters for alignment grid for Video Panes and other non-GIS

	elements
AlignmentSnap	Pixels for object snap for non-GIS elements
AlignmentSnapMethod	None, use Snap tool, use Grid tools.

Upgrades and Re-installation

Re-installation of the C3fusion Client can be accomplished by first using the Windows Programs and Features applet (or equivalent) to completely remove the existing installation, then using the newly provided MSI and following the instructions in the section of this guide entitled Program Installation of Hardware.

However, the settings made for the previous installation will be retained as follows:

1. Client preferences are retained in a file named FusionClient.ini in the Program Data folder.
2. User preferences are retained in a special Data record on the Master Server.

Therefore, no reconfiguration should be required when the new version of the Client is installed.

Master Server Upgrades

Occasionally, Client upgrades may be issued which are not directly compatible with an older version of the Master Server. In this case, the new version cannot be installed until assurance is provided that the required Server upgrade has been performed and verified.