Overview

This document is designed as a reference for installing AirWave 7.7 using the CentOS software bundled with the .iso disc image.

Installing on a VMware Server

Be sure to consider the following if you are installing AirWave 7.7 on a VMware server:

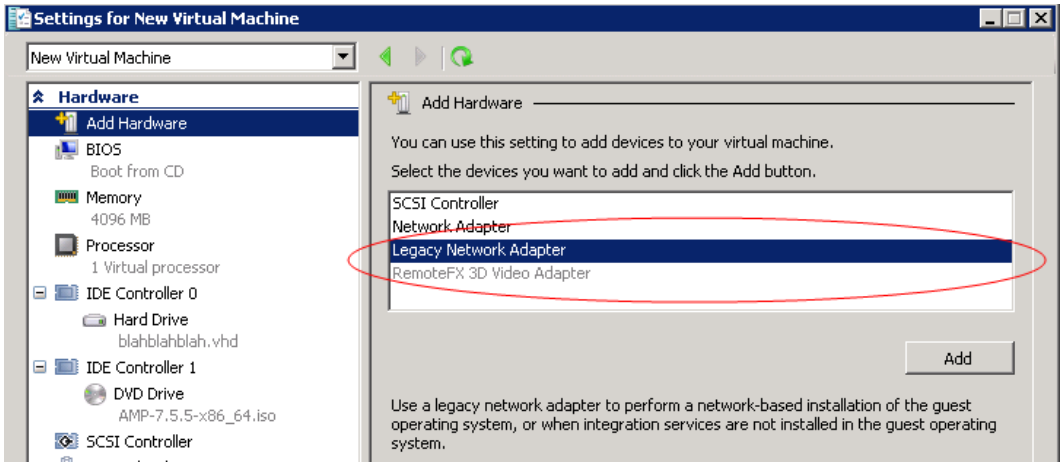
- Always install VMware Tools prior to installing AirWave.
- Consult the hardware sizing guide to be sure that enough resources are allocated to the VM.

Installing in a Hyper-V Virtual Environment

A legacy network adapter must be configured in order to install in a Hyper-V virtual environment. Follow the steps below before installing AirWave.

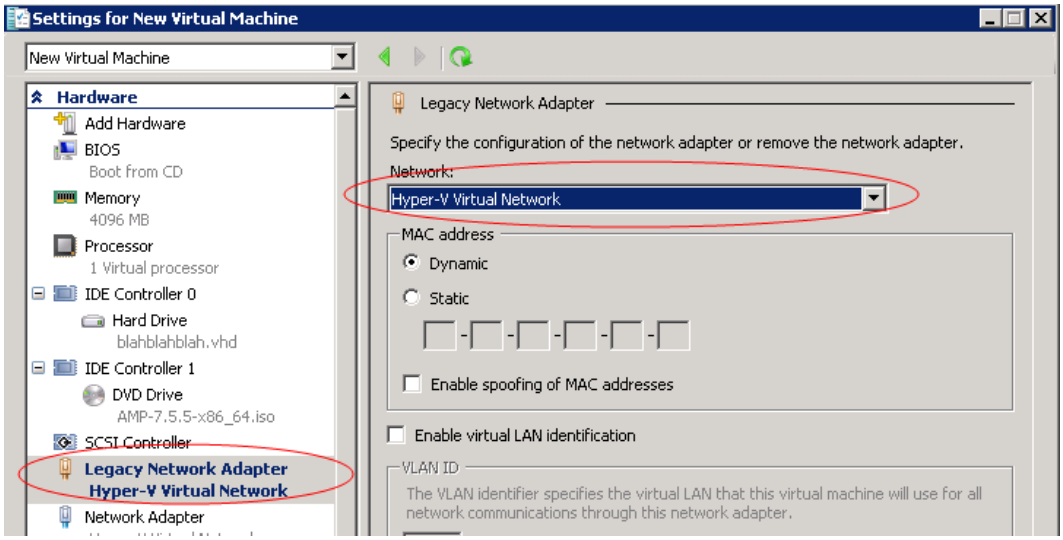
1. During the initial setup of the virtual machine, specify to add a new Legacy Network Adaptor in the Add Hardware section. The image is similar to below.

Figure 1 *Add a Legacy Network Adapter*



2. Click Add. In the left pane, select the legacy network adapter, and configure its settings in the right pane.

Figure 2 *Add a Legacy Network Adapter*



Installing on a Red Hat Enterprise Linux Server

If you are installing AirWave on a Red Hat Enterprise Linux server, contact Aruba Networks support.

NOTE

AirWave does not support downgrading to older versions. Significant data could be lost or compromised in such a downgrade. In unusual circumstances requiring that you return to an earlier version of AirWave, we recommend you perform a fresh installation of the earlier AirWave version, and then restore data from a pre-upgrade backup.

Pre-Installation Checklist

Use this check list to ensure installation goes smoothly.

Table 1: *Pre-Installation Checklist*

Checklist	
Have available the AirWave license key sent to you in an email sent from Aruba Networks	
Obtain dedicated server meeting Aruba sizing specifications	
Determine the static IP address for each AirWave server	
Firewall provisioning enabling proper ports/protocols	
Determine WLAN infrastructure properties (type, quantity, and location)	
Determine WLAN infrastructure access credentials (SNMP, telnet, SSH, etc)	
Determine WLAN security policy specifications	
Set router and switches to monitoring (optional)	
Configure upstream NMS applications (optional)	
Determine wireless client authentication servers (optional)	

Checklist	
Determine AirWave administrative authentication servers like TACACS+, LDAP, or RADIUS (optional)	
If upgrading, ensure that your current version is not more than two versions behind. For example, when upgrading to AirWave 7.7, you must already be using AirWave 7.5 or newer. Contact technical support for assistance with upgrading if you are upgrading from greater than two versions.	

Minimum Supported Browsers

Windows®

- Internet Explorer® 9
- Firefox® 3.x
- Google Chrome™ 9.x (stable)

Mac OS X® (10.5, 10.6, 10.7)

- Safari® 5.x
- Firefox® 3.x
- Google Chrome™ 9.x

Hardware Requirements and Installation Media

The AirWave installation DVD includes all software (including the Linux OS) required to complete the installation of AirWave. AirWave supports any hardware that is Red Hat Enterprise Linux 6.2 certified. By default, all installs are based on a 64-bit operating system.

AirWave hardware requirements vary by version. As additional features are added to AirWave, increased hardware resources become necessary. For the most recent hardware requirements, refer to the *AirWave 7.7 Server Sizing Guide* on the **Home > Documentation** page.

AirWave is intended to operate as a soft appliance. Other applications should not run on the same installation. Additionally, local shell users can access data on AirWave, so it is important to restrict access to the shell only to authorized users.

You can create pseudo users in place of root for companies that don't allow root logins. Customers who disallow root access can give pseudo privileges to other user accounts. For more information, see http://kb.airwave.com/?sid=50140000000Merd or contact Aruba support.

Creating the AirWave Installation DVD from the .iso Disc Image

A variety of software tool can be used to create an installation DVD from the AirWave Installation DVD .iso disc image. You can use a free tool called *burnatonce*.

The DVD burning software included with Windows XP does not currently support the ability to create a DVD from an .iso disc image.

1. Download and save the AirWave 7.7 Installation DVD .iso disc image.
2. Download and install *burnatonce* from http://www.burnatonce.net/downloads/. Windows 95/ME users will need to download and install an additional ASPI layer.
3. Insert a blank DVD-R into the DVD-R drive.

4. Right-click on the AMP Installation DVD .iso disc image file and select **burnatonce**.
5. When the burnatonce program opens, click the **Write** button. If *burnatonce* has not automatically associated to the .iso disc image, run burnatonce manually and select the AMP install image from the **Load** menu.

For help with DVD burning software other than burnatonce, please refer to the user guide for that product and reference the option to create a DVD from .iso disc image. With Nero, for instance, this option may be found under **File > Burn Image or Recorder > Burn Image**.

Server Requirements

AirWave runs on a dedicated system and is compatible with most standard PC or rack-mount server hardware. The Installation DVD will format the hard disk, install the CentOS operating system, and install the AirWave software.

For minimum hardware requirements, refer to the *AirWave 7.7 Sizing Guide* on the **Home > Documentation** page, or contact Aruba support. The hardware must support Red Hat Enterprise 5.0.

Installing Linux CentOS 6.2 (Phase 1)

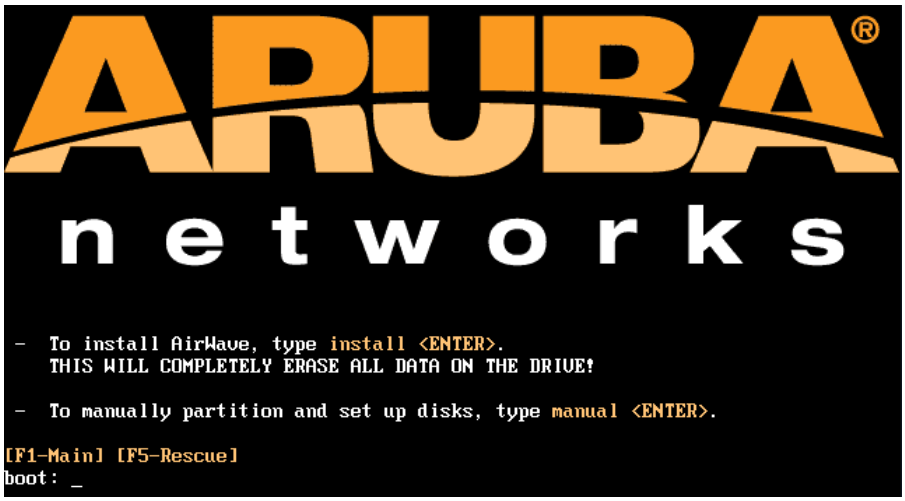
Perform the following steps to install the Linux CentOS 6.2 operating system. The Linux installation is a prerequisite to installing AirWave on the network management system.

This procedure erases the hard drive(s) on the server.

1. Insert the AirWave installation DVD into the drive and boot the server.
2. Type **`install`** and press **Enter**.

   To configure the partitions manually, type **`manual`** and press **Enter**.

Figure 3 *AirWave Installation*



3. Allow the installation process to continue. Installing the CentOS software (Phase I) takes 10 to 20 minutes to complete. This process formats the hard drive and launches Anaconda to install all necessary packages. Anaconda gauges the progress of the installation.

   Upon completion, the system will prompt you to eject the installation DVD and reboot the system. The GRUB screen will appear upon reboot.
4. Remove the DVD from the drive and store it in a safe location.

Installing the AirWave Software (Phase 2)

Getting Started

Perform the following steps when the GRUB screen appears.

1. Press **Enter** or wait six seconds. The system automatically loads the kernel.
2. When the kernel is loaded, log into the server using the following credentials:
   - login = **root**
   - password = **admin**
3. Start the AirWave software installation script by executing the **./amp-install** command.

   Type **`./amp-install`** at the command prompt and press **Enter** to execute the script.

Step 1: Configuring Date and Time

The following message appears. This step ensures the proper date and time are set on the server.

```
----------------------- Date and Time Configuration ------------------
Current Time: Fri May 24 09:18:12 PST 2013
1)  Change Date and Time
2)  Change Time Zone
0)  Finish
```

Ensure that you enter the accurate date and time during this process. Errors will arise later in the installation if the specified date varies significantly from the actual date, especially if the specified date is in the future and it is fixed later. Best practices is to configure NTPD to gradually adjust your clock to the correct time.

1. Select **1** to set the date and select **2** to set the time zone. Press **Enter** after each configuration to return to the message menu above.

Changing these settings after the installation can cause data loss, especially for time-series data such as Client and Usage graphs. Avoid delayed configuration.

2. Press **0** to complete the configuration of date and time information and to continue to the next step.

Step 2: Checking for Prior Installations

The following message appears after the date and time are set:

```
Welcome to AMP Installer Phase 2
STEP 2:  Checking for previous AMP installations
```

If a previous version of AirWave software is not discovered, the installation program automatically proceeds to Step 3. If a previous version of the software is discovered, the following message appears on the screen.

```
The installation program discovered a previous version of the software. Would you like to rei
nstall AMP? This will erase AMP's database. Reinstall (y/n)?
```

Type **y** and then press **Enter** to proceed.

This action erases the current database, including all historical information. To ensure that the AMP database is backed up prior to reinstallation, answer `n` at the prompt above and contact your Value Added Reseller or directly contact Aruba support.

Step 3: Installing AMP Software

The following message appears while the AirWave software is transferred and compiled.

```
STEP 3:  Installing AMP software
  This will take a few minutes.
  Press Alt-F9 to see detailed messages.
```

```
  Press Alt-F1 return to this screen.
```

This step requires no user input, but you can follow the instructions to monitor its progress and switch back to the installation screen.

Step 4: Checking the AirWave Installation

After the AirWave software installation is complete, the following message appears:

```
STEP 4:  Checking AMP installation
  Database is up.
AMP is running version: (version number)
```

This step requires no user input. Proceed to the next step when prompted to do so.

Step 5: Assigning an IP Address to the AMP System

While the AirWave primary network interface accepts a DHCP address initially during installation, AirWave does not function when launched unless a static IP is assigned. Complete these tasks to assign the static IP address. The following message appears:

```
STEP 5: Assigning AMP's address
  AMP must be configured with a static IP.

--------------- Primary Network Interface Configuration -------------
         1)  IP Address    : xxx.xxx.xxx.xxx
         2)  Netmask       : xxx.xxx.xxx.xxx
         3)  Gateway       : xxx.xxx.xxx.xxx
         4)  Primary DNS   : xxx.xxx.xxx.xxx
         5)  Secondary DNS: xxx.xxx.xxx.xxx

         9)  Commit Changes
         0)  Exit (discard changes)

If you want to configure a second network interface, please
use AMP's web interface, AMP Setup --> Network Tab
```

1. Enter the network information.

The Secondary DNS setting is an optional field.

2. To commit the changes, type **9** and then press **Enter**. To discard the changes, type **0** and then press **Enter**.

Step 6: Naming the AirWave Network Administration System

Upon completion of the previous step, the following message appears:

```
STEP 6:  Naming AMP
AMP is currently set to: New AMP
Please enter a name for your AMP:
```

At the prompt, enter a name for your AirWave server and press **Enter**.

Step 7: Generating AMP's SSL Certificate

Upon completion of the previous step, the following message appears on the screen:

```
STEP 7:  Generating AMP's SSL Certificate
 Does AMP have a valid DNS name on your network (y/n)?
```

1. If AirWave does not have a valid host name on the network, type **n** at the prompt. The following appears:

```
Generating SSL certificate for < IP Address >
```

2. If AirWave has a valid host name on the network, type **y** at the prompt. The following appears:

   ```
   Enter AMP's fully qualified domain name:
   ```

3. Type the AirWave DNS name and press **Enter**. The following message appears:

   ```
   Generating SSL certificate for < IP Address >
   ```

   Proceed to the next step when the system prompts you.

Step 8: Changing the Default Root Password

Upon completion of the prior step, the following message appears:

```
STEP 8:  Changing default root password.
It is strongly recommended that you change the default 'root' password.
Please use a password that you consider to be safe, secure, and memorable.

Changing password for user root.
New Password:
```

Enter the new root password and press **Enter**. The Linux root password is similar to a Windows administrator password. The root user is a super user who has full access to all commands and directories on the computer.

This password should be kept as secure as possible because it allows full access to the machine. This password is not often needed on a day-to-day basis but is required to perform AirWave upgrades and advanced troubleshooting. If you lose this password, contact Aruba support for resetting instructions.

Completing the Installation

Upon completion of all previous steps, the following message appears.

```
CONGRATULATIONS! AMP is configured properly.
 To access the AMP web console, browse to https://<IP Address>
 Login with the following credentials:
 Username: admin
 Password: admin
```

- To view the Phase 1 installation log file, type **cat /root/install.log**.
- To view the Phase 2 installation log file, type **cat /root/amp-install.log**.
- To access the AMP GUI, enter the AMP IP address in the address bar of any browser. The AMP GUI then prompts for your license key. If you are entering a dedicated Master Console or AMP Failover license, refer to "Supporting AirWave Servers with the Master Console" in the *AirWave 7.7 User Guide* for additional information.

Upgrade Instructions

To upgrade AirWave:

1. Log in to the AirWave server as the root user.
2. Run the following command (where x.x.x is equal to the latest AMP version)

   ```
   # start_amp_upgrade -v x.x.x
   ```

The AirWave upgrade process may change. Please contact support and consult the latest AirWave release announcement for detailed instructions and changes.

Upgrading Without Internet Access

If your AirWave cannot get to the Internet:

1. Download the latest AMP version from the download page: www.airwave.com/support/download
2. Copy the file to the AMP /root directory using WinSCP.

3. Run the following command on AMP:

```
# start_amp_upgrade -v x.x.x
```

The `start_amp_upgrade` script will check the `/root` directory for the latest update. If the update is not found, the script will attempt to download it from the AirWave support page. The script will then extract the version specific upgrade script. The version specific script will deploy all needed files, update the database, perform any data migrations and restart the AirWave services.

Configuring and Mapping Port Usage for AMP

The following table itemizes the communication protocols and ports necessary for AMP to communicate with wireless LAN infrastructure devices, including access points (APs), controllers, routers, switches, and RADIUS servers. Assign or adjust port usage on the network administration system as required to support these components.

Table 2: *AMP Protocol and Port Chart*

Port	Type	Protocol	Description		Device Type
21	TCP	FTP	Firmware distribution	>	APs or controllers
22	TCP	SSH	Configure devices	>	APs or controllers
22	TCP	SSH	Configure AMP from the CLI	<	Laptop or workstation
22	TCP	VTUN	Support connection (optional)	>	Aruba supports home office
22	TCP	SCP	Transfer configuration files or FW	<	APs or controllers
23	TCP	Telnet	Configure devices	>	APs or controllers
23	TCP	VTUN	Support connection (Optional)	>	Aruba supports home office
25	TCP	SMTP	Support email (optional)	>	Aruba supports email server
49	UDP	TACACS	AMP Administrative Authentication	>	Cisco TACACS+
53	UDP	DNS	DNS lookup from AMP	>	DNS Server
69	UDP	TFTP	Transfer configuration files or FW	<	APs or controllers
80	TCP	HTTP	Configure devices	>	Legacy APs
80	TCP	VTUN	Support connection (optional)	>	Aruba supports home office
161	UDP	SNMP	Get and Set operations	>	APs or controllers
162	UDP	SNMP	Traps from devices	<	APs or controllers
162	UDP	SNMP	Traps from AMP	>	NMS
443	TCP	HTTPS	Web management	<	Laptop or workstation

Port	Type	Protocol	Description		Device Type
443	TCP	HTTPS	WLSE polling	>	WLSE
443	TCP	VTUN	Support connection (optional)	>	Aruba supports home office
1701	TCP	HTTPS	AP and rogue discovery	>	WLSE
1741	TCP	HTTP	WLSE polling	>	WLSE
1812	UDP	RADIUS Auth	Authenticate & authorize AMP administrative users on a RADIUS server.	>	RADIUS auth server
1813	UDP	RADIUS accounting	Retrieve usernames for authenticated WLAN clients from NAS (captive portal, controller, autonomous AP). Only used when usernames are not available in the SNMP MIB of a controller or autonomous AP.	<	RADIUS accounting client
2002	TCP	HTTPS	Retrieve client authentication info	>	ACS
5050	UDP	RTLS	Real Time Location Feed	<	Aruba thin APs
8211	UDP	PAPI	Real Time Feed (AMON)	< >	WLAN controllers
		ICMP	Ping Probe	>	APs or controllers

AirWave Navigation Basics

Every AirWave page contains the following three basic sections:

- "Status Section" on page 9
- "Navigation Section" on page 11
- "Activity Section" on page 13

In addition, throughout AirWave, you will come across common buttons/icons and a series of customizable tables. Refer to the following sections for more information.

- "Common List Settings" on page 14
- "Buttons and Icons" on page 15

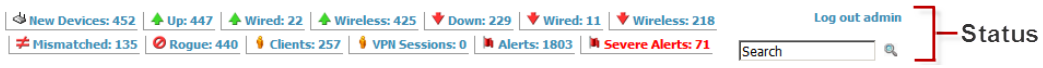
The AirWave pages also contain **Help** links that open the *AirWave 7.7 User Guide*.

On most pages in AMP, the help link is available in the upper-right portion of the page. On some of the newer pages (for example, Home > Firewall or Home > Network Deviations), the help link is a "?" beside the page title.

Status Section

The **Status** section is a snapshot view of overall WLAN performance and provides direct links for immediate access to key system components. You can customize the contents of the Status section on the **Home > User Info** page. Refer to the Configuring Your Own User Information with the Home > User Info Page section in the *AirWave 7.7 User Guide*.

Figure 4 *Status section of the Home > Overview Page*



The table below describes these elements in further detail.

Table 3: *Status Section/Top Header Components of the AMP GUI*

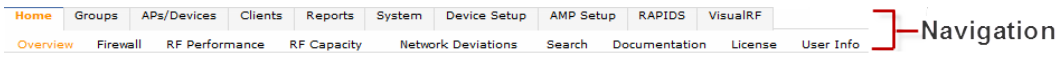
Field	Description
New Devices	The number of wireless APs or wireless LAN controllers that have been discovered by AMP but not yet managed by network administrators. When selected, AMP directs you to a page that displays a detailed list of devices awaiting authorization.
Up (Wired & Wireless)	The number of managed authorized devices that are currently responding to AMP requests. When selected, AMP shows a detailed list of all Up devices.
Up (Wired)	The number of managed authorized, wired devices that are currently responding to AMP requests. When selected, AMP shows a detailed list of all Up devices.
Up (Wireless)	The number of managed authorized, wireless devices that are currently responding to AMP requests. When selected,AMP shows a detailed list of all Up devices.
Down (Wired & Wireless)	The number of managed, authorized devices that are not currently responding to AMP SNMP requests. When selected, AMP shows a detailed list of all Down devices.
Down (Wired)	The number of managed authorized, wired devices that are not currently responding toAMP requests. When selected, AMP shows a detailed list of all Up devices.
Down (Wireless)	The number of managed authorized, wireless devices that are not currently responding toAMP requests. When selected, AMP shows a detailed list of all Up devices.
Mismatched	The total number of Mismatched devices. A device is considered mismatched when the desired configuration in AMP does not match the actual device configuration read from the device.
Rogue	The number of devices that have been classified by the RAPIDS rules engine above the threshold defined on the **Home > User Info** page. If, for example, the threshold is defined as Suspected Rogue, then the Rogue count will include Suspected Rogues as well as classifications above Suspected, which include Rogue and Contained Rogue.
Clients	The number of wireless users currently associated to the wireless network via all the APs managed by AMP . When selected, AMP shows a list of users that are associated. Prior to version 7.4, this was called Users.
VPN Sessions	Displays the number of active VPN sessions. When selected, AMP shows a list of active sessions on the **Clients > VPN Sessions** page. Note that if this page is empty, then there are no active VPN sessions to view. You can navigate to the **APs/Devices > List** page and verify in the table that there are no active VPN sessions.
Alerts	Displays the number of non-acknowledged AMP alerts generated by user-configured triggers. When selected AMP shows a detailed list of active alerts.
Include Device Types in Header Stats	You can support statistics for any combination of the following device types: • Fat APs • Thin APs • Controllers • Routers/Switches • Others

Field	Description
	Refer to the Configuring Your Own User Information with the Home > User Info Page section in the *AirWave 7.7 User Guide*.
Severe Alert Threshold	The **Severe Alert Threshold** determines the severity level that results in a Severe Alert. Specify either Normal, Warning, Minor, Major, or Critical as the severity alert threshold value. These threshold values are tied to triggers that are created on the **System > Triggers** page. For example, if a trigger is defined to result in a Critical alert, and if the Severe Alert Threshold here is defined as Major, then the list of Severe Alerts will include all Major and Critical alerts. Similarly, if this value is set to Normal, which is the lowest threshold, then the list of Severe Alerts will include all alerts. When a Severe Alert exists, a component named **Severe Alerts** will appear at the right of the **Status** field in bold red font. This field will not display if a Severe Alert does not exist. In addition, only users who are enabled for viewing Severe Alerts on the **Home > User Info** page can see severe alerts.
Search	Use the Search field to perform partial string searches on a large number of fields including the notes, version, secondary version, radio serial number, device serial number, LAN MAC, radio MAC and apparent IP of all the APs as well as the client MAC, VPN user, LAN IP, VPN IP fields.

Navigation Section

The **Navigation** section displays tabs for all main GUI pages within AirWave. The top bar is a static navigation bar containing tabs for the main components of AirWave, while the lower bar is context-sensitive and displays the subtabs for the highlighted tab.

Figure 5 *Navigation section of the Home > Overview Page*



Some navigation items may be hidden for users depending on a user's role. The table below describes the navigation elements in further detail.

Table 4: *Components and Subtabs of AirWave Navigation*

Main Tab	Description	Subtabs
Home	The **Home** pages provide basic AMP information including system name, host name, IP address, current time, running time, and software version. The Home pages also provide a central point for network status information and monitoring tools, giving graphical display of network activity, and links to many of the most frequent tools in AMP. For additional information, refer to Monitoring and Supporting AirWave with the Home Pages in the *AirWave 7.7 User Guide*.	Overview Firewall RF Performance RF Capacity Network Deviations Search Documentation License User Info
Groups	The **Groups** pages provide information on the logical groups of devices that have been established for efficient monitoring and configuration. For additional information, see Configuring and Using Device Groups in the *AirWave 7.7 User Guide*. Some of the focused subtabs will not appear for all groups. Focused subtabs are visible based on the device type field on the **Groups > Basic** page. This subtab is the first page to appear when adding or editing groups. **NOTE:** When individual device configurations are specified,	List Focused Subtabs: • Monitor • Basic • Templates • Security • SSIDs • AAA Servers • Radio

Main Tab	Description	Subtabs
	device-level settings override the Group-level settings to which a device belongs.	• Controller Config • Switch Config • Cisco WLC Config • PTMP • Proxim Mesh • MAC ACL • Firmware
APs/Devices	The **APs/Devices** pages provide detailed information about all authorized APs and wireless LAN switches or controllers on the network, including all configuration and current monitoring data. These pages interact with several additional pages in AMP. Refer to Discovering, Adding, and Managing Devices in the *AirWave 7.7 User Guide*. **NOTE:** When specified, device-level settings override the default Group-level settings.	List New Up Down Mismatched Ignored Focused Subtabs: • Monitor • Interfaces • Manage • Audit • Compliance • Rogues Contained
Clients	The **Clients** pages provide detailed information about all client devices and users currently and historically associated to the WLAN, including VPN users. Prior to 7.4, this tab was called Users. For additional information, refer to Monitoring and Supporting WLAN Clients in the *AirWave 7.7 User Guide*.	Overview Connected All Rogue Clients Guest Users VPN Sessions VPN Users Tags *VPN Users* Subtab: • VPN User Detail
Reports	The **Reports** pages list all the standard and custom reports generated by AMP. For additional information, refer to Creating, Running, and Emailing Reports in the *AirWave 7.7 User Guide*.	Generated Definition *Definition* Subtab: • Detail
System	The **System** page provides information about AMP operation and administration, including overall system status, the job scheduler, trigger/alert administration, and so forth. For additional information, refer to Monitoring and Supporting AirWave with the System Pages in the *AirWave 7.7 User Guide*.	Status Syslog & Traps Event Log Triggers Alerts Backups Configuration Change Jobs Firmware Upgrade Jobs Performance
Device Setup	The **Device Setup** pages provide the ability to add, configure, and monitor devices, to include setting AP discovery parameters, performing firmware management, defining VLANs, and so forth. For additional information, refer to Enabling AirWave to Manage Your Devices in the *AirWave 7.7 User Guide*.	Discover Add Communication Aruba Configuration (if Use global Aruba Configuration is enabled in AMP Setup > General)

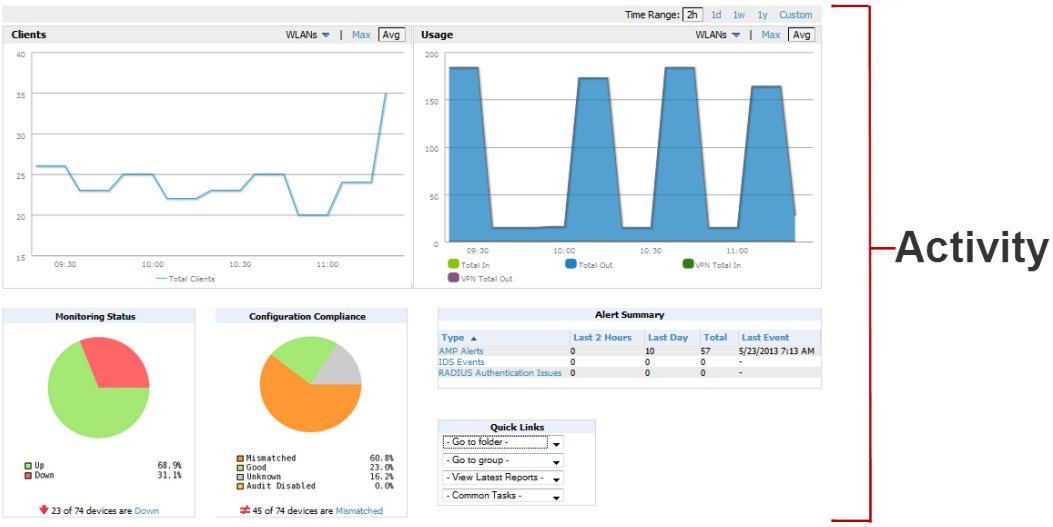
Main Tab	Description	Subtabs
		Upload Firmware & Files Certificate
AMP Setup	The **AMP Setup** pages provide all information relating to the configuration of AMP itself and its connection to your network. This page entails several processes, configurations, or tools in AMP. **NOTE:** Some **AMP Setup** pages may not be visible depending on the role of the logged-in user set in AMP.	General Network Users Roles Guest Users Authentication MDM Server Device Type Setup WLSE ACS NMS RADIUS Accounting PCI Compliance
RAPIDS	The **RAPIDS** pages provide all information relating to rogue access points, including methods of discovery and lists of discovered and possible rogues. For additional information, refer to Using RAPIDS and Rogue Classification in the *AirWave 7.7 User Guide*. **NOTE:** The **RAPIDS** pages may not be visible to the logged-in user, depending on their role set in AMP.	Overview List IDS Events Setup Rules Score Override Audit Log
VisualRF	**VisualRF** pages provide graphical access to floor plans, client location, and RF visualization for floors, buildings, and campuses that host your network. Refer to Using VisualRF in the *AirWave 7.7 User Guide*.	Floor Plans Setup Import Audit Log

The **AMP Setup** tab varies with the user role.

Activity Section

The **Activity** section is the main section of the user interface. This section displays all detailed configuration and monitoring information. It is where you view activity and implement configuration changes.

Figure 6 *Activity section of the* ***Home > Overview*** *Page*

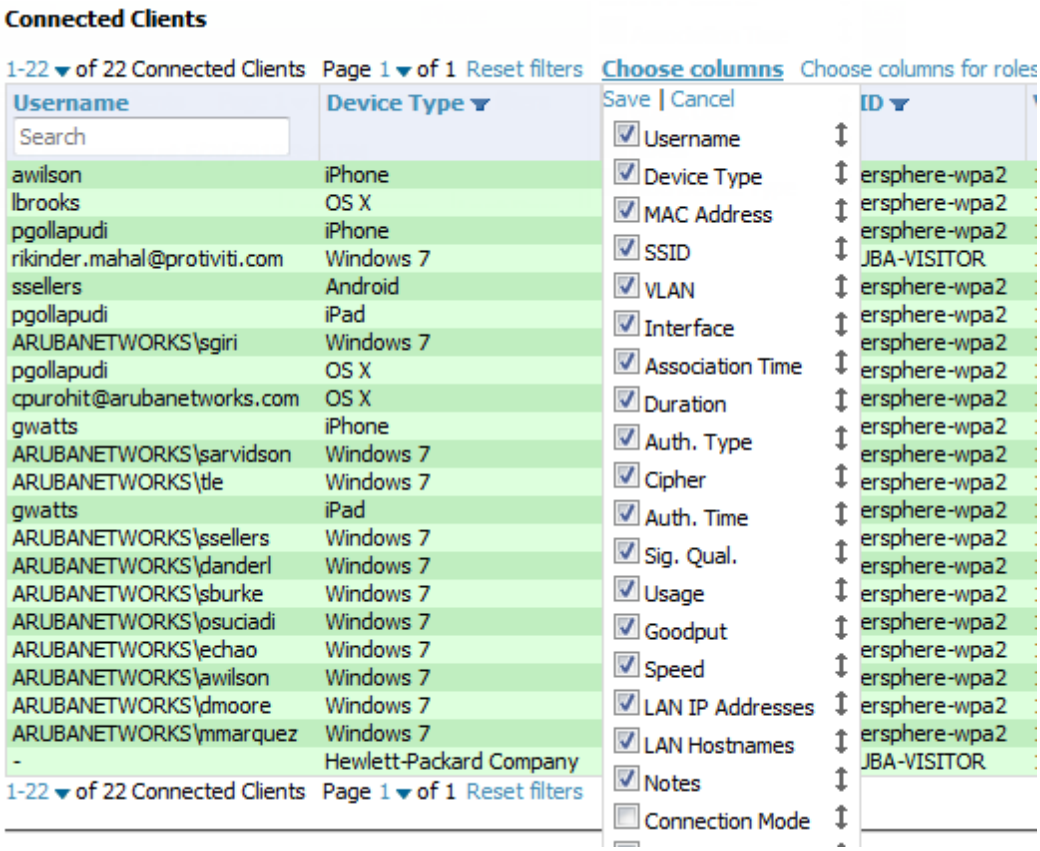


Common List Settings

All of the lists in AMP Setup have some common options. All lists are paginated with a configurable number of items per page. Selecting the **Records Per Page** drop down menu (which usually looks like a range such as 1-20 on the upper left hand side of a list table) enables you select or enter the number of rows that appear at a time in the list. The next down arrow displays a drop down menu that allows you to select the exact page you would like to view, as shown in Figure 7.

The **Choose Columns** option, illustrated on Figure 7, allows you to configure the columns that are presented in the list and the order in which they are presented. To disable a column, clear its checkbox. To reorder the columns, drag a row to the appropriate new position. When you are satisfied with the enabled columns and their order, select **Save** at the top of the columns list.

Figure 7 *Common List Settings* ***Choose Columns*** *Illustration*



These settings are user specific. To reset them, select **Reset List Preferences** on **Home > User Info**.

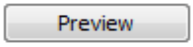
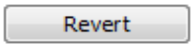
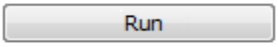
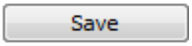
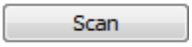
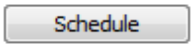
Buttons and Icons

Standard buttons and icons are used throughout AirWave as follows:

Table 5: *Standard Buttons and Icons on AMP pages*

Function	Image	Description
Acknowledge	Acknowledge	Acknowledges and clears an AMP alert.
Add	Add	Adds the object to both the AMP database and the onscreen display list.
Add Folder		Adds a new folder to hierarchically organize APs.
Alert		Indicates an alert.
Apply	Apply	Applies all saved configuration changes to devices on the WLAN.
Audit	Audit	Reads device configuration, compare to desired, and update status.
Choose		Chooses a new Helpdesk incident to be the Current Incident.

Function	Image	Description
Clients		Indicates WLAN users. Select this number to see a list of connected clients.
Create		Creates a new Helpdesk incident.
Customize	Customize	Ignores selected settings when calculating the configuration status.
Delete		Deletes an object from AMP's database.
Down		Indicates Down devices and radios.
Download Original Floor Plan		Downloads the original VisualRF floor plan drawing. When you click this button, you have the option of opening the drawing or saving it to a file.
Drag and Drop		Dragging and dropping objects with this icon changes the sequence of items in relation to each other.
Duplicate		Duplicates or makes a copy of the configuration of an AMP object.
Edit		Edits the object properties.
Email		Links to email reports.
Filter (Funnel icon)		Filters list by values of the selected column. To reset all filters in all columns, click Reset filters link at the bottom of the table.
Google Earth		Views device's location in Google Earth (requires plug-in).
Ignore	Ignore	Ignores specific device(s) - devices selected with check boxes.
Import	Import	Updates a Group's desired settings to match current settings.
Manage		Manages the object properties.
Mismatched		Indicates mismatched device configuration, in which the most recent configuration in AMP and the current configuration on a device are mismatched.
Monitor		Indicates an access point is in monitor only mode.
New Devices		Indicates new access points and devices.
Open in New Window		Opens a VisualRF floor plan in a new browser window.
Poll Now	Poll Now	Polls device (or controller) immediately, override group polling settings.

Function	Image	Description
Preview		Displays a preview of changes applicable to multiple groups.
Print		Prints the report.
Reboot		Reboots devices on AMP.
Refresh		Refreshes the display of interactive graphs when settings have changed.
Relate		Relates an AP, Group or Client to a Helpdesk incident.
Replace Hardware		Confers configuration and history of one AP to a replacement device.
Revert		Returns all configurable data on the screen to its original status.
Rogue		Indicates a rogue AP, and links to RAPIDS.
Run		Runs a new user-defined report.
Save		Saves the information on the page in the AMP database.
Save & Apply		Saves changes to AMP's database and apply all changes to devices.
Scan		Scans for devices and rogues using selected networks.
Schedule		Schedules a window for reports, device changes, or maintenance.
Search		Searches AMP for the specified client, device, rogue, group, folder, tag, or session.
Set Time Range		Sets the time range for interactive graphs to the range specified.
Up		Indicates devices that are in the Up status.
Upgrade Firmware		Applies a new firmware image to an AP/device.
Usage		Displays current bandwidth.
View Historical Graph in New Window		Displays all data series for the selected graph over the last two hours, last day, last week, last month, and last year in one new pop-up window.
VisualRF		Links to VisualRF - real time visualization.
XML		Links to export XHTML versions of reports.

Getting Started with AirWave

This topic describes how to perform an initial launch of the AirWave network management solution on a session-based authentication scheme.

When an AirWave URL is accessed either interactively using a browser or programmatically using an API, a sent cookie may match a session stored in the database, granting authentication (but not necessarily access, depending on how the user's role matches the required role for the URL). If the cookie is not present or the session in the database has expired, the request is denied.

For browser requests, this results in a login form being displayed. When you submit the login form, the supplied credentials are checked against the AMP's user database, an external RADIUS server, an external TACACS+ server, or an external LDAP server, per the AMP configuration. If the credentials are valid, the user's browser is sent a session cookie to use in subsequent requests.

Use your browser to navigate to the static IP address assigned to the internal page of the AMP, as shown in Figure 8. Enter the User Name and Password as **admin/admin** for your initial login, and then select **Log In**.

Figure 8 *AirWave Login Form*

If desired, you can set one of the available languages for your login. AirWave will remember your selected language until you log out and select another. You must log out in order to select a different language.

The first page to appear after you initially log in is the **Home > License** page. Paste the AirWave license key you received into the license field on this page, then click **Save** to display the AirWave licensing agreement.

Click **I Accept** to agree to the terms of the license agreement and apply the license key.

For subsequent logins, your browser launches the AirWave **Home > Overview** page.

NOTE

AirWave pages are protected via SSL. Some browsers will display a confirmation dialog for your self-signed certificate. Signing your certificate will prevent this dialog from displaying. Changing the default login and password on the **AMP Setup > Users** page is recommended. Refer to the procedure Creating AMP User Roles in the *AirWave 7.7 User Guide* for additional information.