# Alcatel-Lucent Configuration Guide

## Version 6.4

Configuration Guide

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## Document Audience and Organization

This configuration guide is intended for wireless network administrators and helpdesk personnel who deploy AOS-W (AOS) on the network and wish to manage it with the OmniVista3600 Air Manager (OV3600). OV3600 Version 6.4 and later releases support Alcatel-Lucent Configuration. This document provides instructions for using Alcatel-Lucent Configuration and contains the following chapters:

**Table 1** *Document Organization and Purposes*

| Chapter | Description |
|---|---|
| Chapter 1, "Overview of Alcatel-Lucent Configuration in OV3600" | Introduces the concepts, components, navigation, and initial setup of Alcatel-Lucent Configuration. |
| Chapter 2, "Using Alcatel-Lucent Configurations in Daily Operations" | Provides a series of procedures for configuring, modifying, and using Alcatel-Lucent Configuration once initial setup is complete. This chapter is oriented around the most common tasks in Alcatel-Lucent Configuration. |

## Related Documents

The following documentation supports the OmniVista3600 Air Manager, Version 6.4 and is accessible from the **Home > Documentation** page:

- Quickstart Guide
- User Guide
- Supported APs/Devices
- Supported Firmware Versions

## Text Conventions

The following conventions are used throughout this manual to emphasize important concepts:

**Table 2** *Text Conventions*

| Type Style | Description |
|---|---|
| *Italics* | This style is used to emphasize important terms and to mark the titles of books. |
| **GUI components** | **Bold, sans-serif font** indicates that the OV3600 GUI displays this item exactly as cited in body text. |
| `System items` | This fixed-width font depicts the following:<br>• Sample screen output<br>• System prompts<br>• Filenames, software devices, and specific commands when mentioned in the text |
| **`Commands`** | In the command examples, this bold font depicts text that you must type exactly as shown. |

This document uses the following notice icons to emphasize advisories for certain actions, configurations, or concepts:

Indicates helpful suggestions, pertinent information, and important things to remember.

Indicates a risk of damage to your hardware or loss of data.

## Contacting Alcatel-Lucent

| Online Contact and Support | |
|---|---|
| Main Website | http://www.alcatel-lucent.com/enterprise |
| Support Website | http://service.esd.alcatel-lucent.com |
| Alcatel-Lucent Enterprise Service and OmniVista 3600 Email Support | Esd.support@alcatel-lucent.com |

# Chapter 1

# Overview of Alcatel-Lucent Configuration in OV3600

## Introduction

AOS-W (AOS) is the operating system, software suite, and application engine that operates Alcatel-Lucent WLAN switch and centralizes control over the entire mobile environment. The AOS-W Wizards, the AOS-W command-line interface (CLI), and the AOS-W WebUI are the primary means by which to configure and deploy AOS.

The Alcatel-Lucent Configuration feature in the OmniVista3600 Air Manager consolidates AOS-W configuration and pushes global Alcatel-Lucent configurations from one utility. This chapter introduces the components and initial setup of Alcatel-Lucent Configuration with the following topics:

### Overview of Alcatel-Lucent Configuration in OV3600

- The Primary Pages of Alcatel-Lucent Configuration
- Device Setup > Alcatel-Lucent Configuration Page
  - Alcatel-Lucent Device Groups Section
  - AP Overrides Section
  - WLANs Section
  - Profiles Section
  - Security Section
  - Advanced Services Section
- Groups > Alcatel-Lucent Config Page
- APs/Devices > List Page
- APs/Devices > Manage Page
- APs/Devices > Monitor Page
- Groups > Basic Page

### Additional Concepts and Components of Alcatel-Lucent Configuration

- Global Configuration and Scope
- Embedded Profile Setup in Alcatel-Lucent Configuration
- Save, Save and Apply, and Revert Buttons
- Folders, Users, and Visibility
- Additional Concepts and Benefits

### Setting Up Initial Alcatel-Lucent Configuration

OV3600 supports ***Alcatel-Lucent AP Groups,*** and these are distinct and must not be confused with standard OV3600 Device ***Groups***. This document provides information about the configuration and use of ***Alcatel-Lucent AP Groups***, and describes how ***Alcatel-Lucent AP Groups*** interoperate with standard OV3600 Device ***Groups***.

# Requirements, Restrictions, and AOS-W Support in OV3600

## Requirements

Alcatel-Lucent Configuration has the following ***requirements*** in OV3600:

- OV3600 6.4 or a later OV3600 version must be installed and operational on the network.
- Alcatel-Lucent WLAN switches on the network must have AOS-W installed and operational.
- Ensure you have Telnet/SSH credentials (configuration only) and the "enable" password (configuration only). Without proper Telnet/SSH credentials a user is not able to fetch the running configuration, nor acquire license and serial information from switches.

## Restrictions

Alcatel-Lucent Configuration has the following ***restrictions*** in OV3600:

- At the present time, Alcatel-Lucent Configuration in OV3600 does not support every AOS-W Network component. OV3600 supports only **IP Mobility** and **VLANs** in the **Advanced Services** section, for example.
- Future versions of OV3600 will support additional AOS-W features, to include **Alcatel-Lucent AP Group** and **Profile** distribution from the Master Console.

## AOS-W Support in OV3600

NOTE

Refer also to "Using OV3600 to Deploy Alcatel-Lucent Devices for the First Time" on page 39.

OV3600 users can choose between the existing template-based configuration and new GUI-based configuration for Alcatel-Lucent devices on firmware 3.3.2.10 and greater. Upon upgrading to OV3600, groups with all devices in monitor-only mode will automatically use the GUI-based configuration.

- Only global configuration is supported; OV3600 can work in a master-local or an all-master configuration.
- Configuration changes are pushed to the switch via SSH with no reboot required.
- All settings for Profiles, Alcatel-Lucent AP Groups, Servers and Roles are supported, as is the AOS-W WLAN Wizard (basic view). Switch IP addresses, VLANs and interfaces are not supported, nor are Advanced Services with the exception of VPN and IP Mobility.
- OV3600 now understands AOS-W license dependencies.
- You can provision devices from the **AP/Devices > Manage** page. You can move APs into **Alcatel-Lucent AP Groups** from the **Modify These Devices** option on the **APs/Devices > List** page.
- You can configure AP names as **AP Overrides** on the **Device Setup > Alcatel-Lucent Configuration** page.
- Support for AOS-W GUI configuration via global groups and the OV3600 Master Console will be added in a future release.

Changes to dependency between the OV3600 group and folders help customers who want to use the folder structure to manage configuration; however, users are now be able to see (but not access) group and folder paths for which they do not have permissions.

For more detailed information about this feature, as well as steps for transition from template-based configuration to web-based configuration, refer to additional chapters in this user guide. For known issues in the general OV3600 release, refer to the *OV3600 Release Notes*.

### AOS-W 3.4.0

OV3600 6.4 and later versions support AOS-W 3.4.0 with these additional enhancements:

- OV3600 displays Alcatel-Lucent APs with disabled radios as up.

- OV3600 supports device IP addresses.
- Air Monitor is now a per-radio mode in OV3600.
- OV3600 displays the user's cipher for Alcatel-Lucent clients, as supported in AOS-W 3.4.
- OV3600 supports several additional IDS traps.
- OV3600 supports additional OmniAccess 4306 WLAN Switch and the OAW-AP105 Access Point.

Refer to the *OV3600 6.4 Release Notes* for additional information.

# Overview of Alcatel-Lucent Configuration in OV3600

This section describes the **Device Setup > Alcatel-Lucent Configuration** page and all additional pages in OV3600 that support Alcatel-Lucent Configuration.

## The Primary Pages of Alcatel-Lucent Configuration

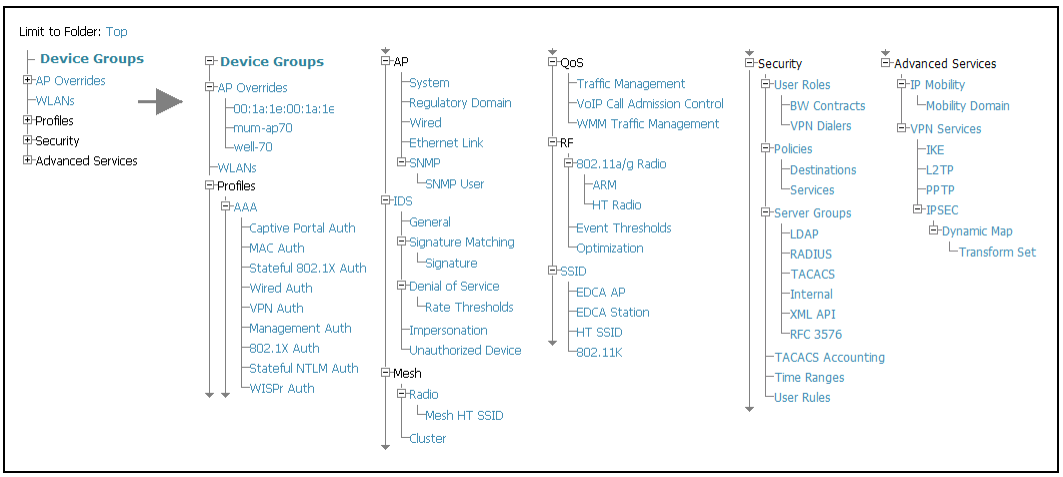
OV3600 supports Alcatel-Lucent Configuration with the following pages:

- Device Setup > Alcatel-Lucent Configuration Page—deploys and maintains Alcatel-Lucent Configuration in OV3600. This page supports several sections, as follows:
  - Alcatel-Lucent Device Groups Section
  - AP Overrides Section
  - WLANs Section
  - Profiles Section
  - Security Section
  - Advanced Services Section
- Groups > Alcatel-Lucent Config Page—manages Alcatel-Lucent device group and other switch-wide settings defined on the **Device Setup > Alcatel-Lucent Configuration** page.
- APs/Devices > List Page—modifies or reboots all devices, including Alcatel-Lucent devices deployed with Alcatel-Lucent Configuration.
- APs/Devices > Manage Page—supports device-level settings and changes in OV3600 as a whole.
- APs/Devices > Monitor Page—supports device-level monitoring in OV3600 as a whole.
- Groups > Basic Page—enables Alcatel-Lucent Configuration in the OV3600 GUI and displays preferences for Alcatel-Lucent and other devices.

## Device Setup > Alcatel-Lucent Configuration Page

This page uses an expandable navigation pane to support Alcatel-Lucent device groups, AP Overrides, WLANs, Profiles, Security, and Advanced Services.

**Figure 1** ***Device Setup > Alcatel-Lucent Configuration*** *Navigation Pane (Contracted and Expanded)*



NOTE

Only **Alcatel-Lucent Device Groups**, **AP Overrides**, and **WLANs** contain custom-created items in the navigation pane.

The navigation pane can be used as follows:

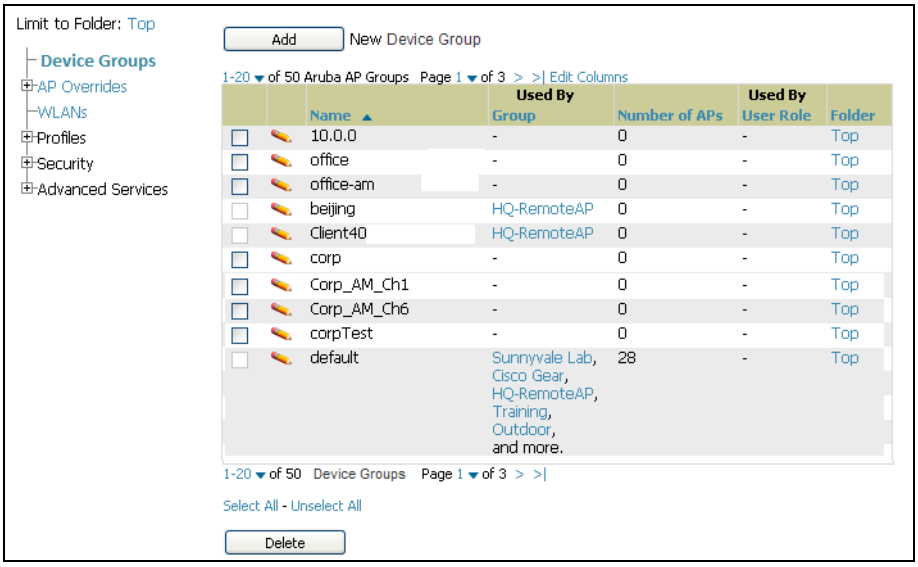
- Any portion with a plus sign (**+**) expands with a click to display additional contents.
- Any portion of the navigation tree can be contracted by clicking the contract sign (**-**).
- You can display the **Edit** or **Details** page for any component with a single click.

## Alcatel-Lucent Device Groups Section

An Alcatel-Lucent Device Group is a collection of configuration profiles that define specific settings on Alcatel-Lucent WLAN switches and the devices that they govern. An Alcatel-Lucent Device Group references multiple configuration profiles, and in turn links to multiple WLANs.

Navigate to the **Device Setup > Alcatel-Lucent Configuration > Alcatel-Lucent Device Groups** page. Figure 2 illustrates one example of this page.

**Figure 2** ***Device Setup > Alcatel-Lucent Configuration > Alcatel-Lucent Device Groups*** *Navigation*




*Alcatel-Lucent Device Groups are not to be confused with conventional OV3600 device groups.* OV3600 supports both group types and both are viewable on the **Groups > List** page when so configured.

Alcatel-Lucent Device Groups have the following characteristics:

- Alcatel-Lucent Device Groups are global, and any Alcatel-Lucent switch can support multiple Alcatel-Lucent Device Groups.
- Alcatel-Lucent Device Groups are assigned to folders, and folders define visibility. Using conventional OV3600 folders to define visibility, Alcatel-Lucent Device Groups can provide visibility to some or many components while blocking visibility to other users for more sensitive components, such as SSIDs. Navigate to the **Users** pages to define folder visibility, and refer to "Visibility in Alcatel-Lucent Configuration" on page 41.
- You can import a switch configuration file from AOS-W for Alcatel-Lucent Device Group deployment in OV3600.

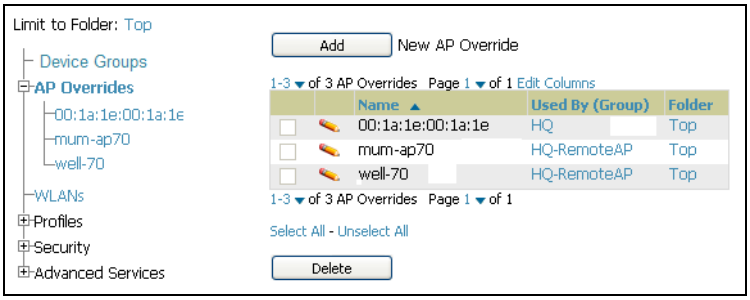
For additional information, refer to the following sections in this document:

- "Setting Up Initial Alcatel-Lucent Configuration" on page 20
- "General Alcatel-Lucent Device Groups Procedures and Guidelines" on page 30

## AP Overrides Section

The second major component of Alcatel-Lucent Configuration is the **AP Overrides** page, appearing immediately below **Alcatel-Lucent Device Groups** in the Navigation Pane. Figure 3 illustrates this location and access:

**Figure 3** ***Device Setup > Alcatel-Lucent Configuration*** > ***AP Overrides*** *Navigation*



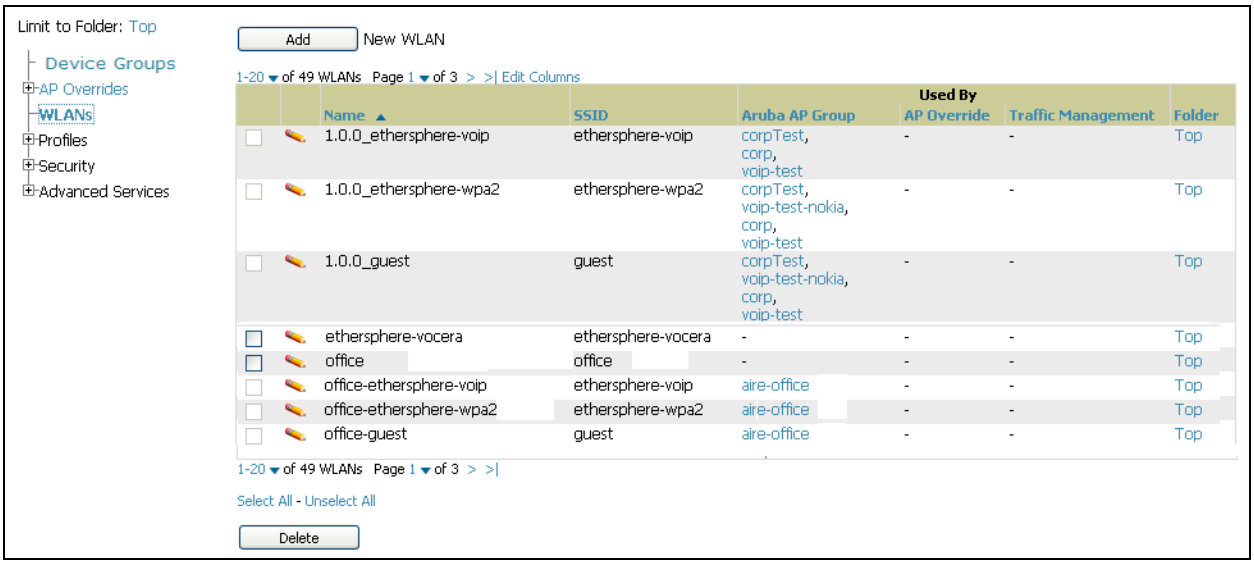

**AP Overrides** operate as follows in Alcatel-Lucent Configuration:

- Custom-created AP Overrides appear in the Alcatel-Lucent Configuration navigation pane, as illustrated in Figure 3.
- Alcatel-Lucent WLAN switches and AP devices operate in Alcatel-Lucent Device Groups that define shared parameters for all devices in those groups. The **Device Setup > Alcatel-Lucent Configuration > Alcatel-Lucent Device Groups** page displays all current Alcatel-Lucent Device groups.
- **AP Override** allows you to change some parameters for any specific device without having to create an Alcatel-Lucent Device group per AP.
- The name of any **AP Override** should be the same as the name of the device to which it applies. This establishes the basis of all linking to that device.
- Once you have created an **AP Override** for a device in a group, you specify the **WLANs** to be included and excluded.
- For additional information about how to configure and use AP Overrides, refer to these topics:
  - "AP Overrides Guidelines" on page 37
  - "Configuring or Editing AP Overrides" on page 37

## WLANs Section

Access WLANs with **Device Setup > Alcatel-Lucent Configuration > WLANs**, illustrated in Figure 4.

**Figure 4** ***Device Setup > Alcatel-Lucent Configuration > WLANs*** *Navigation*




The following concepts govern the use of WLANs in Alcatel-Lucent Configuration:

- WLANs are the same as virtual AP configuration profiles.
- WLAN profiles contain several diverse settings to include SSIDs, referenced **Alcatel-Lucent Device Groups**, **Traffic Management** profiles, and device **Folders**.

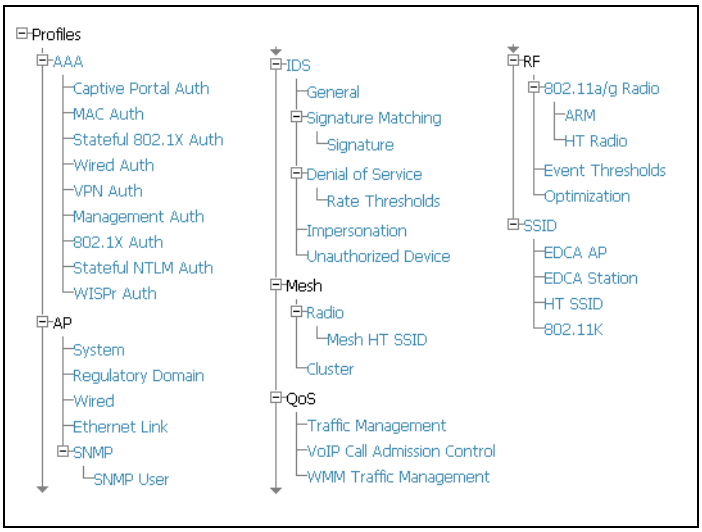
This document describes WLAN configuration in the following section and chapter:

- "Setting Up Initial Alcatel-Lucent Configuration" on page 20
- "General WLAN Procedures and Guidelines" on page 33

## Profiles Section

Profiles provide a way to organize and deploy groups of configurations for Alcatel-Lucent Device Groups, WLANs, and other profiles. Profiles are assigned to folders; this establishes visibility to Alcatel-Lucent Device Groups and WLAN settings. Access **Profiles** with **Device Setup > Alcatel-Lucent Configuration > Profiles**, illustrated in Figure 5.

**Figure 5** ***Device Setup > Alcatel-Lucent Configuration > Profiles*** *Navigation*



Profiles are organized by type in Alcatel-Lucent Configuration. Custom-named profiles do not appear in the navigation pane as do custom-named Alcatel-Lucent Device Groups, WLANs, and AP Overrides.

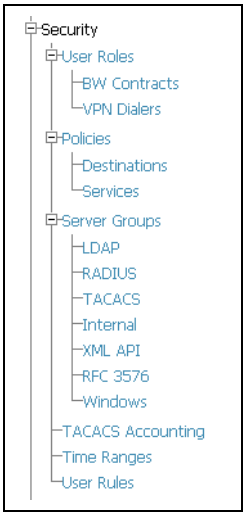
For additional information about profile procedures and guidelines, refer to the following sections in this document:

- “Setting Up Initial Alcatel-Lucent Configuration” on page 20
- “General Profiles Guidelines” on page 35

## Security Section

The **Security** section displays, adds, edits, or deletes security profiles in multiple categories, to include user roles, policies, rules, and servers such as RADIUS, TACACS+, and LDAP servers. Navigate to Security with the **Device Setup > Alcatel-Lucent Configuration > Security** path, illustrated in Figure 6.

**Figure 6** ***Device Setup > Alcatel-Lucent Configuration > Security*** *Navigation*



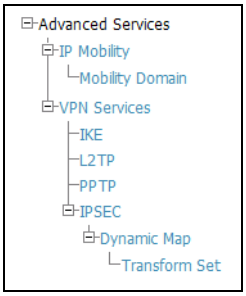

The following general guidelines apply to **Security** profiles in Alcatel-Lucent Configuration:

- Roles can have multiple policies; each policy can have numerous roles.
- Server groups are comprised of servers and rules. Security rules apply in Alcatel-Lucent Configuration in the same way as deployed in AOS.

## Advanced Services Section

Navigate to Advanced Services with the **Device Setup > Alcatel-Lucent Configuration > Advanced Services** path. The **Advanced Services** section includes IP Mobility and VPN Services. Figure 7 illustrates this navigation and the components.

**Figure 7** ***Device Setup > Alcatel-Lucent Configuration > Advanced Services*** *Navigation*

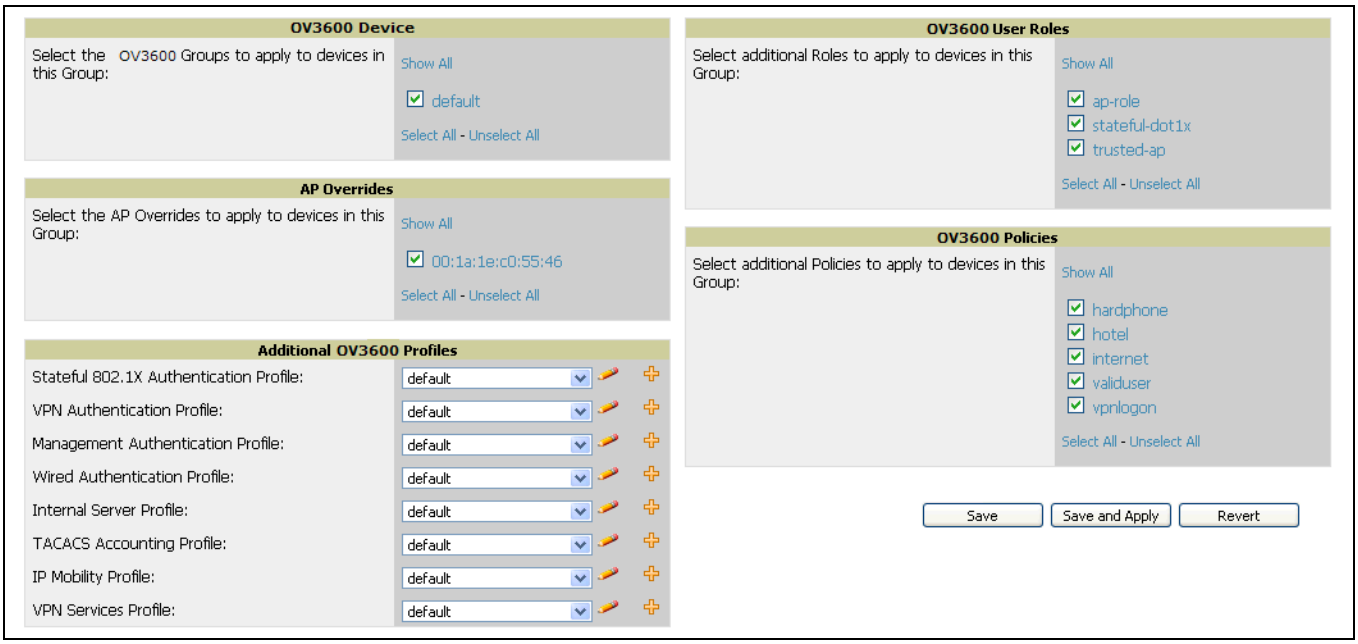


## Groups > Alcatel-Lucent Config Page

This focused submenu page displays and edits all configured Alcatel-Lucent Device groups, with the following factors:

- Alcatel-Lucent Device Groups must be defined from the **Device Setup > Alcatel-Lucent Configuration** page before they are visible on the **Groups > Alcatel-Lucent Config** page.
- Use this page to select the Alcatel-Lucent Device Groups that you push to switches.
- Use this page to associate a standard device group to one or more Alcatel-Lucent Device Groups.
- From this page, you can select other profiles that are defined on the switch, like an internal server.

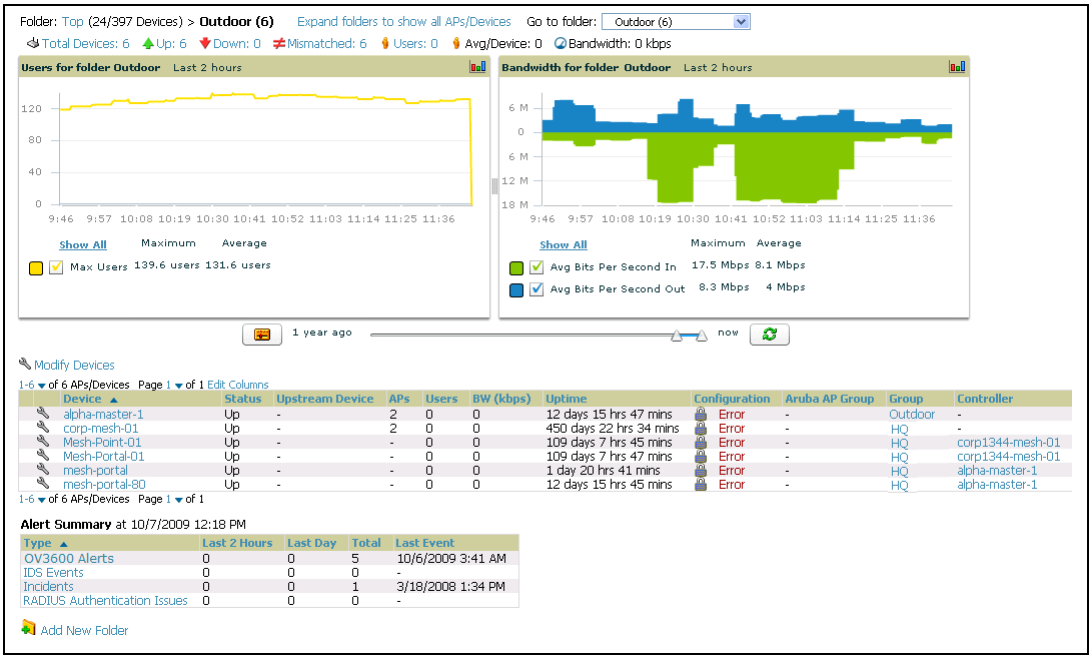
**Figure 8** ***Groups > Alcatel-Lucent Config*** *Page Illustration*




## APs/Devices > List Page

This page supports devices in all of OV3600. This page supports switch reboot, switch re-provisioning, and changing Alcatel-Lucent AP groups. Select **Modify Devices** to configure settings.

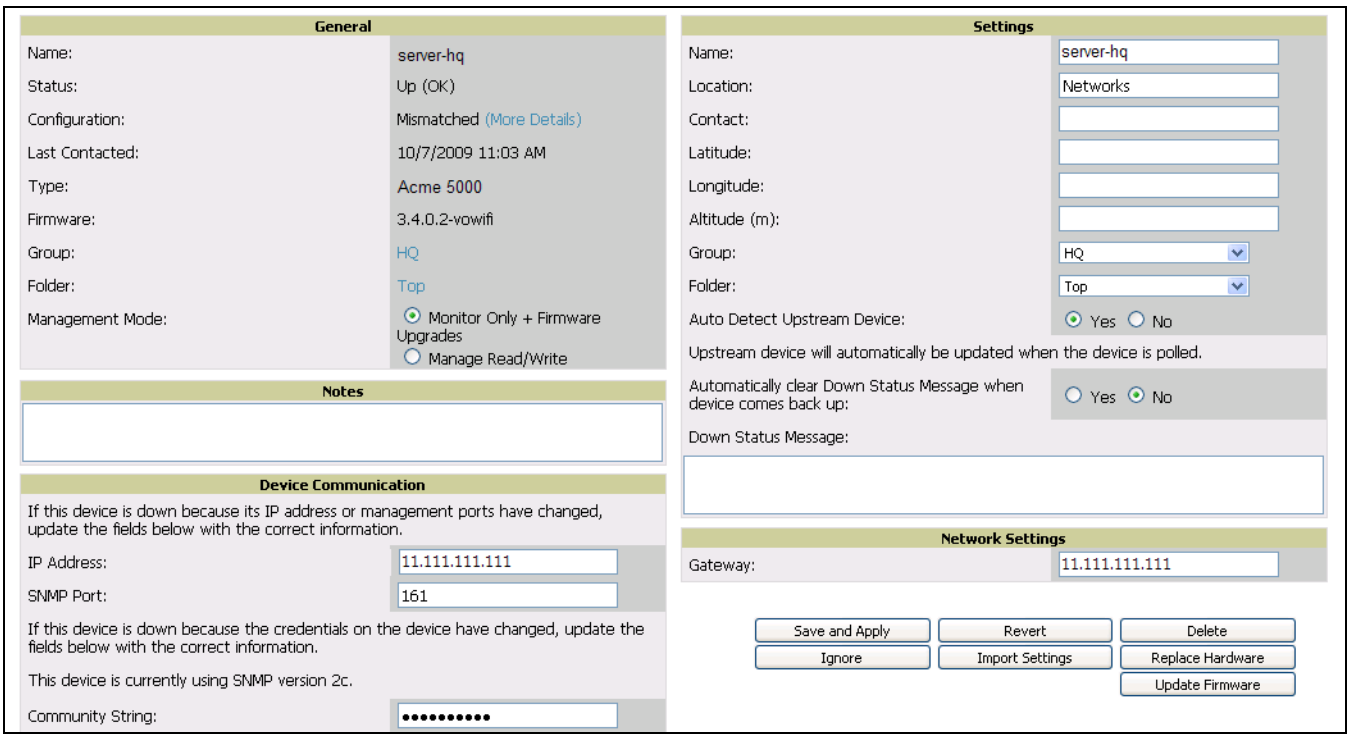
**Figure 9** ***APs/Devices List*** *Page Illustration (Partial Display)*




## APs/Devices > Manage Page

This page configures device-level settings, including **Manage** mode that enables pushing configurations to switches. For additional information, refer to "Pushing Device Configurations to Switches" on page 36.

**Figure 10** ***APs/Devices > Manage*** *Page Illustration (Partial Display)*




## APs/Devices > Monitor Page

Used in conjunction with the **Manage** page, the **Monitor** page enables review of device-level settings. This page is large and often contains a great amount of information, to include the following sections:

- **Status** information

- **User** and **Bandwidth** flash graphs
- **CPU Utilization** and **Memory Utilization** flash graphs
- **APs Managed by this Switch** (when viewing a switch)
- **Alert Summary**
- **Recent Events**
- **Audit Log**

For additional information, refer to "Pushing Device Configurations to Switches" on page 36.

### Groups > Basic Page

The **Groups > Basic** page deploys the following aspects of Alcatel-Lucent Configuration:

- This page contains a new **Alcatel-Lucent GUI Config** field. Use this page and field to make the **Device Setup > Alcatel-Lucent Config** page visible. This page is enabled by default in OV3600.
- Use this page to control which device settings appear on the **Groups** pages.
- If you are using Alcatel-Lucent firmware prior to version 3.0, you should disable Alcatel-Lucent GUI configuration from the **Groups > Basic** page and use template-based configuration.

Refer to Figure 13 for an illustration of this page.

## Additional Concepts and Components of Alcatel-Lucent Configuration

Alcatel-Lucent Configuration emphasizes the following components and network management concepts:


- Global Configuration and Scope
- Embedded Profile Setup in Alcatel-Lucent Configuration
- Save, Save and Apply, and Revert Buttons
- Folders, Users, and Visibility
- Additional Concepts and Benefits


### Global Configuration and Scope

Alcatel-Lucent Configuration supports AOS-W as follows:

- OV3600 supports global configuration from both a master-local switch deployment and an all-master switch deployment:
  - In a master-local switch deployment, AOS-W is the agent that pushes global configurations from master switches to local switches. OV3600 supports this AOS-W functionality.
  - In an all-master-switch scenario, every master switch operates independent of other master switches. OV3600 provides the ability to push configuration to all master switches in this scenario.
- OV3600 Alcatel-Lucent Configuration supports AOS-W profiles, Alcatel-Lucent Device Profiles, Servers, and User Roles.

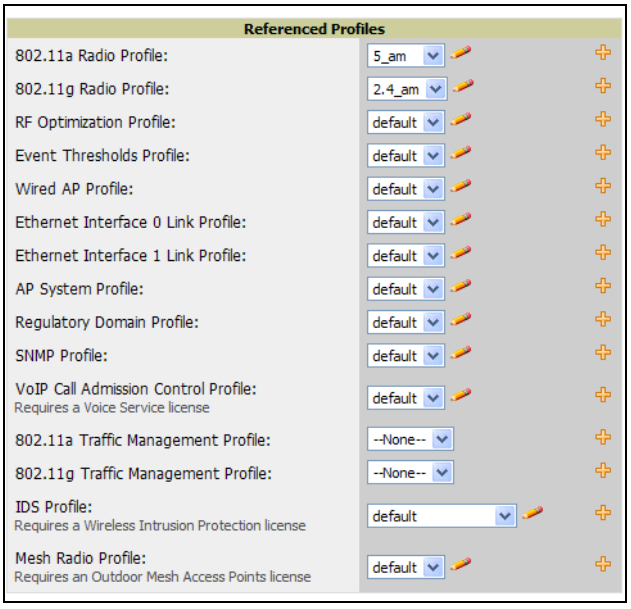
For additional information about these and additional functions, refer to "General Switch Procedures and Guidelines" on page 36.

### Embedded Profile Setup in Alcatel-Lucent Configuration

OV3600 allows you to add or reconfigure many configuration profiles while guiding you through a larger configuration sequence for an Alcatel-Lucent Device Group or WLAN. Consider the following example:

- When you create a new Alcatel-Lucent Device Group from the **Device Setup > Alcatel-Lucent Configuration** page, the **Referenced Profile** section appears as shown in Figure 11:

**Figure 11** *Embedded Profile Configuration for an Alcatel-Lucent Device Group*




- Click the **Add** icon (the plus symbol) at right to add a referenced profile. Once you **Save** or **Save and Apply** that profile, OV3600 automatically returns you to the original Alcatel-Lucent Device Group configuration page.
- This embedded configuration is also supported on the **Additional Alcatel-Lucent Profiles** section of the **Groups > Alcatel-Lucent Config** page.

## Save, Save and Apply, and Revert Buttons

Several **Add** or **Detail** pages in Alcatel-Lucent Configuration include the **Save**, **Save and Apply**, and **Revert** buttons. These buttons function as follows:

- **Save**—This button saves a configuration but does not apply it, allowing you to return to complete or apply the configuration at a later time. If you use this button, you may see the following alert on other Alcatel-Lucent Configuration pages. You can apply the configuration when all changes are complete at a later time.

**Figure 12** *Unapplied **Alcatel-Lucent Configuration** Changes Message*

Note: You have unapplied device configuration changes. You must click 'Save and Apply' to make them take effect.

- **Save and Apply** —This button saves and applies the configuration with reference to Manage and Monitor modes. For example, you must click **Save and Apply** for a configuration profile to propagate to all devices immediately if the switch is in **Manage** mode. If you have devices in **Monitor** mode, OV3600 compares the current device configuration with the new desired configuration. For additional information and instructions about using **Manage** and **Monitor** modes, refer to "Pushing Device Configurations to Switches" on page 36.
- **Revert**—This button cancels out of a new configuration or reverts back to the last saved configuration.

## Folders, Users, and Visibility

Access and edit folders and visibility using the **Folder** column on the **Groups > Alcatel-Lucent Config** page. Profiles and Alcatel-Lucent Device Groups are assigned to folders. Folders allow you to set the visibility for switch information, and to set read/write privileges as required.

- As one example, it may be necessary to provide OV3600 users with RF radio parameters while restricting access to SSID profiles.

## Additional Concepts and Benefits

### Scheduling Configuration Changes

You can schedule deployment of Alcatel-Lucent Configuration to minimize impact on network performance. For example, configuration changes can be accumulated over time by using **Save and Apply** for devices in **Monitor** mode, then pushing all configuration changes at one time by putting devices in **Manage** mode. Refer to "Pushing Device Configurations to Switches" on page 36.

OV3600 pushes configuration settings that are defined in the GUI to the Alcatel-Lucent WLAN switches as a set of CLI commands using Secure Shell (SSH). No switch reboot is required.

### Auditing and Reviewing Configurations

OV3600 supports auditing or reviewing in these ways.

1. You can review the AOS-W running configuration file. This is configuration information that OV3600 reads from the device. In template-based configuration, you can review the running configuration file when working on a related template.
2. You can use the **APs/Devices > Audit** page for device-specific auditing.
3. Once you audit your switch, you can click **Import** from the **APs/Devices > Audit** page to reverse all of the profiles on the switch.

### Licensing and Dependencies in Alcatel-Lucent Configuration

You can review your current licensing status with the **Licensing** link on the **APs/Devices > Monitor** page.

OV3600 requires that you have PEF always installed on all Alcatel-Lucent WLAN switches. If you push a policy to a switch without PEF, a **Good** configuration will not result, and the switch will show as **Mismatched** on OV3600 pages that reflect device configuration status.

Alcatel-Lucent Configuration includes several settings or functions that are dependent on special licenses. The user interface conveys that a special license is required for any such setting, function, or profile. OV3600 does not push such configurations when a license related to those configurations is unavailable.

The following licenses are required for additional functions, profiles, or settings in Alcatel-Lucent Configuration:

- External Services Interface (ESI)
- Indoor Mesh Access Points
- Ortronics Access Points
- Outdoor Mesh Access Points
- Policy Enforcement Firewall
- Remote Access Points
- Voice Service Module
- VPN Server Module
- Wireless Intrusion Protection Module
- xSec Module

# Setting Up Initial Alcatel-Lucent Configuration

This section describes how to deploy an initial setup of Alcatel-Lucent Configuration in OV3600 6.4 or later versions.

### Prerequisites

- Complete the OV3600 6.4 upgrade from a prior OV3600 version. Refer to "Related Documents" on page 5 for installation or upgrade documents. Upon upgrade to OV3600 Version 6.4 or later, Alcatel-Lucent

Configuration is enabled by default in groups with devices in monitor-only mode and AOS-W firmware of 3.3.2.10 or greater.

- Back up your AOS-W switch configuration file. Information about backing OV3600 is available in the *OV3600 User Guide* in the "Performing Daily Operations in OV3600" chapter.

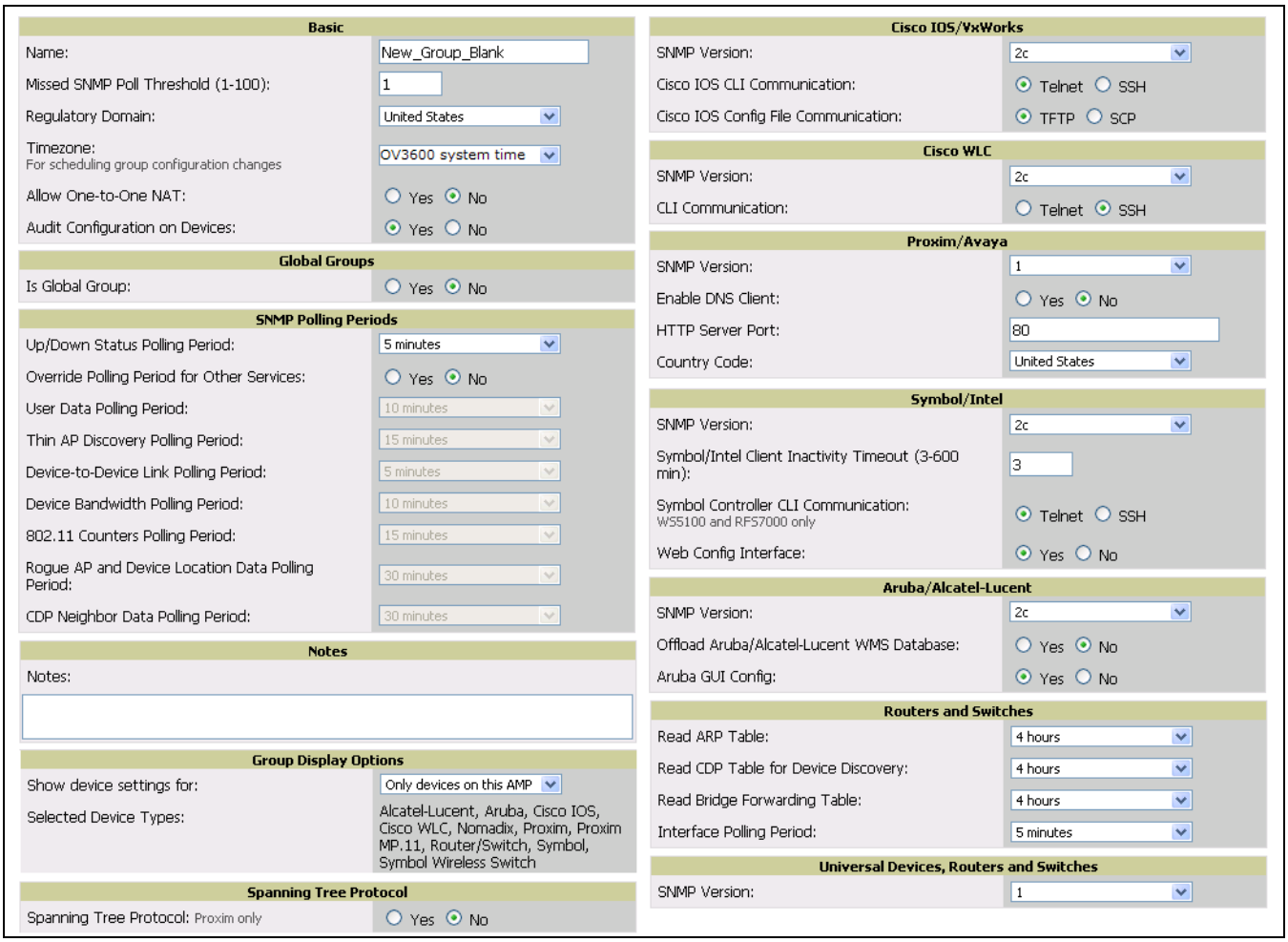
## Procedure

Perform the following steps to deploy Alcatel-Lucent Configuration when at least one Alcatel-Lucent Device Group currently exists on at least one Alcatel-Lucent switch on the network:

1. On the **Groups > Basic** page, enable device preferences for Alcatel-Lucent devices. Figure 13 illustrates this page.

   This configuration defines optional group display options. This step is not critical to setup, and default settings will support groups appropriate for Alcatel-Lucent Configuration. One important setting on this page is the **Alcatel-Lucent GUI Config** option. Ensure that setting is **Yes**, which is the default setting.

**Figure 13** ***Groups > Basic*** *Page Illustration (Partial Display)*




2. Authorize Alcatel-Lucent WLAN switches into the OV3600 Group.

CAUTION

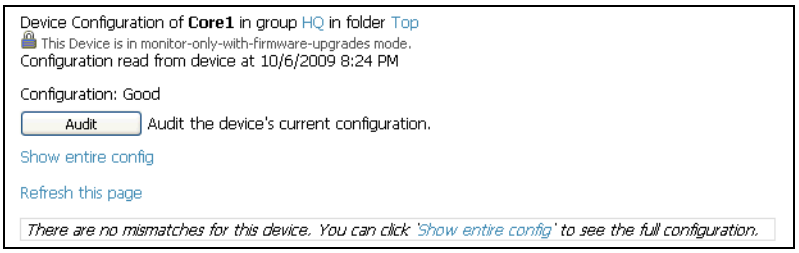
**When authorizing the first switch onto a group, you must add the device in monitor-only mode.** Otherwise, OV3600 removes the configuration of the switch before you have a chance to import the configuration, and this would remove critical network configuration and status.

NOTE

Alcatel-Lucent Configuration is enabled by default in OV3600.

3. Navigate to the **AP/s/Devices > Audit** page for the first switch to prepare for importing an existing Alcatel-Lucent switch configuration file. Figure 14 illustrates this page when all configurations are current. Much additional information is available if the device is mismatched.

**Figure 14** ***APs/Devices > Audit*** *Page Illustration*




4. Navigate to the **APs/Devices > Manage** page for this device. Import the Alcatel-Lucent WLAN switch settings from an Alcatel-Lucent WLAN switch that has already been configured. Click **Import** and OV3600 advises you with a confirmation page.

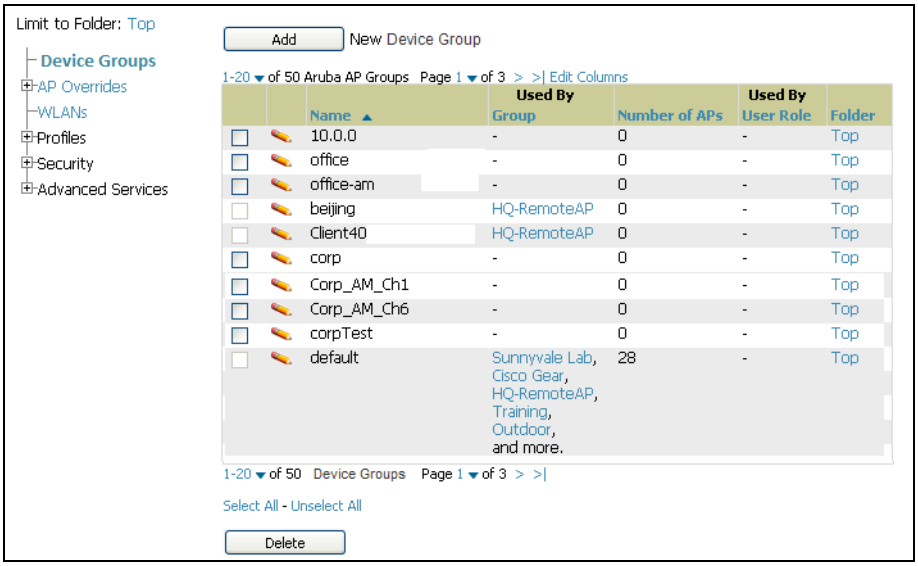
   Importing this configuration creates all the Profiles and Alcatel-Lucent Device Groups on the **Device Setup > Alcatel-Lucent Configuration** page. This action also adds and selects the Alcatel-Lucent Device Groups that appear on the **Groups > Alcatel-Lucent Config** page.

   The folder for all the Profiles and Alcatel-Lucent Device Groups is set to the top folder of the OV3600 user who imports the configuration. This folder is **Top** in the case of managing administrators with read/write privileges.

5. After configuration file import is complete, navigate to the **Device Setup > Alcatel-Lucent Configuration** page.
   - This page displays a list of APs authorized on the OV3600 that are using the Alcatel-Lucent Device Group.
   - The **User Role** is the OV3600 User Role used in firewall settings.
   - The **Folder** column cites the visibility level to devices in each Alcatel-Lucent Device Group. For additional information, refer to "Visibility in Alcatel-Lucent Configuration" on page 41.

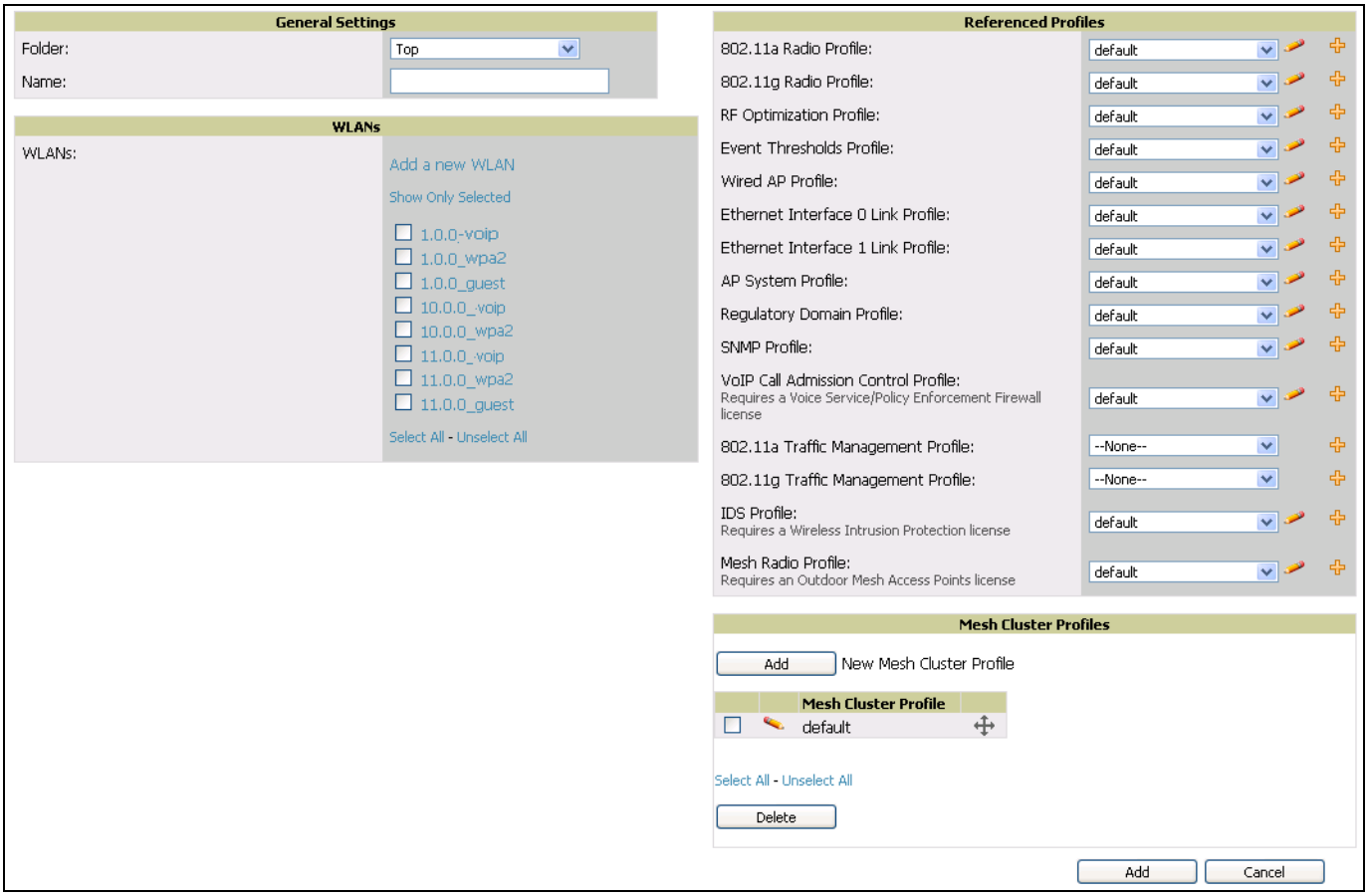
6. Add or modify **Alcatel-Lucent Device Groups** as required.
   a. Navigate to the **Device Setup > Alcatel-Lucent Configuration > Alcatel-Lucent Device Groups** page, illustrated in Figure 15.

**Figure 15** ***Device Setup > Alcatel-Lucent Configuration > Alcatel-Lucent Device Groups*** *Page*




a. Click **Add** from the **Alcatel-Lucent Device Groups** page to create a new Alcatel-Lucent Device Group. To edit an Alcatel-Lucent Device Group, click the pencil icon next to the group. The **Details** page for the Alcatel-Lucent Device Group group appears. This page allows you to select the profiles to apply to the Alcatel-Lucent Device Group, and to select one or more WLANs that support that Alcatel-Lucent Device Group. Figure 16 illustrates this page.

**Figure 16** ***Device Setup > Alcatel-Lucent Configuration > Alcatel-Lucent Device Groups > Add/Edit*** *Details Page*




The following section of this configuration guide provide additional information about configuring Alcatel-Lucent Device Groups:

- "General Alcatel-Lucent Device Groups Procedures and Guidelines" on page 30

7. Add or edit WLANs in Alcatel-Lucent Configuration as required.
   a. Navigate to **Device Setup > Alcatel-Lucent Configuration > WLANs** page. This page can display all WLANs currently configured, or can display only selected WLANs.
   b. Click **Add** to create a new WLAN, or click the pencil icon to edit an existing WLAN.

      You can add or edit WLANs in one of two ways, as follows:

      - **Basic**—This display is essentially the same as the AOS-W Wizard View on the Alcatel-Lucent WLAN switch. This page does not require in-depth knowledge of the profiles that define the Alcatel-Lucent Device Group.
      - **Advanced**—This display allows you to select individual profiles that define the WLAN and associated Alcatel-Lucent Device Group. This page requires in-depth knowledge of all profiles and their respective settings.

      The following section of this configuration guide provide additional information and illustrations for configuring WLANs:

      - "General WLAN Procedures and Guidelines" on page 33
8. Add or edit Alcatel-Lucent Configuration **Profiles** as required.
   a. Navigate to **Device Setup > Alcatel-Lucent Configuration > Profiles** section of the navigation pane.
   b. You must select the type of profile to configure: **AAA**, **AP**, **IDS**, **Mesh**, **QoS**, **RF**, or **SSID**.
   c. Click **Add** from any of these specific profile pages to create a new profile, or click the pencil icon to edit an existing profile.

      Most profiles in OV3600 are similar to the **All Profiles** display in the Alcatel-Lucent WLAN switch WebUI. The primary difference in OV3600 is that **AAA** and **SSID** profiles are not listed under the **Wireless LAN** column as the switch.
   d. Save changes to each element as you proceed through profile and WLAN configuration.

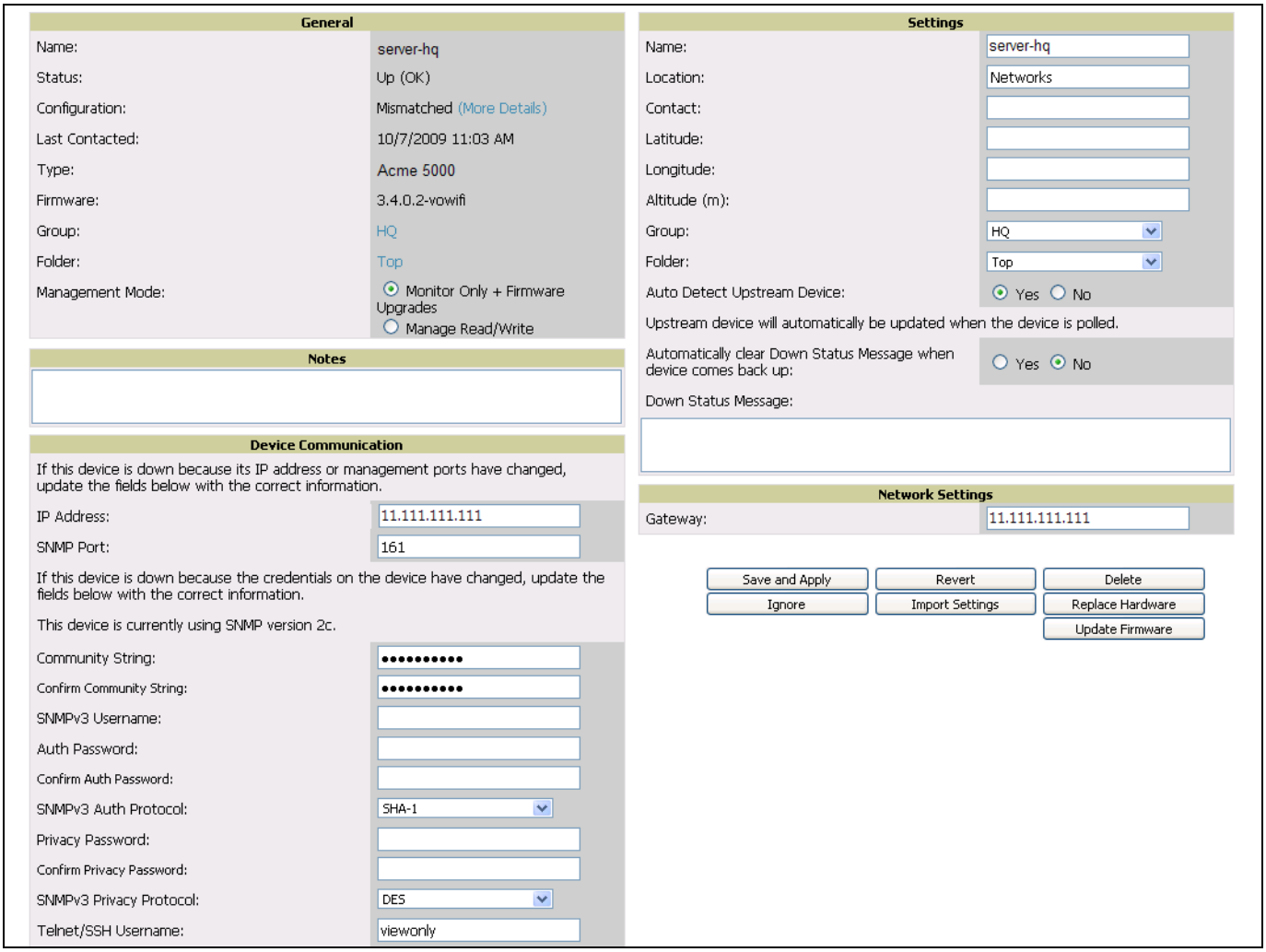
   All other settings supported on Alcatel-Lucent WLAN switches can be defined on the **Device Setup > Alcatel-Lucent Configuration** page. The following section in this document provides additional information about configuring profiles:

   - "General Profiles Guidelines" on page 35
9. Provision multiple Alcatel-Lucent Device Groups on one or more switches by putting the switches into an OV3600 group and configuring that group to use the selected Alcatel-Lucent Device Groups. Configure such Alcatel-Lucent Device Groups settings on the **Group > Alcatel-Lucent Config** page. The following section of this document provides additional information:

   - "General Alcatel-Lucent Device Groups Procedures and Guidelines" on page 30
10. As required, add or edit AP devices. The following section of this document has additional information:

    - "Supporting APs with Alcatel-Lucent Configuration" on page 37
11. Each AP can be assigned to a single Alcatel-Lucent Device Group. Make sure to choose an AP Group that has been configured on that switch using that switch's OV3600 Group. Use the **APs/Devices > List, Modify Devices** field and the **APs/Devices > Manage** page. You can create or edit settings such as the AP name, syslocation, and syscontact on the **APs/Devices > Manage** page. For additional information, refer to "Supporting APs with Alcatel-Lucent Configuration" on page 37.

**Figure 17** ***APs/Devices > Manage*** *Page Illustration (Partial Display)*




12. Navigate to the **APs/Devices > Audit** page for the switch to view mismatched settings. This page provides links to display additional and current configurations. You can display all mismatched devices by navigating to the **APs/Devices > Mismatched** page.

**Figure 18** ***APs/Devices > Audit*** *Page Illustration (Partial Display)*

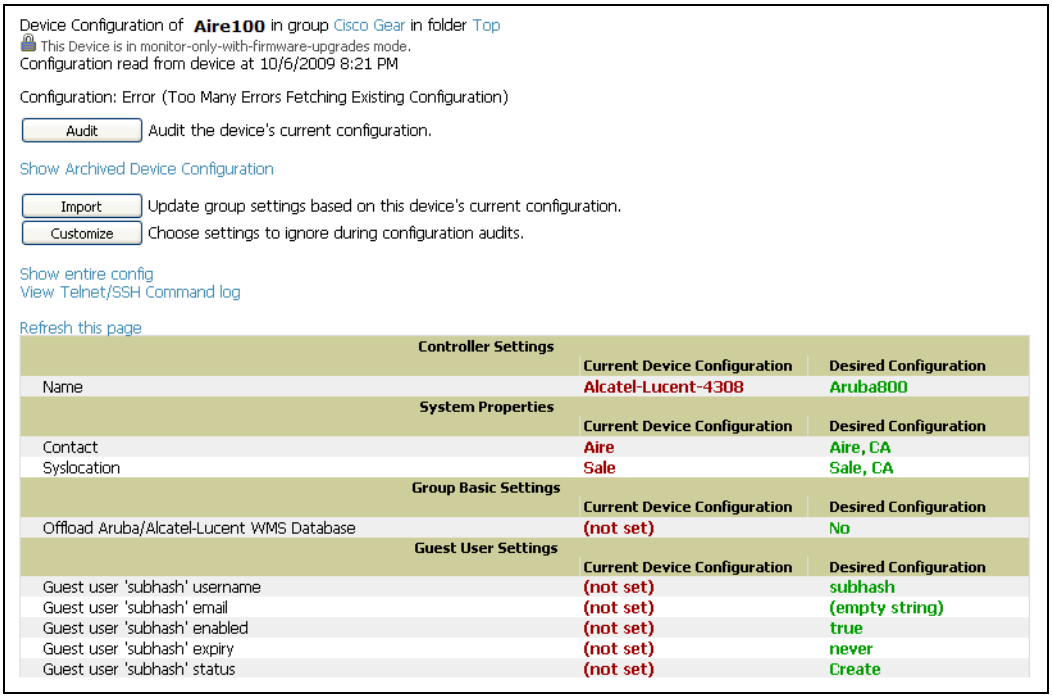
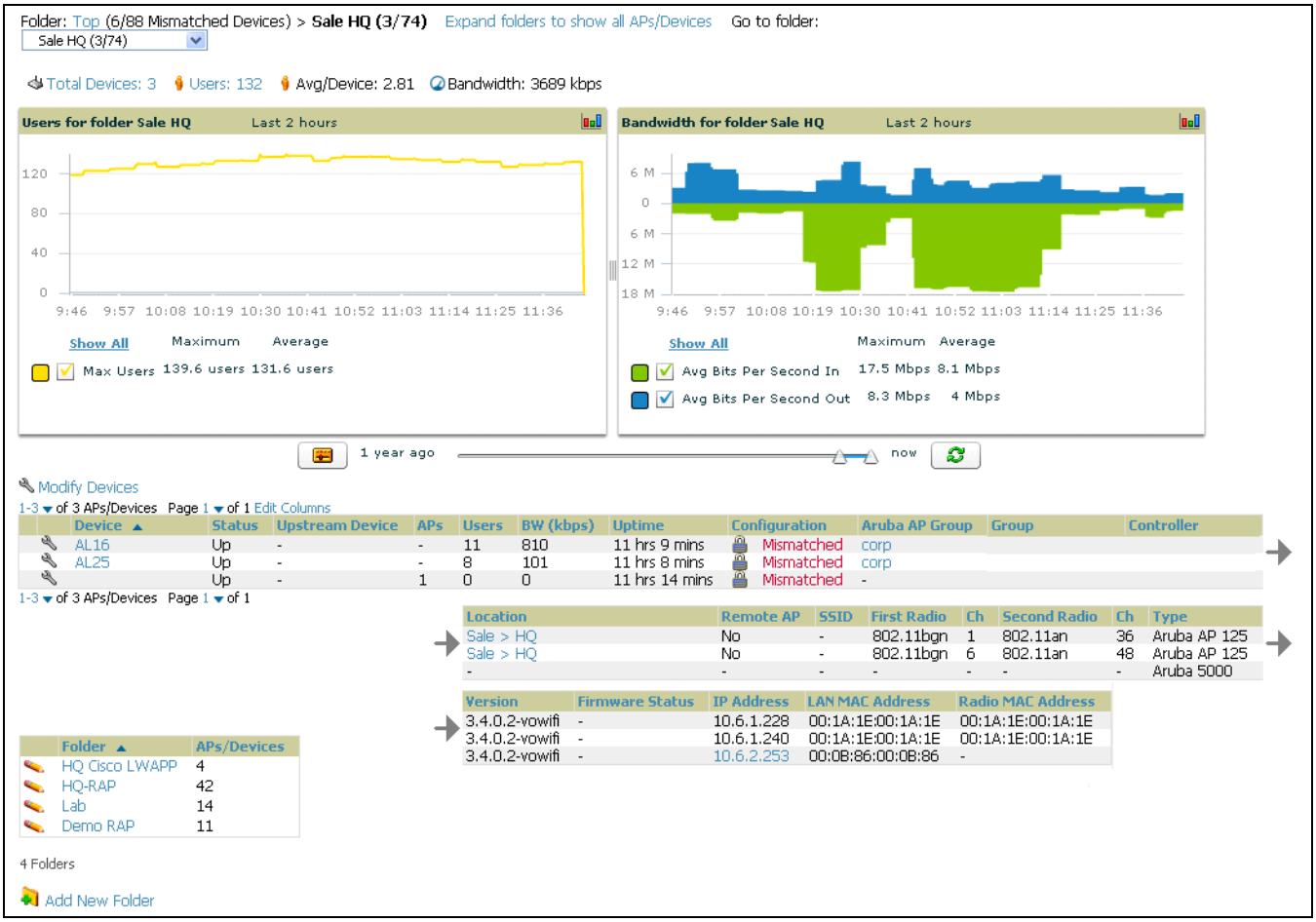



**Figure 19** ***APs/Devices > Mismatched*** *Page Illustration*



## What Next?

After initial AOS-W deployment with the Alcatel-Lucent Configuration feature, you can make many additional configurations or continue with maintenance tasks, such as with the following examples:

- Once Alcatel-Lucent Configuration is deployed in OV3600, you can perform debugging with Telnet/SSH. Review the `telnet_cmds` file in the `/var/log` folder from the command line interface, or access this file from the **System > Status** page. Such configurations are supported on the **Groups > Basic** and **Device Setup > Communications** pages of OV3600. Refer to the *OV3600 User Guide* for additional information.
- To resolve communication issues, review the credentials on the **AP Manage** page.
- Mismatches can occur when importing profiles because OV3600 deletes orphaned profiles, even if following a new import. To display and resolve mismatched devices, refer to "Pushing Device Configurations to Switches" on page 36.
- Use the **Groups > Templates** page to configure Alcatel-Lucent WLAN switches that use 2.x firmware.

## Additional Capabilities of Alcatel-Lucent Configuration

OV3600 supports many additional AOS-W configurations and settings. Refer to these additional resources for more information:

- *AOS-W User Guide*
- *OmniVista3600 Air Manager User Guide*
- *Alcatel-Lucent Best Practices Guide*

# Chapter 2

# Using Alcatel-Lucent Configurations in Daily Operations

## Introduction

This chapter presents the more common tasks or concepts after initial setup of Alcatel-Lucent Configuration is complete, as described in the section "Setting Up Initial Alcatel-Lucent Configuration" on page 20. This chapter emphasizes frequent procedures as follows:

### General Alcatel-Lucent Device Groups Procedures and Guidelines

- Guidelines and Pages for Alcatel-Lucent Device Groups in Alcatel-Lucent Configuration
- Selecting Alcatel-Lucent WLAN Switch Groups
- Configuring Alcatel-Lucent AP Groups
- Retaining Unreferenced Alcatel-Lucent Configuration Profiles

### General WLAN Procedures and Guidelines

- Guidelines and Pages for WLANs in Alcatel-Lucent Configuration
- Configuring or Editing WLANs with Basic View
- Configuring or Editing WLANs with Advanced View

### General Switch Procedures and Guidelines

- Using Master, Standby Master, and Local Switches in Alcatel-lucent Configuration
- Pushing Device Configurations to Switches

### Supporting APs with Alcatel-Lucent Configuration

- AP Overrides Guidelines
- Configuring or Editing AP Overrides
- Changing the Alcatel-Lucent Device Group for an AP Device
- Changing Adaptive Radio Management (ARM) Settings
- Changing SSID and Encryption Settings

### Visibility in Alcatel-Lucent Configuration

- Visibility Overview
- Defining Visibility for Alcatel-Lucent Configuration

### Using OV3600 to Deploy Alcatel-Lucent Devices for the First Time

# General Alcatel-Lucent Device Groups Procedures and Guidelines

## Guidelines and Pages for Alcatel-Lucent Device Groups in Alcatel-Lucent Configuration

The following ***guidelines*** govern the configuration and use of Alcatel-Lucent Device Groups across OV3600:

- Alcatel-Lucent Device Groups function with standard OV3600 groups that contain them. Add Alcatel-Lucent Device Groups to standard OV3600 groups. Additional procedures in this document explain their interoperability.
- APs can belong to a switch's OV3600 group or to an OV3600 group by themselves.
- All configurations of Alcatel-Lucent Device Groups must be pushed to Alcatel-Lucent WLAN switches to become active on the network.
- Additional dynamics between master, standby master, and local switches still apply. In this case, refer to "Using Master, Standby Master, and Local Switches in Alcatel-lucent Configuration" on page 36.

The following ***pages*** in OV3600 govern the configuration and use of Alcatel-Lucent Device Groups or standard device groups across OV3600:

- The **Device Setup > Alcatel-Lucent Configuration** navigation pane displays standard AOS-W components and your custom-configured Alcatel-Lucent Device Groups, WLANs, and AP Overrides.
- You define or modify Alcatel-Lucent Device Groups on the **Device Setup > Alcatel-Lucent Configuration** page. Click **Alcatel-Lucent Device Groups** from the navigation pane.
- You select Alcatel-Lucent Device Groups to associate with OV3600 Groups with the **Groups > Alcatel-lucent Config** page.
- You modify devices in Alcatel-Lucent Device Groups with the **APs/Devices > List** page, clicking **Modify These Devices**. This is the page at which you assign devices to a given group and Alcatel-Lucent Device Group.

## Selecting Alcatel-Lucent WLAN Switch Groups

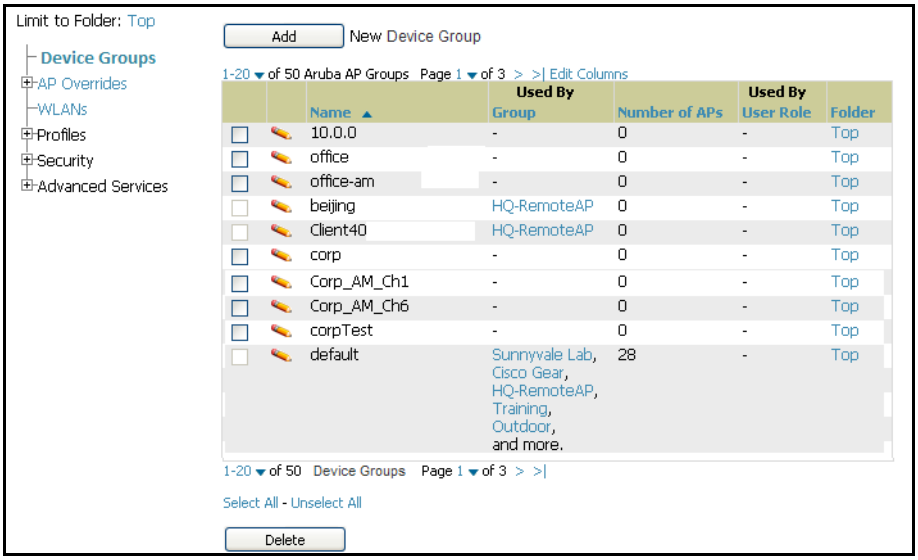
To select Alcatel-Lucent AP Groups, navigate to the **Device Setup > Alcatel-Lucent AP Groups** page. This page is central to defining, viewing, changing and deleting Alcatel-Lucent AP Groups, as well as assigning AP devices to a specific Alcatel-Lucent AP Group.

## Configuring Alcatel-Lucent AP Groups

Perform the following steps to display, add, edit, or delete Alcatel-Lucent AP Groups in **Alcatel-Lucent Configuration**.

1. Browse to the **Device Setup > Alcatel-Lucent Configuration** page, and click the **AP Groups** heading in the navigation pane on the left. The **Groups Summary** page appears and displays all current Alcatel-Lucent Device Groups.

**Figure 20** ***Device Setup > Alcatel-Lucent Configuration > AP Groups*** *Page Illustration*

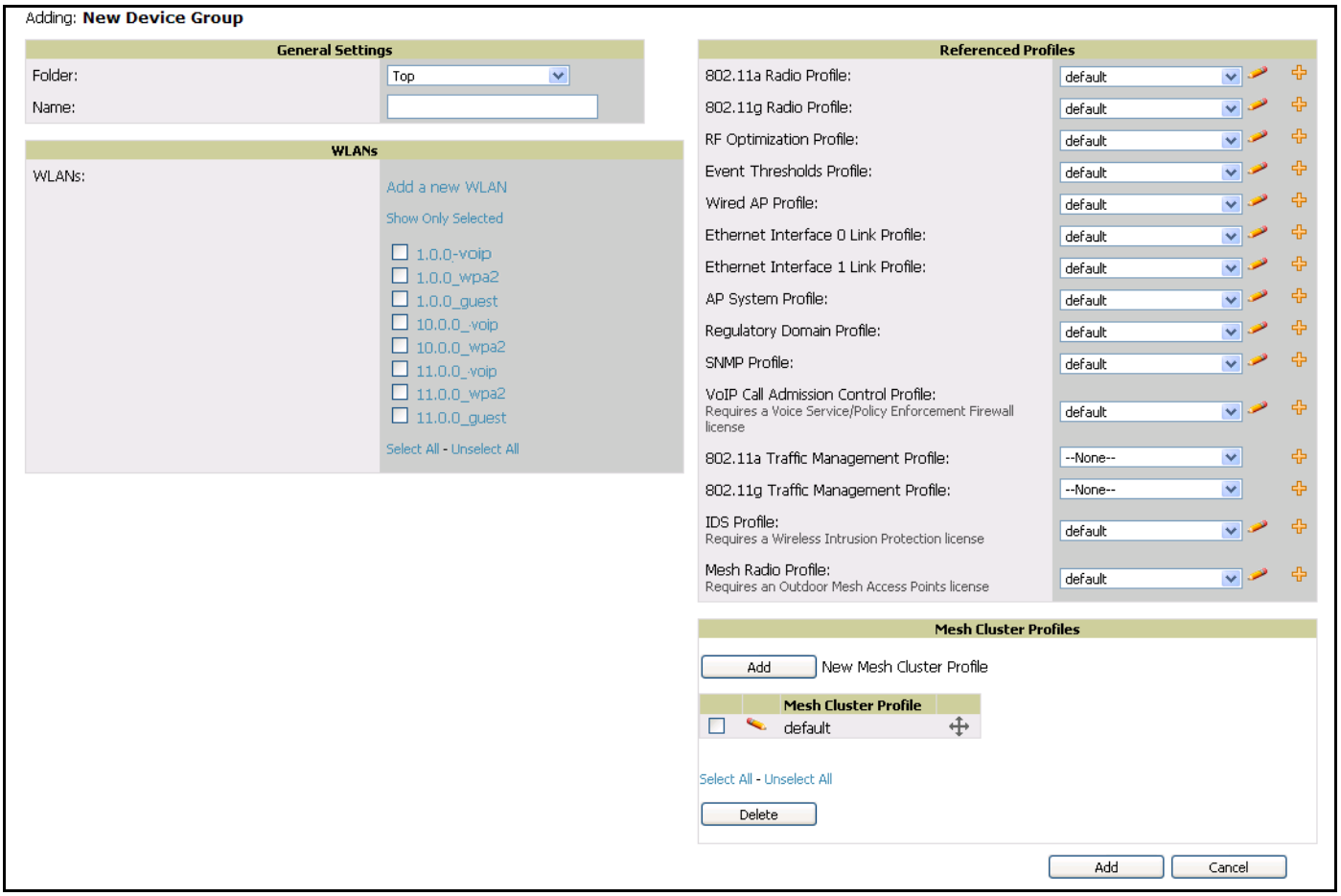



2. To add a new group, click the **Add AP Group** button.

   To edit an existing group, click the **pencil** icon next to the group name.

   The **Group Details** page appears with current or default configurations. Figure 21 illustrates the **Details** page for a new group to be defined.

**Figure 21** ***Device Setup > Alcatel-Lucent Configuration > Add/Edit Group Details*** *Page Illustration*




3. Click **Add** or **Save** to finish creating or editing the Alcatel-Lucent Device Group. Click **Cancel** to back out of this screen and to cancel the AP Group configurations.

4. New AP groups appear in the **AP Groups** section of the Alcatel-Lucent Configuration navigation pane, and clicking the group name takes you to the **Details** page for that group.
5. When this and other procedures are completed, push the configuration to the Alcatel-Lucent WLAN switches by clicking **Save and Apply**. The principles of Monitor and Manage mode still apply. For additional information, refer to "Pushing Device Configurations to Switches" on page 36.

## What Next?

Once Alcatel-Lucent device groups are defined, ensure that all desired WLANs are referenced in Alcatel-Lucent Device Groups, as required. Repeat the above procedure to revise WLANs as required. You can add or edit AP devices in Alcatel-Lucent Device Groups, and you can configure AP Override settings that allow for custom AP configuration within the larger group in which it operates.

### Retaining Unreferenced Alcatel-Lucent Configuration Profiles

OV3600 supports the ability to retain Alcatel-Lucent Configuration profiles even when they are not used. Perform these steps to define the retention of unused Alcatel-Lucent Configuration profiles.

1. Navigate to the OV3600 **Setup > General** page.
2. Locate the **Configuration Options** section and adjust settings as required. The settings in this field configure whether certain changes can be pushed to devices in monitor-only mode.
3. In the **Configuration Options** section, adjust the setting for the **Keep Unreferenced Alcatel-Lucent Configuration** field as required.

   This setting allows OV3600 to retain unused AOS-W configuration profiles pertaining to Alcatel-Lucent Configuration. With Alcatel-Lucent Configuration, you can define profiles on an Alcatel-lucent switch but it is not necessary to reference them from a virtual AP configuration or other component of Alcatel-Lucent Configuration. Normally OV3600 deletes unreferenced profiles, but this setting retains them when enabled with **Yes**.
4. Click **Save** to retain this setting.

## General WLAN Procedures and Guidelines

### Guidelines and Pages for WLANs in Alcatel-Lucent Configuration

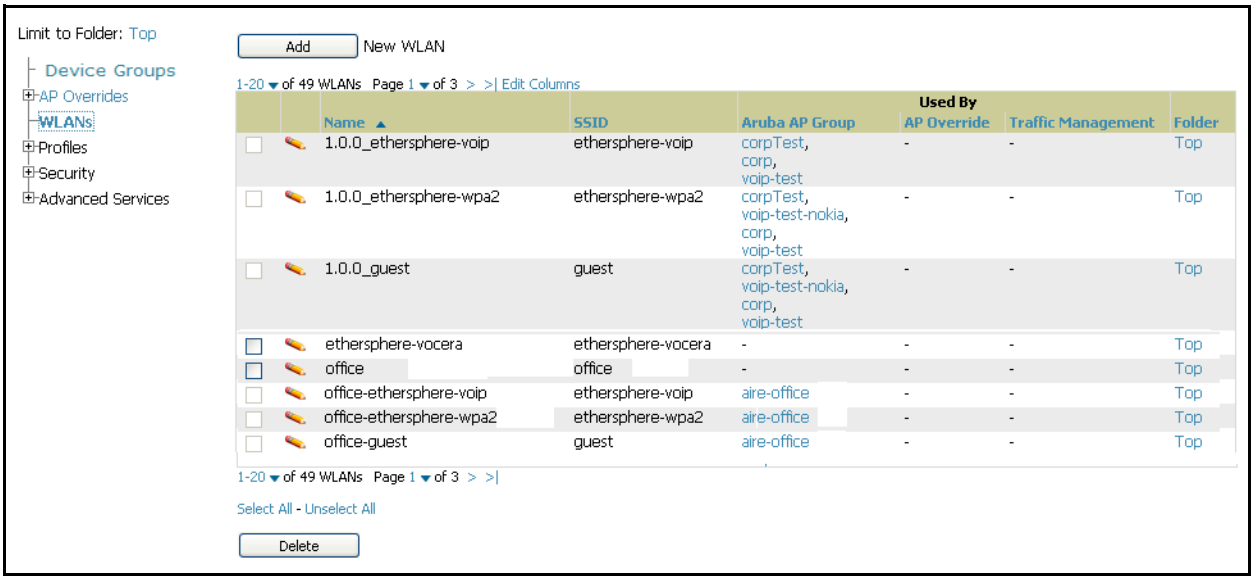
- The **Device Setup > Alcatel-Lucent Configuration** navigation pane displays custom-configured WLANs and Alcatel-Lucent Device Groups. You define or modify WLANs on the **Device Setup > Alcatel-Lucent Configuration** page. Click **WLANs** from the navigation pane.
- You can create or edit any profile in an WLAN as you define or modify that WLAN. If you digress to profile setup from a different page, OV3600 returns you to your place on the **WLAN** setup page once you are done with profile setup.
- All configurations must be pushed to Alcatel-Lucent WLAN switches to become active on the network.

### Configuring or Editing WLANs with Basic View

Perform the following steps to create or configure a basic WLAN in Alcatel-Lucent Configuration.

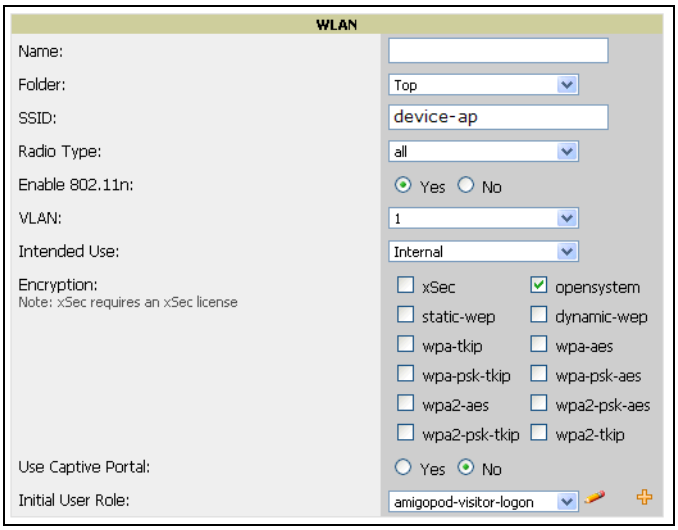
1. Navigate to the **Alcatel-Lucent Configuration > WLANs** page. This page displays currently configured WLANs. Figure 22 illustrates this page.

**Figure 22** ***Device Setup > Alcatel-lucent Configuration > WLANs*** *Page Illustration*



2. To add a new WLAN, click the **Add WLAN** button. To edit an existing WLAN, click the **pencil** icon next to the WLAN name. Select **Basic** to define or modify the settings. Otherwise, refer to the "Configuring or Editing WLANs with Advanced View" on page 34 for additional information. Figure 26 illustrates the **Basic** view.

**Figure 23** ***Device Setup > WLANs > Add > Basic*** *Page Illustration*

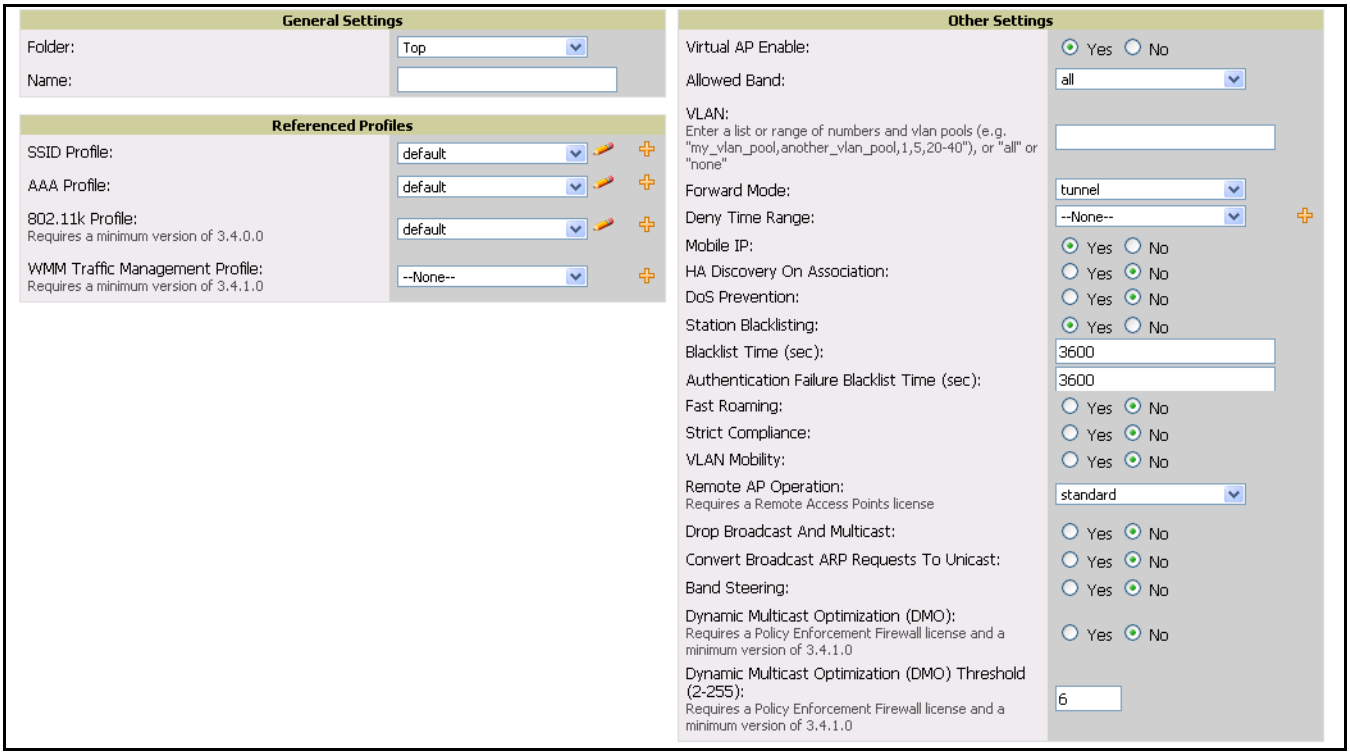



3. Click **Add** or **Save**. The added or edited WLAN appears on the **WLANs** page. You can now use this WLAN with one or more Alcatel-Lucent Device Groups.
4. Repeat this procedure or continue to additional procedures to complete WLAN, Profile, Alcatel-Lucent Device Group or other configurations.
5. Push the newly added or edited WLAN to the desired Alcatel-Lucent WLAN switches. Refer to "Pushing Device Configurations to Switches" on page 36.

## Configuring or Editing WLANs with Advanced View

1. Navigate to the **Alcatel-Lucent Configuration > WLANs** page. This page displays currently configured WLANs. Figure 22 illustrates this page.
2. To add a new WLAN, click the **Add WLAN** button. To edit an existing WLAN, click the **pencil** icon next to the WLAN name. Select **Advanced** to define or modify the settings that pertain to advanced WLAN configuration. Figure 24 illustrates the **Advanced** view.

**Figure 24** ***Device Setup > Alcatel-lucent Configuration > WLANs > Add > Advanced*** *Page Illustration*




3. Click **Add** or **Save**. The added or edited WLAN appears on the **WLANs** page. You can now use this WLAN with one or more Alcatel-Lucent Device Groups.
4. Repeat this procedure or continue to additional procedures to complete WLAN, Profile, Alcatel-Lucent Device Group or other configurations.
5. Push the newly added or edited WLAN to the desired Alcatel-Lucent WLAN switches. For additional information, refer to "Pushing Device Configurations to Switches" on page 36.

## General Profiles Guidelines

AOS-W elements can be added or edited after an AOS-W configuration file is imported to OV3600 and pushed to switches with the steps described in "Setting Up Initial Alcatel-Lucent Configuration" on page 20.

Profiles in Alcatel-Lucent Configuration entail the following concepts or dynamics:

- Profiles define nearly all parameters for Alcatel-Lucent Device Groups and WLANs, and Alcatel-Lucent Configuration supports many diverse profile types.
- Some profiles provide the configurations for additional profiles that reference them. When this is the case, this document describes the interrelationship of such profiles to each other.
- Profiles can be configured in standalone fashion using the procedures in this chapter, then applied elsewhere as desired. Otherwise, you can define referenced profiles as you progress through Alcatel-Lucent Device Group or WLAN setup. In the latter case, OV3600 takes you to profile setup on separate pages, then returns you to your place in Alcatel-Lucent Device Group or WLAN setup.

# General Switch Procedures and Guidelines

## Using Master, Standby Master, and Local Switches in Alcatel-lucent Configuration

OV3600 implements the following general approaches in relation to switches.

- ***Master Switch***—This switch maintains and pushes all global configurations. OV3600 pushes configurations only to a master switch.
- ***Standby Switch***—The master switch synchronizes with the standby master switch, which remains ready to govern global configurations for all switches should the active master switch fail.
- ***Local Switch***—Master switches push local configurations to local switches. Local switches retain settings such as the interfaces and global VLANs.

OV3600 is aware of differences in what is pushed to master switches and local switches, and automatically pushes all configurations to the appropriate switches. Device provisioning is pushed to the switch to which a device is connected.

You can determine additional details about what is specific to each switch by reviewing information on the **Groups > Alcatel-lucent Config** page, and the **Groups > Monitor** page for any specific AP that lists its master and standby master switch.

## Pushing Device Configurations to Switches

When you add or edit device configurations, you can push device configurations to switches as follows:

- Make device changes on the **Device Setup > Alcatel-Lucent Configuration** page and click **Save and Apply**.
- Make devices changes on the **Groups > Alcatel-lucent Config** page and click **Save and Apply**.

A device must be in **Manage** mode to push configurations in this way.

NOTE

If you click **Save and Apply** when a device is in **Monitor** mode, this initiates a verification process in which OV3600 advises you of the latest mismatches. Mismatches are viewable from the **APs/Devices > Mismatched** page. Additional **Audit** and **Group** pages list mismatched status for devices.

Normally, devices are in **Monitor** mode. It may be advisable in some circumstances to accumulate several configuration changes in **Monitor** mode prior to pushing an entire set of changes to switches. Follow these general steps when implementing configuration changes for devices in **Monitor** mode:

1. Make all device changes using the **Device Setup > Alcatel-Lucent Configuration** page and the **Groups > Alcatel-lucent Config** page. Click **Save and Apply** as you complete device-level changes. This builds an inventory of pending configuration changes that have not been pushed to the switch and APs.
2. Review the entire set of newly mismatched devices on the **APs/Devices > Mismatched** page.
3. For each mismatched device, navigate to the **APs/Devices > Audit** page to audit recent configuration changes as desired.
4. Once all mismatched device configurations are verified to be correct from the **APs/Devices > Audit** page, use the **Modify Devices** link on the **Groups > Monitor** page to place these devices into **Management** mode. This instructs OV3600 to push the device configurations to the switch.
5. As desired, return devices to **Monitor** mode until the next set of configuration changes is ready to push to switches.

# Supporting APs with Alcatel-Lucent Configuration

## AP Overrides Guidelines

The **AP Override** component of Alcatel-Lucent Configuration appears in the navigation pane of the **Device Setup > Alcatel-Lucent Configuration** page. This component operates with the following principles:

- AP devices function within groups that define operational parameters for groups of APs. This is standard across all of OV3600.
- **AP Overrides** allows you to change some parameters of any given AP without having to remove that AP from the configuration group in which it operates.
- The name of any **AP Override** that you create should be the same as the name of the AP device to which it applies. This establishes the basis of all linking to that AP device.
- Once you have created an **AP Override**, you select the **WLANs** in which it applies.
- Once you have created the AP Override, you can go one step further with the **Exclude WLANs** option of **AP Override**, which allows you to exclude certain SSIDs from the **AP override**. For example, if you have a set of WLANs with several SSIDs available, the **Exclude WLANs** option allows you to specify which SSIDs to exclude from the **AP Override**.
- You can also exclude mesh clusters from the **AP Override**.

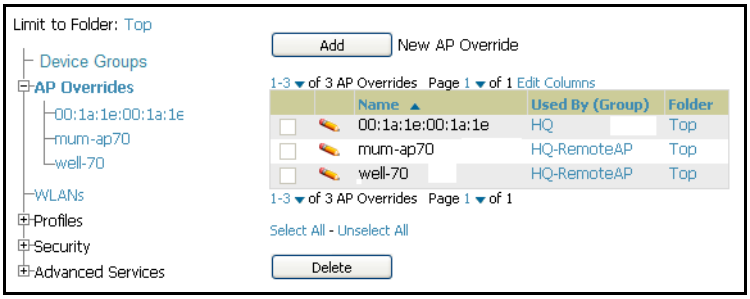
In summary, the **AP Override** feature prevents you from having to create a new AP group for customized APs that otherwise share parameters with other APs in a group. **AP Override** allows you to have less total AP groups than you might otherwise require.

## Configuring or Editing AP Overrides

Perform the following steps to create or edit AP Overrides.

1. Navigate to the **Alcatel-Lucent Configuration > AP Overrides** page. This page displays currently configured AP overrides. Figure 25 illustrates this page.

**Figure 25** ***Device Setup > Alcatel-lucent Configuration > AP Overrides*** *Page Illustration*

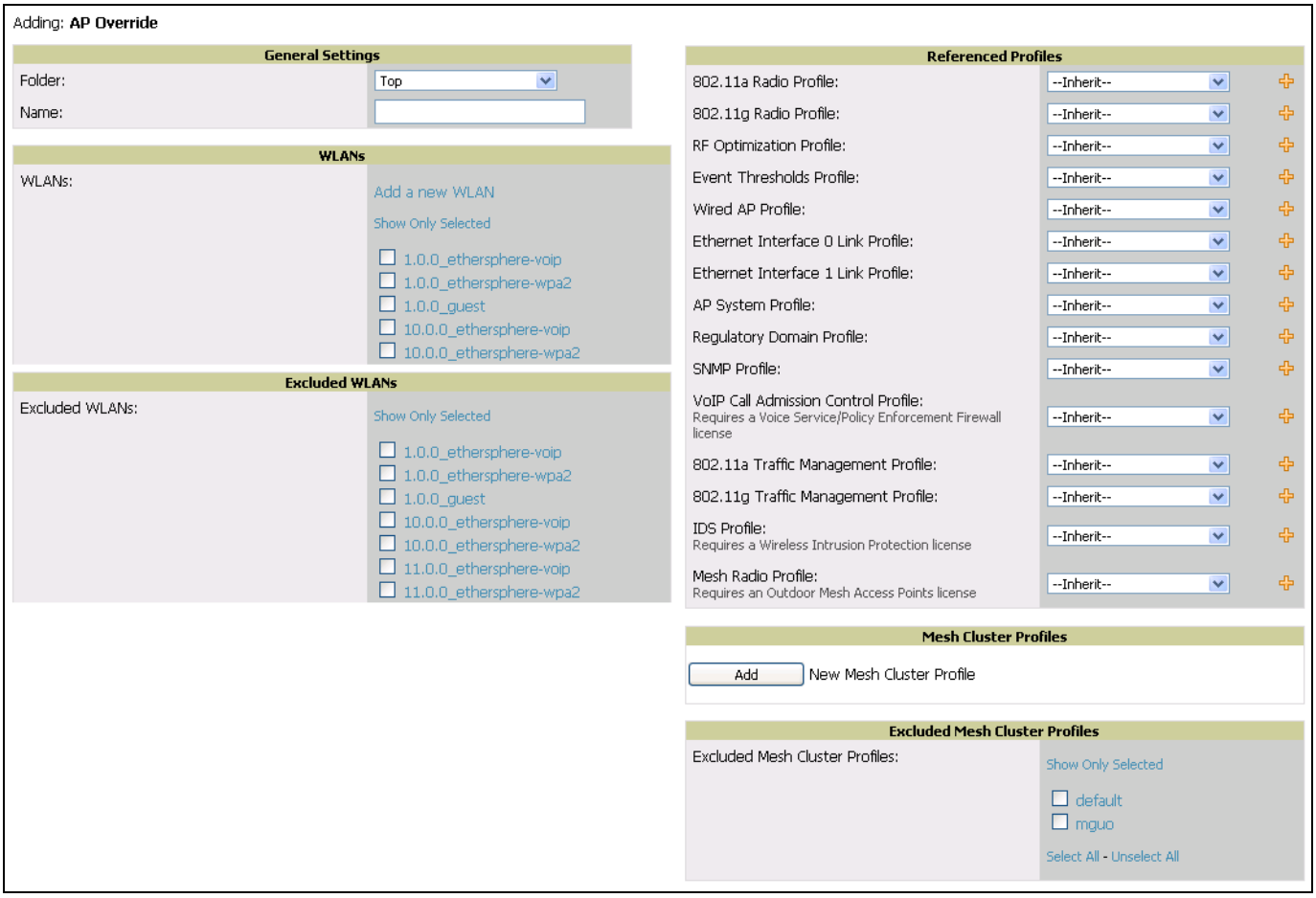



2. To add a new AP Override, click the **Add New AP Override** button.

   To edit an existing AP Override, click the **pencil** icon next to the **AP Override** name.

   The details page appears. Figure 26 illustrates the **AP Overrides** detail view.

**Figure 26** ***AP Overrides Add*** *or* ***Edit*** *Page Illustration (Non-scrolling View)*




3. Click **Add** or **Save**. The added or edited **AP Override** appears on the **AP Overrides** page.
4. Push the newly added or edited AP Override configuration to the desired Alcatel-Lucent WLAN switches. Refer to "Pushing Device Configurations to Switches" on page 36.
5. Repeat this procedure or continue to additional procedures to complete WLAN, Profile, Alcatel-Lucent Device Group or other configurations.

## Changing Adaptive Radio Management (ARM) Settings

You can adjust ARM settings for the radios of a particular Alcatel-Lucent Device Group. To do so, refer to the following topic that describe ARM in relation to Alcatel-Lucent Device groups and device-level radio settings:

- "Configuring Alcatel-Lucent AP Groups" on page 30

## Changing SSID and Encryption Settings

You can adjust SSID and Encryption parameters for devices by adjusting the profiles that define these settings, then applying those profiles to Alcatel-Lucent Device Groups and WLANs that support them. To do so, refer to the following topics that describe relevant steps and configuration pages:

- "Configuring Alcatel-Lucent AP Groups" on page 30
- "Guidelines and Pages for WLANs in Alcatel-Lucent Configuration" on page 33

## Changing the Alcatel-Lucent Device Group for an AP Device

You can change the Alcatel-Lucent Device Group to which an AP device is associated. Perform the following steps to change the Alcatel-Lucent Device Group for an AP device:

1. As required, review the Alcatel-Lucent Device Groups currently configured in OV3600. Navigate to the **Device Setup > Alcatel-Lucent Configuration** page, and click **Alcatel-Lucent Device Groups** from the navigation pane. This page displays and allows editing for all Alcatel-Lucent Device Groups that are currently configured in OV3600.
2. Navigate to the **APs/Devices > List** page to view all devices currently seen by OV3600.
3. If necessary, add the device to OV3600 using the **APs/Devices > New** page.

   To discover additional devices, ensure that the switch is set to perform a device poll period.
4. On the **APs/Devices > List** page, you can specify the **Group** and **Folder** to which a device belongs. Click **Modify Devices** to change more than one device, or click the **Wrench** icon associated with any specific device to make changes. The **APs/Devices > Manage** page appears.
5. In the **Settings** section of the **APs/Devices > Manage** page, select the new Alcatel-Lucent Device Group to assign to the device. Change or adjust any additional settings as desired.
6. Click **Save and Apply** to retain these settings and to propagate them throughout OV3600, or click one of the alternate buttons as follows for an alternative change:
   - Click **Revert** to cancel out of all changes on this page.
   - Click **Delete** to remove this device from OV3600.
   - Click **Ignore** to keep the device in OV3600 but to ignore it.
   - Click **Import Settings** to define device settings from previously created configurations.
   - Click **Replace Hardware** to replace the AP device with a new AP device.
   - Click **Update Firmware** to update the Firmware that operates this device.
7. Push this configuration change to the AP switch that is to support this AP device. For additional information, refer to "Pushing Device Configurations to Switches" on page 36.

## Using OV3600 to Deploy Alcatel-Lucent Devices for the First Time

In addition to migrating Alcatel-lucent access points (APs) from AOS-oriented administration to OV3600 administration, you can use OV3600 to deploy Alcatel-Lucent devices for the first time without separate AOS-W configuration. Be aware of the following dynamics in this scenario:

- OV3600 can manage all wireless network management functions, to include:
  - the first-time provisioning of Alcatel-Lucent devices
  - managing Alcatel-Lucent WLAN switches with OV3600
- In this scenario, when a new Alcatel-Lucent device boots up, OV3600 may discover the AP before you have a chance to configure and launch it through AOS-W configuration on the Alcatel-lucent switch. In this case, the AP appears in OV3600 with a device name based on the MAC address.
- When you provision the AP through the Alcatel-lucent switch and then rename the AP, the new AP name is not updated in OV3600.

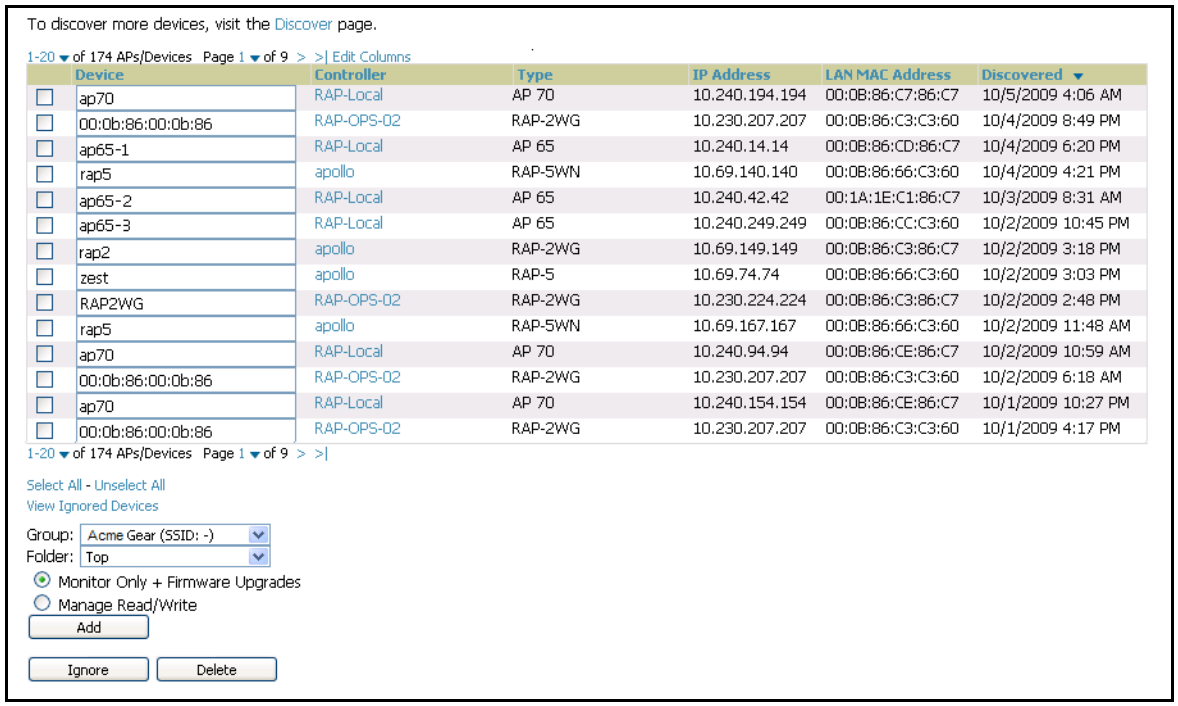
One possible workaround to update an Alcatel-Lucent device name in OV3600 would be as follows, and this is not the most efficient approach:

1. Configure and deploy the AP from AOS-W (separate from OV3600).
2. Delete the AP from OV3600.
3. Have OV3600 rediscover the device.

A more efficient and robust approach is to deploy Alcatel-Lucent devices in OV3600 with the following steps:

1. Define communication settings for Alcatel-Lucent devices pending discovery. Use the **Device Setup > Communication** page. This assigns communication settings to multiple devices at the time of discovery, and prevents having to define such settings manually for each device after discovery.
2. Add or discover new Alcatel-Lucent devices with OV3600. You can do so with the following pages:
   - **Device Setup > Add**
   - **Device Setup > Discover**
3. Click **New Devices** In the **Status** section at the top of any OV3600 page, or navigate to the **APs/Devices > New** page, illustrated in Figure 27.

**Figure 27** ***APs/ Devices > New*** *Page Illustration*




4. Select (check) the box next to any AP you want to provision.
5. Rename all new APs. Type in the new device name in the **Device** column.
6. Scroll the bottom of the page and put APs in the appropriate OV3600 group and folder. Set the devices to **Manage Read/Write** mode.
7. Click **Add**. Wait approximately five to 10 minutes. You can observe that the APs have been renamed not only in OV3600 but also on the Alcatel-lucent switch with the **`show ap database`** AOS-W command.
8. To set the appropriate Alcatel-Lucent Device Group, select the **AP/Devices** or **Groups** page and locate your APs.
9. Click **Modify Devices** under the **User** and **Bandwidth** flash graphics.
10. Select the APs you want to re-group.
11. In the field that states **Move to Alcatel-Lucent Device Group**, below the list of the APs, select the appropriate group, and click **Move**.

If the list of Alcatel-Lucent Device Groups are not there, ensure you either create these Alcatel-Lucent device groups manually on the **Device Setup > Alcatel-Lucent Configuration** page, wherein you merely need the device names and not the settings, or import the configuration from one of your switches to learn the groups.

12. Wait another five to 10 minutes to observe the changes on OV3600. The changes should be observable within one or two minutes on the switch.

### Using General OV3600 Device Groups and Folders

OV3600 only allows any given AP to belong to one OV3600 device group at a time. Supporting one AP in two or more OV3600 device groups would create at least two possible issues, to include the following:

- Data collection for such an AP device would have two or more sources and two or more related processes.
- A multi-group AP would be counted several times and that would change the value calculations for OV3600 graphs.

As a result, some users may wish to evaluate how they deploy the group or folder for any given AP.

Alcatel-Lucent devices can also belong to Alcatel-Lucent Device Groups, but each AP is still limited to one general OV3600 device group.

You can organize and manage any group of APs by type and by location. Use groups and folders with either of the following two approaches:

- Organize AP device groups by device type, and device folders by device location.

  In this setup, similar devices are in the same device group, and operate from a similar configuration or template. Once this is established, create and maintain device folders by location.
- Organize AP device groups by location, and device folders by type.

  In this setup, you can organize all devices according to location in the device groups, but for viewing, you organize the device hierarchy by folders and type.

Be aware of the following additional factors:

- Configuration audits are done at the OV3600 group level.
- OV3600 folders support multiple sublevels.
- Therefore, unless there is a compelling reason to use the folders-by-device-type approach, Alcatel-Lucent generally recommends the first approach where you use groups for AP type and folders strictly for AP location.

## Visibility in Alcatel-Lucent Configuration

### Visibility Overview

Alcatel-Lucent Configuration supports device configuration and user information in the following ways;

- user roles
- AP/Device access level
- folders.

These and additional factors for visibility are as follows:

- Administrative and Management users in OV3600 can view the **Device Setup > Alcatel-Lucent Configuration** page and the **APs/Devices > Alcatel-lucent Config** pages.
  - Administrative users are enabled to view all configurations.
  - Management users have access to all profiles and Alcatel-Lucent device groups for their respective folders.
- The **Device Setup > Alcatel-Lucent Configuration** page has a limit to folder drop-down options for customers that manage different accounts and different types of users.

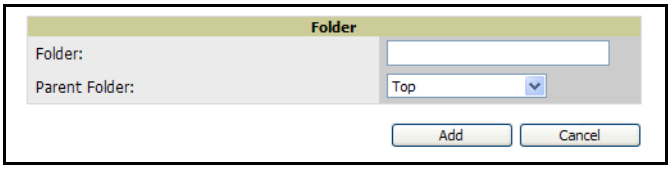
- Alcatel-Lucent Configuration entails specific user role and security profiles that define some components of visibility.
- OV3600 continues to support the standard operation of folders, users, and user roles as described in the *OV3600 User Guide*.

## Defining Visibility for Alcatel-Lucent Configuration

Perform these steps to define or adjust visibility for users to manage and support Alcatel-Lucent Configuration:

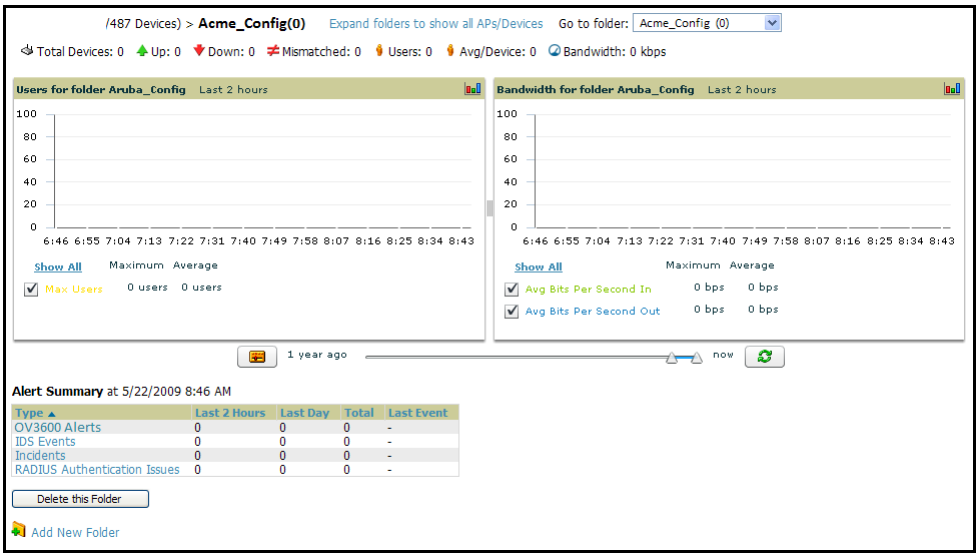
1. As required, create a new OV3600 device folder with management access.
   a. Navigate to the **APs/Device > List** page, scroll to the bottom of the page. (An alternate page supporting new folders is **Users > Connected** page).
   b. Click the **Add New Folder** link. The **Folder** detail page appears, as illustrated in Figure 28:

**Figure 28** ***APs/Devices > Add New Folder > Folders*** *Page Illustration*



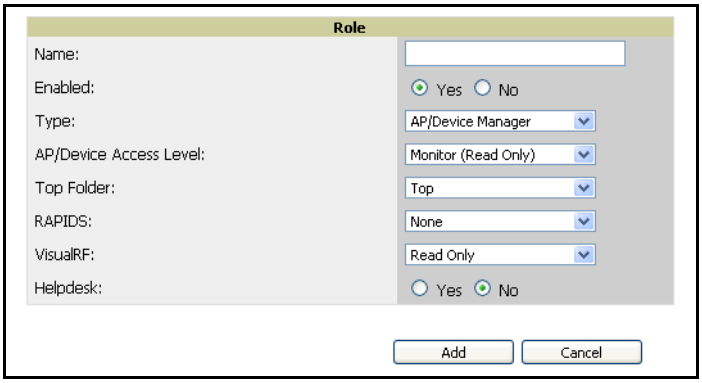

   c. Click **Add**. The **APs/Devices > List** page reappears. You can view your new folder by selecting it from the **Go to folder** drop-down list at the top right of this page. Figure 29 illustrates an unpopulated device page for an example folder.

**Figure 29** ***APs/Devices > List*** *Page With No Devices*




2. Add Alcatel-lucent switch devices to that folder as required. Use the **Device Setup > Add** page following instructions available in the *OV3600 User Guide*.
3. As required, create or edit a user role that is to have rights and manage privileges required to support their function in Alcatel-Lucent Configuration.
   a. At least one user must have administrative privileges, but several additional users may be required, with less rights and visibility, to support Alcatel-Lucent Configuration without access to the most sensitive information, such as SSIDs or other security related data.
   b. Navigate to the OV3600 **Setup > Roles** page, and click **Add New Role** to create a new role with appropriate rights, or click the **pencil** (manage) icon next to an existing role to adjust rights as required. The Role page appears, illustrated in Figure 30.

**Figure 30** ***OV3600 Setup > Roles > Add/Edit*** *Role Page Illustration*




c. As per standard OV3600 configuration, complete the settings on this page. The most important fields with regard to Alcatel-Lucent Configuration, device visibility and user rights are as follows:

- **Type**—Specify the type of user. Important consideration should be given to whether the user is an administrative user with universal access, or an AP/Device manager to specialize in device administration, or additional users with differing rights and access.
- **AP/Device Access Level**—Define the access level that this user is to have in support of Alcatel-Lucent WLAN switches, devices, and general Alcatel-Lucent Configuration operations.
- **Top Folder**—Specify the folder created earlier in this procedure, or specify the Top folder for an administrative user.

d. Click **Add** to complete the role creation, or click **Save** to retain changes to an existing role. The OV3600 **> Setup** page now displays the new or revised role.

4. As required, add or edit one or more users to manage and support Alcatel-Lucent Configuration. This step creates or edits users to have rights appropriate to Alcatel-Lucent Configuration. This user inherits visibility to Alcatel-Lucent WLAN switches and Alcatel-Lucent Configuration data based on the role and device folder created earlier in this procedure.

   a. Navigate to the OV3600 **Setup > Users** page.

   b. Click **Add New User**, or click the **pencil** (manage) icon next to an existing user to edit that user.

   c. Select the user role created with the prior step, and complete the remainder of this page as per standard OV3600 configuration. Refer to the *OV3600 User Guide*, as required.

5. Observe visibility created or edited with this procedure.

   The user, role, and device folder created with this procedure are now available to configure, manage, and support Alcatel-Lucent Configuration and associated devices according to the visibility defined in this procedure. Any component of this setup can be adjusted or revised by referring to the steps and OV3600 pages in this procedure.

6. Add or discover devices for the device folder defined during step 1 of this procedure. Information about devices is available in the *OV3600 User Guide*.

7. Continue to other elements of Alcatel-Lucent Configuration, described in this document. Early emphasis entails creation or editing of Alcatel-Lucent Device Groups and WLANs with which they are associated.

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