WallControl 10

User Guide

Version Number 1.12.0

Engineering the **world's best** visual solutions

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Introduction

WallControl 10 offers real time management of small, medium and large scale display walls. WallControl 10 also enables you to create multiple walls which can all be controlled by a single wall controller system.

You can place any element of content from a Datapath capture card, an IP stream via the PC's processor an ActiveSQX card or any other local media anywhere on your display wall.

The WallControl 10 help files will guide you through the functionality of the application.

WallControl 10 has a number of elements that contribute to controlling and creating your display wall:

The Server

The Server is installed on the machine containing the hardware that captures and displays the sources, for example, IP/Vision windows. A server can be located locally or via a net-work. Each server can run multiple display walls.

WallControl 10 Servers/Services

Once WallControl 10 has been installed, the server/services used to manage the application are started automatically every time the system is turned on.

WallControl 10 requires the following Servers/Services to be running:

WallControl 10 Administration Service

If after turning on your system the WallControl 10 Administration Service fails to start automatically, a manual start is required. Using the Windows Task Manager, locate the WallControl 10 Administration Service on the Services Tab and using the right click menu, restart the service. The Services Tab can also be accessed by typing Services in the Windows Start Menu Search.

WallControl 10 Server

If after turning on your system the WallControl 10 Server fails to start automatically, a manual restart is required. To start the server locate and click the WallControl 10 Server:

Start/Programs/ WallControl 10/ WallControl 10 Server

WallControl 10 Database Service

If after turning on your system the WallControl 10 Database Service fails to start automatically, a manual restart is required. Using the Windows Task Manager, locate the WallControl 10 Database Service on the Services Tab and using the right click menu, Start the service. The Services Tab can also be accessed by typing **Services** in the Windows Start Menu Search.

WallControl 10 Wall

Each wall can be set to start automatically using the Wall Management Tab. Walls may be started manually using any of the follow methods:

- Open the Wall Management Tab in the WallControl 10 Client and locate the wall you wish to start. Using the right click menu on the wall select **Start Wall**.
- Open the WallControl 10 Server dialogue by clicking on the icon in the Systems Tray (see below).

An icon is presented on the Windows Taskbar for each wall that is running. Click on a wall icon to display a menu offering details of the Wall Status, access to the Global and Local Source Libraries and the ability to close the wall.

WallControl 10 Server Dialogue

To open the WallControl 10 Server dialogue click on the WallControl 10 Server icon in the System Tray. See Server Dialogue for more information.

To close the WallControl 10 Server dialogue click the mouse anywhere on the desktop away from the dialogue.

Note:

Only use the WallControl 10 software licence dongle in your system. Problems may occur if third party dongles are installed at the same time.

The Client will display all available servers on the application home page; you can then connect to any of the available WallControl 10 Servers by clicking on the corresponding WallControl 10 Server button.

The Client

The Client (the WallControl 10 application) should be installed on the system that has been identified to control a display wall. This could be any system on the network including the one driving the display wall i.e. the Server.

If installing the WallControl 10 on a remote machine, for example a laptop, you should use the WallControl 10 Client Installer, as this will only install the Client and will not install the Server.

The Client User Interface

To open the Client user interface go to **Start/Programs/WallControl 10/WallControl 10 Client**.

Server Properties

Clicking on the server name within the Client application populates the Server Properties panel.

The Server Properties panel displays information about the selected server, from how many walls the server is running, to how many of them you have permission to connect to. It also displays the name given to it during its creation.

Display Walls

A display wall can be a single display or multiple displays tiled together to form one large Windows desktop. Display walls are represented in the application by large rectangular icons located beneath the named servers on the homepage.

The master wall is referred to as Blueprint by default however, the name can be changed using the Wall Settings dialogue on the Wall Management page.

Sources, Layouts and Templates

The Sources, Layouts and Templates are used to create, organise and display the content for your wall.

Templates can assist in the design of your wall, allowing you to use a grid system for the precise placement of sources; custom templates can be created in addition to the default designs available.

Once your content is created and placed on your wall the layouts can be used to save a particular configuration of windows to be recalled when required.

Sources can be Vision captures, IP streams (from cameras or video files local or on the network), Media files (local to your computer), shared Quant sources, Applications or Internet browser sources.

A search function is available on the Sources tab to help locate specific sources quickly.

Transient Sources

A transient source is a temporary source which is only displayed in the Sources Tab when a layout is opened containing Internet or SQX sources that are not local to the wall.

Once the Layout is closed, the transient sources are automatically removed from the Sources Tab.

A transient source will also be created if a crop of an input is created using the Command Line Interface. The crop will appear in the Source Tab tree as a new item but is removed when the window is closed.

Desktop Tools

The Desktop Tools located to the right of the display wall representation; enables you to carry out functions associated with the selected display wall.

Window Tools

The Window Tools become active when a source is dragged onto the wall; the tools are located on the status bar.

User Settings

The User Settings are located in the application header and consist of:

- Help - Quick access to the application help files.
- User Settings Panel - Allows the user to view and make changes to the application user settings.

Web Interface

The Web Interface is a basic user interface linked to the client via a web API. It offers the user the ability to launch layouts to any wall on a selected server. The Web Interface runs in a browser and can therefore be used on a PC, Mac, Tablet or Smartphone.

Adding Sources to the Global and Wall Source Libraries

Users are required to manually add media sources to both the Global and Wall Source Libraries.

A Global Source Library is a repository for media sources that can be used by any wall on the server. A Wall Source Library is a repository for sources that are only available to a specific wall.

Icons are located in the System Tray for each wall on the server. To select the library, click on the relevant wall icon in the System Tray and select the library you wish to add your media files to. An Explorer Window is displayed containing the relevant folders.

Global Source Library

ImageMedia – Photographs/images (.jpg, .bmp. and ,png)

Office - .docx files

PDFMedia - .pdf files

VideoMedia - Video Files (AVI, MP4, WMV and MPG)

Once your media has been copied in to the relevant folders, it automatically becomes available as a source to use on any wall associated with the server.

Wall Source Library

ImageMedia – Photographs/images (.jpg, .bmp. and ,png)

Office - .docx files

PDFMedia - .pdf files

VideoMedia - Video Files (AVI, MP4, WMV and MPG)

Once your media has been placed in the folders, it will automatically become available as a source on the specified wall.

WallControl 10 64-Bit

WallControl 10 is supported on the Windows 7 and Windows 10 64-Bit Operating Systems.

The requirements are as follows:

WallControl 10 Server

- Driver Install version 4.5.0 or later
- Windows® 7 64-Bit, or
- Windows® 10 64-Bit

WallControl 10 Client

- Windows® 7 64-Bit, or
- Windows® 10 64-Bit

System Requirements

The following details the minimum requirements needed to run WallControl 10 Clients on a PC or Workstation:

	Minimum Requirements	Recommended Requirements
Processor	Intel Dual Core i3 processor (or equivalent)	Intel Dual Core i7 processor (or equivalent)
Memory	4GB	8GB
Network Connection	yes	Yes
Operating System	Microsoft Windows 7 or 10	64bit only
Screen resolution	1280 x 1024	HD 1080p or 4K 2160p

Port Number Requirements

The following ports will be required to be open for communicated between WallControl 10 Client and Server.

Port Type	Number	Reason/Comments
UPD	3702	Discovery Port
TCP	8081+	Default Wall Port (configurable)
TCP	8099	Legacy CLI port number*

TCP	10500	Quant Collaboration Port (configurable)
TCP	19821	Web API Access point
TCP	19820	Internal Database port
TCP	5900	Datapath Agent port (configurable)

+ Any child walls will require a new Port number. This port is randomly generated between 30000 and 40000, but can be manually reconfigured as required.

* From version 1.9 the CLI port is no longer unique and is the same as the Wall Port. The port number is honoured if upgrading from 1.8 onwards.

Anti-virus

In order for WallControl 10 to operate effectively, it is suggested that users add the WallControl 10 executable directories and media directories into your antivirus white lists.

WallControl 10 executable directories can be found at c:\Program Files\ WallControl 10

WallControl 10 media directories can be found at c:\ProgramData\ WallControl 10

It is also suggest that by default you include TCP and UDP traffic for ports 8081 and 8099 to your (allowed) firewall rules. As new multi-walls are created, you may need to add those to your firewall (allowed) list. Multi-Wall port numbers are automatically generated when the next available port number is found.

Datapath Agent

Should users wish, the Datapath Agent can be installed as a Windows Server meaning it will start at the same time as the Operating System with no further action required by the user.

To install:

- Open the Command Prompt (as the Administrator).

- Navigate to the installation location of the Datapath Agent from within the Command Prompt. (c:\program files\WallControl 10\DatapathAgent).

- At the Command Prompt enter:

  Datapath Agent.exe –install

  Datapath Agent.exe –start

  Datapath Agent.exe –controlservice

Run each as a separate command.

- Close the Command Prompt.

SQX Video Decode

The decoding of local video files can be achieved without using the host CPU resources, providing appropriate SQX technology is present within the system.

Media files using the container formats .mp4, .avi, .wmv, .mpg or .mov which are placed inside the DecodeVideoMedia folder become available as a global source for all walls.

C:\ProgramData\WallControl 10\Media\ DecodeVideoMedia

The media files are displayed as SQX sources on the WallControl 10 Sources Tab.

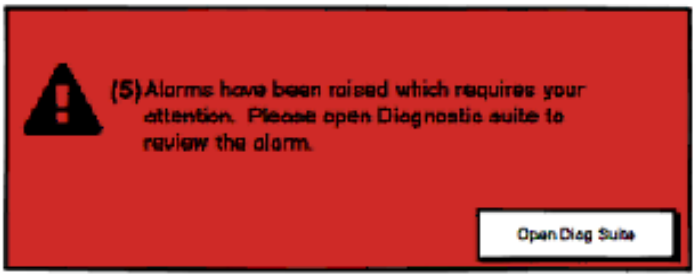
If SQX technology is not present within the system and an attempt is made to display the files, a warning toast notification Failed to Open is displayed.

Note: All media must be in the supported codec formats of MPEG2, MJPEG or H.264. Audio is not currently supported.

Toast Notifications

Toast notifications are slide up/down animations that appear in the bottom right of the application; either as a warning that action is needed to prevent a problem, or to display information regarding the WallControl 10 Client or Server.

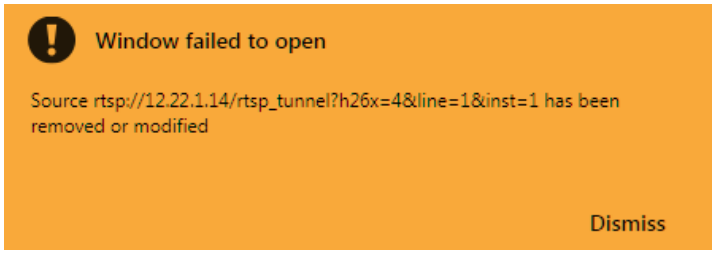
Alarm Toasts



An Alarm Toast is displayed when a hardware problem occurs within the wall controller. To receive Alarm Toast the Diagnostic Suite must be installed on the wall controller. Alarm Toasts will always be red in colour and remain on screen until the user clicks on either **Dismiss** or **Open Diag Suite**.

If an Alarm Toast is displayed in the WallControl 10 Client, the user can launch the Diagnostic Suite and view the Alarms providing the Diagnostic Suite is installed on the machine running the Client. It is strongly recommended that all Alarm Toasts are investigated by clicking on Open Diag Suite. The Alarm Toast can be closed without taking any action by clicking on **Dismiss**.

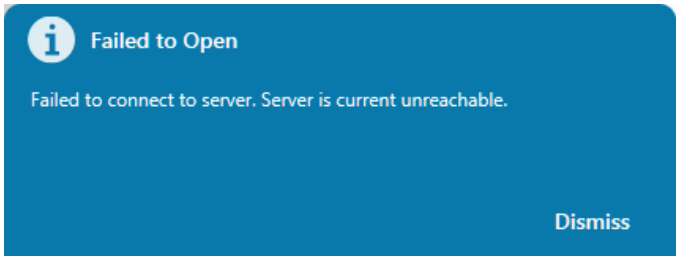
Warning Toasts



A Warning Toast is amber in colour and is displayed when a window is unable to be displayed. The Warning Toast will include a description of the error.

The Warning Toast will automatically close after approximately 10 seconds or it can be closed by clicking on **Dismiss**.

WallControl 10 Information Toast Notifications



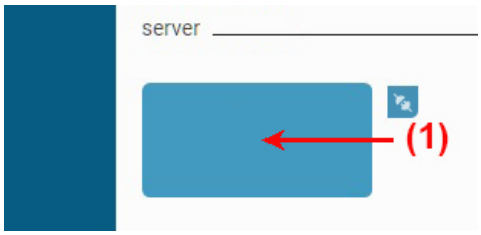
An Information Toast is blue in colour and informs the user that an error has occurred within the WallControl 10 Client or Server. The Information Toast will include a description of the error. The Information Toast will automatically close after approximately 10 seconds or it can be closed by clicking on **Dismiss**.

Opening and Viewing Display Walls

WallControl 10 allows users to manage the content and control multiple display walls from a single server, each wall working independently.

Open a Display Wall

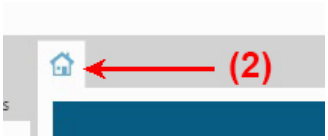
Display walls are represented in the application by large rectangular icons located beneath the named servers on the home page **(1)**. Each server can have multiple walls associated with it.



Click on a wall you wish to view and a new tab is opened showing a live representation of the wall.

When the Wall is opened, the Sources, Layouts and Template tabs associated with the selected wall are displayed.

Open Multiple Walls



To open another wall, return to the home page by clicking on the **Home** icon **(2)**. Select a second wall and a new Wall tab is opened. When switching between Wall tabs, the content of the Sources, Layouts and Templates will display the content associated with the selected wall.

Window Properties and Tools

The Window Properties and Tools located in the application status bar, provide you with information regarding the active window and also allow you to edit the properties and appearance of the window on your display wall.

Window ID

Used to identify specific windows. The Window ID can be edited.

Top and Left

The Top and Left values indicate the position of the window on the display wall. The position values are relative to the top left corner of the display wall. Both values are editable enabling you to position your window precisely.

W and H (Width and Height)

Indicates the width and height (in pixels) of the selected window, the width and height can be edited. If the W and H are linked using the Link icon, changing the values of the width or the height automatically retains the aspect ratio of the window.

Window Options

The Window Options dialogue contains tools to add coloured frames to the window and set the Frame Style. (See Window Options dialogue).

Save Favourite

Save the selected window as a Favourite within the Asset Tab.

Audio

The Audio button is used to mute or select sound for the selected window.

Vision Sources

Audio for Vision sources is muted by default. When unmuted, the audio creates a separate entry in the Windows Volume Mixer. The Volume Mixer can be located by clicking on the

Speaker Icon in the Windows Taskbar.

This allows the volume for each Vision source to be controlled separately.

Media Sources

Audio for media sources is muted by default. The Audio button is only available if a media source contains an audio stream otherwise the icon is disabled. Only one, general entry in the Windows Volume Mixer is created for all media sources

Media Sources

Users are required to manually add media sources to both the Global and Wall Source Libraries.

A Global Source Library is a repository for media sources that can be used by any wall on the server. A Wall Source Library is a repository for sources that are only available to a specific wall.

To select the library, click on the relevant wall icon in the System Tray and select the library you wish to add your media files. An Explorer Window is displayed containing the relevant folders.

Global Source Library

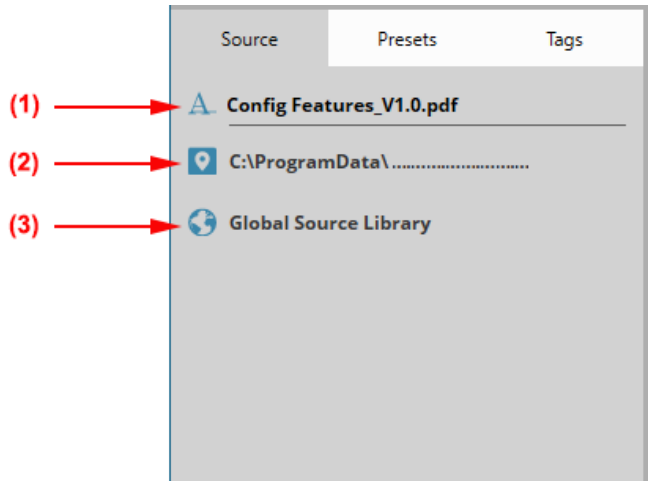
- PDFMedia - .pdf files
- ImageMedia – Photographs/images (.jpg, .bmp. and ,png)
- Office - .docx files
- VideoMedia - Video Files (AVI, MP4, WMV and MPG)

Once your media has been copied in to the relevant folders, it automatically becomes available as a source to use on any wall associated with the server.

PDF Sources

PDF properties are accessed by clicking on the PDF source on the Sources Tab or clicking on a PDF instance already displayed on the wall. Once selected, the properties panel is displayed beneath the Sources Tab.

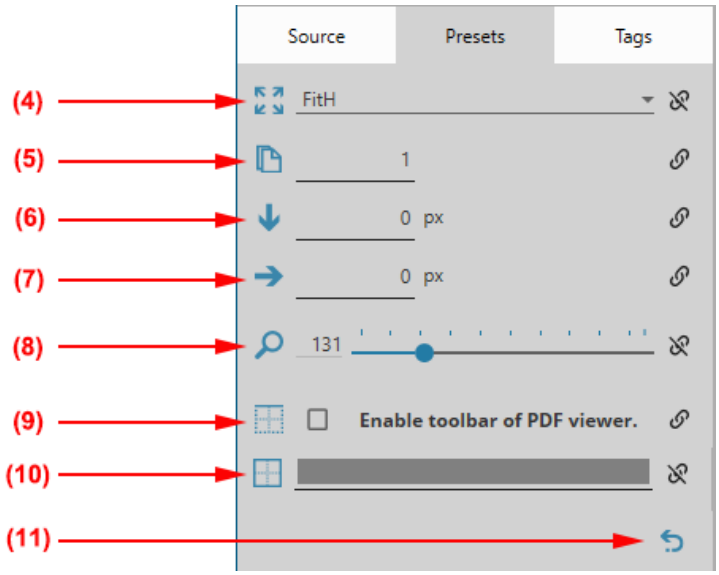
PDF Source Properties



(1)	The name given to the PDF source. The name can be edited by clicking on the edit line and typing a friendly name. The name of the PDF source is automatically updated on the Sources Tab.
(2)	The path to the executable file.
(3)	Displays which repository the PDF source is located.

Presets Settings

The Preset settings when configured, will take effect on the source being opened/displayed or on a carousel rotation. Any changes made to the Presets will not affect any instances of the source already being displayed on the wall. The settings of each instance are configured by clicking on the window and configuring the Instance settings.



(4)	View Mode - Use the drop down list to select the view mode of the PDF source within the window: **Fit** – The whole of the selected page is visible in the window. If the window is scaled, the page is scaled to fit. **FitV** – The selected page will fit vertically in the window. The vertical fit is maintained if the window is scaled. **FitH** – The selected page will fit horizontally in the window. The horizontal fit is maintained if the window is scaled. **Zoom** – Activates the zoom control **(8)**. Used in conjunction with vertical and horizontal offset controls, specific areas of the document can be dis-played. The sliding scale value is percentage.
(5)	Select Page Number – Type in a page number to display that specific page in the window.
(6)	Vertical Offset - Sets a vertical offset from the top of the PDF page. Vertical offset is only effective when the View Mode is configured to FitH or Zoom.
(7)	Horzontal Offset – Sets a horizontal offset from the left of the PDF page. Horizontal offset is only effective when the View Mode is configured to FitV

	or Zoom. Horizontal offset will also have effect if a horizontal scroll bar is present.
(8)	Zoom - Enables the user to zoom into the PDF document. The value is in percentages. The zoom setting is only available if the View Mode is set to Zoom.
(9)	Enable toolbar of PDF viewer – Click the check box to enable the PDF viewer toolbar to appear in the window on the display wall.
(10)	Displays the frame colour used when the Source Colour is selected in the Window Options dialogue. To change the colour, click on the colour bar to open the colour picker and select the required colour.
(11)	Reset to Default – Discard any changes made to the settings and reset to the source defined preset in the Server Overview Preset tab

Tags

Tags are used to create search strings for a specific source. You can then use the Search function on the Sources Tab to quickly access the source. This is a particularly useful function when a wall has many Media sources available.

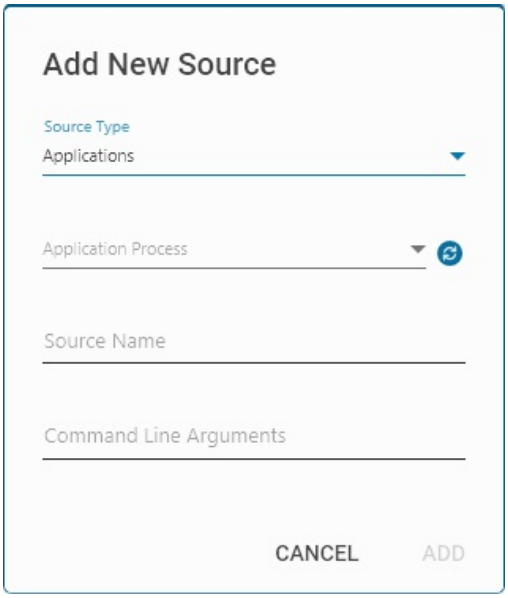
Enter a new Tag, normally the input name and if required, enter a new Location Tag. Location Tags can be used to create a group of search strings.

Application Source

Add a New Application Source

Ensure you have the wall open that you want to add a new application source too.

Click on the **Add New Source** icon on the Sources tab and the Add New Source dialogue opens:

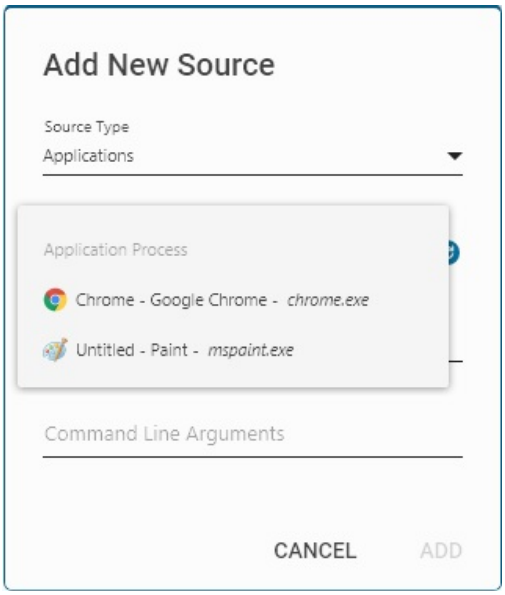


Select **Applications** from the list of Source Types.

When selected, WallControl 10 will scan the system to determine which applications are open and available to add as a source. When the scan is complete, a list of Application Processes becomes available for selection. The list will only display applications that are currently open. If the application you require isn't listed, open it from the programs menu. The application should be positioned and resized manually on the wall as this cannot be done using the WallControl 10 Client. Click on the **Application Process refresh** icon.

It is recommended that applications unable to manage their own start up position and size are not used with the WallControl 10 Client. It should also be noted that some applications may have been excluded by WallControl 10 and not be available to use as a source, for example, the Task Manager.

Once the refresh is complete, the application is added to the list:



Click on the application to select it.

Enter a chosen name for your new source (Mandatory). This is the name that will appear on the Sources Tab once the source has been added.

Add a command line argument if required. For example, adding a URL to a web browser will target a specific web page or add a location of a specific MS Word document. If a command line argument is detected in the application, it will be automatically populated.

Click on **Add** and the application is included on the Sources Tab

In the Sources Tab, third party applications will be listed beneath the Application Provider.

Once an application is added it should be closed by clicking on the adjacent **X** in the WallControl 10 Sources Tab. Closing the window directly from the application results in WallControl 10 being unable to re-open it to the display wall due to it believing the application is still open.

Always close third party applications using the WallControl 10 Sources Tab.

Note:

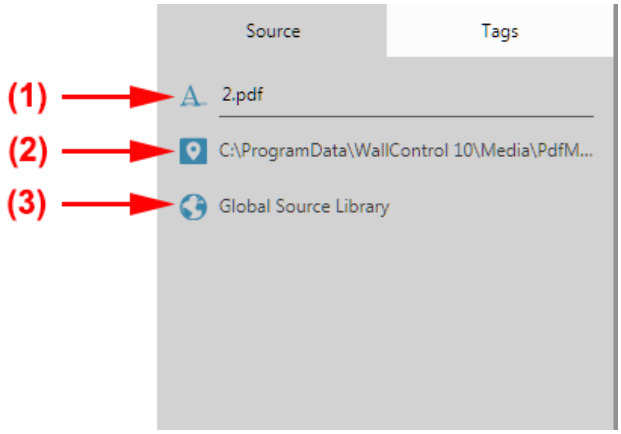
Application sources cannot be dragged from the Sources tab onto the wall. To open an application source, double click on the application in the Sources Tab. When an application source is opened it will, if supported by the application, open in the same position and the same size as when it was last closed.

Some applications only open at a default size and position irrespective of its last recorded position, this includes when saved as part of a layout file.

Application Source Properties

Application source properties are displayed at the bottom of the Sources Tab when an application source is selected.

The Source Properties panel displays the basic properties of the selected application:



(1)	The name given to the application source. The name can be edited by clicking on the edit line and typing a friendly name. The name of the application source is automatically updated on the Sources Tab.
(2)	The path to the executable file.
(3)	Displays which repository the application source is located

Tags

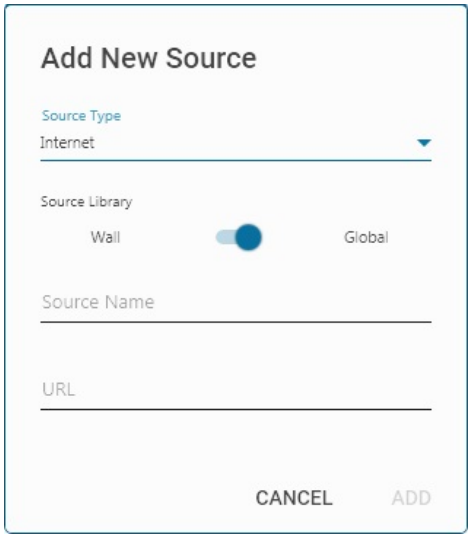
Tags are used to create search strings for a specific source. You can then use the Search function on the Sources Tab to quickly access the input source. This is a particularly useful function when a wall has many Application sources available.

Enter a new Tag, normally the input name and if required, enter a new Location Tag. Location Tags can be used to create a group of search strings.

Internet Browser Source

Add an Internet Browser Source

To add a new internet browser source to the Sources Tab, click on the **Add New Source** icon at the top of the Sources Tab and the following pop-up dialogue is displayed:



Use the Source Type dropdown list to select the type of source you wish to add, in this case select Internet.

Source Library

The Source Library is divided into two specific areas.

Wall Library

The Wall Library is a repository where sources are stored for use on a specific wall.

Global Library

The Global Library is a repository where sources are stored that can be made available to all walls on the server.

Source Name

Enter a chosen name for your new source. This is the name that will appear on the Sources Tab once the source has been added. (Mandatory).

Now enter a URL for the source, ensuring that the full path is entered. If the URL is incorrect the source will still be added to the Sources Tab, therefore care should be taken to ensure the URL is correct.

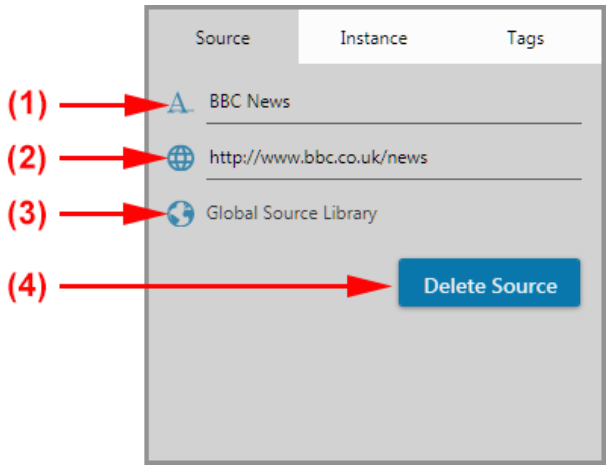
MS Office 365

Documents created using MS Office 365 and saved in the Cloud can be displayed as a source within a browser if the URL is known.

Click on **Add** and the new internet source will be added to the Sources Tab and be available to display on the wall.

Internet Source Properties

The Internet Browser Properties Panel is located beneath the Sources Tab and becomes active when an internet browser is selected on the Sources Tab. The properties panel displays the basic properties associated with the browser window:



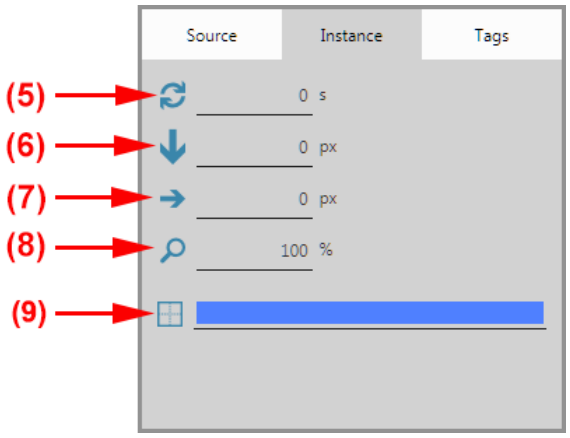
(1)	The name given to Internet source. The name can be edited by clicking on the edit line and typing a friendly name. The name of the Internet source is automatically updated on the Sources Tab.

(2)	URL – Displays the URL of the source. The URL can be edited providing the window is not currently displayed on the wall.
(3)	Displays which repository the internet source is located.
(4)	Delete Source – Click on **Delete Source** to remove the browser instance from the Sources Tab

Instance

An Instance is a single copy of an internet source, which is displayed on the wall.

The Instance Tab displays information on an internet source that is displayed and has been selected on the display wall representation. Any changes made on the Instance Tab only affect the selected Instance.



(5)	Refresh the selected internet source at determined intervals. Values in seconds.
(6)	Scroll the selected internet source vertically to a specific position in the page.
(7)	Scroll the selected internet source horizontally to a specific position in the page. (Only available if the horizontal scroll bar is displayed in the selected internet window.)
(8)	Zoom setting enables you to zoom in on the web page. If 2 or more instances share the same sub domain, Zoom settings are linked and will effect all instances.

(9)	Displays the frame colour used when the Source Colour is selected in the Window Options dialogue. To change the colour, click on the colour bar to open the colour picker and select the required colour.

All the settings on the Instance Tab can be saved in a layout file, however, it should be noted that if the content of a web page changes, adjustments to the Instance settings may be required.

Tags

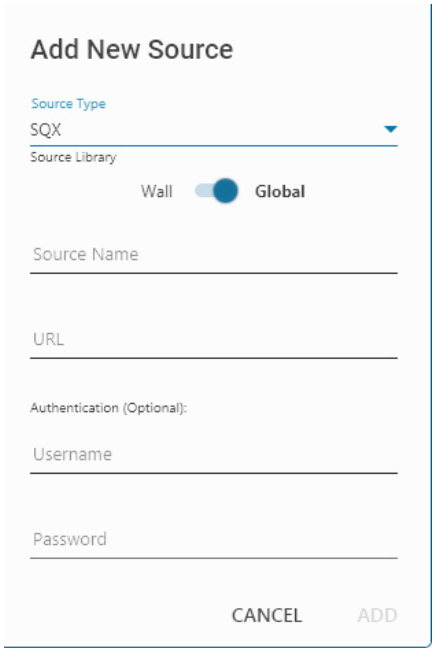
Tags are used to create search strings for a specific source. You can then use the Search function on the Sources Tab to quickly access the input source. This is a particularly useful function when a wall has many Internet sources available.

Enter a new Tag, normally the input name and if required, enter a new Location Tag. Location Tags can be used to create a group of search strings.

SQX Source

Add a SQX Source

To add a new SQX source to the Sources Tab, click on the **Add New Source** icon at the top of the Sources Tab and the Add New Source dialogue is displayed:



Use the Source Type dropdown list to select the type of source you wish to add, in this case select SQX.

Enter a chosen name for your new source. This is the name that will appear on the Sources Tab once the source has been added. (Mandatory).

Authentication

When adding an SQX source you can input the username and password of the source. This removes the requirement to include username and password from the source URL **(2)**. Authentication is not IP Camera specific, it is available for all SQX streams.

Source Library

The Source Library is divided into two specific areas.

Wall Library

The Wall Library is a repository where sources are stored for use on a specific wall.

Global Library

The Global Library is a repository where sources are stored that can be made available to all walls on the server.

Now enter the URL of the source, ensuring that the full path is entered. If the URL is incorrect the source will still be added to the Sources Tab, therefore care should be taken to ensure the URL is correct.

Opening SDP Files

You can open and display Session Description Protocol (SDP) files which are text based files containing SDP IP video source information. To open and display an SDP file enter a sdp:// file path in the URL edit field. For example: sdp://C:\Users\Desktop\IPCamera.sdp".

Click on Add and the new SQX source will be added to the Sources Tab and be available to display on the wall.

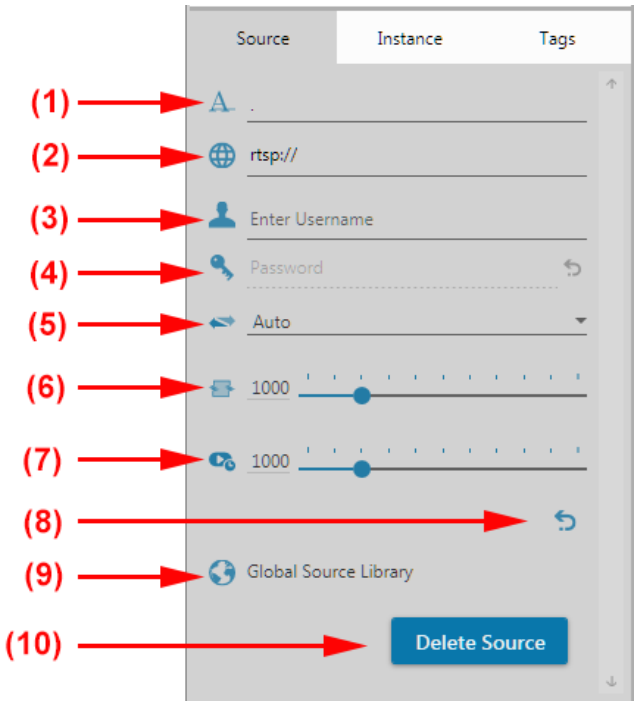
SQX Source Properties

The SQX source Properties Panel is located beneath the Sources Tab. The Properties Panel is populated with information associated with the selected SQX IP source:

The Properties Panel consist of three separate tabs:

Source

The Source Tab displays information relative to the IP source being captured.

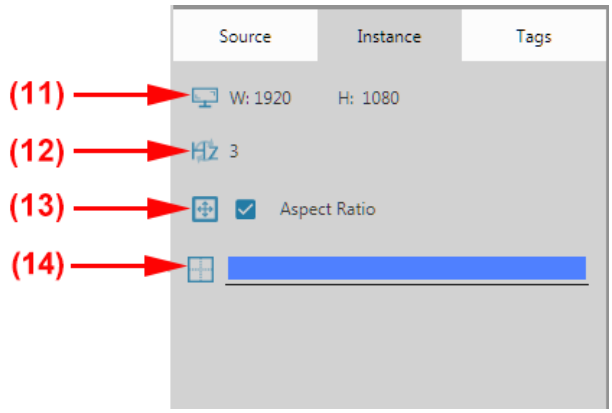


(1)	The name given to the IP source. The name can be edited by clicking on the edit line and typing a friendly name. The name of the source is automatically updated on the Sources Tab.
(2)	Displays the URL of the captured source.
(3)	Enter Username – If you have user rights access, you can enter username of the IP Camera or SQX stream.
(4)	Enter New Password – If you have user rights access, you can enter a new password, overwriting the previous one. Passwords will not be displayed to the user. However an eight character placeholder is displayed to indicate a password is present.
(5)	RTSP Transport Protocol - Forces an applicable SQX client to use a specific data transport connection protocol (UDP/TCP).
(6)	RTSP Jitter Buffering – Instances can occur when data packets are received from the network out of sequence. This can cause a captured stream to skip frames and appear to jolt. The Jitter Buffer control will collate data packets and present them in the cor-

	rect order, creating a smoother display. The Jitter Buffer units of measurement are in milliseconds.
(7)	Decoded Video Cache – Is a store of decoded frames based on the framerate of the IP video stream and the amount of caching (in milliseconds). No frames will be DMA'd out of the ActiveSQX until the caching limit has been filled, at which point the oldest decoded frames will be DMA'd out of the ActiveSQX first.
(8)	Reset to Default – Resets the Jitter Buffering and the Decoded video Cache to their default settings.
(9)	Displays which repository the SQX source is located.
(10)	Delete Source – Click on "**Delete Source**" to remove the IP from the Sources Tab.

Instance

An Instance is a single copy of an IP capture that is being displayed on the wall. Up to eight instances can be created from a single IP capture. The Instance Tab displays information on a specific instance of a captured IP source which has been selected on the wall representation. Any changes made on the Instance Tab only affect the selected Instance.



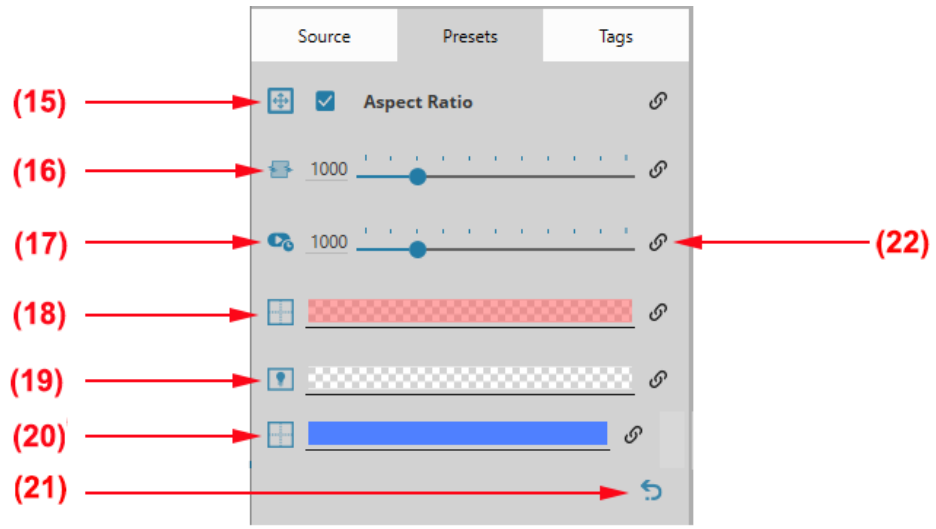
(11)	Displays the resolution of the selected Instance.
(12)	Displays the refresh rate of the selected Instance.
(13)	Allows the user to lock or unlock the aspect ratio of the Instance when res-

	izing.
(14)	Displays the frame colour used when the Source Colour is selected in the Window Options dialogue. To change the colour, click on the colour bar to open the colour picker and select the required colour.

Presets

To open the Presets tab, click on the required SQX source in the Sources Tab and the Presets Tab will be displayed beneath. The Presets Tab displays the source preset controls configured the Server Overview Preset Tab

Any changes made to these settings, override the settings made in the Server Overview Preset Tab. Child input sources created using the Splitting feature, will link to the Presets of the parent input.



(15)	Aspect Ratio - When checked, it indicates the Aspect Ratio of the source will be maintained.
(16)	RTSP Jitter Buffering – Instances can occur when data packets are received from the network out of sequence. This can cause a captured stream to skip frames and appear to jolt. The Jitter Buffer control will collate data packets and present them in the correct order, creating a smoother display.

	The Jitter Buffer units of measurement are in milliseconds.
(17)	Decoded Video Cache – Is a store of decoded frames based on the framerate of the IP video stream and the amount of caching (in milliseconds). No frames will be DMA'd out of the ActiveSQX until the caching limit has been filled, at which point the oldest decoded frames will be DMA'd out of the ActiveSQX first.
(18)	Default primary colour used in Coloured Borders. Click on the colour bar to select a different colour.
(19)	Default alternative colour which is used when Flashing is enabled in Coloured Borders. Click on the colour bar to select a different colour.
(20)	Displays the frame colour used when the Source Colour is selected in the Window Options dialogue. To change the colour, click on the colour bar to open the colour picker and select the required colour.
(21)	Reset to Default – Discard any changes made to the settings and reset to the defined preset in the Server Overview Preset Tab.
(22)	The link icon indicates the Presets defined in the Server Overview Preset Tab are being used. A broken link indicates the preset has been configured locally in this dialogue and no longer matches the preset in the Server Overview Preset Tab.

Tags

Tags are used to create search strings for a specific source. You can then use the Search function on the Sources Tab to quickly access the required IP source. This is a particularly useful function when a wall has many SQX sources available.

Enter a new Tag, normally the input name and if required, enter a new Location Tab. Location Tags can be used to create a group of search strings.

Quant

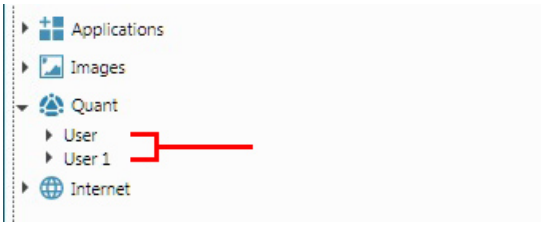
The Quant Wall client must be running on the server to enable Quant windows to be shared to a wall.

Note: Quant will not currently connect to more than one WallControl 10 Server.

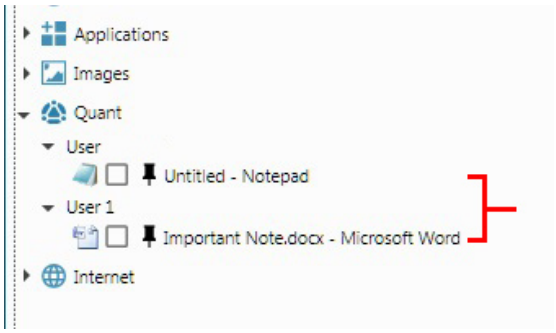
Adding a Quant Source

The Quant Provider will be displayed on the Sources Tab when a Quant Source is detected and has been shared to the wall:

When the Quant Provider tree is expanded, a list of Quant- users, currently sharing windows with the wall are listed:



Each Quant-user can share multiple windows to the wall. By expanding the Quant- user's tree, details of any shared windows are displayed:



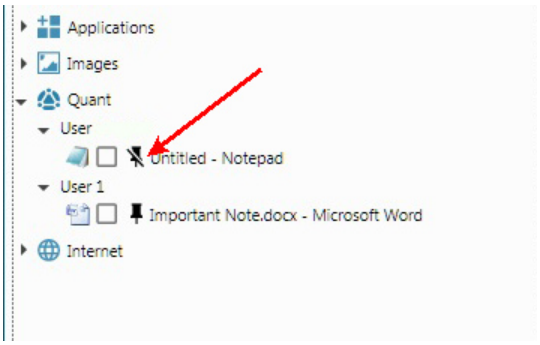
In this instance, User has shared a window to the wall containing an untitled Notepad document. User 1 has shared a window to the wall containing a Microsoft Word document entitled Important Notice.

Quant sources can be added to templates, saved in Layouts and dragged onto the wall like other sources. If a Quant source is dragged to the wall, WallControl 10 will attempt to connect to the source via the Quant Wall client. The ownership remains with the Quant- user sharing the application therefore if the application is closed, it will no longer be displayed on the Sources Tab, unless the source is pinned.

Pinning Quant Sources

Any Quant source shared with the wall will have feature which allows you to pin the source to the WallControl 10 Sources Tab.

To pin a source click on the **Pin icon** next to the source details on the Sources Tab:



When the source is pinned the icon will display a diagonal line going through it as shown above. The source will now remain pinned to the sources tab irrespective of whether the connection is active or not. Pinned sources will always appear on top of the list for each Quant- user.

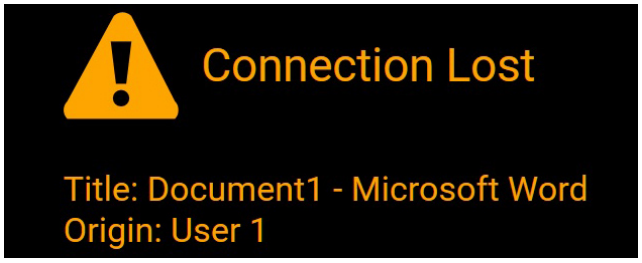
If a Quant window is shared, pinned to the sources tab then unshared the connection will be lost. If changes are made to the application and it is re-shared, the connection is re-established, however the content will have changed.

If a Quant source is dragged to the wall but the window has been unshared by the Quant-user, text will be displayed in the Quant window informing you that WallControl 10 is trying to connect to the source:

At the same time a message is sent to the Quant- user asking for permission to share the application. If a Quant window is included in a wall layout, requests to share Quant windows are automatically sent when the layout is launched.

Once permission has been granted, the application will appear in the Quant window on your wall. If permission to share is rejected by the Quant- user, the following text will appear in the window:

If an application is unshared or the system sharing it is shut down whilst the Quant window is displayed on the wall, a message is displayed in the Quant window informing you that the connection is lost:



When a Quant window is shared, any changes to the application made by the window owner will automatically update on the display wall to reflect the new changes unless it is shared using the Snapshot method of sharing.

Unpinning

Click on the **Pin icon** to unpin a source. If the source is still being shared to the wall it will still remain on the Sources Tab. If you unpin a source then the source is unshared, it will be removed.

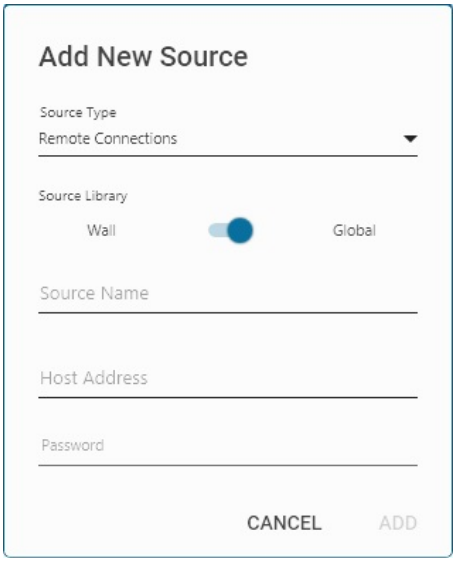
Source Properties Panel

Quant windows do not have any properties to populate the Source Properties panel in WallControl 10.

Remote Connections Source

Adding a Remote Connections Source

To add a new Remote Connections source to the Sources Tab, click on the **Add New Source** icon at the top of the Sources Tab and the Add New Source dialogue is displayed:



Use the Source Type dropdown list to select the type of source you wish to add, in this case Remote Connections.

Enter a chosen name for your new source. This is the name that will appear on the Sources Tab once the source has been added. (Mandatory).

When adding a Remote Connections source, the Host Address of the target machine is required either as an IP-Address or DNS name. Without this you will not be able to connect and display the source on your wall.

A password may also be required if one has been configured in the Datapath Agent on the target machine.

Click on **Add** and the new source will be added to the Sources Tab and be available to display on the wall.

Remote Connections Client Source

Using the Remote Connections Client, WallControl 10 allows you to remotely connect, capture and display the desktop of another computer on the network. You will not be able to interact with the Remote Connections when it has been placed onto the wall.

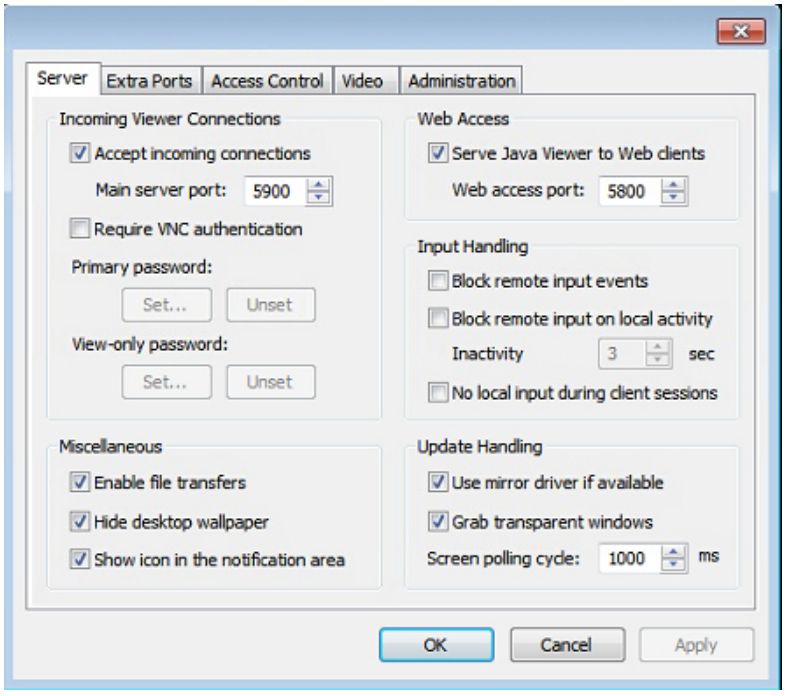
Remote Connections requires the Datapath Agent server to be installed on client machines that you wish to add to the list of Remote Connections Sources.

To be able to use the Remote Connections Client it must be installed and active on the machine that you wish to connect too.

Configure Remote Connections

The Datapath Agent on the target machine must be configured to accept incoming connections otherwise when the remote client tries to display the connection source, the request will fail.

To configure Datapath Agent to accept incoming connections, open the configuration dialogue on the source machine by clicking on the Agent icon located in the system tray, then select Configuration… from the displayed menu. The following dialogue is displayed:

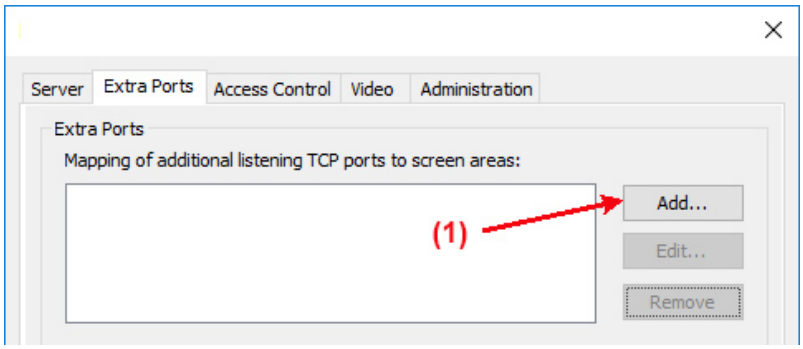


Ensure that the **Accept incoming connections** checkbox is ticked.

Remote Connection Cropping

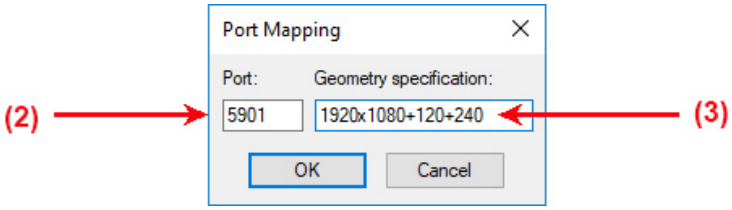
The Datapath Agent allows you to crop the Remote Connection creating variations of the captured desktop and add a new source using an extra port number, each referenced by a unique port number assigned by the user.

To create a cropped Remote Connection, open the Datapath Agent from the system tray on the client machine and click on the **Extra Port** tab:



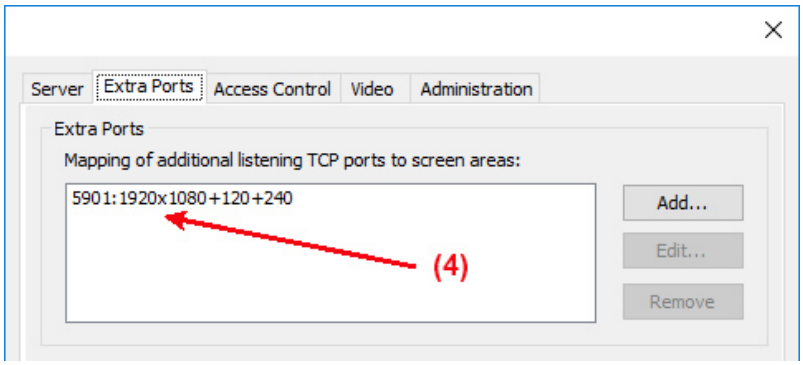
Using the Add function, it is possible to create extra ports, which the Datapath Agent server will listen to. These extra ports can be configured to display specific areas of the desktop and therefore be used as separate Remote Connection sources.

Click on **Add (1)** to open the Port Mapping dialogue:



Select a unique Port number **(2)** for your cropped Remote Connection; this will give your crop its own identity. Use the Geometry Specification edit box **(3)** to create the cropped area of the desktop. In this example, the width of the crop is 1920, the height is 1080, the horizontal offset is 120 and the vertical offset is 240, (all measurements in pixels).

Once the Port Mapping is complete, click on OK and the extra port is created and displayed in the Extra Ports tab **(4)**.



Click on **Apply** to save the extra port.

The extra port can be edited by selecting it and clicking on the **Edit** button, this will open the Port Mapping dialogue enabling the Geometry Specification to be changed.

The extra port can now be used to add a new Remote Connection source. When adding it as a new source the port number is included after the Host Address, for example 10.20.2.15:5901.

The cropped Remote Connection is now available as a source for your display wall.

Note: Each Geometry specification must have a unique port number; multiple specifications cannot be allocated to the same port number.

Port Numbers:

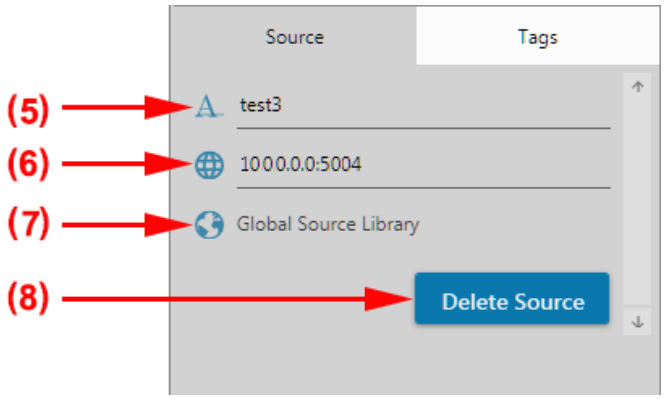
Port Numbers	Used For:
0 - 1023	System or well known ports
1024 - 49151	Registered ports
49152 - 65535	Dynamic/Private ports

It is recommended that you assign a port number between 5901 and 49151.

Port numbers can be used by other applications on your system therefore, you may need to allocate a different port number.

Remote Connection Source Properties

The Remote Connection Properties Panel is located beneath the Sources Tab and becomes active when an internet browser is selected in the Sources Tab. The properties panel displays the basic properties associated with the browser window:

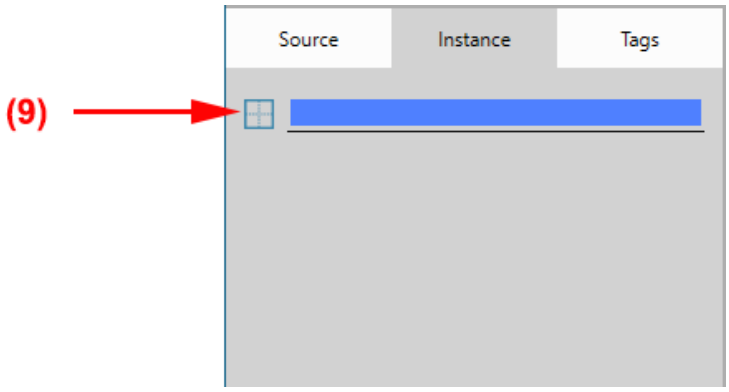


(5)	The name given to the Remote Connection source. The name can be edited by clicking on the edit line and typing a friendly name. The name of the Remote Connection source is automatically updated on the Sources Tab.
(6)	Host Address – Displays the Host Address of the Remote Connection source . The Host Address can be edited providing the window is not currently displayed on the wall.
7)	Displays which repository the Remote Connection source is located.
(8)	Delete Source – Click on **Delete Source** to remove the browser instance from the Sources Tab.

Preset/Instance

An Instance is a single copy of a Remote Connection that is being displayed on the wall. The Instance Tab displays information on a Remote Connection that is displayed and has been selected on the display wall representation. Any changes made on the Instance tab only affect the selected Instance.

To open the Presets tab, click on the required Remote Connection source in the Sources tab and the Presets Tab will be displayed beneath. The Presets Tab displays the source preset controls configured the Server Overview Preset Tab



(9)	Displays the frame colour used when the Source Colour is selected in the Window Options dialogue. To change the colour, click on the colour bar to open the colour picker and select the required colour.

Tags

Tags are used to create search strings for a specific source. You can then use the Search function on the Sources Tab to quickly access the input source. This is a particularly useful function when a wall has many Remote Connection sources available.

Enter a new Tag, normally the input name and if required, enter a new Location Tag. Location Tags can be used to create a group of search strings.

VisionSource

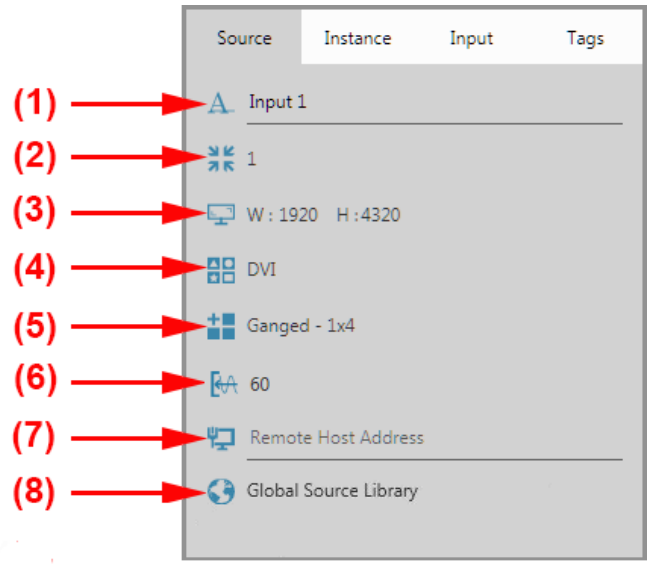
There is no requirement to add Vision sources to the Sources Tab as they are auto-matically detected and added.

The Vision source Properties Panel is located beneath the Sources Tab. The Properties Panel is populated with information associated with the selected Vision source:

The Properties Panel consist of four separate tabs:

Source

The Source Tab displays information relative to the source being captured.

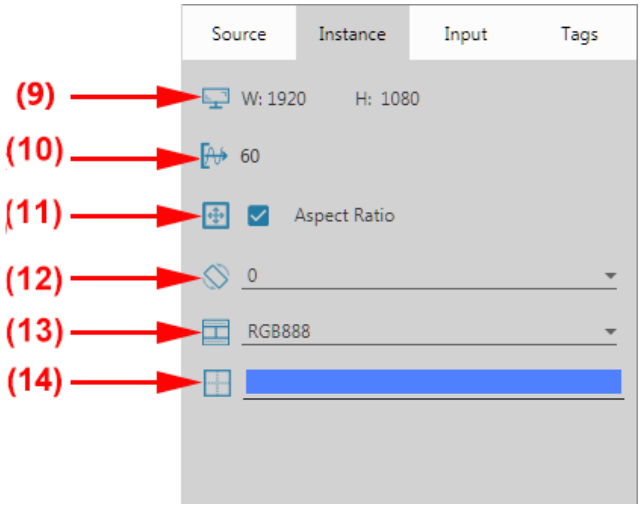


(1)	The name given to the captured input. The name can be edited by clicking on the edit line and typing a friendly name. The name of the input is automatically updated on the Sources Tab.
(2)	Input Number – The input number allocated to the source.
(3)	Displays the resolution of the captured source.
(4)	Displays the type of source being captured, for example DVI, DisplayPort, VGA, Composite etc.

(5)	Ganged – Multiple Vision sources ganged together to create a single input. Values indicate the arrangement of the ganged source.
(6)	Displays the refresh rate of the source.
(7)	Remote Host Address – Input a Host address (Computer name or IP address) to enable a remote connection. (See Vision Remote Connections).
(8)	Displays where the source is located. A Vision source is always available as a Global Source. However, it can be made available to selected Walls using the WallControl 10 Security Administration Client.

Instance

An Instance is a single copy of a capture that is being displayed on the wall. Up to sixteen instances can be created from a single Vision capture. The Instance tab displays information on a specific instance of a captured source which has been selected on the wall representation. Any changes made on the Instance Tab only affect the selected Instance.



(9)	Displays the resolution of the selected Instance.
(10)	Displays the refresh rate of the selected Instance.
(11)	Allows the user to lock or unlock the aspect ratio of the Instance when resizing.
(12)	Rotation – Allows the Instance to be rotated through angles of 90, 180 and

	270 degrees.
(13)	Pixel Format – Allows the user to select a required pixel format.
(14)	Displays the frame colour used when the Source Colour is selected in the Window Options dialogue. To change the colour, click on the colour bar to open the colour picker and select the required colour.

If the Instance is from a Composite/S-Video source, additional information/controls are available:

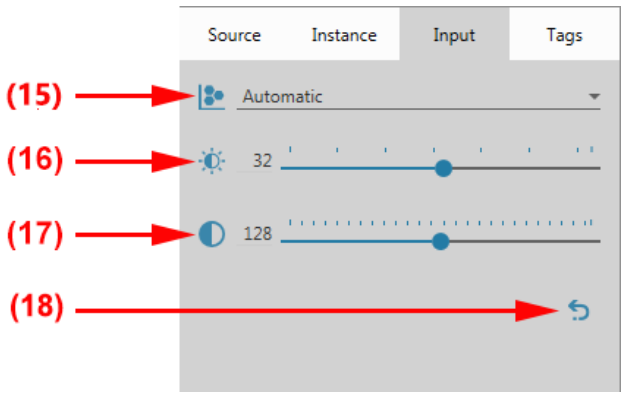
Video Standard – for example NTSC-M.

If the Instance is from an Interlaced source, an additional control is available:

Interlacing Controls – Select between Bob and Weave.

Input

The Input Tab displays controls for the captured source. The Input controls are linked to the capture hardware therefore; any changes made will affect all instances of the captured source, the common controls are shown below. However, additional controls are available depending on the type of source being captured.



(15)	Colour Domain - Allows you to select a preferred colour domain. (Not available for Composite/S-Video).
(16)	Brightness – Adjust the brightness of the source.

(17)	Contrast – Adjust the contrast of the source.
(18)	Reset to Default – Discard any changes made to the input settings and display the input at its default settings.

If the Input source is Dual-Link DVI, an additional control is available:

Equalisation – Used to increase signal strength to support longer cable lengths (up to 20m). Note: For the Equalisation slide bar to be available, the complete line from source to capture card, including cables have to be Dual-Link DVI.

If the Input source is DisplayPort, additional controls are available:

Link Rate – Switch between Higher and Reduced bitrate to compensate for the type of cables being used.

If the Input source is Composite/S-Video, additional controls are available:

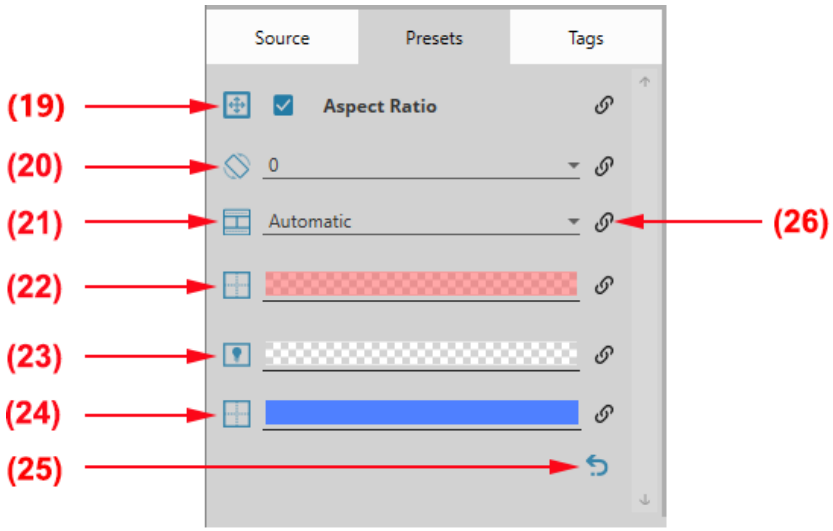
Hue – The Hue control allows you to increase or decrease the Hue. This control is only available for NTSC captures.

Saturation (NTSC only) – The Saturation control allows you to increase or decrease the level of colour saturation.

Presets

To open the Presets Tab, click on the required Vision source in the Sources Tab and the Presets Tab will be displayed beneath. The Presets Tab displays the source preset controls configured the Server Overview Preset Tab.

Any changes made to these settings, override the settings made in the Server Overview Preset Tab. Child input sources created using the Splitting feature, will link to the Presets of the parent input.



(19)	Aspect Ratio - When checked, it indicates the Aspect Ratio of the source will be maintained.
(20)	Rotation – Allows the Instance to be rotated through angles of 90, 180 and 270 degrees.
(21)	Pixel Format – Allows the user to select a required pixel format.
(22)	Default primary colour used in Coloured Borders. Click on the colour bar to select a different colour.
(23)	Default alternative colour which is used when Flashing is enabled in Coloured Borders. Click on the colour bar to select a different colour.
(24)	Displays the frame colour used when the Source Colour is selected in the Window Options dialogue. To change the colour, click on the colour bar to open the colour picker and select the required colour.
(25)	Reset to Default – Discard any changes made to the settings and reset to the defined preset in the Server Overview Preset Tab.
(26)	The link icon indicates the Presets defined in the Server Overview Preset Tab are being used. A broken link indicates the preset has been configured locally in this dialogue and no longer matches the preset in the Server Overview Preset Tab.

Tags

Tags are used to create search strings for a specific source. You can then use the Search function on the Sources Tab to quickly access the input source. This is a particularly useful function when a wall has many Vision sources available.

Enter a new Tag, normally the input name and if required, enter a new Location Tag. Location Tags can be used to create a group of search strings.

Banners

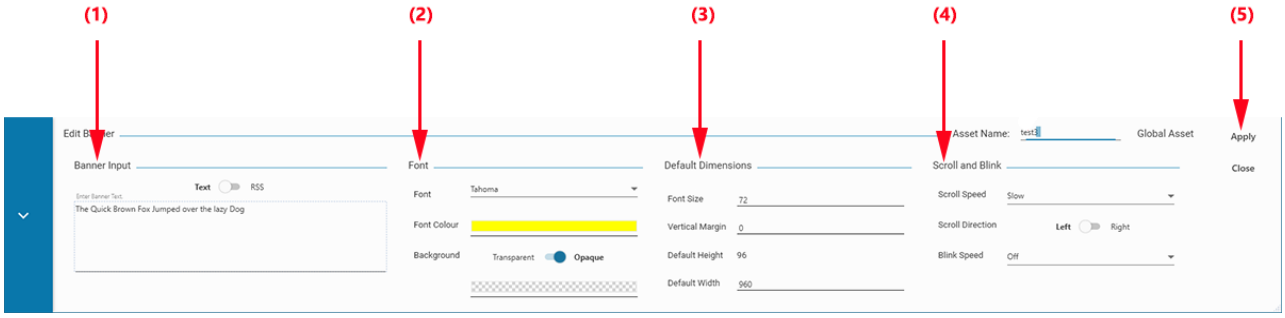
The creation of Banners is only available with the WallControl 10 Pro licence.

Banners can be created to display single strings of information on a display wall. The banner can contain text or an RSS feed. In WallControl 10, banners can be saved as a local or global asset.

Creating a new Banner

Open the Assets tab

Click on the **Add Banner** icon and the Banner panel is displayed:



Banner Input (1)

Content for banners can either be Text or an RSS feed.

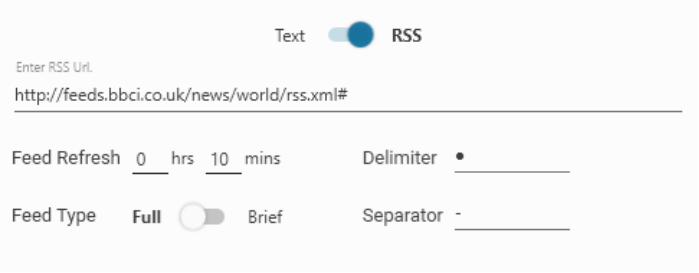
Text banner

Select **Text** and click inside the Enter Banner Text edit box and type in the required text. The banner will be displayed as a single line of text therefore a carriage return used within the text edit box will not be replicated on the banner itself.

RSS banner

RSS is a web based feed which displays text that is updated at regular intervals. For example live news and financial market data.

Select **RSS** and the RSS configuration window is displayed.



Enter the RSS URL you wish to display as a banner on the wall.

Feed Refresh

RSS feeds are continually updated from the source, use the feed refresh to set an interval when the RSS feed should be refreshed allowing the data being displayed to be kept up to date.

Feed Type

RSS feeds can be transmitted with both a full and a brief script of information. A full feed type delivers more detailed information whereas a brief type offers more bullet-point statements.

Delimiter

A delimiter is used to separate different topics displayed within the RSS feed. A delimiter can be up to 10 characters long

Separator

A separator is used to separate topic headings from the story content. A separator can be up to 10 characters long.

Font (2)

Select the font style and colour you wish to use for your banner.

If the banner window is resized on the wall representation, the text within the banner is scaled accordingly.

Background

Select Transparent and the desktop behind the test is visible.

Select Opaque and the area behind the text is displayed in a chosen colour. To select a background colour, click on the colour bar which appears when Opaque is selected.

Default Dimensions (3)

The default dimensions of a banner are displayed when adding a new banner, the values of the dimensions can be edited. The default values will be used whenever the banner is placed on a wall. It should be noted that the default values cannot be edited whilst the banner is being displayed.

Scroll and Blink (4)

Scroll Speed

Scroll speed determines the speed at which the content scrolls across the banner. Select between Slow, Medium, Fast and Off. The selection becomes active once the **Apply (5)** button has been clicked.

With a speed selected the Direction option becomes available, allowing you to select the scroll direction Left or Right.

With speed selection set to Off the banner will stop scrolling and the Alignment option becomes available, select how you would like the text aligned. Justified left, in the centre or justified right.

Scroll Direction

Change the direction of the flow of the text within the banner. Select Left and the banner scrolls from right to left. Select Right and the banner scrolls from left to right.

Blink Speed

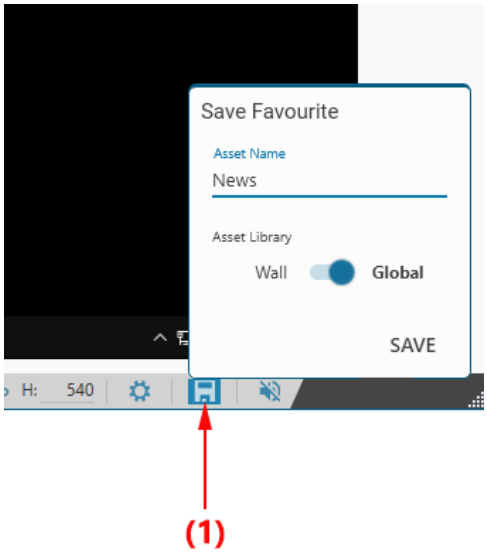
Blinking text can be used to draw attention to the banner. The text blinks on and off as it scrolls across the wall. Select between Slow, Medium, Fast and Off.

Favourites

Any window being displayed on the wall can be saved as a favourite and placed within the Asset tab. Windows that are saved as favourites retain all the components that make up the window. For example: Window Templates, On Screen Display, Coloured Borders and Carousel etc.

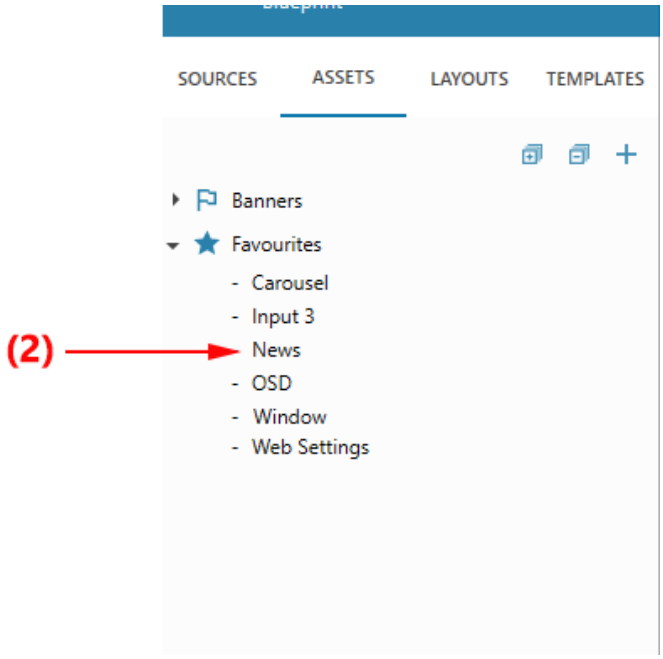
Select the window you wish to save as a favourite so it becomes the active window on the wall.

To save the window as a favourite, click on the **Save Favourite** icon **(1)** on the Window Properties bar and the Save Favourite dialogue is displayed:



Input an Asset Name and select which library you would like to store your Favourite; Wall or Global then click Save. The saved window will then appear in the Favourites tree within the Asset Tab **(2)**.

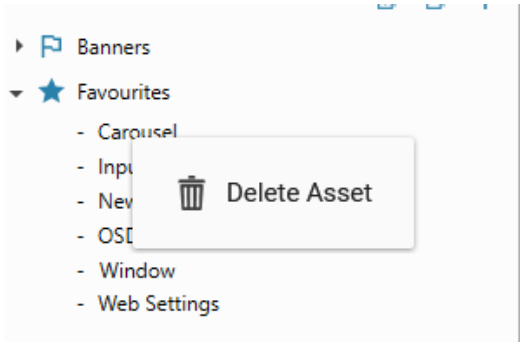
Note: If the window contains a wall based source, the favourite can only be saved in the Wall Asset Library.



Favourites can be applied and displayed on the wall using any of the following of three methods:

1. Double click on the favourite window you wish to open and it will attempt to open it in the same location where it was saved.
2. Drag the favourite window on to the wall or an empty desktop template cell. It will open where placed using the default window dimensions.
3. Drag the favourite window on top of another window being displayed on the wall. The favourite window will replace the entire window content.

To remove a saved favourite from the tree, right click on the favourite you wish to delete and click on **Delete Asset:**

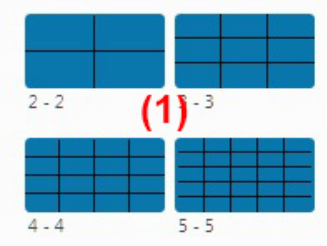


Creating and Saving Layout Files

To create a layout file, firstly open the display wall you wish to create a layout for.

You can add a template to the display wall to enable you to accurately position windows. Layouts can still be created without the use of templates just by dragging the required windows onto the wall and positioning them where required.

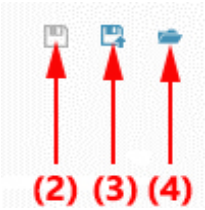
Create a Layout Using Templates



Select a template from the Template Tab **(1)** and drag it onto the selected display wall.

Create a display wall layout by populating the template cells with the required sources by dragging and dropping them from the Sources Tab. Once all the required sources have been placed inside the template cells open the Layout Tab on the left of the application to save your new layout.

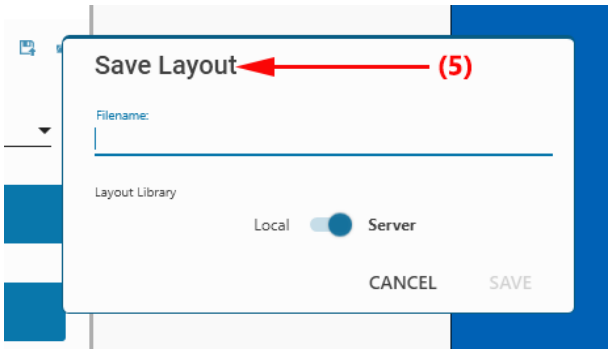
The Layout Tab offers two options to save your layout file:



Save **(2)** - Saves the current layout to where it is opened from, be it local or server.

Save As **(3)** - Opens the Save As dialog **(5)**. This allows you to save the layout either locally on disk or to the server.

Open **(4)** - Opens the file selection dialog allowing the user to open a previously layout already saved disk.



Local

During the WallControl 10 installation process, a layout folder is created and placed in:

Local Disk/Users/My Documents/Datapath/WallControl 10/Layouts

This folder is the default location for the storage of layout files when saving them locally. This enables the WallControl 10 to track the layout files and display them on the Layout Tab.

Layouts can be stored elsewhere on a local machine however; they will not be tracked by the application and therefore will not be presented on the Layout Tab.

To save a layout file in a folder other than the default folder the user can select a directory from a dropdown list containing the last five folders where layouts have been stored. If any of these locations are no longer available, a warning is displayed.

The user can also click on the **Browse…** button to open an Explore window and select a preferred location.

The new layout now appears on the Layout Tab for it to be recalled and if shared, allows the layout to be displayed by other users.

To recall the layout and its sources simply click on it and the layout will launch and populate the display wall.

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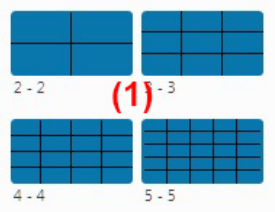
To recall the layout and its sources simply click on it and the layout will launch and populate the display wall.

Display Wall Templates

Templates are tools designed to assist in the organisation and creation of a layout for your display wall. Templates can be used to create visual displays over your wall enabling you to showcase specific content to target audiences.

Open the display wall that you wish to create a template for.

Open the “Templates Tab” and a number of pre-defined templates are available to select as well as any Custom Templates that have been previously created **(1)**.



Select the template you wish to use by clicking on it and dragging it onto the display wall. Double clicking on a template will open the Template Editor.

Once the template is positioned on the wall you can populate the template by dragging sources into the template cells. When a source is place into a cell it will automatically snap to fit.

Dragging a template on to a wall that is currently displaying windows will result in all the windows snapping into individual template cells.

The windows snap into the template cell that contains the largest proportion of the window. If a conflict exists whereby multiple windows overlap a single template cell, the window that has the largest proportion overlapping the cell takes priority.

The application continues to cycle through the process of allocating overlapping windows to cells. Windows overlapping occupied cells will then allocated the closest, empty template cell to the top left corner of the window.

Re-arranging Windows in Templates

Once all the displayed windows have been allocated a template cell, the location of a window can be changed by clicking on it and dragging it to a preferred cell. If the cell is occupied by another window, then the windows will swap positions.

Adding a New Source to a Template

A new source can be added to the template by dragging it from the Sources Tab into a template cell. If the cell is already occupied by another window, the new source will replace it.

Template Restrictions

When applying a template to a wall displaying windows, the number of windows must not exceed the number of cells available within the template. The user will be prompted to close the appropriate number of windows for the template to be applied. If all the windows are required then a template with sufficient number of cells should be selected.

Template cells have a minimum height and width restriction of 160 x 120 pixels. Adding a template with many rows or columns to a small display wall can produce an error, warning the user that the template cannot be applied. For example, a template with 24 rows applied to a 2 x 1 display wall (3840 x 1080) will exceed the height of the wall.

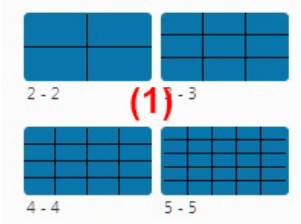
Window Templates

Templates are tools designed to assist in the organisation and creation of a layout for your display wall. Templates can be used to create visual displays over your wall enabling you to showcase specific content to target audiences.

Open the display wall you wish to create a window template for.

Open the Sources Tab and select a source for your window template. Click and drag the source on to the display wall.

Open the Templates Tab and a number of pre-defined templates are available to select as well as any Custom Templates that have been previously created **(1)**.



Select the template you wish to use by clicking on it and dragging it on top of the source window you selected which is displayed on the wall. Double clicking on a template will open the Template Editor.

Once the template has been placed on top of the window, the window will snap into and populate one of the template cells. You can then return to the Sources Tab and populate the remaining cells on your Window Template.

The Window Template can be dragged and positioned anywhere on your display wall. It can also be resized by clicking and dragging the template frame.

The Window Template can be used alongside the Display Wall Template to create a template within a template. If a Display Wall Template is applied to the wall, the Window Template is automatically incorporated into one of the Display Wall Template cells.

Custom Templates

Templates are tools designed to assist in the organisation and creation of a layout for your display wall. Templates can be used to create visual displays over your wall enabling you to showcase specific content to target audiences.

Open the Templates Tab and click on the **Create New template** icon located at the top of the Templates Tab **(1)**.

A default custom template is displayed in the Template Editor. The default template shows a grid containing five columns and five rows. The number of columns and rows can be changed at the top of the Template Editor.

To begin designing your Custom Template, click the cursor inside one of the template cells and drag it over the cells you wish to merge together, thus creating your own template design.

When the design of the custom template is complete, rename the template by clicking in the **Template Name** edit box then click on **Save and Close** and the new custom template is added to the template gallery. The template can now be dragged onto the display wall or used as a window template.

All templates in the Template Gallery can be customised. Double click on any template to open it in the Template Editor.

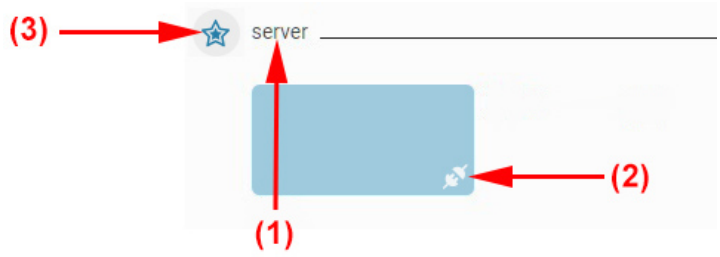
Servers

The Server is the system that drives your display wall configuration and will run all the display walls associated with it. Datapath graphics cards installed in the server will output the Windows desktop to the display wall. The server may also contain the capture cards needed to display video or IP streams.

WallControl 10 automatically discovers all available servers and lists them on the application home page **(1)**, including any servers on the network providing you are connected. Displayed beneath each listed server are the display walls associated with it.

When multiple servers are present on a network, users can pin favourite servers to the top of the server list on the WallControl 10 homepage.

To pin your favourite servers, click on the Set as Favourite icon **(3)** and the server is relocated to the top of the server list. If more than one favourite server is selected, they are listed in alphabetical order.

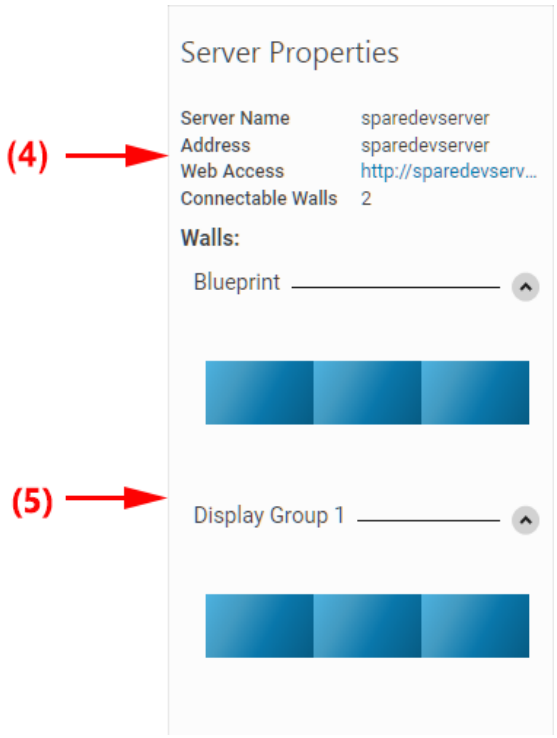


To un-pin a server, click the **Set as Favourite** icon.

Server Properties

Each server has a specific group of properties. To view these properties click on the server on the home page **(1)** and the Server Properties panel located on the right of the application becomes populated.

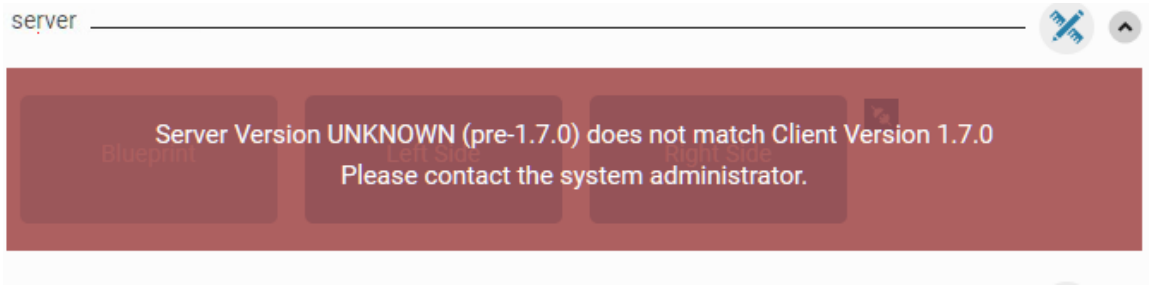
When selected, the Server properties **(4)** and representations of all its associated walls **(5)** are displayed.



If a wall is wider than 23,000 pixels or taller than 7500 pixels, a representation is not displayed.

Incompatible WallControl 10 Version

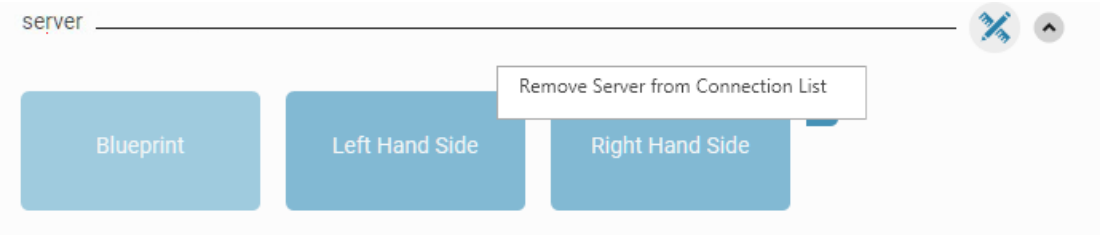
The Server and Client must run on the same version of the WallControl 10 software, should the Server be running pre V1.7.0 the following warning is displayed:



To remedy this, ensure the same version of WallControl 10 Client and WallControl 10 Server are being used. The version of the Client can be found in the client User Settings panel.

Remove a Server

To remove an unwanted server from the list, right click on the server to reveal the following action:



Click on **Remove Server from Connection List** and the server is removed until automatically re-discovered by the WallControl 10 Client

Add a New Server

To add a new Server, enter the Server Name and its IP address then click on the **Add Server** button.

The new server is created and displayed on the application homepage. Clicking on the new server reveals it properties in the Server Properties panel.

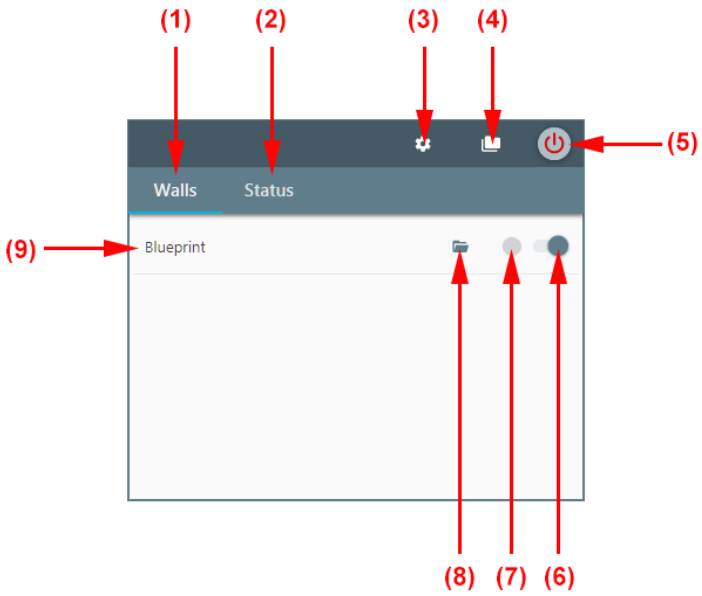
Add a New Wall to the Server

Type in a wall name and port number then click on **Add** to create your wall. Offline walls can be also be created by not typing in a port number. Offline walls display the unconnected icon **(2)**.

The new wall is displayed beneath the server on the Homepage. Details of the wall will also be displayed in the Server Properties panel.

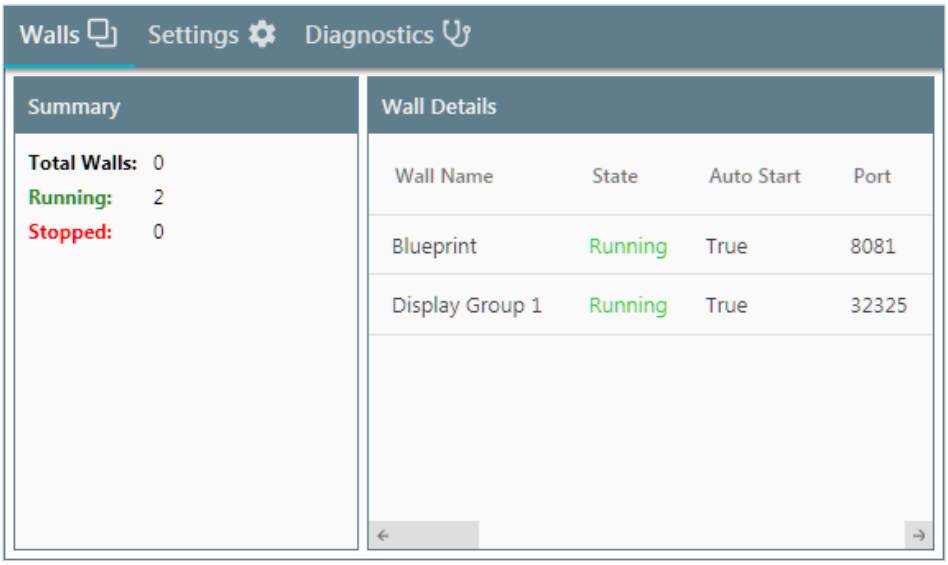
WallControl 10 Server Dialogue

To open the WallControl 10 Server dialogue click on the **WallControl 10 Server** icon in the System Tray:



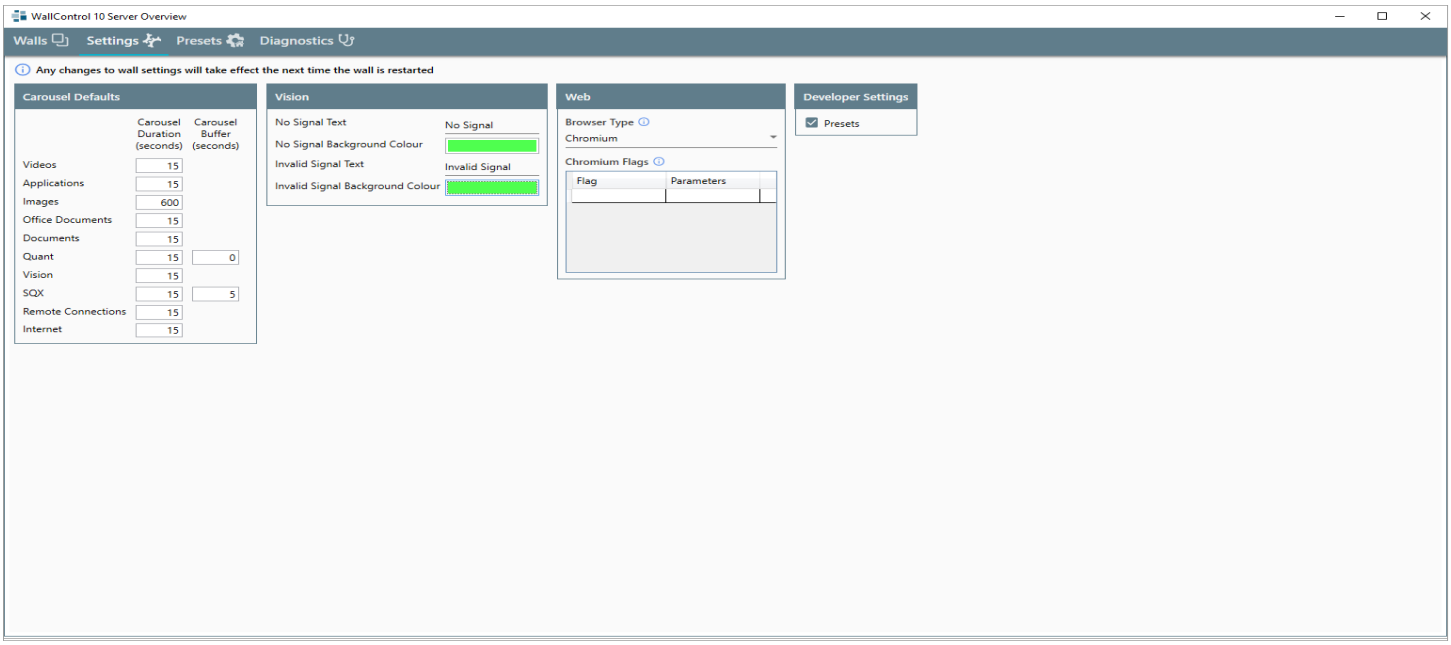
1	Click on **Walls** and a list of walls associated with the server are displayed, including walls that are not currently running.
2	Click on **Status** to display the license type and the serial number of the license dongle.
3	Open Server Overview (See below)
4	Open the Global Source Library.
5	Shut down the Server. **Shutting down the server will close all walls associated with it and any unsaved, open layouts will be lost.**
6	Manually start or stop the wall.
7	Wall status. For details of all wall status icons see Wall Management.
8	Open the Wall Source Library.
(9)	Wall name.

Server Overview – Walls



The Walls overview displays a summary of all the walls associated with the server and the detailed settings for each individual wall.

Server Overview –Settings



The Settings window allows you to apply certain settings from a single location.

Changes to Wall settings will take effect the next time the wall is restarted.

Carousel Defaults

The Carousel Defaults panel allows you to set the default carousel duration, default carousel buffer duration and the default Maintain Aspect Ratio State for each source type (where relevant).

Vision

The Vision panel allows you to configure the displayed text in Vision windows when no signal is being captured or an invalid signal is present.

Type in the required text and select the background colour.

Web

Note: These features should only be used if instructed to do so by Support Staff.

Browser Type

Allows you to change the web browser used to control Web sources. Chromium uses Chromium Embedded Framework (CEF), (Google Chromium-based embedded browser using the same rendering engine as Google Chrome). Legacy uses an Internet Explorer-based browser, and is not recommended for use in most cases.

Chromium Flags

When the Browser Type is set to Chromium, these flags allow modifying the behaviour of the browser within Web sources.

Developer Settings

Swagger is an API exploration tool that is hosted within the Server and Wall Server processes. It enables developers to discover which API calls are available. Swagger must first be enabled using the checkbox in the Developer Settings dialogue as shown above.

Once the Server is restarted, the Swagger UI is available at the following URLs:

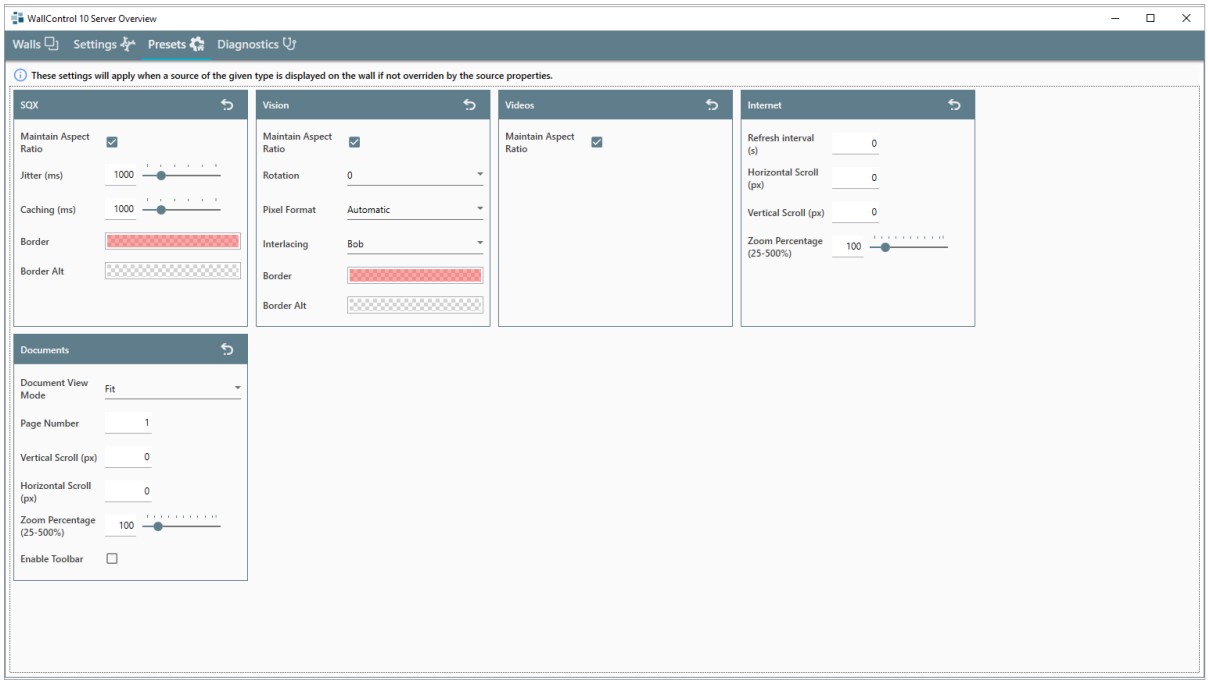
- **Server** - http://<wallserver>:19821/swagger
- **Wall Server** - http://<wallserver>:<wallport>/swagger

It is recommended that Swagger is only enabled on a system used for development purposes.

More information on the Swagger UI is available on the WallControl 10 ReadMe file.

Server Overview Presets

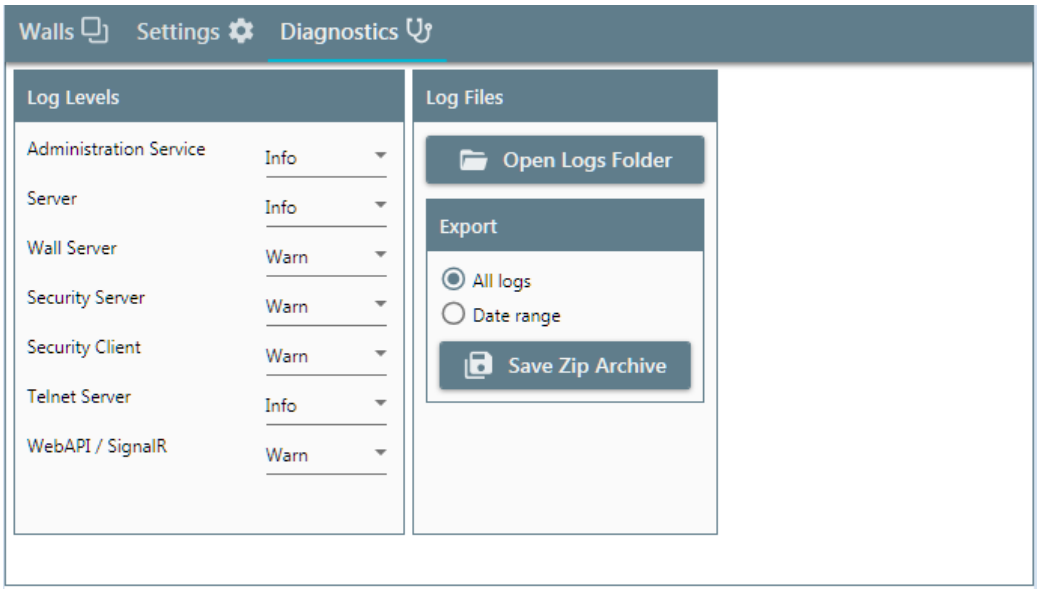
The Presets dialogue enables users to create default settings for each type of source. Once the presets have been configured they will be common amongst all new instances of the source.



Presets can also be configured in the Source Properties dialogue on the WallControl 10 Sources Tab. Any changes made to the presets in the Source Properties dialogue takes precedence.

Server Overview – Diagnostics

Users may be directed by support staff to provide log files to assist in the diagnosis of any problems you may have encountered whilst using the WallControl 10 application.



Log Levels

The Log Levels allow you to select which level of log for each element of the WallControl 10 application is to be retrieved. The Log Levels would normally not require selection unless requested to do so by Support Staff. Use the drop down list and select from:

Info

Warn

Debug

Trace

Log Files

Log files can be viewed by opening the log folder or compressed and exported to an archive for onward transmission to Support Staff.

When exporting log files all recorded logs can be selected. Alternatively, by using the Date Range function logs produced in the last hour, day, week or month can be saved to archive. A custom date range can also be created.

Carousel

The Carousel function allows you to define a number of sources a window will cycle through, allowing each input to be displayed in turn, for a specified duration.

To create a Carousel window, open the display wall on which you wish to display a Carousel window.

Open the Sources Tab.

All sources (with the exception of Applications) are presented with a check box. Use the check boxes to select the sources for your Carousel window.

Once all the required sources are selected, click on one of the sources and drag it onto the display wall. All the selected sources will be dragged across together.

The minimum number of sources that can be contained within a Carousel cycle is 2.

Note: If the cycle contains two sources and one is lost, the Carousel stops and a Toast warning is displayed. The Carousel can be restarted in the user interface providing the source has been reconnected.

To start the Carousel, right click on the window and select **Start Carousel** from the Carousel menu.

The window can be resized and moved to a preferred position on the wall. To edit the properties of your Carousel window open the Edit Carousel panel by right clicking on the window and select **Edit Carousel** from the menu and the edit panel is displayed.

The Edit Panel enables you to set a Buffer (SQX sources only) **(1)**, change the duration for each source **(2)**, change the order in which sources are displayed and skip Vision sources not displaying a signal.

Set Buffer

When using an IP source in a Carousel window a CONNECTING warning may become visible during the transition between windows while a connection to the IP source provider is made. To elevate this, a Buffer can be set thereby hiding the frames displaying the CONNECTING warning.

The settings for the buffer time must be less than the duration of the previous source.

Duration

The duration the source is displayed in the Carousel cycle can be changed. The duration of video sources is automatically set for the length of the video .

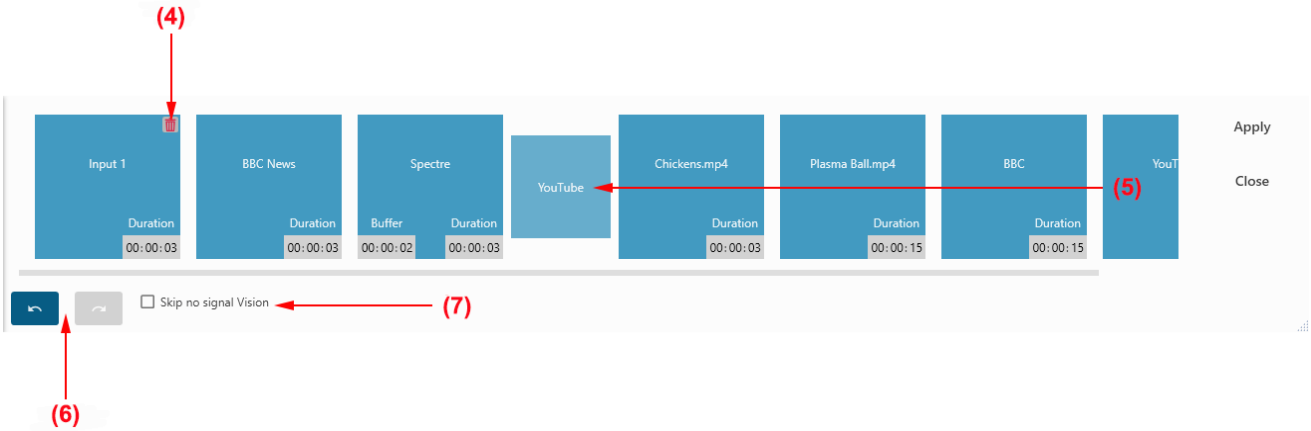
Default timings for Buffer and Duration can be configured on the Settings page in the Server Overview dialogue which is located in the System Tray.

Once any changes to the Buffer and Duration have been made, click on **Apply (3)** and the Carousel settings are updated.

Adding New Sources to the Carousel

Additional sources can be added to your Carousel cycle by dragging them from the Source Tab and dropping them onto the Carousel window. This method of adding sources is only available if the Edit Carousel panel is not open.

If the Edit Carousel panel is open, sources can be dragged onto the panel and will be automatically be placed on the far right.



The sequence in which the windows appear in the Carousel can be changed by repositioning the sources within the panel. This can be achieved by dragging a source and placing it in a different position **(5)**. If a source is dropped on top of another, they will switch positions.

Undo/Redo buttons are available **(6)** for any actions that have been carried out on the panel.

Skip no signal Vision

Select **Skip no signal Vision (7)** to hide any Vision sources where a signal has been lost and the window is displaying NO SIGNAL.

If a signal is detected then lost before a Skip can take place, NO SIGNAL may be displayed until the Carousel starts the next cycle.

Once a signal is restored, the source automatically resumes its position in the Carousel cycle.

Sources can be removed from the Carousel by hovering the mouse over the source and clicking on the Trash icon **(4)**.

The Coloured Borders feature can be applied to a Carousel window but will only take effect on Vision and SQX sources.

Toggle Carousel

If **Toggle Carousel Off** is selected from the Carousel window menu, any source dragged on to the window will replace the whole Carousel cycle. Toggle Carousel Off disables all the Carousel editing features for the selected carousel window.

User Settings Panel

The User Settings Panel enables you to view and make changes to the application settings.

To open the User Settings panel, click on the **User Settings** Icon **(1)** located in the application title bar, tool tips identify each icon.

The first section of the User Settings panel gives details of who is currently logged on to the client and which version of the application is being run. Check our website for details of the latest software release.

Themes

Switch between a Light or Dark user interface.

Application

The Application section allows you to choose from a list of available languages by selecting from the dropdown list.

Click **CLEAR ADDRESS CACHE** to remove the addresses of all the servers not currently connected. This will remove all un-connected servers from the homepage.

Clicking **REFERESH SERVER LIST** results in the server list being refreshed without clearing all the servers from the connection list.

Note:

You must close and restart the application for any changes to the language selection or clearing of the Address Cache to take effect.

Representation Window Defaults

Change the appearance of the windows by choosing a different border or height and width. Click on the **Reset to Default** icon to return to the original settings.

Diagnostics

The Application Diagnostics is a tool used by support staff. Any requirement to use this feature will be prompted by a member of our support team.

To close the User Settings, click on the **Return Arrow** at the top of the panel.

Command Line Interface

The WallControl 10 command line interface can be accessed from a command prompt and also by using Telnet for issuing commands remotely, specifying wcmd.exe.

Telnet

If you intend using a Telnet connection, the following procedures should be followed prior to using the Telnet Client:

1. Run the WallControl 10 Telnet Server:

C:\Program Files\WallControl 10\Telnet Server\WallControl 10 Telnet Server.exe
(double click on the .exe file)

This will start the WallControl 10 Telnet Server and ensures it runs continually after the machine is rebooted.

2. Switch on the Telnet Client:

Control Panel/Programs and Features/Turn Windows features on or off.

Ensure the Telnet Client checkbox is selected.

3. Type **telnet** into the command prompt followed by the name of the machine you wish to connect to, by default Telnet is accessible on port 23, if you have it configured for something different then you will need to specify the port number to connect on. If the machine name contains spaces then enclose the name in quotes, for example:

telnet 127.0.0.1

or

telnet 127.0.0.1 23

Command Line Arguments

The command line arguments are grouped into three categories:

- Information
- Action
- Authentication

Command line arguments are provided with both a long switch and a short switch where shown.

A list of example commands can be found at the bottom of the page.

Nomenclature

Italic – Information you must supply.

Bold – Elements that must be typed exactly as shown.

Between brackets [ ] – Optional items

Between braces { } Set of choices (separated by |) from which you must choose only one.

Information Commands

Long Switch	Short Switch	Description/Example
-help	-?	Displays a list of available command line arguments and some examples.
-exitcodes	-ec	Displays a list of all known exit codes.
-layouts	-l	Displays a list of all layouts on the server.
-providers	-prs	Displays a list of all providers installed in the system.
-open-windows	-ow	Displays a list of all windows currently open on the wall.
-inputs	-in	Displays a list of available inputs in the following format: Alias="friendly name", Provider="web", Input="http://xxxxxxxx"

Action Commands

Inputs

Layouts

Walls

Windows

Long Switch	Short Switch	Description/Example
Inputs		
-provider	**-pr**	**-provider=**{**Capture|Video|Word|Application|Quant|Image|IPDecode|Web|Pdf|Remote**} Target a type of provider on the server. The types of Provider that may be available are: Images, Vision, MS Word, IP, Internet, Remote Connection, Quant, Applications and PDF providers. **wcmd.exe -provider=**<*provider*> **–id=**<*window number*> **-input=**<*name* | *identity*> **–window=**<*left*>,<*top*>,<*width*>,<*height*>
-input	**-in**	**-input=***name* The name of the input to target on the server. The name of the input will depend on the type of provider being used. For example, if the input you are selecting is from the Capture then the input name will be a number from 1 upwards. For other Providers (IP) it will be a friendly name. If the input comes from the Video then the full path is

		required. **wcmd.exe -provider=**<*provider*> **–id=**<*window number*> **-input=**<*name* | *identity*> **–window=**<*left*>,<*top*>,<*width*>,<*height*>
-addinput	**-ai**	Add a new source. Currently only available for IPDecode and Web sources. **addinput**="*rtsp://10.0.0.1:522/Ch2*" **addinput**="*http://www.google.com*" When adding a new input, the URL or IP stream address must be unique and not already exist in the list of sources. **wcmd.exe -provider=**<*provider*> **-addinput=**<*url*> **-alias=**<*name*>
-alias	**-a**	Use in conjunction with **-addinput** to allocate a friendly name. **-alias**="*Camera 1*"
-readonly	**-ro**	Use in conjunction with –addinput to specify if the source alias is editable.**-readonly**="*true*" Renders the input alias uneditable. **-readonly**="*false*" Renders the input alias editable. **wcmd.exe -provider=**<*provider*> **-addinput=**<*url*> **-alias=**<*name*> **-readonly=**<*true* | *false*>
-shared	**-sh**	Use in conjunction with **-addinput**. **-shared**="*true*" Places the source in the Global Media Store. **-shared**="*false*" Places the source in the Local Wall Content Store. **wcmd.exe -provider=**<*provider*> **-addinput=**<*url*> **-alias=**<*name*> **-shared=**<*true* | *false*>
-streamusername	**-sun**	Used to specify a username for a stream source. Must be paired with password. **wcmd.exe -provider=**<*provider*> **-addinput=**<*url*> **-alias=**<*name*> **-streamusername=**<*username*> **-streampassword=**<*password*>
-streampassword	**-spwd**	Used to specify a password for a stream source. Must be paired with username.

		wcmd.exe -provider=<*provider*> **-addinput=**<*url*> **-alias=**<*name*> **-streamusername=**<*username*> **-streampassword=**<*password*>
-deleteinput	**-di**	Deletes a specified input from the Local source repository. Currently only available for IPDecode and Web sources. **-deleteinput**=<*input url*> Only sources specific to a wall can be deleted. Global sources cannot be deleted using the -**deleteinput** switch. **wcmd.exe -provider=**<*provider*> **-deleteinput=**<*name*|*identity*>
-createcrop	**-cc**	Allows a user to create a permanent crop of a specific input. Used in conjunction with**-id**, **–provider** and **–input**. **wcmd.exe -machine=**<*server*>:<*port*> **-provider=**<*Capture* | *IpDecode*> **-input=**<*input*>**-alias=**<*name*> **-createcrop=**<*top*>,<*left*>,<*width*><*height*>**-sourcesize=**<*sourceWidth*>,<*sourceHeight*>
-sourcesize	**-sz**	Used in conjunction with **-createcrop**. To create a crop, the size of the original source is required when using the **-createcrop** switch as the source is not open prior to the crop being created. For example: **wcmd.exe -machine=<***server***>:<port> -provider=<Capture |** *IpDecode***> -input=<***input***>-alias=<name> -createcrop=<***top***>,<***left***>,<***width***><***height***>-sourcesize=<***sourceWidth***>,<***sourceHeight***>**
-tags	**-tag**	Used in conjunction with **–addinput**. Adds tags to any source being added. To add multiple tags use a comma separated list. **wcmd.exe -provider=**<*provider*> **-addinput=**<*url*> **-alias=**<*name*> **-tags=**<*tag1*>,<*tag2*>,<*tag3*>
-location	**-loc**	Used in conjunction with **–addinput**. Adds a location tag to any source being added. **wcmd.exe -provider=**<*provider*> **-addinput=**<*url*> **-alias=**<*name*> **-location=**<*location*>

Layouts

-layout	**-ol**	**-layout=***layout file* Open a specific layout file. If the layout name contains spaces then enclose the name in quotes, for example: **wcmd.exe -layout=***"CCTV One"*
-schedule	**-s**	Used in conjunction with the **–layout** command to create a scheduled task to execute a specific layout. This creates a single scheduled task: **wcmd.exe -layout=**<*name*> -**schedule=**<*datetime*> Specify date time format as "DD/MM/YYYY HH:mm:ss" dependent on windows culture settings.
-savelayout	**-sl**	**-savelayout=***name* Allows you to save the current wall view as a layout. If the layout name contains spaces then enclose the name in quotes, for example: **wcmd.exe -savelayout=***"Layout One"*
-deletelayout	**-dl**	Delete a specific layout file. If the layout name contains spaces then enclose the name in quotes, for example: **-deletelayout**=*"CCTV One"* If User Rights Management is enabled, only Layouts located within theWallControl 10 Layout store can be deleted. Any attempt to delete Layouts saved locally will result in an error message being displayed.

Walls

-getpowerstate	**-gps**	**wcmd.exe -getpowerstate** Obtains the power state of the compatible displays for the current wall, valid results are On and Off. For example: **wcmd.exe -machine**:mywallserver:8081 **-getpowerstate** Valid results are **on|off**. When used locally on the controller you can obtain the power state of the "Blueprint" wall by omitting the **–**

		machine switch. For example: **wcmd.exe -getpowerstate**
-setpowerstate	**-sps**	**wcmd.exe -machine -setpowerstate=***on|off*> Sets the power state of the compatible displays for the current wall. Valid states are **on|off**. Note: A delay can occur when setting the power state due to the hardware.
-getpowerlevel	**-gpl**	**wcmd.exe -machine getpowerlevel** Gets the power level of the screens for the current wall, valid results are **Normal**, **Eco**, **EcoAdvanced**, or **Bright**.
-setpowerlevel	**-spl**	**wcmd.exe -setpowerlevel=**<*Eco* | *EcoAdvanced* | *Bright* | *Normal*> Sets the power level of the screens for the current wall, valid levels are Eco, EcoAdvanced, Bright and Normal Note: A delay can occur when setting the power level due to the hardware.
-wallstate	**-wallstate**	It is possible to get the current state of all walls or an individual wall by specifying its name. An example of getting all the wall states: **wcmd-wallstate** An example of getting a specific wall state: **wcmd-wallstate=***wall name*
-startwalls	**-startwalls**	Starts all walls on the specified server. **wcmd-startwalls** By default, this will only start all walls set to AutoStart, if you require it to start all walls regardless of the autostart setting. **wcmd -startwalls=***all*
-startwall	**-startwall**	Starts a specified wall on the server.

		wcmd -startwall=<*wall name*>
-stopwalls	**-stopwalls**	Stops all the walls on the specified server **wcmd -stopwalls**
-stopwall	**-stopwall**	Stops the specified wall on the server. **wcmd -stopwall=***wall name*
-setdefaultlayout	**-dlay**	Allows you to set a default layout for a wall, if you don't specify the wall it will default to your Blueprint wall. **wcmd.exe –wall=**<*wall*> **-setdefaultlayout=**<*layout*>

Window

-window	**-w**	**-window=**[*left*],[top],[*width*],[*height*] Set the position and size of the window. Commas must be used between values. Must be used in conjunction with the **–id** switch. To display a Vision window a typical command line argument would be: To open a window: **wcmd.exe -provider=**<*provider*> **–id=**<*window number*> **-input=**<*name* | *identity*> **–window=**<*left*>,<*top*>,<*width*>,<*height*> To move/resize an open window: **wcmd.exe –id=**<*window number*> **–window=**<*left*>,<*top*>,<*width*>,<*height*>
-id		When a window is created it can be allocated in ID. To modify or close a window, specify its ID so the correct window is addressed. Only one window can exist on the wall at any time with the allocated ID. **wcmd.exe –id=**<*window number*> **-aspectratio=**<*true* | *false*>
-closewindows	**-cw**	Closes all open windows.

		wcmd.exe -closewindows
-closewindow	**-c**	Used with a specific ID will close that window. **wcmd.exe -id=**<*window number*> **-closewindow**
-windowstyle	**-ws**	Sets the style of the window. **wcmd.exe –id=**<*window number*> **-windowstyle=**<*Border-AndTitlebar* | *NoBorderAndTitlebar*> It can also be used with the open window command (**-window**)
-sendto	**-st**	Allows the user to send a selected window forward or backward, valid values are front and back. For example: **wcmd.exe –id=**<*window number*>**-sendto=**<*front* | *back*> It can also be used with the open window command (**-window**)
-aspectratio	**-ar**	IpDecode, Video and Capture sources only. Allows the user to switch aspect ratio on or off <**true**|**false**>for a selected capture. For example: **wcmd.exe –id=**<*window number*> **-aspectratio=**<*true* | *false*> Note: when applying aspect ratio to IpDecode sources it is advisable to send the command to a source that is already open and decoding. It can also be used with the open window command (**-window**)
-audio	**-au**	Enables or Disables audio for Video and Capture sources only. **wcmd.exe –id=**<*window number*> **-audio=**<[*on/true*] | [*off/false*]> It can also be used with the open window command (**-window**)
-pixelformat	**-pf**	Used with a Vision source only = Auto, RGB565,RGB888 or YUY2

		wcmd.exe –id=<*window number*> **-pixelformat=**< *Auto* | *RGB565* | *RGB888* | *YUY2*> It can also be used with the open window command (**-window**)
-rotate	**-rx**	Capture sources only. Allows the user to apply rotation to Capture sources, valid values are 0, 90, 180, 270, For example: **wcmd.exe –id=**<*window number*> **--rotate=**<*0* | *90* | *180* | *270*> It can also be used with the open window command (**-window**)
-hscroll	**-hs**	Specifies a horizontal scroll offset within the web page specified in pixels. Only used with a Web and PDF Provider. **wcmd.exe -id=**<*window number*> **-hscroll=**<*pixels*> It can also be used with the open window command (**-window**)
-vscroll	**-vs**	Specifies a vertical scroll offset within the web page specified in pixels. Only used with a Web and PDF Provider. **wcmd.exe -id=**<*window number*> **-vscroll=**<*pixels*> It can also be used with the open window command (**-window**)
-refresh	**-rf**	Only valid for Web Provider. Allows a web page to be refreshed every X seconds. For example: **wcmd.exe -id=**<*window number*> **-refresh=**<*seconds*> It can also be used with the open window command (**-window**)
-zoom	**-zm**	Only used with a Web and PDF Provider. Specifies a zoom as a percentage. It can also be used with the open window command (**-window**) Example Usage:

		-zoom=<*percentage*> Minimum zoom is 25% Maximum zoom is 500% **wcmd.exe -id=**<*window number*> **-zoom=**<*percentage*>

On Screen Display (OSD)

-osdfonts	**-osdfo**	Get a list of the fonts supported by the wall. **wcmd.exe -osdfont**
-osdvariables	**-osdv**	Get a list of the OSD variable placeholders. **wcmd.exe -osdvariables**
-osdtext	**-osdt**	Sets the OSD text content, required for all OSD calls. Using OSD defaults: **wcmd.exe -id=**<*window id*> **-osdtext=**<*text*> If you want to override any of the default OSD parameter append any of the below examples to end of the string above.
-osdtextwrapping	**-osdtw**	Sets the OSD word wrapping, true or false. Used as part of the definition of an OSD. Default = true **wcmd.exe -id=**<*window id*> **-osdtext=**<*text*> **-osd-textwrapping=**<*true* | *false*>
-osdtextbold	**-osdtb**	Sets the OSD text to be Bold, true or false. Used as part of the definition of an OSD. Default = false **wcmd.exe -id=**<*window id*> **-osdtext=**<*text*> **-osd-textbold=**<*true* | *false*>
-osdtextitalic	**-osdti**	Sets the OSD text to be Italic, true or false. Used as part of the definition of an OSD. Default = false **wcmd.exe -id=**<*window id*> **-osdtext=**<*text*> **-osd-**

		textitalic=<*true* | *false*>
-osdtextunderlined	**-osdtu**	Sets the OSD text to be Underlined, true or false. Used as part of the definition of an OSD. Default = false **wcmd.exe -id=**<*window id*> **-osdtext=**<*text*> **-osd-textunderlined=**<*true* | *false*>
-osdfontcolour	**-osdfc**	Sets the OSD content's Font colour, in the format red, green, blue in the range 0-255. Used as part of the definition of an OSD. Default = 255,79,79 **wcmd.exe -id=**<*window id*> **-osdtext=**<*text*> **-osd-fontcolour=**<*red, green, blue*>
-osdfontsize	**-osdfs**	Sets the OSD's Font size, in the range 1-1000. Used as part of the definition of an OSD. Default = 36. **wcmd.exe -id=**<*window id*> **-osdtext=**<*text*> **-osd-fontsize=**<*size*>
-osdfont	**-osdf**	Sets the OSD's Font using the name of an installed font. Used as part of the definition of an OSD. Default = Consolas or the first alphabetically listed font. **wcmd.exe -id=**<*window id*> **-osdtext=**<*text*> **-osdfont=**<*font name*>
-osdbtransparent	**-osdbt**	Sets the OSD content's background to be transparent, true or false. Used as part of the definition of an OSD. Default = false **wcmd.exe -id=**<*window id*> **-osdtext=**<*text*> **-osd-btransparent=**<*true* | *false*>
-osdbcolour	**-osdbc**	Sets the OSD content's background colour, in the format alpha, red, green, blue in the range 0-255. Used as part of the definition of an OSD Default = 255.0.0.0

		wcmd.exe -id=<*window id*> **-osdtext=**<*text*> **-osd-bcolour=**<*alpha, red, green, blue*>
-osdscaled	**-osds**	Sets the OSD content to scale with window size or be fixed sized using scaled or fixed. Used as part of the definition of an OSD. Default = fixed **wcmd.exe -id=**<*window id*> **-osdtext=**<*text*> **-osdscaled=**<*fixed* | *scaled*>
-osdhalignment	**-osdha**	Sets the OSD content Horizontal alignment, in the format left, center or right. Used as part of the definition of an OSD. Default = left **wcmd.exe -id=**<*window id*> **-osdtext=**<*text*> **-osdh-alignment=**<*left* | *center* | *right*>
-osdvalignment	**-osdva**	Sets the OSD content Vertical alignment, in the format top, center or bottom. Used as part of the definition of an OSD. Default = top **wcmd.exe -id=**<*window id*> **-osdtext=**<*text*> **-osdv-alignment=**<*top* | *center* | *bottom*>
-osdmargins	**-osdm**	Sets the margins around the OSD draw area, in the format left, top, right, bottom side. Used as part of the definition of an OSD. Default = 0,0,0,0 **wcmd.exe -id=**<*window id*> **-osdtext=**<*text*> **-osdmar-gins=**<*left, top, right, bottom*>
-removeosd	**-rosd**	**wcmd.exe -id=**<*window id*> **-removeosd**

Coloured Borders

-removeborder	**-rbdr**	Remove the Coloured Border for a given window. **wcmd.exe -id=**<*window id*> **-removeborder**
-borderstatus	**-bdrst**	Get the Coloured Border set values for a given window.

		wcmd.exe -id=<*window id*> **-borderstatus**
-border	**-bdr**	Apply a Coloured Border to a given window. Using Coloured Border defaults: **wcmd.exe -id=**<*window id*> **-border**
-bordercolour	**-bdrc**	Set the Coloured Border primary colour, in the format alpha, red, green, blue in the range 0-255. Used as part of the definition of a Coloured Border. Default = 128, 255, 79, 79 **wcmd.exe -id=**<*window id*> **-border -bordercolour=**<*alpha, red, green, blue*>
-bordercolouralt	**-bdrca**	Set the Coloured Border alternative colour used whilst flashing, in the format alpha, red, green, blue in the range 0-255. Used as part of the definition of a Coloured Border Default = 0, 255, 255, 255 **wcmd.exe -id=**<*window id*> **-border -bordercolouralt=**<*alpha, red, green, blue*>
-borderthickness	**-bdrt**	Set the Coloured Border thickness, in the format left, top, right, bottom. Used as part of the definition of a Coloured Border. Default = 30, 30, 30, 30 **wcmd.exe -id=**<*window id*> **-border -borderthickness=**<*left, top, right, bottom*>
-borderflash	**-bdrf**	Set the Coloured Border flash speed, in the format off, slow, medium or fast. Used as part of the definition of a Coloured Border. Default = off **wcmd.exe -id=**<*window id*> **-border -borderflash=**<*off* | *slow* | *medium* | *fast*>
-bordereasing	**-bdre**	Set the Coloured Border easing whilst flashing.Used as part of the definition of a Coloured Border. Default = off

		Wcmd.exe -id=<*window id*> **-border -bordereasing=**<*off* | *on*>
-borderscaling	**-bdrs**	Sets the ColouredBorder content to scale with window size or be fixed sized using scaled or fixed. Used as part of the definition of an OSD. Default = fixed **Wcmd.exe -id=**<*window id*> **-border -borderscaling=**<*fixed* | *scaled*>

Coloured Frames

-framestatus	**-frs**	Display the setting for the Wall Frame options **Wcmd.exe -framestatus**
-frames	**-fr**	Enables or disabled the Wall Frames, using the format true or false. If Enabling used with thickness and colour to turn the frames on. **Wcmd.exe -frames=**<*false*> Or **Wcmd.exe -frames=**<*true*> **-framesthickness=**<*thickness*> **-framescolour=**<*red, green, blue*>
-framesthickness	**-frt**	Set the Frame thickness, in the format positive integer. Used as part of the definition of turning frames on. **Wcmd.exe -frames=**<*true*> **-framesthickness=**<*thickness*> **-framescolour=**<*red, green, blue*>
-framescolour	**-frc**	Set the Frame deafult colour, in the format red, green, blue in the range 0-255. Used as part of the definition of turning frames on. **Wcmd.exe -frames=**<*true*> **-framesthickness=**<*thickness*> **-framescolour=**<*red, green, blue*>
-windowframestatus	**-wfrs**	Display the setting for the Window Frame options. **Wcmd.exe -id=**<*window id*> **-windowframestatus**

-windowframemode	**-wfrm**	Select the window Frame colour mode, in the format default, source, window. **Wcmd.exe -id=**<*window id*> **-windowframemode=**<*default* | *source* | *window* >
-windowframecolour	**-wfrc**	Set the Frame specific colour in the format red, green, blue in the range 0-255. Only used with frame mode "window". **Wcmd.exe -id=**<*window id*> **-windowframecolour=** <*red, green, blue*> **-Windowframemode=**<*window*>

Banners

-bannerdelete	**-bnd**	Remove a Banner Definition with a given friendly name. **wcmd.exe -bannerdelete=**<*Name of Banner*>
-banneradd	**-bna**	The friendly name for a Banner definition being added.Using the Banner default values. **wcmd.exe -banneradd=**<*banner name*> **-bannertext=**<*text*>
-bannertext	**-bnt**	The Text or RSS URL given to a Banner definition being added, depending on the IsRss flag. Using the Banner default values. ***wcmd.exe -banneradd=***<*banner name*> ***-bannertext=***<*text*>
-bannerfontcolour	**-bnfc**	Set the Banners Font colour, in the format alpha, red, green, blue in the range 0-255. Used as part of the definition of a Banner Default = 255, 255, 255, 255 **wcmd.exe -banneradd=**<*banner name*> **-bannertext=**<*text*> **-bannerfontcolour=**<*alpha, red, green, blue*>
-bannerbackcolour	**-bnbc**	Set the Banners background colour, in the format alpha, red, green, blue in the range 0-255. Used as part of the definition of a Banner Default = 255, 0, 0, 255

		wcmd.exe -banneradd=<*banner name*> **- bannertext=**<*text*> - bannerbackcolour=<*alpha, red, green, blue*>
-font	**-f**	Sets the Banner's Font using the name of an installed font. Used as part of the definition of a Banner. Default = Consolas or first alphabetical found font. **wcmd.exe -banneradd=**<*banner name*> **- bannertext=**<*text*> **-font=**<*font name*>
-fontsize	**-fs**	Sets the Banner's Font size, in the range 6 -450. Used as part of the definition of a Banner. Default = 72 **wcmd.exe-banneradd=**<*banner name*> **- bannertext=**<*text*> **-fontsize=**<*font size*>
-bannermargin	**-bnm**	Sets the Banner's vertical margin, top and bottom of the text in the banner, using a positive intger. Used as part of the definition of a Banner. Default = 0 **wcmd.exe -banneradd=**<*banner name*> **- bannertext=**<*text*> **- bannermargin =**<*margin*>
-bannerspeed	**-bnss**	Sets the Banner's scroll speed, in the format Off, Slow, Medium or Fast. Used as part of the definition of a Banner. Default = Medium **wcmd.exe -banneradd=**<*banner name*> **- bannertext=**<*text*> **- bannerspeed =**< *off* | *slow* | *medium* | *fast* >
- bannerdirection	**-bnsd**	Sets the Banner's scroll direction, in the format left or right. Used as part of the definition of a Banner. Default = left **wcmd.exe -banneradd=**<*banner name*> **- bannertext=**<*text*> **- bannerblink =**< *left* | *right* >
-bannerblink	**-bnbs**	Sets the Banner's blink speed, in the format Off, Slow, Medium or Fast. Used as part of the definition of a Banner.

		Default = Medium **wcmd.exe -banneradd=**<*banner name*> **- bannertext=**<*text*> **- bannerblink =**< *off* | *slow* | *medium* | *fast* >
-alignment	**-al**	Sets the Banner's text alignment using "Left", "Centre" or "Right". Used as part of the definition of a Banner. Cannot only be configured with a banner with a scrolling speed set to off. Default = Centre **wcmd.exe -banneradd=**<*banner name*> **- bannertext=**<*text*> **-alignment=**<*left* | *centre* | *right*>
-bannerisrss	**-bnir**	Sets the if Banner's text is an RSS feed, in the format false, true. Used as part of the definition of a Banner. Default = false **wcmd.exe -banneradd=**<*banner name*> **-bannertext=**<*rss URL*> **- bannerisrss =**< *false* | *true*>
-bannerrsstime	**-bnrt**	Sets the Banner's RSS feed refresh time, in the format "HH:MM". HH in the range 0-23 and MM in the range 0-59. Used as part of the definition of a Banner. Default = 00:10 **wcmd.exe-banneradd=**<*banner name*> **-bannertext=**<*rss URL*> **-bannerisrss =**<*true*>**-bannerrsstime=** < *time* >
-bannerrssfeedtype	**-bnft**	Sets the Banner's RSS feed type, in the format brief or full. Brief is heading fields only or Full heading and story. Used as part of the definition of a Banner. Default = full **wcmd.exe -banneradd=**<*banner name*> **-bannertext=**<*rss URL*> **-bannerisrss =**<*true*>**- bannerrssfeedtype =**<*brief* | *full*>
-bannerrssdelimiter	**-bnrd**	Sets the Banner's RSS delimter between stories, in the range of 0-10 characters. Used as part of the definition of a Banner.

		Default = "●" **wcmd.exe -banneradd=**<*banner name*> **-bannertext=**<*rss URL*> **-bannerisrss=**<*true*>**- bannerrssdelimiter=**< *string* >
- bannerrssseparator	**-bnrs**	Sets the Banner's RSS separator between the RSS 's feed heading and story, in the range of 0-10 characters. Used as part of the definition of a Banner. Default = "-" **wcmd.exe -banneradd=**<*banner name*> **-bannertext=**<*rss URL*> **-bannerisrss=**<*true*>**- bannerrssseparator=**<*string*>
-bannername	**-bnn**	Name of the Banner definition being used by the open or switch Banner region content. **wcmd.exe -bannername=**<*banner name*> **-bannerid=**<*id*> **-area =**<*X*>, <*Y*>, <*Width*>, <*Height*> Or **wcmd.exe -bannername=**<*banner name*> **-bannerid=**<*id*>
-bannerid	**-bnid**	The id of an open Banner region, used when opening a banner and used for targeting an open window with move, switch and close commands. **wcmd.exe -bannername=**<*banner name*> **-bannerid=**<*id*> **-area =**<*X*>, <*Y*>, <*Width*>, <*Height*>
-area	**-area**	A rectangle used to define the area of a Banner (Open and Move Commands). In the format X, Y, Width, Height **wcmd.exe -bannername=**<*banner name*> **-bannerid=**<*id*> **-area =**<*X*>, <*Y*>, <*Width*>, <*Height*> Or **wcmd.exe -bannerid=**<*id*> **-area =**<*X*>, <*Y*>, <*Width*>, <*Height*>
-bannerclose	**-bnc**	Close an open Banner region. **wcmd.exe -bannerid=**<*id*> **-bannerclose**

-openbanners	**-bno**	Get a list of the open Banner region. **wcmd.exe -openbanners**
-closewindows	**-cw**	Closes all open windows and banners. **wcmd.exe -closewindows**

Favourite Definition

-favouritedelete	**-fvd**	Remove a Favourite Definition with a given friendly name. **wcmd.exe -favouritedelete =**<*Name of Favourite*>
-favourites	**-favs**	Display a list Favourite Definition names. **wcmd.exe -favourites**
-favouritesave	**-fvs**	Save selected open window as a Favourite Definition with a given friendly name. Can be used with "-shared" to define viewing limitation. **wcmd.exe -favouritesave =**<*Name of Favourite* > **-id=**<*id*>
-favouriteopen	**-fvo**	Open a Favourite Definition with a given friendly name at the position original define before creation or use the window command to specify a specific area. **wcmd.exe -favouriteopen =**<*Name of Favourite* > **-id=**<*id*> Or **wcmd.exe -favouriteopen =**<*Name of Favourite* > **-id=**<*id*> **-window=**<*x, y, width, height*>

PDF Provider

-toolbar	**-tool**	Only valid for the PDF provider. Sets the PDF toolbar visibility, valid values are true, false, on and off. **wcmd.exe -id=**<*id*> **-toolbar=**<*true*|*false*|*on*|*off*>
-pagenumber	**-page**	Only valid for the PDF provider. Sets the PDF page number to view. **wcmd.exe -id=**<*id*> **-pagenumber=**<*number*>

-viewmode	**-view**	Only valid for the PDF provider. Sets the PDF view mode, valid values are fit, fitV, fitH and zoom. **wcmd.exe -id=**<*id*> **-viewmode=**<*fit|fitV|fitH|zoom* >

Vision Source

-interlacing	**-int**	Used with a Vision source only. Sets the interlacing mode of a Vision source, valid values are bob or weave. **wcmd.exe -id=**<*id*> **-interlacing=**<*bob|weave*>
-colourdomain	**-cd**	Used with a Vision source only. Setting this property will update it for the original Rgb Source and any instances of it on your wall. Sets the colour domain of a Vision source, valid values are rgb709full, yuv709full, yuv601full, yuv709studio, yuv601studio, rgb709studio, yuv2020full, yuv2020studio, rgb601full, rgb601studio, rgb2020full, rgb2020studio or auto. **wcmd.exe -id=**<*id*> **-colourdomain=**<*colour domain*>
-linkrate	**-lr**	Used with a Vision source only. Setting this property will update it for the original Rgb Source and any instances of it on your wall. Sets the link rate of a Vision source, valid values are rgbLinkrateRbr, rgbLinkrateHbr or rgbLinkrateHbr2. **wcmd.exe -id=**<*id*> **-linkrate=**<*rgbLinkrateRbr|rgbLinkrateHbr|rgbLinkrateHbr2|* >
-equalisation	**-eq**	Used with a Vision source only. Setting this property will update it for the original Rgb Source and any instances of it on your wall. Sets the equalisation of a Vision source. **wcmd.exe -id=**<*id*> **-equalisation=**<*integer*>
-brightness	**-br**	Used with a Vision source only. Setting this property will update it for the original Rgb Source and any instances of it on your wall.

		Sets the brightness of a Vision source. **wcmd.exe -id=**<*id*> **-brightness=**<*integer*>
-contrast	**-con**	Used with a Vision source only. Setting this property will update it for the original Rgb Source and any instances of it on your wall. Sets the contrast of a Vision source. **wcmd.exe -id=**<*id*> **-contrast=**<*integer*>
-hue	**-hu**	Used with a Vision source only. Setting this property will update it for the original Rgb Source and any instances of it on your wall. Sets the hue of a Vision source. **wcmd.exe -id=**<*id*> **-hue=**<*integer*>
-saturation	**-sat**	Used with a Vision source only. Setting this property will update it for the original Rgb Source and any instances of it on your wall. Sets the saturation of a Vision source. **wcmd.exe -id=**<*id*> **-saturation=**<*integer*>

System

-machine	**-m**	**wcmd.exe -machine=**<*server*>:<*port*> **-closewindows** **wcmd.exe -machine=**<*server*> **-wall=**<*wall name*> **-closewindows**
-wall	**-wn**	This has been added so that users are not required to know about the random port numbers for direct connection to a wall, they can still be specified if required but not used in conjunction with the -wall=wallname switch as the value returned by the wall name will override anything provided by the user as part of the **-machine=***server:port* command. **wcmd.exe -machine=**<*server*> **-wall=**<*wall name*> **-layouts**

-serverport	**-sp**	User to specify a custom port number which should be used to communicate with the desktop server. This will override the default port number 19821 **wcmd.exe -serverport=**<*port number*> **-stopwalls**
-echo	**-e**	This allows the error level to be returned to the command line so that it can be used with AMX/Crestron controllers. If the **-echo** switch is not used then the exit code is not returned on the command line. For example: zero (0) represents a success and the exit code is printed to the output. **wcmd -layouts -echo** ExitCode: 0 Layout1, Layout2 An exit code greater than zero is an error and is shown below. **wcmd -layout=**"Layout3" **-echo** ExitCode: 3 Using the Command Line without the **-echo** switch. **wcmd -layouts** Layout1, Layout2 **wcmd -layout=**"Layout3" In these usage scenarios the user can detect the command line exit code by using the **%ERRORLEVEL%** value in DOS as previously (although that will not work in conjunction with AMX / Crestron, hence the **-echo** change).
-help	**-?**	**-help=**-<*command*> Example Usage: To return a list of all command switches and comment **wcmd -help** To return specific help for a command **wcmd.exe -help** **wcmd.exe -help=**<-*command*>

Authentication Commands

Long Switch	Short Switch	Description/Example
-username	**-un**	If you are trying to connect to a machine other than the one you are using a username and password may be required. If you are logged on to windows as a user that is authorised in URM you do not need to provide a username and password. **-username=***"user name"* **wcmd.exe -username=**<*username*> **-password=**<*password*> **-layouts**
-password	**-pwd**	If you are trying to connect to a machine other than the one you are using a username and password may be required. If you are logged on to windows as a user that is authorised in URM you do not need to provide a username and password. **-password=**password **wcmd.exe -username=**<*username*> **-password=**<*password*> **-layouts**

Example Command

Below is a list of example commands:

1. Open a Vision window using Vision input number 2 positioned at the top left of the wall with a height and width of 500 pixels:

wcmd –machine=*10.0.0.21:8081* **–id=**1 **–provider=Capture –input=***2* **–window=***100,100,500,500*

2. Open an video window using Input wildlife:

wcmd –machine=*10.0.0.21:8081* **–id=**5 **–window=**1920,1080,1920,1080 **–input=**"C:\users\desktop\videos\wildlife.wmv"

The full path is required for the input.

3. Change the source of Window 1 to a known internet source

wcmd –machine=*10.0.0.21:8081* **–id=***1* **–provider=Web –input=***"google"*

Note: The input used must exist within the WallControl 10 repository and the name "google" must exist as an internet source accessible via the WallControl 10 source menu.

4. Move Window 1 to a different position on the wall.

wcmd –machine=*10.0.0.21:8081* **–id=***1* **–window=***5000,450,500,500*

5. Get a list of available layouts

wcmd –machine=*10.0.0.21:8081* **-layouts**

6. Save a layout

wcmd –machine=*10.0.0.21:8081* **–savelayout=***"my layout"*

7. Load a layout

wcmd –machine=*10.0.0.21:8081* **–layout=***"my layout"*

8. Schedule a task to load a layout

wcmd –machine=*10.0.0.21:8081* **–layout=***"my layout"* **–schedule=***"15/05/2017 09:00:00"*

9. Get a list of all open windows on the wall

wcmd –machine=*10.0.0.21:8081* **–openwindows**

10. Turning on/off the audio for an Capture window

wcmd.exe -machine=*10.0.0.21:8081* **-id=***1* **-provider=Capture -audio=***on*

11. Adding a new web input source into the Global Media Store with an editable friendly name:

wcmd -machine=*10.0.0.1:522* **-provider=web -alias=***Google* **-addinput=***"http://www.-google.com"* **-shared***=true* **-readonly***=false*

12. Adding a new IPDecode source to a Local Wall Content Store with an uneditable friendly name:

wcmd -machine=*10.0.0.1:522* **-provider=IPDecode -alias=**"*Camera 1*" **-addinput=**"*rtsp://10.0.0.1:522/Ch2*" **-shared=***false* **-readonly=***true*

WallControl 10 Wall Management

Display Groups

Display Groups is a feature used by the **Display Driver Configuration Tool** (DDCT) to create a virtual monitor consisting of one or more screens. The DDCT can be used to configure multiple Display Groups creating custom designed video walls.

Note: If the XDDM driver is installed, only one display group can be created.

WallControl 10 Wall Manager uses the Display Group as a basis for creating walls on your video wall controller, making changes to Display Groups or creating new ones can only be achieved using the DDCT. To access the DDCT, right click on the desktop and select **Display Driver Configuration Tool** from the menu.

During the first start-up following installation, WallControl 10 automatically generates a wall designated as Blueprint, this represents the entire wall including all Display Groups. The Blueprint wall automatically resizes itself to fill the entire desktop when changes to the Display Groups are made.

Wall/Display Group Interactions

When a wall is associated with a Display Group it tracks that Display Group's position within the windows desktop. If you move a Display Group within DDCT, any associated walls will track its top-left position. Furthermore, if the wall was sized to 100% of the Display Group's area, then the wall also tracks the Display Group's size, resizing to fill the entire Display Group.

If a Display Group is resized, any associated walls that were not filling the entire Display Group and are now too large to fit within the Display Group, will move to an error state and not run until they are manually resized within Wall Management.

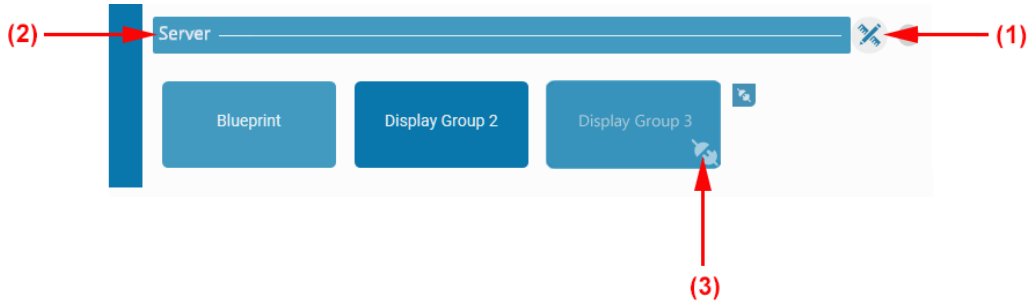
Walls that are not associated with a Display Group (such as those that span multiple Display Groups) will not track the position of any Display Groups, and may end in an error state if they no longer fit within the desktop area. These walls will need manually resizing/moving within Wall Management before being started again.

Wall Management

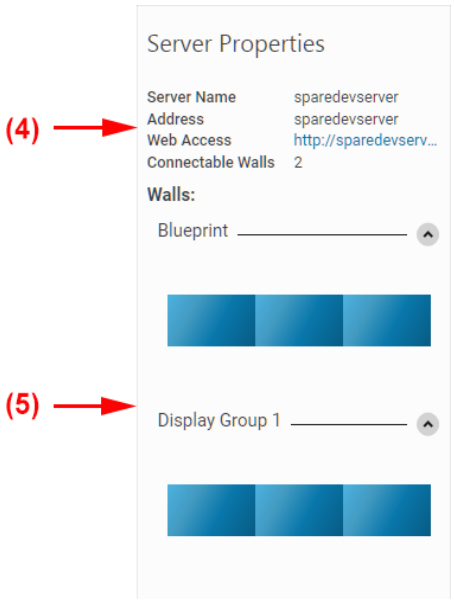
If an Admin Role has been created in the WallControl 10 Security Client, a system restart may be necessary before opening Wall Management for the wall the Admin Role was created for.

Wall Management can be opened using any of the following methods:

- Locate a Server then click on its **Wall Management icon (1)**
- Select the required server by clicking on the server name on the WallControl 10 homepage **(2)** and click on the Wall Management button. If a wall is not running either because the wall has been stopped or the Auto Start is disabled; a broken link icon is displayed **(3)**.

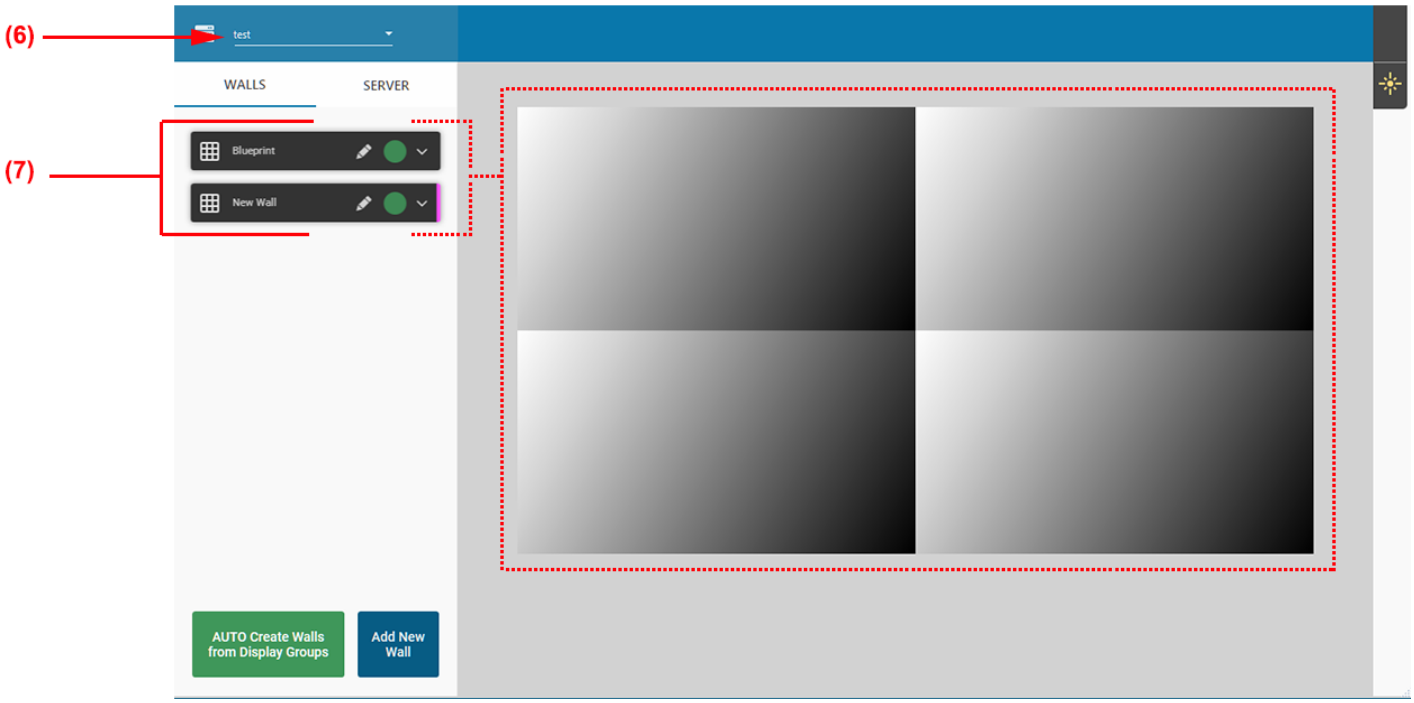


- When selected, the Server properties **(4)** and representations of all its associated walls **(5)** are displayed to the right in the Server Properties panel. If a wall is greater than 23,000 x 7500 pixels, a representation is not displayed.



- Click on the **Open Wall Management** button at the bottom of the Server Properties panel and Wall Management is displayed showing all the walls on the selected server. You can use the server drop down list **(6)** to select any available server.

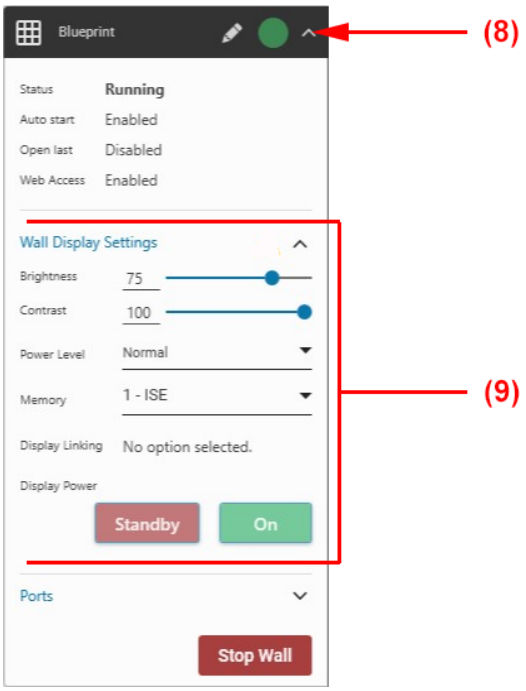
Wall Management displays a representation of all the walls on the server **(7)**.



Walls

If WallControl 10– Pro is installed, Wall Management will list all walls associated with the server **(7)**. If the WallControl 10 standard version is being used, only the Blueprint wall is represented.

Each wall has a dropdown arrow **(8)** which when opened, displays information on the selected wall:



Status – Displays the current status of the wall.

Auto Start – Identifies if the Auto Start is enabled or disabled. Auto Start is configured in the wall settings dialogue and when enabled, the wall will start automatically when the system is booted and the server is initiated. If Auto Start is disabled, the wall can be started manually by clicking on the **Start Wall** button or from the Server dialogue located in the System tray.

Open Last – Identifies if the Open Last Layout on Start is enabled or disabled.

Web Access – Identifies if the Web Access is enabled or disabled to work with the Web Interface.

Wall Display Settings – The Wall Display settings **(9)** are only be available if compatible displays have been configured to link with the WallControl 10 user interface within the DDCT.

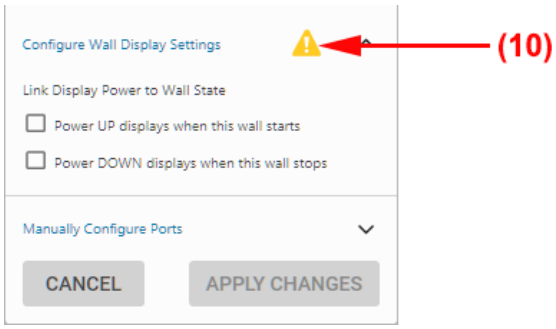
The DDCT can be accessed at any time by right clicking on the desktop and selecting Display Driver Configuration. Any changes to the display configuration must be carried out using the DDCT.

Wall Display settings enables the user to control how compatible displays on the wall are powered on or placed on standby. Displays can be configured to turn on automatically when the wall is started and turn off when the wall is closed. The displays can be manually turned on or placed on standby using the Display Power controls.

- Brightness – Increase or decrease the brightness of all compatible displays on the wall.
- Contrast - Increase or decrease the brightness of all compatible displays on the wall.
- Power level allows the user to select a level of power management for the linked display. Power management selection can differ between display manufacturers.
- Display Linking – Shows the configured settings for the compatible wall displays. It displays information as to whether or not the user has selected to power up the displays when the wall starts or power down when the wall stops. If no Display Linking has been configured, no information is displayed.
- Display Power – Standby/On. Place all compatible displays on the wall into standby mode or turn them all on. Non-compatible monitors are not affected and will need to be operated manually.

Error Messages

Any errors with the Wall Display Settings are indicated with a yellow warning triangle **(10)**, hover the cursor over the triangle to view the error message.



Some of the displays used by this wall cannot be configured to support these settings.

- If the wall encroaches onto a display that cannot support the settings, this error is displayed. It means that not all displays associated with the wall are compatible and Wall Display Settings will only apply to compatible displays.

Some of the displays used by this wall are not configured to support these settings.

- If the wall encroaches onto a display that is not configured to support the settings, this error is displayed. It means that not all displays associated with the wall are configured within the DDCT and "Wall Display Settings" will only apply to configured displays.

Some of the displays used by this wall are not connected, settings cannot be applied to those displays.

- Some of the displays configured within the DDCT are not connected to the wall controller, therefore any settings created will not be applied to those displays.

Error messages displayed within the Wall Display Settings dialogue:

None of the displays used by this wall are configured.

- The displays used by the wall are compatible but they have not been configured within the DDCT for use with WallControl 10. To configure the displays, open the DDCT by right clicking on the desktop and select **Display Configuration Tool**.

None of the displays used by this wall are connected.

- Displays are compatible and have been configured within the DDCT but are not connected to the wall controller.

Some of the displays used by this wall cannot be configured to the selected Power level. Do you still wish to set the displays that can?

- Power levels can differ between display manufacturers therefore the power levels may not be available to every display on the wall. You can choose to apply the power level settings to displays that are compatible.

Ports

Allows the user to manually input port numbers.

Server Port - Displays Server Port number.

CLI Port – Displays CLI Port number.

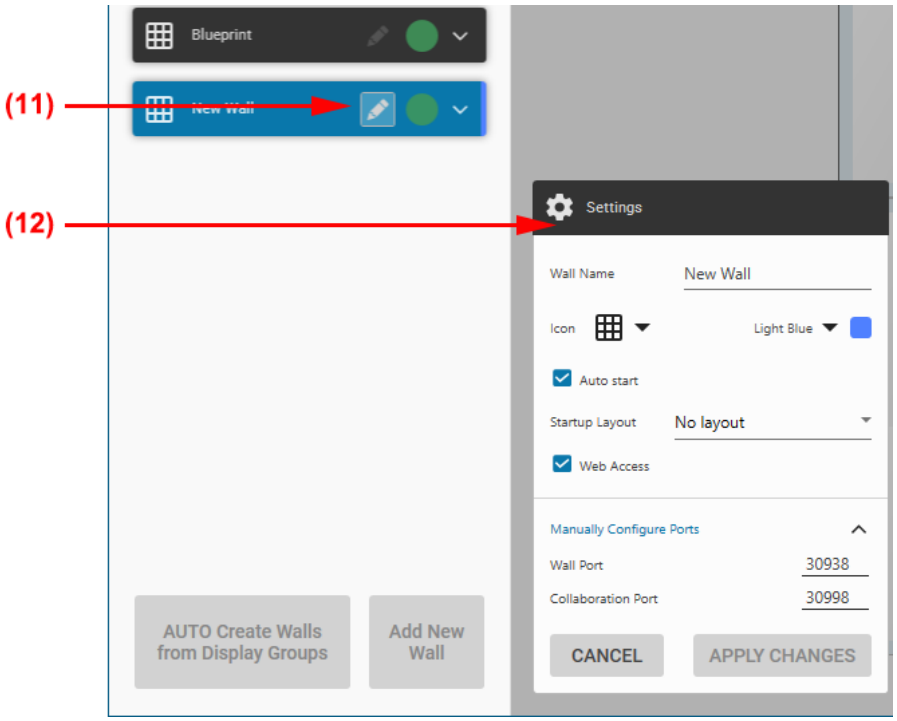
Collaboration Port - Displays Collaboration Port number.

Delete Icon – Click on the **Delete Icon** to delete the Wall.

Stop Wall – Click on the **Stop Wall** button to stop the wall server running. The wall can also be stopped/started by right clicking on any wall in the list and selecting **Start/Stop**.

Wall Settings

The Settings dialogue becomes available when a wall is selected for editing. To edit a wall click on its **Edit Mode** icon on the Wall Tab **(11)**:



The Settings dialogue is displayed in the bottom left of the Wall Management window. All settings within the dialogue are editable:

Wall Name – The name allocated to the wall. This is an editable field.

Icon – Select a preferred icon to represent the wall, click on the dropdown menus and all available icons are displayed.

Colour – Select a colour to represent the wall. The colour identifies the wall on the Wall Management representation with a coloured outline..

Select **Auto Start** the wall to start automatically when the system is booted and the Server starts.

Startup Layout– Use the dropdown list to select a layout to be displayed on the wall on startup:

- No Layout – The wall will startup and no layout displayed.
- Last open layout – The wall will start up and display the last layout that was open on the wall before it was closed.

- Specified Layout – Browse and select a specified layout from the library. Click on the refresh button to update the list of available layouts. Once selected, the layout will be displayed when the wall is started.

NOTE: This only applies to layouts saved on the server, not layouts saved locally – windows open on the wall but not saved in a layout will not be preserved even when these options are enabled.

Web Access – Determines whether the wall is visible in the server's Web Interface.

Configure Wall Display Settings – The Configure Wall Display Settings are only be available if compatible displays have been configured to link with the WallControl 10 user interface within the DDCT.

Users can link compatible displays to the wall and configure them to automatically power up when the wall starts and power down when the wall stops.

Manually Configure Ports – If required, manually input a port number for the Server Port, CLI Port and Collaboration Port.

The wall can also be resized and positioned on other Display Groups within the Wall Management representation window.

Once all required settings have been configured, click on **Apply Changes**. Users can cancel any changes prior to applying them by clicking on **Cancel**.

Wall Status Icons

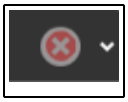
Display walls generated by WallControl 10, using the pre–configured Display Groups can display a number of different running states:

- Running.
- Running but with warnings which the user is required to address.
- Stopped.
- Stopped with errors which the user is required to address.

Icons are displayed in WallControl 10 Wall Management representing each running state, these are covered below.

When a wall is running, depending on the nature of the warning it may not be displayed correctly. When a wall has errors it cannot be started until the errors are addressed.

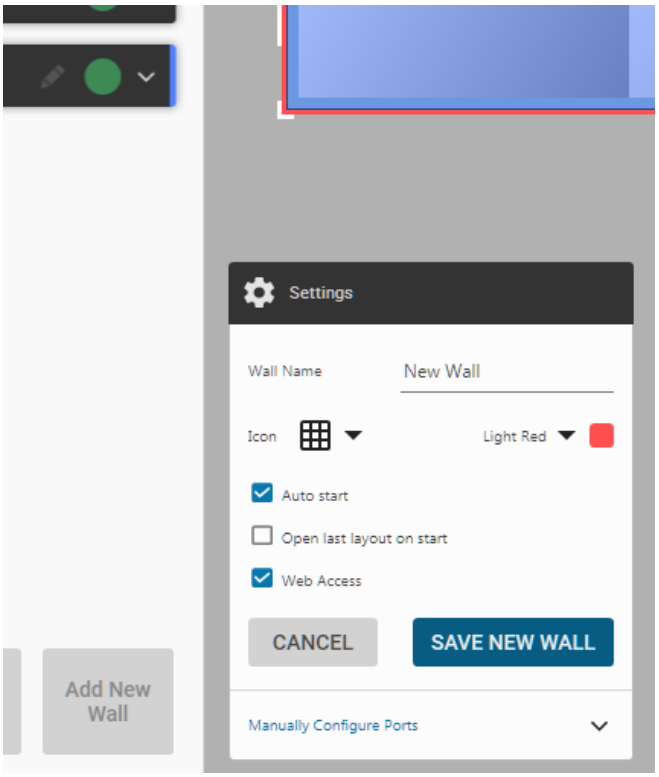
Each wall has an icon displaying the status of the wall **(8)**.

	Wall running without errors or warnings.
	Wall running but with warnings that the user is required to address.
	Wall stopped with warnings that the user is required to address.
	Wall stopped without warnings or errors.
	Wall stopped with errors which the user is required to address.

AUTO Create Walls from Unassigned Display Groups

Clicking the **AUTO Create Walls from Unassigned Display Groups** button will create new walls based on any unassigned display groups and will add them to Wall Management.

The AUTO Create Walls from Unassigned Display Groups button can be used for example, when graphics hardware has been added and the DDCT has been used to create a new display group.

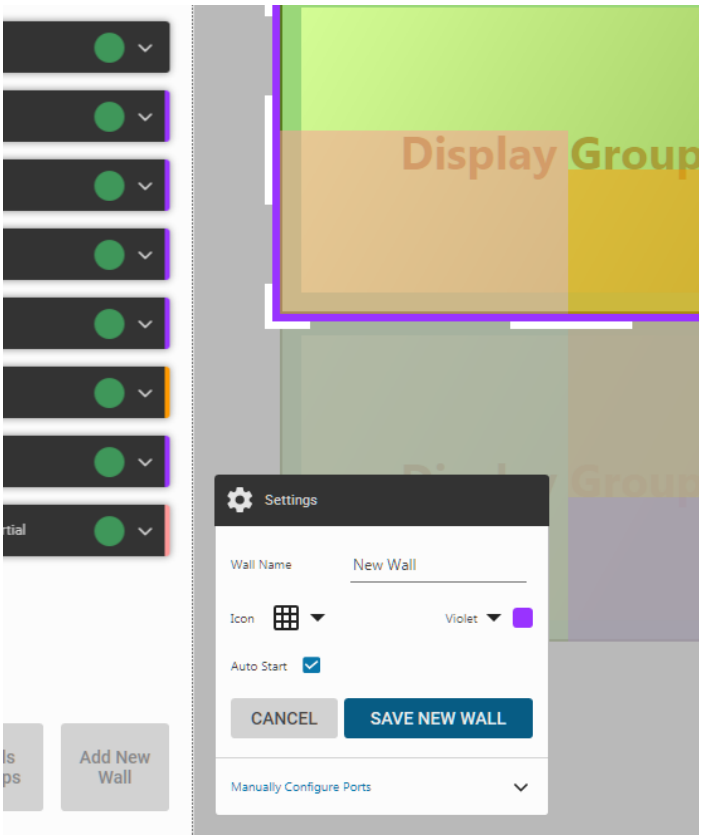


The AUTO Create Walls from Unassigned Display Groups button is not available to users of the WallControl 10 Standard version. Standard version users only have access to the automatically generated Blueprint wall.

Manually Create Walls

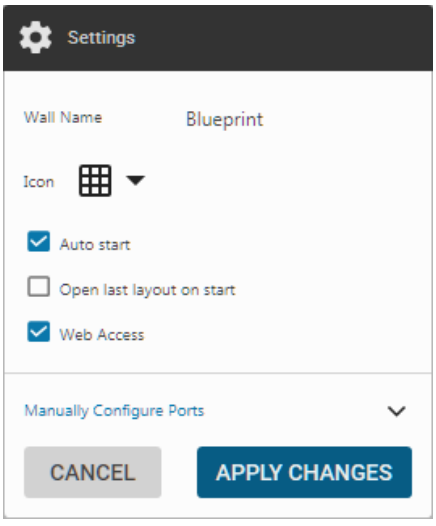
To manually create a wall click on the **Add New Wall** button.

The Settings dialogue is displayed in the bottom left of the Wall Management window and a resizable wall will appear on the first display group:



The resizable wall representation can be dragged, resized and positioned on any of the Display Groups. If the new wall overlaps two or more Display Groups, WallControl 10 will not track the wall should the displays from any of the Display Groups be physically moved.

Once the new wall has been positioned, you will need to complete the fields in the Settings dialogue:



Wall Name – Input a friendly name for the wall.

Icon – Select an icon that represents the wall.

Colour – Select a colour that represent the wall.

Auto Start - Click the **Auto Start** checkbox to enable the wall server to start automatically when the WallControl 10 Server is started. If the box is unchecked, the WallControl 10 Wall server can be started manually by right clicking on the wall representation and selecting Start Wall.

Once all the wall information has been entered, click on **Save New Wall** and the new wall will appear in the list of available walls in Wall Management. If Auto Start was enabled, the wall will start immediately.

Manually Configure Ports

Manually change the following ports if required:

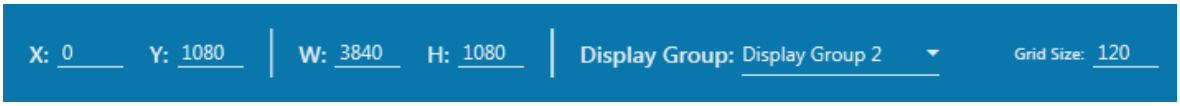
Server Port – Displays the Port Number of the WallControl 10 Server.

CLI Port – Displays the Port Number used for the Command Line Interface.

Collaboration Port – Displays the Port Number used by applications that support collaboration with WallControl 10.

Size and Positioning Properties Bar

The size and positioning properties are located on the top bar of the Wall Management tab:



X/Y axis

Shows the exact position of the wall on the desktop based on the top left, X = Distance in pixels from the left and Y = Distance in pixels from the top.

W/H

Width and Height of the wall (in pixels).

Display Group

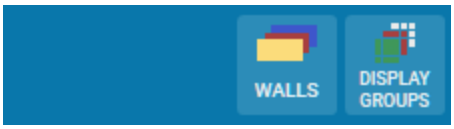
The Display Group associated with the wall.

A wall can be moved from one Display Group to another by selecting a preferred Display Group.

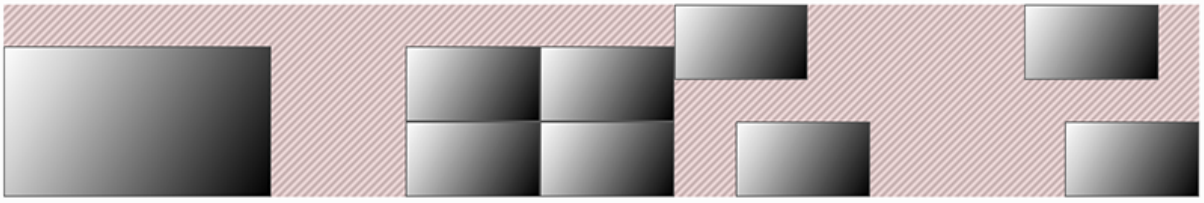
Grid Size

Determine the size of the grid squares (in pixels) when the Snap to Grid tool is applied.

Overlay Toggle Buttons



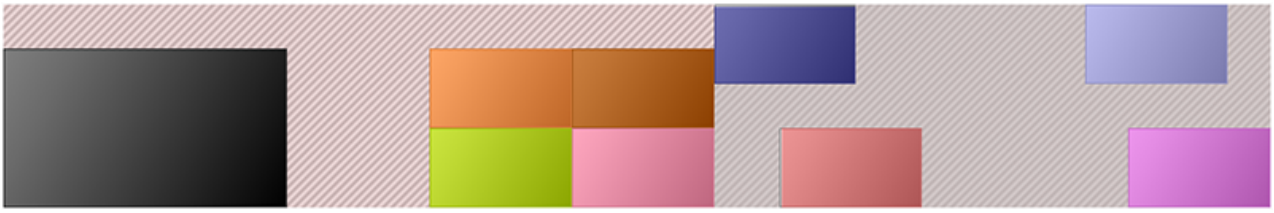
The default state of the representation within the Wall Management tab shows all the displays associated with the server and the desktop area. The default also shows all Walls and Display Groups.



The Overlay Toggle buttons change the appearance of the representations.

WALLS

Click on **WALLS** and the toggle button is highlighted and the walls associated with the server are overlaid on the Wall Management representation. Each wall is displayed in the colour allocated to it in the Wall Settings dialogue.

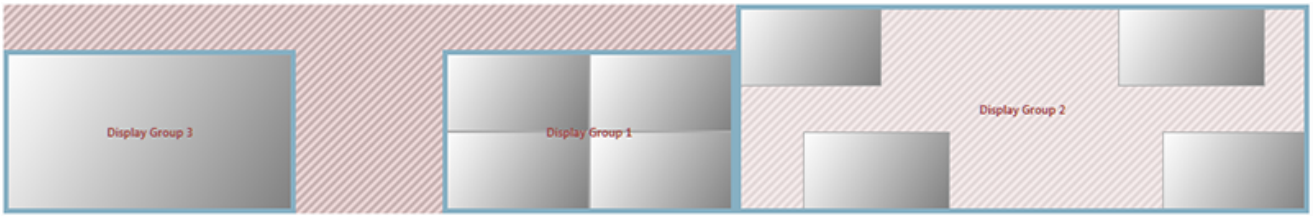


Click on **WALLS** again and the overlay is removed.

It should be noted that the walls cannot be selected directly from the Wall Management representation. Select a specific wall by clicking on it in the list of walls panel.

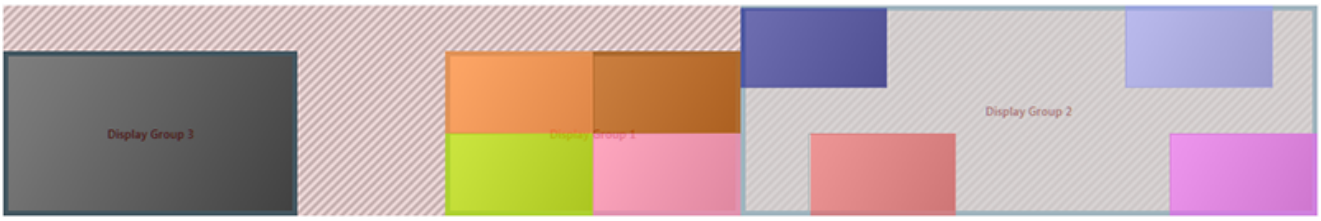
DISPLAY GROUPS

Click on **DISPLAY GROUPS** and the toggle button will be highlighted and the display groups associated with the server are overlaid on the representation.



Click on **DISPLAY GROUPS** again and the overlay is removed.

Select both toggle buttons and the walls and display groups are displayed:



Toolbar

Wall Management has a selection of tools to assist the user when creating walls:

Undo.

Redo.

Clear wall Selection.

Recentre View.

Snap to walls (only available when WALLS is active).

Snap to Screens.

Snap to Display Group (only available when DISPLAY GROUPS is active).

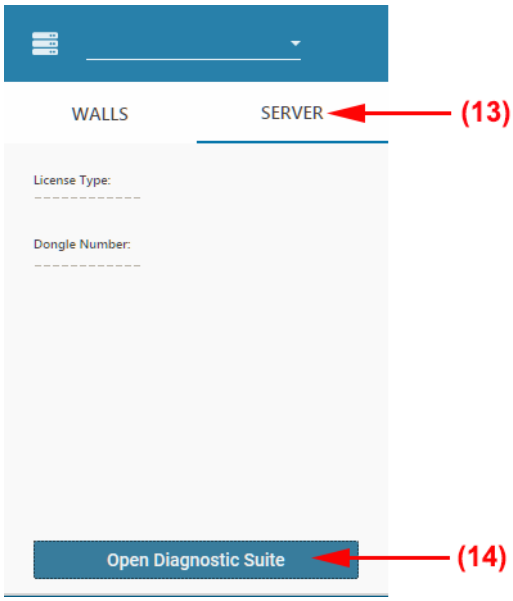
Snap to Grid

Desktop Representation – Pan and Zoom

You can zoom in and out of the desktop representation by holding the **Shift** key and scrolling the mouse wheel. Similarly, you can pan around within the desktop representation by holding the **Control** key and clicking and dragging with the left mouse button.

Server

Click on the **Server Tab (13)** to display details of the license type and dongle number of the WallControl 10 Server.



The server license version must be the same version as the client. The version number of the client license can be found in the Client User Settings panel.

Open Diagnostic Suite

The Diagnostic Suite is an application designed to assist with diagnosing problems within your wall controller, should any arise. The application will help you and the support staff identify problems quickly enabling a timely and effective resolution.

The Diagnostic Suite must be installed on the Server you are connected to, if it is not installed the following text appears in place of the Open Diagnostics Suite button **(14)**.

This server has not been configured to use the Diagnostic Suite, please speak to your systems administrator

The Diagnostic Suite must also be installed on the machine running the WallControl 10 Client. If the Diagnostic Suiteis not installed the Open Diagnostics Suite button **(14)** will be replaced by the following text:

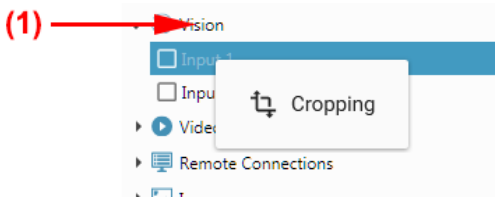
Please install Diagnostics Suite to access its functionality or speak to your system administrator.

Vision and SQX Source Cropping and Splitting

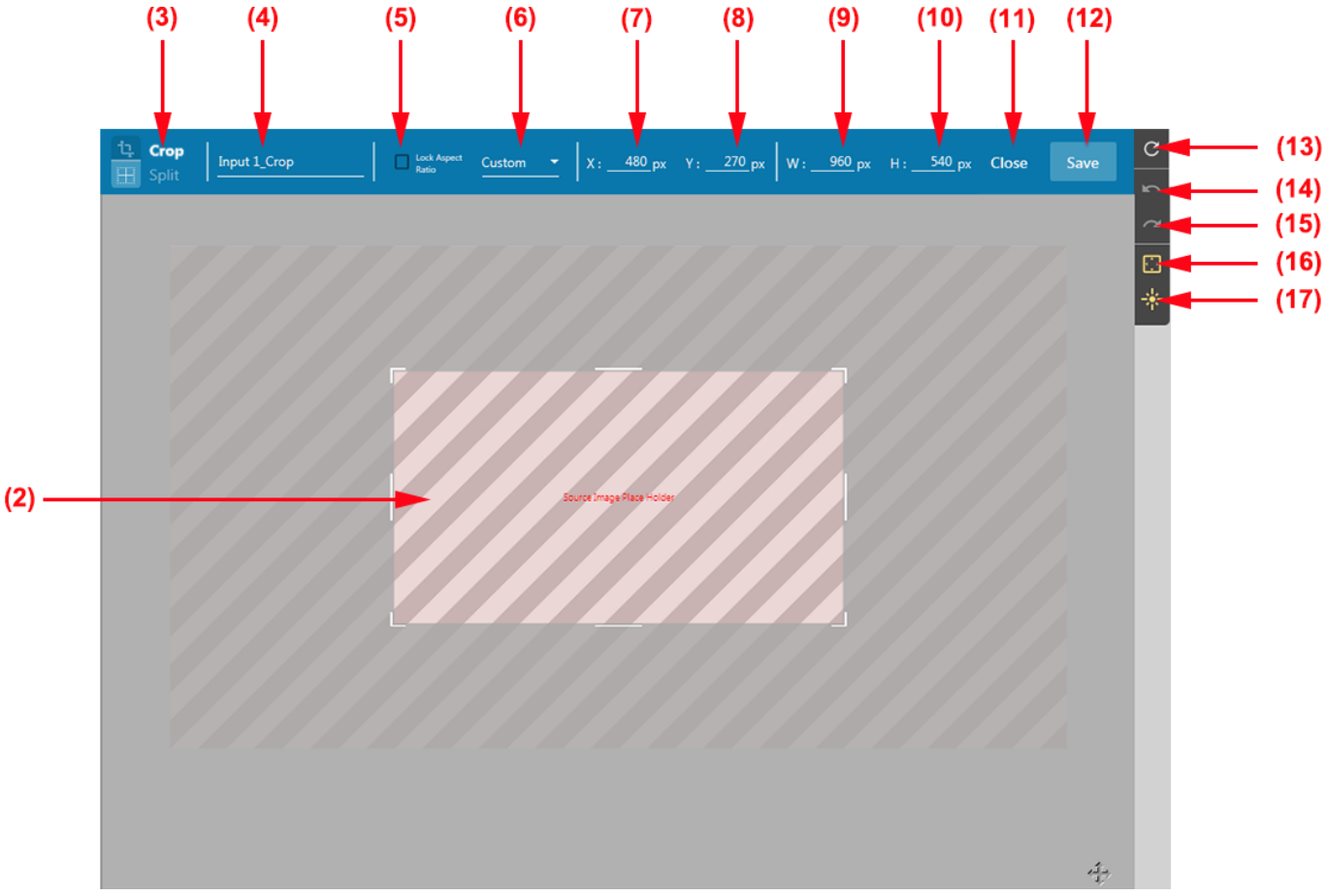
Cropping an Input Source

Each Vision or SQX source can be cropped to create child sources displaying only specific areas of the parent source. Once created, child sources are located in the Sources Tab beneath the parent source and can be used in the same way as any other captured source.

To access the Cropping feature, right click on the Vision or SQX source in the Sources Tab that you wish to crop and select **Cropping (1)**:



The cropping page is displayed:



(2)	Crop View – Highlights the area of the source that will be cropped. To select a specific area, click on and drag the Crop View anywhere on the area of the input source. To resize the view click and drag the resize corner and side handles to create a custom crop. Retain the aspect ratio by selecting the **Lock Aspect Ratio** checkbox. The mouse wheel can be used to zoom in and out of the view.
(3)	Toggle between the Crop and Split functions.
(4)	The default name of a Crop is taken the input source; this can be edited by clicking in the edit box and over-writing the text. When the Crop is saved, the name will appear in the Sources Tab as a child source beneath the parent source from which the crop was made.
(5)	Lock Aspect Ratio – Use the checkbox to lock the aspect ratio of the cropping view.
(6)	Aspect Ratio – Use the dropdown list to select an aspect ratio. The dropdown contains a list of common fixed aspect ratios. Custom refers to the aspect ratio of the current crop view if not a common aspect ratio.
(7)	X-Axis – Input the number of pixels you would like to position the left of the Crop View from the left of the input source.
(8)	Y-Axis – Input the number of pixels you would like to position the top of the Crop View from the top of the input source.
(9)	W – Set the width of the crop in pixels. The minimum number of pixels is 100, the maximum number cannot exceed the total width of the source.
(10)	H – Set the height of the crop in pixels. The minimum number of pixels is 100, the maximum number cannot exceed the total height of the source.
(11)	Cancel – Click on cancel to return to the "Wall View" without saving the crop.
(12)	Save – Click on "Save" to create the crop and save it to the Sources Tab. The saved crop will appear as a child input beneath the original source.

Toolbar

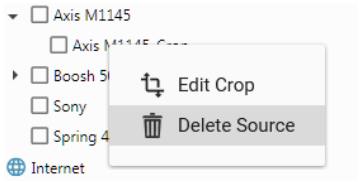
(13)	Refresh Screen Capture - When the cropping page is selected, the current frame being displayed is captured and imported onto the page. Click on Refresh Screen Capture to import the current frame from the source.
(14)	Undo – Undo the last action.
(15)	Redo – Redo the last action.
(16)	Reset View – Returns you to the initial view the crop window was opened in.
(17)	Re-centre View - The entire view including the source can be positioned anywhere within the cropping window by clicking on it, holding and dragging to a preferred position. Click on **Re-centre View** to return the view to the default position.

Multiple Cropping

Once a crop has been performed, the Source Image Place Holder returns to the default position, it can then be moved to a different areas of the source and another crops can be made. There is no limit to the amount of crops that can be created on a single Vision or SQX source. All crops will appear as Child Inputs on the Sources Tab.

Delete a Child Input from the Sources Tab

A Child Input can be deleted from the Sources Tab by right clicking on it and selecting **Delete** from the displayed menu:



A Child Input can also be deleted from the Source Properties Panel

Swapping an Input Source

If an input for a cropped source is swapped to one with a different resolution, WallControl 10 attempts to capture the same crop area of the new input source; this will be based on a percentage of the original crop against the new resolution. However, manual adjustments may be required using the Edit Crop tool.

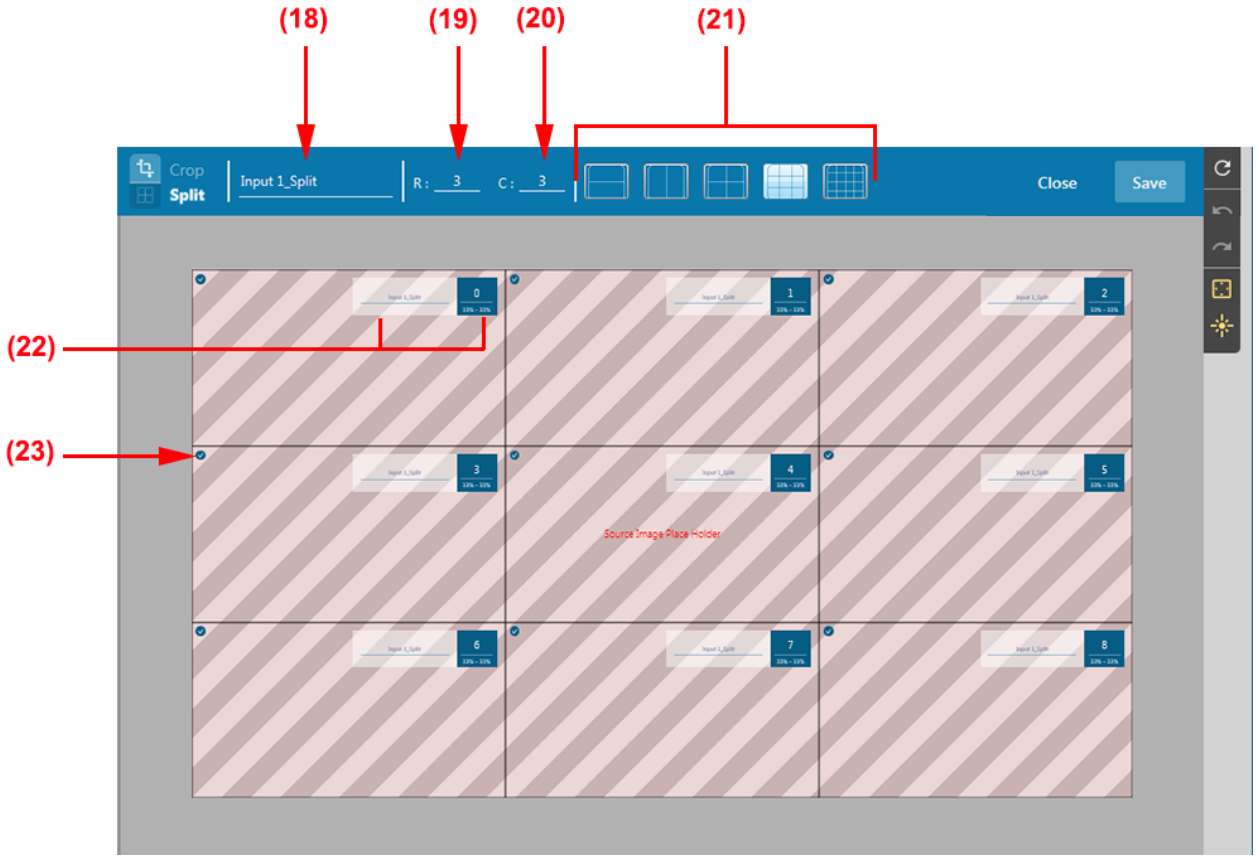
Splitting an Input Source

Each Vision or SQX source can be split to create up to sixteen individual cells, each cell working independently enabling the user to display individual areas of the captured video on a wall. Once created, the split cells are located in the Sources Tab beneath the parent source.

To access the Splitting feature, right click in the Vision or SQX source in the Sources Tab and select **Cropping**:

When selected, the cropping page (above) is displayed; select **Split** from the header toolbar **(3)** and the split feature becomes available. The Split page differs slightly in that the header toolbar contains a different set of function tools. All tools, apart from the ones marked below, retain the same functionality as Cropping.

A Split creates a crop of the input source based off a fixed grid. The grid can be created manually or the user can select a template grid **(21)**. Each cell created by the Split is displayed on the Sources Tab and appears as a child input beneath the original source.



The Split functionality is restricted to creating no more than sixteen cells for any captured source. An error message is displayed if the number of cells is exceeded.

(18)	The Master name of a Split is taken from the input source.
(19)	Input the number of required rows.
(20)	Input the number of required columns.
(21)	Pre-configured templates – Click to select a Split Template of your choice.
(22)	Each cell will adopt the master name **(18)** and will be automatically allocated a unique appendix. The cell name and appendix are editable; therefore, each cell can have its own, unique identity which appears on the Sources Tab. To edit the cell name and appendix, click inside the edit box.
(23)	Cell Included/Excluded – Individual cells can be excluded prior to saving the split. If excluded, the cell will not appear in the Sources Tab.

Vision Remote Connection

Using a Vision source you can remotely connect, capture, display and interact with the desktop of another system providing the desktop is an input on a Vision capture card. A Remote Host Address is required if a remote connection is to be established and this should be entered in the Vision "Source Properties". The remote address can be the DNS name of the machine or its IP address.

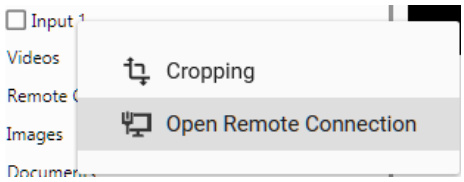
When a Remote Host Address is entered, it will automatically be allocated the Port number 5900. An alternative Port number can be used however, this will need to be created in the Datapath Agent Server Configuration Application which is located in the System Tray.

The Datapath Agent Server must be installed on the target machine for a remote connection to be successful. If the target machine is password protected, the password is also required on connection.

Opening a Remote Connection

From the Sources Tab

To open a remote connection using a Vision source right click on the source in the Sources Tab and select **Open remote Connection**. It should be noted that this feature is greyed out and unavailable until a Remote Host Address has been entered in the Input Source Properties.

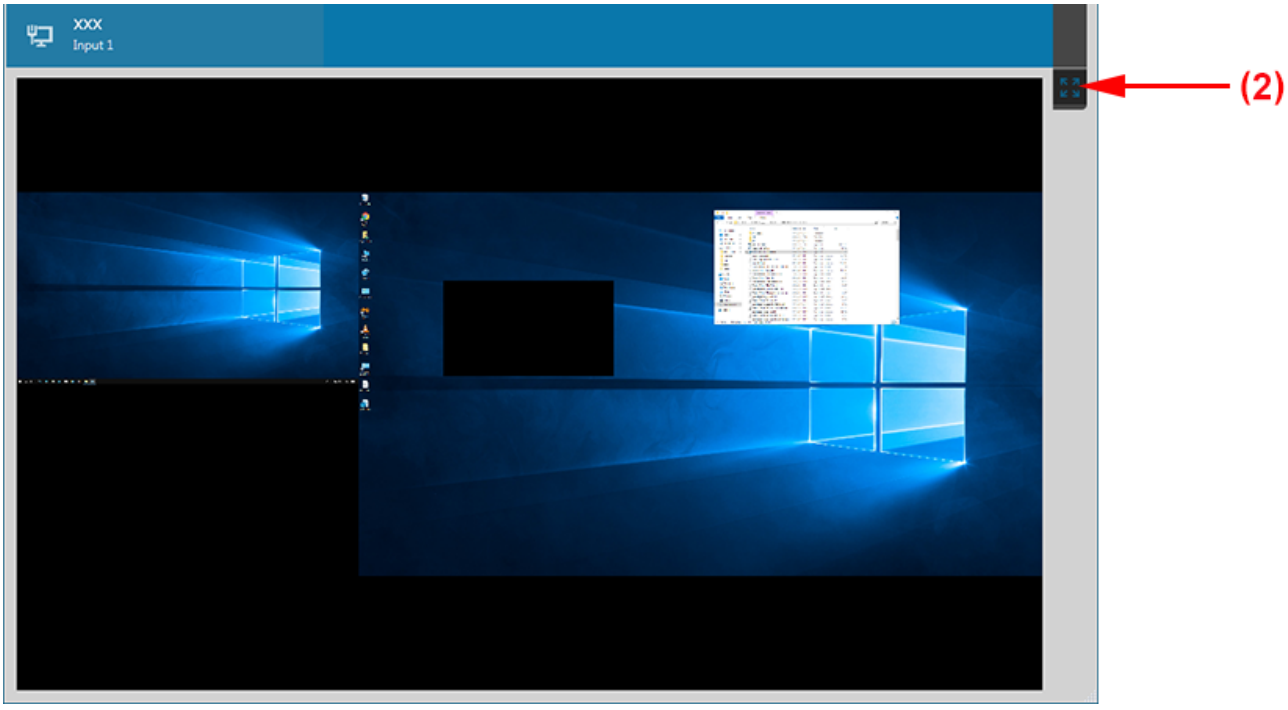


From a Window

To open a remote connection from an active window, click on the **Open Remote Connection** icon located in the Window Toolbar **(1)**:

The Open Remote Connection icon is not available if the source is contained within a Carousel or a Window Template.

Once the remote connection has been made a new tab is opened and an instance of the desktop you have connected to is displayed:



The dialogue displays the desktop of the machine you have connected to. If the machine is password protected you will be required to enter the password prior to the capture being displayed.

The Scale Toggle **(2)** allows you to scale the connection 1:1. The window scroll bars can be used to locate a specific area of the captured desktop.

Web Interface

The **"Web Interface"** is a basic user interface linked to the client via a web API. It offers the user the ability to launch layouts to any wall on a selected server. The "Web Interface" runs in a browser and can therefore be used on a PC, Mac, Tablet or Smartphone.

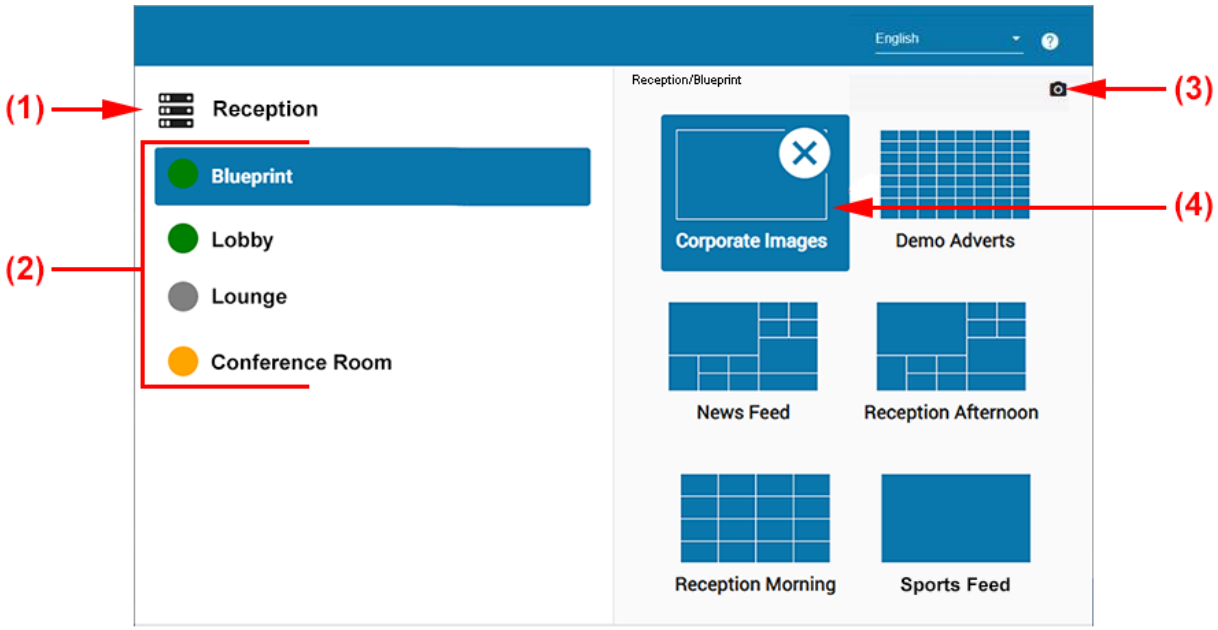
The **"Web Interface"** currently supports the following web browsers:

Chrome
Safari

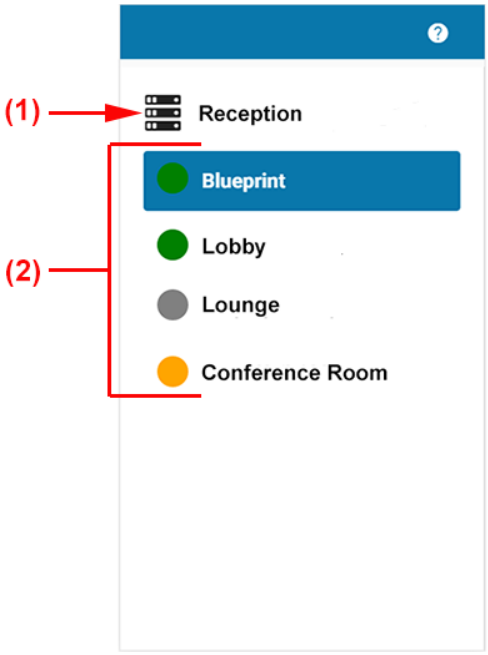
The **"Web Interface"** is launched by navigating to the server address provided in the **"Wall Management\Server"** tab from a browser on your computer or mobile device. It is recommended that once entered, the address is saved as a bookmark. Each server has its own unique address therefore **"Web Interface"** instances for each server have to be created separately.

An internet connection is not required to link the **"Web Interface"** to the server. However, it has to have access to the same network hosting the server.

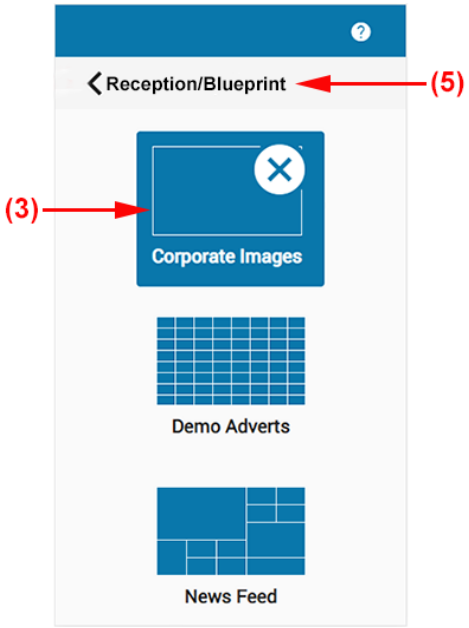
When the **"Web Interface"** is launched in landscape mode the application is displayed as follows:



If screen width is limited, such as on a smartphone oriented in portrait mode, only one panel will be displayed at a time. The default panel is the **Server/Wall** panel:



To view the list of layouts, simply tap on the relevant Wall **(2)** and the "Layout Panel" is displayed:



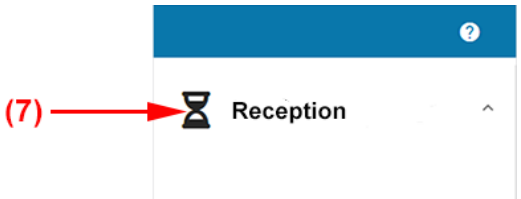
(1)	Server – Identifies the server you are connected too.
(2)	Walls – List of walls associated with the Server.
(3)	Show Wall Desktop Capture – Click on the Camera Icon and a snapshot of the desktop for the selected wall is displayed.
(4)	Layouts – List of Layouts available in the Server Library. Tap a layout to launch it to the wall. When the layout has been launched, the icon is enlarged and an **"X"** appears in the top left. To close the layout, tap the **"X"**.
(5)	Tap to return to the **"Wall Panel"** page.

Unless the layout is de-selected **(4)** prior to closing the application, the layout will continue to be displayed on the wall even if the **"Web Interface"** is closed.

Server

When connecting to a server using the **"Web Interface"** the following icons may be displayed:

The Server icon **(6)** indicates that a successful connection with the server has been achieved.



The egg timer icon **(7)** indicates that the **"Web Interface"** is waiting for a response from the server. A connection has not yet been achieved.

The crossed-out server icon **(8)** indicates that the server is currently unavailable and a connection is not possible. The server may need to be started or restarted before a connection can be made. Alternatively, a network problem may be preventing communication. The browser can be refreshed to try and connect again once the problem has been fixed.

Walls

When a connection with the server is made, the Walls associated with it are displayed **(2)**. To select a wall tap on it, the wall is then highlighted and remains highlighted until another wall is selected. Each wall has an icon which is colour-coded to identify its current status:

	Green – Indicates that the wall is running and available to accept layouts.
	Amber – Indicates that the wall is about to start running or about to stop. The wall is not currently able to accept layouts.
	Grey – Indicates that the wall has stopped and not available to accept layouts. The wall can be restarted in the Wall Management tab.

On Screen Display

The On Screen Display (OSD) tool allows you to configure and display text on Vision and SQX windows; this includes a number of variables relating to the system and captured sources. Any OSD added to a window is displayed as soon as the OSD is applied.

If a Vision or SQX window is opened without a source connected, text configured in the OSD user interface will still be displayed.

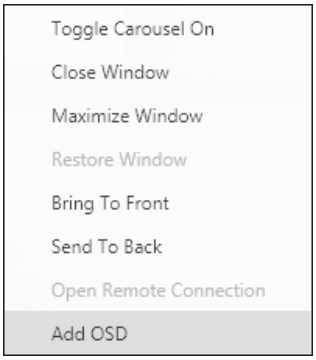
When applied to a window, the OSD is retained if the window is saved within a layout file.

OSD – Carousel

If a window containing an OSD is applied to a Carousel, the OSD content will continue to be displayed for all Vision and SQX sources contained within the Carousel. If variables are contained within the OSD, these are applied to the Vision or SQX source currently being displayed.

OSD User Interface

To open the OSD user interface right click on an active Vision or SQX window and select **Add OSD**.



The OSD user interface will open at the bottom of the WallControl 10 window:

Enter OSD Text

Type in the required OSD text for the selected window. The text is displayed until it reaches the edge of the margin. For long strings of text, it is recommended that Word Wrapping is switched on.

Select Variables

The Select Variables function allows you to display a changeable value in the OSD, for example the current system date or system time. Use the dropdown arrow to display a list of variables, select the variable you require then click on **Add**. The variable will then appear in the OSD text field. Multiple variables can be added to a single OSD if required by individually selecting the variable and adding them to the OSD text field.

%ALIAS%	Name: The name of the source, as specified in the source definition properties.
%SOURCE%	Source: The source itself, as specified in the source definition properties.
%HRES%	The Horizontal resolution of the capture/stream.
%VRES%	The Vertical resolution of the capture/stream.
%SYSDATE%	Date: The current system date.
%SYSTIME%	Time: The current system time.
%REFRESHRATE%	Refresh Rate: The rate at which the source is drawn on the wall.
%CAPTURERATE%	Capture Rate: The rate at which the input itself is captured.

Variables included in the OSD are updated every second.

Font

Select the font, size, colour and style of font you wish to use for your display.

Scaling

When Fixed is selected, the text in the OSD remains the same size regardless of the size of the window.

When Scale is selected, the text in the OSD is scaled up or down in line with the scaling of the window.

Background

Transparent

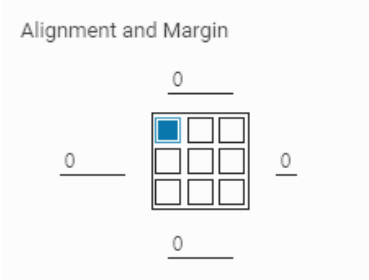
Select **Transparent** and the captured source behind the text is visible.

Opaque

Select **Opaque** and the area behind the text is displayed in a chosen colour,

Position

Alignment and Margins



The Alignment control allows you to position the OSD within the margins. To select the position of alignment click the required position within the grid as shown in the example above.

The Margin settings define the area within the window in which the OSD is displayed, any OSD text that falls outside the margins is not displayed.

To set the required margins, enter values in the top, bottom, left and right edit boxes. Values are in pixels.

Editing a Previously Saved OSD

To edit a configured OSD, right click on the window containing the OSD and select **Edit OSD** from the menu. The OSD user interface open at the bottom of the WallControl 10 application, allowing you to edit the content.

Saving Your OSD Settings

Once an OSD has been edited or created, click on **Apply** to save the settings.

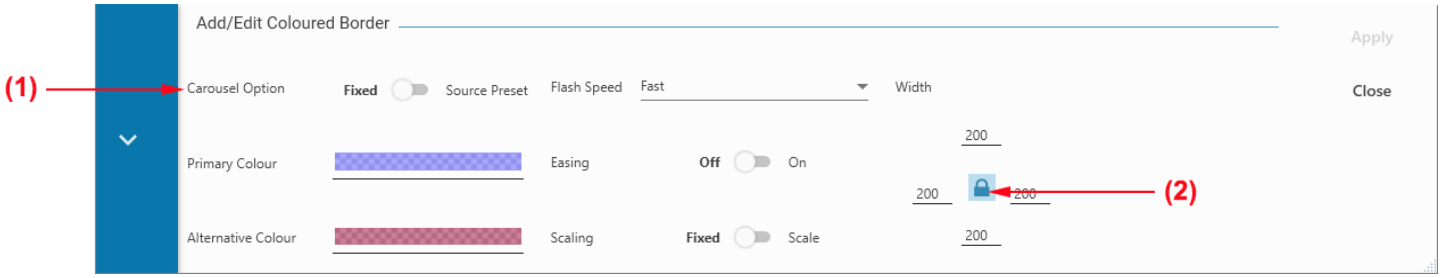
Removing an OSD

To remove a configured OSD, right click on the window containing the OSD and select **Remove OSD** from the menu.

Coloured Borders

Coloured borders can be used to draw attention to specific windows or groups of windows. The coloured borders feature is only available for SQX and Vision windows.

To access the Coloured Borders panel place the SQX or Vision windows you wish to create coloured borders for on the wall. Open the Window Menu with a right click of the mouse and select **Add Coloured Border**. The Add/Edit Coloured Border panel is displayed:



Carousel Option

If the coloured border panel is opened from a Carousel window, the Carousel Option is available **(1)**.

Toggle the option to Fixed and the primary and alternative colours can be selected. Any colour selections made in this mode will be adopted by all SQX or Vision windows contained within the Carousel.

Toggle the option to Source Preset and the primary and alternative colours configured within the Presets page in the Server Overview dialogue are used. However, the Presets configured in the Source Properties panel will take priority.

Primary Colour

Select the main colour for the border. Click on the colour bar to open the colour picker, select a colour for the border. Colours are set at 50% transparency as a default but this can be changed in the advanced tab within the colour picker.

Alternative Colour

Alternative colours are used when the coloured border is configured to Flash. Click on the colour bar to open the colour picker, select an alternative colour for the border. The border

will switch between the primary and alternative colours.

Flash Speed

A flashing coloured border on a window can be used to draw attention to a specific event being captured and displayed in the window.

To initiate a flashing coloured border, open the Flash Speed dropdown list and select the required speed: **Slow**, **Medium** or **Fast**.

Easing

When a flash speed is selected the Easing function becomes available. Toggle the Easing control to On then click on **Apply** and the transition between the primary and alternative colours is smoother.

Select **Off** to stop the coloured border flashing.

Width

The width of the coloured border can be configured by entering a value for the top, bottom, left and right borders. Values are in pixels. To enter the same value for all sides of the coloured border, click on the **Dimensions Linked** icon **(2)** and type the required value into one of the fields. The remaining fields are set automatically.

Fixed – Scale

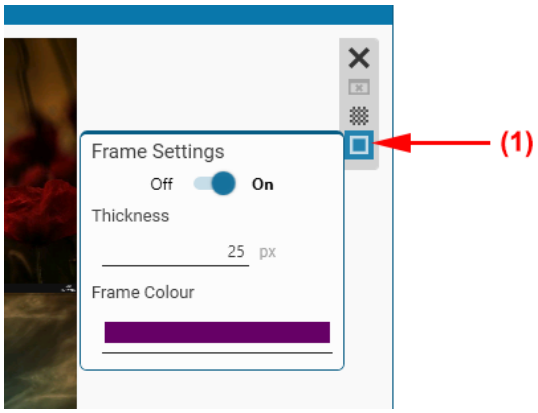
Select **Fixed** and the coloured border will remain the selected width when the size of the window is scaled up or down.

Select **Scale** and the coloured border width is scaled up or down, relative to the size of the window.

Coloured Frames

The coloured frames feature allows the user to select a coloured frame for all windows on the wall simultaneously or apply coloured frames to individual walls. This enables the user to categorise groups of windows. Coloured frames can be applied to all source types and can be used in conjunction with Coloured Borders for Vision and SQX sources.

Frame Settings



To create a coloured frame for all windows on the wall, open the Frame Setting dialogue by clicking on the **Wall Frame Options** icon **(1)**.

Off – On

When the frame settings is On, any coloured frame configurations are applied to the wall, meaning all windows currently being displayed and any subsequent windows that are placed on the wall will adopt the coloured frame.

Set to Off and all windows being displayed on the wall will have the coloured frames turned off and any subsequent windows placed on the wall will not display a coloured frame.

Thickness

Input the required thickness for all four sides of the frame. Value in pixels.

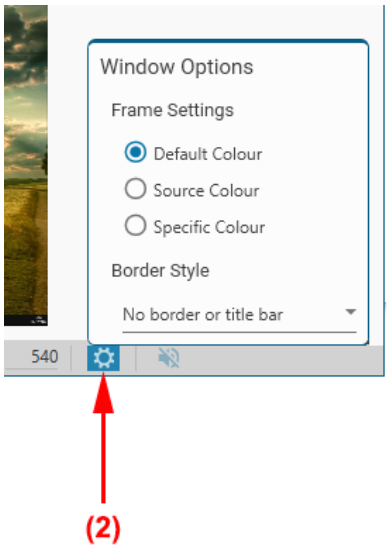
Frame Colour

Click on the colour bar to open a colour picker and select the colour required. The colour will not be used on any windows that have been assigned a Specific Colour in the Window

Options.

Window Options

To open the Window Options click on the Window Options icon in the bottom right corner of the user interface **(2)**.



Frame Settings

Default Colour

Select **Default Colour** and the selected window will adopt the frame colour configured in the Frames Setting dialogue.

Source Colour

Select **Source Colour** and the window will adopt the frame colour configured in the Source properties dialogue.

Specific Colour

Select **Specific Colour** and a colour bar is displayed, click on the bar to open the colour picker, select the required colour for the window frame.

Border Style

The window border style can be selected by clicking on the Border Style dropdown list. Select either **No border or title bar** or **Border and title bar.**

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