WAP9112/9114 Quick Start Guide

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Chapter 1: Introduction

This Quick Start Guide is intended to enable a user to configure the Avaya WLAN 9100 WAP9112/9114 Access Points to provide basic Wireless LAN Services for Staff and Guests.

The WAP9112 is a high performance Gigabit Wi-Fi wall access points with an integrated wired Gigabit switch. It is designed specifically for multi-device wired and wireless in-room connectivity in hotel rooms, dormitories, hospital rooms, smaller offices, and similar locations.

The WAP9114 is a cost effective, indoor 802.11ac Access Point ideal for small and medium size enterprises.

Chapter 2: Required Software Components

WAP9112/9114 Access Point Operating System (AOS-Lite)

The AP Operating System for WAP9112/9114 Access Points is called AOS-Lite and is a separate image file then the AOS image file used for other Access Points in the WLAN 9100 Portfolio.

Wireless LAN Orchestration System (WOS)

WAP9112/9114 can only be configured and monitored via the Wireless LAN Orchestration System. The Access Point does not support a Command Line Interface or Web Management Interface for configuration.

Wireless LAN Orchestration System 7.5.x or later is required for managing WAP9112 and 9114.

Chapter 3: Installing or Upgrading Wireless LAN Orchestration System

The Wireless LAN Orchestration System (WOS) server is designed to be run on a virtual platform. The application package allows you to install and run the WOS server on your own virtual machine under VMware or Hyper-V environment.

For installation instructions, see Installing the WOS-VM Virtual Appliance or Installing the WOS-HV Virtual Appliance in the WOS User guide or online help at http://docs.wifi.avaya.com/wos/prod/7.5/wwhelp/wwhimpl/js/html/wwhelp.htm#href=ms_chap2.html#1070630.

Note:

A new installation of WOS allows you to manage up to 10 Access Points for 30 days in Demo Mode. A valid Base License is required to login after 30 days.

If you have an existing WOS Server installation the appliance needs to be upgraded to the 7.5 release or later using the .xau file (example: Wos-vm-upgrade-7.5.1-6873.xau). For upgrade instructions, see Performing Server Upgrades in the WOS User Guide or at the online help at http://docs.wifi.avaya.com/wos/prod/7.5/wwhelp/wwhimpl/js/html/wwhelp.htm#href=XSI.html.

Chapter 4: Setup Wireless LAN Orchestration System for WAP9112 and 9114

Related links

Connect to WOS Web Client via a browser on page 6
Creating an AOS-Lite Profile for AP Configuration on page 6
Configuring the AP Switch Port Configuration on page 8
Configuring the Wireless Networks on page 9

Connect to WOS Web Client via a browser

To start the web client for WOS servers, point your workstation's browser to the IP address or hostname for the WOS server machine followed by: 9443. For example, if the IP address is 192.168.10.40, point your browser to https://192.168.10.40:9443.

When the WOS splash window appears, log in with your User name and Password. The default login is **admin**/**admin**

For new appliance installations, click on **Cancel** for the Setup Wizard and continue.

Related links

Setup Wireless LAN Orchestration System for WAP9112 and 9114 on page 6

Creating an AOS-Lite Profile for AP Configuration

About this task

A profile allows you to define a common access point configuration to a set of Access Points and manage them as a group. After creating a profile, a uniform configuration and AP Operating System software release to be applied to all of the member Access Points is defined.

If there is a mixture of WAP9112/9114 Access Points and WAP9122, 9123, 9132, 9133, 9172, 9173 or WAO9122 Access Points, you should create one or more AOS and AOS-Lite profiles and set a default profile for each type.

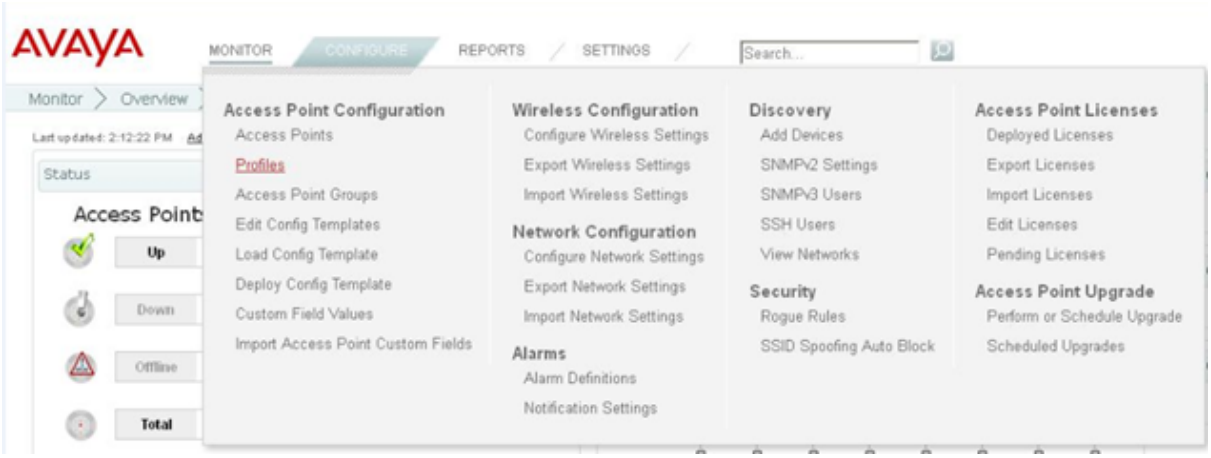
When WOS discovers an Avaya AP, it automatically places it into the correct default profile based on whether the AP runs the AOS or AOS-Lite Operating System.

Before you begin

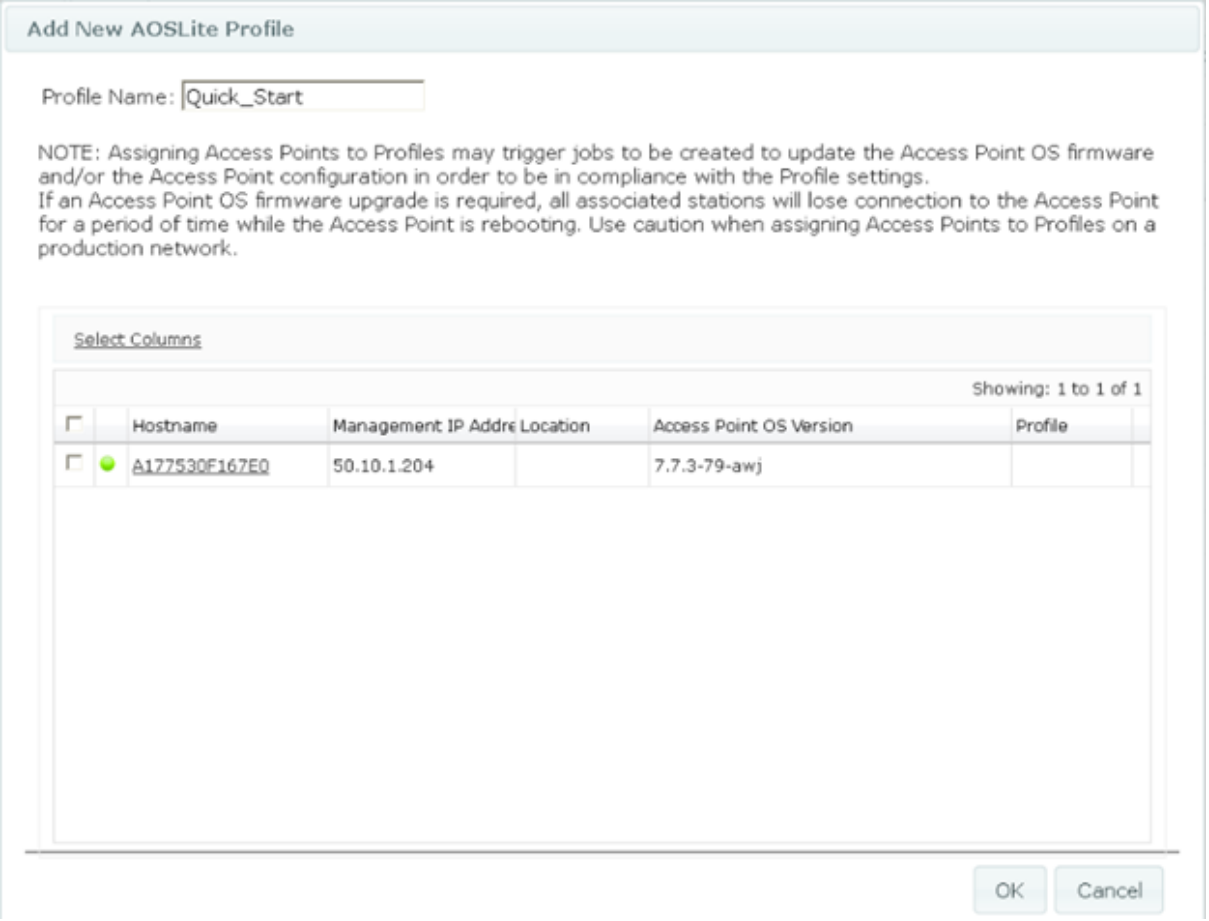
- An AOS-Lite Profile should be created for WAP9112/9114 Access Points.

Procedure

1. Select the **Configure** menu at the top of the Page.



2. Click on the **Profiles** link under the Access Point Configuration.
3. Click **Add AOSLite Profile** to create a new AOSLite profile.
4. Enter the name of the profile in the box next to **Profile Name** and click **OK** when done.



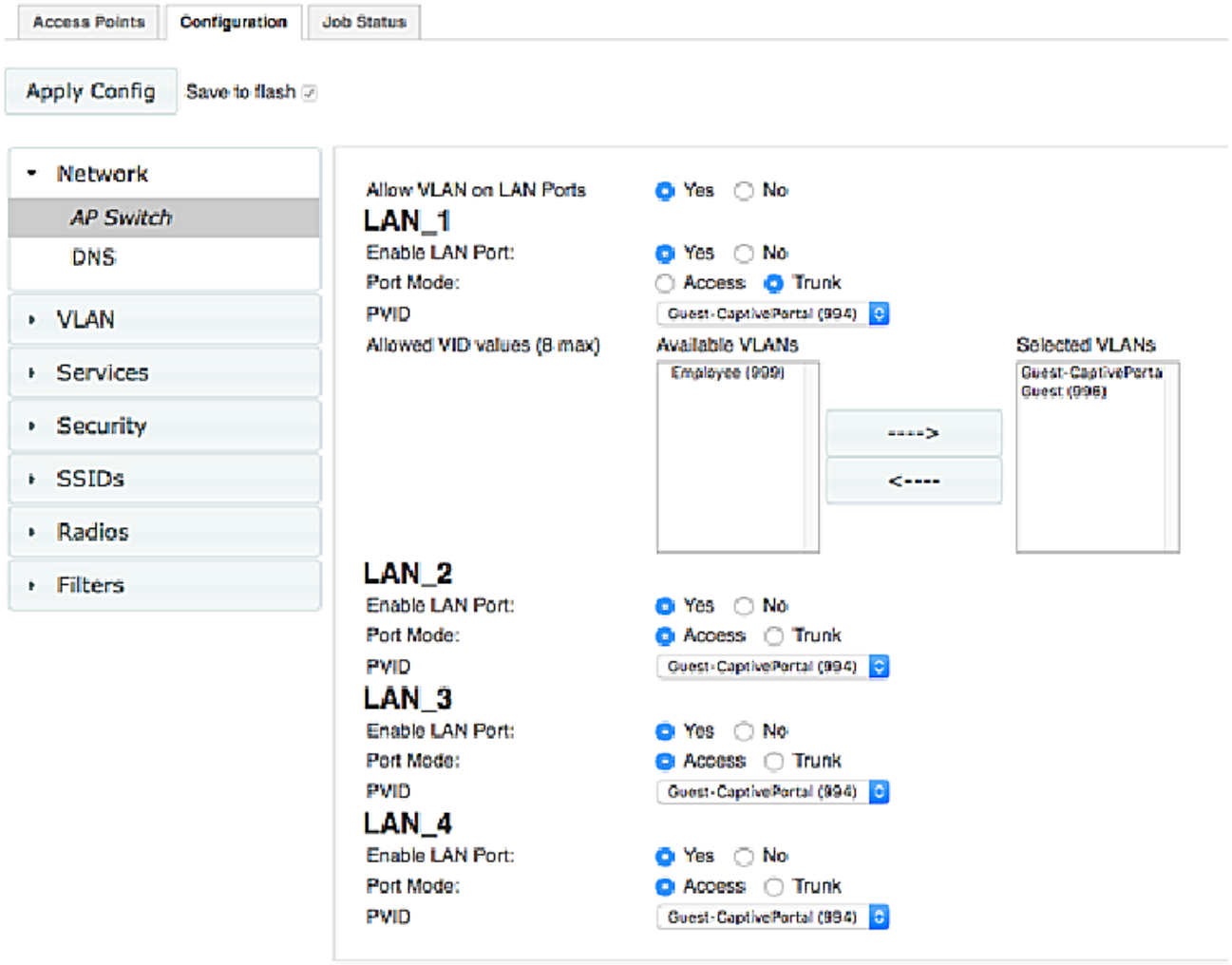
Related links

Setup Wireless LAN Orchestration System for WAP9112 and 9114 on page 6

Configuring the AP Switch Port Configuration

The WAP9112 has 4 switch ports to connect wired devices to the network. By default the switch ports forward untagged traffic from the devices over to the up-link PoE switch. The Profile Configuration -> Network -> Switch Port configuration page allows VLAN configuration for the individual LAN ports.

The Switch Port can be configured as an Access or Trunk port and can support up to 8 VLANs when configured as a Trunk Port.



Related links

[Setup Wireless LAN Orchestration System for WAP9112 and 9114](#) on page 6

Configuring the Wireless Networks

The Profile Configuration enables you to configure your Wireless Networks and apply it to a group of APs that share the common network and access control policies.

Select the Profile that you just created from the Profiles Page. (CONFIGURE->Access Point Configuration -> Profiles)

Enter the Configuration Tab of the Profile.

Related links

Setup Wireless LAN Orchestration System for WAP9112 and 9114 on page 6
Creating Wireless User VLANs on page 10
Creating SSIDs on page 11
Enable Radios on page 13
Saving the Configuration on page 14

Creating Wireless User VLANs

About this task

WLAN 9100 Access Points use the Native VLAN (PVID) of the PoE Switch Port for management traffic. The Access Point sends management traffic as untagged traffic.

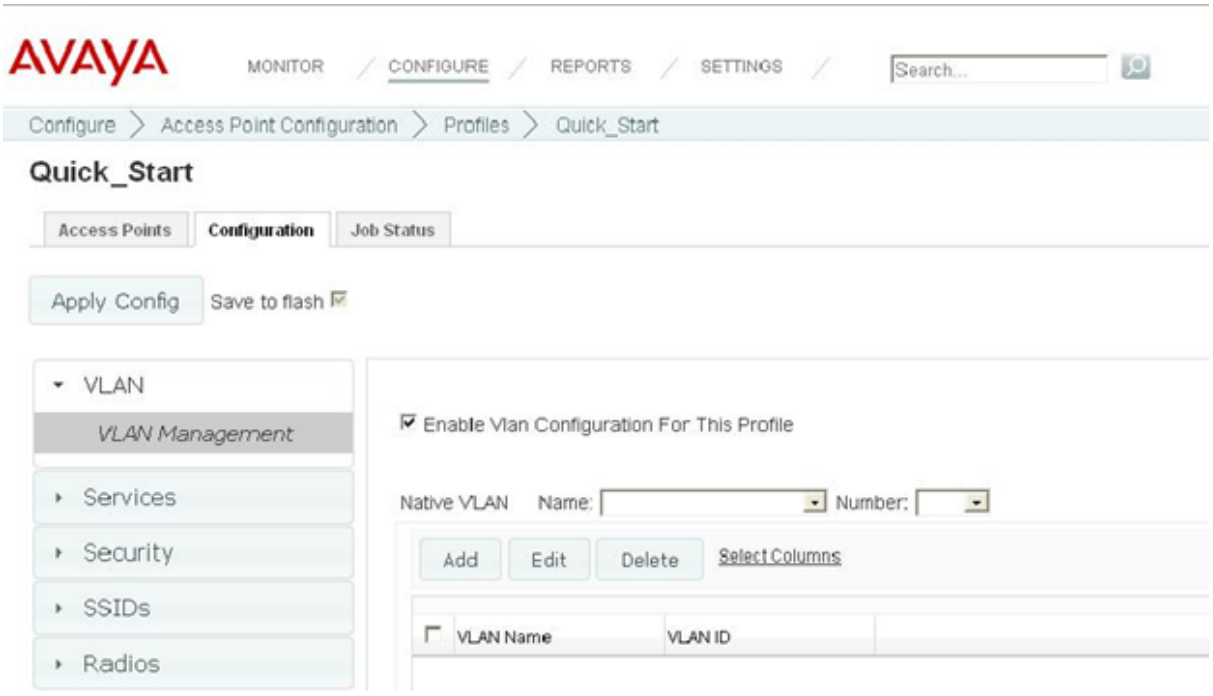
The VLAN Management page allows you to assign and configure VLANs.

Important:

Only create the Wireless Client VLANs as required in this tab. You do not have to create the AP management VLAN.

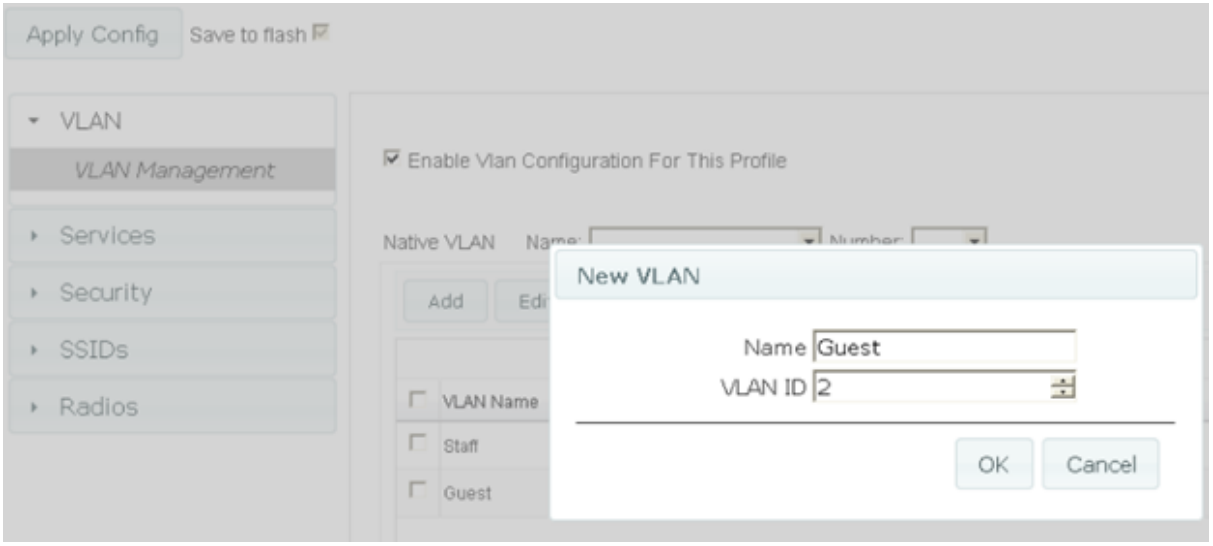
Procedure

1. In the Profile Configuration Tab, click the **VLAN** button
2. Click **VLAN Management** to navigate to the VLAN Management page.



3. Check the **Enable Vlan Configuration For This Profile** box to enable VLAN Management functions.

4. Click the button **Add** to create a new VLAN.
5. Enter a name and number for the new VLAN. Click **OK** once done.



6. Repeat steps 2 and 3 to create multiple VLAN names and numbers as needed.

Related links

Configuring the Wireless Networks on page 9

Creating SSIDs

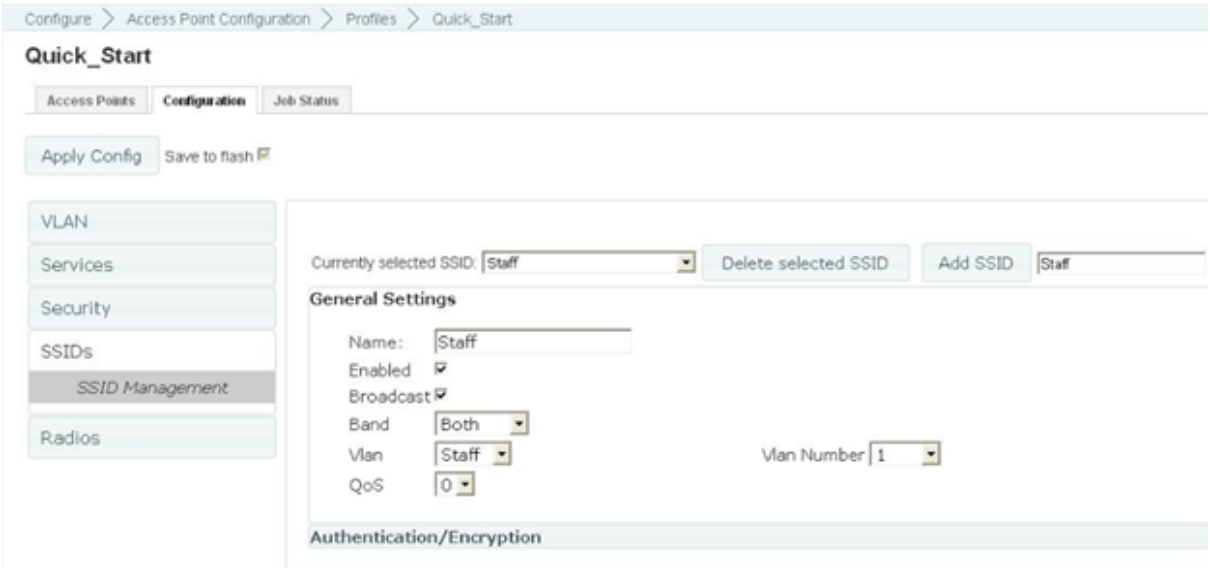
About this task

The SSID Management page allows you to create, edit and delete SSIDs, and assign security parameters.

For this guide, the SSIDs “Staff” and “Guest” will be created.

Procedure

1. Open the Profile Configuration Tab.
2. Click the **SSIDs** button in the menu on the left-hand side.
3. Click **SSID Management** to navigate to the SSID Management page.
4. To create a new SSID, enter a name to the right of the **Add SSID** button.
5. Once a name has been entered, click the **Add SSID** button.
6. Next use the drop down menu selection **Currently selected SSID** to select the newly created SSID. The drop-down list shows all currently defined SSIDs.
7. Click the SSID in the list to select it.

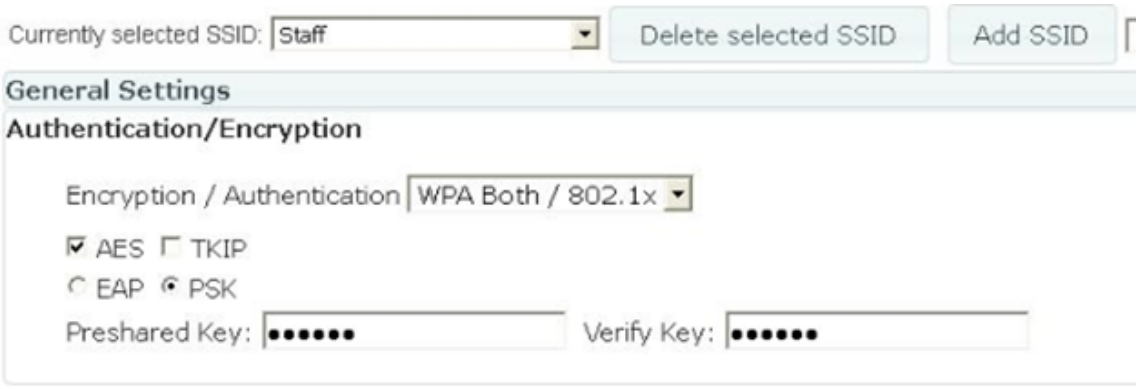


8. Check the box for **Enabled** to activate the selected SSID or uncheck the box to deactivate it.
9. Check the box for **Broadcast** to make the selected SSID visible to all clients on the network.
10. Select which wireless band the SSID will be beaconed on (5GHz, 2.4GHz, or Both).
11. Select the VLAN name you would like to assign the SSID to (Staff or Guest) and verify the VLAN number that you want traffic from users associating to this SSID to be forwarded to on the wired network.
12. Click the **Authentication/Encryption** tab to display the SSID Security Management settings.
13. Use the drop-down list **Encryption / Authentication** to choose the encryption that will be required for this specific SSID (None, WEP, WPA, WPA2 or WPA-Both).

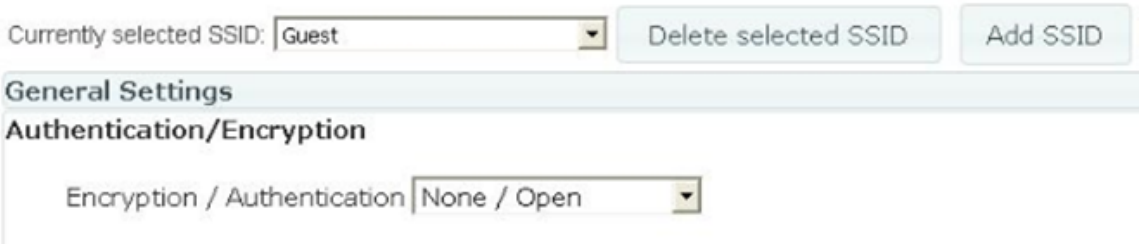
    ⚠ Caution:

    It is recommended to avoid WEP or WPA/TKIP due to security and performance restrictions.

    a. For Staff SSID check the boxes to enable AES and PSK or AES and EAP for RADIUS Authentication as your security requirements warrants. If PSK is used, choose a strong passphrase containing between 8 and 63 characters (20 is preferred). Always use a combination of letters, numbers and special characters.



b. For Guest SSID using a Captive Portal select **None / Open**. WAP9112/9114 does not have Internal Captive Portal and can be used with any external Captive Portal systems including Avaya IDE Access Portal.



Related links

Configuring the Wireless Networks on page 9

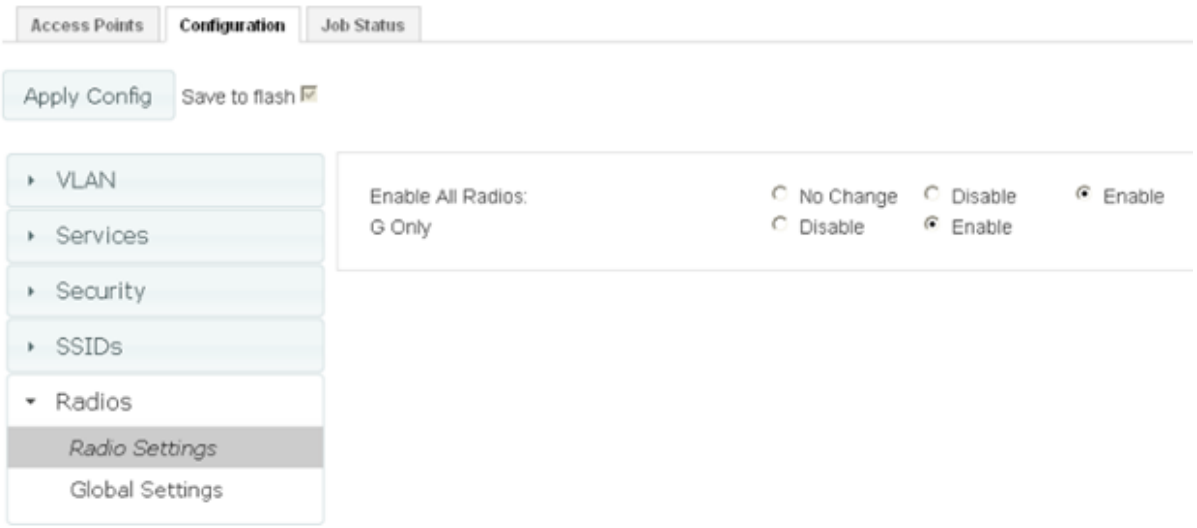
Enable Radios

About this task

The Radio Settings page allows you to enable/disable the settings **Enable all Radios** and **G Only**.

Procedure

1. The Radios button is found in Profile Configuration Tab in the menu on the left-hand side.
2. Click **Radio Settings** to navigate to the to the Radio Settings Management page.
3. Enable all radios by clicking **Enable** in the **Enable All Radios** row.
4. Select whether you want to enable or disable **G Only**. This disables 802.11b data rates improving the performance of the 2.4GHz Radios



Related links

Configuring the Wireless Networks on page 9

Saving the Configuration

Procedure

Click the **Apply Config** button at the top of the configuration window to apply these changes to the Access Point.

Important:

To make these changes permanent check **Save to flash**.

Related links

Configuring the Wireless Networks on page 9

Chapter 5: Discovering the Access Points

Related links

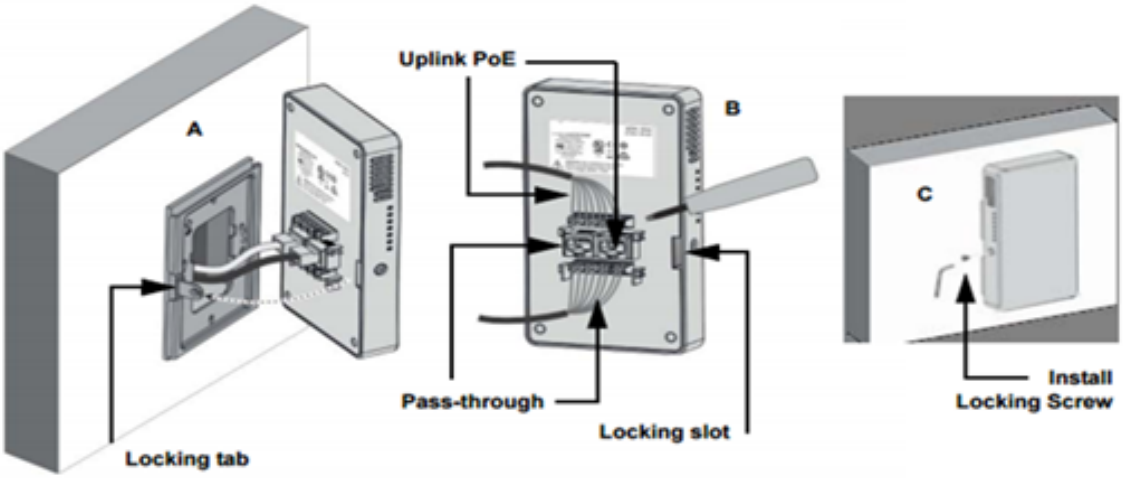
[Powering the WAP9112](#) on page 15
[Powering the WAP9114](#) on page 16
[Discovering the Access Points in WOS](#) on page 17

Powering the WAP9112

About this task

Procedure

Plug the Uplink-PoE and Pass-through cables into their respective sockets.



Note:

When the correct power is supplied the **POWER LED** on the side of the unit turns on and the WAP9112 boots up.

Caution:

Please wait for up to 3 minutes for the AP to boot up and get an IP Address from the DHCP Server. If the AP does not receive DHCP IP Address the default IP Address 192.168.1.3 will be used.

Related links

Discovering the Access Points on page 15

Powering the WAP9114

Procedure

Connect the cable that carries power and data to **GIG1/POE** (shown in red). If the power is properly supplied, the AP's LEDs light up and blink in their rotating boot pattern.

Caution:

Please wait for up to 3 minutes for the AP to boot up and get an IP Address from the DHCP Server. If the AP does not receive DHCP IP Address the default IP Address 192.168.1.3 will be used.

Related links

Discovering the Access Points on page 15

Discovering the Access Points in WOS

WAP9112 and 9114 Access Points do not support auto discovery using the Avaya-WOS DNS entry like the other AOS software Access Points. The Discovery has to be initiated from WOS. There are two methods for discovering the Access Points.

Related links

Discovering the Access Points on page 15
Discover the AP in WOS using an IP on page 17
Discover the AP in WOS using a Network Address on page 18

Discover the AP in WOS using an IP

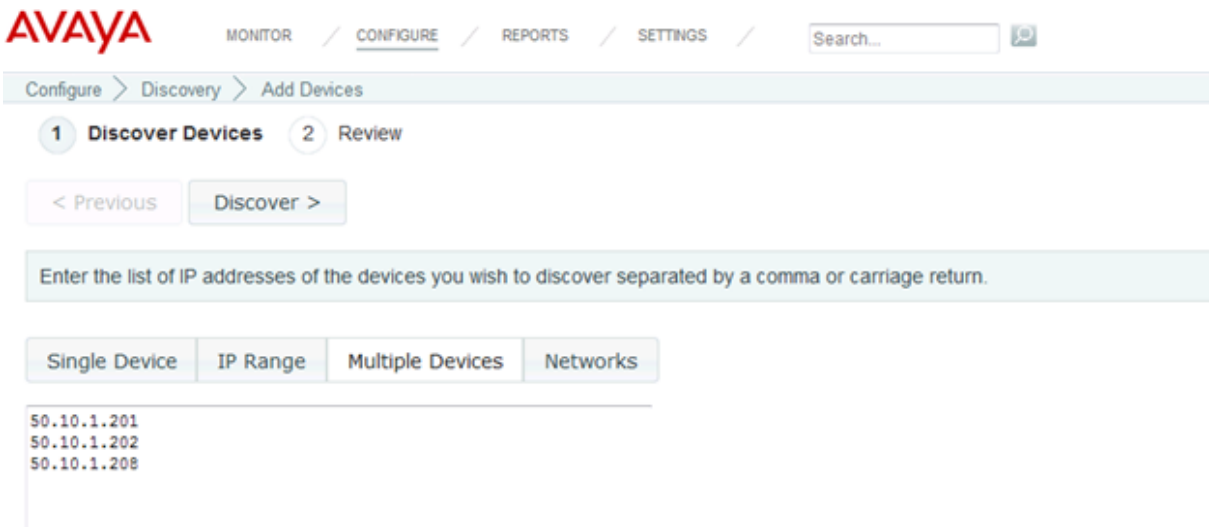
About this task

Use the following procedure to discover an AP in WOS if you know the IP Addresses.

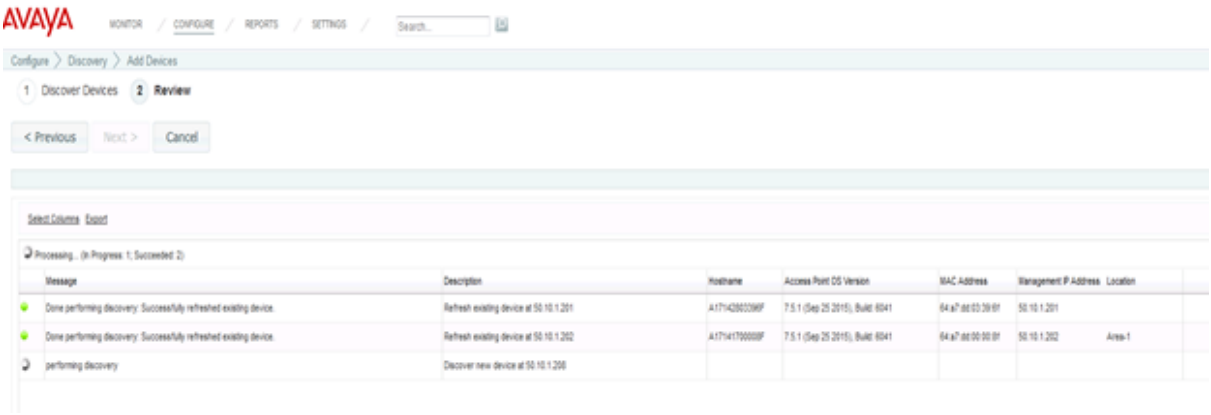
Procedure

1. Select the **Configure** menu at the top of the Page.
2. Click on **Add Devices** link under the **Discovery**.
3. Select **Multiple Devices** and enter the IP Addresses of individual APs you would like to discover and click **Discover**.

   After you click the **Discover** button, WOS will attempt to discover an Avaya Access Point or managed power supply at all of the IP addresses in the specified subnetworks. It will display the results for each network, listing whether discovery is in **Progress**, **Completed**, **Disabled**, or **Failed**.



4. Wait until your Network Address shows a status **Complete** to confirm discovery mode has completed its task.



Related links

Discovering the Access Points in WOS on page 17

Discover the AP in WOS using a Network Address

About this task

Use the following procedure to discover an AP if you don't know the IP Addresses of the APs,

Note:

Running a discovery on the entire subnet is a time consuming task taking up to 30 minutes for a /24 subnet and should only be used if the AP IP addresses cannot be determined from the DHCP Server.

Procedure

1. Select the **CONFIGURE** menu at the top of the Page.
2. Click on the **Add Devices** link under **Discovery**.
3. Click **Networks**.

4. Enter the subnets **Network Address** and **Subnet Mask**, and then click **Add**.
5. Click **Discover** to initiate the discovery process.

   The newly entered network will be displayed in the list of networks for discovery.

   Note:

   After you click the **Discover** button WOS will attempt to discover an Avaya Access Point or managed power supply at all of the IP addresses in the specified subnetworks. It will display the results for each network, listing whether discovery is in **Progress**, **Completed**, **Disabled**, or **Failed**.

6. Once the Network Address shows a status of **Complete**, the discovery mode has completed its task.

Related links

Discovering the Access Points in WOS on page 17

Chapter 6: Upgrade Access Point Operating System

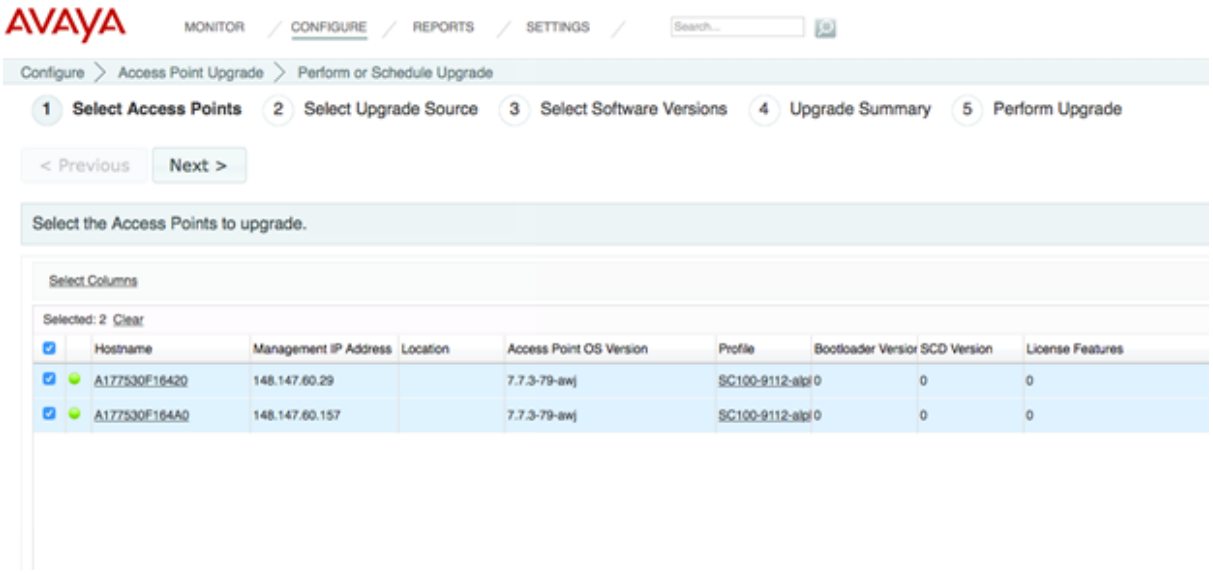
About this task

Use this procedure to upgrade Access Points that do not contain the current GA software version.

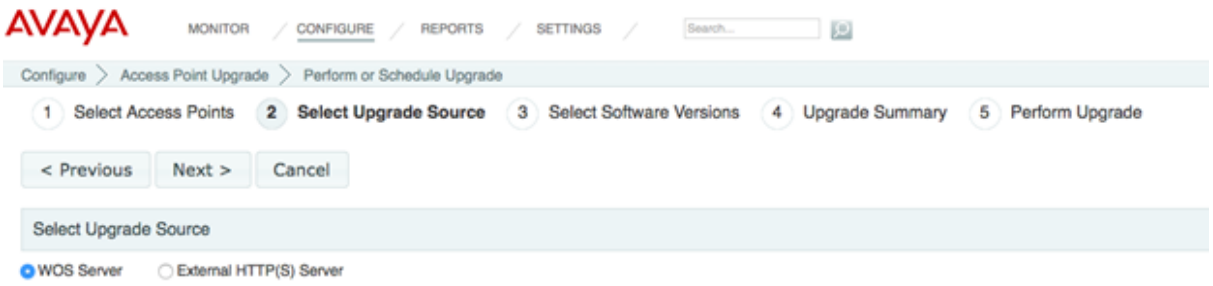
Procedure

1. Download the latest AOS-Lite software from Avaya support portal.
2. Click the **CONFIGURE** tab and
3. Under **Access Point Upgrade** select **Perform or Schedule Upgrade**.

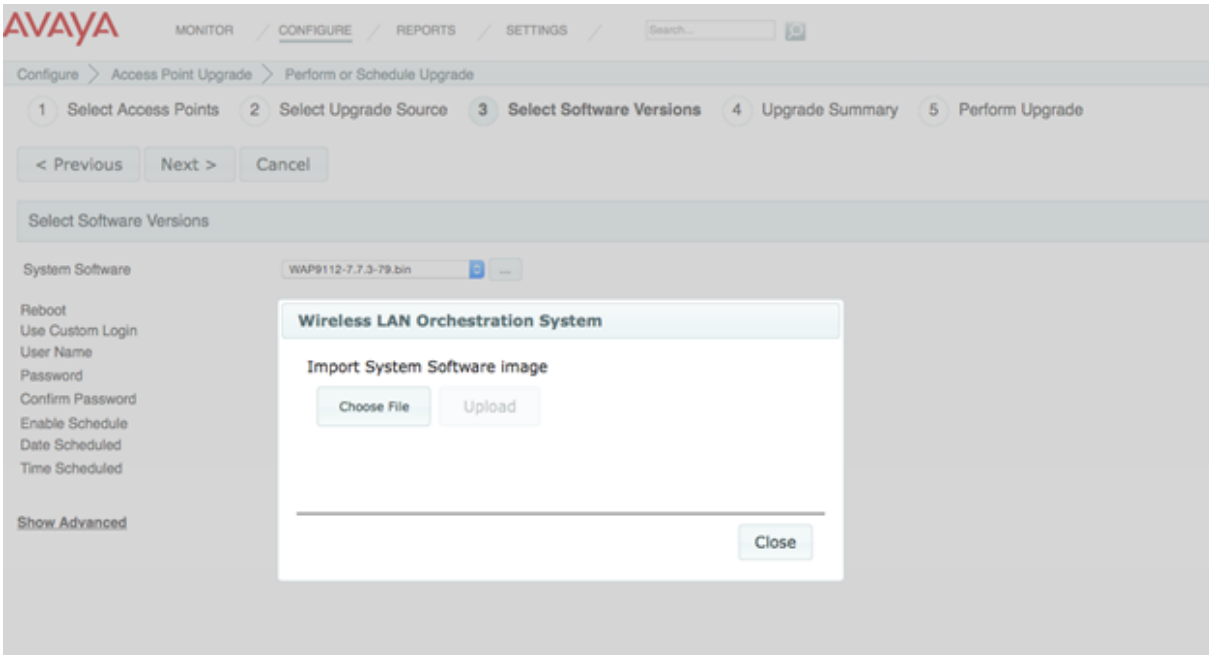
4. Select the WAP9112/9114 Access Points to be upgraded and click **Next**.



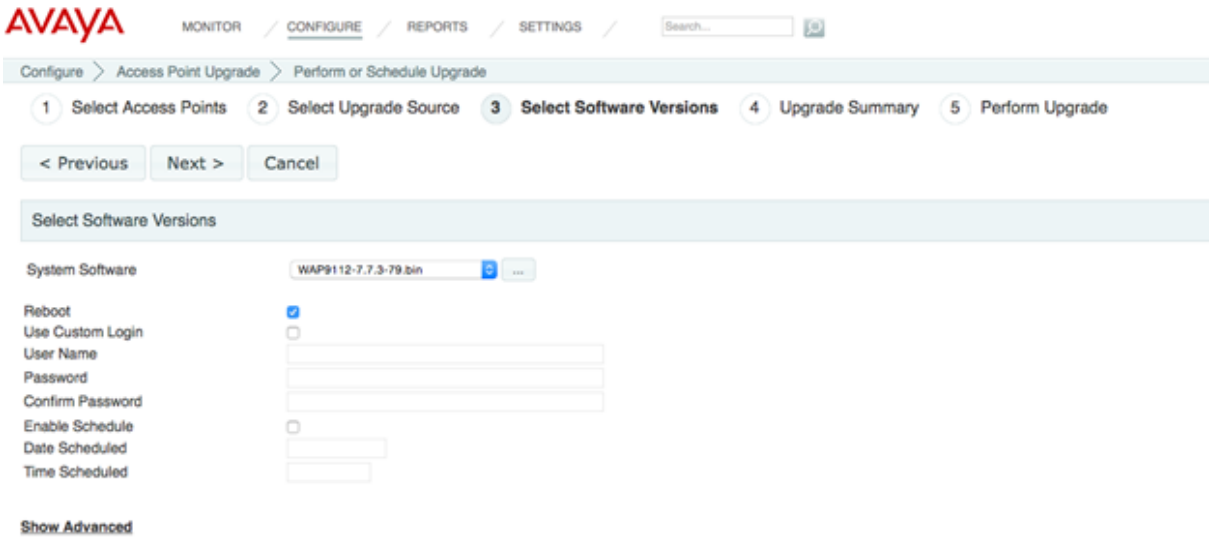
5. Select WOS Server as the upgrade source and click **Next**.



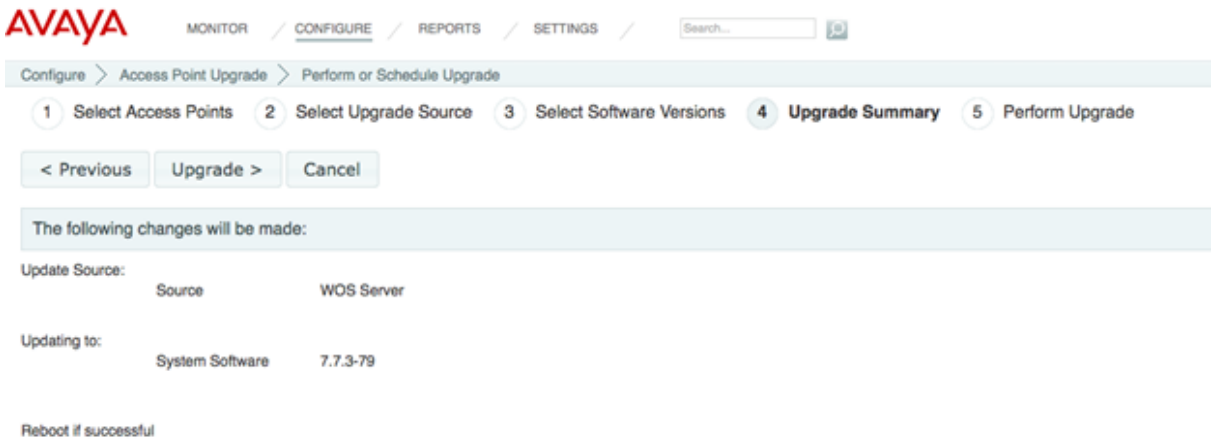
6. Click on Browse button**…** next to the system software and import the WAP9112/9114 software image downloaded from the support portal.



7. Select the imported software and click **Next** once the import is complete.



8. Click **Upgrade** to start the AP image upgrade and wait for the upgrade process to complete.


AVAYA
MONITOR
CONFIGURE
REPORTS
SETTINGS
Search...
Configure
Access Point Upgrade
Perform or Schedule Upgrade
1 Select Access Points
2 Select Upgrade Source
3 Select Software Versions
4 Upgrade Summary
5 Perform Upgrade
< Previous
Upgrade >
Cancel
The following changes will be made:
Update Source:
Source
WOS Server
Updating to:
System Software
7.7.3-79
Reboot if successful

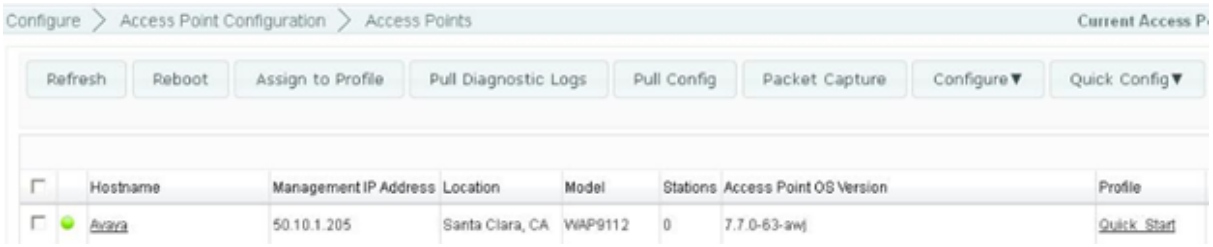
Chapter 7: Assigning an AP to a Profile

About this task

When an Access Point is discovered it is automatically assigned to the default Profile. If the profile is not setup as Default, you must use this procedure to manually assign an AP to a profile.

Procedure

1. Navigate to the **Access Points** page.
2. Select **Configure**.
3. Click the **Access Points** link in the **Access Point Configuration** section.



4. Select the check box next to the APs you wish to assign to the profile.
5. Click the **Assign to Profile** button.

   Note:

   This option assigns the selected Access Points to the profile that you specify. Since an Access Point may not be a member of more than one profile, the selected Access Points will be removed from any other profiles to which they belong.

6. In the drop-down menu select the Profile name you wish to assign the AP to.

7. Click **OK**.
8. Navigate to the profile and monitor the Job Status for the configuration to complete. The time for job completion is dependent on the number of APs.

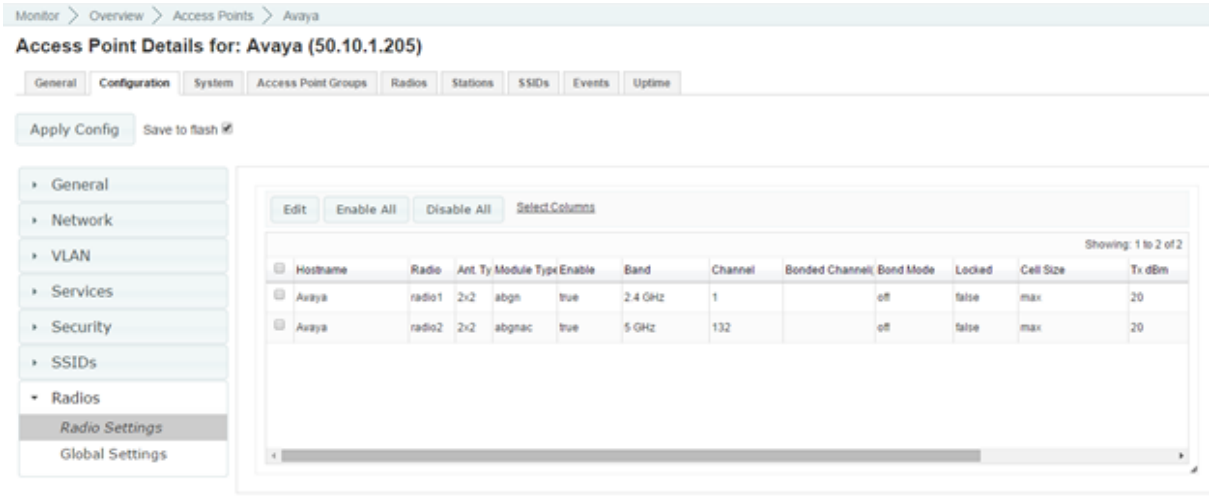
Chapter 8: AP Configuration

About this task

The profile handles the common configuration across a group of APs, however configuration such as radio settings that are unique to each AP may still be required.

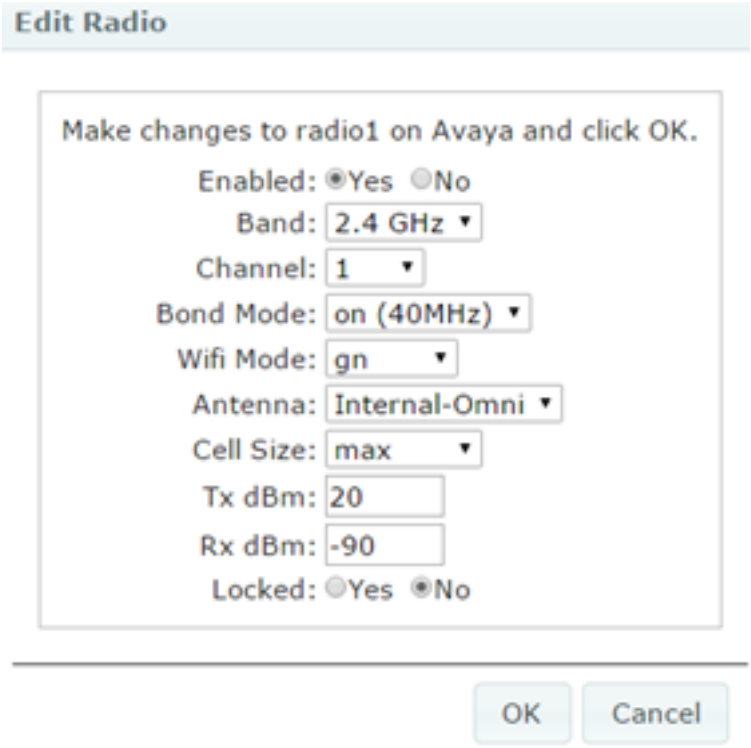
Procedure

1. Navigate to the **Configuration** tab and select **Access Points** at the top of the page.
2. Selectk the name of your AP to navigate to the **Access Point Details** page.



3. Select the **Configuration** tab.
4. Select the **Radios** tab in the menu on the left-hand side.
5. Select **Radio Settings**.
6. Select the desired radio's check box on the left and click the **Edit** button.

   The Edit Radio dialog appears.



Note:

For 5GHz Radios Select the Channel Bonding option – When multiple Access Points are being deployed it is recommended to use 40MHz or off to increase the number of non-overlapping channels.

Note:

WiFi Mode – Ensure the Wi-Fi mode is gn for 2.4GHz radios and anac for 5GHz radios

Note:

Cell Size – For most hotel rooms selecting **Small** for 2.4GHz and **Medium** for 5GHz Radios is optimal.

7. Select **OK** when finished.
8. Click the **Apply Config** button at the top of the configuration window to apply these changes to the Access Point.

Important:

To make the changes permanent check **Save to flash** before clicking the **Apply Config** button.

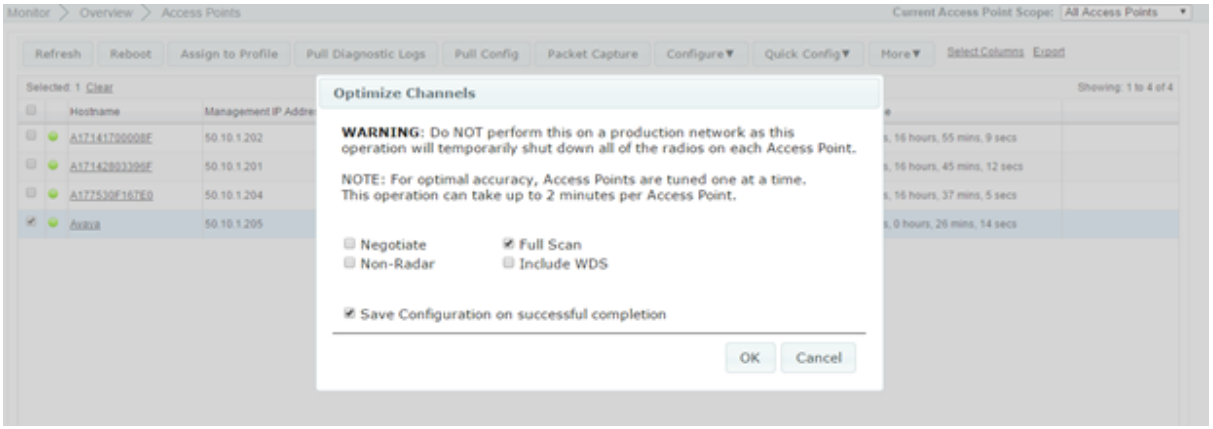
Chapter 9: RF Optimization

About this task

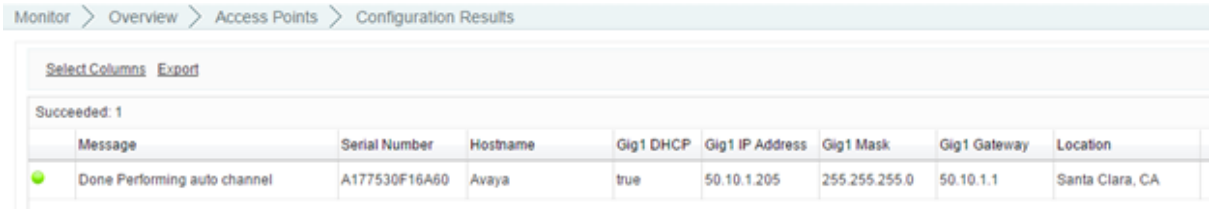
WAP9112/9114 Access Points perform auto channel searches to select the best available channel on initial start up. However it is also recommended to perform a Channel Optimization post deployment. Use this procedure to perform that optimization.

Procedure

1. Navigate to the **Access Points** page.
2. Select the desired Access Points and click the **Configure** button in the Access Point Page Menu.
3. Click on **Optimize Channels** in the drop down menu.



4. Check **Full Scan** and click **OK** when done.
5. Wait until the Message column shows **Done Performing auto channel** to signify completion.



Chapter 10: Validate Configuration

Connect Clients to the Staff and Guest SSID to validate the configuration.