# **AOS-W Instant 6.4.3.4-4.2.1.2**



#### Copyright

© 2016 Alcatel-Lucent. All rights reserved.

Specifications in this manual are subject to change without notice.

Originated in the USA.

AOS-W, Alcatel 4302, Alcatel 4304, Alcatel 4306, Alcatel 4308, Alcatel 4324, Alcatel 4504, Alcatel 4604, Alcatel 4704, Alcatel 6000, OAW-AP41, OAW-AP68, OAW-AP60/61/65, OAW-AP70, OAW-AP80, OAW-AP92/93, OAW-AP105, OAW-AP120/121, OAW-AP124/125, OAW-AP175, OAW-IAP92/93/105, OAW-RAP2, OAW-RAP5, and Omnivista 3600 Air Manager are trademarks of Alcatel-Lucent in the United States and certain other countries.

Any other trademarks appearing in this manual are the property of their respective companies. Includes software from Litech Systems Design. The IF-MAP client library copyright 2011 Infoblox, Inc. All rights reserved. This product includes software developed by Lars Fenneberg et al.

#### **Legal Notice**

The use of Alcatel-Lucent switching platforms and software, by all individuals or corporations, to terminate Cisco or Nortel VPN client devices constitutes complete acceptance of liability by that individual or corporation for this action and indemnifies, in full, Alcatel-Lucent from any and all legal actions that might be taken against it with respect to infringement of copyright on behalf of Cisco Systems or Nortel Networks.

Contents	3
Release Overview	5
Contents	5
Contacting Support	5
What's New in this Release	6
Regulatory Domain Updates	6
Resolved Issues in this Release	6
OmniVista	6
Datapath/Firewall	6
Known Issues and Limitations	7
Maximum Configurable Year for Absolute Time Range Profiles	7
Known Issues	7
VC Management	7
Features and Enhancements in Previous Releases	8
Features and Enhancements	8
Support for Cell Size Reduction feature on OAW-IAPs	8
Support for configuring up to 16 Captive Portal Profiles	8
Time Based Services	8
XML-API Server Configuration Enhancement	8
Uplink Bandwidth Monitoring	9
Modulation Rates Configuration	9
Short Preamble Configuration	9
Support for New Modems	9
Very High Throughput Configuration	9
FCC Compliance Statement	10
Cellular SIM PIN Locking Feature Enhancements	10

	U-APSD Support for WMM Clients	. 10
	DHCP Enforcement	. 10
	RADIUS Server IP Configuration for Balancing CPPM Server Load	10
	Dynamic TACACS Proxy	11
	Traps to Notify the Status of the External Captive Portal Server	.11
Issi	ues Resolved In Previous Releases	.12
ls	sues Resolved in 6.4.3.4-4.2.1.1	12
	Authentication	12
	Datapath/Firewall	. 12
Is	sues Resolved in 6.4.3.4-4.2.1.0	12
	Datapath/Firewall	. 12
	Mesh	.13
	Wi Ei Drivor	12

AOS-W Instant 6.4.3.4-4.2.1.2 is a patch release that introduces any new enhancements, and fixes to the issues identified in the previous releases.

For information on upgrading OAW-IAPs to the new release version, refer to the Upgrading an OAW-IAP topic in the AOS-W Instant 6.4.3.1-4.2.1 User Guide.

## **Contents**

- What's New in this Release on page 6 lists the regulatory information, any new features and enhancements, and fixed issues in Instant 6.4.3.4-4.2.1.2 release.
- Known Issues and Limitations on page 7 lists the known issues and limitations identified in the 6.4.x.x-4.2.1.x releases.
- Features and Enhancements in Previous Releases on page 8 describes the features and enhancements added in previous 6.4.x.x-4.2.1.x releases.
- Issues Resolved In Previous Releases on page 12 lists the issues fixed in previous Instant 6.4.x.x-4.2.1.x releases.

# **Contacting Support**

**Table 1:** Contact Information

Contact Center Online		
Main Site	http://www.alcatel-lucent.com/enterprise	
Support Site	https://service.esd.alcatel-lucent.com	
Email	esd.support@alcatel-lucent.com	
Service & Support Contact Center Telephone		
North America	1-800-995-2696	
Latin America	1-877-919-9526	
• EMEA	+800 00200100 (Toll Free) or +1(650)385-2193	
Asia Pacific	+65 6240 8484	
Worldwide	1-818-878-4507	

This chapter lists the regulatory information, features, enhancements, fixed issues, known issues and limitations identified in the AOS-W Instant 6.4.3.4-4.2.1.2 release.

# **Regulatory Domain Updates**

The following table lists the DRT file versions supported by Instant 6.4.3.x-4.2.1.x releases:

**Table 2:** DRT Versions

Instant Release Version	Applicable DRT Version
6.4.3.4-4.2.1.2	1.0_52480
6.4.3.4-4.2.1.1	1.0_52480
6.4.3.4-4.2.1.0	1.0_52480

For a complete list of countries certified with different AP models, see the respective DRT release notes at service.esd.alcatel-lucent.com.

## **Resolved Issues in this Release**

The following issues are fixed in the Instant 6.4.3.4-4.2.1.2 release.

#### **OmniVista**

Table 3: OmniVista Fixed Issue

Bug ID	Description
126970	<b>Symptom</b> : OAW-IAPs were unable to apply the new hostname pushed by the OmniVista Management Platform (AMP). A change in the OAW-IAP code has resolved this issue. <b>Scenario</b> : This issue occurred when the hostname included 31 characters and was observed in all OAW-IAPs running Instant 6.4.3.4-4.2.1.0 release and earlier versions.

## Datapath/Firewall

**Table 4:** Datapath/Firewall Fixed Issue

Bug ID	Description
126980	<b>Symptom</b> : VLAN tagged packets bridged out to the OAW-IAP had an incorrect default CoS (802.1p priority) value of three. This issue is resolved by fixing a VLAN tagging issue when the DSCP value in the ACL was set to zero. <b>Scenario</b> : This issue occurred when the SSID was directing traffic in the bridge mode and the CoS value of the associated VLAN was set to three by default. This issue was not limited to a specific OAW-IAP model or software version.

# **Known Issues and Limitations**

The following known issues and limitations are identified in the Instant 6.4.3.x-4.2.1.x releases.

## **Maximum Configurable Year for Absolute Time Range Profiles**

When creating an absolute time-range profile, the year selected for the Start Day and End Day cannot exceed 2037.

#### **Known Issues**

The following Known Issue is identified in the Instant 6.4.3.4-4.2.1.0 release:

## **VC Management**

**Table 5:** VC Management Known Issue

Bug ID	Description
128737	<b>Symptom</b> : When assigning a time-range profile to an SSID, the OAW-IAP UI throws a "Profile Not Found" error if the time-range profile name is configured with a special character " or a blank space. <b>Scenario</b> : This issue is found on OAW-IAPs running Instant 6.4.3.4-4.2.1.0 release. <b>Workaround</b> : Avoid configuring the time-range profile names with a special character " or blank space.

This chapter describes the features and enhancements introduced in previous AOS-W Instant 6.4.3.x-4.2.1.x releases.

## **Features and Enhancements**

This section describes the features and enhancements introduced in Instant 6.4.3.x-4.2.1.x releases.

## Support for Cell Size Reduction feature on OAW-IAPs

The Cell Size Reduction feature allows you to manage dense deployments and to increase overall system performance and capacity by shrinking an OAW-IAP's receive coverage area, thereby minimizing co-channel interference and optimizing channel reuse. This feature can be configured using the OAW-IAP CLI.

For more information, see:

- Configuring Cell Size Reduction using the CLI in the AOS-W Instant6.4.3.4-4.2.1.0 User Guide.
- rf dot11a-radio-profile, rf dot11g-radio-profile, and show radio config commands in the AOS-W Instant 6.4.3.4-4.2.1.0. CLI Reference Guide.

## Support for configuring up to 16 Captive Portal Profiles

Starting with Instant 6.4.3.4-4.2.1.0, you can configure up to 16 external captive portal profiles. A new option called **Switch IP** has been included to use the VC IP as the Switch IP in the external captive portal redirect URL.

For more information, see:

- Creating a Captive Portal Profile in the AOS-W Instant 6.4.3.4-4.2.1.0 User Guide.
- wlan external-captive portal command in the AOS-W Instant 6.4.3.4-4.2.1.0 CLI Reference Guide.

#### **Time Based Services**

Starting with Instant 6.4.3.4-6.2.1.0, users can configure time range profiles using the OAW-IAP UI and CLI. These Time Range Profiles can be enabled on anOAW-IAP to allow or deny access to an SSID only during a specific period of time.

For more information, see:

- Configuring Time Range Profiles in the AOS-W Instant 6.4.3.4-4.2.1.0 User Guide.
- time-range, show time-profile and show time-range commands in the AOS-W Instant 6.4.3.4-4.2.1.0 CLI Reference Guide.

## XML-API Server Configuration Enhancement

Starting with Instant 6.4.3.4-4.2.1.0 release, users can now configure up to 8 XML API server entries on anOAW-IAP. You can also create XML API requests with appropriate authentication commands.

For more information, see Configuring an OAW-IAP for XML API Integration and Creating an XML API Request sections in the AOS-W Instant 6.4.3.4-4.2.1.0 User Guide.

## **Uplink Bandwidth Monitoring**

OAW-IAP uses Iperf3 as a TCP or UDP client to run a speed test and measure the bandwidth on an uplink. Iperf3 runs on the VC IP of the cluster and the speed test results are published to ALE. You may choose to configure and execute a speed test during boot time and additionally at specific time intervals in the CLI configuration mode or execute the speed test at any preferred time using the CLI Privileged EXEC mode.

For more information, see:

- Uplink Bandwidth Monitoring in the AOS-W Instant 6.4.3.4-4.2.1.0 User Guide.
- **speed-test** and **speed-test <server>** commands in the AOS-W Instant 6.4.3.4-4.2.1.0 CLI Reference Guide.

## **Modulation Rates Configuration**

In Instant 6.4.3.4-4.2.1.0, the OAW-IAP CLI allows you to enable and disable modulation rates for a radio band, High Throughput (HT) Modulation and Coding Scheme (MCS) set, and a combination of VHT MCS and spatial streams as a VHT MCS rate set for a WLAN SSID profile. For example, the 802.11g band supports the modulation rate including 1, 2, 5, 6, 9, 11, 12, 18, 24, 36, 48, 54Mbps and 802.11a band supports a modulation rate set including 6, 9, 12, 18, 24, 36, 48, 54Mbps. The OAW-IAP CLI now allows you to configure the modulation rates for these bands.

You can also configure an HT MCS rate set, so that the SSID does not broadcast the disabled MCS rates list for 802.11n clients. For 802.11ac clients, only 10 MCS rates supported in the 802.11ac mode and OAW-IAPs use a combination of VHT MCS and spatial streams to convey the supported MCS rates.

The following configuration parameters are introduced in the **wlan ssid-profile** command to allow the administrators to configure modulation rates, HT MCS, and VHT MCS.

- a-basic-rates
- a-tx-rates
- g-basic-rates
- g-tx-rates
- supported-mcs-set
- vht-support-mcs-map

## **Short Preamble Configuration**

In Instant the 6.4.3.4-4.2.1.0, the OAW-IAP CLI allows you to enable or disable the transmission and reception of short preamble frames. By default, short preamble frames are enabled for all WLAN SSID clients.

To disable short preamble frames, use the **short-preamble-disable** parameter in the **wlan ssid-profile** command.

## **Support for New Modems**

Starting from Instant 6.4.3.4-4.2.1.0, OAW-IAPs support Huawei E3372 and Alcatel L800 4G modems.

## Very High Throughput Configuration

In Instant 6.4.3.4-4.2.1.0, OAW-IAPs allow you to enable or disable Very High Throughput (VHT) function on devices that support VHT. VHT is enabled by default on 802.11ac series OAW-IAPs. However, you can disable VHT if you want the 802.11ac IAPs to function as 802.11n OAW-IAPs.

You can configure VHT on SSID or a 5 GHz radio profile. If you enable or disable VHT on an SSID, the configuration is applicable only to the clients connecting through that SSID. To disable or enable VHT on all SSIDs, configure VHT on the 5 GHz radio profile.

For more information, see:

- Configuring WLAN Settings for an SSID Profile and Configuring Radio Settings in AOS-W Instant 6.4.3.4-4.2.1.0 User Guide
- The wlan ssid-profile and rf dot11a-radio-profile commands in AOS-W Instant 6.4.3.4-4.2.1.0 CLI Reference Guide

## **FCC Compliance Statement**

The **About** tab in the Maintenance window now displays FCC compliance statement for the OAW-IAPs operating in the US regulatory domain.

## Cellular SIM PIN Locking Feature Enhancements

In the previous Instant release, the SIM PIN lock and PIN renewal commands were available in the cellularuplink-profile configuration mode in the OAW-IAP CLI. In Instant 6.4.3.4-4.2.1.0, the following commands for locking, unlocking, and renewing SIM PIN are removed from the **cellular-uplink-profile** configuration mode and added under the configuration mode:

- pin-enable and no pin-enable
- pin-puk
- pin-renew

For more information, see AOS-W Instant 6.4.3.4-4.2.1.0 CLI Reference Guide

## **U-APSD Support for WMM Clients**

To extend the battery life and enable powersaving on WLAN clients, OAW-IAPs now support Unscheduled Automatic Power Save Delivery (U-APSD) for the clients that support WMM. The U-APSD or the WMM power save feature is enabled by default on all SSIDs.

For more information on U-APSD configuration, see:

- Configuring WMM U-APSD in AOS-W Instant 6.4.3.4-4.2.1.0 User Guide
- The wlan ssid-profile command in AOS-W Instant 6.4.3.4-4.2.1.0 CLI Reference Guide

#### **DHCP Enforcement**

The administrators can now block traffic for OAW-IAP clients that do not obtain IP address from DHCP by using the **enforce-dhcp** parameter in the **wlan ssid-profile** command.

For more information, see:

- Enforcing DHCP in AOS-W Instant 6.4.3.4-4.2.1.0 User Guide
- The wlan ssid-profile command in AOS-W Instant 6.4.3.4-4.2.1.0 CLI Reference Guide

## RADIUS Server IP Configuration for Balancing CPPM Server Load

To improve the guest user experience and balance the CPPM server load, the administrators can now configure the IP address of a RADIUS server when configuring additional parameters for guest registration on the ClearPass Guest Login page.

For more information, see Configuring RADIUS Attribute for CPPM Server Load Balancing in AOS-W Instant 6.4.3.4-4.2.1.0 User Guide.

## **Dynamic TACACS Proxy**

A new checkbox called TACACS has been included under Dynamic Proxy which allows the Virtual Controller network to use the VC IP address for communication with external TACACS servers.



When dynamic-tacacs-proxy is enabled on the OAW-IAP, the TACACS server cannot identify the slave OAW-IAP that generates the TACACS traffic as the source IP address is changed.

For more information, see Configuring System Parameters in AOS-W Instant 6.4.3.4-4.2.1.0 User Guide **Dynamic TACACS Proxy** command in the AOS-W Instant 6.4.3.3.4-4.2.1.0 CLI Reference Guide

## Traps to Notify the Status of the External Captive Portal Server

In Instant 6.4.3.4-4.2.1.0, two new traps are added to notify OmniVista Management Platform (AMP) and Central about the status of the external captive portal server.

- wlsxPortalServerDown This trap is generated when the external captive portal server is down.
- wlsxPortalServerUp This trap is generated when the external captive portal server comes up.

For more information on these traps, see aruba-instant.my MIB file.

This chapter describes the issues fixed in previous AOS-W Instant 6.4.3.x-4.2.1.x releases.

## Issues Resolved in 6.4.3.4-4.2.1.1

#### **Authentication**

**Table 6:** Authentication Fixed Issue

Bug ID	Description
129304 127348 128118 130490	<b>Symptom</b> : Client devices running the Android 6.0+ or Windows 10 software were unable to connect to the 802.1x SSID of the OAW-IAP. The fix ensures that the client devices are able to connect to the 802.1x SSID. <b>Scenario</b> : This issue occurred when 802.1x termination was enabled on the OAW-IAP and was observed in all OAW-IAPs running Instant 6.4.3.4-4.2.1.0 release.

## Datapath/Firewall

Table 7: Datapath/Firewall Fixed Issue

Bug ID	Description
125170	<b>Symptom</b> : When the <b>show speed-test data</b> command was executed while the speed test was in progress, the output was either blank or an error message was displayed on the CLI. The fix ensures that the output for the <b>show speed-test data</b> command is displayed correctly. <b>Scenario</b> : This issue was observed on all OAW-IAPs that support the speed-test function (OAW-IAP109, OAW-IAP205, and OAW-IAP225) running Instant 6.4.3.4-4.2.1.0 release.

# Issues Resolved in 6.4.3.4-4.2.1.0

# Datapath/Firewall

Table 8: Datapath/Firewall Fixed Issue

Bug ID	Description
126377	<b>Symptom</b> : OAW-IAPs were dropping client ARP packets when the client VLAN was deleted from the VLAN multicast table. This issue is resolved if the client exists on the OAW-IAP, since the OAW-IAP does not delete the client VLAN from the VLAN multicast table. <b>Scenario</b> : This issue was not limited to a specific OAW-IAP model or Instant software version.

#### Mesh

Table 9: Mesh Fixed Issue

Bug ID	Description
122099	<b>Symptom</b> : When the 5 GHz radio of anOAW-IAP was configured to run in the legacy-mode (non-802.11n mode), the 802.11ac mesh link was still working in the VHT mode. This issue is resolved by adding check logic to notify the OAW-IAP when the legacy mode is changed. <b>Scenario</b> : This issue was found in OAW-IAP2xx series access points running Instant 6.4.3.1-4.2.0.0 release.

## Wi-Fi Driver

Table 10: Wi-Fi Driver Fixed Issue

Bug ID	Description
122099	<b>Symptom</b> : AnOAW-IAP-205 device crashed due to Kernel panic. This issue is resolved by making a change in the OAW-IAP code to identify the action frames with invalid pointers and dropping those packets. <b>Scenario</b> : This issue was observed in OAW-IAP205 and OAW-IAP215 access points running Instant 6.4.3.1-4.2.0.0 release.