Aetria Command Center

User Guide

Version Number 1.9

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

DATAPATH
EXCELLENCE BY DESIGN

Introduction

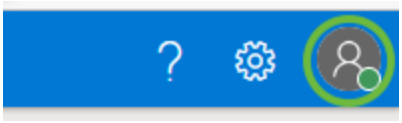
Projects

Aetria Command Center provides a comprehensive, centralized interface enabling integrators to design, manage and operate control rooms. Once configured, Aetria Command Center offers quick access to the sources and assets operators need on any connected display surface.

Settings

A settings icon is located in the top right of the application window, here you can set the preferred unit of measurement and the language of both the application and the help section. The Snap to Grid function, allowing quick and accurate alignment can also be enabled.

User Details



Details of the current user can be edited by clicking on the user icon in the top right of the application, next to the settings icon. A menu is displayed enabling the user to select to log out of the application or edit the user details.

Select **Logout** and the user is logged out of Aetria Command Center and application displays the login page.

Select **Change Account Details** and a new browser window is opened enabling the user to edit the email associated with the user, change the first and last names and also create a new password. The username is not editable.

Disclaimer - Aetria Network Manager Software

Datapath Limited gives notice that future releases of Aetria Network Manager software may require greater hardware capabilities for the software to run optimally. Datapath cannot assume responsibility for any hardware upgrades required to run future software releases.

Design Work Area

The design work area is where representations of locations and display walls are shown. A location can be used to group different areas of the video wall to display content in different locations from a single wall controller.

Each wall displayed on the work area has a context menu which can be accessed by right clicking on the wall name within the representation. The menu allows the user to move the wall to the front or back of stacked walls. Rotate the wall through 90/180/270 degrees and also remove the wall from the location. Each display within the location can be selected and display the same context menu where the selections only affect the selected display.

When a single display is selected, its properties are displayed in the **Attributes** panel on the right.

The design work area can be moved around by pressing the Shift key and left mouse button at the same time whilst using the mouse to drag the display work area to the required position. Use the mouse scroll button to zoom in and out of the surface grid.

Settings

A settings icon is located in the top right of the application window, here you can set the preferred unit of measurement and the language of both the application and the help. The Snap to Grid function, allowing quick and accurate alignment can also be enabled.

Content Tree

On the left of the work area grid is the content tree which displays control groups and wall projects that have been created or imported. The properties of each item in the content tree are displayed to the right of the work area grid in the properties panel when a group or wall is selected. To view individual display properties, select the location prior to selecting the individual display.

The content tree can be fully opened or retracted using the **+** or **-** icons located at the top, right hand side of the content tree panel.

Content Tree Menu

Right clicking on a location within the content tree presents the user with options to add new walls (multiple and single display), rename locations, copy locations enabling the creation of multiple locations where new walls can also be added. Delete locations from the list and print the location organization.

Right clicking on a wall presents the user with following options:

- Rename the wall.
- Edit the wall configuration.
- Add walls.
- Delete the wall.
- Make a copy of the wall to add to the same location.
- Move To. (This is useful if walls of the same specification are required within another location).
- Visualize the wall (see below).
- Print a diagram of the wall.

When Edit Configuration is selected a new dialog is displayed which enables users to edit the details of the wall as follows:

- Location - Select a different location for the wall to be associated with.
- Wall Name - Change the name of the wall by typing in the new name in the edit box.
- Physical Wall Type - Select the type of hardware to be used to drive the wall.

Once the edits are complete, click on **Next** and a summary of the edits is displayed. If further edits are required click **Previous**, if the edits are as required, click on **Complete**.

Visualize Walls

Select **Visualize** from the wall context menu and a representation of the wall is displayed. Users can select an overlay to be displayed on the wall representation and a background image to show how the wall may look when installed. A bezel correction feature is also available for the overlays.

Users can upload preferred background images (.jpeg); for instance the control room where the wall is to be located can be photographed and imported to create a realistic view of the project.

The wall displayed in the visual representation can be resized by hovering the cursor over the representation and using the mouse scroll button to resize it. The wall can also be moved around within the representation by left clicking on it and dragging it to a preferred location.

The visualization can be printed if required.

Location/Wall Tools

The Location/Wall tools panel is located to the right of the design area and contains alignment tools, wall and display attributes and a wall configuration function. The tools panel can be displayed or hidden by clicking on the tools panel icon located top right of the display work area.

Alignment

The alignment icons are only active when a group or a wall is selected using the mouse to draw around the required group or wall. Selecting an icon aligns all displays within the selected wall to the right, center or left of the rectangular display boundary.

Set the distance of the of the wall from the vertical axis (**x**) or the horizontal axis (**y**). Unit of measurement can be set in the Settings Panel. Available only when a wall or display is selected.

The rotation function is used to rotate a wall or display by selecting the required angle of rotation from the dropdown list.

Attributes

The attributes panel displays wall attributes and display attributes:

Wall Attributes

Select a wall either in the content tree or by clicking on the wall name on the design work area and the attributes panel will display the name of the wall selected, the manufacturer of the displays that make up the wall and the whole display area of the wall in millimeters or inches depending on the preferred unit of measurement.

Display Attributes

To view the attributes of a single display, select the control group in the content tree and then click on a display. The attributes panel will display the manufacturer, the model, resolution refresh rate, display area and the width of each bezel. If the Display is an LED Sender Fixture name, Fixture resolution and Fixture output resolution are displayed in the Attributes panel.

Wall Configuration

A location may have multiple walls, for example it may have a main display wall comprising of multiple displays. It could also have a number of smaller walls acting as workstations. Aetria Command Center is able to distinguish which devices are connected to specific walls. For instance workstations may be connected to an Arqa or Aligo whereas the main display wall could be connected to a VSN wall controller running Image4K graphics cards.

Each wall created in the group can be connected to a specific device. Select a wall by clicking on the wall name on the work area grid or by clicking on the wall in the content tree. When selected the wall representation will become a shade lighter making it easy to identify which wall is selected. Choose the required physical wall type by clicking on the **Physical Wall Type** dropdown list located in the Wall Configuration panel on the right hand side of the display work area.

Design Tools

Along the top of the design surface are tools allowing the user to add a new item and show measurements.

New

Click on **New** and the user is presented with a choice of opening a new location, adding multiple displays or adding a single display.

Selecting location will open the **Add a New location** dialog, enter a control group name and click on **Create Location**. The new control group will be added to the content tree.

To add a wall to a location, select the location in the content tree, click on **New** and choose the type of wall you require either multiple displays or a single display. The Add a New Wall dialog is displayed.

Measurements

Click on Measurements to display a list of selectable options:

Show Location Measurements - Select to display the total combined measurements of all the walls within the location. The unit of measurement is determined in the settings panel which can be opened by clicking on the settings wheel icon located at the top right corner of the application.

Show Display Measurements - Select to display the measurements of each individual display within the location. To display the measurements of a single display, first select the display by clicking on it then select **Show Display Measurements**. Only the measurements of the selected display will be shown.

Hide Measurements - Select to remove all measurements currently being displayed.

Zoom

Use the "**-**" and "**+**" function icons to zoom in and out of the design work area, enabling the user to focus on a specific areas of the design.

Reset

Click on the reset icon and the design work area is resized to show all content. The default reset percentage is dictated by the size of the application window,

Select/Pan

Click on Select/Pan to toggle between the two functions.

> Select - When selected, the user can select a specific display from any wall within the design work area. When a display is selected, the alignment properties and attributes for that display are displayed in the panel on the right hand side of the design work area.

Pan - When selected, the user can move the design work area by clicking on and dragging the cursor.

Add a New Wall

When opening the Design page for the first time an **Add a New Wall** dialog is displayed. If new walls are not required close the dialog by clicking on the "**X**" in the top right corner. Alternatively to open the **Add New Wall** dialog, click on **New** at the top of the design page and select **Wall**.

If the user wishes to add a new wall, follow the three step process using the **Add New Wall** dialog.

Step 1 – Details

The details page allows the user to select friendly names for the location and the wall itself:

- Select a location - A location is a physical wall or a group of walls.
- Enter a name for the wall - This is the name that will be associated with this particular wall throughout all the Aetria applications.
- Select a physical wall type - Use the dropdown list to select the type of wall required by the user for example a WallControl Wall, Arqa OneControl wall, an Aligo wall/OneControl Group or an Aetria Workstation.

Once all the fields in the details page have been entered, click **Next** to move on to step 2. It should be noted that all fields need to be completed to move on to the next step.

Step 2 Displays

The display page allows the user to select the manufacturer and model of the displays being used on the wall and also create a display layout.

- Display – Use the dropdown list to select the manufacturer and model of the displays to be used for the new wall. If the displays are not listed, click on Add a display and a new dialog is displayed which allows the user to input the details of the displays to be used for the wall. It is recommended that, if possible, the manufacturer's datasheet is used as reference for inputting the data.

- Display type – Select the type of display, Monitor, Projector or LED Sender.
- Manufacturer – Use the dropdown list to select the display manufacturer
- Model – Enter the displays model number or model name.
- Resolution – Enter the resolution of the display.
- Display Area – Add the size of the display area. Unit of measurement can be changed in the application settings.
- Bezels – Enter the measurements of each bezel. Unit of measurement can be changed in the application settings.
- Refresh Rate – Enter the refresh rate of the monitor.

Display Layout – Select a display layout by clicking the mouse inside a cell, a single cell represents one display. To select multiple displays for the layout, left click the mouse inside the cell and drag the mouse horizontally and vertically across the cells to create a representation of the physical wall layout.

- Angle – Select an angle at which the physical displays will be positioned.
- Spacing/Overlap – If projectors are being used to display content set the toggle to **Overlap**, if spaces are being used between displays select **Spacing**.

Once all fields have been addressed, click **Complete**.

Step 3 Confirm

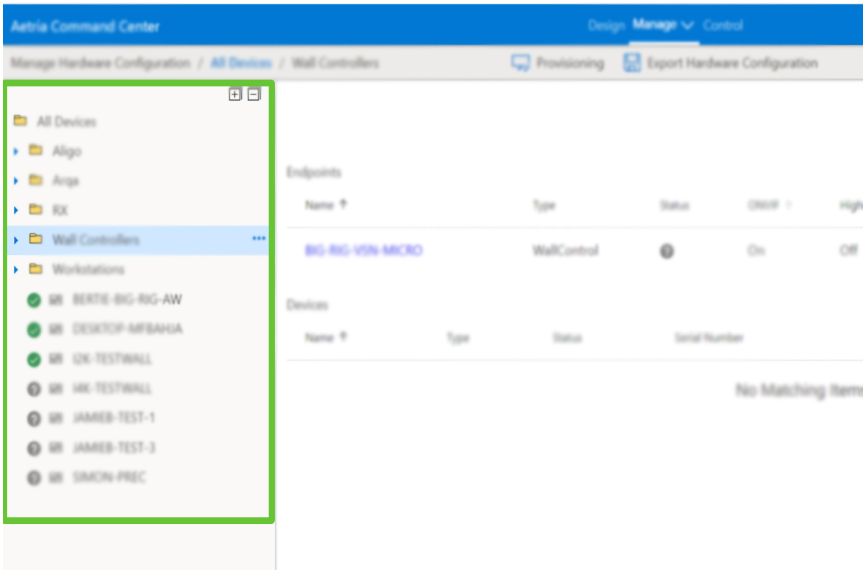
The confirm page enables the user to review all the details for the new wall. If all is in order, click **Complete**. To return to previous pages in the dialog, click on the page name at the top of the dialog.

Once all details have been checked and confirmed, click on **Complete**. The dialog closes and the new wall is added to the contents panel on the left and is available to add templates, layouts and sources etc.

Hardware Configuration

Hardware configuration allows the user to configure both input and output hardware and export the hardware configuration.

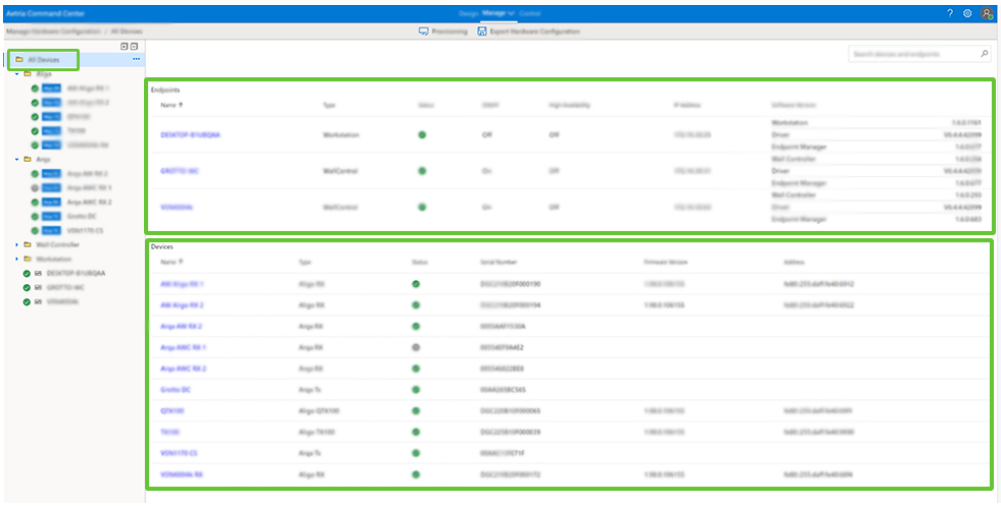
The content panel contains a list of hardware devices and walls that are available on the network.



Each device listed will indicate if it is online or offline. Online is indicated by a green circle with a tick. A blue square indicates if the device is a receiver (RX) or a transmitter (TX).

All Devices

Click on **All Devices** in the content tree and a list of all devices is displayed in the center panel grouped within endpoints and devices:



Endpoints

All endpoints are listed by name and show:

- Type - The type of endpoint.
- Status - The status of the endpoint whether its online or offline.
- ONVIF - (Open Network Video Interface Forum) Displays if the ONVIF function for the endpoint is on or off.
- High Availability - Displays if the high availability function for the endpoint is on or off.
- IP Address - Displays the IP address for the endpoint.
- Software Versions - Displays the version of any software such as the driver or Aetria Endpoint Manager.

Devices

All devices are listed by name and show:

- Type - The type of device.
- Status - The status of the device whether its online or offline.
- Serial Number - Displays the device serial number.

- Firmware Version - Displays the version of the firmware currently on the device.
- Address - Displays the device network address.

Provisioning

Clicking on **Provisioning** will display all the devices that have been automatically detected by the Aetria Network Manager, allowing the user to accept each device into the Aetria Network Manager database for use across the whole system.

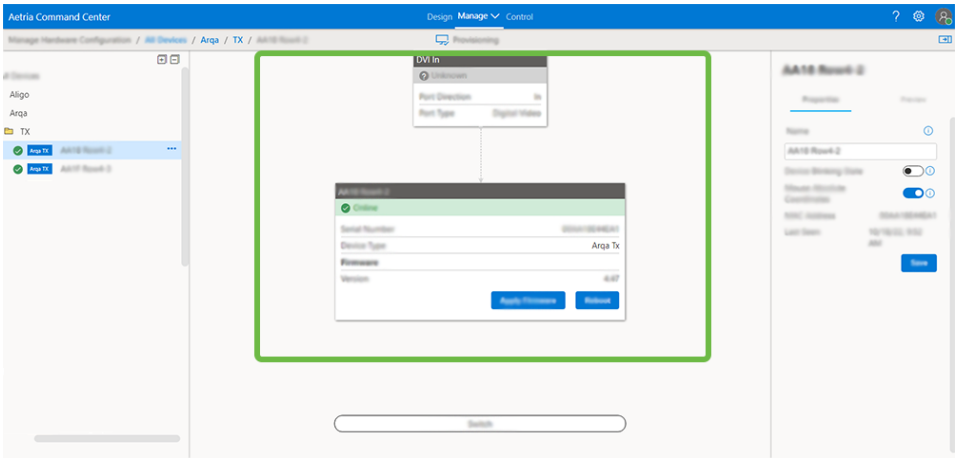
Export Hardware Configuration

Clicking on **Export Hardware Configuration** from the top of the page will automatically create and download a zip file containing two .csv files containing device and endpoint data. A pop up window is displayed when the export has successfully downloaded.

Arqa Devices

An Arqa TX will transmit a captured source onto the network via a network switch. Network Manager acts as a matrix for all the sources transmitted by Arqa TX's and will direct the sources to a selected receiver (Arqa RX) allowing it to be used anywhere on the wall or on a workstation. The number of sources available to use is limited to the number of Arqa RX devices. A warning is displayed if insufficient Arqa RX resources are available.

Click on an Arqa TX (transmitter) and a dialog is shown in the center panel:



- MAC Address - The MAC address is the number at the top of the information box. It is also displayed in the input properties box.
- If the device is on or offline.
- The friendly name of the device.
- The firmware version and the firmware release date. Click on **Apply Firmware** and a dialog is displayed offering firmware update options. Use the drop down list to select the version you wish to apply to the device then click **Apply**.

  Click on **Upload New Firmware** and the upload software dialog is displayed. Click on Browse to locate and select the required firmware file, this will be a .afw file for Aligo devices or a .bmp for Arqa devices.
- Add a description for the firmware and enter a version number.
- Click on Save and the upload process will commence.
- Click on the Reboot button to reboot the device.
- If an input device is selected a properties and diagnostic panel is displayed on the right of the application.

An input dialog is also shown displaying the type of source being transmitted by the Arqa TX:

- Type of source.
- The friendly name of the device.
- The port direction (in/out).
- The port type.

Aligo Devices

An Aligo TX will transmit a captured source onto the network via a network switch. Network Manager acts as a matrix for all the sources transmitted by Aligo TX's and will direct the sources to a selected receiver (Aligo RX) allowing it to be used anywhere on the wall or on a workstation. The number of sources available to use is limited to the number of Aligo RX devices. A warning is displayed if insufficient Aligo RX resources are available.

Click on an Aligo TX (transmitter) and a dialog is shown in the center panel:

- Sources, showing whether or not sources are connected by displaying **Signal** or **No Signal**.
- HDMI Input.
- Display Mode.
- Color format.
- Color depth.
- Color sample format.
- HDCP encryption status for each input for when a source utilizes the HDCP function.

Details of the physical Aligo are displayed including:

- The device serial number.
- If the device is online or offline.
- Friendly name. (This can be edited in the properties panel on the right).
- The device type.
- Firmware - Release version, Bootloader version, System version and RootFS version.
- Click on **Apply Firmware** and a dialog is displayed offering firmware update options. Use the drop down list to select the version you wish to apply the device to then click **Apply**. The **Force Update** toggle can be used if a side grade of the same version or a downgrade to a previous version is required for the device.

  Click on **Upload New Firmware** and the upload software dialog is displayed. Click on Browse to locate and select the required firmware file, this will be a .afw file for Aligo devices or a .bmp for Arqa devices.

  - Add a description for the firmware and enter a version number.
  - Click on Save and the upload process will commence.

- Click on the Reboot button to reboot the device.

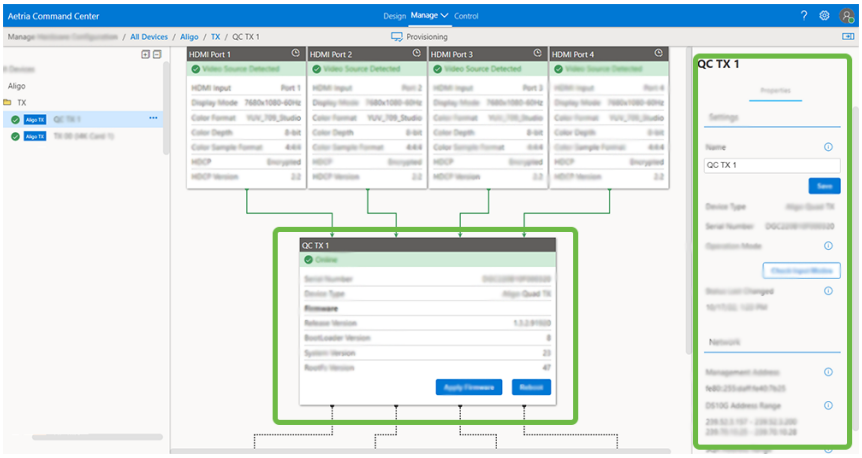
If multiple devices are being updated from the Manage/Software page, an upgrade status of devices will be shown.

If an Aligo device is displaying a warning triangle, this indicates that the device is in **Recovery Mode**. The warning triangle will appear either in the navigation tree, on the device representation or on the hardware overview table. It indicates that an error has occurred with the standard firmware and the device is unable to boot correctly, therefore it has automatically reverted to a safe version of the firmware.

If a device falls back into recovery mode then a update of the latest firmware should be installed as per the instructions above.

Aligo QTX EDID

Click on the Aligo QTX input header and the option to import and reset EDID's becomes available in the properties panel on the right.



Import EDID - Select an EDID file to upload to the selected Aligo TX port. Click inside the edit box and browse to locate and select the required EDID file. Click on **Upload** to complete the EDID import.

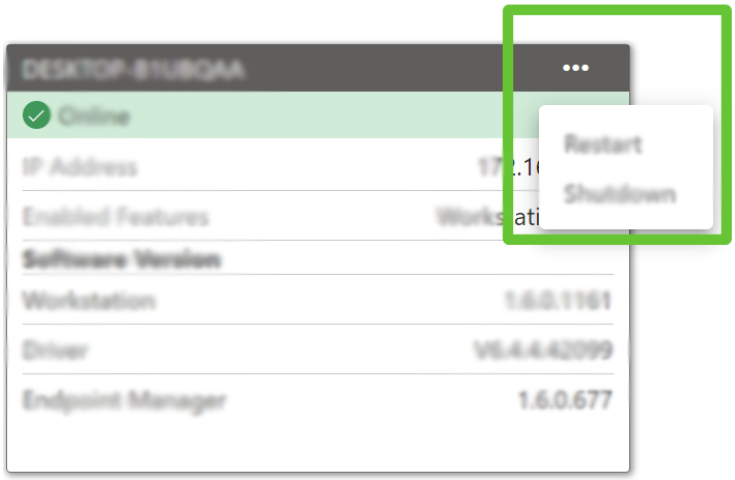
Reset EDID - Click on reset EDID and the Aligo TX port will reset to the default EDID.

Aligo RX EDID

Click on an Aligo RX Output dialog and the option to export EDID's becomes available. Click on Export to download a .afw file to the local PC being used to control Aetria Command Center.

Endpoints

An endpoint can be provisioned and will appear as hardware in the devices panel on the left of the application. Click on a desktop device and a dialog is displayed in the center panel:



The dialog contains the following information:

- If the endpoint is currently online.
- The IP Address of the endpoint.
- Enabled features - Workstation, ONVIF Discovery. A green tick icon shows the features have been enabled and are online.
- Software Version - Shows all the software versions related to the specific endpoint.

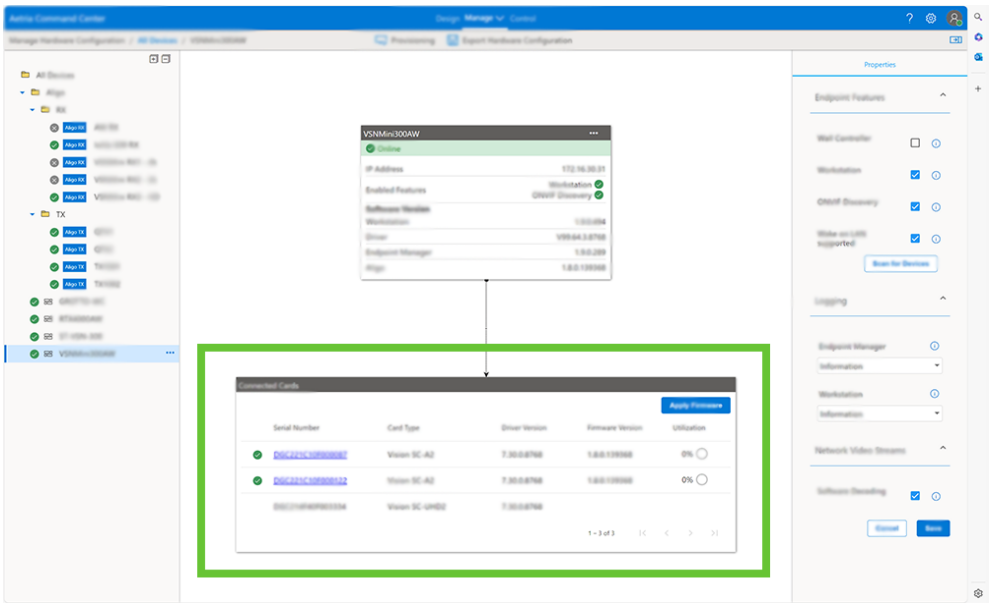
The right panel displays the Endpoint features available for selection and the logging functionality. Aetria Command Center uses an Endpoint Manager to discover system endpoints like a VSN controller or network devices. The user can select these endpoints and allocate them specific tasks:

- Wall Controller - The capability for the endpoint to act as a Wall Controller. This requires Aetria WallControl to be installed and running on the Endpoint. The Wall Controller and Workstation capabilities are mutually exclusive.
- Workstation - The capability for the endpoint to act as a Workstation. This requires Aetria Workstation to be installed and running on the Endpoint. The Wall Controller and Workstation capabilities are mutually exclusive.
- ONVIF Discovery - The capability for the endpoint to discover ONVIF compatible sources on the network such as security cameras.

- Wake on Lan- If the endpoints have power management configured Wake on Lan can be used to power down an endpoint to reduce the wear and tear on the hardware. If the active wall controller suffers a network or hardware failure, the standby controller will be powered up automatically by the Aetria Network Manager.

Connected Cards

When an endpoint is selected, details of the capture cards installed are displayed as shown below:



Details for each connected card:

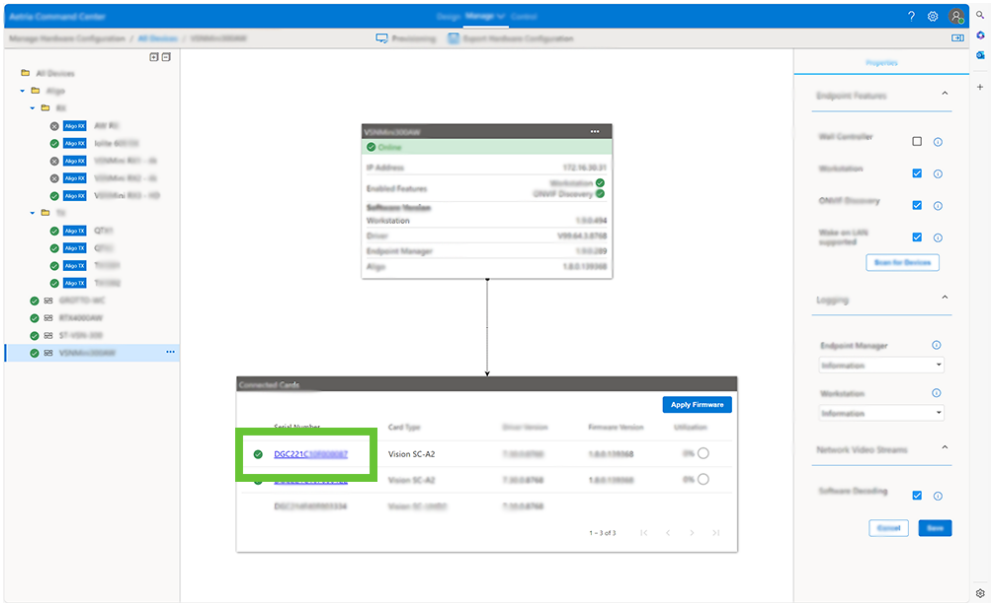
- Serial Number - The unique serial number of the card.
- Wall Controller - The wall controller in which the card is installed.
- Card Type - The model name of the card.
- Driver Version - The current diver version installed for the card.
- Firmware Version - The current firmware version installed on VisionSC-A2 cards.
- Utilization - The utilization displays the current processing power being used by the card. The utilization is only displayed for VisionSC-A2 cards.

Apply Firmware

The apply firmware function allows the user to update the firmware for all capture cards in the wall controller. Selecting individual cards for firmware upgrade is not possible. The firmware version is only displayed for VisionSC-A2 cards.

VisionSC-A2

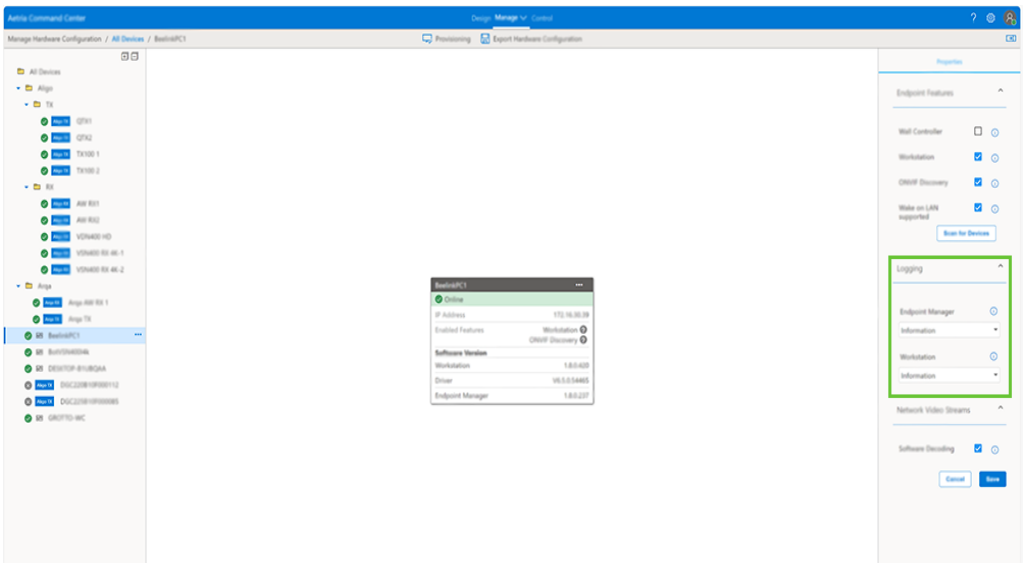
The VisionSC-A2 cards have hyperlinks on the card serial number as shown below:



Clicking on the link opens a new dialog displaying details of the device and the device properties.

Logging

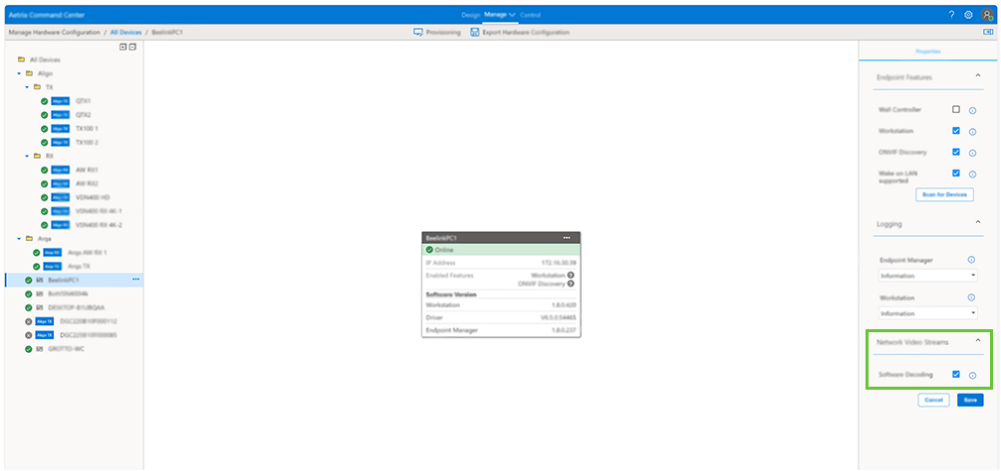
The logging function enables the user to create and store logs for the endpoints including Workstations and Wall Controllers which can be used for support investigation.



Use the dropdown list to set the minimum log levels, the recommended log level is **Information**.

Once the log levels have been selected, click on **Save** and the log levels for each item are saved. The log levels indicate the minimum level of information the logs will contain when retrieved for investigation.

Network Streams - Software Decoding



When enabled, SoftSQX technology uses the processing power of the endpoint GPU or CPU to decode network video streams.

Creating a High Availability Cluster

When a standby wall controller has been added to the network it must first be provisioned. To provision the standby controller, click on Provision at the top of the page and all Aetria endpoints requiring provisioning are displayed.

Select the endpoint which is to be used as a standby controller then click on **Provision** in the **Actions** column and then **Provision - "*Name of Wall Controller*"** dialog is displayed.

To add a standby controller to a cluster select **Join Existing High Availability Group** then use the dropdown list to display the active controllers on the network. Select the active controller with which to associate standby controller and the endpoint is added as the standby node in the high availability cluster.

Once a cluster has been established there are additional menu options available which can be accessed by clicking on the three dots at the top right of the cluster.

Remove from Cluster - Removes the Node from the Cluster and deletes the connection. When removed, the Node is no longer available as a standby wall controller. To reinstate it, reprovision the wall controller and follow the **Join Existing High Availability Group** process as detailed above is required.

Disable - Select disable and the Node status changes to Offline. To reinstate the status to Online, use the dropdown menu and select **Bring Online**.

Manual Failover - The manual failover can be used to manually switch the active wall controller to the standby. To carry out a manual failover, click on the three dots in the top right of the active wall controller within the cluster and select **Manual Failover**. A dialog is displayed asking for confirmation to failover to the standby controller. Click **Yes** and the process of closing down the active controller and switching to the standby controller will commence. It should be noted that the walls being driven by the active wall controller become unavailable for a few seconds whilst the standby controller becomes active. The Manual failover function only applies if both active and standby wall controllers are online.

Scanning for Devices

If a new device is connected to a wall controller or workstation, a scan for devices is required so the new devices can be allocated as capture sources.

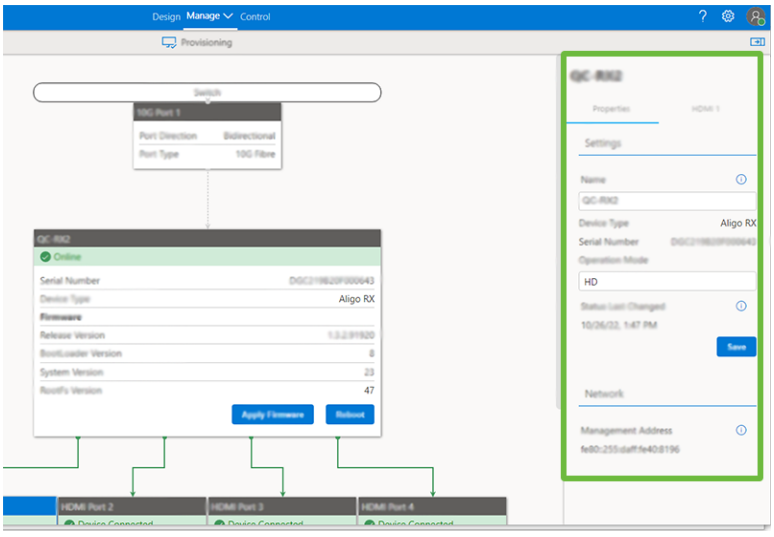
Click on **Scan for Devices** and a dialog is displayed listing new and existing devices. Click on **OK** to acknowledge and close the dialog. If no connected devices are discovered during the scan a dialog is displayed informing the user that no devices were found.

Device Properties

Device properties are displayed in the right hand column when a device is selected.

Aligo RX Properties Panel

When an Aligo RX is selected from the content panel, the properties panel can be selected on the right of the page.



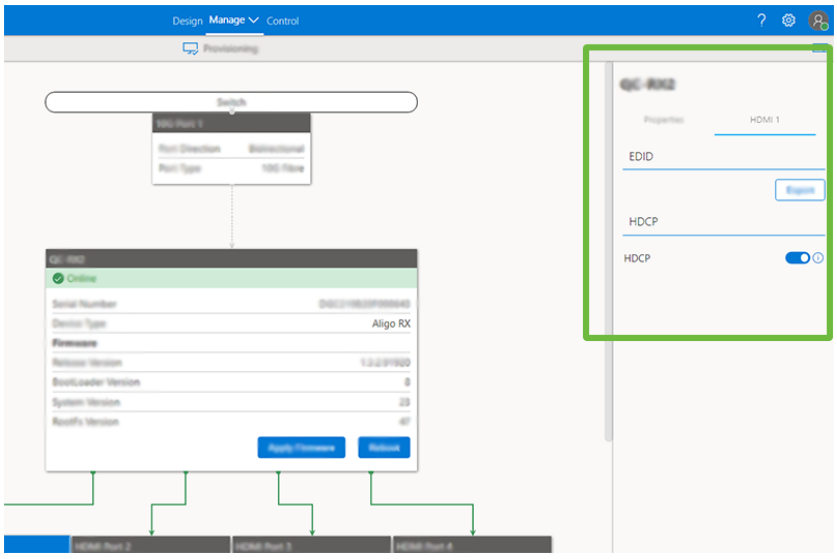
- Name - Enter a chosen name for the device, the device must have a name, the edit box cannot be left empty. This is the name that will appear throughout the Aetria

application for the selected device once the input properties have been saved.

- Device Type - Displays the device type and model.
- Serial Number - Displays the serial number of the selected device.
- Operation Mode - Displays the current mode the device operation is in. Click in the edit box to select a preferred operation mode. If HD mode is selected all four HDMI ports on the Aligo become available and are displayed in the central panel, the user can then select 4 x HD sources which can be displayed on the wall. If the 4K operation mode is selected, only one 4k source can be selected, the center panel will show one port available. In 4K mode, only one Aligo TX source at a time is supported on the Aligo RX device.
- Check Input Modes - Click on Check Input Modes and a list of AligoTX modes are shown displaying their current input mode status.
- Status last changed- Displays the date and time that the device online/offline status changed.
- Network - Displays the network addresses used for the management of the device.
- Click on **Save** to retain any changes that have been made.

Aligo RX HDMI Panel

When an Aligo RX is selected from the content panel, the HDMI panel can be selected on the right of the page.



- EDID - Click on the Export button to export the EDID.
- HDCP - The user can switch the toggle to enable/disable HDCP for the selected HDMI Port.

Aligo TX Properties Panel

- Name - Enter a chosen name for the device, the device must have a name, the edit box cannot be left empty. This is the name that will appear throughout the Aetria application for the selected device once the input properties have been saved.
- Device Type - Displays the device type and model.
- Serial Number - Displays the serial number of the selected device.
- Operation Mode - Check the operation mode for all inputs. Standard mode will automatically detect between HD and up to 4k resolutions. Quadcast mode supports aspect ratios of 2.5:1 or greater.
- Status last changed- Displays the date and time that the device online/offline status changed.

Network

Management Address - This is the address which is used for the management of the Aligo device.

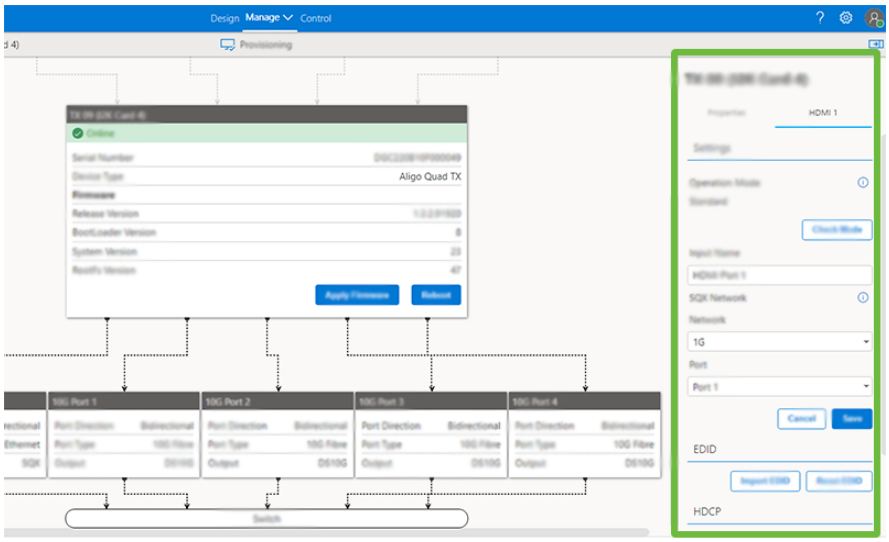
DS10G Address Range - Displays the IPv4 multicast address ranges that are configured for the selected device for DS10G streaming.

SQX Address Range - Displays the IPv4 multicast address ranges that are configured for the selected device for SQX streaming.

Click on **Save** to retain any changes that have been made.

Aligo TX HDMI Panel

The HDMI panel is displayed on the right when the port is selected and displays information relevant to that port.



Operation Mode - Check the operation mode on the selected input. Standard mode will automatically detect between HD and up to 4k resolutions. Quadcast mode supports aspect ratios of 2.5:1 or greater.

Input Name - The name given to the HDMI port. This can be edited and saved.

SQX Network - Use the dropdown list to select either a 10G or 1G network so the streams are presented to the network as expected, the default setting is 10G.

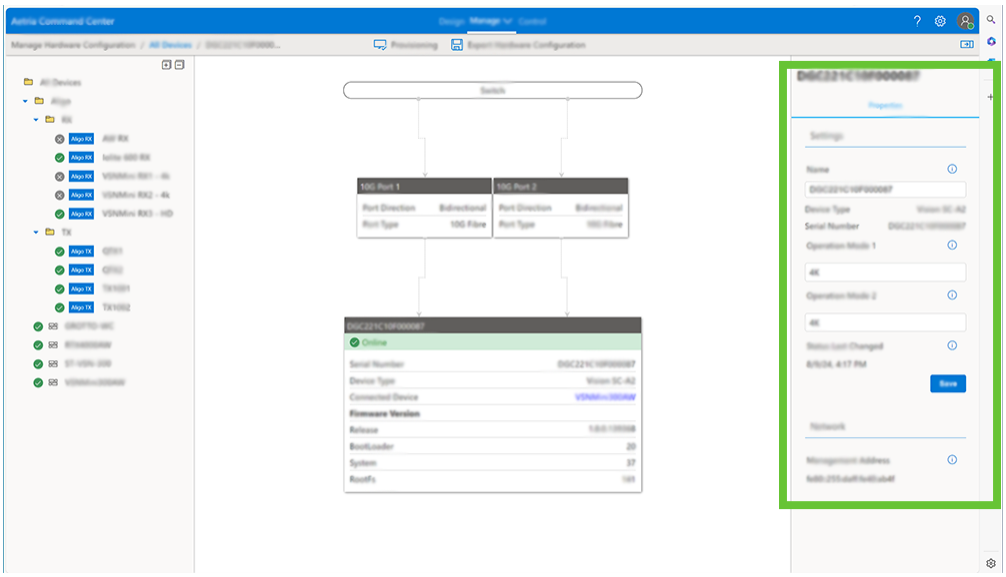
Encoding - Select H264 or H265.

EDID - Import an EDID using a selected .bin file or reset to the default.

HDCP - The user can switch the toggle to enable/disable the HDCP mode that is proposed to the source device.

Genlock Group - Used to create a group of frame-locked sources which will allow the receiver to switch between sources whilst maintaining low latency. Click on the "+" icon to create a new genlock group or click on the pencil icon to edit the details of the selected group.

VisionSC-A2 Card Panel



The device properties panel is on the right of the window as indicated above.

Name - The default name is the cards unique serial number, click inside the edit box to set a friendly name.

Operation Mode 1 - Set the preferred resolution of the sources in the 10G port 1. Click in the edit box to select either 4K or HD. 4K is the default setting.

Operation Mode 2 - Set the preferred resolution of the sources in the 10G port 2. Click in the edit box to select either 4K or HD. 4K is the default setting.

Status Last Changed - Displays the date and time the device was last online/offline.

Management Address - Displays the address used to manage the VisionSC-A2 capture card.

Arqa TX Properties Tab

Friendly Name - Enter a chosen name for the device, the device must have a name, the edit box cannot be left empty. This is the name that will appear throughout the Aetria application for the selected device once the input properties have been saved.

Device Blinking State - When enabled, the LED on the front of the Arqa device will blink fast enabling the user to quickly identify where the physical input device is located.

Mouse Absolute Coordinates - The coordinates sent from an Arqa TX1 to an Arqa RX1 are the absolute position of the mouse cursor x/y position.

MAC Address - Displays the unique MAC address for the device.

Last Seen - Displays the date and time the properties were last seen by a user.

Online Status - Shows whether or not the device is on or offline.

Status Last Changed - Shows the status of the device, restarted or powered off.

Click on **Save** to retain any changes that have been made.

Arqa TX Preview Tab

If available, a preview of the source being captured is displayed. Refresh the preview by clicking on the refresh button in the top right of the preview window.

Arqa RX Properties

Friendly Name - Enter a chosen name for the device, the device must have a name, the edit box cannot be left empty. This is the name that will appear throughout the Aetria application for the selected device once the input properties have been saved.

Device Blinking State - When enabled, the LED on the front of the Arqa device will blink fast enabling the user to quickly identify where the physical input device is located.

USB HID Mode - Enable/Disable. Enable features like Mouse Glide or USB sharing.

Power saving mode - Enable/Disable the power saving mode for the device.

Show Red Frame - Displays a red frame around active screen.

DDC Mode - Select a preferred Display Data Channel mode from the dropdown list.

MAC Address - Displays the unique MAC address for the device.

Last Seen - Displays the date and time the properties were last seen by a user.

Online Status - Shows whether or not the device is on or off line.

Status Last Changed - Shows the status of the device, restarted or powered off.

Click on **Save** to retain any changes that have been made.

Aetria Workstation Desktops Endpoint Features

The user can select these endpoints and allocate them specific tasks:

- Wall Controller - The capability for the endpoint to act as a Wall Controller. This requires Aetria WallControl to be installed and running on the Endpoint. The Wall Controller and Workstation capabilities are mutually exclusive.

- Workstation - The capability for the endpoint to act as a Workstation. This requires Aetria Workstation to be installed and running on the Endpoint. The Wall Controller and Workstation capabilities are mutually exclusive.

- ONVIF Discovery - The capability for the endpoint to discover ONVIF compatible sources on the network such as security cameras.

- Wake on Lan- If the endpoints have power management configured Wake on Lan can be used to power down an endpoint to reduce the wear and tear on the hard-ware. If the active wall controller suffers a network or hardware failure, the standby controller will be powered up automatically by the Aetria Network Manager.

Click on **Scan for Devices** and a dialog is displayed listing new and existing devices. Click on **OK** to acknowledge and close the dialog. If no connected devices are discovered during the scan a dialog is displayed informing the user that no devices were found.

Wall Controllers Endpoint Features

As above for Aetria Workstation Desktop Endpoint features with the addition of:

- Wake on Lan- If the endpoints have power management configured to enable **Wake on LAN**, cold standby can be used to power down a standby controller to reduce the

wear and tear on the hardware. The offset will be a longer period of time it takes for the standby controller to become the active controller if a failover occurs.

Click on **Scan for Devices** and a dialog is displayed listing new and existing devices. Click on **OK** to acknowledge and close the dialog. If no connected devices are discovered during the scan a dialog is displayed informing the user that no devices were found.

Capture Card Properties

Capture card properties are only visible for Endpoints under the Wall Controller configuration panel on the right.

No Signal Text - The default text is No Signal. This is displayed when a signal is not being received by the input on the video capture card. This normally happens when an input source has been disconnected. The default text can be edited by clicking in the edit box.

No Signal Background Color - To select a background color, click on the color bar and use the color picker to select the color you require. Once the color has been selected, click on **Save**.

Invalid Signal Text - The default text is Invalid Signal. This is displayed when a valid signal is not being received by the input on the video capture card. This normally happens when the wrong source has been connected. The default text can be edited by clicking in the edit box.

Invalid Signal Background Color - To select a background color, click on the color bar and use the color picker to select the color you require, once the color has been selected, click on **Save**.

Restreaming - When enabled retreaming allows the user to encode and stream a capture card source to another machine or wall controller (as a Restreaming source). A dialog is displayed when restreaming is enabled:

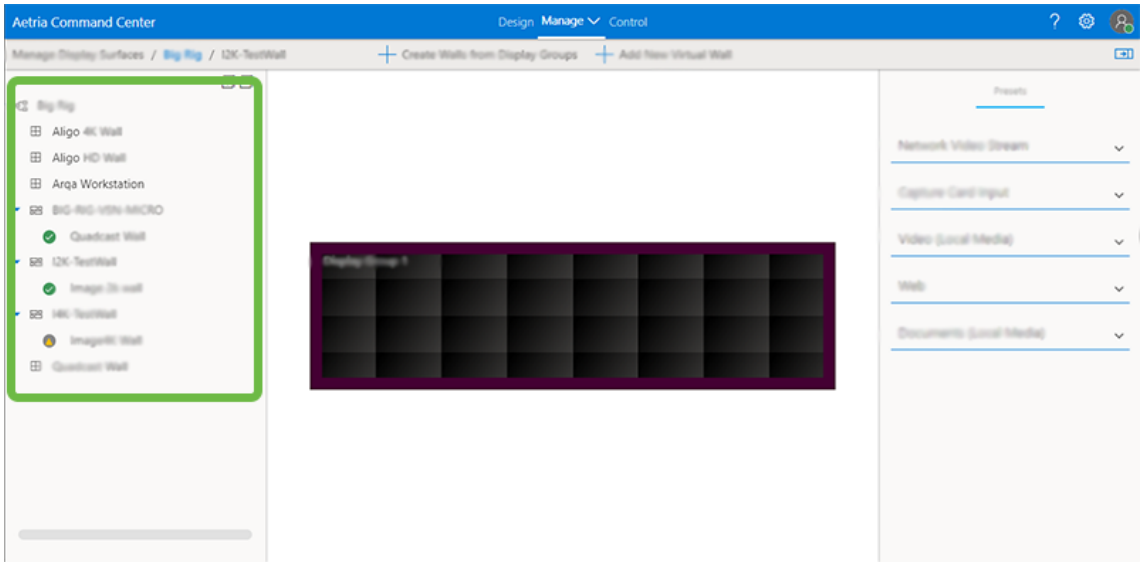
- Restreaming Base URL - Enter the URL or IP address of the machine where the streaming source is located.
- Restreaming Port - Enter a port number to use for restreaming the capture.
- Restreaming Enabled - Displays whether or not restreaming is enabled.

Display Surfaces

Manage display surfaces enables the user to manage locations, and walls. Users can assign new walls to hardware, create walls from already existing display locations and add virtual walls. Presets and properties can also be edited.

Content Panel

The content tree, located on the left displays control groups, locations and display walls. The content tree can be fully opened or retracted using the **+** or **-** icons located at the top, right hand side of the content panel.



Unassigned Walls

When a wall has been designed and saved it needs to be assigned to specific hardware. Click on the unassigned wall on the content tree and the wall is displayed on the display surface indicating the displays are unassigned. Walls can be assigned to hardware using the wall controller panel on the right, the hardware available is listed, expand the hardware categories to identify the hardware to be assigned to the display wall.

To assign an Arqa Workstation, drag and drop the Arqa devices from the list displayed in the right hand panel onto the unassigned displays. When multiple screens are used in an Arqa Workstation configuration a USB Master can be set by right clicking on the assigned display and selecting USB master from the menu. The USB Master will be the Arqa device where the mouse and keyboard are connected.

To assign an Aligo wall, click on the new Aligo wall listed in the content panel on the left and the wall will be displayed on the **Display Surface** panel. To assign Aligo RXs to specific displays, drag and drop the Aligo RX devices from the list displayed in the right hand panel onto the unassigned displays.

Each display on an unassigned wall can be arranged to reflect the physical arrangement of the wall by clicking on it and dragging it to the required position. To return the displays to their default position click on **Reset Position** at the top of the center panel.

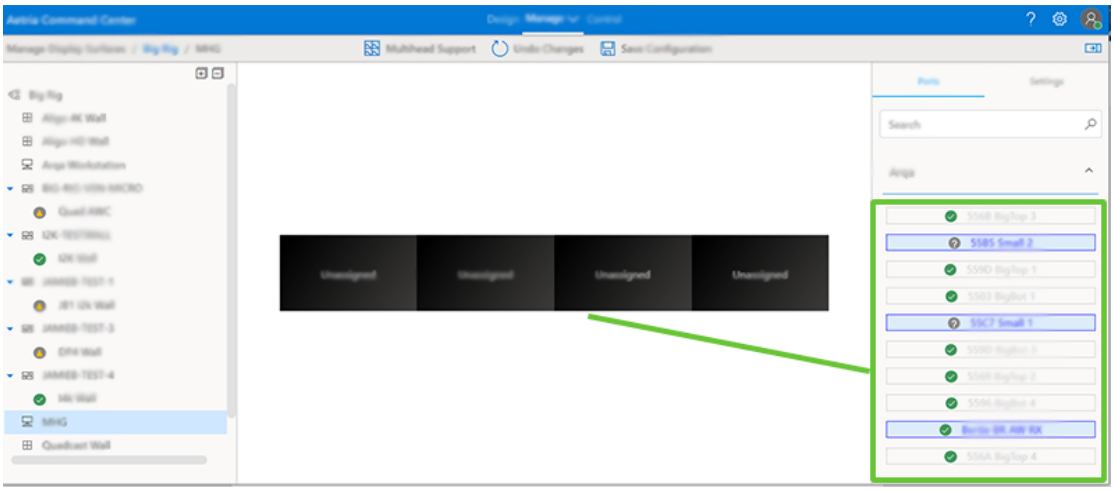
For Arqa or Aligo OneControl groups, once all the displays have been assigned, if keyboard and mouse control is required for the group, right click on the first display (or top left) and select **Set USB Master.**

Multihead Support

Multihead support is available for Arqa OneControl walls. It enables the user to create a single source from a device with multiple outputs by grouping all the outputs together whilst offering USB control (keyboard and mouse) over all displays within the group.

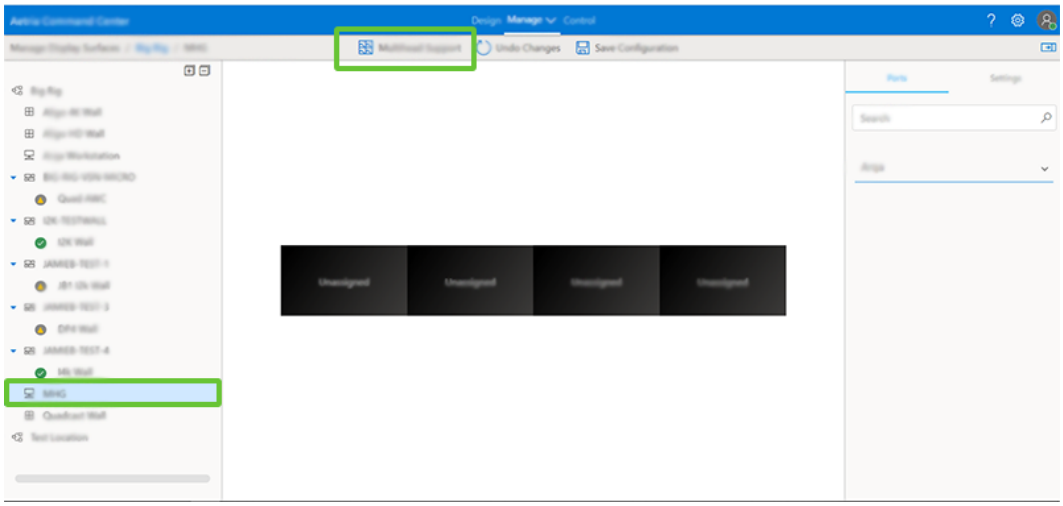
Configuring Multihead Support

Each display has to be assigned an Arqa Rx, this is done by opening the Arqa dropdown list in the right hand panel, select an available Arqa RX and drag onto one of the displays in the center panel:



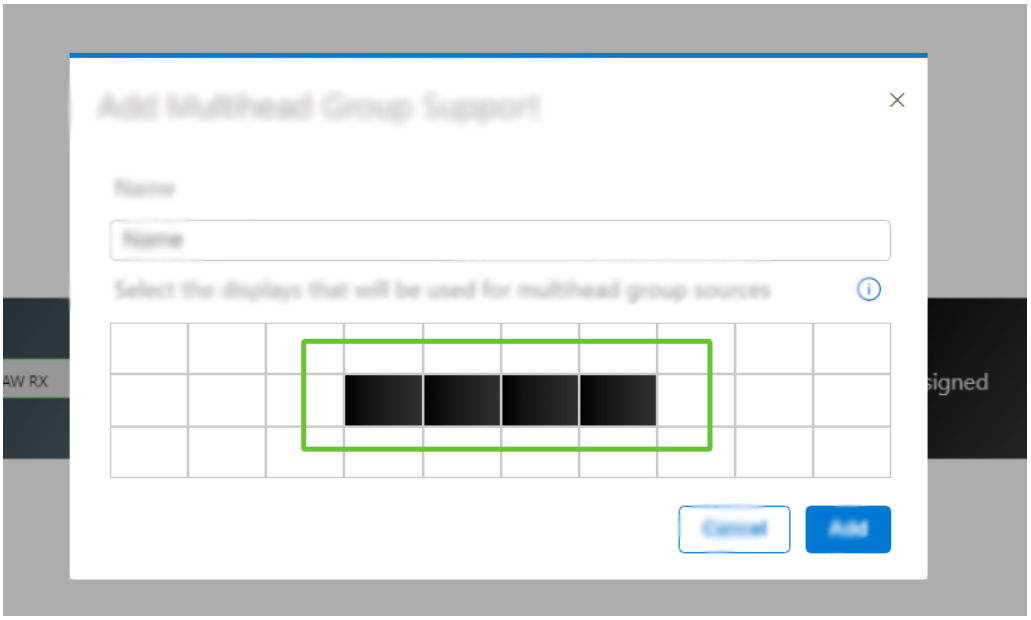
Once all the displays have been assigned an Arqa Rx, if keyboard and mouse control is required for the group, right click on the first display (or top left) and select **Set USB Master.**

To configure Multihead Support to an Arqa OneControl wall, select the Arqa OneControl wall from the content tree on the left panel and the Multihead Support icon becomes active in the toolbar and the unassigned displays are shown in the center panel:



Adding Multihead Support

Click on the Multihead Support icon in the toolbar at the top of the center panel and the **Add Multihead Group Support** dialog is displayed:



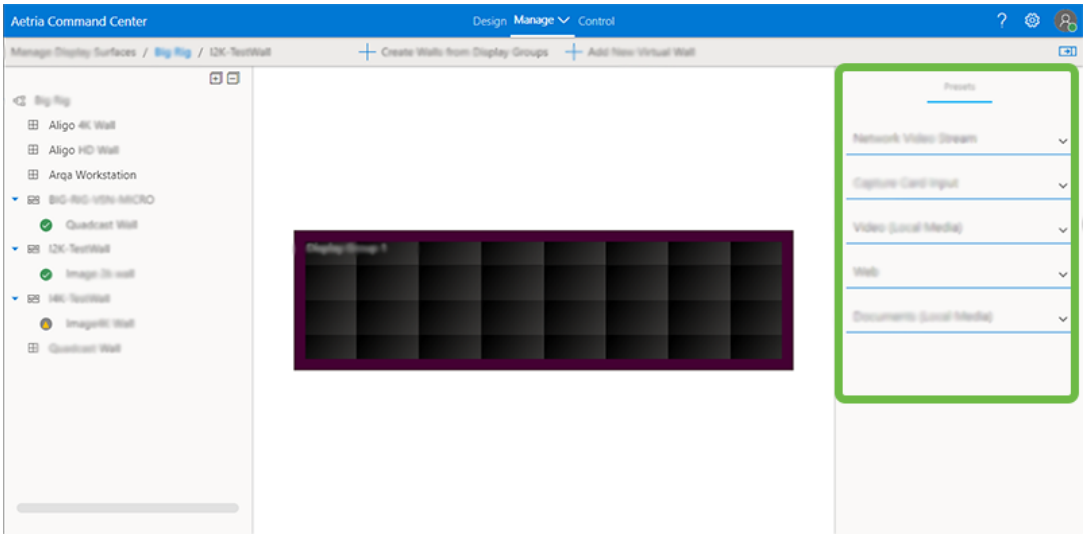
Select the displays that will be used for the multihead group sources by clicking in the required cell, when selected the cell will display a blue outline.

It should be noted that when displays are configured as part of a Multihead Group, only the first display will be available for use with single stream sources.

Once the displays have been selected, allocate the group a name and click on **Add** then complete the process by clicking on the **Save Configuration** icon on the toolbar. The Multihead Group can now be created by adding a new Multihead Group on the sources page.

Source Presets

Select a display location and the presets of its sources are displayed in the presets panel on the right.



Each source type is listed and can be opened using the expanding arrow. Presets can be edited and when saved become the default presets for all sources of the same type within the display location. Click here to view the presets for all sources. Source Presets

Virtual Walls Panel

Select a display location and then navigate to the virtual walls panel on the right. Each virtual wall is listed and can be opened using the expanding arrow to display general information such as the status of the wall, if auto start is enabled, the wall port number, the position, the dimensions and the allocated display group. When not expanded, the status of the wall can be determined by the color of the round status icon:

Green - The wall is running without errors or warnings.

Green with warning in the center - The wall is running but with warnings that the user is required to address.

Grey with warning in the center - The wall has stopped with warnings that the user is required to address.

Grey - The wall has stopped without warnings or errors.

Wall Properties

The Wall Properties panel is opened by clicking on the **Edit** button on the virtual walls panel.

Virtual Wall Name

Click inside the virtual wall name text box to edit the wall name or choose a new name for the wall (maximum of 50 characters).

Wall Color

Select a color to represent the wall on the display surface. The color is also associated with the wall on the virtual wall properties panel.

Auto Start

When enabled, the wall will start automatically when the system is booted and the server is initiated.

Layout Settings

Use the dropdown to select either None or Apply specific Layout. If specific layout is selected a second dropdown is available to choose a specific layout.

Wall Port

The wall port text box allows the user to manually input the wall port number.

Click on **Cancel** to discard any changes made or select **Save** and any changes made are stored.

Position

Set the distance of the of the wall from the vertical axis (**x**) or the horizontal axis (**y**). Unit of measurement can be set in the Presets Panel.

Dimensions

Displays the whole area dimension of the selected video wall in either mm or inches depending on the unit of measurement set in the Presets Panel.

Location

Use the dropdown arrow to select a location to associate the wall too.

Click on **Cancel** to discard any changes made or select Save and any changes made are stored.

Presets Panel

See Sources

Create Walls from Display Groups

New walls can quickly be created using the Create Walls from Display Groups button at the top of the Display Surfaces panel. To create a new wall, select the location you wish to create a wall from in the content panel and click on **Create Walls from Display Groups** and a new wall is created and added to the content panel. The properties of the new wall can be edited by clicking on it to open the wall properties panel.

Add New Virtual Wall

New virtual walls can be added to the display group using the Add New Virtual Wall button at the top of the Display Surfaces panel. To add a new virtual wall, select the display group you wish to add a virtual wall from in the content panel and click on Add New Virtual Wall. The properties of the new virtual wall can be edited by clicking on it to open the wall properties panel.

Manage Templates

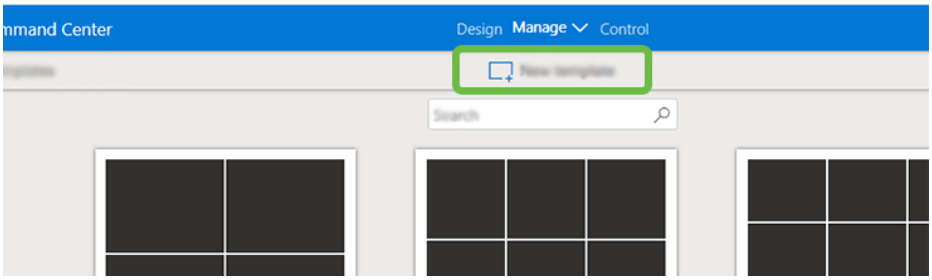
Templates are tools designed to assist in the organization and creation of a layout for your display wall. Templates can be used to create visual displays over your wall enabling you to showcase specific content to target audiences.

Select Templates and a number of pre-defined templates are available to select as well as any custom templates that have been created.

If many templates are stored in the template gallery, use the Search function to locate the desired template quickly or use the scroll bar.

Create A New Template

To begin designing your own template, select **New Template** at the top of the page and the template editor is displayed.



Create a name for the new template by clicking in the template name edit box and typing in a template name. If the name chosen is already in use, a message is displayed informing the user the name already exists and another name should be selected.

Using the (-) and (+) select the number of columns and rows you wish to build your template from.

Customize templates by clicking 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. Once a cell is merged an undo action can be carried out by clicking on the split icon displayed in the middle of the merged cells.

Splitting Cells

Cells can be split vertically or horizontally by moving the cursor through a cell and clicking where the cell should be split. A cursor guide line is displayed to assist in selecting the

preferred location for the split. To split a cell horizontally, press the shift key and move the cursor up or down, the guide line will flip horizontally. Any split made in a cell can be reciprocated in any cell in the same column or row by clicking in it. to undo a split drag the cursor over the cells where the new split was made and click on the split icon.

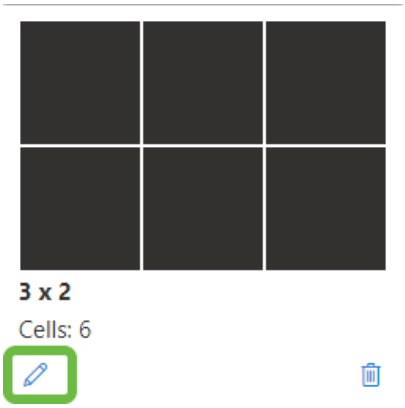
When the design of the custom template is complete, rename the template by clicking in the template name edit box then click on **Save and Close** and the new custom template is added to the template gallery.

Naming a cell

Each cell within a template can be named independently. To name a cell, right click in the cell that requires a name and a dialog is displayed with a text box which is used for naming the template cell.

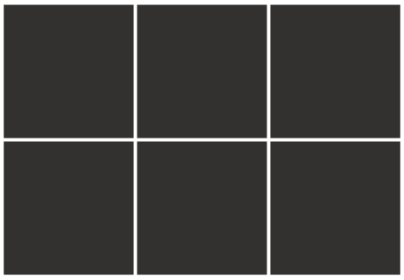
Editing Templates

All templates within the gallery can be customized in the template editor by clicking on the **Edit** button or double clicking on the required template.



In the template editor, users can rename a template, add columns or rows and merge cells. When editing is complete, click on **Save Template**.

To delete a template from the gallery click on the Bin icon located in the bottom right corner of the template representation.



3 x 2

Cells: 6

Manage Sources

The Manage Sources page enables the user to manage current sources, add new sources and create new assets. On the left of the sources page is the sources and assets content tree. The content tree can be fully opened or retracted using the **+** or **-** icons located at the top, right hand side of the content panel.

Using filter dropdown list at the top of the sources content users can select to view selected sources and assets including On Screen Display, Border and Banner configurations.

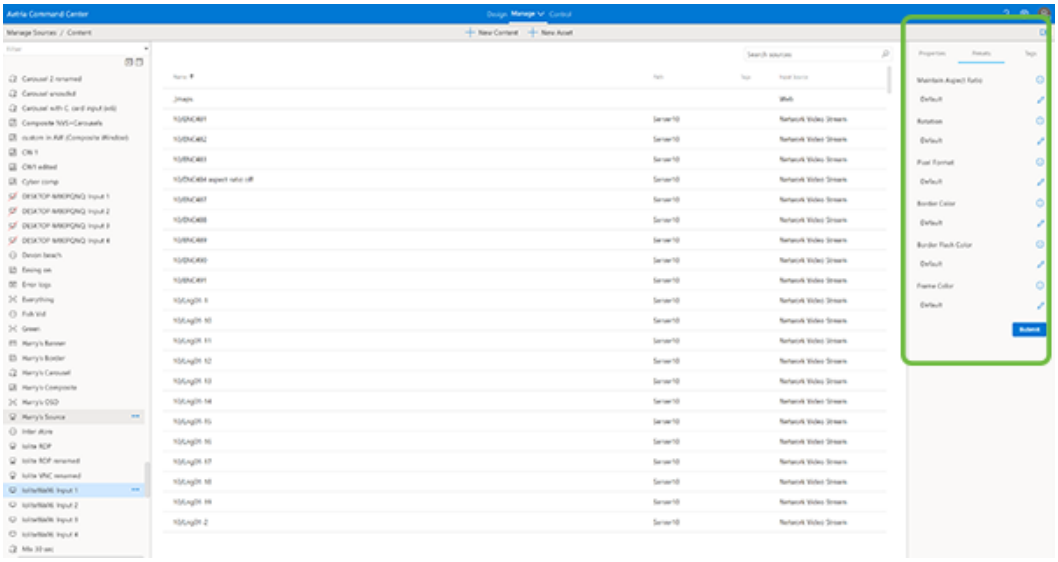
Sources

Select Sources and a folder is displayed containing all available sources, click on or expand the folder and all sources are displayed in the center panel. Click on an individual source and the instances, presets and tags associated with the selected source can be viewed in the panel on the right.

Source Types

Network Video Stream

The network video stream source presets allows the user to edit the name of the source. This is the name that will appear in the sources content folder once the source has been saved. The presets are displayed in the presets panel in the right hand column when a device is selected.



Select the Preset tab and the panel will display the following information:

- Aspect Ratio - Allows the user to enable or disable the aspect ratio of the source when resizing.
- 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.
- Decoded Video Cache - Is a store of decoded frames based on the frame rate of the network video stream and the amount of caching (in milliseconds).
- Audio Sync - Aetria will attempt to synchronize video and audio automatically. This can be disabled when the format of the network video stream doesn't support it.
- Border Color - Default primary color used on the border. Click on the color bar to select the required color.
- Border Flash Color - Displays the alternative color which is used when Flashing is enabled in colored borders. Click on the color bar to select a different color.
- Frame Colour - Color of the frame around the window, the setting is configure to the source colour.
- Reset to Default – Discard any changes made to the settings and reset to the defined preset.

Click on the Default pencil icon to edit the values then click on **Submit** to save any changes.

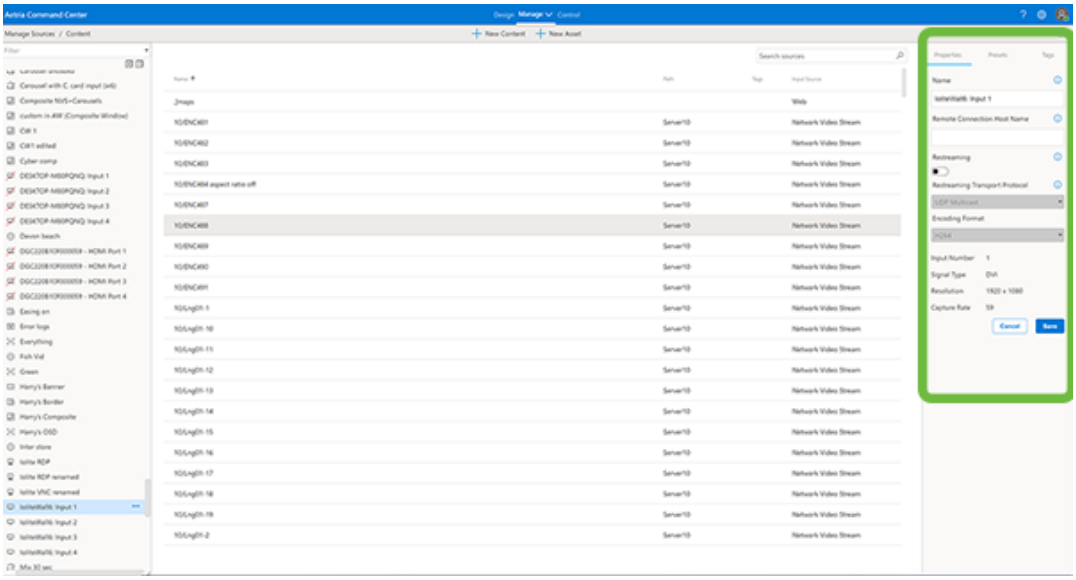
Click on the **Tags** tab to create search strings for a specific input. You can then use the search function on the sources panel to quickly access the required source. This is a particularly useful function when a wall has many available sources.

Enter a new Tag, normally the input name.

If any editing of the presets takes place, click on **Submit** to save any changes.

Capture Card Input

The Capture card input source properties are displayed in the properties panel in the right hand column when a device is selected.



- Name - Allows the user to edit the name of the capture card source.
- Restreaming - Enable Wall Controller streaming.
- Restreaming Transport Protocol - The user can select between RTSP Unicast or UDP Multicast as the transport protocol. Cropping is available on Restreamed sources. When RTSP is selected the URI is displayed.
- Encoding Format - Use the dropdown list to select the required encoding format.

The capture card input properties panel also displays the input number, the type of signal being captured, the input resolution and capture rate. These are not editable.

If any editing of the properties takes place, click on **Submit** to save any changes.

Select the Preset tab and the panel will display the following information:

- Aspect Ratio - Allows the user to lock or unlock the aspect ratio of the source when resizing.

- Rotation – Allows the Instance to be rotated through angles of 90, 180 and 270 degrees.
- Pixel Format – Allows the user to select a required pixel format. Automatic, RGB565, RGB888 or Yuy2.
- Restreaming and Jitter Buffering - Jitter buffer (milliseconds) is used to minimize the effects of out-of-sequence data when video data is transmitted across a network. Select a low value when using a stable or dedicated AV network to reduce latency.
- Restreaming Decoded Video Cache - The decoded video cache is a store of dedicated frames up to a maximum amount (milliseconds) based on the frame rate of the network video stream and the amount of caching.
- Audio Enabled - Defines whether audio is enabled for the source.
- Border Color - Displays the border color. To change the color, click on the color bar to open the color picker and select the required color.
- Border Flash Color - Displays the alternative color which is used when Flashing is enabled in colored borders. Click on the color bar to select a different color.
- Frame color - Displays the default color of the window frame.

Click on the Default pencil icon to edit the values then click on **Submit** to save any changes.

Click on the **Tags** tab to create search strings for a specific input. You can then use the search function on the sources panel to quickly access the required source. This is a particularly useful function when a wall has many available sources.

Enter a new Tag, normally the input name.

Click on **Submit** and the edited video source will be updated in the sources folder.

Web Sources

The web source properties allows the user to edit the name of the source. This is the name that will appear in the sources content folder once the source has been submitted. The

URL can also be edited, ensure the URL is correct. If the URL is incorrect the source will still be added to the Sources content folder, therefore care should be taken to ensure the URL is correct.

Select the Preset tab and the panel will display the following information:

- Refresh the selected internet source at determined intervals. Values in seconds. Click on the pencil icon on the presets tab to edit the default refresh interval.
- Vertical Page Scroll - Scroll the internet source vertically to a specific position in the page. Click on the pencil icon on the presets tab to edit the default position.
- Horizontal Page Scroll - Scroll the internet source horizontally to a specific position in the page. (Only available if the horizontal scroll bar is displayed in the selected internet window.) Click on the pencil icon on the presets tab to edit the default position.
- Zoom Percentage - Enables the user to zoom in on the web page. If 2 or more instances are being displayed, Zoom settings are linked and will affect all instances. Click on the pencil icon on the presets tab to edit the default percentage of the zoom function.
- Displays the frame color. To change the color, click on the color bar to open the color picker and select the required color.

Click on the **Tags** tab to create search strings for a specific input. You can then use the search function on the sources panel to quickly access the required source. This is a particularly useful function when a wall has many available sources.

Click on **Submit Source** and the edited video source will be updated in the sources folder.

Local Media Souces

Local media sources are sources which are stored locally on your machine. They can be PDF documents, images or videos. Each type of local media source will have its own presets.

Documents (Local Media)

- View Mode - Use the dropdown list to select the view mode of the document source within the window.

  Whole Page – The whole of the selected page is visible in the window. If the window is scaled, the page is scaled to fit.

- Fit Page Vertically – The selected page will fit vertically in the window. The vertical fit is maintained if the window is scaled.

- Fit Page Horizontally – The selected page will fit horizontally in the window. The horizontal fit is maintained if the window is scaled.

- Page Number – Type in a page number to display that specific page in the window.

- Vertical Page Scroll – Sets a vertical offset from the top of the page. Vertical offset is only effective when the View Mode is configured to Fit page Horizontally.

- Horizontal Page Scroll – Sets a horizontal offset from the left of the page. Horizontal offset is only effective when the View Mode is configured to Fit Page Vertically. Horizontal offset will also have effect if a horizontal scroll bar is present.

- Zoom Percentage – Enables the user to zoom into the document. The value is in percentages.

- Enable toolbar – Enable/Disable the toolbar to appearing in the window on the display wall.

- Frame color - Displays the default color of the window frame. Click on the pencil icon to edit the color and transparency.

Video (Local Media) Sources

It should be noted that a video codec application may be required to be installed on the Aetria Wall Control Server to enable local video media to be displayed.

- Maintain Aspect Ratio - Allows the user to lock or unlock the aspect ratio of the source when resizing. Click on the pencil icon to change the default setting of the

aspect ratio of the source.

- Frame color - Displays the default color of the window frame. Click on the pencil icon to edit the default color and transparency.
- Audio enabled - Defines whether audio is enabled for the source.

Image (Local Media) Source

- Frame color - Displays the default color of the window frame. Click on the pencil icon to edit the color and transparency.

Supported Media

The following media types are supported in Aetria Command Center:

- .avi
- .mov
- .mp4
- .mpg
- .wmv
- .gif

Application Sources

The application source properties allows the user to edit the name of the source. This is the name that will appear in the sources content folder once the source has been saved. If required, edit the name of the wall controller where the application is located.

The application field displays a list of applications available on the selected wall controller to use as a source. Click on the Application refresh icon to updated the list.

The command line argument field, displays the path to the application's executable file.

VNC Sources

The VNC source properties allows the user to edit the name of the source. This is the name that will appear in the sources content folder once the source has been saved; the type of remote connection mode currently selected, the Host address, Port number and Password can also be edited.

Click on the Properties tab in the right panel whilst a VNC source is selected to display the properties:

- Name - The name of the VNC source. This is the name that will appear in the sources content folder.
- Remote Connection Modes - Displays the mode of the remote connection, either VNC or RDP.
- Host Address - The host address of the target machine, normally displayed as an IP Address.
- Port - Displays the port number used to communicate with the host machine.
- Password - The password edit box. When passwords are edited characters are not displayed.

RDP Sources

The RDP source properties allows the user to edit the name of the source. This is the name that will appear in the sources content folder once the source has been saved; the type of remote connection mode currently selected and the Host address.

- Name - The name of the RDP source. This is the name that will appear in the sources content folder.
- Remote Connection Modes - Displays the mode of the remote connection, either VNC or RDP.
- Host Address - The host address of the target machine, normally displayed as an IP Address.

Hardware Stream Sources

A hardware stream source is a source generated using an Arqa or Aligo. The properties tab on the right will display the following:

- Name - The name of the source. This is the name that will appear in the sources content folder.
- Hardware Stream Type - The hardware device delivering the source.
- Serial Number - The serial number of the hardware device delivering the source.
- Port Identifier - Displays the type of source being delivered.
- Audio Enabled - Defines whether audio is enabled for the source.

The presets available for the hardware stream are as follows:

- Maintain Aspect Ratio - Allows the user to lock or unlock the aspect ratio of the source when resizing.
- Pixel Format – Allows the user to select a required pixel format. Automatic, RGB565, RGB888 or Yuy2.
- Frame color - Displays the default color of the window frame.
- SQX Restreaming and Jitter Buffering - Jitter buffer (milliseconds) is used to minimize the effects of out-of-sequence data when video data is transmitted across a network. Select a low value when using a stable or dedicated AV network to reduce latency.
- SQX Decoded Video Cache - The decoded video cache is a store of dedicated frames up to a maximum amount (milliseconds) based on the frame rate of the network video stream and the amount of caching.

Click on the Default pencil icon to edit the values then click on **Submit** to save any changes.

Composite Source

- Composite Name - Enter a name for the composite source. This is the name that will appear in the sources content folder.
- Dimensions - Displays the dimensions of the source in pixels.

Adding New Source Content

To add new content to the sources folder click on **New Content** located above the center panel on the manage sources page. A list is displayed of source types that can be added to the sources. There is no requirement to add video input sources as they are automatically detected and added to the sources folder.

Remote Connection

Select **Remote Connection** and the Add New Source dialog is displayed. Enter a chosen name for the source (Mandatory). This is the name that will appear in the Sources content folder once the source has been submitted. Select the type of connection mode from the dropdown list (VNC or RDP) then enter the host name, it can either be the name of a machine or its IP address. Add a port number to be used as the connection, the default is set at 5900 then add the password used to access the machine. Click on **Submit Source** and the new source will be added to the Sources content folder. To use an RDP source the credentials required are those belonging to the machine the user wishes to connect to.

If a VNC connection is required, a remote desktop application must be installed on the machine you wish to connect to. When adding a VNC source the login credentials of the remote desktop application are required. If password credentials are not added, a warning message is displayed requesting the credentials when the user tries to deploy the source to a wall.

It should be noted that RDP sources cannot be deployed to a wall. If an attempt is made to do so, an error message is displayed.

Web Source

Select **Web** and the Add New Source dialog is displayed. Enter a chosen name for the web source (Mandatory). This is the name that will appear in the Sources folder once the source has been submitted.

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 content folder, therefore care should be taken to ensure the URL is correct.

Click on the **Tags** tab to create search strings for a specific input. You can then use the search function on the sources panel to quickly access the required source. This is a particularly useful function when a wall has many available sources.

Click on **Submit Source** and the new web source will be added to the sources folder.

Network Video Stream

Select **Network Video Stream** and the Add New Source dialog is displayed. Enter a chosen name for the video stream (Mandatory). This is the name that will appear in the sources folder once the source has been submitted.

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 folder, therefore care should be taken to ensure the URL is correct.

When adding an network video stream source you can input the username and password of the source. This removes the requirement to include username and password from the source URL . Username and password authentication is not IP camera specific, it is available for all network password streams.

Click on **Submit Source** and the new network video stream source will be added to the sources folder.

Composite Window

Select composite window and a black panel is displayed in the center of the application. Drag any sources and assets from the left panel to create the required content of the composite window. Multiple sources can by applied into template cells and OSDs can also be added if required.

Once the content has been created, enter a friendly name in the Composite Name edit box on the right of the application and set the required dimensions of the source.

Carousel

Select **Carousel** and the carousel properties panel on the right of the application is displayed.

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.

Enter a chosen name for the carousel (Mandatory). This is the name that will appear in the carousel folder once the source has been submitted. Users can elect to start the carousel sequence when the carousel source is opened, users can also skip capture card inputs when no signal is detected on the input. A reason for this could be the source of the input has been disconnected.

To create a Carousel drag the required sources from the sources content tree on the left into the carousel box in the carousel properties panel on the right. The sources will be listed in the order they are dragged across. However they can be rearranged by clicking on and dragging to create the required order in which the sources will appear in the carousel sequence.

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 alleviate this, a Buffer can be set thereby hiding the frames displaying the CONNECTING warning.

Users can select the duration of each input contained within the carousel.

Click on **Save** and the new carousel source will be added to the carousel folder.

Application

Aetria 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 applications 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 on the relevant wall controller.

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

Select the name of the wall controller where the application is located.

The application field displays a list of applications available on the selected wall controller to use as a source. Click on the Application refresh icon to update the list.

In the command line argument field, enter the path to the application's executable file.

Click on **Submit Source** and the new application source will be added to the sources folder.

Multihead Group (Arqa)

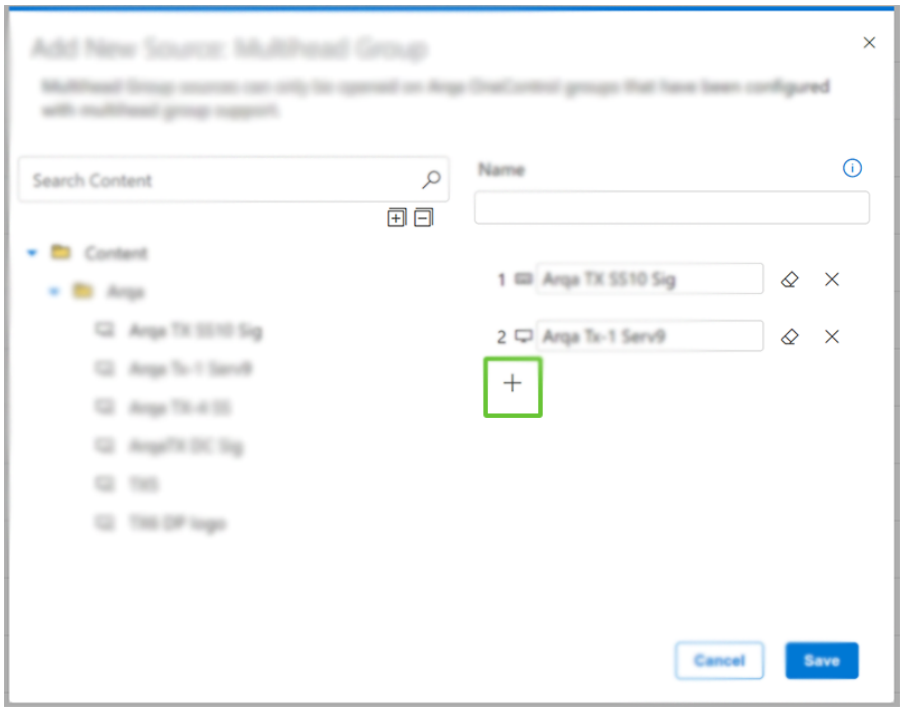
Multihead Groups enable the user to create a single source from a device with multiple outputs. For example where a PC may have up to four outputs, these outputs can be grouped together to create a single source.

Multihead Group sources can only be opened on Arqa OneControl groups that have been configured with Multihead Group Support.

To configure Arqa devices as a Multihead Group, connect an Arqa Tx to each of the device outputs to be grouped together, ensuring a USB cable is connect from the device to the Arqa Tx connected to the first output. The Arqa OneControl Group then needs to have Multihead Support configured, this is carried out in Manage/Display Surfaces.

Creating a new Multihead Group

Once Multihead Support has been configured, click on the New Content icon on the tool-bar and the Add New Source: Multihead Group dialog is displayed:



Click on the "+" icon to select the number of Arqa Tx's which will form the Multihead Group. Next select the Arqa Tx's that are connected to the device outputs from the list of contents on the left and drag across to the boxes on the right ensuring the first Arqa Tx is the one connected to device output 1, this is indicated by a small keyboard icon.

Once the Multihead Support has been configured and new source content created, it will appear as a single source in the contents tree in the right hand panel.

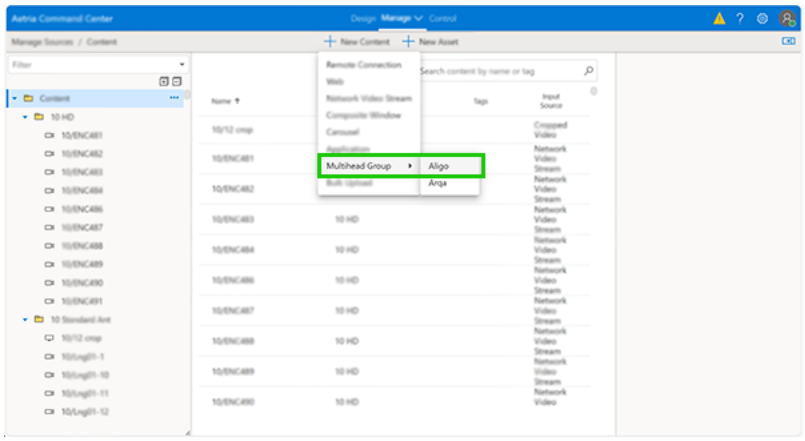
Prior to initial use, the user must log in to the first Arqa Rx (USB Master) using the Arqa Rx OSD menu.

Multihead Groups (Aligo)

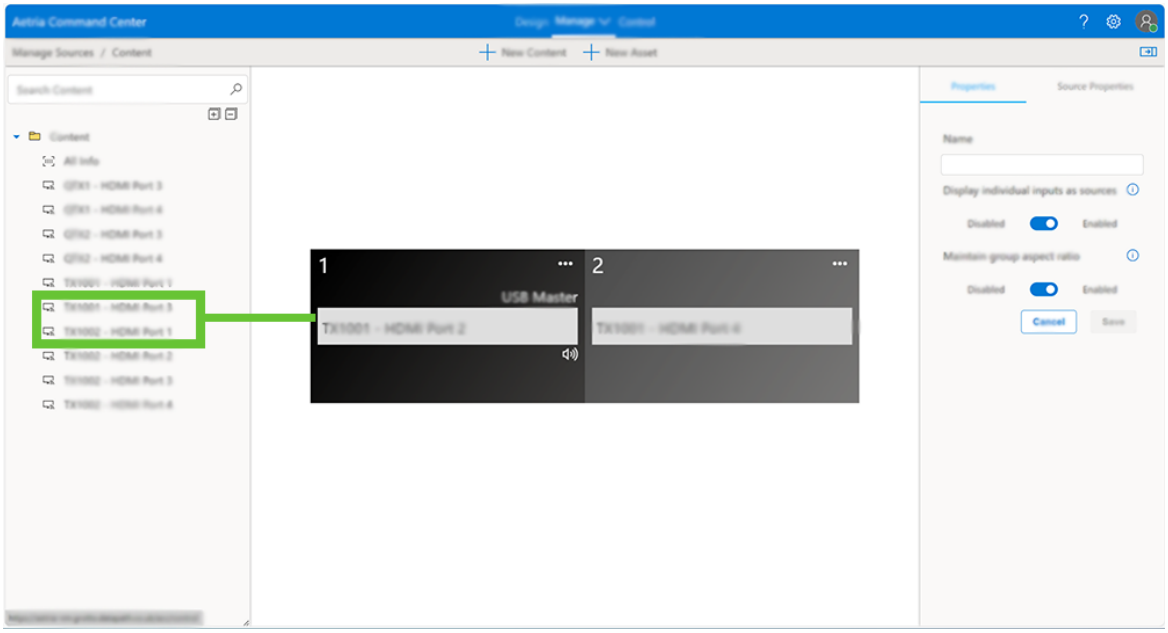
Multihead Groups enable the user to create a single source from a device with multiple outputs. For example where a PC may have up to four outputs, these outputs can be grouped together to create a single source.

Creating a new Aligo Multihead Group

To create a new Aligo Multihead group, click on the New Content icon on the toolbar at the top of the page and select Multihead Group/Aligo:



Select the required Aligo TX devices from the left panel and drag into the work space in the center as shown below:



Once all the divices have been assigned if keyboard and mouse control is required for the group, right click on the first display (or the top left display) and select **Set USB Master.**

If audio is required for the group, right click on the first display (or the top left display) and select **Set Audio Master.**

At this stage an On Screen Display (OSD) can also be added to the multihead group by selecting the required OSD from the content panel on the left and dragging it onto the multihead group

Ensure all the devices are positioned in the correct order and without any gaps or overlapping as both will prevent saving the group. Enter a name for the Multihead group in the properties panel on the right and click **Save**.

A warning triangle and messages will be displayed against the multihead group source if the operation mode of any sources within the multihead group changes. to resolve the error, users can change the operation mode or edit the multihead group. When saved, the error should be resolved.

Display individual inputs as sources

Determines if the component inputs are also available as independent sources. If disabled, the multihead group is only available as a single source for use with Aetria Workstation.

Maintain group aspect ratio

Enables the user to enable or disable the aspect ratio for the Aligo Multihead group.

Datapath Mouse

To enable the mouse cursor to be active on all displays within a multihead group, the Datapath mouse executable file should be downloaded from the Datapath website and installed on the PC which is the source for the multihead group.

Quadcast Multihead Groups

To enable the user to have keyboard and mouse functionality on Quadcast multihead groups the multihead group must be configured in the same layout as the quadcast i.e. four next to each other and in the correct order to enable the mouse to track normally.

Bulk Upload

The bulk upload functionality enables users to upload multiple sources using a file containing all the required source information (source name, source type, tags and required properties) in .json or .cvs format. Once uploaded, Aetria Command Center then converts

the information into sources. An example of the format structure for each supported source type is as follows::

.json

Remote Connection (VNC or RDP)

```
{
        "sourceType": "RemoteConnection",
        "name": "VNC-SBT1",
        "remoteConnectionSource": {
                "connectionType": "Vnc",
                "port": "4444",
                "hostname": "TEST-1",
                "password": "example"
                },
        "tagIds": [],
        "sourcePresets": []
},
```

Web Sources

```
{
        "sourceType": "Web",
        "name": "YouTube",
        "webSource": { "url": "https://www.youtube.co.uk"},
        "tagIds": [],
        "sourcePresets": []
```

},

Network Video Stream


```
{
        "sourceType": "NetworkVideoStream",
        "name": "NVS - Bosch5000HD",
        "networkVideoStreamSource": {
                "uri": "rtsp://10.20.0.27:554/media/camera1",
                "username": "live",
                "password": "live12345"
                },
        "tagIds": [],
        "sourcePresets": []
}
```


The file would look something like the following table:

sourceType	Name	tagid-s	con-nectionProtocol	sourceidentity	user-name	pass-word	port
Net-workVideoStream	NVS-Bosch5000H-D			rtsp://10.20.0.27:554/-media/camera1	live	live12345	
Web	YouTube			https://www.youtube.co.uk			
RemoteConnection	VNC-SBT1		VNC	Test-1	example	4444	

.csv

CCTV Camera	Model	Location	Timestamp	Active
Samsung	Techwin SCO-6083R	Entrance	1030	Yes
Samsung	SS345 - SCO-2040R	Reception	0730	No
Yale	SV-ABFX-B	Warehouse	0320	Yes

Sony	IPELA SNC-EM520	Car Park	0001	Yes

The above table of data can be represented in .csv format as follows:

```
CCTV Camera,Model,Location,Timestamp,Active
Samsung,Techwin SCO-6083R,Entrance,"1030",Yes
Samsung,SS345 - SCO-2040R,Reception,"0730",No
Yale,SV-ABFX-B,Warehouse,"0320",Yes
Sony,IPELA SNC-EM520,Car Park,"0001",Yes
```

To upload the .json or .csv file, click on **Bulk Upload** and browse to and select the required file.

Adding a New Asset

Users can create assets to use alongside and within display windows, including Banners, On Screen Display (OSD) and Borders. To add a new asset, click on **New Asset** located above the center panel on the manage sources page. A list is displayed of assets that can be created.

Create a Banner

Banners can be created to display single strings of information on a display wall. The banner can contain text or an RSS feed.

Select Banner from the list of new assets and the banner properties panel on the right of the application is displayed. Enter a chosen name for the banner (Mandatory). This is the name that will appear in the banner folder once the banner has been saved.

Select a font for the banner using the font dropdown list, select **Transparent** and the desktop behind the text is visible. Select **Opaque** and the background behind the text is displayed in a chosen color. To select a font or background color, click on the color bar and use the color picker to select the color you require, once the color has been selected, click on **Save**.

Once the font style has been selected open the Default Dimensions panel and set the required font size. The height in the default dimensions is calculated using the font size and the height of the vertical margin and is not editable. The height and width refers to the dimension of the box containing the content of the banner displayed in the center panel.

The vertical margin sets the height of the text box in conjunction with the Font size; if the vertical margin is set to 0, this equals the font size. Increasing the vertical size of the banner is useful if a background color is going to be used and the user requires the banner to be prominent on the display wall. It should be noted that the default values cannot be edited whilst the banner is being displayed.

Open the scroll and blink panel to determine how the banner content is displayed.

The scroll speed determines the speed at which the content scrolls across the banner. use the dropdown arrow to select between Slow, Medium and Fast. The selection becomes active once the **Save** button has been clicked. Select **Off** and the banner will stop scrolling and the beginning of the feed is displayed.

Users can change the direction the text is scrolling within the banner. Select **Left** and the banner scrolls from right to left. Select **Right** and the banner scrolls from left to right.

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.

The banner input panel enables the user to select a text banner or an RSS feed.

Select **Text** and click inside the 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.

An RSS Feed is a web based feed which displays text that is updated at regular intervals. For example live news and financial market data. Enter the RSS URL you wish to display as a banner on the wall.

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.

RSS feeds can be transmitted with two types of feed 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.

When selecting an RSS feed, Delimiter and Separator functions become available. A delimiter is used to separate different topics displayed within the RSS feed and can be up to 10

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

Once all user requirements have been entered, click on **Save** and the banner will be saved into the Banner folder.

To edit a banner click on the filter dropdown list at the top of the sources content tree and select Banners, all previously saved banners are displayed. Click on a banner to select it and the properties for that banner are displayed in the right panel.

Create an On Screen Display

The On Screen Display (OSD) allows users to configure and display text on capture card or network video stream 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 capture card or network video stream window is opened without a source connected, text configured in the OSD user interface will still be displayed.

Select OSD from the list of new assets and the OSD properties panel on the right of the application is displayed. Enter a chosen name for the OSD (Mandatory). This is the name that will appear in the OSD folder once it has been saved.

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 Wrap is switched on.

The 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.

%NAME%	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.

Select the size, color and style of font you wish to use for your display. For the OSD background, users can choose between Transparent and Opaque. Select Transparent and the captured source behind the text is visible, select Opaque and the background behind the text is displayed in a chosen color if required.

To select a font or background color, click on the color bar and use the color picker to select the color you require, once the color has been selected, click on **Save**.

Scaling of the OSD can be turned off or on depending on user requirements. When **Off** is selected, the text in the OSD remains the same size regardless of the size of the window. When **On** is selected, the text in the OSD is scaled up or down in line with the scaling of the window.

The Alignment and Margin control allows the user to position the OSD within the margins. To select the position of alignment click the required position within the grid.

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 text boxes. Values are in pixels.

To edit an OSD click on the left and right arrows at the top of the sources content tree and select OSD, all previously saved OSD's are displayed. Click on an OSD to select it and the properties for that OSD are displayed in the right panel.

Create a Window Border

Colored borders can be used to draw attention to specific windows or groups of windows. The colored borders feature is only available for IP and video windows.

Select **Borders** from the list of new assets and the Borders properties panel on the right of the application is displayed. Enter a chosen name for the border (Mandatory). This is the name that will appear in the border content folder once it has been saved.

If the colored border panel is created for a Carousel window, the carousel color can be fixed or preset colors used.

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

Toggle the option to Preset and the primary and alternative colors configured as a preset are displayed. Presets will take priority.

Select the primary color for the border. Click on the color bar to open the color picker, select a color for the border. Colors are set at 50% transparency as a default but this can be changed within the color picker.

Alternate colors are used when the colored border is configured to Flash. Click on the color bar to open the color picker, select an alternative color for the border. The border will switch between the primary and alternate colors. Colors are set at 50% transparency as a default but this can be changed within the color picker.

A flashing colored 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 colored border, open the Flash Speed dropdown list and select the required speed: Slow, Medium or Fast. If a flashing border is not required, select off.

When a flash speed is selected the Easing function becomes available. Toggle the easing control to **On** and the transition between the primary and alternate colors is smoother. Click on **Save** to apply.

Scaling the border can be switched on or off. Select **Off** and the colored border will remain the selected width when the size of the window is scaled up or down. Select **On** and the colored border width is scaled up or down, relative to the size of the window.

The width of the 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 colored border. Click on the dimensions linked lock icon in the center and type the required value into one of the fields. The remaining fields are set automatically.

Cropping a Capture Card Input Source

Cropping a Source

Each capture card or network video stream 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 and can be used in the same way as any other captured source.

To access the cropping feature, right click on the capture card source or network video stream source in the Content panel that you wish to crop, select **Crop/Split** and the crop/split page is displayed.

The page displays the area of the source content (grey area) overlaid by a cropping template (black area).

Users can zoom in and out of the captured view by pressing the keyboard **Shift** key and at the same time using the scroll button on the mouse. To drag the content view around the center panel, press the **Shift** key then click on and drag the captured view to the desired position.

The cropping template can be position anywhere on the captured view by clicking on and dragging the template to the required area of the captured view where the crop is required, the crop template can also be resized by clicking and dragging on the corners and sides of the template. The aspect ratio will be maintained if the aspect ratio is locked in the properties panel on the right. If the aspect ratio is set to **Free**, the crop template can be sized into a custom format.

Cropping/Split Tools

The cropping and split tools are located at the top of the center panel

Refresh Screen Capture - When Crop/Split is selected, Aetria captures a single frame of the source, clicking on refresh screen capture updates the displayed capture.

Undo- Used to perform a reverse action and reverting to a former state.

Redo - Used to restore a previous action that has been undone.

Recenter View - If the screen capture view has been moved or scaled using the zoom function, selecting Recenter View will restore the screen capture to its default position in the center of the panel.

Crop Properties

- Crop/Split - Toggle between cropping and splitting the source.
- Crop Name - Enter a name for the cropped source. This is the name that will appear in the sources content folder.
- Lock Aspect Ratio - Use the toggle to lock or free the aspect ratio of the cropping template.
- Aspect Ratios - 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.
- Position - Input the number of pixels you would like to position the left of the Crop template from the left of the input source (X axis) and input the number of pixels you would like to position the top of the Crop template from the top of the input source (Y axis).
- Dimensions - Set the width and height of the crop in pixels. The minimum number of pixels is 100, the maximum number cannot exceed the total width of the source.

Once the crop has been configured as required, click on Save and the crop will appear as a source in the sources folder in the content panel on the right. A cropped source inherits all the properties from the parent source.

Splitting a Source

Each capture card or network video stream 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.

To access the splitting feature, right click on the capture card or network video stream source in the Content panel, select **Crop/Split** and Crop/Split page is displayed. To access the splitting functions set the Crop/Split toggle to Split.

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 common split. Each cell created by the Split is displayed on the Content panel.

Split Properties

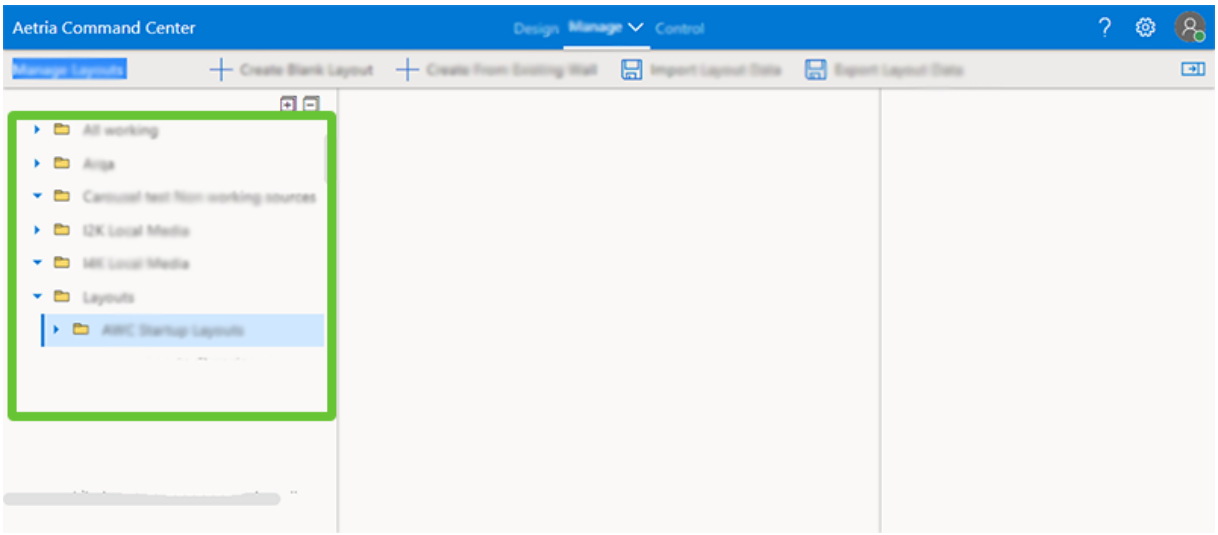
- Crop/Split - Toggle between cropping and splitting the source.
- Split Name - Enter a name for the split source. This is the name that will appear in the sources content folder.
- Grid Values - Input the number of rows and columns required for splitting the source.
- Common Splits- A list of common splits are available for ease of use. Select the common split of your choice. Individual cells can be excluded prior to saving the split. To exclude a cell from the split, ensure the cell is unchecked in the top left of the cell. If excluded, the cell will not appear in the Content panel.

Manage Layouts

Layouts can be used to organize the content displayed on a wall. Commonly used content can be saved in specific layouts and recalled to the display wall when needed providing the content is available.

The Aetria Command Center allows the user to create new layouts, save the layout of an existing wall and import/ export layout data. When saved, the layouts are stored within the layout folder which is displayed in the layout content tree on the left of the manage layouts page.

The content panel can be fully opened or retracted using the **+** or **-** icons located at the top, right hand side of the content tree panel.



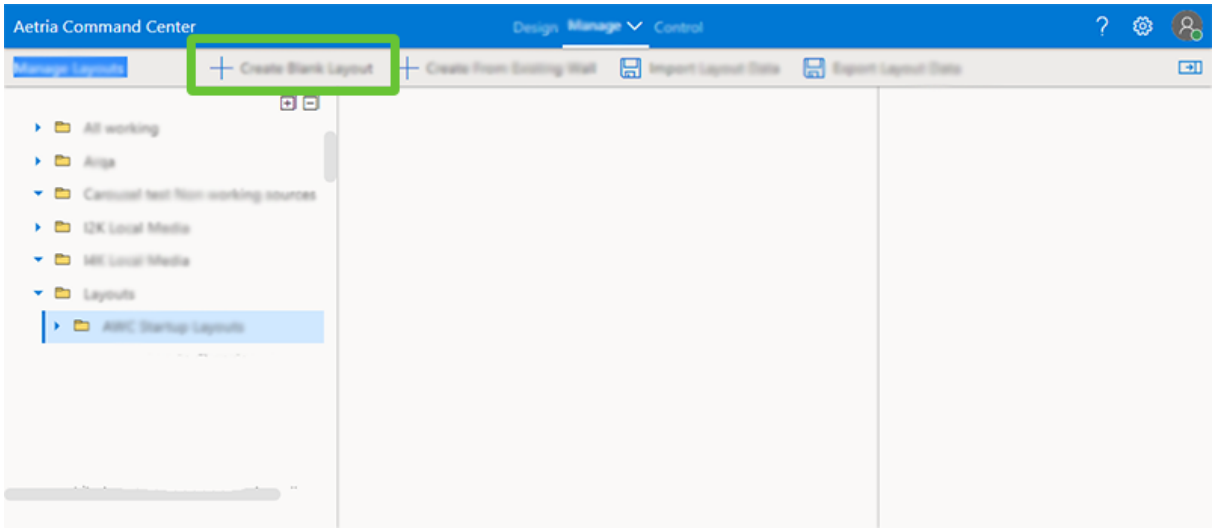
View Layouts

To view available layouts open the layout folder and click on the layout you wish to view. When opened, the properties panel on the right hand side of the page is populated with the layout properties including the properties of any sources or assets that have been applied to the layout . To edit the name of the layout, click on the edit tab and in the **Layout Name** text box type in the new layout name. Users can also display or hide frames by selecting or deselecting the **Frames Enabled** feature. The frame thickness and frame color can also be amended. Window properties are also displayed when a window is selected.

Use the left and right arrows at the top of the properties panel to scroll through the properties associated with the layout.

Create a Blank Layout

Click on **Create Blank Layout** located at the top of the manage layouts page and the create layout dialog is displayed.



The content tree is also populated with all the assets available to create the layout, including Sources, Templates, Banners, Borders, On Screen Displays, Carousels and Composite windows.

Click on the **Layout** tab in the panel on the right and enter a name in the Layout Name text box (Mandatory). If a frame around the layout is required select the frame tab and enable frames using the **Frames Enabled** control. Choose the thickness of the frame (in pixels) then select a color by clicking on the color bar and using the color picker to select the required color.

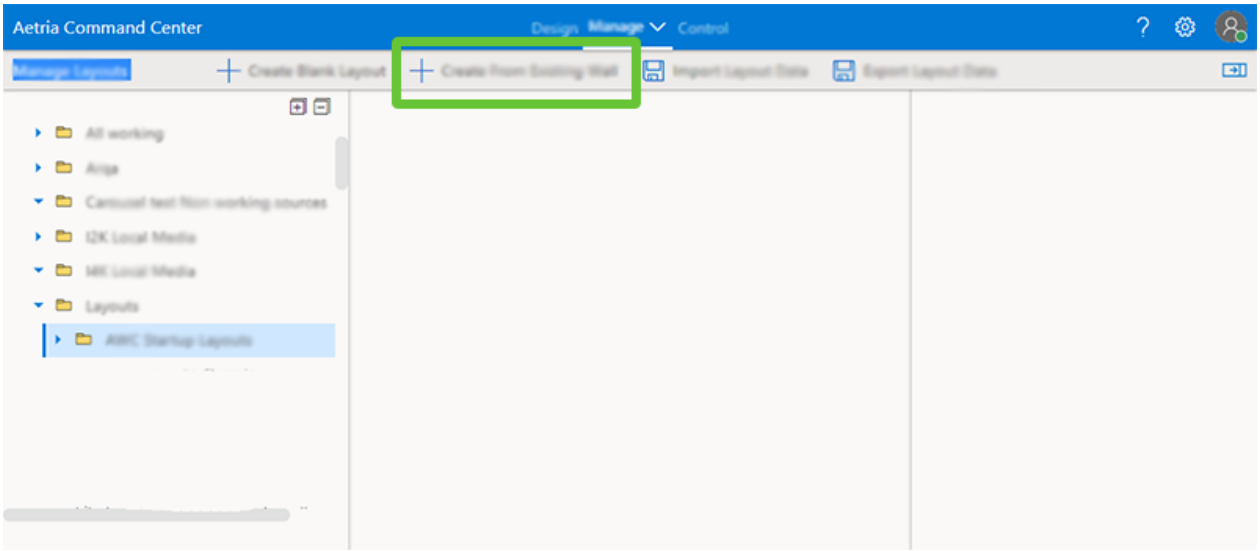
A layout is created by simply dragging the required sources and assets onto the wall representation in the center of the page and positioning them on the wall. A template may be used to help organise the content. Open the Template folder and drag the required template onto the wall representation. The cells of the template can then be populated with the required sources. Other assets can also be added using the same drag and drop process.

When a source is selected to be used within the layout, the window properties and source properties of that particular source are displayed in the panel on the right.

Once the layout has been created enter a layout name and click on **Save** at the top of the properties panel and the layout will be saved in the Layout folder. If the layout is not required click on **Cancel** and the layout is deleted.

Create a Layout from an Existing Wall

When the content of a wall has been created on the Control page and a saved layout of that wall is required, select **Create From Existing Wall** from the top of the Manage Layouts page and a dialog is displayed showing a representations of all walls within the group.



Select the wall you wish to create a layout from.

The selected wall will open on the Manage Layouts page. Click on the **Layout** tab in the panel on the right and enter a name in the Layout Name text box (Mandatory). If a frame around the layout is required select the frame tab and enable frames using the frames enabled control. Choose the thickness of the frame (in pixels) then select a color by clicking on the color bar and using the color picker to select the required color.

Click on **Save** and the layout is saved and stored in the Layout folder.

Aligo Layouts

To create an Aligo layout, click on **Create From Existing Wall** and select an Aligo wall, the **Add Aligo Layout** dialog is displayed. On the left of the dialog is a list of available Aligo sources, a search function is available to target a specific source if required. On the right of the dialog are the displays configured to the Aligo wall.

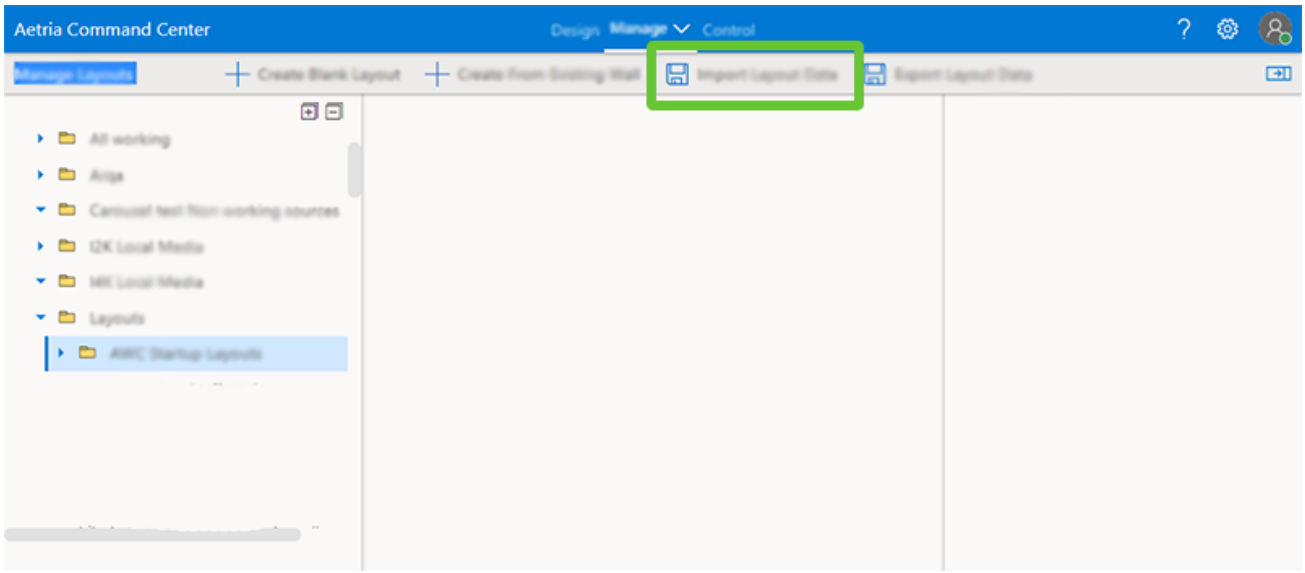
To place source content onto a display click on the required source on the left and drag it to the display field on the right. The content can be cleared using the eraser icon on the right. Additional displays can be added to the layout by clicking on the "**+**" below the list of displays. Aligo layouts can be applied to Aligo OneControl groups

Once all sources have been allocated to displays, enter a new layout name and click on **Save** and the Aligo layout is saved and stored in the Layout folder.

Import Layout Data

Layout data can be imported from Aetria Designer enabling users to share specific layouts across a network.

To import a layout data file, click on **Import Layout Data** located at the top of the Manage Layouts page.



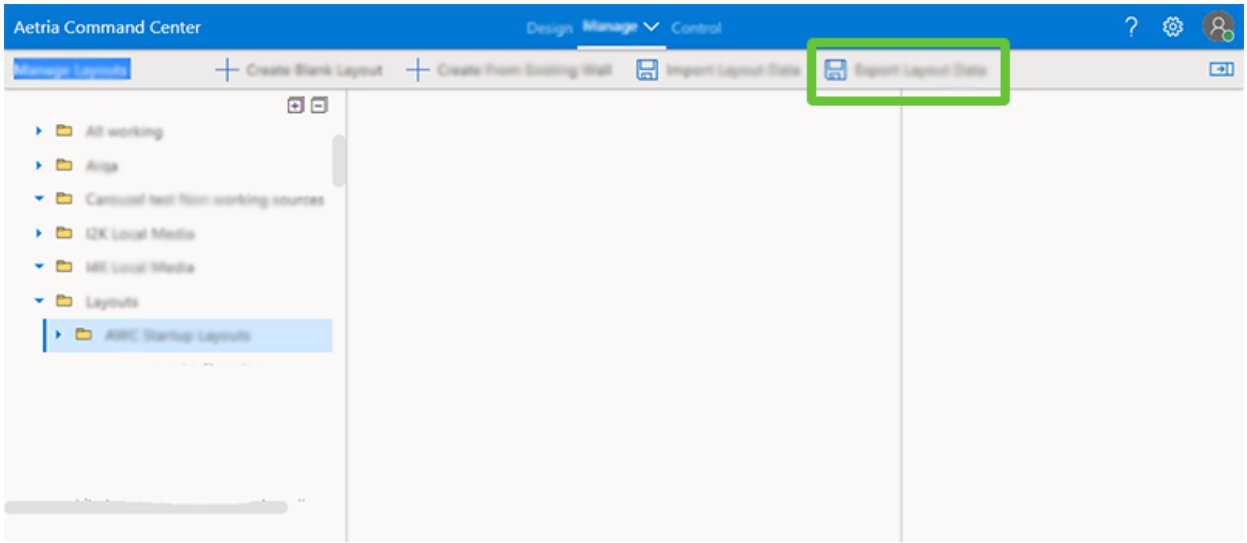
Click inside the **Browse..** edit box and a browser is opened, once the exported layout file (.json) is located select it, and click on Open in the browser window, the file will then be displayed in the Import Layout Data dialog.

Click on **Import** and the layout is imported into the layout folder located in the content panel on the left. It should be noted that the layout content con only be displayed on the system importing the data if the sources are available on that system.

Export Layout Data

Layouts can be exported into Aetria Designer where they can be edited then imported back into the Aetria Command Center. A layout data file contains data on the positioning of windows and sources contained within all layouts. It should be noted that the layout content can only be displayed on the system importing the data if the sources are available on that system.

Click on **Export Layout Data** located at the top of the Manage Layouts page and the layout data file will be exported to the system download folder as a .json file.

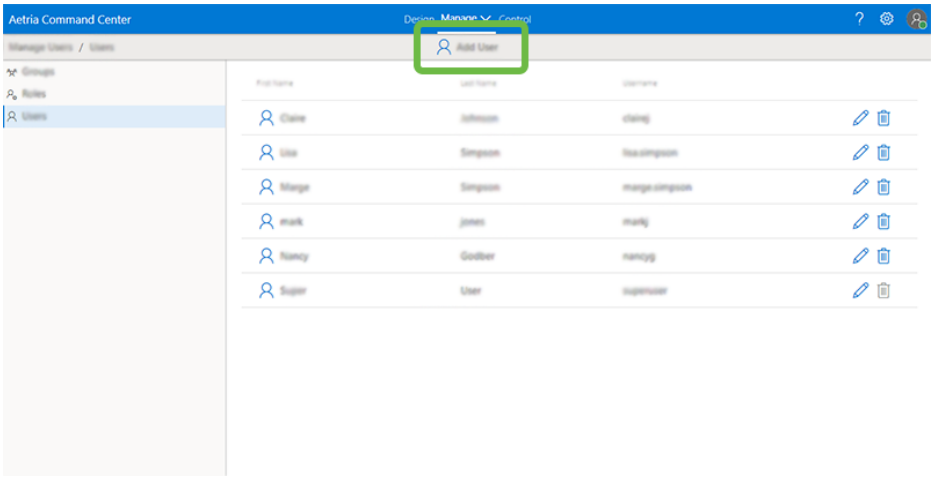


Users

The users page allows administrators to create new users, groups of users, create and administer user roles and assign users to specific roles. Roles can be structured to allow only specific tasks to be carried out. To display a list of authorized users click on **Users** in the left panel.

Add New Users

New users can be added to the system by clicking on **Add User** at the top of the users page.



A dialog will be displayed prompting the user to enter a first name, last name and a user-name. Arqa credentials can also be added. Users can also be integrated into Aetria from an LDAP compliant directory service such as Active Directory. The following icons are used to distinguish the type of user within Aetria.

Normal user created from within the Aetria application.

A user integrated from an Active Directory. User credentials cannot be modified in Aetria.

Arqa Credentials

When creating new users there is an option to create Arqa User Credentials. These credentials are required if the end user will use an Arqa workstation. The credentials are the

same as those used to log into the Arqa On Screen Display. It should be noted for the user to have visibility of Arqa TX's, they need to be given a role with **Read** access. The Arqa credentials are totally separate from other login/passwords used in the Aetria user interface.

It should be noted that it is not possible to log on to an Arqa that is connected to an Aetria Workstation and has been scanned for using the Scan for Devices function.

Username

Enter the username used for the Arqa OSD. The username is restricted to a maximum of 16 characters and should contain a combination of upper and lower case letters and numbers between 0-9. Symbols like "£ % &" should not be used.

Password

Enter the password used for the Arqa OSD. The password is restricted to a maximum of 16 characters and should contain a combination of upper and lower case letters and numbers between 0-9. Symbols like "£ % &" should not be used. The password may be reset on the Arqa credentials settings panel.

Priority

Users of the Arqa system are assigned a priority, the high the number, the higher the priority. Users who have a lower priority are unable for instance, to push to an Arqa RX device if the current user has a higher priority.

Enabled

Use the toggle switch to enable or disable the Arqa credentials.

Once all the details have been entered click on **Save**. To remove all Arqa credentials, open the Arqa Credentials panel and click on **Delete Arqa Credentials**.

Groups

A group can be created to allocate a group of users to specific roles and tasks, a group will contain roles and user members.

Open the Groups page by clicking on **Groups** on the left panel of the Manage Users page.

The groups page will list all groups that have been created including the name of the group, the roles associated with the group and members of the group. To edit group details, click on the pencil icon located on the right. Click on the bin icon to delete the group. Note that the delete function cannot be undone once selected.

Add a Group

To add a new group click on Add New Group at the top of the page and a dialog is displayed prompting the user to enter a name for the new group. Once a group name has been entered click **Save** and the new group will be added to the list of available groups.

Groups can also be integrated into Aetria from an LDAP compliant directory service such as Active Directory. The following icons are used to distinguish the type of Group within Aetria.

Normal group created from with the Aetria application.

A group integrated from an Active Directory. Group details cannot be modified in Aetria.

Edit a Group

Click on the edit group pencil icon and the groups setting page is displayed. Here you can change the name of the group or delete it. As mentioned above, pressing delete cannot be undone.

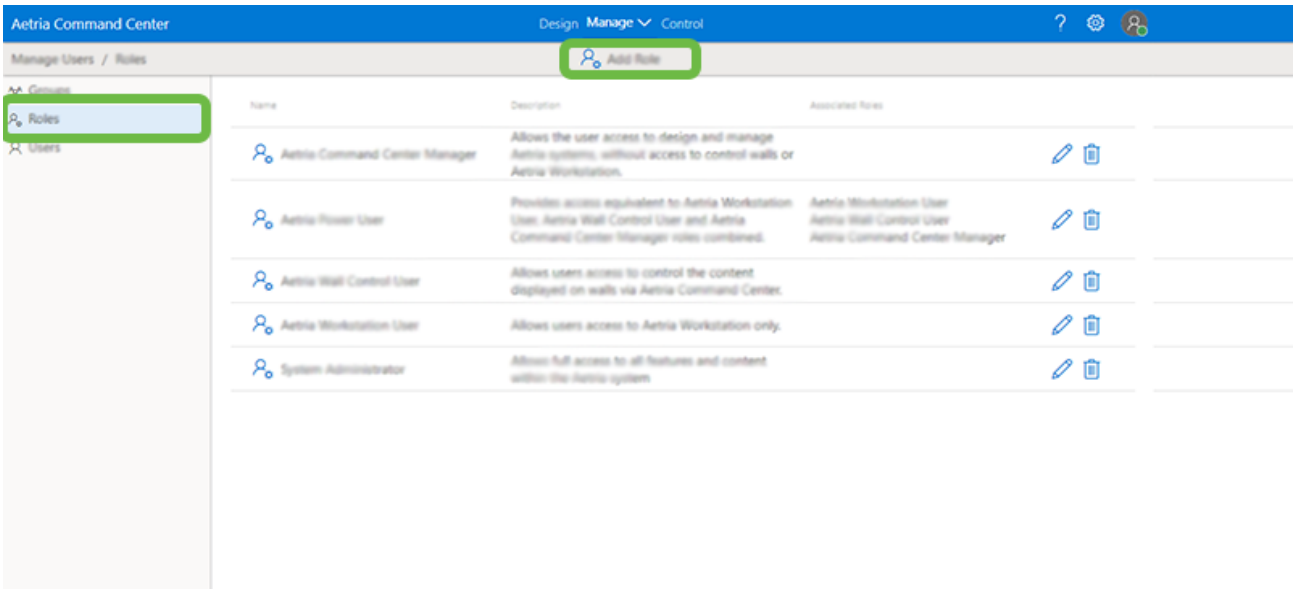
Roles

Aetria Command Center is shipped with the following pre-defined roles:

- **Aetria Command Center Manager** - Allows access to design and manage Aetria systems without access to control walls or Aetria Workstation.
- **Aetria Power User** - Provides access equivalent to Aetria Workstation User, Aetria Wall Control User and Aetria Command Center Manager roles combined.
- **Control Walls** - Allows users access to control the content displayed on walls via Aetria Command Center.

- **Use Aetria Workstation** - Allows users access to Aetria Workstation only.
- **System Administrator** - Allows full access to all features and content within the Aetria system.

To add a new role, click on **Roles** in the left panel of the Manage Users page and select **Add Role** located at the top of the page.



This will open a dialog prompting the user to enter a name and a description for the new role, click on **Save** and the role will be created and added to the list of available roles.

Role Permissions

Available Permissions	Permission Description
Use Aetria Command Center	Enable the user to have access to the Aetria Command Center Application.
Control Walls	Enable the user to have access to control for wall controllers.
Control All Walls	Enables the user to have

	access to all the walls in the system without needing to use the Walls tab to configure access.
Use Aetria Workstation	Enable the user to have access to the Aetria Workstation Application.
Create Private Desktop Layouts	Enable the user to create, edit and delete the users own private desktop layouts.
Create Private Desktop Templates	Enable the user to create, edit and delete the users own private desktop templates.
Create Private Layouts	Enable the user to create, edit and delete the users own private layouts.
Manage Public Templates	Enable the user to create, edit and delete public templates.
Manage Devices	Enable the user to manage all hardware devices.
Manage Global Settings	Enable the user to set and manage all global settings.
Manage Licenses	Enable the user to upload, update, remove and modify licenses.

Manage Physical Walls	Enable the user to add, update and remove physical wall.
Manage Public Layouts	Enable the user to create, edit and delete all public templates.
Manage Sources	Enable the user access to all content folders with permission to read/write.
Manage Tags	Enable the user to create and read Tags.
Manage Wall Controllers	Enable the user to view settings, update and control wall controllers.
Manage Users	Enable the user to edit groups, permissions, roles and users.
Manage Network Manager	Access to the network manager area enabling configuration of High Availability, certificate uploads and export logs.
Manage All Content	Enables the user to have unconditional read/write access to all content folders

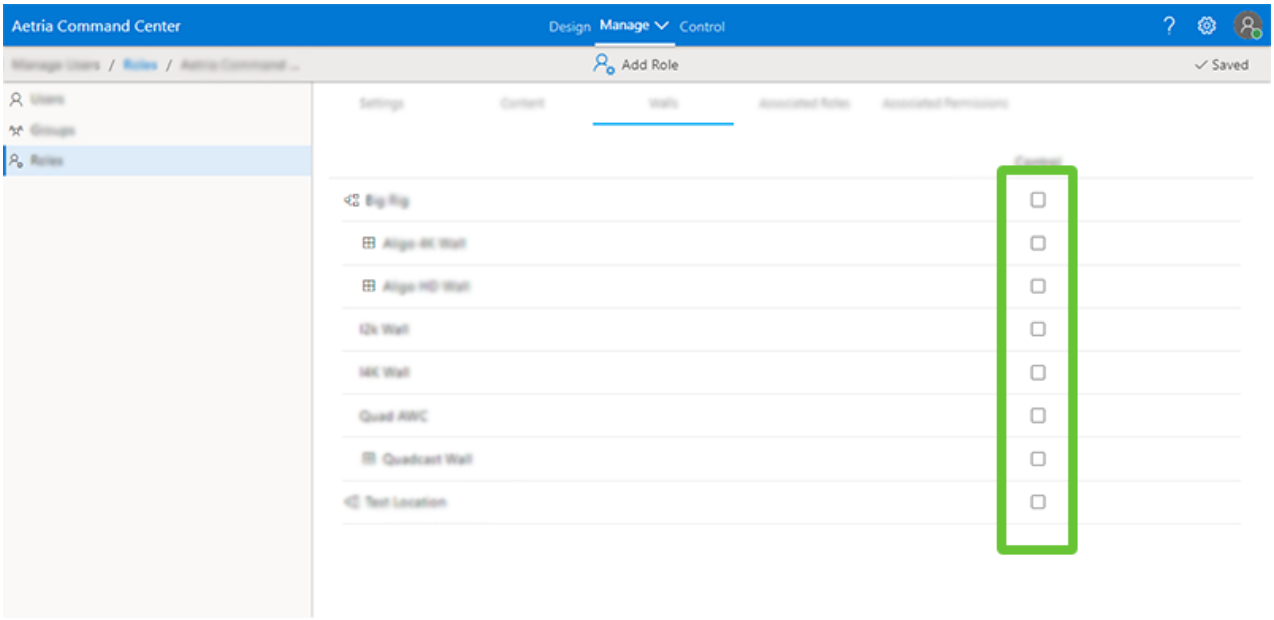
The role name and description can be changed on the settings panel. To access the settings panel click on the pencil icon for the selected role and then select **Settings** at the top of the page.

Allocate Source Content Permissions to Roles

When a role has been created specific source content permissions can be allocated to that role. To allocate content, click on **Content** at the top of the page and a list of system content folders is displayed. Two check boxes, View and Edit are available for each source content folder. Click the view check box and the selected role will be able view the source content contained in the folder. Select Edit and users with the selected role can view and edit the content.

Allocating Access to Specific Walls

When a role has been created, access to specific walls for that role can be selected. To access the walls panel click on the pencil icon to the right of the role and select the Walls tab. All the walls in the system are displayed:



Note: Wall level user rights management is applied to all Aligo OneControl groups.

Click in the check box to select individual walls or select a location and all walls within that location will be selected.

Allocate Available Roles to Associated Roles

Click on **Associate Roles** at the top of the page to allocate roles to the group. Select a role from the list of available roles and click on the right direction arrows to allocate the role to

the group. To remove a role, select it from the Associated Roles list and use the left directional arrow to remove it.

Manage Licenses

The license page allows the user to manage the licenses associated with the Aetria Command Center including the Aetria Network Manager, Aetria WallControl and the Aetria Workstation. When selected, the License page opens displaying all licenses in the left hand side license panel.

Network Manager License

Select **Network Manager** and details of the Network Manager license are displayed on the licenses page. Click **Refresh** to open a dialog enabling the user to upload a refresh response or to download a refresh file.

The information displayed:

- Customer ID
- Customer Name
- License ID
- License Obtained
- License type
- Maintenance Pack Purchased
- Maintenance Expires
- Installed Version
- Installed Version Released
- Purchased version
- Touch Interface

Three Aetria license types are available:

- Aetria-LIC-UNL - An Aetria license for VSN walls, with unlimited Aligo and Arqa end-points and all types of Aetria Workstations.
- Aetria-LIC-VSN - Aetria license for environments that exclusively utilise VSN video walls without Arqa/Aligo endpoints.
- Aetria-LIC-NAV - Aetria license for up to 100 Networked-AV Aligo/Arqa endpoints, including Aligo Walls and Arqa/Aligo workstations.

Aetria WallControl

An Aetria license for VSN walls,with unlimited Aligo and Arqa endpoints and all types of Aetria Workstations.

Select **Aetria WallControl** and details of the license are displayed, users are also able to add new licenses. Click **Refresh** to open a dialog enabling the user to upload a refresh response or to download a refresh file.

The information displayed:

- Customer ID
- Customer Name
- Licence ID
- License Obtained
- License Type
- Maintenance Pack Purchased
- Maintenance Expires
- Session limit - How many sessions are remaining

Aetria Workstation

Add License

When a new license has been acquired users need to register and activate it.

Click on **Add License** at the top of the license page and the Add License dialog is displayed. Enter the Licence ID and the Activation Password then click on **Activate**

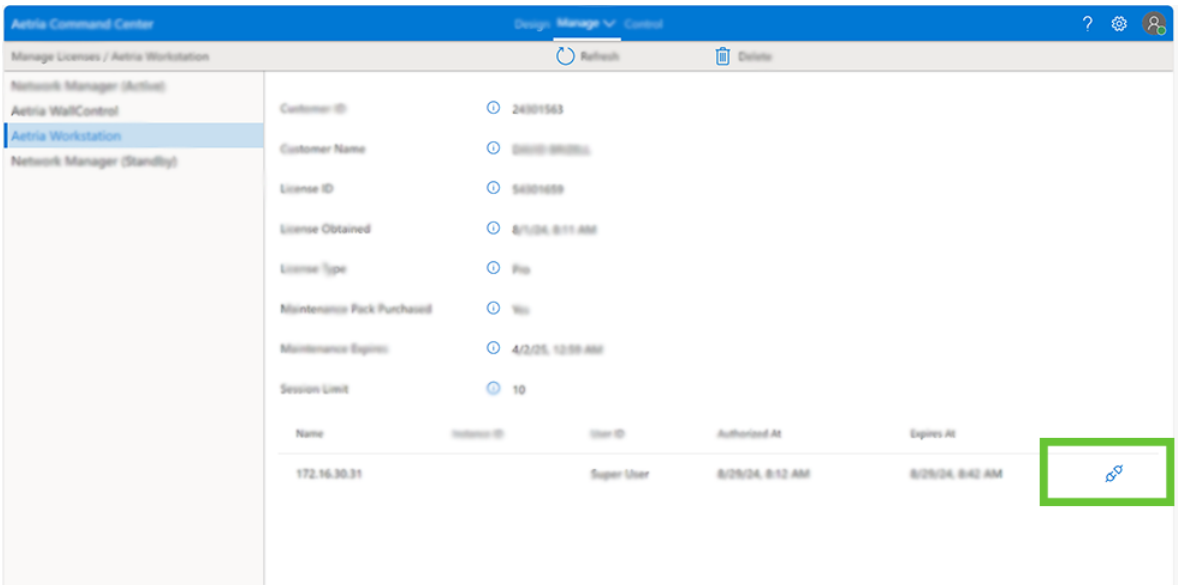
Click on **Refresh** to view the updated list of allocated Aetria WallControl licences.

Select **Aetria Workstation** and details of the licenses are displayed, users are also able to add new licenses. Click **Refresh** to open a dialog enabling he user to upload a refresh response or to download a refresh file.

The information displayed:

- Customer ID
- Customer Name
- License ID
- License Obtained
- License Type
- Maintenance Pack Purchased
- Maintenance Expires
- Session limit - How many sessions are remaining

All active sessions for Aetria WallControl and Aetria Workstation are displayed within the license window. Users can disconnect the active session by clicking on the disconnect icon as shown below:



Offline Activation

In environments where an internet connection is not available, licenses are activated by downloading the activation files from Network Manager onto a USB memory stick. The memory stick can then be plugged into a system connected to the internet where the activation response file can be obtained. To save time downloading activation files, the user can select **Add Another** in the License Activation dialog enabling activation files for Aetria WallControl and Aetria Workstation to be downloaded onto a USB memory at the same time.

Enter the License ID's and the Activation Password's supplied with the software media and click on **Download Activation File**. Use the USB memory stick as the target location for the downloads. Once the downloads are complete, remove the USB memory stick and place it in a machine with access to the internet.

Browse to the offline activation files on the USB stick and double click on them. A browser is opened and a response file is displayed. Download the Response.xml file and copy it to the USB stick.

Note that all the response files will have the same name when they are downloaded so it is recommended that the user renames them to avoid any confusion.

Insert the USB memory stick back into the Aetria system, press **Upload Activation Response** in the Aetria browser and select the relevant Response.xml files on the USB memory stick.

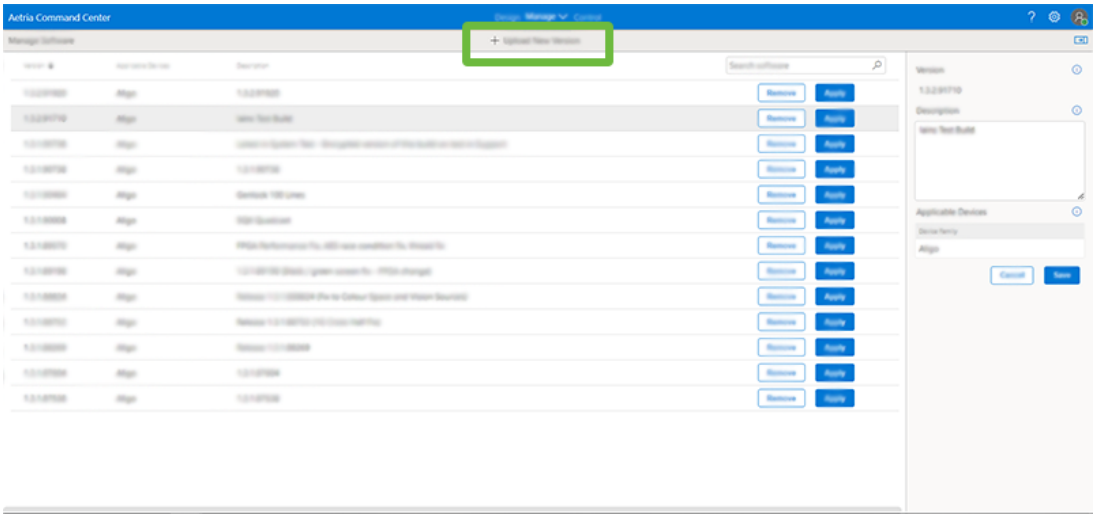
Once all the response files have been selected, the Aetria licenses are activated.

Software

The software page enables the user to manage the software being used within the Aetria system including uploading and installing new firmware for hardware devices.

It should be noted that there is a limit of five Aligo and five Arqa firmware files that can be stored in Aetria Command Center. If the limit is reached, an existing firmware file will need to be deleted before a new one can be uploaded.

To upload new versions of Aetria software, click on **Upload New Version** located at the top of the Manage Software page.



An Upload New Version dialog is displayed containing the following fields:

- Target Device Type - Use the dropdown list to select the type of device family that the uploaded firmware file is associated with.
- Firmware File - Click inside the Firmware file box to browse and locate the firmware file to be uploaded as part of the upload package. The types of files are:

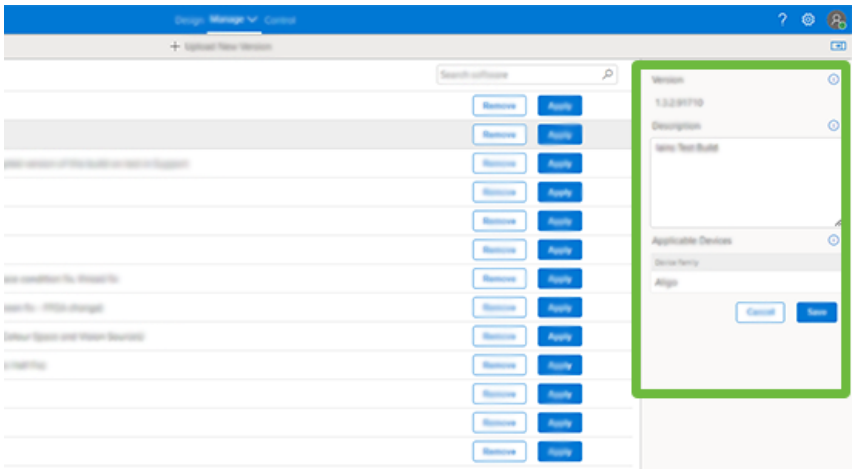
  Aligo - .afw

  Arqa - .bmp

- Description - Enter a description for the firmware. This could be a brief statement with regards to what has been updated.
- Versions - Enter the version number of the firmware.

Once all the fields have been entered, click on Save and the upload will commence. When the upload is complete the firmware upload will be displayed on the Manage Software page.

Selecting a firmware file from the list will open a properties panel on the right of the page.



Version - The version number of the selected firmware file.

Description - The description of the selected firmware file. To edit the description, click inside the description edit box.

Applicable Devices - The device family that the selected firmware is associated with.

Apply Firmware

Click on **Apply** and a dialog is opened displaying a list of devices within the system. Use the check boxes to select the devices that the firmware is to be applied to. The **Force Update** toggle at the bottom of the dialog can be used if a side grade of the same version or a downgrade to a previous version is required for the selected devices.

Global Settings

The global settings page displays a list of settings available globally across the network. Any changes to these setting affect all instances across the network.

Default Settings

Carousel Buffer

Click inside the timer text box to enter a new default buffer length for all Carousels.

Carousel Duration

Click inside the timer text box to enter a new default duration length for all Carousels.

System Settings

Enable public API - When set to enabled the Public API allows the access of third party applications to Aetria functionality. It should be noted that third party applications can send unsecured queries and commands.

When Enable public API is selected, an Enable public API security setting is displayed and also enabled.

Click Save and an **Open public API** button and a **Get new API key** button is displayed.

Open public API - Click on the **Open public API** button and a Swagger interface is displayed. See Aetria API Guide for more information.

Get new API key - Click on the Get new API key button and a dialog is displayed informing users that API calls made using a previous key will no longer work and the new key will be required for authentication.

Click **Continue** and a one off **Public API Key** is generated and displayed. The key is required for all API calls to be run successfully. Click on the copy icon and the key will be saved to the clipboard.

The public API does not require authentication and is not secure. This should be considered when implementing solutions that require the public API to be enabled.

Public API security is enabled by default. If disabled, users are required to confirm they understand the security implications of third party application access to Aetria.

Once enabled the public API is available on port 8443.

SNMP

Simple Network Management Protocol (SNMP) is used for monitoring and the management of network connected devices.

- Enable SNMPv2 - when enabled the SNMP protocol will monitor the Aetria Network.
- Download MIB - Management Information Base (MIB) is a text file (DATAPATH-MIB.txt) which can be downloaded and imported into a MIB browser which will display the set of devices that can be managed using SNMP. Third party MIB browsers are widely available to download from the internet, when selecting one, ensure SNMP v2 is supported.
- Credentials - View the SNMP read only and read/write community strings.
- Notification listeners - Displays a list of Network Manager servers currently being sent notifications. Add up to eight SNMP listeners, the default port is 162.

Hardware Settings

Use the global hardware settings to configure the following address ranges:

- Aligo DS10G Multicast Address Range.
- Aligo SQX Multicast Address Range.
- Aligo Timing Multicast Address Range.
- Vision Restreaming Multicast Address Range.

Click on **Save** to retain any changes that have been made.

Aetria API Guide

Overview

The Aetria Public API is provided to allow 3rd party access over a simplified subset of functions in Aetria. This set of functions may be expanded over time.

Details of how to enable the public API can be found on the Global Settings Page.

Swagger

You can try all available API calls via the swagger interface provided with the public API. This can be found at https://<your-networkmanager-url>:8443/swagger.

By opening a section, and then the API call, you can see details regarding the call, such as the required data and structure to be passed, its URL address and its documented responses.

By clicking the Try It Now button you can execute the API call directly in Aetria and see the response. This allows you to experiment with the API.

A JSON version of the API can be supplied by Datapath and viewed via the swagger website https://editor.swagger.io/. This version can be also downloaded from the active Aetria instance via the swagger page.

This API can also be used to generate a client for your application, using such tools as NSwagStudio (https://github.com/RicoSuter/NSwag/wiki/NSwagStudio). This will generate a class and all the objects required to use the API. Other tools are available.

API Description

This is a brief guide to the API calls available in the Aetria public API.

Layouts

Get all Layouts

Gets all layouts that can be opened on a wall controller.

- `api/layouts`
- `GET`

Request: *No request body required.*

Response: Returns a list of Layout objects containing:

- Layout Id (*layoutId*)
- Layout Name
- List of Source objects containing:
  - Source Id (*sourceId*)
  - Source Name
  - Source Type

Create Layout from an existing wall

Creates a layout from an existing Virtual wall.

- /api/algolayouts/create-from-physical-wall
- POST

Request:

Physical Wall Id : int

Response: Returns a list of Layout objects containing:

  - layoutId : int
  - Name : string
  - Sources Array of sources that are in the layout

- Id : Guid
- Name : string

SourceType : Enum

- AdHoc,

  AligoMultiheadGroup,

  Application,

  ArqaMultiheadGroup,

  CaptureCardInput,

  CroppedVideo,

  HardwareStream,

  LocalMedia,

  NetworkVideoStream,

  RemoteConnection,

  Web

Sources

Get all Sources

Get all sources available for wall controllers.

- `api/sources`
- GET

Request: *No request body required*.

Response: Returns a list of Source objects containing:

- Source Id (*sourceId*)
- Source Name
- Source Type

Templates

Get all Templates

Get all available templates.

- `api/templates`
- `GET`

Request:

- *TemplateTargetApplication*

Response: Returns a list of Template objects containing:

- Template Name

  List of Template Cells containing

  - Cell Name
  - Column number

    Indexed starting at zero which is the left most column
  - Row Number

    Indexed starting at zero which is the top most row
  - Column Span

Minimum of one span which indicates a single column span

- Row Span

  Minimum of one span which indicates a single row span

Aligo Devices

Get All Aligo Rx devices

Get All Aligo Rx devices

- `api/devices/aligo/rx`
- `GET`

Response

[

{

"id": 0,

"name": "string",

"serialNumber": "string",

"status": "DeviceStatus",

"deviceType": "Monitor",

"firmwareVersion": "string",

"operationMode": "OperationMode"

}

]

Get a specific Aligo Rx device

Get a specific Aligo Rx device (deviceId)

- api / devi ces/ al i go/ r x/ { devi ceI d}
- GET

Response

{

"id": 0,

"serialNumber": "string",

"status": "Unknown",

"deviceType": "Monitor",

"firmwareVersion": "string",

"managementAddress": "string",

"operationMode": "QuadStream",

"ports": [

{

"portDirection": "In",

"portType": "Ethernet1G",

"connectionType": "Display",

"hdcpEnabled": boolean,

"hdcpFromSource": "string",

"hdcpFromReceiver": "string",

"hdcpSubsampled": boolean,

"devicePortId": 0,

"active": boolean,

"resolution": "string"

}

]

}

Get a specific Aligo Tx device

Get a specific Aligo Tx device (deviceId)

- `api/devices/aligo/tx/{deviceId}`
- `GET`

Response

{

"id": 0,

"serialNumber": "string",

"status": "Unknown",

"deviceType": "Monitor",

"firmwareVersion": "string",

"managementAddress": "string",

"streamMode": "SingleCast",

"ports": [

{

"devicePortId": int,

"portType": "Ethernet1G",

"connectionType": "Display",

```
        "encodingType": "H264",
        "colorFormat": "string",
        "colorDepth": int,
        "colorSampleFormat": "string",
        "hdcpEnabled": boolean,
        "hdcpVersion": "string"
        }
]
}
```


Open Source on an Aligo Rx port

Open an Aligo Tx Source [txPortId] on an Aligo Rx port [portId}

- `/api/devices/aligo/rx/ports/{portId}/source`
- `PUT`

Request:

- Tx Port Id: int

Response: *No response body returned (status only)*

Close Aligo Rx Source

Close an Aligo Rx Source using the [deviceID] and [portId}

- `/api/devices/aligo/rx/ports/{portId}/source`
- `DELETE`

Request:

- Device Id: int

Response: *No response body returned (status only)*

Mute Rx Port

Mute an Aligo Rx Port [portId]

- `Api/devices/aligo/rx/{portId}/mute`
- `PUT`

Request:

- Port Id: *int*
- Mute: *bool*

Response: *No response body returned (status only)*

Update Rx Audio Jack Settings

Update Rx Audio Jack Settings [deviceId] for all or 1 of the settings.

- `Api/devices/aligo/rx/{deviceId}/audio-jack`
- `PUT`

Request:

- Device Id: *int*
- Muted: *bool, optional*
- Volume: *int, optional*
- Output Port: *AligoAudioJackOutput, optional*

Response: *No response body returned (status only)*

Aligo Walls

Get All Aligo Walls and One Control Groups

Get All Aligo Walls and One Control Groups

- `api/aligo-physical-walls`
- `GET`

Response

- Wall/One Control Group Id
- Wall/One Control Group Name
- Devices
    - Device Name
    - Serial Number
    - Online Status
        - Unknown
        - Online
        - Offline
    - List of Connected Ports
        - Name
        - Id

Mute/Unmute Audio on an Aligo wall

Mutes/unmutes audio on an Aligo wall

- `/api/aligo-physical-walls/{wallId}/mute-audio`
- `PUT`

Request:

- Physical Wall ID : *int*
- Mute : *bool*

Response: *No response body returned (status only)*

Get List of sources open on Aligo Walls or One Control Groups

Get list of sources open on Aligo Walls or One Control Groups

- `api/aligo-physical-walls/{physicalWallId}/sources`
- `GET`

Response:


```
[
        {
        "id": int,
        "name": string,
        "deviceId": int,
        "rxPortId": int,
        "sourceType": "HardwareStream"
        }
]
```


Close all sources on an Aligo Wall or One Control Group

Closes all the sources on an Aligo Wall or One Control Group

- `api/aligo-physical-walls/{physicalWallId}/sources`
- `DELETE`

Response: 204

Apply Aligo Layout

Applies a layout to a Physical Wall

- `/api/aligo-physical-walls/{physicalWallId}/layout`
- `PUT`

Request:

- name (Layout name)
- ContentFolderId?: (defaults to –1 if not provided)
- Layout Id : int

Response: Returns a list of Layout objects containing:

- layoutId : int
- Name : string
- Sources Array of sources that are in the layout
  - Id : Guid
  - Name : string
  - SourceType :Enum

    AdHoc,

    AligoMultiheadGroup,

    Application,

    ArqaMultiheadGroup,

    CaptureCardInput,

    CroppedVideo,

HardwareStream,

LocalMedia,

NetworkVideoStream,

RemoteConnection,

Web

Arqa Devices

Get Arqa Rx Device

- `api/arqa/rx/{deviceId}`
- `GET`

Response


```
{
      "monitorInfo": {
      "monitorName": "string",
      "lastChanged": "string"
},
"ddcMode": "string",
"powerSavingMode": "boolean",
"usbHidMode": "boolean",
"usbMassStorageAndUsb": "boolean",
"showRedFrame": "boolean"
}
```

Get All Arqa Rx Devices

- api/arqa/rx
- GET

Response

A List of Objects:


```
[
{
"monitorInfo": {
     "monitorName": "string",
     "lastChanged": "string"
},
"ddcMode": "string",
"powerSavingMode": "boolean",
"usbHidMode": "boolean",
"usbMassStorageAndUsb": "boolean",
"showRedFrame": "boolean"
}
]
```


Get Arqa Tx Device

- api/arqa/tx/{deviceId}
- GET

Response


```
{
```

"deviceId": number,

"name": "string",

"serialNumber": "string",

"isOnline": boolean,

"firmwareVersion": "string",

"videoMode": "string"

}

Get All Arqa Tx Devices

- `api/arqa/tx`
- `GET`

Response

[

{

"deviceId": number,

"name": "string",

"serialNumber": "string",

"isOnline": boolean,

"firmwareVersion": "string",

"videoMode": "string"

}

]

Open a source on an Arqa RX device

Connects an Arqa RX with an Arqa TX

- `/api/devices/arqa/rx/{rxDeviceId}/source`
- `PUT`

Request:

- TxDeviceId – The device Id of the TX you are trying to connect

Response: *No response body returned (status only)*

Close a source on an Arqa RX device

Connects an Arqa RX with an Arqa TX

- `/api/devices/arqa/rx/{rxDeviceId}/source`
- `DELETE`

Request: *No request body required*.

Response: *No response body returned (status only)*

Open an Arqa multihead group on an Arqa receiver group

Routes the transmitters in an arqa multihead group to the receivers in an Arqa receiver group

- `/api/devices/arqa/receiver-group/{receiverGroupId}/multihead-group`
- `PUT`

Request:

- Arqa multihead group Id (`arqaMultiheadGroupId`)

Response: N*o response body returned (status only)*

Close an Arqa multihead group on an Arqa receiver group

Disconnects the transmitters in an arqa multihead group to the receivers in an Arqa receiver group.

Request: *No request body required.*

Response: *No response body returned (status only)*

- `/api/devices/arqa/receiver-group/{receiverGroupId}/multihead-group`
- `DELETE`

Request:*No request body required*.

Response:*No response body returned (status only)*

Arqa receiver groups

Get all receiver groups

Gets all Arqa receiver groups available in Aetria.

- `api/arqa/receiver-groups`
- `GET`

Request: *No request body required*

Response: Returns a list of Arqa receiver group objects containing:

- RecieverGroupId (Id)
- Receiver Group Name (name)
- List of receiver device Ids

Walls

Get all Walls

Gets all virtual walls available in Aetria.

- `api/walls`
- `GET`

Request: *No request body required*.

Response: Returns a list of Wall objects containing:

- Wall Id (*wallId*)
- Wall Name
- Port number
- Current Layout Id (*layoutId*)
- IsOnline

Open a Layout on a Wall

Open a specified layout (*layoutId*) on a specified wall (*wallId*)

- `api/walls/{wallId}/current-layout`
- `PUT`

Request:

- Layout Id (*layoutId*)

Response: *No response body returned (status only)*

Get the current Template on a Wall

Get the current *templateId* and template definition on a specified wall (*wallId*)

- `api/walls/{wallId}/current-template`
- `GET`

Request: *No request body required*.

Response:

- Template Id (*templateId*)
  - This may not be a valid template number as the layout template may not exist as an actual template.

- Template Name

  List of Template Cells containing
  - Cell Id (*cellId*)
  - Cell Name
  - Column number

    Indexed starting at zero which is the left most column
  - Row Number

    Indexed starting at zero which is the top most row
  - Column Span

    Minimum of one span which indicates a single column span
  - Row Span

    Minimum of one span which indicates a single row span

Open a source on a wall by position

Open source by *sourceId* on a specified wall (*wallId*) at x/y coordinates with a size height/width. The window will be coerced into a new position and size if the coordinates and size place the window beyond the bounds of the wall, or below its minimum size.

- `api/walls/{wallId}/windows`
- `POST`

Request:

- Source Id (*sourceId*)
- Source Bounds (window position on wall) containing:
    - X coordinate

      Horizontal position of the top corner of the window

      In pixels with zero being leftmost
    - Y coordinate

      Vertical position of the top corner of the window

      In pixels with zero being topmost
    - Width

      Horizontal width of window in pixels
    - Height

      Vertical height of window in pixels
- Command Line Window Id (*cmdWindowId*)
    - The window id you can assign to the window for use in other API calls.
    - This id persists for the lifetime of the window.

Response: *No response body returned (status only)*

Open a source on a wall by template cell

Open source by *sourceId* on a specified wall (*wallId*) in a specified template cell (*templateId*)

- `api/walls/{wallId}/windows-template`
- `POST`

Request:

- Source Id (*sourceId*)
- Template Cell Id (*templateCellId*)
- Command Line Window Id (*cmdWindowId*)
    - The window id you can assign to the window for use in other API calls.
    - This id persists for the lifetime of the window.

Response: *No response body returned (status only)*

Switch a source, in an already open window on a wall

Switch source by sourceId on a specified wall (wallId) in a specified window (windowId)

- `api/walls/{wallId}/windows/switch`
- `POST`

Request:

- Source Id (sourceId)
- Command Line Window Id (WindowId): The window id configured whilst opening source, see above.

Response: No response body returned (status only)

Get Open windows on a wall

Get all the open windows on a wall

- `api/walls/{wallId}/windows`
- `GET`

Response: 200

[

{

"*id*": *0*,

"*title*": "*string*",

"*sourceId*": "*string*",

"*x*": *0*,

"*y*": *0*,

"*width*": *0*,

"*height*": *0*

}

]

Switch a source, in an already open window on a wall

Switch source by sourceId on a specified wall (wallId) in a specified window (windowId)

- `api/walls/{wallId}/windows/switch`
- `POST`

Request:

- Source Id (sourceId)
- Command Line Window Id (WindowId): The window id configured whilst opening source, see above.

Response: No response body returned (status only)

Close a single window on a wall

Close a window on a wall (*wallId*) by Command Line Window Id (*cmdWindowId*). Ensure you only include the command line window id in the request.

- `api/walls/{wallId}/window`
- `DELETE`

Request:

- *Window ID* – omit, do not use. This is reserved for future work.
- Command Line Window Id (*cmdWindowId*)
  - The target window id to close.
  - Once closed this window id is no longer valid.

Response: *No response body returned (status only)*

Close all windows on a wall

Close all windows on a wall (*wallId*)

- `api/walls/{wallId}/windows`
- `DELETE`

Request: *No request body required*.

Response: *No response body returned (status only)*

Move or resize a window on a wall

Move or resize a specific window (windowId) on a specific wall (wallId)

- `/api/walls/{wallId}/window/{windowHandle}/move-resize`
- `PUT`

Request: either move or resize can be null but not both

{

"move": {

"x": 1920,

"y": 540

},

"resize": {

"width": 900,

"height": 900

}

}

Response: No response body returned (status only)

Toggle Audio for an open source on a wall

Toggle audio for a specific window(windowId) on a wall (wallId)

- `/api/walls/{wallId}/windows/{windowId}/toggle-audio`
- `PUT`

Request:

{

EnableAudio: bool

}

Response: *No response body returned (status only)*

Maximise/Restore a window on a wall

Maximise/Restore a window(windowId) on a wall (wallId)

- `/api/walls/{wallId}/windows/{windowId}/restore-maximise`
- `PUT`

Request:

{

isMaximized: bool

}

Response: *No response body returned (status only)*

Update the frame settings for a wall

Update the frame settings for a wall

- `/api/walls/{wallId}/frame-settings`
- `PUT`

Request:

{

"framesEnabled": true,

"thickness": 0,

"frameColor": 0

}

Response:

{

```
        "type": "string",
        "title": "string",
        "status": 0,
        "detail": "string",
        "instance": "string",
        "extensions":
            "additionalProp1": "string",
            "additionalProp2": "string",
           "additionalProp3": "string"
},
"additionalProp1": "string",
"additionalProp2": "string",
"additionalProp3": "string"
}
```


Notes: The Frame color is in an ARGB format. The value for the alpha channel is represented in the bits 24-31, the red channel in bits 16-23, the green channel in bits 8-15, and the blue channel in bits 0-7. The value of the alphgeta value is ignored and the frame is always fully opaque. (Put in a value of -1 for the alpha channel)

Maximise/Restore a window on a wall

Maximise/Restore a window(windowId) on a wall (wallId)

`/api/walls/{wallId}/windows/{windowId}/restore-maximise`

`PUT`

Request:


```
{
```

isMaximized: bool

}

Response: *No response body returned (status only)*

The Frame color is in an ARGB format. The value for the alpha channel is represented in the bits 24-31, the red channel in bits 16-23,

/// the green channel in bits 8-15, and the blue channel in bits 0-7. The value of the alpha value

/// is ignored and the frame is always fully opaque. (Put in a value of -1 for the alpha channel)

Send window to front or back

Change the Z order of a window on the wall

- `api/walls/{wallId}/windows/{windowId}/change-z-order`
- `PUT`

Request:

- WindowZOrderPosition – must be “FrontMost” or “BackMost”

Response: *No response body returned (status only)*

Aligo layouts

Open an Aligo layout on an Aligo wall

Open an aligo layout on an aligo wall

- `/api/aligolayouts/{layoutId}/walls/{wallId}`
- `PUT`

Request: *No request body required.*

Response: *No response body returned (status only)*

Get aligo layouts

Returns a list of all aligo layouts

- `/api/aligolayouts`
- `GET`

Request: *No request body required*.

Response:

- List of aligo layouts
    - Id
    - ContentFolderId
    - Name
    - AligoLayoutData : List
        - SourceId : Guid,
        - MonitorIndex : int
- UserId
- CreatedAt
- ModifiedAt

Create Aligo layout from wall

Create an Aligo layout from an Aligo wall or OneControl Group

- `/api/aligolayouts/{wallId}`
- `POST`

Request:

- FolderId
- LayoutName

Response:

- Id
- ContentFolderId
- Name
- AligoLayoutData : List
  - SourceId : Guid,
  - MonitorIndex : int
- UserId
- CreatedAt
- ModifiedAt

Borders

Apply border to a wall window

Apply a border to a window (windowId) on a wall (wallId)

`api/walls/{wallId}/displayRegions/{windowId}/border`

`PUT`

Request:

{

BorderId: int

}

Response: `No response body returned (status only)`

Remove border from a window on a wall

Apply a border to a window (windowId) on a wall (wallId)

- `api/walls/{wallId}/displayRegions/{windowId}/border`
- `Delete`

Request: *No request body required.*

Response: *No response body returned (status only)*

Wall Banners

Open a banner on a wall

Open a banner (bannerId) on a wall (wallId)

- `/api/walls/{wallId}/banners`
- `POST`

Request:

- BannerOpenPosition: center top position of banner
  - X
  - Y
- BannerOverrdieBouns: optional override of configured banner starting size.
  - Width
  - Height
- Banner Id : int

Response: *No response body returned (status only)*

Close Banner on a wall

Close a banner region (bannerRegionId) on a wall (wallId)

- `api/walls/{wallId}/banners/{bannerRegionId}/close`
- `Delete`

Request: *No request body required*.

Response: *No response body returned (status only)*

Get all open Banners on a wall

Get all open Banners on a wall (wallId)

- `api/walls/{wallId}/banners`
- `Get`

Request: *No request body required*.

Response: *List of Open Banners*

- RegionId: Guid
- Name: String
- BannerId: int
- X: int
- Y: int
- Width: int
- Height: int

OSDs

Apply OSD to a wall window

Open an osd to a window (displayRegionId) on a wall (wallId)

- `/api/walls/{wallId}/displayregions/{displayRegionId}/osd`
- `PUT`

Request:

{

osdId: int

}

Response: *No response body returned (status only)*

Remove OSD from a window on a wall

Remove a border to a window (displayRegionId) on a wall (wallId)

- `api/walls/{wallId}/displayRegions/{displayRegionId}/osd`
- `Delete`

Request: *No request body required*.

Response: *No response body returned (status only)*

Folders

Get all content folders

Get all content folders

- `api/folders/content`
- `Get`

Request: *No request body required*.

Response: *List of content folders*

- Id: int
- Name: String

Assets

Get All Assets

Get All Assets

- `api/assets`
- `GET`

Response: *List of Assets*

- Id: int
- Name: string
- Type: AssetType

Example Workflow

Below are examples of very simple workflows to achieve results on the wall. It is up to the developer to optimize their applications correctly.

Opening a layout

1. Call the *Get all walls* api endpoint.

   This will return a list of walls which can be stored in memory/database.

2. User selects a Wall to perform an action on.

   The user can select a wall by name but internally within the 3rd party application it should use *wallId*.

3. Call the *Get all Layouts* api endpoint.

   This will return a list of layouts which can be stored in memory/database.

4. User selects a Layout to open.

   The user can select a layout by name but internally within the 3rd party application it should use *layoutId*.

5. Call the Open a Layout on Wall api endpoint using the selected *wallId* and *layoutId* in the request body.

Opening a source on the wall (by position)

1. Call the *Get all walls* api endpoint.

   This will return a list of walls which can be stored in memory/database.

2. User selects a Wall to perform an action on.

   The user can select a wall by name but internally within the 3rd party application it should use *wallId*.

3. Call the *Get all Sources* api endpoint.

   This will return a list of sources which can be stored in memory/database.

4. User selects a Source to open.

   The user can select a source by name but internally within the 3rd party application it should use *sourceId*.

5. The user should define the sources position and size. Internally the 3rd party application will allocate the *cmdWindowId* and store its association with the *sourceId* and *wallId*.

6. Call the Open a *Source on a Wall* by position api endpoint using the selected *wallId* and *sourceId* and user specified position in the request body.

Opening a source on the wall (by template cell)

1. Call the *Get all walls* api endpoint.

   This will return a list of walls which can be stored in memory/database.

2. User selects a Wall to perform an action on.

   The user can select a wall by name but internally within the 3rd party application it should use *wallId*.

3. Call the *Get all Sources* api endpoint.

   This will return a list of sources which can be stored in memory/database.

4. User selects a Source to open.

   The user can select a source by name but internally within the 3rd party application it should use *sourceId*.

5. Using the selected *wallId*, call the *Get the current template on the wall* api endpoint.

   This will return the structure of the template on the wall as a list of cells which can be stored in memory/database.

6. The user selects a Template Cell to open the source.
   The user can select a template cell by name, or by position, but internally within the 3rd party application it should use *templateCellId*. From the cell structure it would even be possible to create a rudimentary diagram of the template for the user to select the cell from. Internally the 3rd party application will allocate the *cmdWindowId* and store its association with the sourceId and *wallId*.

7. Call the *Open a Source on a Wall by Template cell* api endpoint using the selected *wallId* and *sourceId* and *templateCellId* in the request body.

Closing a window directly opened by the 3rd party application

1. User selects a window to close from a list of stored *cmdWindowId* and associated data.

2. Using the *wallId*, call the Close a single window on a *wall* api endpoint, specifying only the *cmdWindowId* in the request. Do not include the *windowId* at all.

Network Manager

The Network Manager page enables users to create additional standby Network Manager servers using the High Availability function to run alongside the Network Manager server currently controlling the system which is continually updated with the same data. It also allows the user to configure and export logs to assist with any support issues.

High Availability

Should an incident occur where the Network Manager server goes offline due to a power failure for example; the standby Network Manager server seamlessly takes over the management of the Aetria network. Events that trigger the standby Network Manager server are as follows:

- Active Network Manager appliance loses connection to Management or AV network if for example an ethernet cable is disconnected or there is a network fault.
- Active Network Manager appliance experiences a software component failure where an automatic restart is not possible.
- Active Network Manager appliance experiences hardware failure preventing communication with the standby.

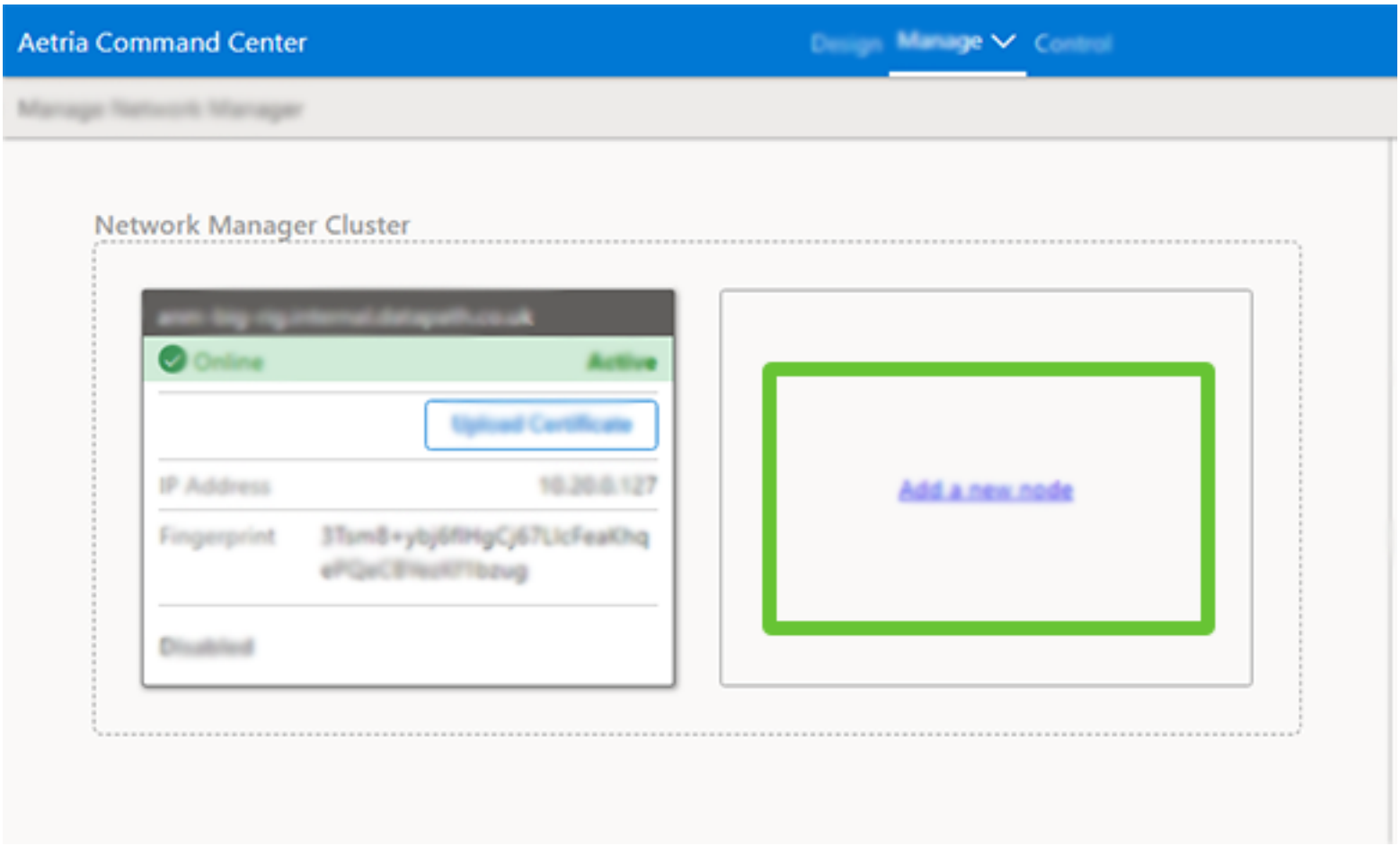
Setting up a Network Manager Cluster can only be done by the system administrator who has Manage Global Settings permissions.

To open, select **Network Manager** from the manage menu and the Network Manager panel is displayed. The center panel shows the current Network Manager node on the left and a click link to **Add a New Node** on the right.

Node dialog's display basic information regarding the Network Manager server including the node number, IP address, whether or not the Network Manager server is online or offline.

Adding a Node

To create a new Node, click on **Add a new Node** in the center panel.



An **Add New Node** dialog is displayed.

Enter the host name or IP address. A Node represents a back up network manager server that will be used should the main server go offline.

Adding a Node is a two way process. Firstly, the node is created and pointed towards the Network Manager server that will be used as the standby server to request authentication. To authenticate the request, open Aetria Command Center on the target Network Manager server and open the Manage/Network Manager panel.

A message is displayed requesting authentication. This process ensures the correct Network Manager server is connected as the standby.

Once authentication has taken place return to the main server to complete the setup process by adding details to the cluster:

Cluster Management Virtual IP - A static IPv4 address that the cluster will assign as a virtual IP for the management network. The cluster will assign this IP to whichever node is currently active. Therefore the Aetria Network Manager can always be accessed on the same IP address.

Cluster Public Hostname - The hostname that the cluster will be accessed from. The cluster setup process uses the hostname for when Aetria Network Manager is accessed via that hostname.

Node 1 iDRAC IP and Node 2 iDRAC IP - These are static IPv4 addresses that will be assigned to the iDRAC. iDRAC is a management platform that is integrated into the Dell servers used for Aetria Network Manager.

Click on **Save** to create the new Node.

The Nodes will display **Online - Active** for the main Network Manager server and **Online - Standby** for the backup Network Manager server.

The Active Node has a dropdown menu, click on the three dots top right of the Active Node dialog and the menu displays

Manual failover - Select Manual failover and a dialog is displayed requesting the user to confirm the action is required. The Manual failover function, when selected, causes the Network Manager server to fail which in turn brings the standby server on line.

An option is available to perform a **Forced Manual failover**, this will fence the active Aetria Network Manager via iDRAC as opposed to performing a normal manual failover therefore simulating a real life failover. This will result in a reboot requiring the standby node to be brought back online. To bring the standby node back on line, click on the three dots on the top right of the offline standby node and select **Enable**.

Re-start Aetria - This will restart Aetria Command Center. Access to both Aetria Command Center and Aetria Workstation will be affected whilst Aetria re-starts.

The dropdown menu for the active Standby Node displays:

Remove from Cluster - Removes the Node from the Cluster. Deletes the connection and removes the Node from the set up. When removed, the Node is no longer available as a standby Network Manager server. Once removed, the Node will require a re-installation of

the Aetria Network Manager before adding it back to the cluster. To reinstate it, the **Add New Node** process as detailed above is required.

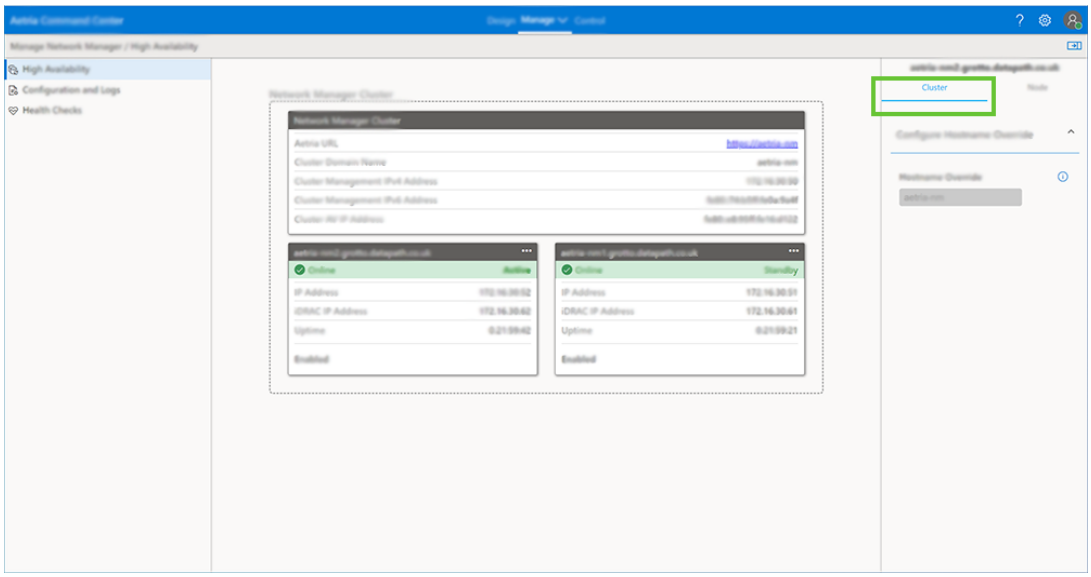
Disable - Select disable and the Node status changes to Offline. This could be used for maintenance of the standby Network Manager server. To reinstate the status to Online, use the dropdown menu and select **Enable**. Data replication will be paused and failover will not be possible until the node rejoins the cluster.

Re-start Aetria - This will restart Aetria Command Center. Access to both Aetria Command Center and Aetria Workstation will be affected whilst Aetria re-starts.

Node and Cluster Properties

Clicking on a node opens a properties panel on the right of the window.

Cluster Properties

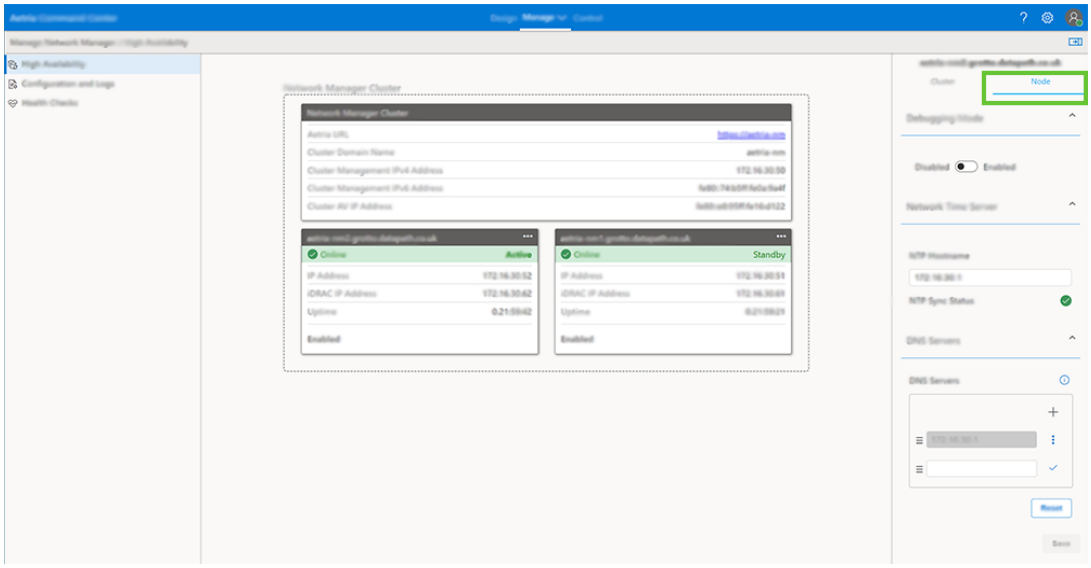


Configure Hostname Override

The Hostname is the main identity of the Network Manager, the override offers the user flexibility on a network as to what its called, for example allowing non-DNS users to configure it as the IP address.

Type the required name in the Hostname Override edit box. Users can only change the hostname override when not in a High Availability (HA) environment, if a user is in a HA environment, the option is greyed out and not available.

Node Properties



Debugging Mode

When enabled, users are granted access to the debug pages for Aetria Network Manager.

Network Time Server

NTP Hostname

Displays the configured IP or domain name of the NTP server for the selected node which synchronizes the time with Network Manager. Click in the edit box to change the configured NTP server.

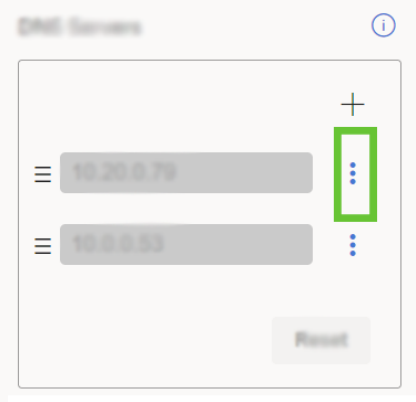
NTP Sync Status

The NTP Sync Status displays the current status of the connection. A green circle with a tick indicates the connection is working correctly, a yellow triangle means an error has occured and action needs to be taken to re-establish the connection.

DNS Servers

Displays a list of DNS entries for routing access to Aetria.

To edit or delete the DNS entries click on the three dots located to the right of each entry as shown below:



Once changes have been made to the entries the reset button is activated. Click **Reset** to reset the DNS entries.

Click on **Save** to save any changes to the cluster or node properties.

Cluster Admin Page

Should both nodes simultaneously lose power the user can restart the cluster using the admin page. To access the admin page browse to https://<node1>/admin and click on **Start Cluster** button to reinstate the cluster. A warning will be displayed if a forced restart is required.

Keyboard and Mouse Control

If the Aetria Network Manager is restarted, keyboard and mouse control will be re-established for existing users.

Configuration and Logs

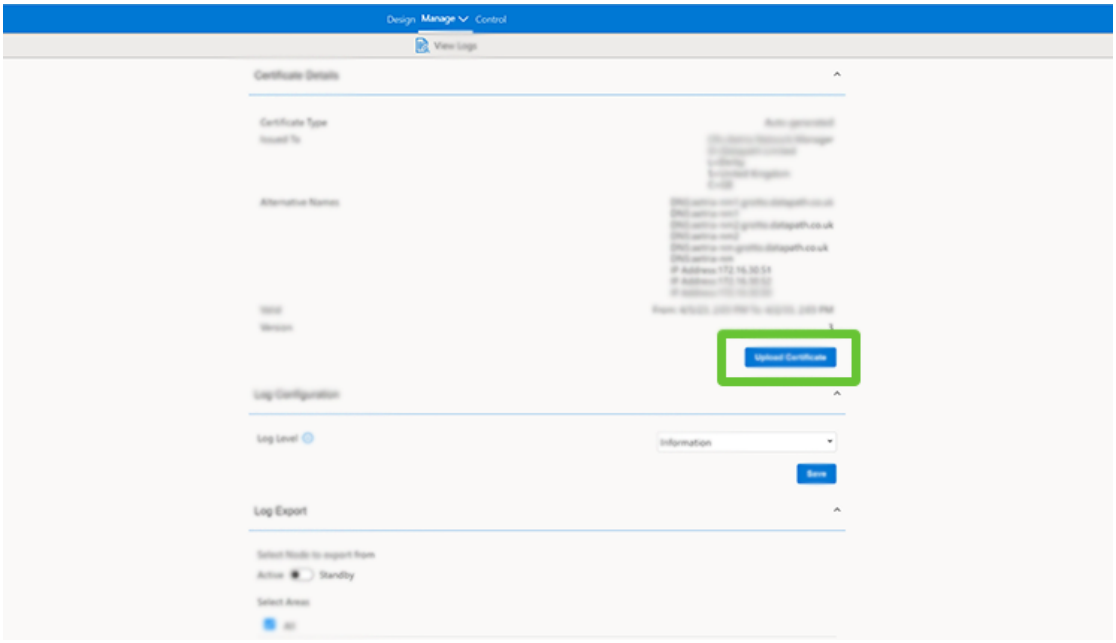
Certificate Details

A certificate is a digital certificate that authenticates the identity and security of the Aetria web interface environment. A certificate will be created by the system IT manager who will

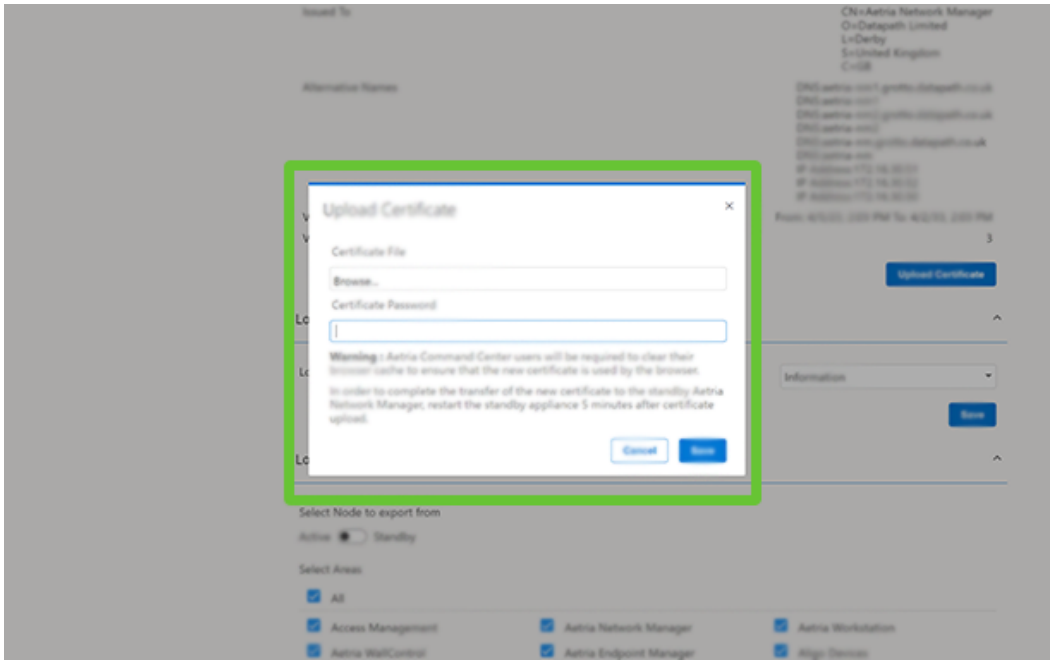
create and save the certificate as a Personal Information Exchange file (.pfx). When uploaded to Network Manager, the certificate is distributed to all endpoints.

Upload Certificate

To upload a .pfx file, click on the Upload Certificate button.



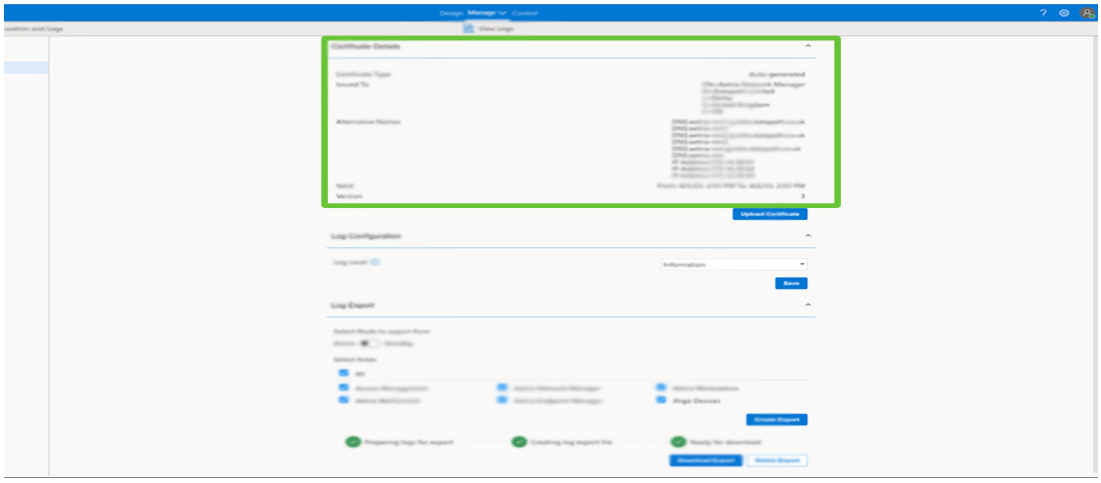
An Upload Certificate dialog is displayed.



Browse and locate the required .pfx fie and enter the certificate password if one has been created and click Save.

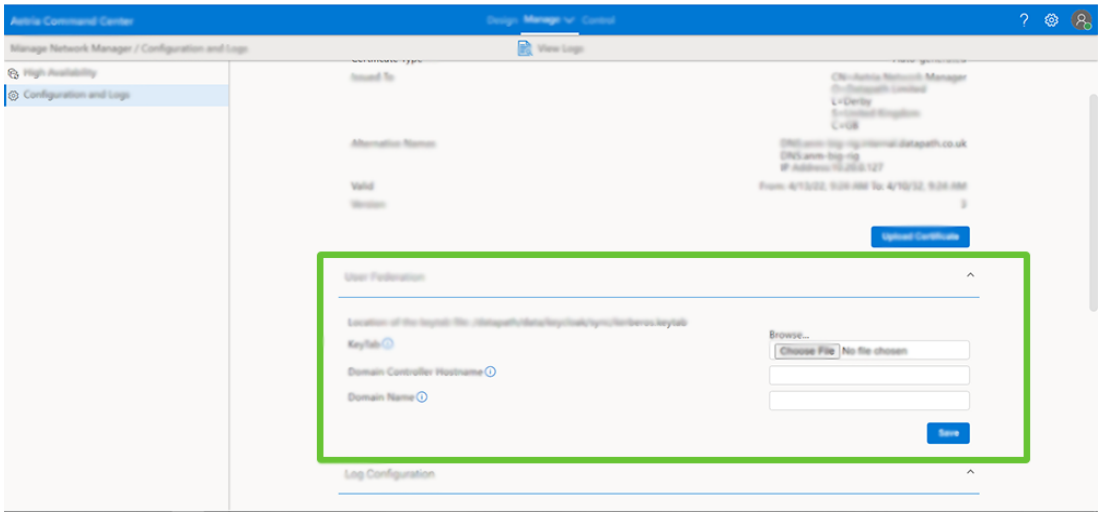
It should be noted that Aetria Command Center users are required to clear the browser cache to ensure the new certificate is adopted by the browser.

Once uploaded successfully, details of the certificate are displayed in the center panel.



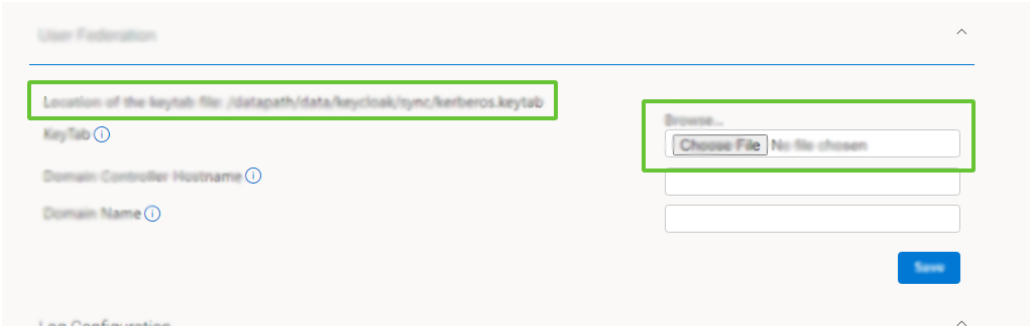
User Federation

This section allows the user to upload certain information for the User Federation setup.



- Key Tab - Key tab files are used to allow Aetria to authenticate federated users without the need for them to enter a password. To upload the key tab file, click on

Choose File and browse to the location of the file. Details of the location are shown at the top of the User Federation panel.

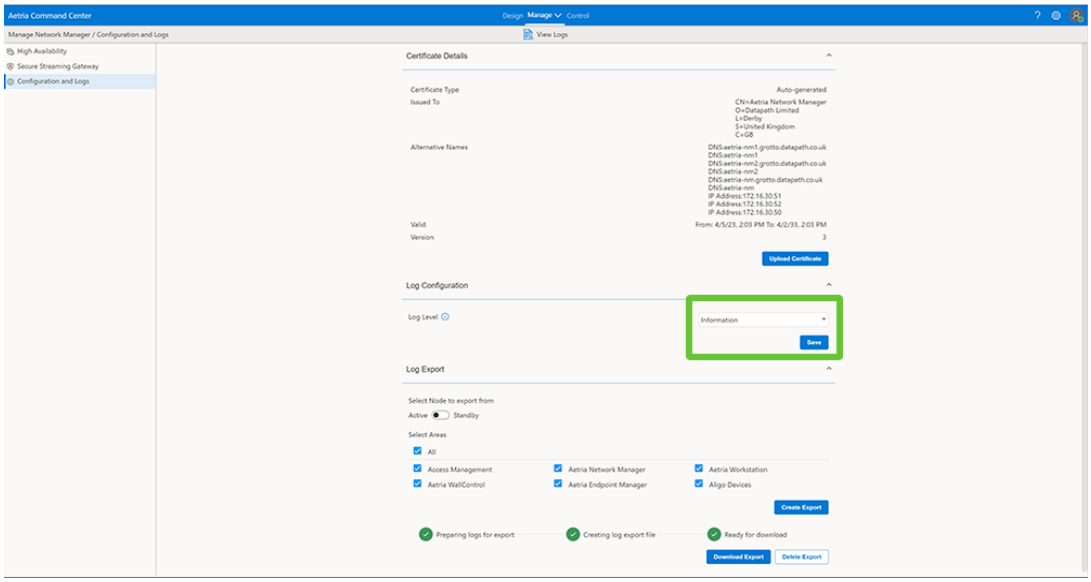


- Domain Controller Hostname - Enter the name of the domain controller that manages the network requests.
- Domain Name - Enter the domain name that users will type into the browser.

Once the Key Tab file has been uploaded and all three fields have been populated, click on **Save**.

Log Configuration

Use the dropdown list to set the minimum log level for Aetria Network Manager. The recommended level is **Information**.



Users can also turn on or turn off the logging of Aligo devices.

Once the log level has been selected click on **Save**.

Log Export

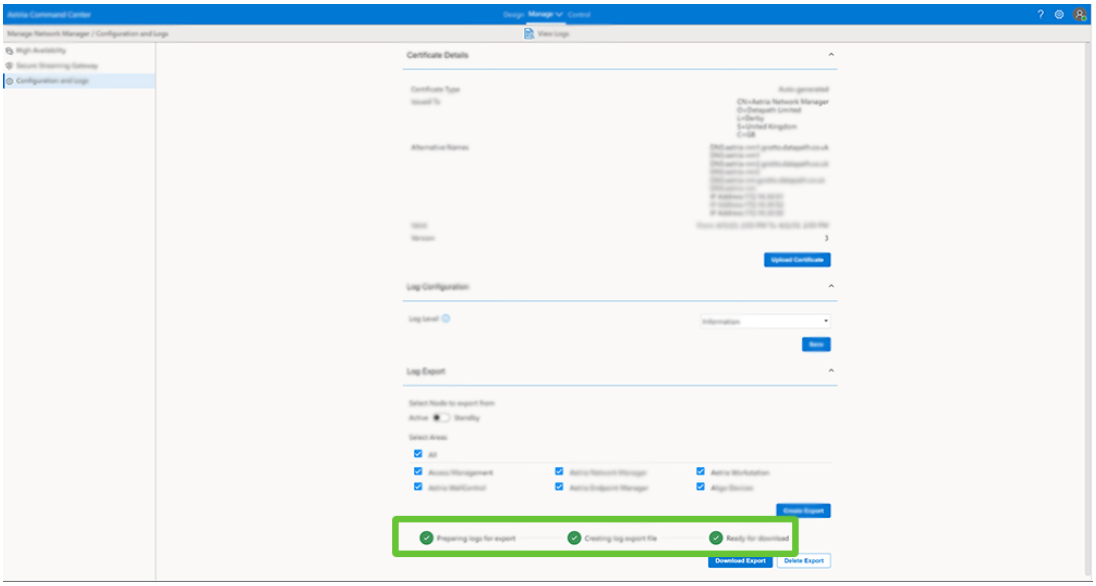
Select Node to export from

Users can select which Node to export the log files from, the active Network Manager or a standby system.

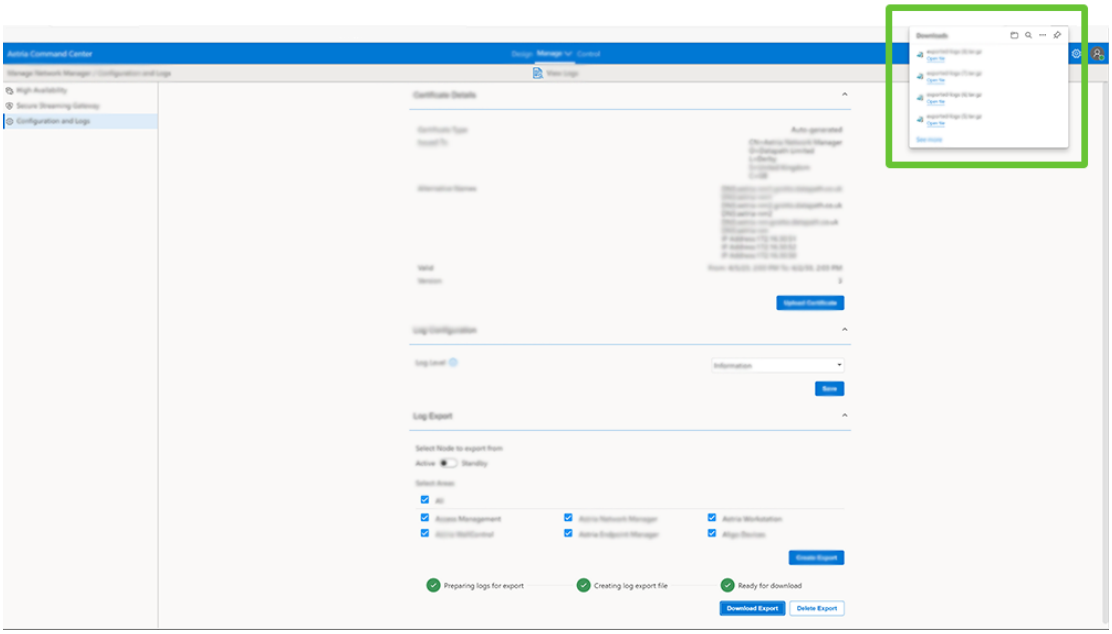
Select Areas

Select the areas where the logs are to be exported from. Multiple areas can be selected by clicking in the relevant checkbox. If a log is required for all areas, select **All**.

Once all required areas have been selected click on **Create Export**. Creating a log for export can take up to several minutes depending on how many areas have been selected and how large the system is. A status of the export log is displayed :



Once the creation of the log export is complete, click the **Download Export** button. It should be noted, some exported log files can be large in size and may take several minutes to download. A dialog is displayed showing the status of the download:



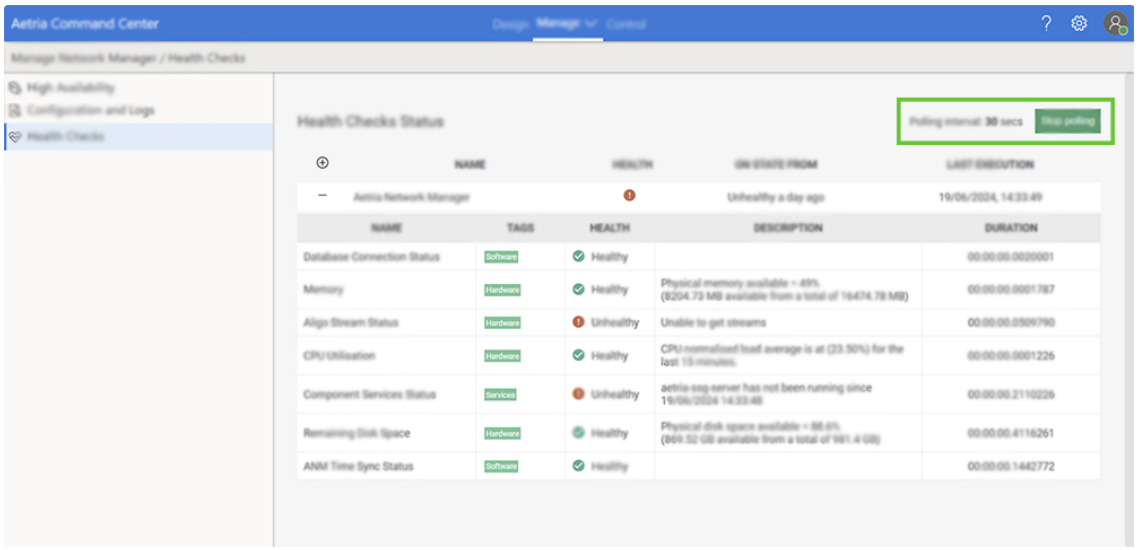
Redirect URLs

Set up a friendly name to access Aetria Command Center. Setting a friendly name does not replace the host name or IP address that is set up on the node.

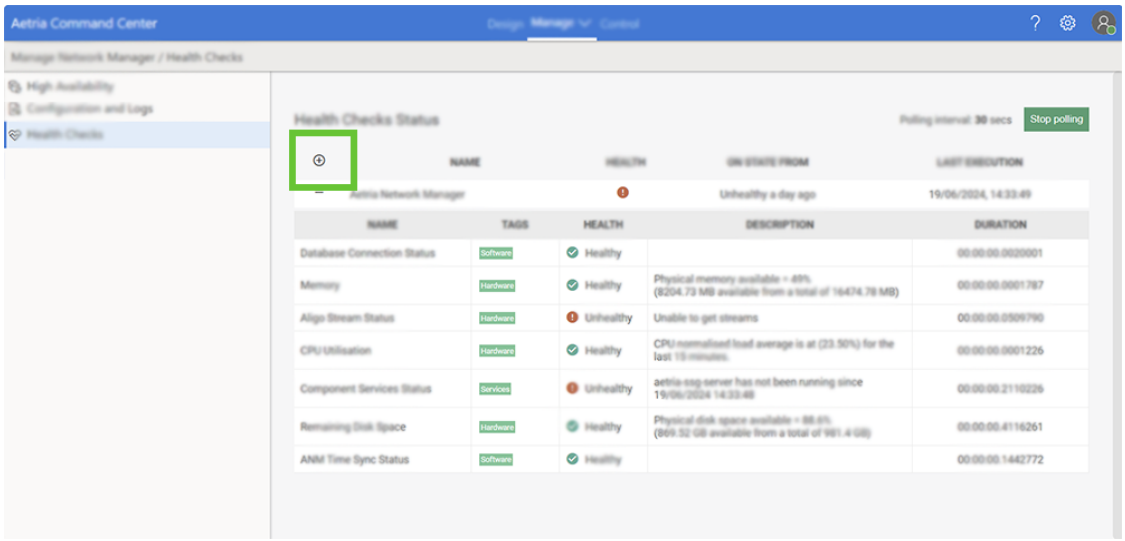
Health Checks

The Health Checks status page displays hardware and software elements of the Aetria Network Manager that are regularly polled for errors.

The Polling Interval shows how often a poll occurs to check for a change in state, the default is 30 seconds, this cannot be changed. The polling can be stopped/started at anytime by clicking on the Polling button.



To view the status of the health checks for each element of Aetria Network manager and any associated standby nodes, click on the cross icon as shown below:



When expanded, the window displays a list of elements that have been checked during the latest polling, any element found to have any issue will be classified as unhealthy (red icon) or degraded (amber icon). The description column will give the details of any problems that have been detected.

It is recommended to monitor the health check status until the next polling cycle takes place (30 seconds) to see if the unhealthy or degraded status changes.

The following table offers advice regarding what action to take should any status read unhealthy:

Status	Description	Advice
Database Connection Status		
Unhealthy		View the Aetria Service Monitoring dashboard, check to ensure the 'postgresql@13-main' service is running. If not restart network manager.
Memory		
Degraded	"Caused when the remaining memory is less than 10% of the total."	View the Aetria Network Manager Monitoring dashboard to see further details on what is utilizing the excess memory.
Aligo Stream Status		
Degraded	"SQX encryption keys missing/invalid for Aligo…"	Reboot the affected Aligo to resolve. If the issues persists deprovision and reprovision the device.
	"DS10G encryption keys missing/invalid for Aligo..."	
	"DS10G and SQX encryption keys are missing for the Aligo…"	
	"Stream link for Aligo..” “is missing or	

	invalid."	
CPU Utilization		
Unhealthy	Caused when the remaining CPU is less than 10% of the total.	View the Aetria Network Manager Monitoring dashboard to see further details on what is utilizing the excess processing.
Component Services Status		
Unhealthy	"SERVICE has not been running since…"	This is a critical service. Recommend to restart Network Manager to ensure core functionality is maintained.
Degraded	"SERVICE has not been running since…"	This is a non critical service. Recommend to restart Network Manager to resolve when available or if functionality is impacted.
Degraded	"has only been running since…" "and may be unhealthy"	This service has either just started or has encountered issues causing regular reboots
Remaining Disk Space		

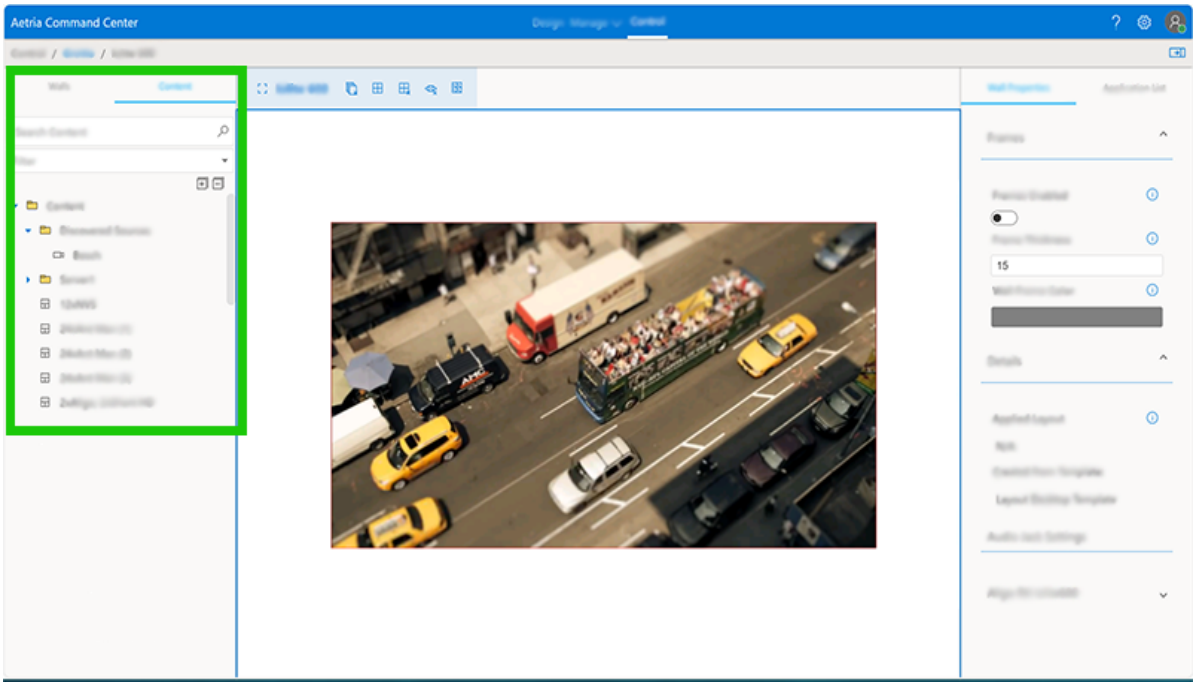
Unhealthy	Caused when the remaining disk space is less than 10% of the total.	View the Aetria Network Manager Monitoring dashboard to see further details on what is utilizing the excess storage.
Time Sync Status		
Unhealthy	"Aetria cannot sync to the specified time (NTP) server"	Check Manage>Network manager to ensure the set NTP Hostname is valid on all nodes.
Unhealthy	"Aetria cannot reach the specified time (NTP) server."	Check Manage>Network manager to ensure the set NTP Hostname is valid.
High Availability Status (High Availability)		
Unhealthy	“Standby node is…”	Navigate to Manage>Network Manager and ensure the standby node is online, active and enabled.
Database Replication Status (High Availability)		
Healthy	“Active node: Outgoing replication synced”	There are no issues replicating data from this

		node.
Healthy	“Standby node: Incoming replication synced”	There are no issues replicating data to this node.
Unhealthy	“Database replication is not running successfully”	Check Manage>Network Manager to restart and ensure the affected node is online (active or standby).

Control

The Control area of the Aetria application is where the user controls the content of display walls. Users can work with specific walls, controlling the content including sources, templates, layouts and assets.

Content Panel



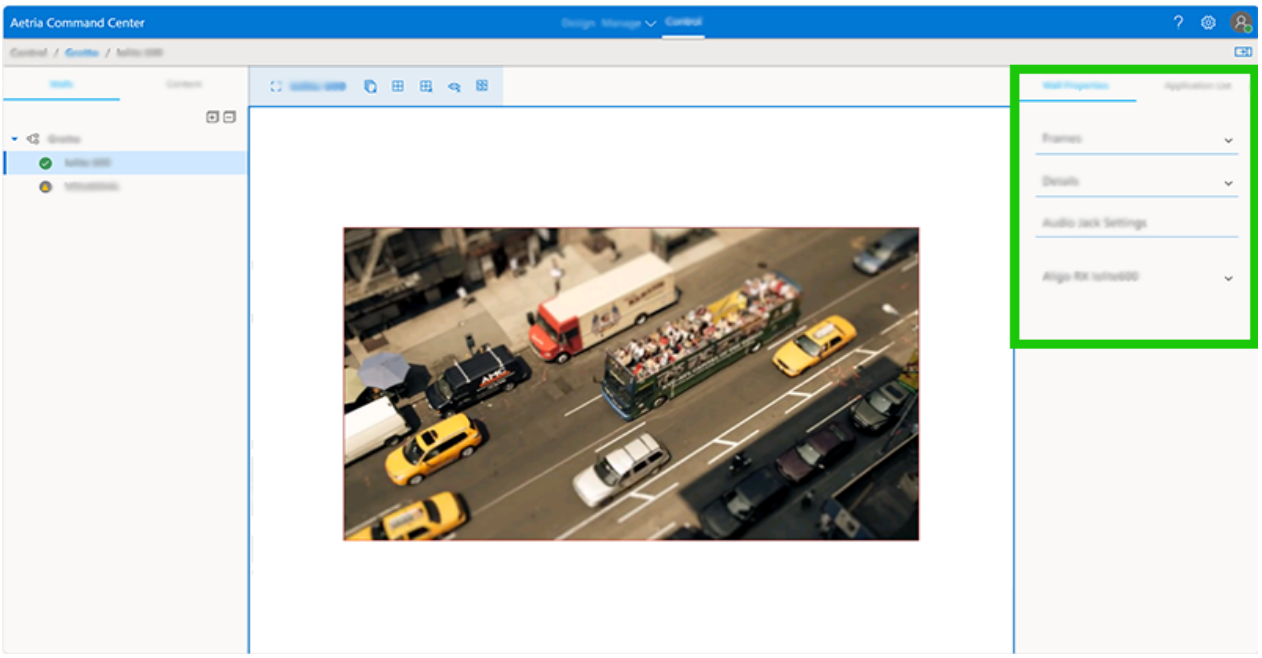
On the left of the work area are two panels, one displays the locations and the walls contained within each location the other panel displays content. The content panel can be fully opened or retracted using the **+** or **-** icons located at the top, right hand side of the panel.

Search

A search function is available to enable the user to search for specific content either by name or tag. Tags can be created in the wall properties panel. The filter dropdown list is used to select a specific type of content including any content set as a favorite. To set a source as a favorite, highlight the source in the content panel and click on the star to the right, when the center of the star is filled in, the source is set as a favorite.

Click on a specific location and all walls within that group are displayed in the central wall panel. To display a single wall, expand the location which contains the wall you require

and click on the wall. When a wall is selected, the wall properties and application list are displayed in the panel on the right of the application.



Wall Properties

- Frames Enabled - When frames are enabled, windows are displayed with frames around the outer edge.
- Frame Thickness - Apply the required thickness of the frame.
- Wall Frame Color - Apply the required color of the frame.
- Applied Layout - Shows the name of the layout currently displayed on the wall.
- Created from Template - Displays the name of the template if a template is applied to the wall. N/A shows no template applied.
- Audio Jack Settings - Audio Jack refers to the physical audio output on the Aligo RX. If the audio output is used, the volume can be controlled using the slide control.

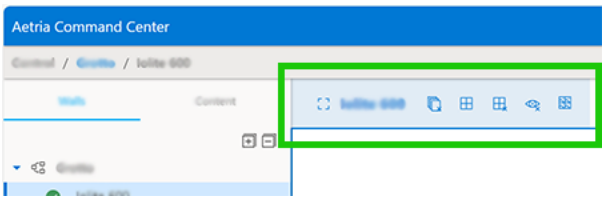
- Click on the **Tags** tab to create search strings for a specific wall or source. You can then use the search function to quickly access the required items. This is a particularly useful function when a system has many walls and sources.

The filter dropdown list at the top of the sources content panel is where users can select to view selected sources and assets including On Screen Display, Borders, Frames and Banner configurations.

It should be noted that right clicking on a wall in the content panel displays a browser menu and not an Aetria menu.

Shortcuts

A number of shortcut icons are available for the selected wall, these are located at the top of the control panel as shown below:



The icons displayed are dictated by the type of wall selected, each icon has a tool tip describing what the icon means:

Click on this icon to focus the wall in the center panel of the Aetria application. This can also be done by clicking on the wall name.

Shows the current latency status. (Aligo wall). The icon will change color depending in the current status. Grey = Genlocking disabled, Orange = establishing a connection, Green = Genlock or Low latency enabled and Red = Genlock or Low latency connection error.

Click on this icon to close all of the windows displayed on the wall. (All walls).

Click on this icon to open the Apply Template dialog where the user can select a template to be deployed to the wall...

Click on this icon to remove all templates on the wall. (All walls).

Click on this icon to display or remove the template names. (All walls)

Click on this icon to display just a wire frame representation of the wall. This will remove the window content and the name of the source being displayed in the application. (All walls).

Click on this icon to mute all audio on all displays on the wall. Individual displays can be muted by clicking on the mute icon located in the top right corner of each display representations. (Aligo Walls).

Click on this icon to save the selected wall content as a layout. This function is only available to users who have the ability to create layouts and can only save layouts to folders they have access to.

Adding Content to a Wall

Adding content to a wall is a simple drag and drop process. All available content, including assets are listed on the contents panel. Use the dropdown list on the right hand side of the panel to select the required content.

It should be noted that if an Aligo wall is selected, only Aligo sources and layouts can be added to the wall.

Adding a Source to a Wall

The types of sources and assets are shown using icons, the following table identifies the type of source/asset each icon represents:

	VNC and RDP Connections		Local Media - Document		Network Video Stream
	Web Source		Composite Windows		Capture Card Input/Cropped Source

	Capture Card - No Signal		Restreaming unavailable due to the port having no signal or the source has a HDCP signal.		Carousel
	Hardware Stream Source		Application		Local Media - PDF
	Local Media - Video		Local Media - Photo Images		On Screen Display - Asset
	Banner - Asset		Border - Asset		Favorites

To add a source to a wall, open the Content folder and a list of available sources is displayed. Click on and hold the source you wish to display and drag it onto the wall representation and position as required. Once the source is applied to the wall it becomes a window and is encased in a frame. The window can be resized by using the cursor to grab the window frame and dragging it to the desired size. Right clicking on a source window also offers the functions to maximize the window, bring the window to the front or send it to the back.

When a window is selected, the window properties are displayed in the properties panel and can be edited. Position the window precisely using the "**X**" and "**Y**" coordinates. The "**X**" coordinate is the distance, in pixels from the edge of the left side of the desktop, the "**Y**" coordinate is the distance in pixels from the top. The width and the height of the window can also be edited.

Using the left and right arrows at the top of the properties panel the user can also select and view the selected window properties, input, instance and frame properties.

Frames for windows can also be created. Using the left and right arrows at the top of the properties panel select **Frames**.

Toggle **Frames Enabled** to display or hide any frames that have been created for the windows. The frame thickness can be configured by entering a value in the frame thickness edit box, the value is in pixels.

To select a color for the Wall Frame, click on the color bar to open the color picker, select a color for the frame. Frames are applied to all windows on the wall when enabled.

To remove a window from the wall right click on the window representation and select **Close** from the displayed menu.

When a window on the wall is selected, the **Selected Window Properties** are displayed, the properties will differ depending on the type of source selected:

- Source Name - Displays the friendly name given to the source input. The name can be changed by clicking on the source in Manage Sources.
- Position - Displays the coordinates of the position of the selected window on the wall, values in pixels. Values can be edited to position the window as required.
- Resolution - Displays the resolution of the selected window. Values can be edited to set the required window dimensions.
- Title Bar - Toggle On or Off to display or remove the title bar from the selected window.

The **Instance Tab** displays information on a specific instance of the source that has been selected and displayed on the wall. The instance tab is located in the panel on the right. The instance properties will differ depending on the type of source selected:

- URL - Only displayed for web sources. Displays the URL of the web source the window is currently connected to. Changes to the URL should be saved to take effect.
- Color Domain/Space (Video Input)- Allows you to select a preferred color domain. Use the dropdown menu and select the required domain. (Not available for Composite/S-Video).
- Brightness (Video Input) – Adjust the brightness of the source using the slider.
- Contrast (Video Input) – Adjust the contrast of the source using the slider.
- Resolution (Video Input) - Displays the resolution of the selected source.
- Interlacing (Video Input) – Select between Bob and Weave.

- Signal Type (Video Input) - Displays the type of source being captured, for example DVI, DisplayPort, VGA, Composite etc.
- Ganging (Video Input) – Multiple capture sources ganged together to create a single input. Values indicate the arrangement of the ganged source.
- OSD Name - When a window is displayed containing an on screen display, the name of the OSD is displayed.
- OSD Background Color - Displays the background colour for the OSD.
- Frame Settings - Select a frame color for the window using the dropdown list. Wall Color = Automatically selects a color from the colors displayed on the wall. Source Color = Automatically selects a color from the colors displayed in the source. Specific Color = Opens the color picker allowing the user to select a required color.
- View Mode (Local Media source - PDF/Document) - Use the drop down list to select the view mode of the document source within the window:

  Whole Page – The whole of the selected page is visible in the window. If the window is scaled, the page is scaled to fit.
- Fit Page Vertically – The selected page will fit vertically in the window. The vertical fit is maintained if the window is scaled.
- Fit Page Horizontally – The selected page will fit horizontally in the window. The horizontal fit is maintained if the window is scaled.
- Page Number (Local Media source - PDF/Document) – Type in a page number to display that specific page in the window.
- Vertical Page Scroll (Local Media source - PDF/Document) – Sets a vertical offset from the top of the page. Vertical offset is only effective when the View Mode is configured to Fit page Horizontally.
- Horizontal Page Scroll (Local Media source - PDF/Document) – Sets a horizontal offset from the left of the page. Horizontal offset is only effective when the View Mode

is configured to Fit Page Vertically. Horizontal offset will also have effect if a horizontal scroll bar is present.

- Zoom Percentage - Enables the user to zoom into document or the web page. If 2 or more instances of a web page are being displayed, Zoom settings are linked and will affect all instances.
- Enable toolbar (Local Media source - PDF) – Enable/Disable the toolbar to appearing in the window on the display wall.
- Frame color (Local Media source - PDF) - Displays the default color of the window frame. Click on the pencil icon to edit the color and transparency.
- Border Name - When a window is displayed containing a border, the name of the border is displayed.
- Maintain Aspect Ratio - Allows the user to lock or unlock the aspect ratio of the source when resizing. Click on the pencil icon to change the default setting of the aspect ratio of the source.

Cropped Source

If a source has been cropped, the cropped video inherits all the window properties from the parent source

Adding a Layout to a Wall

Layouts can be used to organize the content displayed on a wall. Commonly used content can be saved in specific layouts and recalled to the display wall when needed providing the content is available.

Click on this link for information on how to create a new layout.

To add a layout to a wall, open the layout folder in the content and assets panel on the left, select the required layout and drag it onto the display wall representation.

It should be noted that sources saved when the layout was created are only displayed if the sources are still available.

To remove a layout from the wall, click on close all windows icon located next to the wall name. If a template was used to create the layout click on the remove templates icon.

Adding a Template to a Wall

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.

Click on this link for information on how to create a new template.

Select the template you wish to use by opening the template folder, clicking on it and dragging it onto the display wall representation.

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 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 be 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 Content 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.

Click on this link for information on how to create and edit template.

Adding a Banner to a Wall

Banners can be created to display single strings of information on a display wall. The banner can contain text or an RSS feed.

Click on this link for information on how to create and edit a banner.

To add a banner to a wall, open the banner filter and a list of available banners is displayed. Click on and hold the banner you wish to display and drag it onto a wall representation and position as required. Once the banner is applied to a wall it becomes a window and is encased in a frame. The window can be resized by using the cursor to grab the window frame and dragging it to the desired size.

To remove a window from a wall right click on the window representation and select **Close** from the displayed menu.

Adding an On Screen Display (OSD) to a Wall

The On Screen Display (OSD) tool allows you to configure and display text on Video 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.

Click on this link for information on how to create and edit an OSD.

To add an OSD to a wall, open the OSDs filters and a list of available OSD is displayed. Click on and hold the OSD you wish to display and drag it onto a wall representation and position it on a video window as required.

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

Adding a Carousel to a Wall

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.

Click on this link for information on how to create and edit a carousel.

To add a carousel onto a wall, open the carousel filters and a list of available carousels is displayed. Click on and hold the carousel you wish to display and drag it onto a wall representation and position as required. Once the carousel is applied to a wall it becomes a window and is encased in a frame. The window can be resized by using the cursor to grab the window frame and dragging it to the desired size.

When a window is selected, the window properties are displayed in the properties panel, the properties can be edited. Position the window precisely using the "**X**" and "**Y**" coordinates. The "**X**" coordinate is the distance, in pixels from the edge of the left side of the desktop, the "**Y**" coordinate is the distance in pixels from the top. The width and the height of the window can also be edited.

To remove a carousel from a wall right click on the window representation and select **Close** from the displayed menu.

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