



# Exterity AvediaServer<sup>®</sup> V3.2.0

## Administrator's Guide



## Notices

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## Products Covered By This Guide

AvediaServer™ Platform

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[support@terity.com](mailto:support@terity.com)

## Safety Notices

Before installing and operating these products, please read the safety information in this manual.

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# Important Safety Instructions

Read all of these instructions thoroughly before proceeding with installation.

There are no instructions specifically for service personnel in this document. There are no user serviceable parts inside any Exterity product. To prevent electric shock or fire hazard, do not remove cover. Refer service to qualified service personnel.

This chapter contains important safety information. If you are unsure about any of the information in the section, please contact Exterity.

## USA and Canada

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the instructions contained in this manual.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Do not expose this apparatus to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the apparatus.
16. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from the AC receptacle.
17. The mains plug of the power supply cord shall remain readily operable.

**WARNING!** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

## EU and Others

Do not proceed beyond a **WARNING!** notice until you have understood the hazardous conditions and have taken appropriate steps.

### Safety Information

**WARNING!** There are no user serviceable parts inside any Exterity product. To prevent electric shock or fire hazard, do not remove cover. Refer service to qualified service personnel.

**WARNING!** For 230/240 volt operation, be sure to use a harmonised grounded 3 conductor cord, rated 6 Amp minimum. Use a suitable cord for connection to the equipment and terminating in an IEC approved plug.

This equipment relies upon a safety earth for operation, ensure that you always use a power cord with appropriate earth and that the inlet to which is inserted also has the appropriate earth. If in any doubt about the earth provision in your building consult a qualified electrician

**WARNING!** Use only the dedicated power supply or cord supplied for your device.

**WARNING!** The Exterity products use ventilation holes for cooling. None of the ventilation holes should be blocked. Keep all materials at least 5cm away from all the ventilation holes.

**WARNING!** Do not expose the product to any rain or moisture.

**WARNING!** Do not use the product near a naked flame e.g. a candle.

**WARNING!** The operating conditions of the product should be 0°C-35°C with a Relative Humidity of 5 – 95%. The product should not be operated outside of these conditions.

There are no user-serviceable parts inside these products. Any servicing, adjustment, maintenance, or repair must only be performed by service-trained personnel.

# 1 Summary

The Exterity AvediaServer is a modular system both in terms of the physical hardware and the applications. This manual explains how to manage the core applications of the AvediaServer product family, including installing, configuring and operating the AvediaServer.

## Scope

This edition of the manual refers to version 3.2.0 of the AvediaServer platform and describes the operation and use of the functions accessed by the following menu tabs:

- **AvediaServer**
- **Status**
- **Users**

The Guides for functions and menu tabs associated with other AvediaServer applications are listed in Table 1.

## Audience

This manual is intended for use by systems integrators or systems administrators who are installing and setting up Exterity products.

It is assumed that readers are familiar with installing and configuring network-based products. Ideally, readers will also have an understanding of the key features of an IPTV system.

## Documentation

We strongly recommend that you read the *AvediaServer Install Guide* for more information about the physical installation of the AvediaServer.

Additionally, the following guides provide specific information relevant to the AvediaServer applications available:

**Table 1 AvediaServer Application Documentation**

<b>Application</b>	<b>Menus</b>	<b>Manual</b>	<b>Reference Number</b>
<b>Server</b>	AvediaServer Status Users	Server Administrator's Guide	1300-0016-0001 (This Guide)
<b>Play</b>	Content Scheduled Play	Play Administrator's Guide	1300-0017-0001
<b>EPG</b>	EPG	EPG Administrator's Guide	1300-0015-0001
<b>Portal</b>	Portal	Portal Administrator's Guide	1300-0021-0001
<b>Record</b>	Record	Record Administrator's Guide	1300-0014-0001
<b>Director</b>	Director	Director Administrator's Guide	1300-0023-0001

## Copyright

The Exterity AvediaServer is a powerful product that allows you to import (copy) content (audio & video) and subsequently distribute that content to large numbers of users over an IP network. Content may have a copyright and you should always secure the permission of the copyright holder in order to copy and transmit the content on your IP network.

Unauthorised use and/or duplication of copyrighted material may be a violation of copyright law in one or many countries/regions. In using the AvediaServer you accept full responsibility for the copyright status of the content you import and transmit on your IP network.

## Terms and Definitions

The following terms and definitions are used in this document:

**Table 2 Terms and Definitions**

<b>Term</b>	<b>Definition</b>
<b>DHCP</b>	Dynamic Host Configuration Protocol
<b>EIT</b>	Event Information Table
<b>EPG</b>	Electronic Program Guide
<b>FTP</b>	File Transfer Protocol
<b>IGMP</b>	Internet Group Management Protocol
<b>LDAP</b>	Lightweight Directory Access Protocol
<b>NTP</b>	Network Time Protocol
<b>RTSP</b>	Real Time Streaming Protocol
<b>SAP</b>	Session Announcement Protocol
<b>SNMP</b>	Simple Network Management Protocol
<b>SSH</b>	Secure Shell
<b>Syslog</b>	a protocol for forwarding log messages in an IP network
<b>TFTP</b>	Trivial File Transfer Protocol
<b>VoD</b>	Video on Demand
<b>XML</b>	Extensible Markup Language



## 2 About AvediaServer

The AvediaServer is a server platform which can be supplied with a range of different applications selected from:

- Play – including VoD and Scheduled Play
- Record
- Electronic Program Guide (EPG)
- Portal
- Director

Preconfigured modules (application combinations) are shown in Table 3.

**Table 3 AvediaServer Configurations**

AvediaServer Module		AvediaServer Applications				
Name	Number	Director	Portal	EPG	Play	Record
Director	m6005	•				
Portal	m6010	•	•	•		
Play 25	m6102	•	•	•	•	
Play 60	m6110	•	•	•	•	•
Play 200	m6120	•	•	•	•	•
Play 500	m6150	•	•	•	•	
Record 200	m6220	•	•	•		•

### Module and Chassis Combinations

Valid module and chassis combinations are shown in Table 4.

**Table 4 Configured Modules**

Name	Number	Chassis and Storage
Director	m6005	c1505 1U Chassis
Portal	m6010	c1510 1U Chassis 500GB
Play 25	m6102	c1510 1U Chassis 500GB
Play 60	m6110	c1510 1U Chassis 500GB
Play 60	m6110	c1550 2U Chassis up to 7TB
Play 200	m6120	c1510 1U Chassis 500GB
Play 200	m6120	c1550 2U Chassis up to 7TB
Play 500	m6150	c1550 2U Chassis up to 7TB
Record 200	m6220	c1550 2U Chassis up to 7TB

For more information, refer to [Viewing Hardware Information](#) on page 40.

### Network Considerations

For successful operation the AvediaServer should be connected to a gigabit Ethernet port.

## 3 Getting Started

This section provides a brief overview of the steps required to bring the AvediaServer up to full operational status. Whilst not essential, following the suggested order is efficient and effective. Click the links for more detailed information.

- [Racking the Server](#)
- [Connecting to the Network](#)
- [Inserting the Dongle](#)
- [Connecting to Power](#)
- [Configuring the IP Address](#)
- [Configuring the Name and Location of the AvediaServer](#)
- [Configuring an NTP Server and Local Time](#)
- [Configuring Services](#)
- [Configuring AvediaServer Applications](#)

### 1. Racking the Server

First, you need to install the server into a rack.

For more information on racking the server follow the manufacturer's instructions on the specific server model supplied. The installation manual is included with the AvediaServer.

---

**WARNING:** Due to its size and weight, the AvediaServer needs to be handled with care to avoid injury.

---

### 2. Connecting to the Network

For more information on connecting the AvediaServer to the network, see the *AvediaServer Install Guide*.

---

**Note:** The AvediaServer has two Ethernet interfaces, labelled port 1 and port 2; use **port 1**, presented on the left when looking at the rear of the unit, as shown in the AvediaServer Installation Guide.

---

### 3. Inserting the Dongle

The dongle is a USB dongle that is pre-programmed by Exterity and must be inserted into the chassis for the correct operation of the AvediaServer. The dongle is essential to get the AvediaServer up and running and loads the applications and services specific to the module configuration of your AvediaServer. Each module supplies one or more services. For more information on the different AvediaServer configurations available, refer to [Module and Chassis Combinations](#) on page 9. For instructions on inserting the dongle into the chassis, see the *AvediaServer Install Guide*.

The dongle is discovered by the AvediaServer and the correct applications and services are automatically added and displayed on the **Status > Service** page of the AvediaServer's Web Management Interface. For more information, refer to [Configuring Services](#) on page 22.

---

## 4. Powering the AvediaServer

For more information on powering up the AvediaServer refer to the *AvediaServer Install Guide*.

---

**Caution:** The AvediaServer should be powered down or rebooted using the Web Management Interface. Powering off an AvediaServer without using the Web Management Interface may corrupt the software, which may then require a re-install or, at worst, a return to the factory.

---

## 5. Configuring the IP Address

By default, the AvediaServer requires a DHCP Server to be available on the network to assign it an IP address. Allocating a static IP address for the AvediaServer allows continued operation without a DHCP Server.

Exterity **strongly** recommends using a static IP address for an AvediaServer because other Exterity devices will rely on this address remaining the same.

To assign a static IP address to the AvediaServer, temporarily set up a DHCP server on an isolated network. Once an IP address is assigned to the AvediaServer, you can configure a static IP address using the Web Management Interface.

For more information, refer to [Configuring Network Settings](#) on page 17.

For hints on how to find out which IP address has been assigned to a server using DHCP, refer to Appendix A Discovering the IP Address of the AvediaServer on page 50.

## 6. Configuring the Name and Location of the AvediaServer

Now you need to give the AvediaServer a name and location. By default, the name assigned to the AvediaServer is its own MAC address.

For more information, refer to [Naming the AvediaServer](#) on page 16.

## 7. Configuring an NTP Server and Local Time

With the capability to record and play content at specified times (depending on configured applications), you should ensure that the AvediaServer is configured to the correct local time and this is maintained accurately and adjusted automatically.

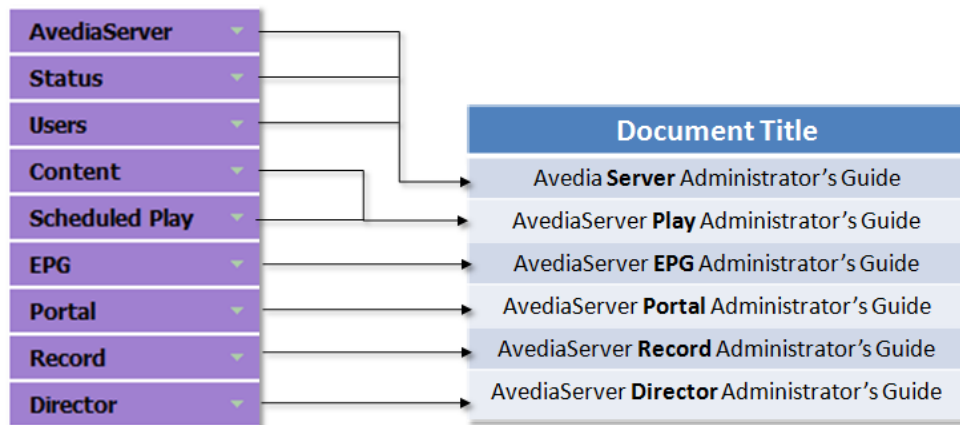
For more information, refer to [Configuring the NTP Server](#) and [Configuring the Local Time of the AvediaServer](#) on page 20.

## 8. Configuring Services

The correct services are automatically added from the license dongle and displayed on the **Status > Service** page of the AvediaServer's Web Management Interface. Enable/disable services as required for your AvediaServer applications. For more information, refer to [Configuring Services](#) on page 22.

## 9. Configuring AvediaServer Applications

The menu structure of your AvediaServer depends on the configured applications. The menu labels map to the relevant guides as shown in Figure 1.



**Figure 1 Document Mapping**

To configure the individual applications supplied with AvediaServer, refer to the application guides listed in [Documentation](#) on page 7.

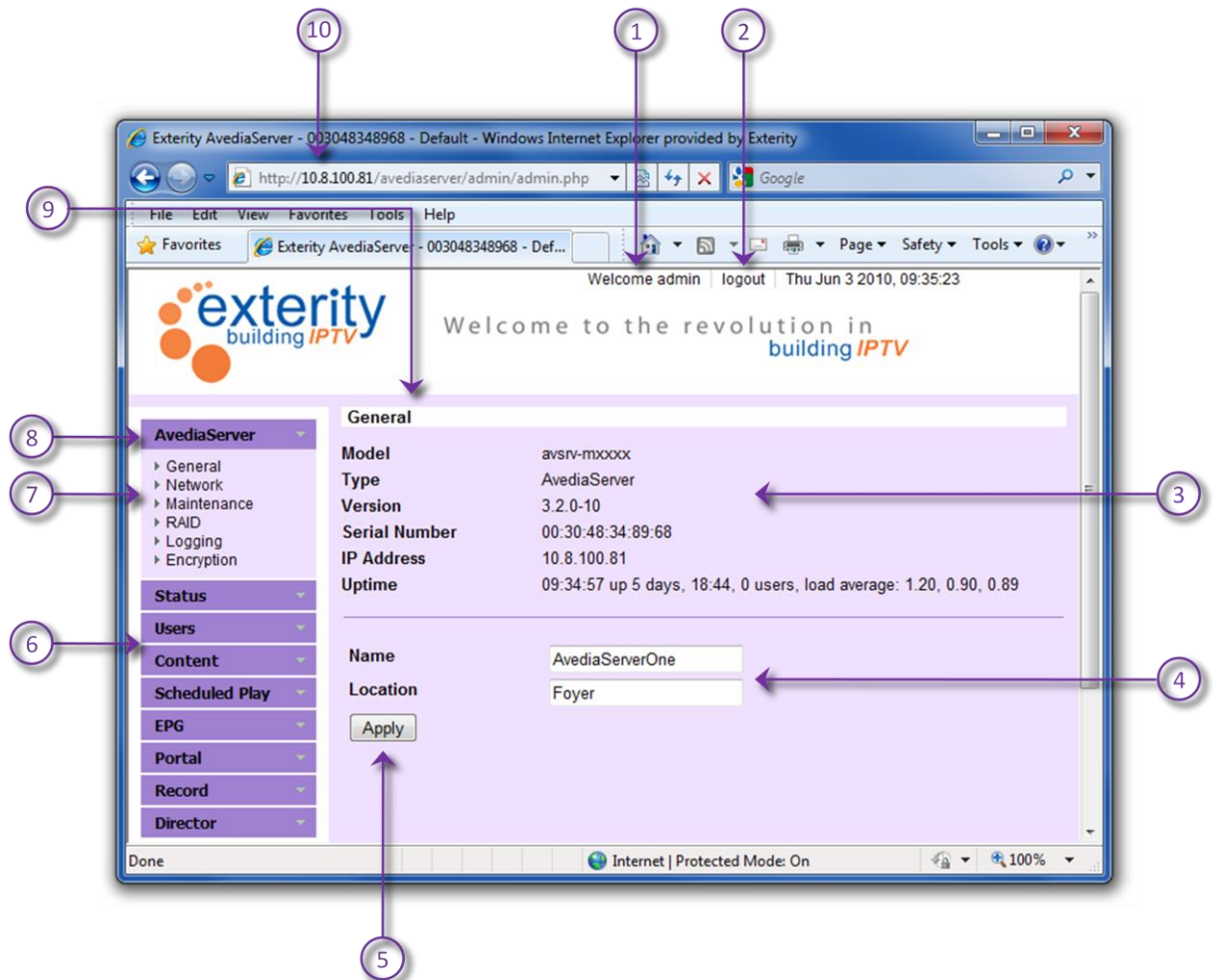
## 4 Management Interfaces

The AvediaServer has 2 management interfaces as follows:

- [Web Management Interface](#)
- [Admin Interface](#)

### Web Management Interface

You can manage every aspect of AvediaServer functionality using the Web Management Interface. The Web Management Interface supports Microsoft Internet Explorer 7 & 8 and Mozilla Firefox 2 & 3.



**Figure 2 AvediaServer Web Management Interface**

You can launch the Web Management Interface into your default browser using the IPTV Manager, as shown in the previous section, or by typing the IP address of the server directly into your browser. If a DHCP server on your network has been used, APPENDIX A on page 50 shows you how to find the Assigned AvediaServer address.

**Open the Web Management Interface as follows:**

1. When prompted, enter the correct username and password. The default login details are:

**Username:** admin

**Password:** labrador

Unless you tick the **Disable Log in timeout** check box, you are automatically logged out if more than 24 minutes of inactivity is detected.

---

**Note:** The administrator can change the admin password on the **Users >User Accounts** page. For more information, refer to [Changing the Admin Password](#) on page 26.

---

2. The Web Management Interface opens in your browser, as shown in Figure 2.
3. Click on the **AvediaServer** tab to display the menu; this is the top tab in the purple bar on the left-hand side. All the AvediaServer applications and their functions are accessed from the menu.
4. Table 5 details the major parts of the interface.

**Table 5 Web Interface Key**

Figure 2 ID	Title	Description
1	<b>Login Name</b>	Displays the system name of the currently logged-in user. This is either 'admin' or an assigned user name. If Active Directory access has been configured the user's common name is displayed.
2	<b>Logout</b>	Click logout to close your session and return to the login screen.
3	<b>Page</b>	Displays information and settings for the currently selected menu page. In Figure 2 the <b>AvediaServer &gt; General</b> page is displayed.
4	<b>Settings</b>	You can enter information into the settings boxes. They also display the current value.
5	<b>Apply</b>	When displayed, you must click the <b>Apply</b> button to complete any changes to settings.
6	<b>Menu Tabs</b>	The menu tabs allow access to configuration and information pages. Availability of menu tabs is controlled by the AvediaServer application configuration.
7	<b>Menu Pages</b>	Menu Pages are accessed from an associated Menu Tab and display detected and configurable information. In Figure 2 the pages accessed from the <b>AvediaServer</b> menu are shown and the <b>General</b> page has been selected.
8	<b>Open Menu</b>	Menu tabs open to reveal associated lower level menu pages. In Figure 2 the <b>AvediaServer</b> menu is open.
9	<b>Page Title</b>	Display the currently selected Menu Page.
10	<b>Interface Addr.</b>	IP address of the AvediaServer web interface. If known you can enter this directly to launch this interface or launch it from the IPTV Manager application.

## Admin Interface

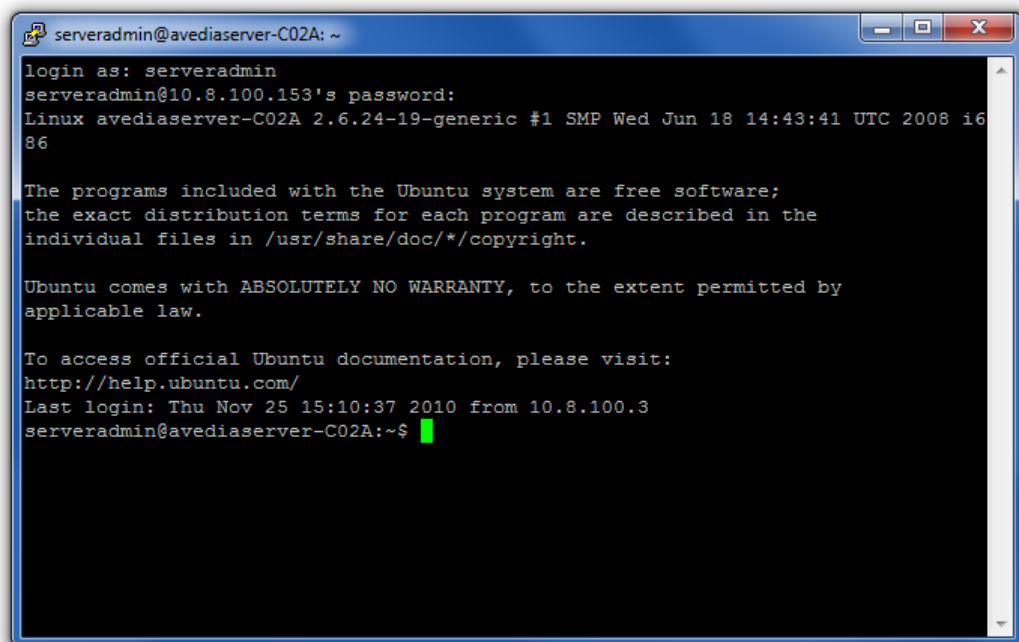
In certain circumstances it may not be possible to manage the AvediaServer via the Web Management Interface. If you know the IP address of the AvediaServer, you can use a terminal application to log into the Linux kernel.

Alternatively, connect a mouse, keyboard, and VGA monitor to the AvediaServer chassis interfaces.

Log into the Admin Interface using the following login details:

**Username:** serveradmin

**Password:** labrador



```
serveradmin@avediaserver-C02A: ~
login as: serveradmin
serveradmin@10.8.100.153's password:
Linux avediaserver-C02A 2.6.24-19-generic #1 SMP Wed Jun 18 14:43:41 UTC 2008 i686

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To access official Ubuntu documentation, please visit:
http://help.ubuntu.com/
Last login: Thu Nov 25 15:10:37 2010 from 10.8.100.3
serveradmin@avediaserver-C02A:~$
```

## 5 Configuring the AvediaServer

This section describes how to name your AvediaServer and configure its network settings using the Web Management Interface. All procedures described in this section assume that you are running the Web Management Interface, as described in [Management Interfaces](#) on page 13.

The functions described in this section are accessed from the AvediaServer menu tab and are available in all configurations of AvediaServer.

---

**Note:** When making changes using the Web Management Interface, click **Apply** to save your changes before moving to another tab or page, otherwise your changes are lost.

---

This section describes the following:

- [Naming the AvediaServer](#)
- [Configuring Network Settings](#)
- [Configuring the NTP Server](#)
- [Configuring the Local Time of the AvediaServer](#)
- [Configuring Services](#)

### Naming the AvediaServer

The AvediaServer can be assigned a name and location. This name can be used to identify the AvediaServer within the IPTV Manager, while the location you specify is used by the IPTV Manager to organise devices into folders. For example, if you specify **Foyer**, the AvediaServer appears in **Location\Foyer** in the IPTV Manager and the AvediaServer Director.

---

**Note:** The default name assigned to the AvediaServer is the MAC address.

---

**To specify the name and location:**

1. Open the Web Management Interface.
2. Click **AvediaServer > General**.

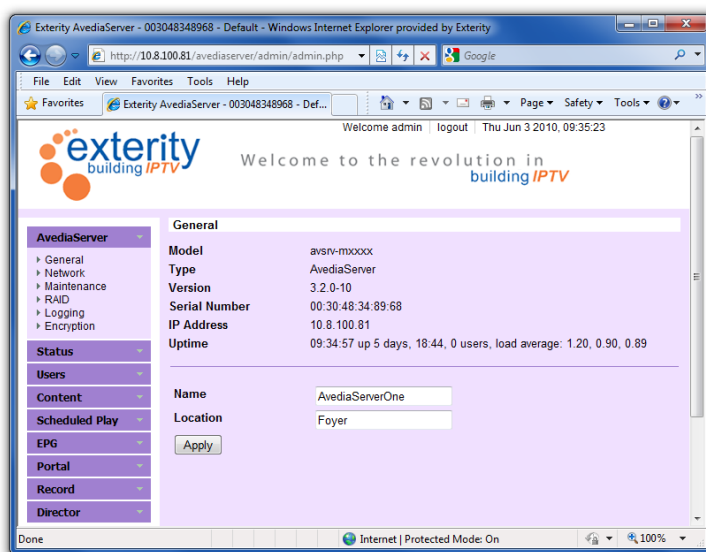


Figure 3 AvediaServer General Page



3. Enter the name you wish to assign to the AvediaServer in the **Name** field
4. Enter the location name you wish to assign to the AvediaServer in the **Location** field
5. Click **Apply**

## Configuring Network Settings

### Configuring IP address settings

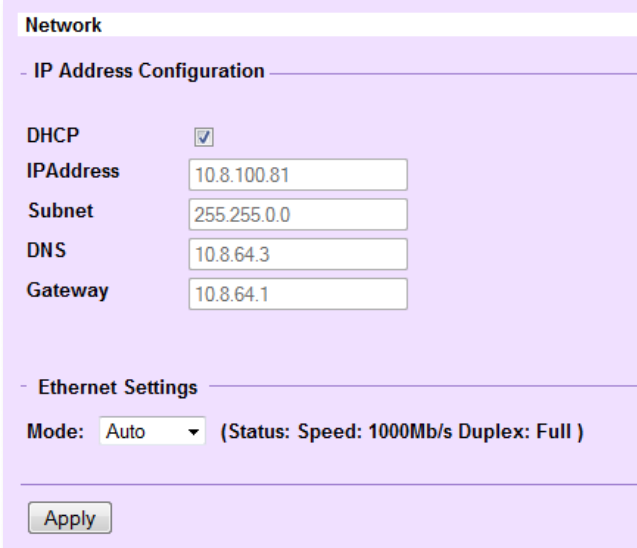
You can configure the server to obtain an IP address automatically using DHCP, or you can specify static addressing information, such as IP address, subnet mask and default gateway.

---

**Note:** Changes to IP addressing take place immediately on clicking **Apply**.

---

By default, the AvediaServer is configured to assign an IP address using DHCP, as shown below:



The screenshot shows a configuration window titled "Network" with a light purple background. It is divided into two sections: "IP Address Configuration" and "Ethernet Settings".

**IP Address Configuration:**

- DHCP:** A checkbox is checked.
- IPAddress:** A text box containing "10.8.100.81".
- Subnet:** A text box containing "255.255.0.0".
- DNS:** A text box containing "10.8.64.3".
- Gateway:** A text box containing "10.8.64.1".

**Ethernet Settings:**

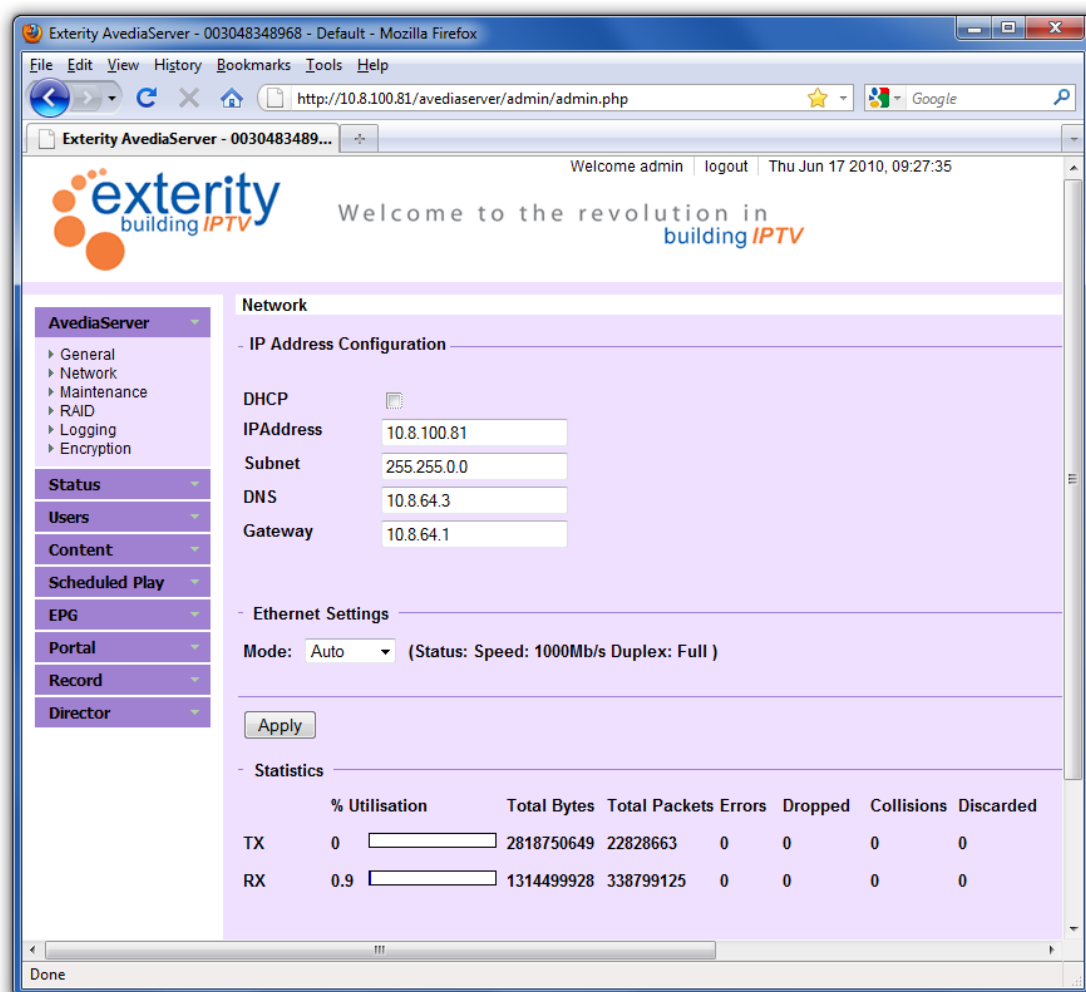
- Mode:** A dropdown menu set to "Auto".
- Status:** "(Status: Speed: 1000Mb/s Duplex: Full)".

At the bottom of the window is an "Apply" button.

**Figure 4 AvediaServer IP Address Configuration**

**To configure a static IP address:**

1. Open the Web Management Interface
2. Click **AvediaServer > Network** to open the Network page.

**Figure 5 AvediaServer Network Page**

3. In the **IP Address Configuration** section, deselect the **DHCP** checkbox.
4. Enter the **IP Address** you wish to assign to the AvediaServer in the **IPAddress** field.
5. Enter the Subnet mask you wish to assign to the AvediaServer in the **Subnet** field.
6. Enter the DNS address you wish to assign to the AvediaServer in the **DNS** field.
7. Enter the Gateway address you wish to assign to the AvediaServer in the **Gateway** field.
8. Click **Apply**.

**To configure the AvediaServer to be allocated an IP address dynamically:**

1. Click **AvediaServer > Network** to display the Network page, as shown in Figure 5.
2. In the **IP Address Configuration** section, select the **DHCP** checkbox.
3. Click **Apply**.

---

## Configuring the Ethernet Settings

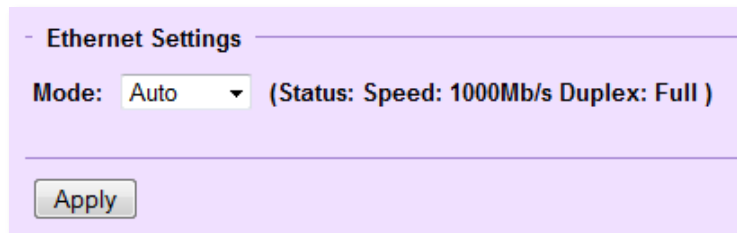
The AvediaServer Ethernet interface is a 100/1000 port that can be set to either auto-negotiation or 100FD mode. Auto-negotiation is enabled by default.

---

**Note:** In order to avoid Ethernet errors, ensure that the server's interface settings match the settings for the network switch port to which the server is connected. This means that either both devices should be configured for auto-negotiation or both devices should be configured for a fixed setting of 100FD.

---

You can view the **Ethernet Settings** on the **Network** page, as shown below:



- Ethernet Settings

Mode:  (Status: Speed: 1000Mb/s Duplex: Full )

**Figure 6 AvediaServer Ethernet Settings**

### To enable/disable auto-negotiation:

1. Click **AvediaServer > Network**.
2. Choose an option from the **Auto-negotiation** box.
3. Click **Apply**.

---

**Note:** Exterity strongly recommends that you leave the Ethernet Settings on 'Auto' Mode at all times.

---

## Configuring the NTP Server

You can configure NTP Time Servers on the Maintenance page. The AvediaServer uses this to keep time accurately and adjusts its time accordingly. You must configure one or more NTP Servers to ensure correct operation of the Scheduled Play and Record applications.

**Note:** When DHCP is used and the DHCP server supplies an NTP server address, any NTP servers configured using the Web Management Interface are ignored. If the DHCP server does not supply an NTP server address, the address must be configured on the Maintenance page.

### To add an NTP server:

1. Click **AvediaServer > Maintenance** to display the Maintenance page as shown in Figure 7.

**Figure 7 Maintenance Page**

2. In the **Time** section, enter the name of the NTP server in the **NTP Servers** field.
3. Click the **Add Server** button.

### To remove an NTP server:

1. Click **AvediaServer > Maintenance** to display the Maintenance page.
2. In the **Maintenance** section, click the [remove](#) hyperlink.

## Configuring the Local Time of the AvediaServer

The AvediaServer has a real-time clock that is persistent over reboots and power downs. Maintaining accurate synchronisation with local time is vital to ensure all schedule related aspects such as Record, Scheduled Play, and EPG operate correctly.

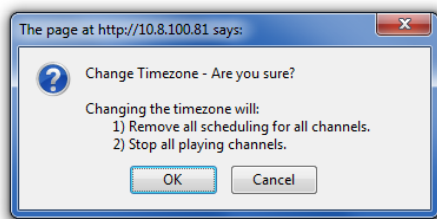
---

**Note:** Changing the **Time Zone** clears any scheduled content configured in the **Scheduled Play** channels. Therefore, ensure that you configure the **Time Zone** before scheduling any content.

---

### To configure the local time of the AvediaServer:

1. Click **AvediaServer > Maintenance** to display the Maintenance page as shown in Figure 19.
2. Select the country and region from the **Time Zone** drop-down list. A warning message is displayed, as shown below:



3. Click **OK**

## Configuring Services

The applications configured for your AvediaServer specify the services available. Each application supplies one or more services. They can be enabled or disabled on the **Status > Service** page.

Click **Status > Service** to display the Status page, as shown below:

The screenshot shows the 'Status' page in the AvediaServer interface. On the left is a navigation menu with options: AvediaServer, Status (selected), Service, Bandwidth, Disk, Users, Content, Scheduled Play, EPG, Portal, Record, and Director. The main content area is titled 'Status' and includes a 'Product Licence' section showing 'Licence Type' as 'AvediaServer Play 200 (avsrn-m6120)'. Below this is a 'Services' table with columns for Name, State, and Start on Boot. Each service row includes a traffic light icon for the State and buttons for Stop and Disable/Enable.

Name	State	Start on Boot
Channel Listener	●	Disable
Device Listener	●	Disable
Channel Announcer	●	Disable
EPG Generator	●	Enable
Scheduled Play/VoD	●	Disable
EPG Server	●	Disable
Portal	●	Disable
PMS	●	Disable
Record	●	Disable
Channel Monitor	●	Disable

Figure 8 AvediaServer Status Page

The **Licence Type** and status of all available services are displayed.

**AvediaServer services status is shown by a simple traffic light icon that has 3 states:**

- - indicates that the service is running without any error.
- - indicates that the service is not running. The administrator has deliberately stopped the service or an error has occurred.
- - indicates that start on boot is disabled and the service is not running.


## Services in Detail

**Table 6 Service Name and Function**



Service Name	Module	Function
<b>Channel Listener</b>	Director	Channel Listener function uses SAP (Session Announcement Protocol) messages to add channels to the Channels page in the Director module. When disabled, the pages are not updated. Refer to Managing Channels in the <i>AvediaServer Director Administrator's Guide</i> for more information.
<b>Device Listener</b>	Director	Device Listener automatically detects and adds devices to the device pages in the Director module. When disabled, no new devices can be detected and Device list pages are not updated. Refer to Managing Devices in the <i>AvediaServer Director Administrator's Guide</i> for more information.
<b>Channel Announcer</b>	Scheduled Play	SAP Announcements are used by Exterity Receivers and Servers for channel discovery. Channel Announcer sends SAP announcements for the created Scheduled Play channels. Refer to <i>AvediaServer Play Administrator's Guide</i> for more information.
<b>EPG Generator</b>	EPG	The EPG (Electronic Program Guide) combines EIT (Event Information Table) data for the various content sources on the IPTV network, providing a consolidated program guide. Refer to <i>AvediaServer EPG Administrator's Guide</i> for more information.
<b>Scheduled Play/VoD</b>	Play	Enables/disables the Scheduled Play and video-on-demand (VoD) functions. Refer to <i>AvediaServer Play Administrator's Guide</i> for more information.
<b>EPG Server</b>	EPG	Enables/disables the EPG server. When disabled. No EPG information is available. Refer to <i>AvediaServer EPG Administrator's Guide</i> for more information.
<b>Portal</b>	Portal	Enables/Disables the Portal functions. Refer to <i>AvediaServer Portal Administrator's Guide</i> for more information.
<b>PMS</b>	Portal	Enables/disables the AvediaServer interface to a Property Management System ( <b>PMS</b> ). Refer to <i>AvediaServer Portal Administrator's Guide</i> for more information.
<b>Record</b>	Record	When enabled, allows the scheduled recording of content. If disabled, recording capabilities are globally withheld. Refer to <i>AvediaServer Record Administrator's Guide</i> for more information.
<b>Channel Monitor</b>	Director	When enabled, you can selectively view additional channel information on the Channel pages in the Director module. <b>Channel Listener</b> must also be enabled. Refer to Managing Channels in the <i>AvediaServer Director Administrator's Guide</i> for more information.

## Starting and Stopping Services

### To start a service:

1. Click **Status > Service** to display the **Status** page as shown in Figure 8.
2. Click on the **Start** button next to the service you wish to start.
3. Confirm the **State** turns to , indicating the service has started.

### To stop a service:

1. Click **Status > Service** to display the **Status** page as shown in Figure 8.
2. Click on the **Stop** button next to the service you wish to stop.
3. Confirm the **State** turns to  if Start on Boot is enabled or  if **Start on Boot** is disabled.

## Configuring Services to Start on Boot

You can configure services to start automatically when you boot up the AvediaServer. You can also disable services from starting on boot.

### To enable a service to start on boot:

1. Click **Status > Service** to display the **Status** page as shown in Figure 8.
2. Click on the **Enable** button next to the service you wish to start. The button changes to Disable.
3. The service is now configured to start automatically the next time you boot the AvediaServer.

### To disable a service from starting on boot:

1. Click **Status > Service** to display the **Status** page as shown in Figure 8.
2. Click on the **Disable** button next to the service you wish to start. The button changes to Enable.
3. The service is now configured to remain off until manually enabled the next time you boot the AvediaServer.



## 6 Configuring Users and Profiles

This section describes configuration of specific capabilities for users, or groups of users, who have access to the AvediaServer using the Web Management Interface. All procedures described in this section assume that you are running the Web Management Interface, as described in Management Interfaces on page 13.

The functions described in this section are accessed from the **Users** menu tab and are available in all configurations of AvediaServer.

The AvediaServer User account management allows you to configure specific user accounts, group accounts, or a mixture of both. User accounts and profiles can be added, edited, and deleted. You cannot however delete or edit the base admin account and profile. If Active Directory has been implemented in your organisation, you can use the LDAP Groups function to assign profiles to user groups without creating specific named accounts for each individual user. Users can use their domain credentials to log in.

This section describes the following procedures:

- [Changing the Admin Password](#)
- [Managing Profiles](#)
- [Managing User Accounts](#)
- [Configuring LDAP Access](#)
- [Managing Active Directory User Group Accounts](#)

---

**Note:** 'admin' is the only user who has access to the Director module. You can create a user account with the same **Functions** enabled allowing access to all other admin functions.

---

## Changing the Admin Password

By default, a username/password pair of `admin/labrador` is required to gain access to the Web Management Interface and the Admin Interface. The admin password can be changed by the administrator, as required.

### To change the admin password:

1. Open the Web Management Interface
2. Click **Users > Users Accounts** to open the User Account page.

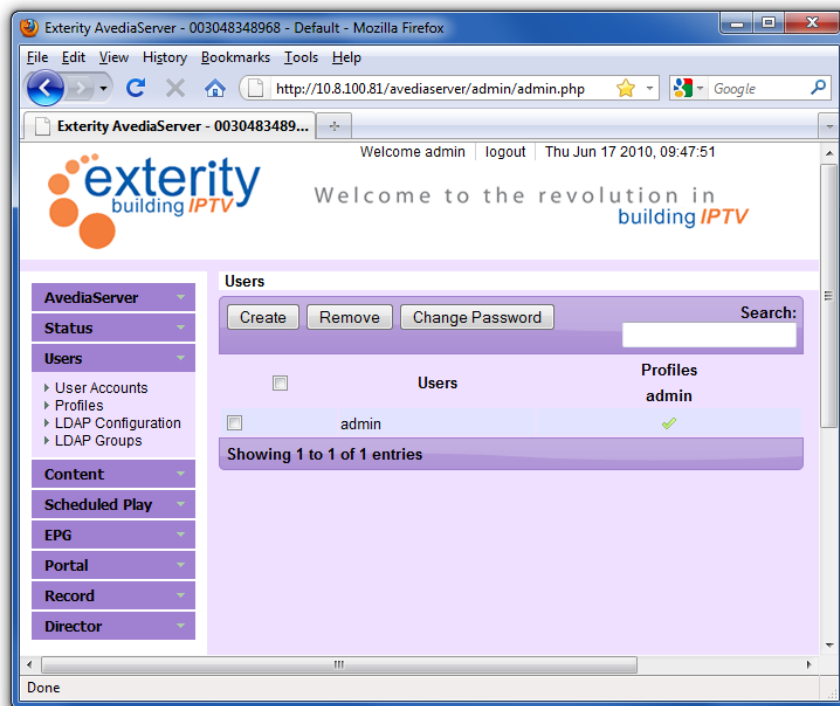


Figure 9 AvediaServer User Accounts

3. Click the admin checkbox to select the admin user account.
4. Click the **Change Password** button.

The "Modify Password" dialog box has a title bar with a close button. The main text reads: "Please enter a username and password for the user. Note that usernames must be unique." Below this, there are three input fields: "Username" with the value "admin", "Password" with masked characters, and "Confirm password" with masked characters. At the bottom right, there are "Apply" and "Cancel" buttons.

5. Enter the new password in both fields.
6. Click **Apply**.

## Managing Profiles

Each user must have an associated profile. If a profile is not assigned, the user account has no capability and access to the AvediaServer is blocked when log in is attempted. Each profile you create can enable any permutation of the 22 profile functions. The profiles page is accessed by clicking **Users > Profiles**.

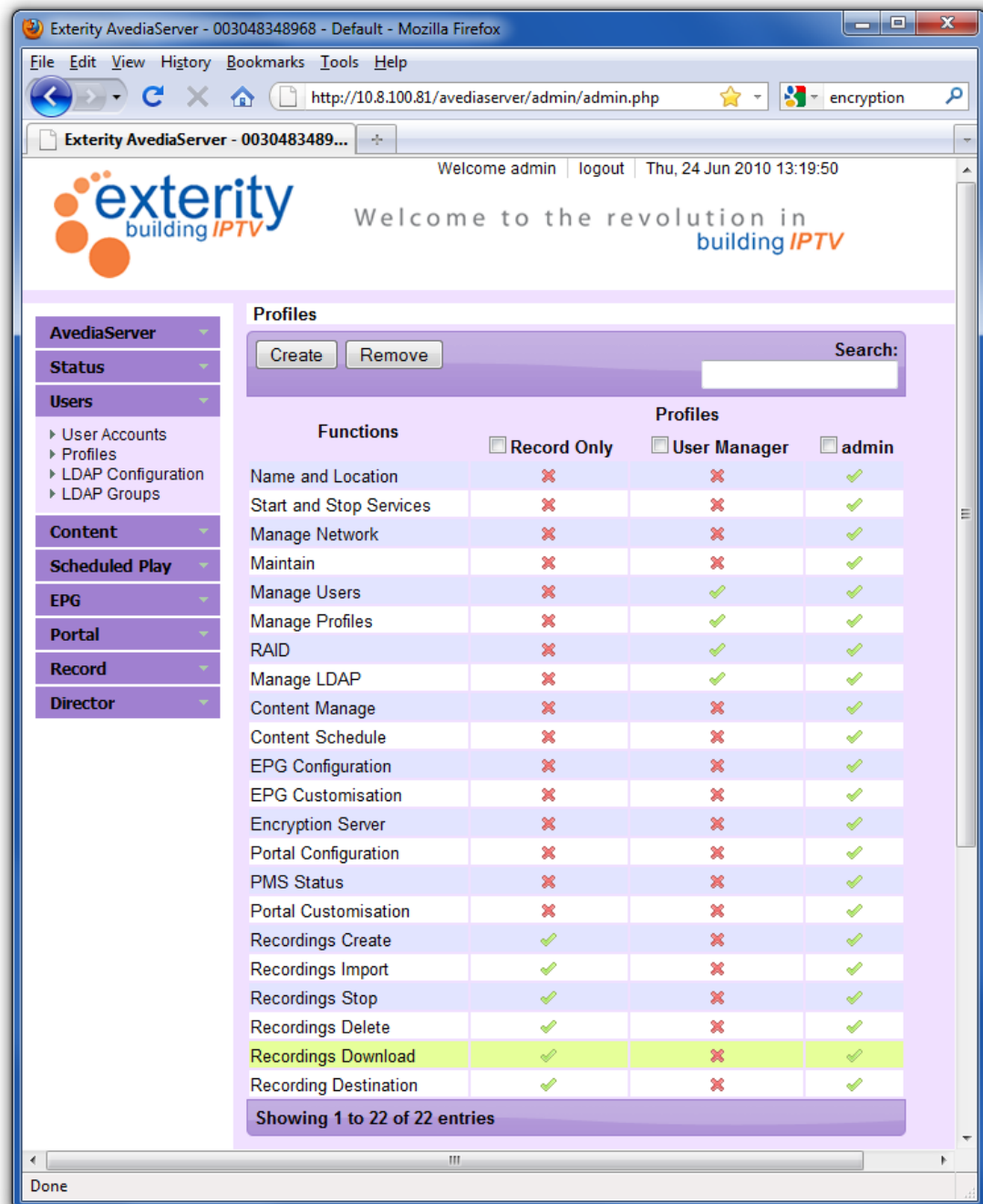


Figure 10 Profiles Page

## Profile Functions

The following section lists and briefly describes the functions listed on the profiles page. When a function is enabled as part of a named profile, the described capability is available to all assigned users. By selecting or deselecting individual functions you can enable the capabilities best suited to each user, or groups of users.

The functions are as follows:

- **Name and Location**<sup>1</sup> — controls access to the **AvediaServer > General** page where the Name and Location of the AvediaServer can be configured. The page also displays the AvediaServer firmware version, IP address, and serial number. Refer to [Naming the AvediaServer](#) on page 16 for more information.
- **Start and Stop Services** — controls access to the **Status > Service** page. Refer to [Configuring Services](#) on page 22 for more information.
- **Manage Network**<sup>1</sup> — controls access to the **AvediaServer > Network** page where the network parameters such as the IP address of the AvediaServer can be configured. Refer to [Configuring Network Settings](#) on page 17 for more information.
- **Maintain**<sup>1</sup> — controls access to the **AvediaServer > Maintenance** and **Logging** pages where you can configure firmware upgrades, AvediaServer Time zone, and import/export configurations. Refer to [Maintaining the AvediaServer](#) on page 43 and [Logging](#) on page 46 for more information.
- **Manage Users**<sup>2</sup> — controls access to the **Users > User Accounts** page. Refer to [Managing User Accounts](#) on page 31 for more information.
- **Manage Profiles**<sup>2</sup> — controls access to the **Users > Profiles** page. Refer to [Managing Profiles](#) on page 27 for more information.
- **RAID** — controls access to the **AvediaServer > RAID** page where RAID information is displayed. Refer to [Viewing RAID Status](#) on page 41 for more information.
- **Manage LDAP** — controls access to the **Users > LDAP Configuration** and **Users > LDAP Groups**. Refer to [Configuring LDAP Access](#) on page 34 and [Creating User Group Accounts with LDAP](#) on page 36 for more information.
- **Content Manage** — controls access to the **Content** menu. When deselected, the **Content** menu tab is not displayed. Refer to the *AvediaServer Play Administrator's Guide* for more information.
- **Content Schedule** — controls access to the **Scheduled Play** menu. When deselected, the **Scheduled play** menu tab is not displayed. Refer to the *AvediaServer Play Administrator's Guide* for more information.
- **EPG Configuration**<sup>3</sup> — controls access to the **EPG > Configuration, Statistics, XML Import** and **XML Assignment** pages. Refer to the *AvediaServer EPG Administrator's Guide* for more information.
- **EPG Customisation**<sup>3</sup> — controls access to the **EPG > Backgrounds** and **Customisation** pages. Refer to the *AvediaServer EPG Administrator's Guide* for more information.
- **Encryption Server** — controls access to the **AvediaServer > Encryption** page. Refer to the *AvediaServer Portal Administrator's Guide* for more information.
- **Portal Configuration**<sup>4</sup> — controls access to the **Portal > Configuration, Genres, Channels, and Reporting** pages. Refer to the *AvediaServer Portal Administrator's Guide* for more information.
- **PMS Status**<sup>4</sup> — controls access to the **Portal > PMS** page. Refer to the *AvediaServer Portal Administrator's Guide* for more information.
- **Portal Customisation**<sup>4</sup> — controls access to the **Portal > Backgrounds** and **Reporting** pages. Refer to the *AvediaServer Portal Administrator's Guide* for more information.
- **Recordings Create**<sup>5</sup> — controls the availability of the **Create** function on the **Record > Recordings** page. Refer to the *AvediaServer Record Administrator's Guide* for more information.
- **Recordings Import**<sup>5</sup> — controls the availability of the **Import** function on the **Record > Recordings** page. Refer to the *AvediaServer Record Administrator's Guide* for more information.

- **Recordings Stop**<sup>5</sup> — controls the availability of the **Stop** function on the **Record > Recordings** page. Refer to the *AvediaServer Record Administrator's Guide* for more information.
- **Recordings Delete**<sup>5</sup> — controls the availability of the **Delete** function on the **Record > Recordings** page. Refer to the *AvediaServer Record Administrator's Guide* for more information.
- **Recordings Download**<sup>5</sup> — controls the availability of the **Download** function on the **Record > Recordings** page. Refer to the *AvediaServer Record Administrator's Guide* for more information.
- **Recording Destination**<sup>5</sup> — controls the availability of the **Transfer** tab in the **Create a recording** window. Refer to the *AvediaServer Record Administrator's Guide* for more information.

#### Notes:

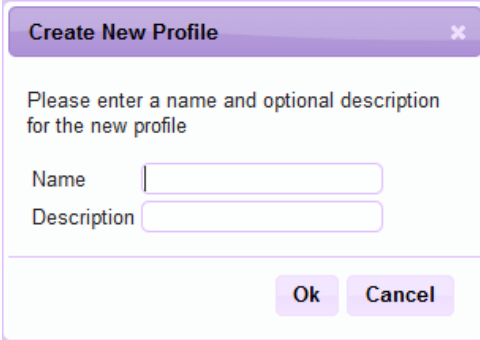
- 1 - When Name and Location, Manage Network, Maintain, RAID, and Encryption Server are deselected, the AvediaServer menu tab is not displayed.
- 2 - When Manage Users, Manage Profiles, and Manage LDAP are deselected, the Users menu tab is not displayed.
- 3 - When both EPG Configuration and Customisation are deselected, the EPG menu tab is not displayed.
- 4 - When Portal Configuration, PMS Status, and Portal Customisation are deselected, the Portal menu tab is not displayed.
- 5 - When Recordings Create, Import, Stop, Delete, Download, and Destination are deselected, the Record > Recordings menu tab is not displayed.

## Creating and deleting Profiles

You can create as many profiles as you need to make the specific functions available to match each user, or user group requirements. This also helps limit capabilities to only what is needed.

#### To create a profile:

1. Click **Users > Profiles** to open the Profile page as shown in Figure 10.
2. Click the **Create** button. The following window is displayed:



3. Enter a name and description for the profile in the Name and Description fields.
4. Click **Ok** and confirm the new profile name is listed on the **Profile** page.
5. In the new profile column click the associated **✗** to enable (**✓**) the Functions required in the profile. Refer to [Profile Functions](#) for more information.

When you have enabled the required functions, click **User Accounts** or **LDAP Groups** to assign users to the profile. Refer to [Creating a User Account](#) and [Creating User Group Accounts with LDAP](#) for more information.

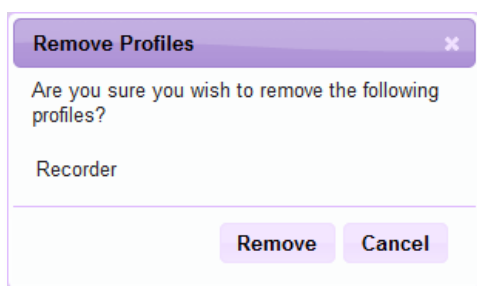
#### To delete a profile:

1. Click **Users > User Accounts** to open the Users page as shown in Figure 11.
2. Deselect any users assigned to the profile you want to delete by clicking the associated **✓** to display **✗**.

**Note:** If users then have no assigned profile, they subsequently cannot access the AvediaServer.

---

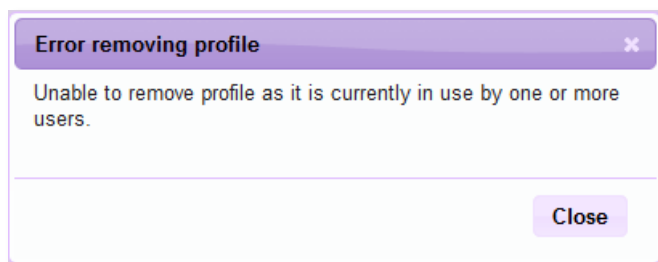
3. Click **Users > Profiles** to open the Profiles page as shown in Figure 9.
4. Click the check box for the profile you want to delete.
5. Click the **Remove** button.
6. Confirm the required profile is displayed and click **Remove** when the **Remove Profiles** window is displayed.



7. The **Profiles** page is updated.

---

**Note:** If users are still assigned to the profile an error message is displayed:



Click **Users > User Accounts** to de-couple the profile you want to delete from any user accounts. Note also that a user account without an assigned profile cannot access the AvediaServer.

---

## Managing User Accounts

There are 2 basic types of account, admin and user. You can create and delete user accounts as required. The core admin user account and profile cannot be modified or deleted, and it is the only account with access to the Director menu and functions. You can however, create a user account with an admin profile, hence enabling admin capabilities.

All other accounts are considered user accounts, even when all Profile Functions are enabled. This allows you, the system administrator, to closely control the capabilities available to specific users. Refer to [Creating User Group Accounts with LDAP](#) for more information about configuring user groups from Active Directories.

As profiles define the capabilities available to a user, an account without an assigned profile has no capability. By default, freshly created accounts or profiles have no enabled Functions. Likewise, profiles are not automatically assigned to new individual or group user accounts. These must be manually configured. You can create profiles for a specific user prior to creating the account, or you can create the account, configure the profile, and complete the process by assigning the user to the profile. A user can be a member of more than one profile.

This section describes the following:

- [Creating a User Account](#)
- [User Log in](#)
- [Deleting a User Account](#)

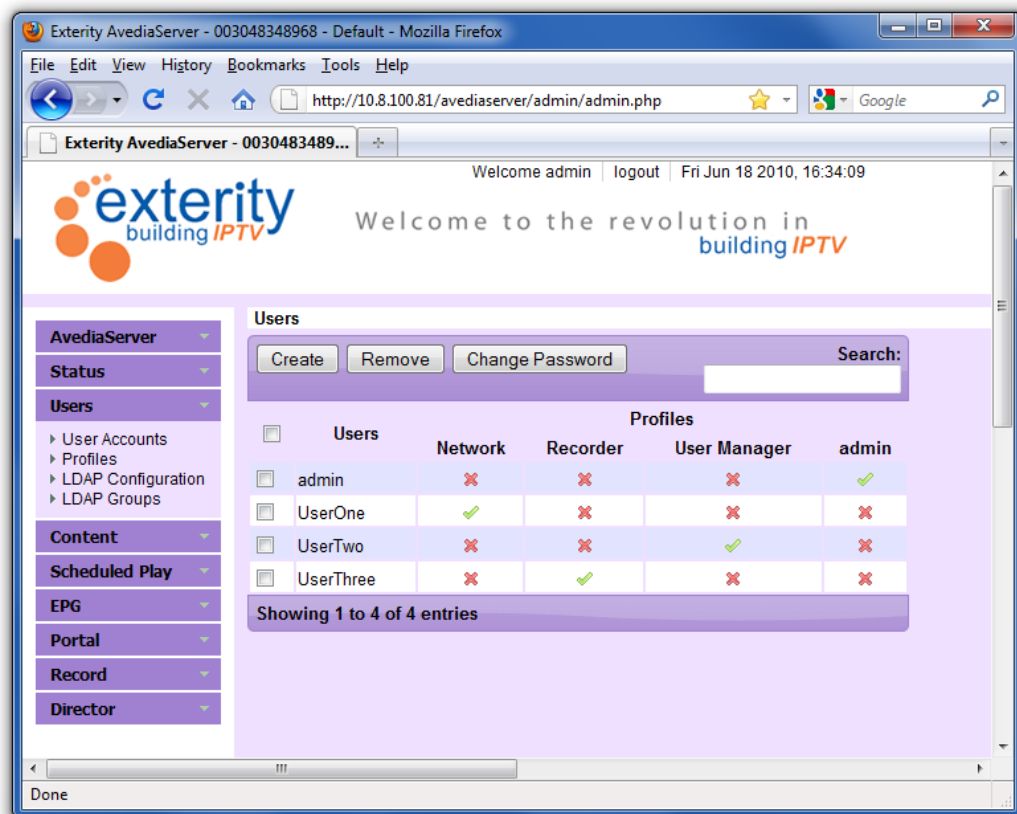


Figure 11 Example User Accounts page

## Creating a User Account

To add a user account:

1. Click **Users > User Accounts** to open the Users page.
2. Click the **Create** button to display the **Create New User** window.

3. Enter the user name and password.
4. Click **Create User** to add the new account. The new account is listed in the Users column:

Users	Profiles			
	Network	Recorder	User Manager	admin
<input type="checkbox"/> admin	✗	✗	✗	✓
<input type="checkbox"/> UserOne	✓	✓	✗	✗
<input type="checkbox"/> UserTwo	✗	✗	✓	✗
<input type="checkbox"/> UserThree	✗	✓	✗	✗
<input type="checkbox"/> NetworkAdmin	✗	✗	✗	✗

Showing 1 to 5 of 5 entries

**Note:** The new account (NetworkAdmin) has not been assigned to a profile.

5. If you have already created the required profile click the ✗ on the required profile in the user row to assign it to the user (✓). (In this example, NetworkAdmin user and Network profile.)

Users	Profiles			
	Network	Recorder	User Manager	admin
<input type="checkbox"/> admin	✗	✗	✗	✓
<input type="checkbox"/> UserOne	✓	✓	✗	✗
<input type="checkbox"/> UserTwo	✗	✗	✓	✗
<input type="checkbox"/> UserThree	✗	✓	✗	✗
<input type="checkbox"/> NetworkAdmin	✓	✗	✗	✗

Showing 1 to 5 of 5 entries



## User Login

The user can now log into the Avedia Server using the assigned user name and password. If you have not assigned a profile to a user account, the following message is displayed when log in is attempted and access denied:

Please login to your AvediaServer:

Username:

Password:

Keep user logged in

**No access rights**

User XXXXX has no access rights on this server.

## Deleting a User Account

To delete a user account:

1. Click **Users > User Accounts** to open the Users page.
2. Click the checkbox for the user account you want to delete.

Buttons: Create, Remove, Change Password, Search:

<input type="checkbox"/>	Users	Profiles			
		Network	Recorder	User Manager	admin
<input type="checkbox"/>	admin	×	×	×	✓
<input type="checkbox"/>	UserOne	✓	✓	×	×
<input type="checkbox"/>	UserTwo	×	×	✓	×
<input type="checkbox"/>	UserThree	×	✓	×	×
<input checked="" type="checkbox"/>	NetworkAdmin	×	×	×	×

Showing 1 to 5 of 5 entries

3. Click the **Remove** button to delete the account. Any associated profile is unaffected.

## Configuring LDAP Access

If Active Directory has been implemented in your organisation, users and their passwords are already organised by functional groups. You can make use of this information and its structure using the LDAP (Lightweight Directory Access Protocol) feature.

With LDAP authentication configured and enabled, the Active Directory information is used to allow users access to AvediaServer functions using their domain name and login. The functions are determined by the profile assigned to each Active Directory group. Users access only the functions enabled by the profile assigned to their group.

For example, in an education environment, teachers and students are likely to be in two distinct groups. By using the data accessed you can assign a play only profile to the student group, whilst allowing teachers more extensive capabilities with different, or combinations of profiles. Setting up an AvediaServer user account for every user is not required, only the group names.

The following information is required for configuration:

- The IP address of the Active Directory host.
- The Base DN (Domain Name) of the directory entries. The Base DN is typically derived from your organisation name and domain name.
- The version of LDAP in operation on the Host.

### To configure LDAP access:

1. Click **Users > LDAP Configuration** to open the LDAP Configuration page as shown in Figure 12.

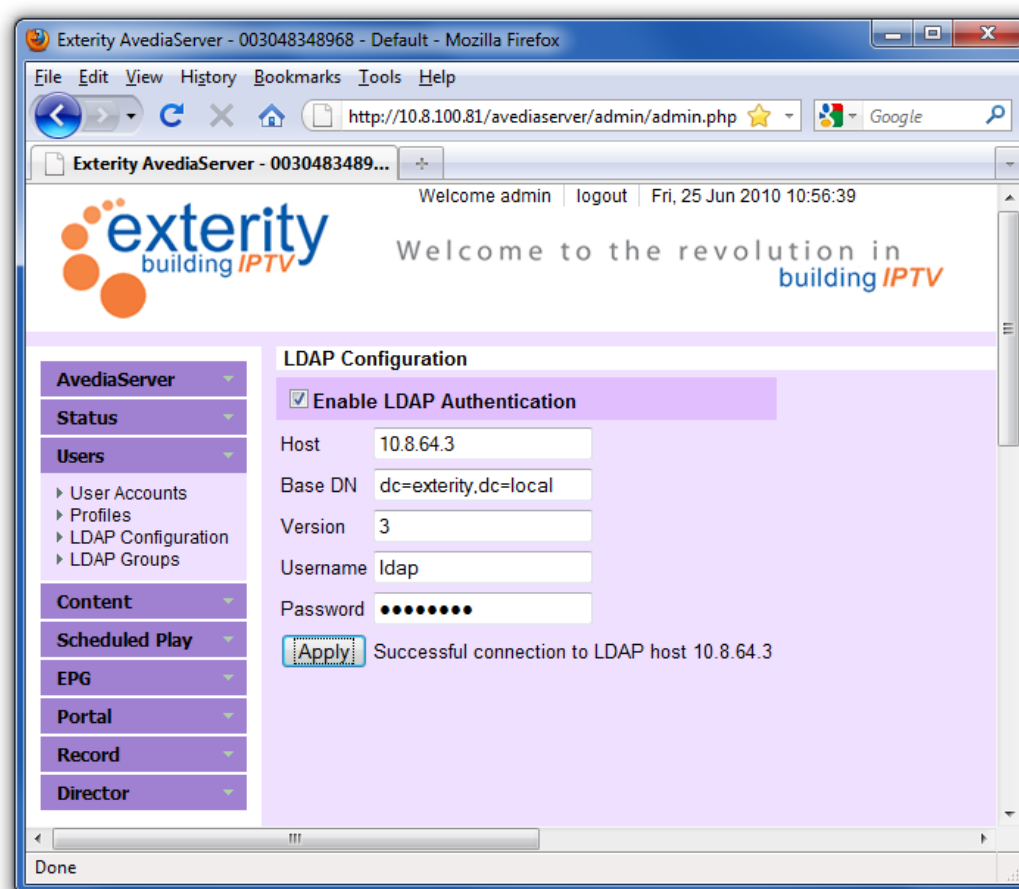


Figure 12 LDAP Configuration

2. Click the **Enable LDAP Authentication** checkbox.
3. Enter the IP address of the Active Directory host in the **Host** field.
4. Enter the Base Domain Name in the **Base DN** field.
5. Enter the LDAP version in use in the **Version** field. (Normally 3)
6. Enter your domain login in the **Username** field.
7. Enter your domain password in the **Password** field.
8. Click the **Apply** button to access the Active Directory.
9. Confirm the message: "Successful connection to LDAP host <IP address>" is displayed.

---

**Note:** If unsuccessful, the message: "Failed to connect to LDAP host <IP address>" is displayed.

---

## Managing Active Directory User Group Accounts

Whilst the groups are defined by the Active Directory structure, configuring user group accounts is similar to the process for individual user accounts. As profiles define user capability, an account without an assigned profile has no function. By default, freshly created accounts or profiles have no enabled Functions. Likewise, profiles are not automatically assigned to new individual or group user accounts. These must be manually configured. You can create profiles for any group prior to creating the group accounts, or you can create the accounts, configure the profile, and complete the process by assigning the user groups to the appropriate profile. A group can be a member of more than one profile.

This section describes the following:

- [Configure a Group Account](#)
- [User Log in](#)
- [Admin Log in](#)

### Configure a Group Account

To configure a group account:

1. Click **Users > LDAP Groups** to open the LDAP - Active Directory Group to Profile Mappings page. When the Active Directory access has been configured correctly, the ADGroups list is populated, similar to that shown in Figure 13.

ADGroups	Profiles			
	Play Only	Record Only	User Manager	admin
IIS_WPG	x	x	x	x
HelpServicesGroup	x	x	x	x
TelnetClients	x	x	x	x
WINS Users	x	x	x	x
DHCP Users	x	x	x	x
DHCP Administrators	x	x	x	x
Administrators	x	x	x	x
Users	x	x	x	x
Guests	x	x	x	x
Print Operators	x	x	x	x
Backup Operators	x	x	x	x
Replicator	x	x	x	x
Remote Desktop Users	x	x	x	x
Network Configuration Operators	x	x	x	x
Performance Monitor Users	x	x	x	x
Performance Log Users	x	x	x	x
Distributed COM Users	x	x	x	x
Domain Computers	x	x	x	x
Domain Controllers	x	x	x	x
Schema Admins	x	x	x	x
Enterprise Admins	x	x	x	x
Cert Publishers	x	x	x	x
Domain Admins	x	x	x	x
Domain Users	x	x	x	x
Domain Guests	x	x	x	x

Figure 13 LDAP - Active Directory Group to Profile Mappings page

- Click the **✗** on the required profile in the user group row to assign it to the group (**✓**) as shown in Figure 14.

ADGroups	Profiles			
	Play Record Only	Record Only	User Manager	admin
IIS_WPG	✗	✗	✗	✗
HelpServicesGroup	✗	✗	✗	✗
TelnetClients	✗	✗	✗	✗
WINS Users	✗	✗	✗	✗
DHCP Users	✗	✗	✓	✗
DHCP Administrators	✗	✗	✗	✓
Administrators	✗	✗	✗	✓
Users	✗	✗	✗	✗
Guests	✓	✗	✗	✗
Domain Users	✓	✓	✗	✗
Domain Guests	✓	✗	✗	✗

**Figure 14 Selected Profiles**

Each user within the specific Active Directory Group now has access to the AvediaServer with capabilities and limitations determined by their assigned profile.

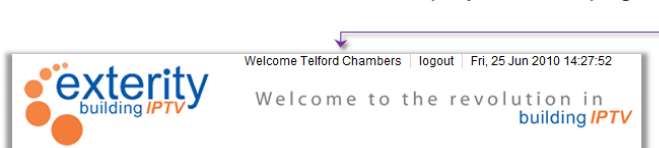
### User Log in

The user can now log into the Avedia Server using their domain name and password.

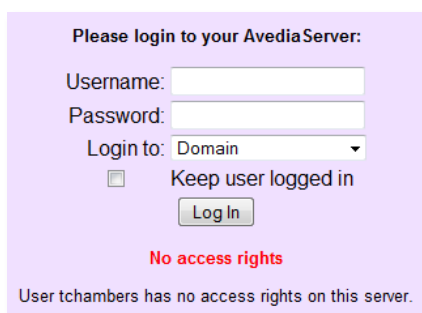
#### To log in with domain name:

- Launch the AvediaServer login screen.
- Enter the domain user name and password.

- Select **Domain** from the **Login to:** drop down list.
- Click the **Keep user logged in** checkbox if required and click the **Log In** button.
- The user's common name is now displayed in the page banner.



If you have not assigned a user account to a profile, the following message is displayed when log in to the AvediaServer is attempted and access denied:



Please login to your AvediaServer:

Username:

Password:

Login to: Domain

Keep user logged in

**No access rights**

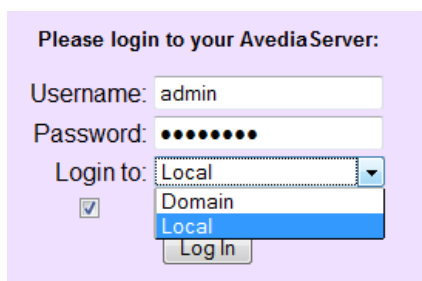
User tchambers has no access rights on this server.

## Admin Log in

If you want to ensure that only the admin login has full administrative rights for the AvediaServer, ensure that no user groups are assigned to the base admin profile.

### To log in as admin:

1. Launch the AvediaServer login screen.
2. Enter the admin username and password. Default is 'admin' and 'labrador'.
3. Select **Local** from the **Login to:** drop down list.
4. Click the **Keep user logged in** checkbox if required and click the **Log In** button.



Please login to your AvediaServer:

Username: admin

Password: ●●●●●●

Login to: Local

Keep user logged in

5. Click **User > LDAP Groups**.
6. Deselect any user groups in the admin profile column.

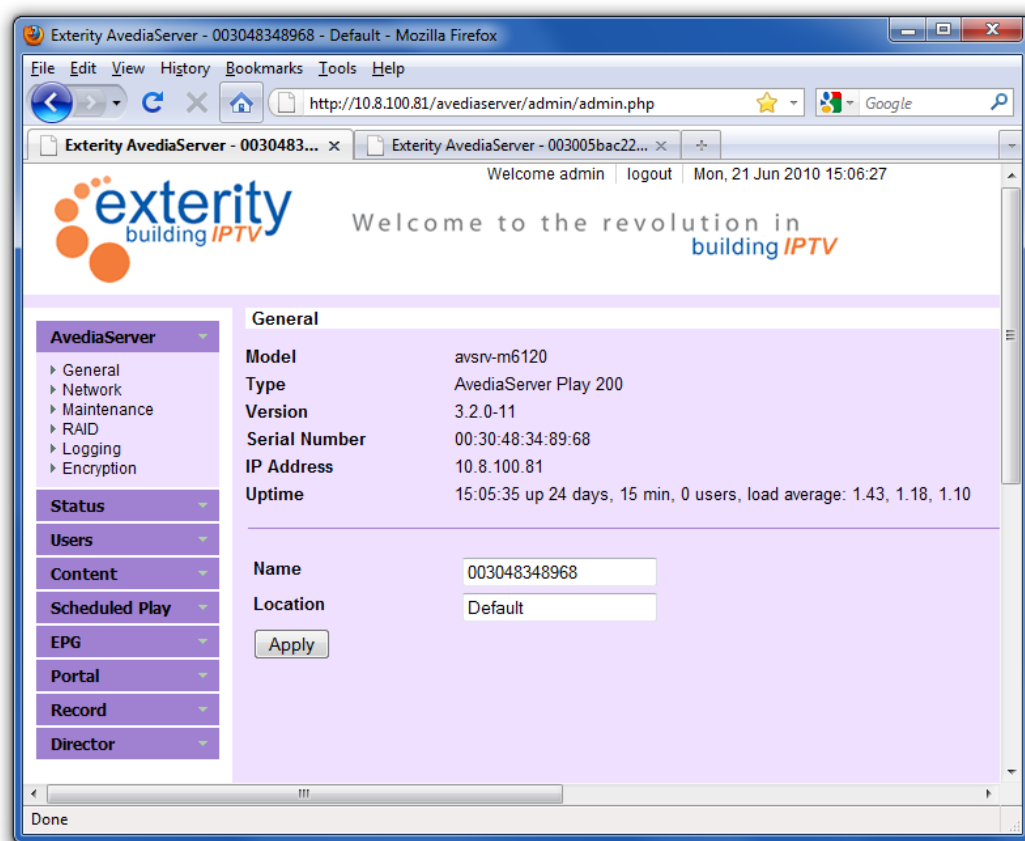
## 7 Status Monitoring

This chapter explains how to check the operating status of the AvediaServer. It contains the following sections:

- [Viewing AvediaServer Details](#)
- [Viewing Hardware Information](#)
- [Viewing Network Status](#)
- [Viewing RAID Status](#)

### Viewing AvediaServer Details

Click **AvediaServer > General** to display the General page as shown below:



**Figure 15 AvediaServer General Page**

The following information is displayed:

- **Model** – The AvediaServer model, In this example, this is **avsrv-m6120**. Refer to [AvediaServer Module Configurations](#) for more information.
- **Type** – The AvediaServer type. In the example, this is **Play 200**. Refer to [AvediaServer Module Configurations](#) for more information.
- **Version** – The currently installed AvediaServer firmware version.
- **Serial Number** – The MAC address of the AvediaServer.
- **IP Address** – The IP address assigned to the AvediaServer, either configured statically or assigned by DHCP. Refer to [Configuring Network Settings](#) for more information.
- **Uptime** – The length of time since the last power-on or reboot.

- **Name** – Name of the AvediaServer. Refer to [Naming the AvediaServer](#) for more information.
- **Location** – Location of the AvediaServer. Refer to [Naming the AvediaServer](#) for more information.

## Viewing Hardware Information

To view hardware information for the AvediaServer:

1. Click **AvediaServer > Maintenance** to display the Maintenance page, as shown in Figure 19.
2. In the **Server Details** section, click the **Show** button alongside **Hardware Info**. A page showing all the hardware information is displayed, as shown partially below:

```
#### Network Interface Configuration ####
eth0      Link encap:Ethernet  HWaddr 00:30:48:7c:c0:2a
          inet addr:10.8.100.153  Bcast:10.8.255.255  Mask:255.255.0.0
          inet6 addr: fe80::230:48ff:fe7c:c02a/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:291018818  errors:0  dropped:0  overruns:0  frame:0
          TX packets:10624886  errors:0  dropped:0  overruns:0  carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:2160552695 (2.0 GB)  TX bytes:1983825880 (1.8 GB)
          Base address:0x2000 Memory:d8020000-d8040000

eth1      Link encap:Ethernet  HWaddr 00:30:48:7c:c0:2b
          UP BROADCAST MULTICAST  MTU:1500  Metric:1
          RX packets:0  errors:0  dropped:0  overruns:0  frame:0
          TX packets:0  errors:0  dropped:0  overruns:0  carrier:
```

Figure 16 AvediaServer Hardware Information

## Viewing Network Status

The **Statistics** section of the **Network** page provides an indication of the bandwidth being used by the network interface.

Click **AvediaServer > Network** to view the **Statistics** in the lower half of the **Network** page as shown in Figure 5. The AvediaServer automatically updates the statistics without the need to refresh the page.

- Statistics								
	% Utilisation		Total Bytes	Total Packets	Errors	Dropped	Collisions	Discarded
TX	0	<input type="text"/>	3955194183	31752291	0	0	0	0
RX	0	<input type="text"/>	3460138151	370811408	0	0	0	0

Figure 17 Network Statistics



**Note:** With reference to the **Play** module only, the information in the **Statistics** section is useful if the AvediaServer is indicating that it is streaming channels but that the channels are not accessible. If the channels are streaming, the bandwidth being used by the network indicates this; a standard definition (SD) TV channel typically uses 4Mbps of network bandwidth and a radio channel uses approximately 200kbps.

For more information about the **Play** module, see the *AvediaServer Play Module Administrator's Guide V3.2.0*.

## Viewing RAID Status

The AvediaServer c1550 chassis supports multiple disks configured in a RAID array, which ensures that no data is lost in the event of a disk failing. This capability is not supported on the c1510 chassis and the RAID page is not displayed in the AvediaServer menu.

**Note:** A RAID array of disks is used for content storage, which typically applies to AvediaServers used for **Play** and **Record**.

**To check the status of the RAID array on the AvediaServer:**

1. Click **AvediaServer** > **RAID** to display the RAID Status page as shown below:

**RAID Status**

```

Personalities : [linear] [multipath] [raid0] [raid1] [raid6] [raid5] [raid4] [raid10]
md0 : active raid5 sdb1[0] sdd1[4] sdf1[3] sde1[2] sdc1[1]
3907039744 blocks level 5, 64k chunk, algorithm 2 [5/5] [UUUUU]

unused devices: <none>
/dev/sdb1:
Magic : a92b4efc
Version : 00.90.00
UUID : 824f3ef2:3bdd5131:09435ebf:76661876
Creation Time : Mon Nov 30 09:07:01 2009
Raid Level : raid5
Used Dev Size : 976759936 (931.51 GiB 1000.20 GB)
Array Size : 3907039744 (3726.04 GiB 4000.81 GB)
Raid Devices : 5
Total Devices : 5
Preferred Minor : 0

Update Time : Thu Jun 10 09:45:32 2010
State : clean
Active Devices : 5
Working Devices : 5
Failed Devices : 0
Spare Devices : 0
Checksum : b85eb65b - correct
Events : 0.32

```

**Figure 18 AvediaServer RAID page**

2. Check that the last characters in the third line of information look like [UUUUU], as shown below:

```

Personalities : [linear] [multipath] [raid0] [raid1] [raid6] [raid5] [raid4] [raid10]
md0 : active raid5 sdf1[4] sde1[3] sdd1[2] sdc1[1] sdb1[0]
1250274304 blocks level 5, 64k chunk, algorithm 2 [5/5] [UUUUU]

```

Each 'U' relates to an individual disk in the RAID array. In the above example, there are five disks in the array.

If an underscore is displayed (for example, [U\_UUU]), one of the disks is faulty and has been removed from the RAID array.

3. Further down the page, check the number of RAID Devices. If all the disks are working properly, the information is as follows:

```
Raid Devices : 5
Total Devices : 5
```

If the number of Total Devices is less than the number of RAID Devices (for example, Total Devices = 4 and RAID Devices = 5), a disk(s) in the array is faulty and has been removed from the RAID array.

### Disks missing from the RAID array

A disk could be missing from the array because it has physically been removed from the server or it could be logically removed from the array because of some other problem (for example, read/write errors resulting in the RAID software deciding not to use the disk and removing it from the RAID array).

If you discover there is a disk missing, please contact support for assistance. For more information, refer to Troubleshooting on page 49.

---

**Caution:** Hard disks must not be removed from the server unless instructed to by the System Integrator or Exterity support. Removing a disk from an active RAID array can result in the loss of all data on the array.

---

## 8 Maintaining the AvediaServer

This chapter describes the AvediaServer maintenance procedures. It contains the following sections:

- [Upgrading the AvediaServer](#)
- [Exporting Configurations to a TFTP Server](#)
- [Importing Configurations from a TFTP Server](#)
- [Rebooting the AvediaServer](#)
- [Shutting Down the AvediaServer](#)
- [Returning the AvediaServer to Factory Default Settings](#)

**Maintenance**

**Time**

Time Zone: Europe/London Fri, 10 Sep 2010 15:17:09 +0100

NTP Servers:  Add Server  
ntp.ubuntu.com remove

**Server**

Reboot: Reboot

Shutdown: Shutdown

Factory defaults: Defaults

**Upgrade/Configuration**

TFTP Server: 10.8.90.11

Upgrade Filename:  Upgrade

Export Filename:  Export

Import Filename:  Import

**Server Details**

Hardware Info: Show

Figure 19 AvediaServer Maintenance Page

## Upgrading the AvediaServer

Upgrading an Exterity AvediaServer from a version prior to 3.0.1 is a complex process that involves a complete installation of the operating system. For more information, contact your System integrator.

For version 3.0.1 or later, you can perform an upgrade using the maintenance page.

---

**Note:** However, upgrading can result in loss of system configuration such as scheduled channels. You should also [export](#) the AvediaServer configuration to an external location for later use.

---

### To upgrade the AvediaServer:

1. Place the new AvediaServer release file (avedia-server-install-x.y.z.tar.gz) in an accessible location in a known remote TFTP server location.
2. Click **AvediaServer > Maintenance** and enter the IP Address of the remote TFTP server.
3. Enter the name of the new firmware .tar.gz file in the **Upgrade Filename** field.
4. Click the **Upgrade** button.

The AvediaServer may require in excess of 10 minutes and restart more than once to complete the upgrade process.

## Exporting Configurations to a TFTP Server

You can export the current settings from the AvediaServer to a TFTP server in the form of a single configuration file.

### To export a configuration from the AvediaServer:

1. Click **AvediaServer > Maintenance**.
2. In the **Upgrade/Configuration** section, enter the IP address of the TFTP server in the **TFTP Server** field.
3. Enter the name you want to use as the file name for the configuration file in the **Export Filename** field.
4. Click the **Export** button.

## Importing Configurations from a TFTP Server

Once the upgrade is complete, any exported configuration can be imported from a TFTP server into the AvediaServer.

### To import a configuration into the AvediaServer:

1. Copy the exported configuration to the `root` directory of the TFTP server.
2. Click **AvediaServer > Maintenance** tab to display the Maintenance page as shown in Figure 19.
3. In the **Upgrade/Configuration** section, enter the IP address of the TFTP server in the **TFTP Server** field.
4. Enter the filename of the configuration to import in the **Import Filename** field.
5. Click the **Import** button.
6. View the log file to verify that the configuration settings have been uploaded.

## Rebooting the AvediaServer

### To reboot the AvediaServer:

1. Click **AvediaServer > Maintenance** to display the Maintenance page as shown in Figure 19.
2. In the **Server** section, click the **Reboot** button.

## Shutting Down the AvediaServer

**To shut down the AvediaServer:**

1. Click **AvediaServer > Maintenance** to display the Maintenance page as shown in Figure 19.
2. In the **Server** section, click the **Shutdown** button.

## Returning the AvediaServer to Factory Default Settings

**To return the AvediaServer to the factory default settings:**

1. Click **AvediaServer > Maintenance** to display the Maintenance page as shown in Figure 19.
2. In the **Server** section, click the **Defaults** button.

## 9 Logging

Logging permanently logs events. Logging information can be used by authorised Exterity service personnel to analyse any installation or performance problems experienced on an AvediaServer.

This chapter contains the following sections:

- [Viewing all Logging Information](#)
- [Refreshing Logging Information](#)
- [Downloading the Log File](#)
- [Logging Information to an External Syslog Server](#)

### Viewing all Logging Information

**To view all logging information:**

1. Click **AvediaServer > Logging** to display the Logging page as shown in Figure 22.
2. Click the **Show All** button.

The following window is displayed with all available log information:

```

Jul 15 08:28:19 avediaserver-C02A authorisation.php: admin logged in
Jul 15 08:28:19 avediaserver-C02A authorisation.php: NOTICE - user 'admin' logged in
Jul 15 08:28:25 avediaserver-C02A kernel: [491797.013168] rtc: lost 26 interrupts
Jul 15 08:28:51 avediaserver-C02A kernel: [491823.222783] rtc: lost 26 interrupts
Jul 15 08:28:54 avediaserver-C02A authorisation.php: user:admin sent command:remove
Jul 15 08:28:54 avediaserver-C02A authorisation.php: deleting contentid=58,
type=RECORDING, name='BBC 1 CI local'
Jul 15 08:28:54 avediaserver-C02A authorisation.php: deleting recording file for
recordingid=11
Jul 15 08:28:54 avediaserver-C02A avedia-recorddd: handler - stopping recording id=9
Jul 15 08:28:54 avediaserver-C02A avedia-recorddd: handler - recording id=9 is not an
active recording, it cannot be stopped
Jul 15 08:28:54 avediaserver-C02A avedia-recorddd: handler - deleting recording id=9
Jul 15 08:28:54 avediaserver-C02A avedia-recorddd: Failed to read id = 9 from
recordings table
Jul 15 08:28:54 avediaserver-C02A avedia-recorddd: handler - could not read recording
id=9 from database
Jul 15 08:29:08 avediaserver-C02A authorisation.php: user:admin sent command:remove
Jul 15 08:29:08 avediaserver-C02A authorisation.php: deleting contentid=58,
type=RECORDING, name='BBC 1 CI local'
Jul 15 08:29:08 avediaserver-C02A authorisation.php: deleting recording file for
recordingid=11
Jul 15 08:29:08 avediaserver-C02A avedia-recorddd: handler - stopping recording id=9
Jul 15 08:29:08 avediaserver-C02A avedia-recorddd: handler - recording id=9 is not an
active recording, it cannot be stopped
Jul 15 08:29:08 avediaserver-C02A avedia-recorddd: handler - deleting recording id=9
Jul 15 08:29:08 avediaserver-C02A avedia-recorddd: Failed to read id = 9 from
recordings table
Jul 15 08:29:08 avediaserver-C02A avedia-recorddd: handler - could not read recording
id=9 from database

```

**Figure 20 Show All Log Information**

## Refreshing Logging Information

To refresh the Logging page:

1. Click **AvediaServer > Logging** to display the Logging page as shown in Figure 22.
2. Click the **Refresh** button to refresh the Logging information.

## Downloading the Log File

To download the log file:

1. Click **AvediaServer > Logging** to display the Logging page as shown in Figure 22.
2. Click the **Download** button to display the following window:

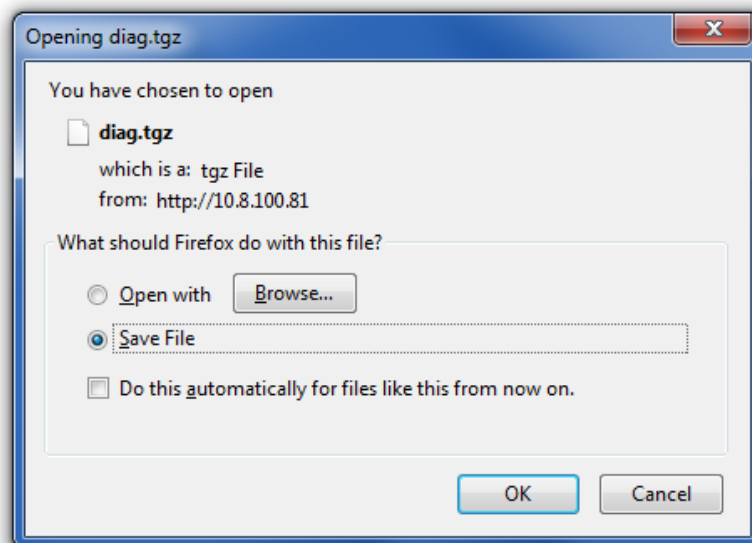


Figure 21 AvediaServer Save Log File

3. Click the **OK** button to save the log file to the required destination.

---

**Note:** You can also open the log file if you wish to view it immediately. Click **Open with** and click the **Browse** button to select your .tgz extraction application.

---

## Logging Information to an External Syslog Server

The AvediaServer is configured by default for all logging messages to be saved locally. The default logging is set to Level 7, Debug. However, you can configure different logging levels and to save the messages to an external Syslog server.

---

**Note:** A Syslog server must already be available for use.

---

To log information to an external Syslog server:

1. Click **AvediaServer > Logging** to display the Logging page as shown below:

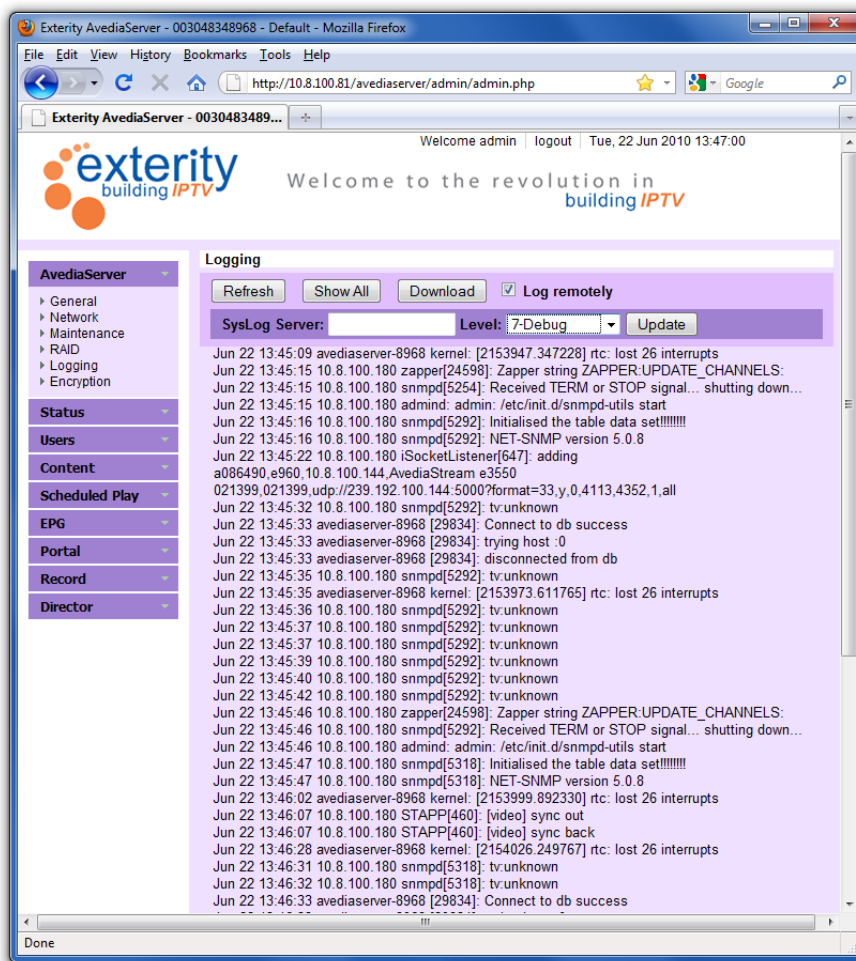


Figure 22 AvediaServer Log Page

2. Click the **Log remotely** checkbox to display the following toolbar which allows you to configure the **Syslog Server** and the **Logging Level**.

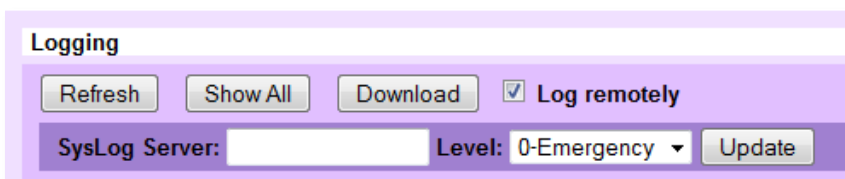


Figure 23 AvediaServer Logging Toolbar

3. Enter the IP address of the Syslog Server in the **Syslog Server** field.
4. Select the logging level from the **Level** drop-down list. **0-Emergency** logs the least amount of data to the Syslog server, **7-Debug** the most.
5. Click **Update**.



## 10 Troubleshooting

<b>Problem</b>	<b>Possible Cause</b>	<b>Solution</b>
No services are displayed on the <b>Status</b> page	No dongle inserted into chassis	Insert the dongle into chassis
Unable to insert dongle into chassis	Problem with dongle	Contact Technical Support. Please have the product name and order code on hand – the licence type of the dongle shows this information.
Inserted/reinserted dongle into chassis but no services are showing		
All services have stopped	Dongle has been removed	Reinsert the dongle into chassis
Cannot connect to URL to view AvediaServer web pages	You are using invalid proxy settings	Check your proxy settings on <b>Browser</b> tab
Faulty disk in the RAID array on the AvediaServer	Unknown	Contact your Exterity systems integrator or reseller. <b>Caution:</b> Removing disks from the RAID array may crash the AvediaServer.

## APPENDIX A Discovering the IP Address of the AvediaServer

By default and as shipped from the factory, the AvediaServer gets its IP address from the DHCP server on the network.

There are four methods to find out the IP address assigned via DHCP:

1. Check the leased IP address database of the DHCP server. Match the MAC address of the AvediaServer to an allocated IP address.
2. If you already have another AvediaServer (release 3.2.0 or later) in your system, click **Director > AvediaStream** and select AvediaServer from the **Device** drop down list. The AvediaServer MAC and IP addresses are listed.
3. Log into the Admin Interface using `username=serveradmin` and `password=labrador` and run the `ifconfig` command to get the IP address of the AvediaServer. For more information, refer to Admin Interface on page 15.
4. Use a network snooter application, such as [Wireshark](#), to listen for the broadcast traps (255.255.255.255, port 162).

## **APPENDIX B Support and contact information**

Technical Support for Exterity products is provided by authorised Systems Integrators and Resellers. Please contact your Systems Integrator or Reseller with any Support issues.