

AOS-W 3.3.1

Quick Start Guide

This document describes the initial setup of an OmniAccess user-centric network that consists of an OmniAccess WLAN Switch and OmniAccess Access Points (APs). The installation consists of the following steps:

1. Run the Java-based RF Plan tool, version 2.0 or higher, to determine the number of APs required for your site. Alcatel-Lucent's RF Plan is an application that allows you to determine AP placement based on your specified coverage and capacity requirements without impacting the live network. When you receive your APs, enter the serial number for each AP into the RF Plan tool.

Download the RF Plan tool and *RF Plan Installation and User Guide* from the Alcatel-Lucent Technical Support web site at <https://service.esd.alcatel-lucent.com>.

2. Use the Setup Wizard to configure the WLAN Switch and install software licenses. For more information, see "[Run the Setup Wizard](#)" on page 2.
3. Connect the WLAN Switch to the wired network.

For more information, see "[Connect the WLAN Switch to the Wired Network](#)" on page 6.

4. Ensure that the APs, when installed and powered on, will be able to locate and connect to the WLAN Switch.

For more information, see "[Ensure APs Can Connect to the WLAN Switch](#)" on page 7.

5. Define the mesh cluster profile, mesh radio profile, and provision the AP as a mesh portal or mesh point when deploying APs in a mesh networking environment.

NOTE: This step is required only if you are configuring mesh.

For more information, see "[Provision APs for Mesh](#)" on page 9.

6. Connect your APs to the network.

See "[Install the APs](#)" on page 9.

Before You Begin

1. Review the contents of your WLAN Switch shipment to ensure that you have received the following:
 - OmniAccess WLAN Switch with appropriate power cord and accessories
 - *AOS-W Quick Start Guide* (this document)
 - *AOS-W End User License Agreement*
2. Read the *AOS-W End User License Agreement*.

NOTE: Check the customer support web site for the latest software upgrades and documentation updates: <https://service.esd.alcatel-lucent.com>.

Run the Setup Wizard

The Setup Wizard allows you to configure access to the WLAN Switch and install software licenses.

The Setup Wizard is available the first time you connect to and log into the WLAN Switch or whenever the WLAN Switch is reset to its factory default configuration. After you complete the Setup Wizard, the WLAN Switch reboots using the new configuration information you entered.

NOTE: Do *not* connect the WLAN Switch to your network when running the Setup Wizard. The factory-default WLAN Switch boots up with a default IP address and both DHCP server and spanning tree functions are enabled. Once you have completed the Setup Wizard and rebooted the WLAN Switch, you can use either the CLI or WebUI for further configuration before connecting the WLAN Switch to your network.

Required Information

Table 1 describes the information that is *required* for the Setup Wizard.

TABLE 1 Required Information for Setup Wizard

Required Information	Description
System Name	A user-defined name by which the WLAN Switch will be referenced. You can specify a name of up to 63 characters.
Country Code	The country in which the WLAN Switch will operate. The country code determines the 802.11 wireless transmission spectrum. NOTE: You cannot change the country code for WLAN Switches designated for certain countries, such as the U.S. Improper country code assignment can disrupt wireless transmissions. Most countries impose penalties and sanctions for operators of wireless networks with devices set to improper country codes.
admin Password	Password of up to 32 characters for the admin user to log in to the WLAN Switch.
Enable Mode Password	Password of up to 15 characters for the admin user to access the Enable mode in the CLI.
Date and Time	You can either manually set the date, time, and GMT time zone or specify the IP address of an NTP server from which the WLAN Switch will obtain its date and time settings.

TABLE 1 Required Information for Setup Wizard (Continued)

Required Information	Description
WLAN Switch Mode	<p>Standalone: If this is the only WLAN Switch on the network.</p> <p>Master: If this WLAN Switch will manage other WLAN Switches on the network. You are prompted for a key that will be used by all WLAN Switches on the network.</p> <p>Local: If this WLAN Switch will be managed by a master WLAN Switch. You are prompted for a key that will be used by all WLAN Switches on the network. (You need to provide the IP address of the master WLAN Switch.)</p>
VLAN 1	The WLAN Switch takes its IP address from VLAN 1. The WLAN Switch uses the configured IP address to communicate with other WLAN Switches and with APs.
Default Gateway	This is usually the IP address of the interface on the upstream switch or router to which you will connect the WLAN Switch. The default gateway and the VLAN 1 IP address need to be in the same network.

Optional Information

The Setup Wizard also allows you to:

- Create virtual local area networks (VLANs) into which wireless users are placed after authentication
- Modify default port settings
- Install licenses for AOS-W software modules

NOTE: The above configurations are not available if you use a serial port connection to the WLAN Switch to run an initial setup. See [“Serial Port Connection” on page 5](#).

Running the Setup Wizard

The default IP address of the WLAN Switch is 172.16.0.254. When you connect a PC or workstation to a line port on the WLAN Switch, you can connect to this IP address through a Web browser to run the Setup Wizard.

You can use any PC or workstation on which you can run a Web browser. The system must either be configured to obtain its IP address via DHCP or configured to have a static IP address on the 172.16.0.0/24 subnetwork.

To run the Setup Wizard:

1. Make sure that the WLAN Switch is not connected to any device on your network.
2. Boot up the OmniAccess WLAN Switch.
3. Connect your PC or workstation to a line port on the WLAN Switch.
4. On your PC or workstation, open a Web browser and connect to <https://172.16.0.254>.
5. The WLAN Switch contains a default server certificate^{*}. At the Security Alert, click **Yes** to proceed with the Setup Wizard.
6. Enter the information described in [Table 1](#).
7. Click **Continue** to install software licenses on the WLAN Switch.

Proceed to [“Connect the WLAN Switch to the Wired Network”](#) on page 6.

Serial Port Connection

The serial port is located on the front panel of the WLAN Switch. When you connect a terminal or PC/workstation running a terminal emulation program to the serial port on the WLAN Switch, you enter the Initial Setup dialog.

NOTE: The serial port connection allows you to configure the basic configuration required to connect the WLAN Switch to the network. The browser-based Setup Wizard allows you to also install software licenses (see [“Run the Setup Wizard”](#) on page 2). If you use the Initial Setup dialog to configure the WLAN Switch, the Setup Wizard will not be available unless you reset the WLAN Switch to its factory default configuration.

To run the Initial Setup dialog from a serial connection:

1. Configure your terminal or terminal emulation program to use the following communication settings:

Baud Rate	Data Bits	Parity	Stop Bits	Flow Control
9600	8	None	1	None

2. Connect your terminal or PC/workstation to the serial port on the WLAN Switch using an RS-232 serial cable.

^{*} A digital certificate is a way to validate a device on the network. The default certificate installed in the WLAN Switch does not guarantee security in production networks. Alcatel-Lucent strongly recommends that you replace the default certificate with a custom certificate issued for your site or domain by a trusted Certificate Authority. See the *AOS-W User Guide* for more information about certificates.

All accessory kits shipped with OmniAccess WLAN Switches contain an RJ-45 cable and DB-9 to RJ-45 adapter for this purpose. You may need to provide a USB adapter to connect the serial cable to your PC.

3. Boot up the OmniAccess WLAN Switch.

After the WLAN Switch has booted up, you should see a screen similar to the following:

```
***** Welcome to the OAW-4302 setup dialog *****
This dialog will help you to set the basic configuration for the switch.
These settings, except for the Country Code, can later be changed from the
Command Line Interface or Graphical User Interface.

Commands: <Enter> Submit input or use [default value], <ctrl-I> Help
<ctrl-B> Back, <ctrl-F> Forward, <ctrl-A> Line begin, <ctrl-E> Line end
<ctrl-D> Delete, <BackSpace> Delete back, <ctrl-K> Delete to end of line
<ctrl-P> Previous question <ctrl-X> Restart beginning

Enter System name [OAW-4302]:
```

FIGURE 2 Initial Setup for Serial Port Connection

4. Enter the information described in [Table 1](#).
5. At the end of the Initial Setup, you are asked to review and confirm your configuration changes. Enter **y** to accept the changes.

The WLAN Switch reboots.

NOTE: There are optional configurations you may want to complete before you connect the WLAN Switch to your network, for example, disabling spanning tree. In addition, you should set the system clock and install software licenses before connecting to the network. For more information, see “Deploying a Basic User-Centric Network” in the *AOS-W User Guide*.

Proceed to [“Connect the WLAN Switch to the Wired Network”](#) on page 6.

Connect the WLAN Switch to the Wired Network

Connect a port on the WLAN Switch to the appropriately-configured port on a Layer-2 switch or router. Make sure that you have the correct cables and that the port LEDs indicate proper connections. Refer to the *Installation Guide* for your OmniAccess WLAN Switch for port LED and cable descriptions.

Ensure APs Can Connect to the WLAN Switch

Before you install APs in a network environment, you must ensure that the APs will be able to locate and connect to the WLAN Switch when powered on. Specifically, you need to ensure the following:

- When connected to the network, each AP is assigned a valid IP address
- APs are able to locate the WLAN Switch

IP Addresses for APs

Each OmniAccess AP requires a unique IP address on a subnetwork that has connectivity to a WLAN Switch. Alcatel-Lucent recommends using the Dynamic Host Configuration Protocol (DHCP) to provide IP addresses for APs; the DHCP server can be an existing network server or an OmniAccess WLAN Switch configured as a DHCP server.

If an AP is on the same subnetwork as the master WLAN Switch, you can configure the WLAN Switch as a DHCP server to assign an IP address to the AP. The WLAN Switch must be the only DHCP server for this subnetwork.

Using the WebUI to Enable DHCP Server Capability on the WLAN Switch

1. To use the WebUI, enter the IP address of the WLAN Switch in the URL of a browser window.

NOTE: The WebUI requires Internet Explorer 6.0. Other browsers may work but with limited functionality and are therefore not supported.

2. At the WebUI login page, enter the **admin** user name and the password you entered during the Initial Setup.
3. Navigate to the **Configuration > Network > IP > DHCP Server** page.
4. Select the **Enable DHCP Server** checkbox.
5. In the Pool Configuration section, click **Add**.
6. Enter information about the subnetwork for which IP addresses are to be assigned. Click **Done**.
7. If there are addresses that should not be assigned in the subnetwork:
 - A. Click **Add** in the Excluded Address Range section.
 - B. Enter the address range in the Add Excluded Address section.
 - C. Click **Done**.

8. Click **Save Configuration** at the top of the page to save this configuration to the WLAN Switch's flash memory.

WLAN Switch Discovery

An OmniAccess AP can discover the IP address of the WLAN Switch in one of several ways. The Alcatel-Lucent Discovery Protocol (ADP) is enabled by default on all OmniAccess APs and WLAN Switches. To use ADP, all OmniAccess APs and WLAN Switches must be connected to the same Layer-2 network.

NOTE: If the devices are on different networks, a Layer-3 compatible discovery mechanism, such as DNS, DHCP, or IGMP forwarding, must be used instead. See "Deploying a Basic User-Centric Network" in the *AOS-W User Guide* for information.

With ADP, APs send out periodic multicast and broadcast queries to locate the master WLAN Switch. If the APs are in the same broadcast domain as the master WLAN Switch, the WLAN Switch automatically responds to the APs' queries with its IP address. If the APs are not in the same broadcast domain as the master WLAN Switch, you need to enable multicast on the network — see "Deploying a Basic User-Centric Network" in the *AOS-W User Guide* for information.

Provision APs for Mesh

NOTE: The information in this section applies only if you are configuring and deploying APs in a mesh networking environment. If you are not, proceed to [“Install the APs” on page 9](#).

Before you install APs in a mesh networking environment, you must do the following:

- Define and configure the mesh cluster profile and mesh radio profile before configuring an AP to operate as a mesh node. An AP configured for mesh is also known as a mesh node.
- Provision one of the following mesh roles on the AP:
 - Mesh portal—The gateway between the wireless mesh network and the enterprise wired LAN.
 - Mesh point—APs that can provide traditional OmniAccess WLAN services (such as client connectivity, intrusion detection system (IDS) capabilities, user roles association, LAN-to-LAN bridging, and Quality of Service (QoS) for LAN-to-mesh communication) to clients on one radio and perform mesh backhaul/network connectivity on the other radio. Mesh points can also provide LAN-to-LAN bridging through their Ethernet interfaces.

NOTE: You must install a Secure Enterprise Mesh license on any WLAN Switch that you use to provision a mesh AP. For example, if you are provisioning a mesh node on a master WLAN Switch but the mesh node will communicate with a local WLAN Switch, you must install Secure Enterprise Mesh licenses on both the master and local WLAN Switches.

For detailed provisioning guidelines, caveats, and instructions, see the [“Configuring Secure Enterprise Mesh”](#) chapter in the *AOS-W User Guide*.

Install the APs

Use the AP placement map generated by RF Plan to install APs. You can either connect the AP directly to a port on the WLAN Switch, or connect the AP to another switch or router that has Layer-2 or Layer-3 connectivity to the WLAN Switch.

If the Ethernet port on the WLAN Switch is an 802.3af Power over Ethernet (PoE) port, the AP automatically uses it to power up. If a PoE port is not available, you need to obtain an AC adapter for the AP from Alcatel-Lucent. For more information, see the *Installation Guide* for the specific AP.

Once an AP is connected to the network and powered up, it attempts to locate the WLAN Switch using ADP.

On the WLAN Switch, you can view the APs that have connected to the WLAN Switch in the WebUI. Navigate to the **Configuration > Wireless > AP Installation** page. [Figure 3](#) shows an example of this page.

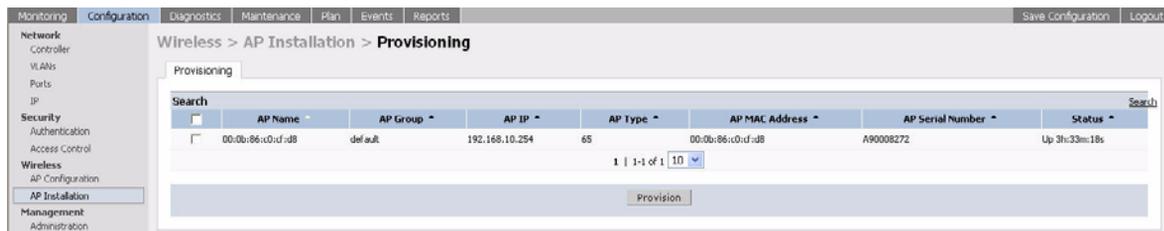


FIGURE 3 APs Connected to WLAN Switch

After you have installed a basic user-centric network, the OmniAccess AP advertises the default **aruba-ap** SSID. Wireless users can connect to this SSID but because you have not yet configured authentication, policies, or user roles, they will not have access to the network.

Volume 3, “Configuring APs” in the *AOS-W User Guide* describes how to configure APs. The other volumes in the *AOS-W User Guide* provide more information about configuring and using features of the user-centric network.

Contacting Alcatel-Lucent

Contact Center Online

- Main Site <http://www.alcatel-lucent.com/enterprise>
- Support Site <https://service.esd.alcatel-lucent.com>
- Email support@ind.alcatel.com

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