VWS-VWM10-STD

RADIAN VIDEO WALL SOFTWARE

24/7 TECHNICAL SUPPORT AT 1.877.877.2269 OR VISIT BLACKBOX.COM

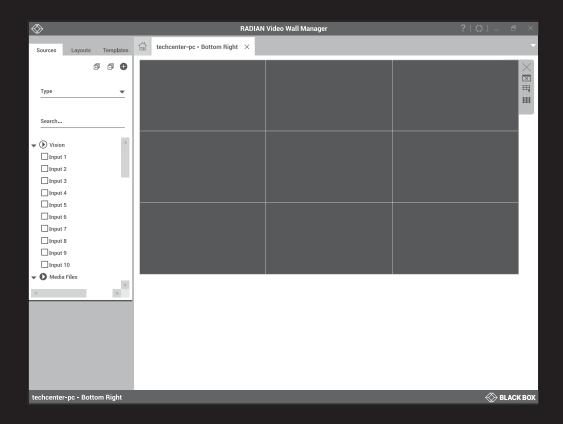




TABLE OF CONTENTS



1. INTRODUCTION	5
1.1 The Server	5
1.2 The Client	5
1.3 The Client User Interface	5
1.3.1 Server Properties	5
1.3.2 Display Walls	5
1.3.3 Sources, Layouts and Templates	6
1.3.4 Desktop Tools	6
1.3.5 Window Tools	
1.3.6 User Settings	6
1.4 Adding Source to the Global and Wall Source Libraries	6
1.4.1 Global Source Library	7
1.4.2 Wall Source Library	
1.5 Adding New File Extensions to the Source Libraries	
1.6 Video Wall Manager Software 64-Bit	
1.7 Antivirus Software	8
2. OPENING AND VIEWING DISPLAY WALLS	
2.1 Open a Display Wall	
2.2 Open Multiple Walls	9
3. WINDOW PROPERTIES AND TOOLS	
3.1 Window ID	
3.2 Top and Left	
3.3 W and H (Width and Height)	
3.4 Border Style	
3.5 Audio	10
4. APPLICATION SOURCE	11
4.1 Add a New Application Source	
4.2 Using MultiWall	
4.3 Application Source Properties	
4.5 Application Source Properties	13
5. INTERNET BROWSER SOURCE	14
5.1 Add an Internet Browser Source	
5.2 Source Library	
5.2.1 Wall Library	
5.2.2 Global Library	
5.2.3 Source Name	
5.3 MS Office 365	
5.4 Properties	
5.4.1 Name of Source	
	15
5.4.2 Admin Tab	15

TABLE OF CONTENTS



6. SQX SOURCE	
6.1 Add an SQX Source	16
6.2 Source Library	16
6.2.1 Wall Library	16
6.2.2 Global Library	16
6.3 Opening SDP Files	17
6.4 SQX Source Properties	17
6.4.1 Name of the Source	17
6.4.2 Resolution	17
6.4.3 Refresh	17
6.4.4 Admin Tab	18
6.4.5 Tags Tab	18
7. QUANT	19
7.1 Adding a Quant Source	19
7.2 Pinning Quant Sources	20
7.3 Unpinning	22
7.4 Source Properties Panel	22
8. REMOTE CONNECTION SOURCE	23
8.1 Adding a Remote Connection Source	23
8.2 Remote Connection Client Source	23
8.3 Configure Remote Connection	24
8.4 Remote Connection Cropping	25
8.5 Properties	27
8.5.1 Basic Functions	27
8.5.2 Admin Functions	27
8.5.3 Tags	27
9.VISION SOURCE	29
9.1 Properties Panel	28
9.1.1 Tags Tab	28
9.1.2 Admin/Advanced Properties	28
10. CREATING AND SAVING LAYOUT FILES	29
10.1 Create a Layout Using Templates	29
11. DISPLAY WALL TEMPLATES	30
11.1 Re-arranging Windows in Templates	30
11.2 Adding a New Source to a Template	
11.3 Template Restrictions	
12. WINDOW TEMPLATES	32

TABLE OF CONTENTS



13. CUSTOM TEMPLATES	33
14. SERVERS	34
14.1 Server Properties	34
14.2 Add a New Server	34
14.3 Add a New Wall to the Server	35
15. Carousel	
15.1 Adding New Sources to the Carousel	36
15.2 Toggle Carousel	36
16. WALL CREATOR	37
16.1 Creating Child Walls	37
16.2 Child Wall Start-Up	37
17. USER SETTINGS PANEL	
17.1 Application	
17.2 Representation Window Defaults	
17.3 Diagnostics	38
18. COMMAND LINE INTERFACE	39
18.1 Telnet	
18.2 Command Line Arguments	
18.3 Example Commands	42
APPENDIX. DISCLAIMER/TRADEMARKS	
A.1 Disclaimer	
A.2 Trademarks Used in This Manual	42



Video Wall Manager Software offers real time management of small, medium and large scale display walls. Video Wall Manager Software 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 Radian capture card, an IP stream via the

PC's processor an ActiveSQX card or any other local media anywhere on your display wall.

The Video Wall Manager Software help files will guide you through the functionality of the application.

Video Wall Manager Software has a number of elements that contribute to controlling and creating your display wall:

1.1 THE SERVER

The Server is 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 network. Each server can run multiple display walls.

The Server must be started first to allow the Client to locate available servers. To start the server, go to Start/Programs/Video Wall Manager Software/Video Wall Manager Software Server. Start the client by going to Start/Programs/Video Wall Manager Software/Video Wall Manager Software Client. When the client runs it will automatically seek out and display all servers available to you.

NOTE: Only use the Video Wall Manager Software software license 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 Video Wall Manager Software Servers by clicking on the corresponding Video Wall Manager Software Server button.

1.2 THE CLIENT

The Client (the Video Wall Manager Software 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.

1.3 THE CLIENT USER INTERFACE

To open the Client user interface go to Start/Programs/Video Wall Manager Software/Video Wall Manager Software Client.

1.3.1 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.

1.3.2 DISPLAY WALLS

A display wall is a monitor or multi-monitors tiled together to form one large Windows® desktop. Display walls are represented in the user interface below each server.

The master wall is referred to as the "Blueprint".





1.3.3 SOURCES, LAYOUTS AND TEMPLATES

The Sources, Layouts and Templates are used to create, organize 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.

1.3.4 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.

1.3.5 WINDOW TOOLS

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

1.3.6 USER SETTINGS

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

- Themes Users may change the application theme colors.
- Help Quick access to the application help files.
- User Settings Panel Allows the user to view and make changes to the application user settings.

1.4 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.





1.4.1 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 into the relevant folders, it automatically becomes available as a source to use on any wall associated with the server.

1.4.2 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.

1.5 ADDING NEW FILE EXTENSIONS TO THE SOURCE LIBRARIES

Video Wall Manager Software has a default set of file types configured for use in the Wall and Global Source Libraries.

Users are able to add new file types to suit requirements.

To add a new file type, the Video Wall Manager Software server must first be stopped and the relevant configuration file updated. The configuration files are stored with the Source Library folders:

- Global Source Library: C:\ProgramData\Video Wall Manager Software\Server
- Wall Source Library: C:\ProgramData\Video Wall Manager Software\[Wall name]

For example; to add a .tif file extension to the ImageMedia folder in the Global Source Library:

- Close the Video Wall Manager Software Server by selecting "CloseServer" from the Server System Tray menu.
- Open the Image.config in Notepad:
 C:\ProgramData\Video Wall Manager Software\Server\Image.config
- Add *.tif to the file extension filter:
 <FileExtensionFilters> *.jpg;*.png;*.gif;*.tif</FileExtensionFilters>
- Save the Image.config file and restart the Video Wall Manager Software Server

The new .tif file extension can now be used and images can be placed in the ImageMedia folder as described in the "Adding Sources to the Global and Wall Source Libraries" section above.

NOTE: URL based sources are subject to input validation. For example, ActiveSQX source can be rtsp://, udp://, http://, https:// and sdp://. Internet sources can only be http:// and https://.



1.6 VIDEO WALL MANAGER SOFTWARE 64-BIT

Video Wall Manager Software is supported on the Windows® 7 and Windows® 10 64-Bit Operating Systems.

The requirements are as follows:

Video Wall Manager Software Server:

- Driver Install version 4.2.4 or later
- Windows® 7 64-Bit, or
- Windows® 10 64-Bit

Video Wall Manager Software Client:

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

1.7 ANTIVIRUS SOFTWARE

For Video Wall Manager Software to operate effectively, we suggest that users add the Video Wall Manager Software executable directories and media directories into your antivirus white lists.

Video Wall Manager Software executable directories can be found at c:\Program Files(x86)\<Radian>

WHERE IS EXECUTABLE DIRECTORY FOUND?

Video Wall Manager Software media directories can be found at c:\ProgramData\<Radian>

WHERE IS EXECUTABLE DIRECTORY FOUND?

We 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.

CHAPTER2:OPENINGANDVIEWINGDISPLAYWALLS



Video Wall Manager Software allows users to manage the content and control multiple display walls from a single server, each wall working independently.

2.1 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.

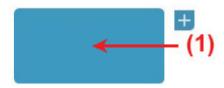


FIGURE 2-1. OPEN A DISPLAY WALL

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.

2.2 OPEN MULTIPLE WALLS



FIGURE 2-2. OPEN MULTIPLE DISPLAY 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.

CHAPTER3:WINDOWPROPERTIESANDTOOLS



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.

3.1 WINDOW ID

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

3.2 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.

3.3 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.

3.4 BORDER STYLE

The "Window Border" style can be selected by clicking on the arrow to display the window border styles available for selection.

3.5 AUDIO

Click on the Audio icon to mute the sound for the selected window.



CHAPTER4: APPLICATION SOURCE



4.1 ADD A NEW APPLICATION SOURCE

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

Click on the "Add New Source" icon on the Sources tab and the "Add New Source" dialog opens:

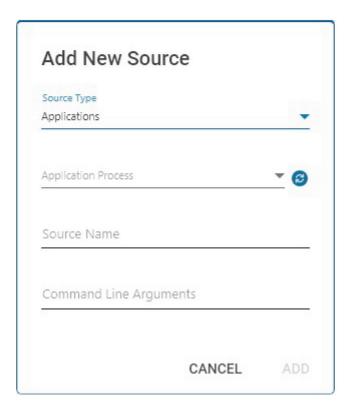


FIGURE 4-1. ADD NEW SOURCE DIALOG BOX

Select "Applications" from the list of Source Types.

When selected, Video Wall Manager Software 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 Video Wall Manager Software Client. Click on the Application Process refresh icon.

We recommend that applications unable to manage their own start up position and size are not used with the Video Wall Manager Software Client.

NOTE: Some applications may have been excluded by Video Wall Manager Software and not be available to use as a source, for example, the Task Manager.

CHAPTER4: APPLICATION SOURCE



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

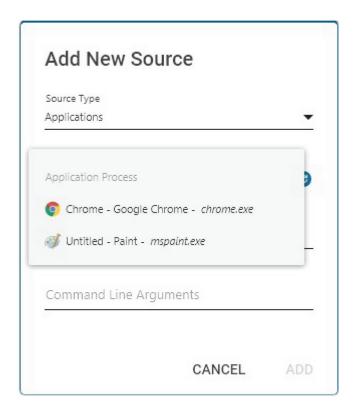


FIGURE 4-2. APPLICATION ADDED TO LIST

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, close it by clicking on the adjacent "X" in the Video Wall Manager Software Sources Tab. Closing the widow directly from the application results in Video Wall Manager Software 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 Video Wall Manager Software Sources Tab.

CHAPTER4: APPLICATION SOURCE



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 regardless of its last recorded position, this includes when saved as part of a layout file. This could cause problems in a MultiWall configuration as the application could open on or across a different wall.

4.2 USING MULTIWALL

If adding an application source to a child wall set up in Wall Creator, the application will only appear in the list of available applications if the whole frame of the application is being displayed on the child wall. If any part of the application is displayed outside the boundaries of the wall, it will not be available for selection as a source.

4.3 APPLICATION SOURCE PROPERTIES

Application source properties are displayed at the bottom of the sources tab when an application source is selected from the sources tab.

The source properties panel initially displays the basic properties of the selected application:

- Application source name
- The Application icon

Click on the Admin tab to reveal the administrative tools for the application source:

- The path to the executable
- The command line parameters (editable)
- The window title (editable)
- Delete source button

CHAPTER5:INTERNETBROWSERSOURCE



5.1 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 dialog is displayed:

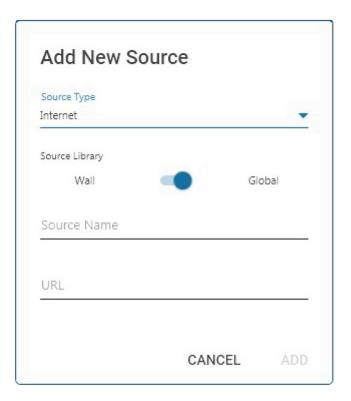


FIGURE 5-1. ADD NEW SOURCE SCREEN

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

5.2 SOURCE LIBRARY

The Source Library is divided into two specific areas: Wall Library and Global Library.

5.2.1 WALL LIBRARY

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

5.2.2 GLOBAL LIBRARY

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

CHAPTER5:INTERNETBROWSERSOURCE



5.2.3 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. Make sure the URL is correct.

5.3 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.

5.4 PROPERTIES



FIGURE 5-2. PROPERTIES PANEL

The Internet Browser Properties Panel is located beneath the Sources Tab (1) 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.

5.4.1 NAME OF SOURCE

The name of the source is editable. A change made to the name in the properties panel automatically updates the name in the "Sources Tab".

5.4.2 ADMIN TAB

Click on the Admin tab to reveal the administrative tools for the internet source.

- URL Displays the URL of the source. The URL can be edited providing the window is not currently displayed on the wall.
- DELETE SOURCE Click on DELETE SOURCE to remove the browser from the "Sources Tab".

5.4.3 TAGS TAB

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 browser 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.



CHAPTER6:SQXSOURCE



6.1 ADD AN 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 dialog is displayed:

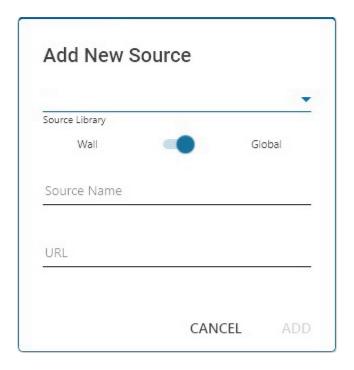


FIGURE 6-1. ADD NEW SOURCE DIALOG

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).

6.2 SOURCE LIBRARY

The Source Library is divided into two specific areas: Wall Library and Global Library.

6.2.1 WALL LIBRARY

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

6.2.2 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. Make sure the URL is correct.



CHAPTER6:SQXSOURCE



6.3 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.

6.4 SQX SOURCE PROPERTIES

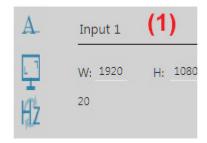


FIGURE 6-2. SQX SOURCE PROPERTIES SCREEN

SQX properties are displayed beneath Source Tab (1) when an SQX or IP source is selected from an SQX provider.

To view the properties of an IP source open the Sources Tab and select an IP source from the SQX provider. An IP source is identified by a camera icon.

The IP source "Properties Panel" displays basic information associated with the IP source.

Click on an active IP window on the wall and all available properties are displayed.

6.4.1 NAME OF THE SOURCE

The name of the source is editable. Changes made to the name in the source properties panel automatically updates the name in the "Sources Tab".

6.4.2 RESOLUTION

Displays the resolution of the of the captured IP source.

6.4.3 REFRESH

Displays the refresh rate of the captured source.



CHAPTER6:SQXSOURCE



6.4.4 ADMIN TAB

Click on the Admin Tab to reveal the administrative tools for the IP source:

- The IP address of the source is displayed.
- Maintain the aspect ratio of the source by clicking the check box.
- Click "Delete Source" to remove the IP source from the Sources Tab.

6.4.5 TAGS TAB

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 IP 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.

NB: Video Wall Manager Software does not yet support the ActiveSQX caching option.



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 Video Wall Manager Software Server.

7.1 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:



FIGURE 7-1. QUANT SCREEN

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

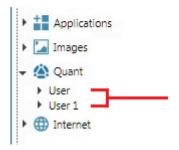


FIGURE 7-2. QUANT PROVIDER TREE

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

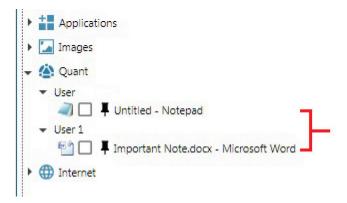


FIGURE 7-3. QUANT USERS TREE EXPANDED



CHAPTER7:QUANT



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, Video Wall Manager Software 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.

7.2 PINNING QUANT SOURCES

Any Quant source shared with the wall will have a feature that allows you to "pin" the source to the Video Wall Manager Software Sources Tab.

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

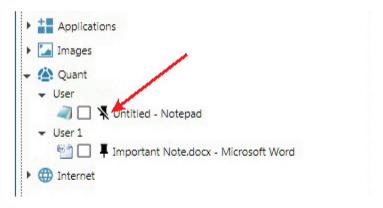


FIGURE 7-4. QUANT SOURCE PINNED SCREEN

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 regardless 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 reestablished, but the content will have changed.



If a Quant source is dragged to the wall, but the window has been unshared by the Quantuser, text will be displayed in the Quant window informing you that Video Wall Manager Software is trying to connect to the source:

Connecting... Title: Document1 - Microsoft Word Origin: User 1

FIGURE 7-5. CONNECTING SCREEN

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:



FIGURE 7-6. CONNECTION FAILED SCREEN

CHAPTER7:QUANT



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:

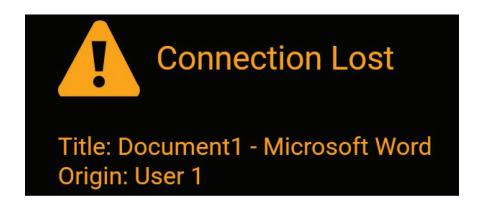


FIGURE 7-7. CONNECTION LOST SCREEN

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.

7.3 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 and it will be removed.

7.4 SOURCE PROPERTIES PANEL

Quant windows do not have any properties to populate the Source Properties panel in Video Wall Manager Software.



CHAPTER8:REMOTECONNECTIONSOURCE



8.1 ADDING A REMOTE CONNECTION SOURCE

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

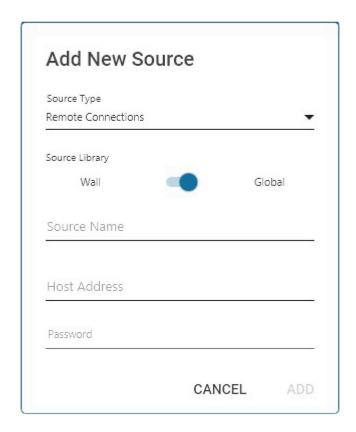


FIGURE 8-1. ADD NEW SOURCE DIALOG

Use the Source Type drop-down list to select the type of source you wish to add, in this case, Remote Connection.

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 Connection 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 Radian 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.

8.2 REMOTE CONNECTION CLIENT SOURCE

Using the Remote Connection Client, Video Wall Manager Software 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 Connection when it has been placed onto the wall.

CHAPTER8:REMOTECONNECTIONSOURCE



The Remote Connection requires the Radian Agent server to be installed on client machines that you wish to add to the list of Remote Connection Sources.

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

8.3 CONFIGURE REMOTE CONNECTION

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

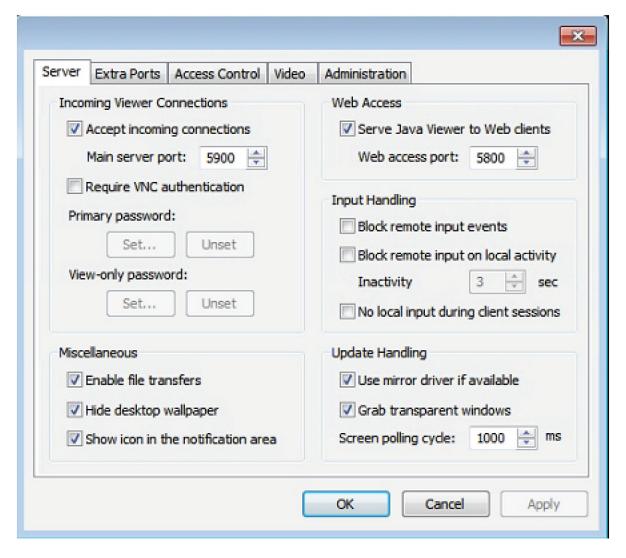


FIGURE 8-2. ACCEPT INCOMING CONNECTIONS SCREEN

Ensure that the Accept incoming connections checkbox is ticked.



CHAPTER8: REMOTECONNECTION SOURCE



8.4 REMOTE CONNECTION CROPPING

The Radian 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 Radian Agent from the system tray on the client machine and click on the "Extra Ports" tab:

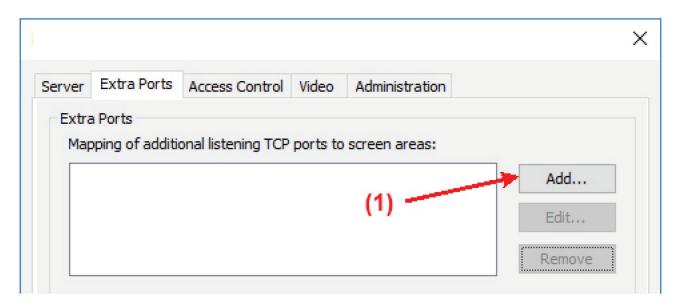


FIGURE 8-3. EXTRA PORTS TAB

Using the "Add" function, it is possible to create extra ports, which the Radian 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" dialog:

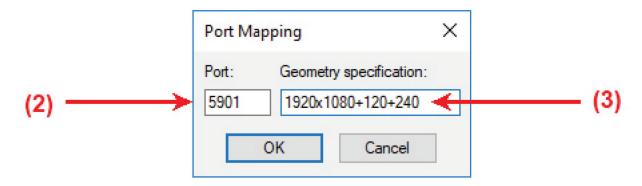


FIGURE 8-4. PORT MAPPING DIALOG

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).

CHAPTER8:REMOTECONNECTIONSOURCE



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

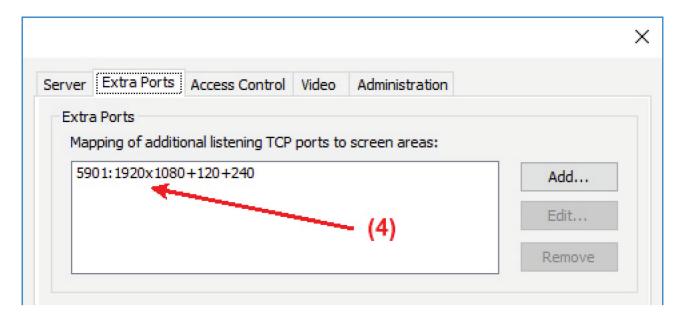


FIGURE 8-5. EXTRA PORTS TAB

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" dialog, 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.

TABLE 8-1. PORT NUMBERS

PORT NUMBERS	USED FOR:	
0 - 1023	System or well known ports	
1024 - 49151	Registered ports	
49152 - 65535	Dynamic/Private ports	

We recommend that you assign a port number between 5901 and 49151.

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



CHAPTER8:REMOTECONNECTIONSOURCE



8.5 PROPERTIES

To open the Remote Connection Client properties panel, simply select a Remote Connected Client from the Sources Tab.

The source panel displays the following:

8.5.1 BASIC FUNCTIONS

Displays the name of the Remote Connection source.

8.5.2 ADMIN FUNCTIONS

Displays the URL of the Remote Connected source.

- Edit the URL of the source. (This cannot be done if the source is currently being displayed).
- Delete the source, removing it from the Sources Tab.

8.5.3 TAGS

Add search tags and create new location strings to assist in the organization of your sources.

CHAPTER 9: VISION SOURCE



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

9.1 PROPERTIES PANEL

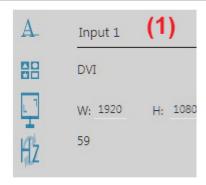


FIGURE 9-1. PROPERTIES PANEL

The Vision source "Properties Panel" is located beneath the Sources Tab (1). The Properties Panel is populated with the basic information associated with the selected Vision source:

- The name given to the input; this name can be edited.
- The type of source being captured, for example DVI.
- The resolution of the source being captured.
- The refresh rate of the source.

9.1.1 TAGS TAB

"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.

9.1.2 ADMIN/ADVANCED PROPERTIES

The Admin/Advanced properties are displayed when a source window is displayed on the wall and is the active window. (Click on the window to make it the active window).

Admin:

Under the "Admin" tab you can:

- Choose to maintain the Aspect Ratio of the window
- The Rotation Tool has a drop-down menu that displays a list of rotation angles available for the source.
- The Color Domain Tool has a dropdown menu that allows you to select a preferred color domain. The Color Domain Tool is not available on DisplayPort and Composite inputs.

Advanced:

Use the Advanced tab to adjust the brightness and contrast of the source.



CHAPTER 10: CREATING AND SAVING LAYOUTFILES



To create a layout file, first 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.

10.1 CREATE A LAYOUT USING TEMPLATES

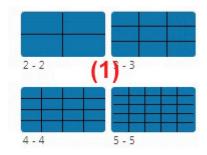


FIGURE 10-1. LAYOUT

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. The "Save" icons are located at the top of the "Layout Tab". The first option (2) allows you to save the layout locally on your system. The second option (3) is to save the layout on the server, allowing it to be shared by other users.

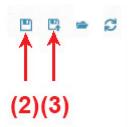


FIGURE 10-2. LAYOUT FILE SAVING OPTIONS

Click on the save option you require, you will then be prompted to enter a file name for the layout. Click "Save".

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.

CHAPTER 11: DISPLAYWALL TEMPLATES



Templates are tools designed to assist in the organization 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).

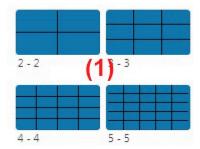


FIGURE 11-1. CUSTOM TEMPLATE

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 placed into a cell, it will automatically snap to fit.

Dragging a template onto 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 where 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.

11.1 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.

11.2 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.



CHAPTER 11: DISPLAYWALLTEMPLATES



11.3 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.

CHAPTER12:WINDOWTEMPLATES



Templates are tools designed to assist in the organization 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).

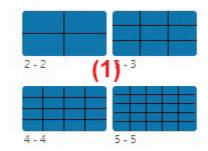


FIGURE 12-1. TEMPLATES

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.

CHAPTER13:CUSTOMTEMPLATES



Templates are tools designed to assist in the organization 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).



FIGURE 13-1, TEMPLATES TAB

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 customized. Double-click on any template to open it in the Template Editor.

CHAPTER14:SERVERS



The Server is the system that drives your display wall configuration and will run all the display walls associated with it. Radian 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.

Video Wall Manager Software 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.

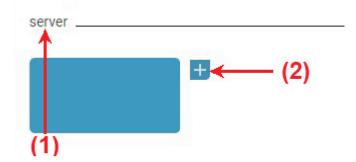


FIGURE 14-1. SERVERS

14.1 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.

The "Server Properties" panel displays:

- The name of the server
- The address of the server
- The number of connectible walls

The Server Properties panel also displays a list of associated walls. Each wall listed has a dropdown menu listing properties for each wall:

- The name of the wall
- The Port number
- The Command Line Interface (CLI) port
- The number of screens
- The arrangement of the screens

14.2 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.



CHAPTER14:SERVERS



14.3 ADD A NEW WALL TO THE SERVER

To add a wall to your server, click on the "Add Wall to Server" icon. This is represented by a cross beneath the Server (2). 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.

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

CHAPTER15:CAROUSEL



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

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

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 have been selected, click on one of the sources and drag it onto the display wall. All the selected sources will be dragged across together. The Carousel window is now being displayed on your wall. 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 and change the Duration for each source. The default settings are 0 seconds for the buffer and 15 seconds for the duration for each source displayed in the Carousel window.

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 introduced in the "Edit Carousel" panel, thus hiding the frames displaying the "CONNECTING" warning.

Once any changes to the Buffer and Duration have been made, click on apply and the Carousel settings are updated.

15.1 ADDING NEW SOURCES TO THE CAROUSEL

Additional sources can be added to your Carousel cycle by dragging and dropping them onto the Carousel window.

Any new source is visible in the Carousel Edit Panel where changes can be made to the buffer and duration settings. To include the new window in the Carousel cycle, you will need to stop and start the cycle in the Carousel menu.

15.2 TOGGLE CAROUSEL

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



CHAPTER16:WALLCREATOR



The Wall Creator tool allows you to create multiple child walls from one, single display wall. Each wall created can operate independently from other walls, having its own sources and templates.

16.1 CREATING CHILD WALLS

Open the display wall that you wish to create a child wall from.

Click on the "Create Child Wall" icon which is located on the right hand side of the application (1).



FIGURE 16-1. CREATE CHILD WALL ICON

The "Wall Creator" tool is displayed in a new window. The tool shows the number and layout of the screens that make up your wall.

Click and drag the cursor over the screens you require to create your "Child Wall".

Once the selection has been made, the new "Child Wall" can be allocated a wall name in the edit box at the top left of the "Wall Creator" window. After entering a wall name, the "Create Wall" button becomes active.

Click on "Create Wall" and the new "Child Wall" wall is created and displayed in the "Wall Creator" gallery.

Close the "Wall Creator" interface and navigate back to the home page. The new "Child Wall" will now be displayed under the server. Each "Child Wall" can be opened and managed independently.

16.2 CHILD WALL START-UP

When a system is booted, any Child Walls associated with the Video Wall Manager Software server are started automatically.

If a Child Wall becomes unreachable, it can be started manually without the need to shut down and restart your system.

To manually restart a Child Wall:

Open an Explorer window and browse to C:\ProgramData\Video Wall Manager Software\[Child Wall Folder]. Inside the folder, locate and double-click on the Child Wall Server icon shortcut and the wall will restart. It may take a few seconds for the connection to re-establish.

NOTE: When a Child Wall is restarted, it does not restore any content, including layouts, on the wall.

CHAPTER 17: USER SETTING SPANEL



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.

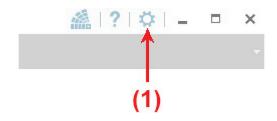


FIGURE 17-1. USER SETTINGS ICON

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.

17.1 APPLICATION

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

Click "CLEAR ADDRESS CACHE" to remove the addresses of all the servers not currently connected. This will remove all unconnected servers from the home page.

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

17.2 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.

17.3 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.





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

18.1 TELNET

If you intend to use a Telnet connection, follow these procedures before using the Telnet Client:

1. Run the Video Wall Manager Software Telnet Server:

C:\Program Files (x86)\Video Wall Manager Software\Telnet Server\Video Wall Manager Software Telnet Server.exe (double click on the .exe file)

This will start the Video Wall Manager Software 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.

Make sure 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

18.2 COMMAND LINE ARGUMENTS

The command line arguments are grouped into three categories:

- Information
- Action
- Impersonation

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

A list of example commands can be found in Section 18.3.



TABLE 18-1. 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	-1	Displays a list of all layouts on the server
-providers	-prs	Displays a list of all providers installed in the system
-openwindows	-ow	Displays a list of all windows currently open on the wall
·		Displays a list of available inputs in the following format:
-inputs		Alias="friendly name", Provider="web", Input="http://xxxxxxx"

TABLE 18-2. ACTION COMMANDS

LONG SWITCH	SHORT SWITCH	DESCRIPTION/EXAMPLE
		Add a new source. Currently only available for IPDecode and Web sources
-addinput	-ai	addinput = "rtsp://10.0.0.1:522/Ch2"
		<pre>addinput = "http://www.google.com"</pre>
-11 -		Use in conjunction with -addinput to allocate a friendly name
-alias	-a	-alias="Camera 1"
		Use in conjunction with -addinput .
-shared	-sh	-shared="true" Places the source in the Global Media Store
		-shared="false" Places the source in the Local Wall Content Store
	.ie	Deletes a specified input from the Global or Local source repository
-deleteinput	input -di	-deleteinput= <input url=""/>
-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
		Delete a specific layout file. If the layout name contains spaces then enclose the name in quotes, for example:
-deletelayout	-dl	-deletelayout="CCTV One"
•		or
		-deletelayout="c:\mylayoutfolder\CCTV One.dpl"
-audio	-au	Enables or Disables audio for selected inputs
		-machine=IP address:port-number}
-machine	-m	Specifies the machine that you want to connect to
		-machine=10.0.0.21:8099
		-id=number
-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.



		-window=[top],[left],[width],[height]
		Set the position and size of the window
		Commas must be used between values
window	-w	Must be used in conjunction with the -id switch
		To display a Vision window a typical command line argument would be:
		wcmd -machine=10.0.0.21:8099-id=3-provider=Capture
		-input=3-window=200,300,500,500
closewindows	-cw	Closes all open windows
closewindow	-c	Used with a specific ID will close that window
		-provider={Capture Video Word Application Quant Image IPDecode Web Pdf Remote}
provider	-pr	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.
		-windowstyle={BorderAndTitlebar NoBorderAndTitlebar}
windowstyle	-ws	Sets the style of the window
		-input=name
		The name of the input to target on the server
-input	-in	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 friendly name.
		If the input comes from the Video then the full path is required. See Example Command 2.
		-savelayout= <i>name</i>
savelayout	-sl	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:
		-savelayout="Layout One"
		-layout=layout file
layout	-ol	Open a specific layout file. If the layout name contains spaces then enclose the name in quotes, for example:
		-layout="CCTV One"
		-deletelayout=name
-deletelayout	-dl	Delete a specific layout file. If the layout name contains spaces then enclose the name in quotes, for example:
		-deletelayout = "CCTV One"
		Used in conjunction with the -layout command to create a scheduled tas to execute a specific layout. This creates a single scheduled task:
schedule	-s	wcmd -machine=10.0.0.21:8099-layout="my layout"
		-scheduled="15/05/2017 09:00:00"

TABLE 18-3. IMPERSONATION 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:
		-username="user name"
-password	-pwd	-password=password



18.3 EXAMPLE COMMANDS

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=10.0.0.21:8099-id=1-provider=Capture-input=2-window=100,100,500,500

2. Open an video window using Input wildlife:

wcmd-machine=10.0.0.21:8099-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=10.0.0.21:8099-id=1-provider=Web-input="google"

NOTE: The input used must exist within the Video Wall Manager Software repository and the name "google" must exist as an internet source accessible via the Video Wall Manager Software source menu.

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

wcmd-machine=10.0.0.21:8099-id=1-window=5000,450,500,500

5. Get a list of available layouts:

wcmd-machine=10.0.0.21:8099-layouts

6. Save a layout:

wcmd-machine=10.0.0.21:8099-savelayout="my layout"

7. Load a layout:

wcmd-machine=10.0.0.21:8099-layout="my layout"

8. Schedule a task to load a layout:

wcmd-machine=10.0.0.21:8099-layout="my layout"-scheduled="15/05/2017/09:00:00"

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

wcmd-machine=10.0.0.21:8099-openwindows

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

wcmd.exe-machine=10.0.0.21:8999-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



APPENDIX: DISCLAIMER/TRADEMARKS



A.1 DISCLAIMER

Black Box Corporation shall not be liable for damages of any kind, including, but not limited to, punitive, consequential or cost of cover damages, resulting from any errors in the product information or specifications set forth in this document and Black Box Corporation may revise this document at any time without notice.

A.2 TRADEMARKS USED IN THIS MANUAL

Black Box and the Black Box logo type and mark are registered trademarks of Black Box Corporation.

Any other trademarks mentioned in this manual are acknowledged to be the property of the trademark owners.

NEED HELP? LEAVE THE TECH TO US

LIVE 24/7 TECHNICAL SUPPORT

1.877.877.2269

