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Introduction



WELCOME

ARDx™ Viewer from Adder Technology is a software client application that allows a PC user to manage and connect to remote KVM over IP devices that feature ARDx™ technology. The ARDx™ Viewer supports high-quality video and audio, secure connections and low latency control of the remote host and provides all the necessary tools to configure and manage connection settings and user profiles.

Connect, View, Manage and Control

Use the dashboard to manage connections to several devices, access user admin tools and adjust settings. Multiple sessions can be launched concurrently, providing a seamless remote KVM experience on your desktop.

Seamless User Experience

Inherently low latency provides precision control as though you were operating the remote device directly. Unobtrusive On-Screen Display (OSD) lets you manage key features quickly and intuitively.

High quality audio and video

Renders fluid motion, accurate colour and clear text without tearing or artifacts for demanding image critical applications. Synchronised high quality digital audio provides the complete multi-media experience.

Groups and Multi Head Groups

Groups allow you to collect together multiple server connections that serve related purposes. Multi head groups introduce features specifically for servers with multiple video displays.

Highly Secure

Enterprise grade security ensures your connection is safe. AES-256 encryption and RSA-2048 authentication offer the highest level of protection, trusted by security agencies and financial institutions worldwide.

Connection Profile Management

Create, save, modify, import and export multiple target PC network connection profiles. Provides IT admin with the tools to simplify single and batch system installations.

User Management

Admin can create, configure and manage an effectively unlimited number of User Profiles, each with defined access rights such as view only or the ability to connect privately by blocking concurrent connections.

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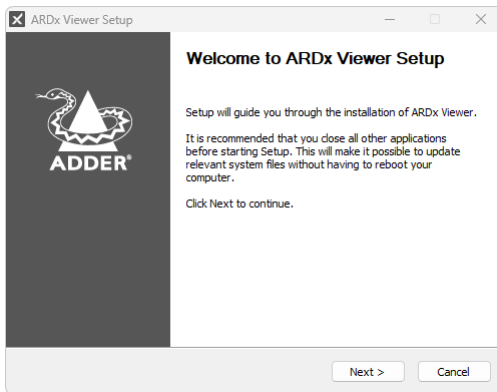
INSTALLING THE ARDx™ VIEWER FOR WINDOWS

Connection to the ARDx™ device is carried out over a network, using the ARDx™ Viewer application running on a Windows-based computer.

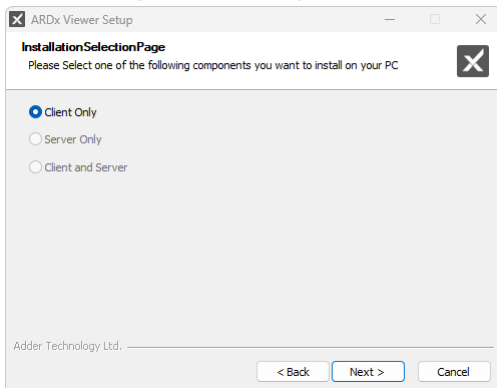
- If you already have the ARDx™ Viewer application installed, please follow the Initial configuration instructions given on page 5.

To install the ARDx™ Viewer

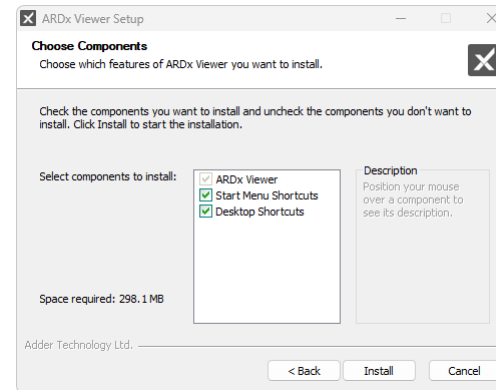
- 1 Go to the Adder website (www.adder.com), then search for and download the ARDx™ Viewer installation file for Windows.
- 2 Run the downloaded .exe file to view the opening dialog:



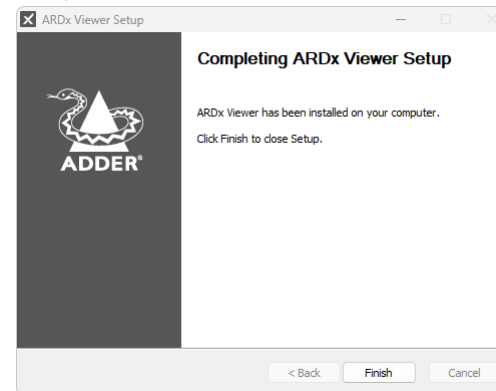
- 3 Click *Next >*. You will now be asked to read and agree to the end user license agreement.
- 4 Click the *I Agree* button to proceed to view the Installation Selection page:



- 5 Click *Next >* to confirm the installation of the 'Client Only' and to view the *Choose Components* page:



- 6 If necessary, alter the installation options and then click *Install* to proceed. The necessary files will be installed and the following page displayed once the process is complete.



- 7 Click *Finish*.

INSTALLING THE DRIVER FOR MULTI HEAD OPERATION

Note: Only for Windows™.

If you wish to take advantage of the ARDx™ Multi Head feature to view dual video displays, it will be necessary to install a small driver onto each server involved with Multi Head operation.

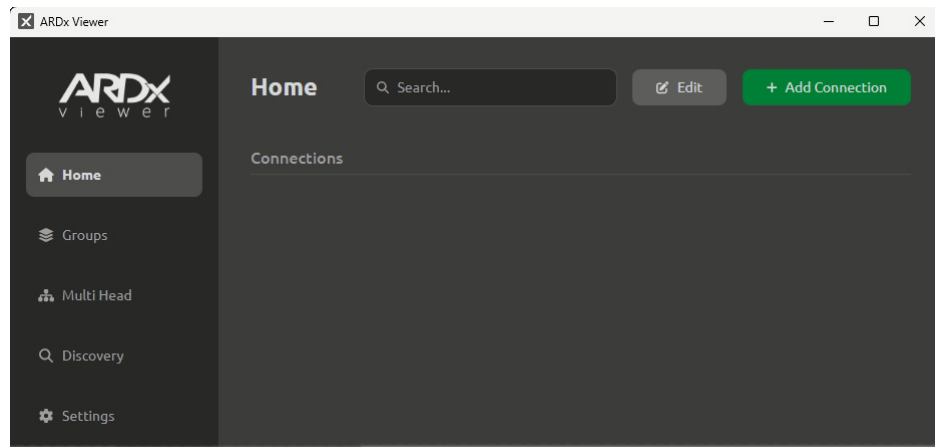
To install the ARDx™ Multi Head server driver

- Please refer to: <https://support.adder.com/tiki/tiki-index.php?page=Remote%3A+Multi-Monitor+Driver>

INITIAL CONFIGURATION

To perform the initial configuration, you need to connect the Adder ARDx™ device to an IP network and use a computer located on the same network to connect to it. *Note: It is also possible to connect a computer (using a cross-over cable or adapter) directly to the ARDx™ device for configuration purposes.*

When the ARDx™ Viewer opens you will see the main page:



Any pre-configured server connections will be listed in the Connections area.

Adding a new server connection

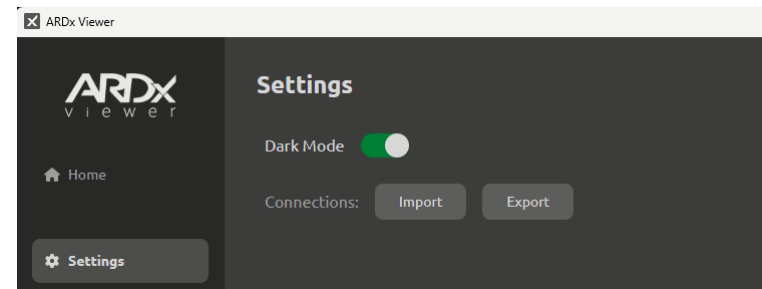
There are various ways to add a new server (connected to an Adder Portal device):

- Import an ARDx™ config file (see below), or
- Manually enter the server preferences (see next page), or
- Scan for new servers that are connected (see next page).

To import an ARDx™ config file

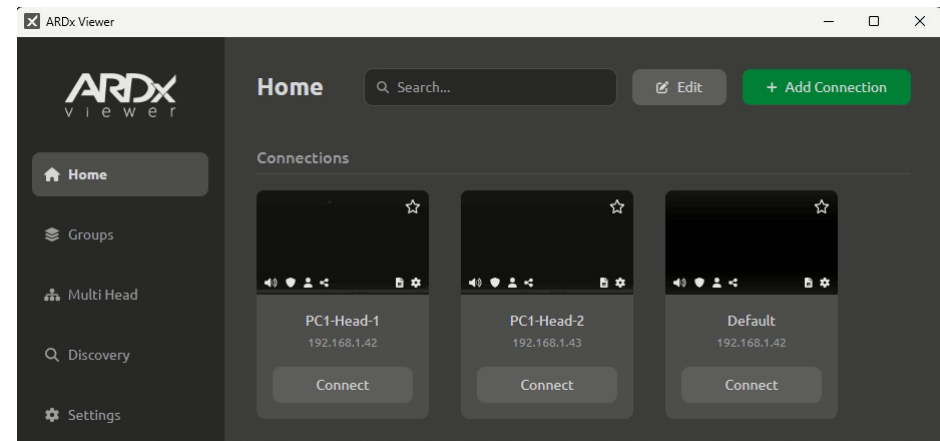
ARDx™ config files use the `.json` format.

1 In the main ARDx™ Viewer window, on the left hand side menu bar, click the *Settings* option.



2 Click the Import button to show a file dialog, use it to highlight a valid import file and then click *Open*.

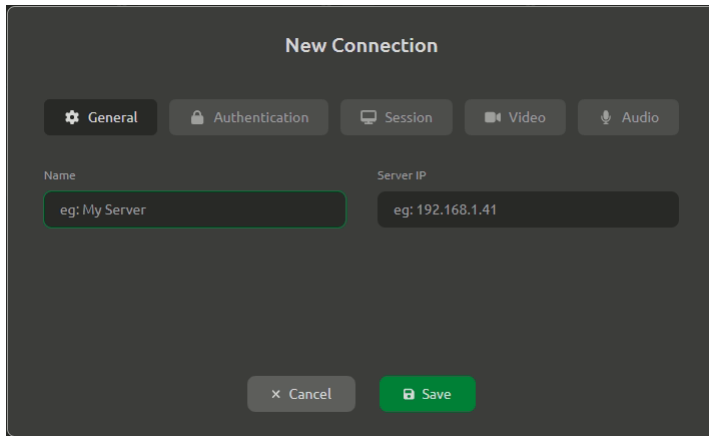
If the selected ARDx™ configuration is valid, its contents will be used to create one or more new server entries within the Connection area of the application:



Adding a new server connection (continued)

To manually enter the server connection preferences

1 In the Home page of the main ARDx™ Viewer window, click the green *Add Connection* button to show the Server connection preferences dialog:



For details about all of the options, please see “Appendix I - Server connection preferences” on page I4.

2 You need to enter the following key settings:

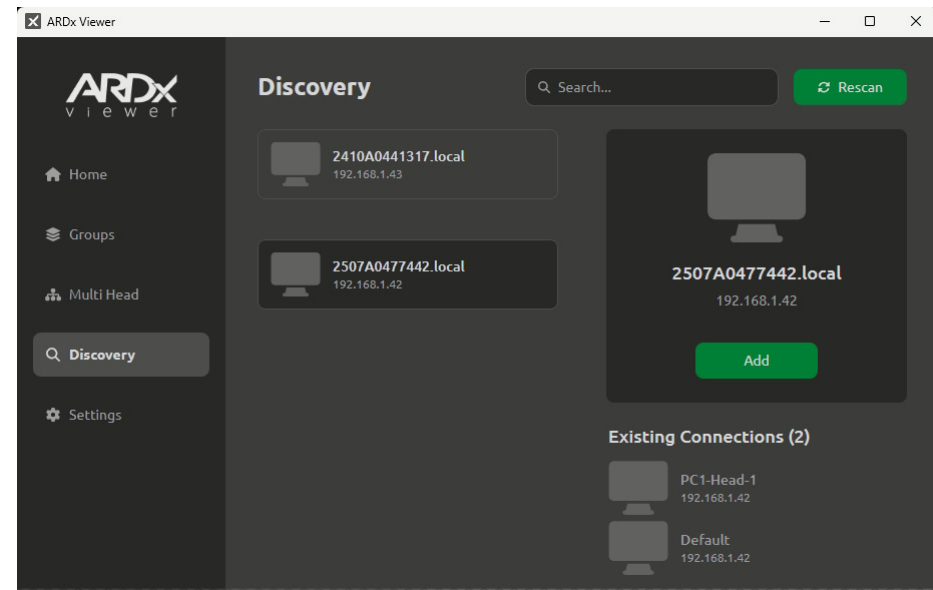
- Server Name (this is displayed on the connection entry that is added to the Connection area of the Home screen,
- Server IP address,
- Determine whether authentication is required for the server (if yes, then a valid username and password must be entered).

All other options can remain at their default unless particular circumstances dictate otherwise.

3 Click *Save* to add your new server entry to the Connection area of the Home screen.

To scan for connected new servers

1 In the main ARDx™ Viewer window, on the left hand side menu bar, click the *Discovery* option. Any known servers will be displayed:




2 You can now, either:

- Click on a server entry to show a highlight box on the right side of the window. Then click the green *Add* button in the highlight box to show the New Connection preferences dialog (as shown left). In there you can name the new server and adjust any other details, as necessary. Any existing ARDx™ connections to the highlighted server will be listed below the box.
- Click the green *Rescan* button in the top right corner to run a check for other connected servers.
- If the list of connected servers is long, use the Search... field in the top right corner to narrow down the list.

Editing existing server details

You can edit any of the stored details for a server connection at any time.

To edit details for an existing server

1 In the Home page of the main ARDx™ Viewer window, click the small  icon located in the middle right section of the server connection entry that you wish to edit.

The preferences dialog will be shown.

2 Make the necessary changes and then click *Save*.

For details about all of the options, please see “Appendix I - Server connection preferences” on page I4.

Removing a server connection entry

You can view the connection entry for any server.

To remove the connection entry for a server

1 In the Home page of the main ARDx™ Viewer window, click the *Edit* button located in the top right corner of the window.

Small red **x** icons will be displayed in the top right corner of each server connection entry.

2 Click the red **x** icon of the server connection entry that you wish to delete.


3 Click the green *Save* button. A confirmation dialog will be displayed.

4 Click the red *Delete* button to confirm the action.

Viewing a server connection log

You can view the connection log for any server.

To view the connection log for a server

1 In the Home page of the main ARDx™ Viewer window, click the small  icon located in the middle right section of the required server connection entry.

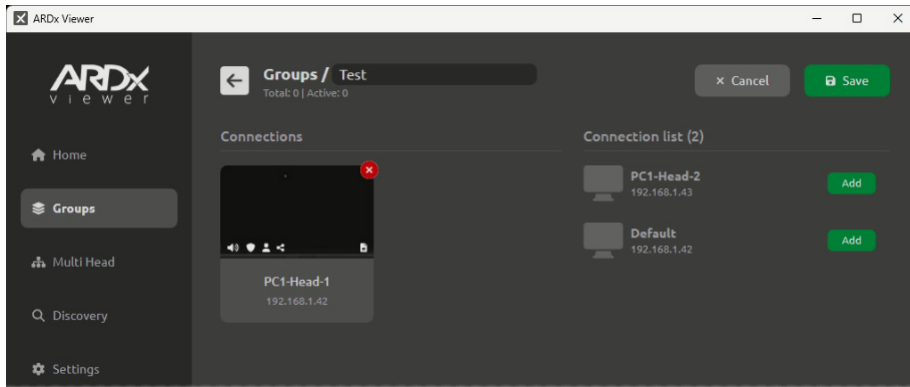
A file dialog will be displayed, use it to locate the required log file.

Groups

Groups allow you to collect any number of separate server connections together to assist with clarity. For servers that are regularly viewed in unison, consider using *Multi Head groups* instead, see page 9.

To create a group

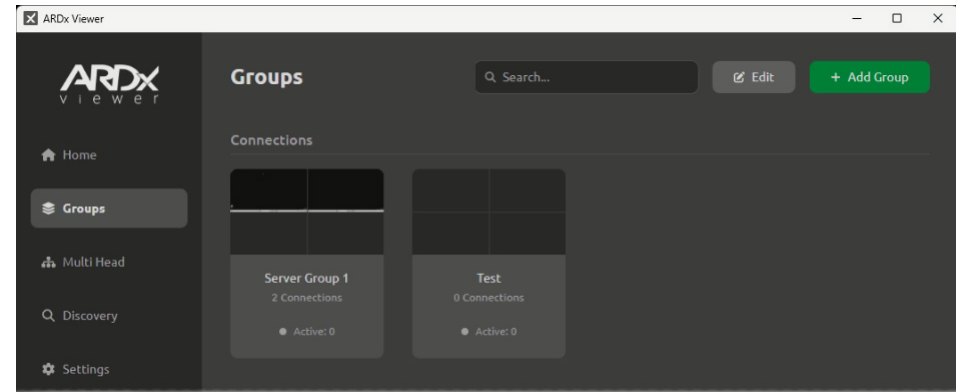
- 1 In the main ARDx™ Viewer window, on the left hand side menu bar, click the *Groups* option. Any existing groups will be displayed in the Connections area.
- 2 Click the green *Add Group* button in the top right corner and enter a name for your new group in the resulting popup dialog. Click the *Save* button.
- 3 In the new empty group, click the green *Add Connection* button. All known server connections will be listed on the right hand side:



- 4 For each server connection that you wish to add to the new group, click the adjacent green *Add* button.
 - To remove a server connection from the group and return it to the list on the right, click the red **x** in the top right corner of its entry.
 - If required, you can edit the group title in the text field at the top.
- 5 When the group is arranged as required, click the green *Save* button in the top right corner.
- 6 Click the left arrow icon in the top left corner to return to the Groups page.

To edit a group

- 1 In the main ARDx™ Viewer window, on the left hand side menu bar, click the *Groups* option. Any existing groups will be displayed in the Connections area:



- 2 Click the entry for the group that you wish to edit. The server connection entries within that group will be shown.
- 3 Click the *Edit* button in the top right corner. You can now add new connections to the group or remove existing ones from it.
- 4 When you are done, click the *Save* button.

To remove a group

- 1 In the main ARDx™ Viewer window, on the left hand side menu bar, click the *Groups* option. Any existing groups will be displayed in the Connections area (as shown above).
- 2 Click the *Edit* button in the top right corner (next to the *Add Group* button). Small red **x** icons will be displayed in the top right corner of each server group entry.
- 3 Click the red **x** icon of the server group entry that you wish to delete.
- 4 Click the green *Save* button. A confirmation dialog will be displayed.
- 5 Click the red *Delete* button to confirm the action.

Multi Head groups

Multi Heads allow you to group two or more server connections that have related video displays, eg computer system(s) with multiple screens that are viewed together.

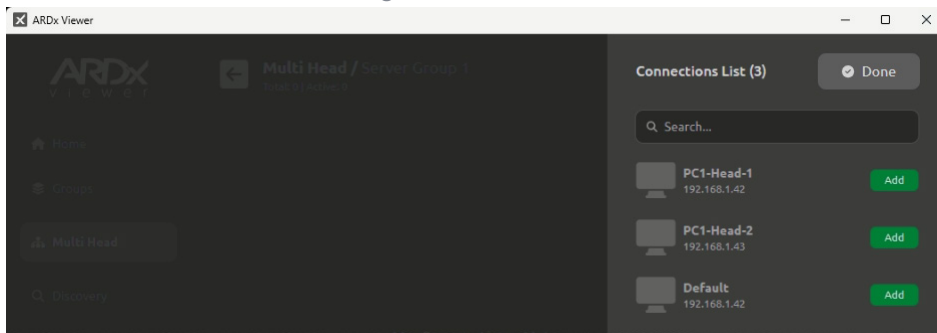
To allow multiple screens to be remotely viewed and controlled across the network connection, it is necessary to introduce two new concepts:

- **Virtual Hosts** - every multi head server needs to be represented by a virtual host within the ARDx™ Viewer. In most cases a virtual host will represent just a single server that has multiple video displays. However, where necessary, it is also possible that two servers, each with their own video display(s), can be represented by a single virtual host. In both cases, the user experience at the ARDx™ Viewer end will be identical because their differing server and display realities have been virtualised.
- **Virtual Screens** - these are required only if a remote server has one or more locally-connected video displays. It is essential that ARDx™ knows exactly where to place the mouse pointer at every moment. To this end, each virtual screen represents a local video display in both its resolution and also its position relative to the video displays that are accessed via ARDx™.

Note: To use the Multi Head feature it is necessary to install a driver onto each affected server - see “Installing the driver for Multi Head operation” on page 4.

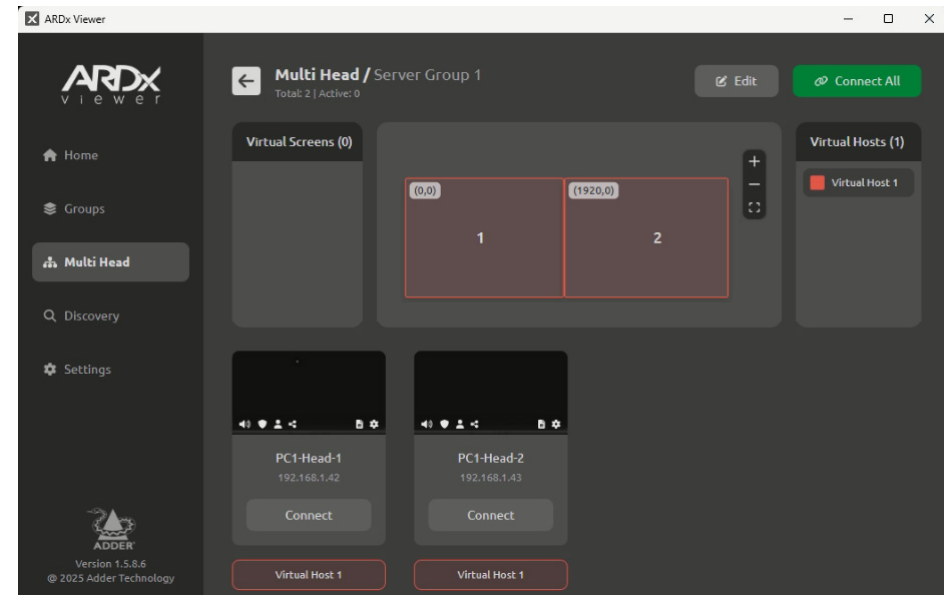
To create a multi head group

- 1 In the main ARDx™ Viewer window, on the left hand side menu bar, click the *Multi Head* option. Any existing multi head groups will be displayed in the Connections area.
- 2 Click the green *Add Multi Head* button in the top right corner and enter a name for your new multi head group in the resulting popup dialog. Click the *Save* button.
- 3 In the new empty group, click the green *Add Connection* button. All known server connections will be listed on the right hand side:



- 4 For each server connection that you wish to add to the new multi head group, click the green *Add* button next to the server name.

- 5 When you have added all required servers, click the *Done* button in the top right corner. The added servers and their screens will be summarised:



- 6 If required, you can now edit the server and screen arrangements to suit:

- Edit multi head servers and screens,
- Add virtual screens if one or more video displays are connected to the server(s).

continued

See also “Making a multi head server connection” on page 11.

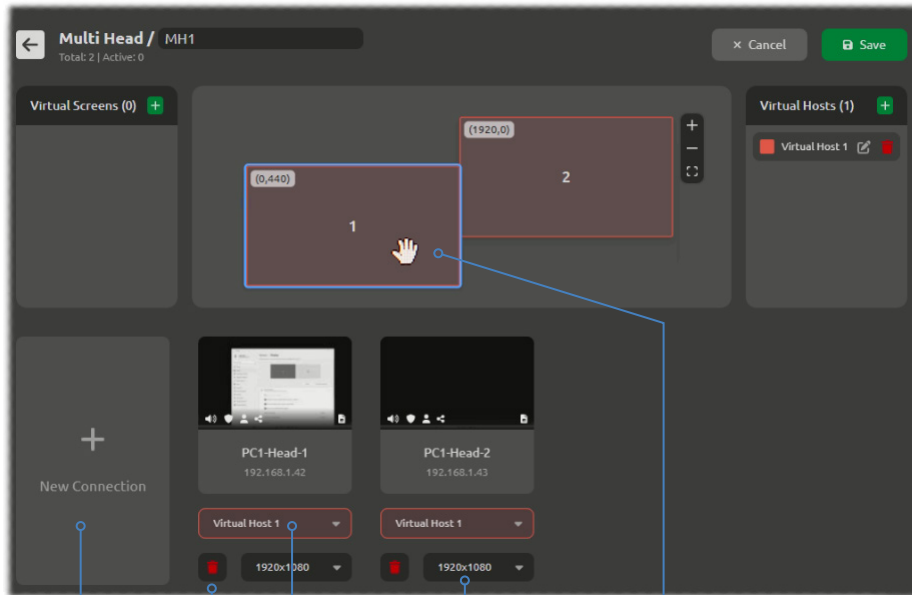
Multi Head groups (continued)

Editing multi head servers and screens

It's important that your multiple screens have the right resolution and also have the correct orientation relative to each other.

To edit multi head servers and screens

- 1 Add the necessary servers to the multi head group as described on the previous page.
- 2 Click the *Edit* button in the top right corner. The servers and their screens will become editable. You can now alter various aspects:



- Add another server to the group
- Remove server from the group
- Assign the server to a different virtual host
- Change the resolution for a screen
- Click and drag a screen to position it correctly relative to the other(s), so that the layout matches the physical arrangements of the screens. If the positions don't match, you may see out-of-sync mouse movements.

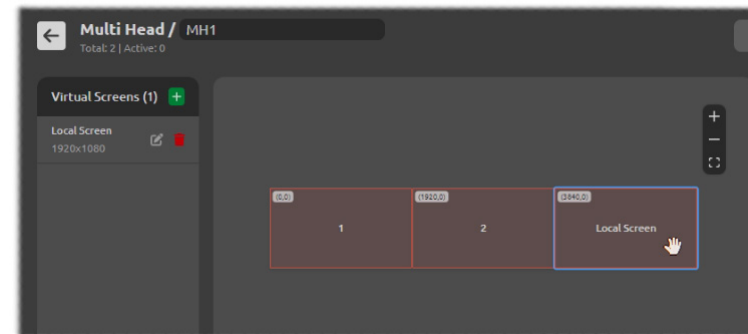
- 3 When all necessary changes have been made, click the green *Save* button.

Adding and arranging a virtual screen

If a remote server has a locally-connected video display, you will need to add a virtual screen to represent it using the correct resolution and also position relative to the ARDx™ accessed displays.

To add and arrange a virtual screen

- 1 Add the necessary servers to the multi head group as described on the previous page.
- 2 Click the *Edit* button in the top right corner. The servers and their screens will become editable.
- 3 In the top left of the edit area, click the green + icon in the Virtual Screens section. In the resulting popup, enter a name for the virtual screen (eg Local Screen) and choose the correct resolution. Then click the green *Save* button to add the new virtual screen to the layout:



- 4 If necessary, click and drag the virtual screen to a different position relative to the other screen(s).
- 5 When all necessary changes have been made, click the green *Save* button.

To discover whether a screen is the primary or secondary

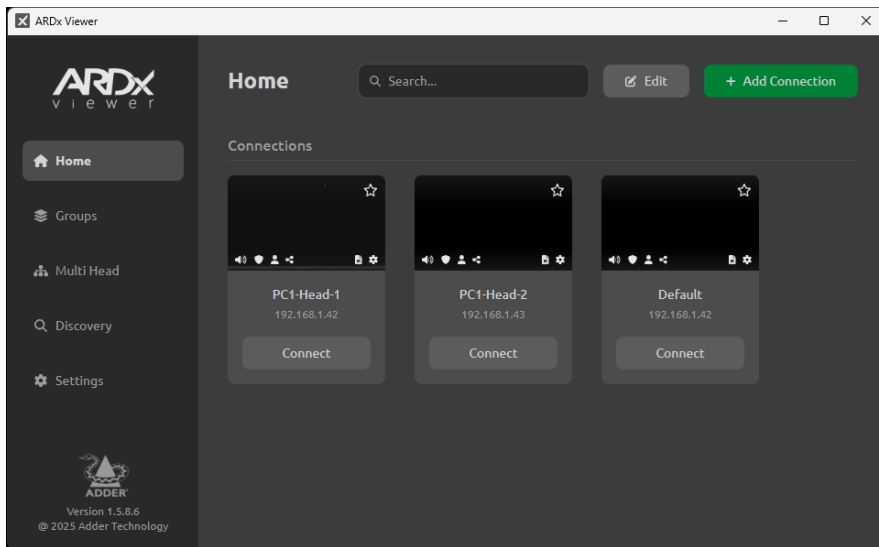
- 1 Make a connection to one of the screens (when not in edit mode).
- 2 Within that connection window, access the Microsoft® Windows™ settings and go to Display Settings.
- 3 Click the Identify button. A number should be overlaid on the video image so that you know whether you are viewing the primary or secondary screen.

CONNECTING WITH SERVERS

The ARDx™ Viewer application allows you to remotely connect with multiple server systems via ARDx™ devices.

Making a remote server connection

1 Run the ARDx™ Viewer and view the Home page. All registered server entries will be displayed within the Connections area:



Alternatively, click the *Groups* option on the left side and then click on the required group - this will open the group to show the server connections contained within it.

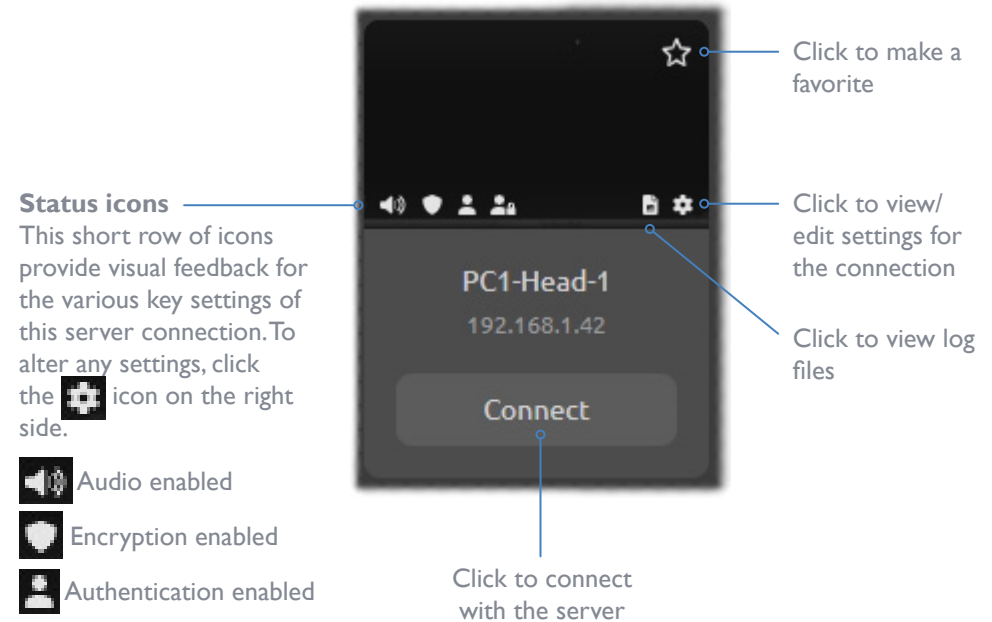
- 2 Click the *Connect* button of the required server to begin a connection.
- 3 If login details are requested, enter a valid password and click *OK*.
An Adder Remote Desktop window will be opened.





Making a multi head server connection

- 1 Run the ARDx™ Viewer and click the *Multi Head* option on the left side.
- 2 Click the *Connect All* button of the required multi head group to connect with all of the servers contained within.
- 3 If login details are requested, enter a valid password and click *OK*.
Multiple Adder Remote Desktop windows will be opened.





Server connection entries

Each server connection is represented by an entry that has numerous elements:



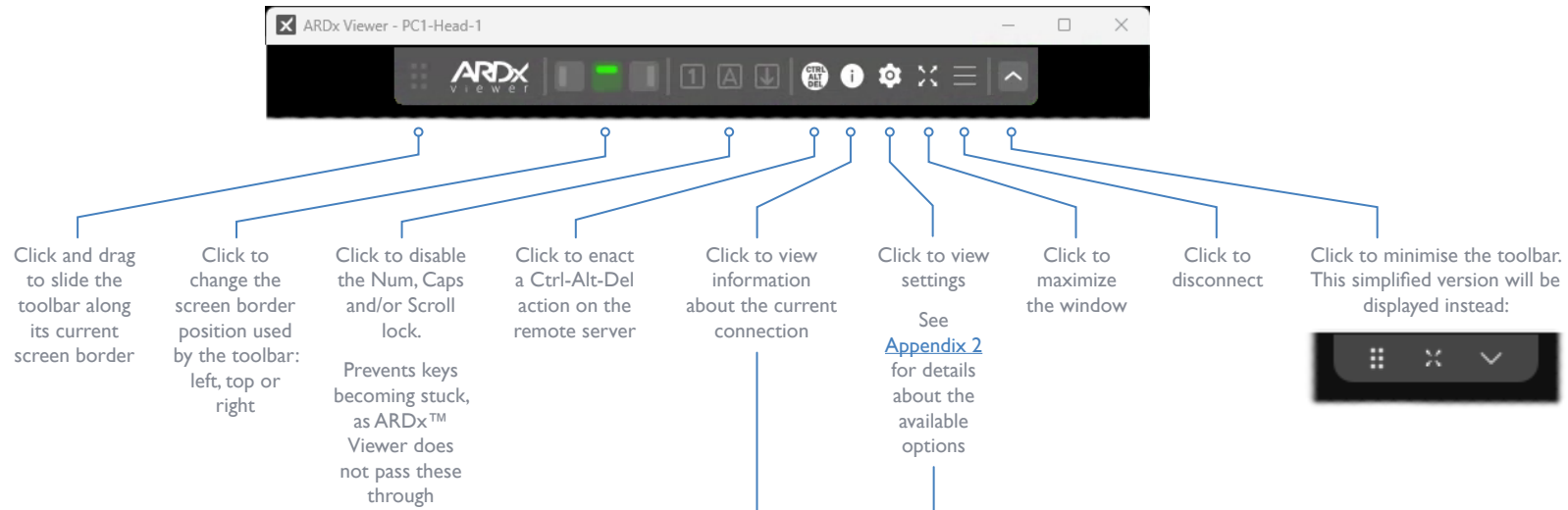
- Status icons**
This short row of icons provide visual feedback for the various key settings of this server connection. To alter any settings, click the  icon on the right side.
-  Audio enabled
 -  Encryption enabled
 -  Authentication enabled

Access mode:

-  Shared
-  Private
-  View only
-  Exclusive

ARDx™ connection window options

During a connection session the ARDx™ Viewer window provides a drop down toolbar with various options:



ARDx viewer - PC1-Head-1

Information

Logged in as: admin

Device

Server IP / DNS Name: 192.168.1.42

Viewer Version: 1.5.8.6

Audio

Status: Enabled (Speaker Only, PCM 44100 2 Channels)

Video

Viewer Window Size: 1920 x 1080

Codec: JPEG

Chroma Subsampling: 444

Background Refresh: OFF

Instantaneous FPS: 4

Average FPS: 4

Network

Data Send Rate: 37.0 Kbps

Data Receive Rate: 68.0 Kbps

EXIT

ARDx viewer - Server1

Settings

Logged in as: admin

Mouse

Mouse Cursor: Full Cursor

Time and Date

Add NTP Server: [Off]

Current Time (UTC): 26/12/2025 18:52

Network (Effective after Reboot)

Management Port (TCP): 5800

Data Port (UDP): 5801

Use DHCP: [On]

IP Address: 192.168.1.42

Net Mask: 255.255.0.0

Default Gateway: 192.168.1.1

DNS Server: 192.168.1.1

Remote Support

Server Port: 22

Enable: [On]

Further information



This chapter contains a variety of information, including the following:

- Getting assistance - see right
- [Appendix 1](#) - Server connection preferences
- [Appendix 2](#) - ARDx™ connection window settings
- [Appendix 3](#) - Open source licenses

GETTING ASSISTANCE

If you are still experiencing problems after checking the information contained within this guide, then please refer to the Support section of our website:

www.adder.com

INSTALLATION


CONFIGURATION

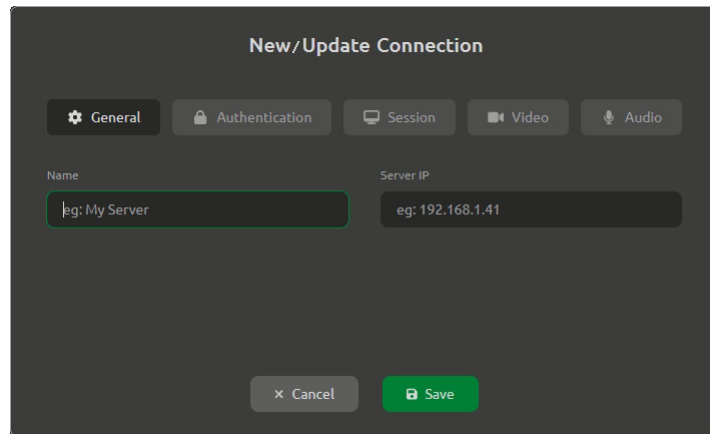
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APPENDIX I - SERVER CONNECTION PREFERENCES

Within the ARDx™ Viewer Home page, when you click the green Add Connection button or click the small  icon on any existing server entry, the following connection preferences will be shown:



General

Name

Enter the name, up to 30 characters, to be displayed on the server entry.

Server IP Address

Enter the network address where the server is located.

Authentication

Authentication / Username / Password

When enabled you will be required to enter a username and password that will be presented to the server when logging in.

Whenever a user first connects, they will be prompted to change their password.

Session

Access Mode

Choose the required access mode for this connection:

- *View Only* - Allows the user only to view the video output of the server, the USB channel is denied.
- *Shared* - Allows the user to control the server in conjunction with other users. This is the default setting.
- *Exclusive* - Grants exclusive control to one user while all others can simultaneously view and hear, but not control, the output.
- *Private* - Allows the user to gain private access to a system, while locking out all others.

Encryption

Determines whether links to the server should be encrypted. Current options are *None* or to use *AES256*.

Video

Viewer Resolution

Determines the resolution at which the viewer window will be opened. Various common resolutions are available for selection.

Target Frame Rate

Determines the video frame rate that should be achieved if connections speeds are sufficient. Choices range from *10* to *60* frames per second (with *60* being the default).

Background Refresh

Adds an additional progressive update to the video frame capture to correct for any discrepancies caused by the difference threshold used for determining video updates. When Standard mode is chosen, a new field is displayed to allow to choose between Fast, Medium and Slow refresh rates. When Advanced is chosen, the extra field allows you to fine tune the refresh between 1 and 120 seconds.

Note: The Back Pressure option (see page 18) within the connection window settings can also assist with squeezing the best operation from slow connections.

Audio

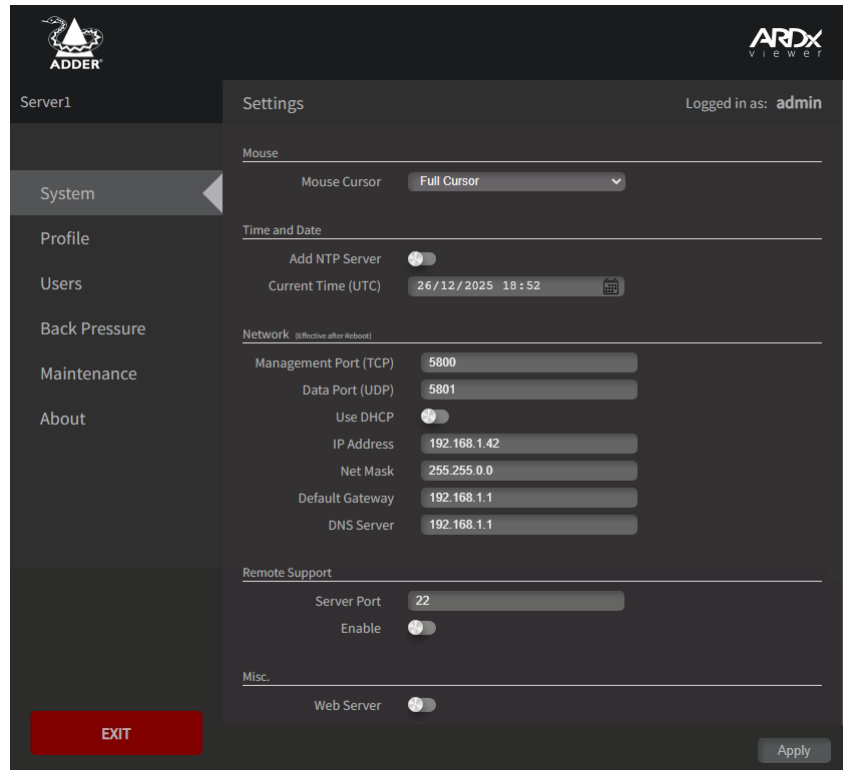
Determines whether the audio link is enabled or disabled.

APPENDIX 2 - ARDx™ CONNECTION WINDOW SETTINGS

During an ARDx™ connection session you can access and alter various settings.

In the ARDx™ toolbar in the connection window, click the  icon to view settings:

System page



Use the menu on the left side to change to other pages.

When you make changes to any settings, be sure to click the *Apply* button in the lower right corner to save them.

*Note: Items marked * are only visible to admin users.*

Mouse

Mouse Cursor

During a connection session, your mouse movements within the window are complimented by a second mouse cursor to account for any lag in the connection speed. By default two mouse cursors will be seen: the one local to your system which immediately follows your movements plus a second pointer representing the response of the remote system. You can optionally choose to hide or completely suppress your local mouse pointer within the connection window using the Hide Cursor or No Cursor settings, respectively.

Time and Date

Add NTP Server*

Allows you to determine the time and date settings using an NTP Server.

Current Time (UTC)

When the NTP Server option is disabled, this field displays the current date and time setting. Click the calendar icon to change the settings.

Network

Management Port (TCP)*

Determines the network port that is used for all ARDx™ management information. This should remain at 5800 for most installations.

Data Port (UDP)*

Determines the network port that is used for all ARDx™ connection data. This should remain at 5801 for most installations.

Use DHCP*

Determines whether a DHCP server should be used to automatically configure the network settings for the ARDx™ device.

IP Address / Netmask/ Default Gateway / DNS Server*

If the *Use DHCP* option is disabled, these fields allow you to manually configure the network details for the ARDx™ device.

Remote Support

Server Port*

Port used for the Remote Support function to access the internet. The port selected will need to have a route to the internet for Remote Support function.

Enable*

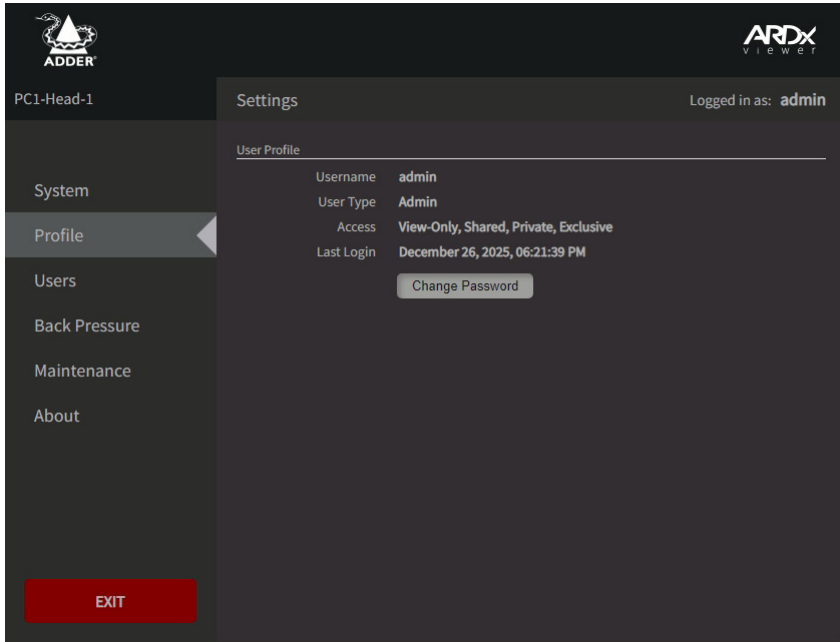
Toggle to enable/disable remote support for the device.

Misc.

Web Server*

Toggle to enable/disable the web server for the device. You will need to enable the web server to upgrade the firmware of the device.

Profile page



Use the menu on the left side to change to other pages.

User Profile

Username

Displays the username for the current user account.

User Type

Indicates whether the current user account has admin privileges.

Access

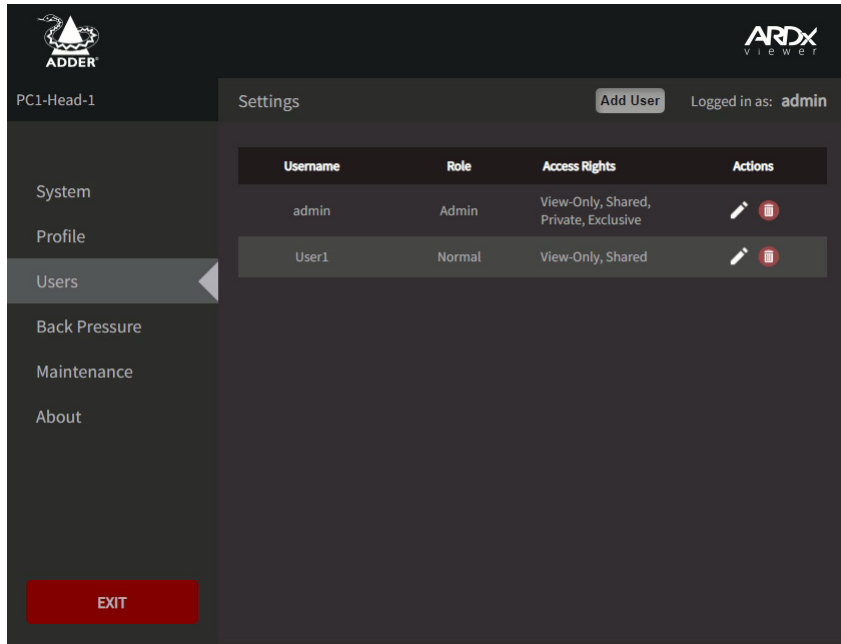
Displays the access permissions granted to the current user account: View-Only, Shared, Private or Exclusive.

Last Login

Indicates the date and time of the last login by the user account.

Change Password

Click to change the password for the current user account.

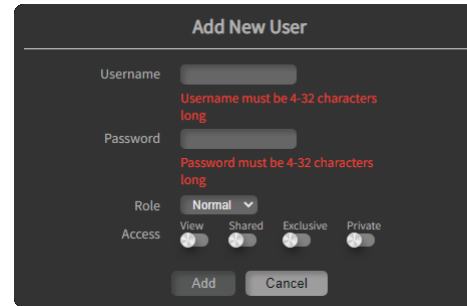


Use the menu on the left side to change to other pages.

Note: This page is only visible to admin users.

Add User

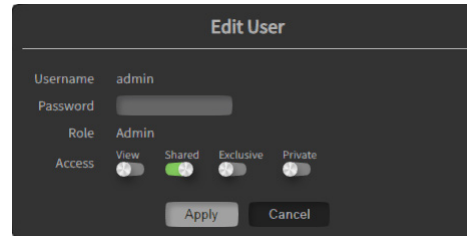
Click the *Add User* button and set a username, password, role, and access mode. The user name and password must be between 4 and 32 characters long.



Note: Special characters and signs are not supported in either the username or password.

Edit User

Click the pencil icon for a particular user to view the edit popup:



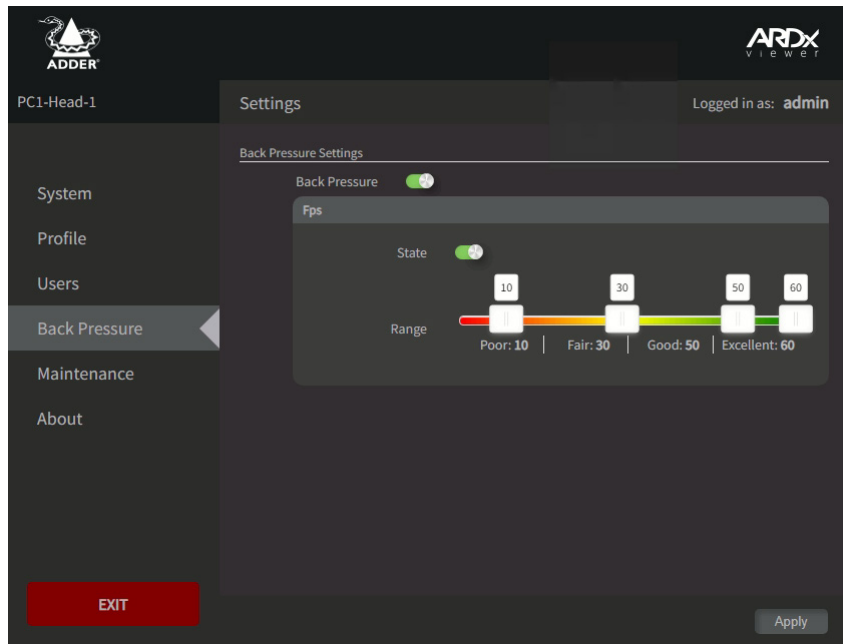
Here, after entering the appropriate password, you can edit the access rights for the chosen user.

Delete User

Click the  icon adjacent to the user entry that you wish to remove.

Click *Apply* to save changes and exit.

Back Pressure page

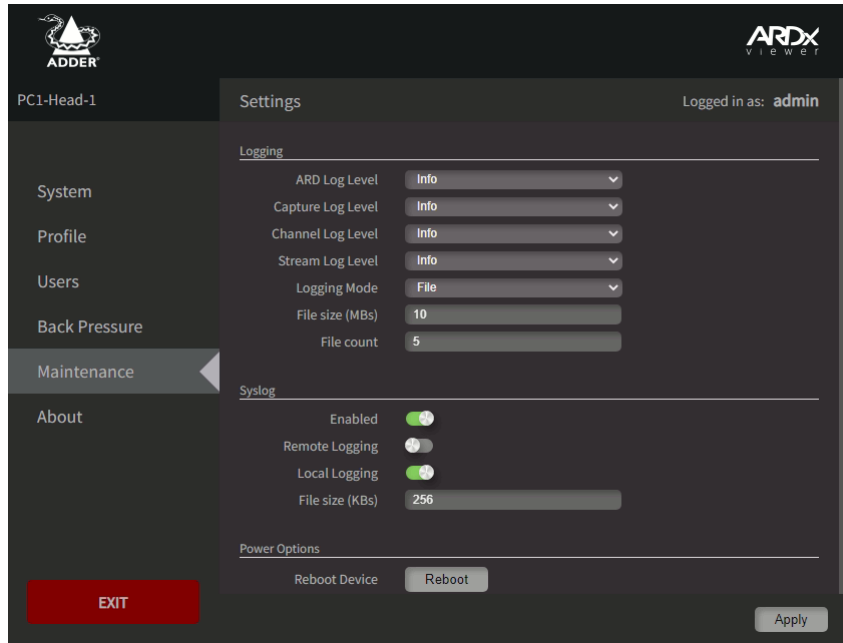


Use the menu on the left side to change to other pages.

In normal operation, ARDx™ aims to achieve 60 frames per second for optimum video performance. However, if poor network conditions cause some frames to be lost, ARDx™ will automatically reduce the frame rate to limit the data being sent across the link. When conditions improve, ARDx™ will attempt to increase the frame rate.

When enabled, the Back Pressure feature hands greater control of frame rate selection over to you. In the *Connection Window Settings > Back Pressure* page, the FPS range gauge shows four generalised network connection conditions: Poor, Fair, Good and Excellent. In each of the condition sections, a slider allows you set a desired frame rate (per second) that you wish ARDx™ to attempt whenever network performance is affected. Some trial and error may be required to achieve the optimum performance at the various conditions.

ARDx™ will always try to use the highest possible condition, but as network operation becomes affected, it will step down to the next achievable level in order to keep video motion smooth and prevent pixelation. As each condition is attempted, the frame rate that you have dialled in will be enacted.



Use the menu on the left side to change to other pages.

When you make changes to any settings, be sure to click the *Apply* button in the lower right corner to save them.

Note: This page is only visible to admin users.

Logging

The various drop downs determine how verbose the log level for each of the categories of event should be.

Logging mode is a choice between File or Syslog. File will store log files to the unit, whereas Syslog will push the events to a syslog server. When File is selected, you have the options to determine the size of the log files in MBs and how many files to store on the unit (File count).

Syslog

Remote logging

Log syslog events to an external syslog server. When enabled, you will be presented with an IP address to fill in for your syslog server.

Local logging

Store the syslog locally on the ARDx™ device.

File size

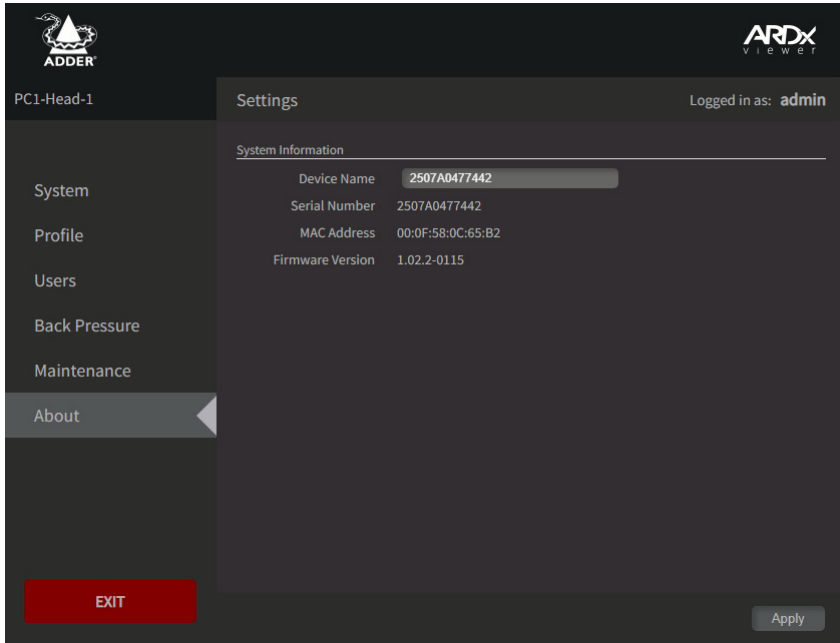
The maximum file size of the syslog stored in Kilo Bytes.

Power Options

Reboot Device

Click to perform a cold reboot of the ARDx™ device.

About page



Use the menu on the left side to change to other pages.

When you make changes to any settings, be sure to click the *Apply* button in the lower right corner to save them.

System Information

Device Name

This field allows you to assign a specific name to the ARDX™ device to differentiate it from other installations.

Serial Number / MAC Address

These entries display the fixed unique identifiers for the ARDX™ device.

Firmware Version

Indicates the current firmware version being used by the ARDX™ device.

APPENDIX 3 - OPEN SOURCE LICENSES

This product includes binaries that are derived from the open source community by Adder under the GNU General Public License v2. Please follow the link below to view the full list of open source licenses used:

<https://support.adder.com/tiki/tiki-index.php?page=ARDx™-Viewer:-OpenSource-Licence>

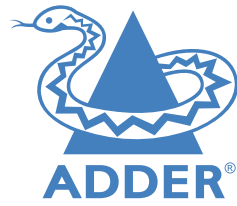
The software included in this product contains copyrighted software that is licensed under the GNU General Public License (GPL). You may obtain the complete Corresponding Source Code from Adder for a period of three years after the last shipment of this product, which will be no earlier than 2028, by contacting support@adder.com or writing to:

Attn: ACD/Open Source Request,
Adder Technology Ltd,
Saxon Way, Bar Hill,
Cambridge, CB23 8SL,
United Kingdom

Please write “Source for product XXXXXXXXX” in the subject line, where XXXXXXXXX is the model and version number.

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