Release Notes – Rev. B

OmniAccess Stellar AP

AWOS Release 3.0.3 – GA Release

These release notes accompany the OmniAccess Stellar Operating System (AWOS) Release 3.0.3 software for the Stellar APs. This document provides important information on individual software and hardware features. Since much of the information in the release notes is not included in the hardware and software user manuals, it is important to read all sections of this document before installing new hardware or loading new software.

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Related Documentation

The release notes should be used in conjunction with the associated manuals as listed below.
User manuals can be downloaded at: https://businessportal2.alcatel-lucent.com.

Stellar AP Quick Start Guide
The Quick Start Guide assists you in quickly connecting to and configuring the Stellar AP.

Stellar AP Installation Guide
Provides technical specifications and installation procedures for the Stellar AP.

Stellar AP Configuration Guide
Includes procedures for managing and configuring all aspects of the Stellar AP using the built-in web interface.

Technical Tips, Field Notices, Upgrade Instructions
Contracted customers can visit our customer service website at: https://businessportal2.alcatel-lucent.com.

Hardware Supported

- AP1101, AP1220 series, AP1230 series, AP1251
- No new hardware supported.

New Software Features and Enhancements

The following software features are new with this release, subject to the feature exceptions and problem reports described later in these release notes:

Feature	Platform Support
	OmniAccess Stellar AP1101/AP1220/AP1230/AP1251
AP WEB UI	All
Smart Sticky avoidance (802.11k & 802.11v)	All
DHCP/DNS/NAT	All
LACP AP1230 series	AP1230 series ONLY
Certificate Management	All
External Captive Portal	All
Northbound RESTful API	All
MESH/Bridge (BETA)	AP1220/ AP1230/ AP1251
Certificate Management	All
Northbound RESTful API	All

Notes:
- This release is compatible with OVE 4.3R1.
- OmniAccess Stellar AP reserves two SSIDs (One on 2.4G band, and one on 5G band). They perform background scanning for WIPs/WIDs services to alert and take preventive actions on any security threat. It is secure and NO clients can connect to these SSIDs.

Fixed field problems in build 3.0.3.32

PR	Description
ALEISSUE-110	Summary: Client inactivity should be a configurable option
ALEISSUE-128	Summary: L3 ACL does not work in the AP-1101 cluster.
ALEISSUE-145	Summary: AP name is not consistent throughout the web gui.
ALEISSUE-88	Summary: ACL per SSID
ALEISSUE-160	Summary: Manually set channels need to be respected by ACS
ALEISSUE-193	Summary: mywifi factory SSID provides open access to network
ALEISSUE-186	Summary: Client is not receiving the IP address if SSID is configured with VLAN-2 on AP1231/32
ALEISSUE-179	Summary: AP 1221 with 3.0.0.57 sending unknown UDP packets
ALEISSUE-90	Summary: Guest re authentication on inactivity
ALEISSUE-87	Summary: Captive portal page is hosted only in http by default
ALEISSUE-86	Summary: Unable to install public, wildcard, private or self-signed certificate on the cluster

Note: All fixes from prior releases are included (refer Appendix A)

Open/Known Problems

The problems listed here include problems known at the time of the product's release. Any problems not discussed in this section should be brought to the attention of the Service and Support organization as soon as possible. Please contact customer support for updates on problem reports (PRs) where no known workaround was available at the time of release.

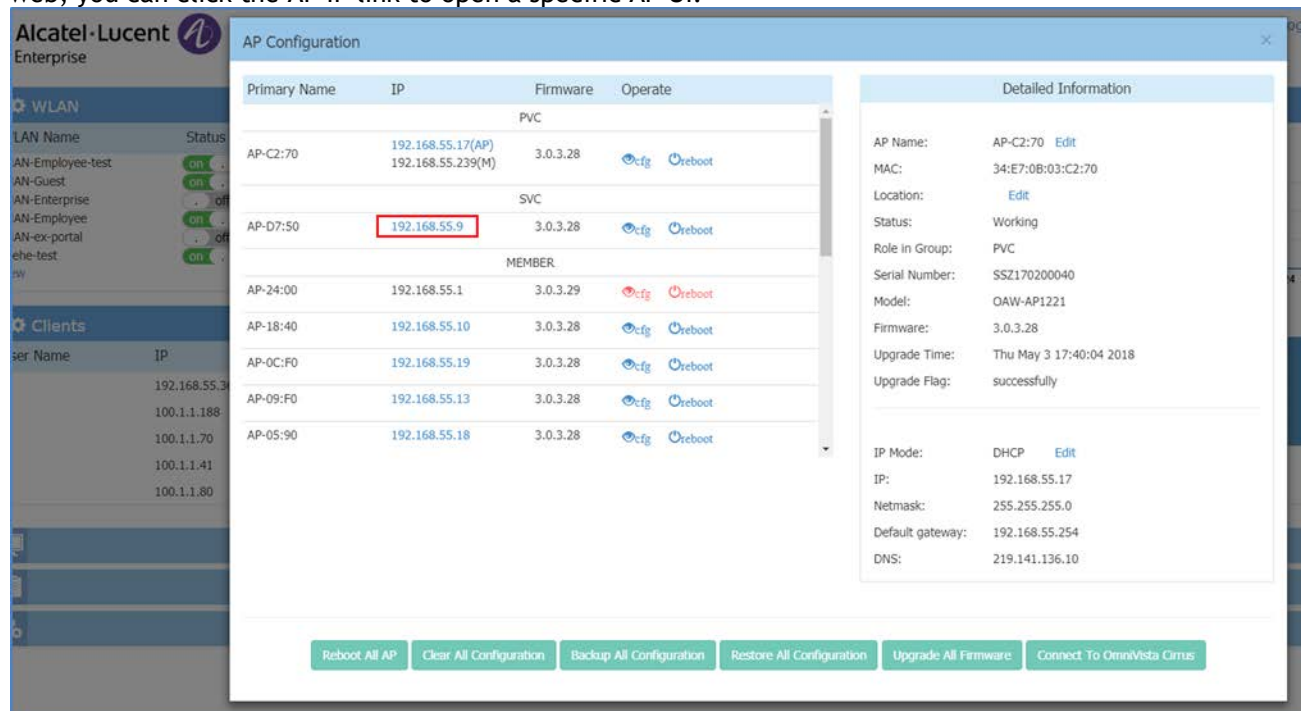| PR	Description	Workaround
ALEISSUE-158	**Summary:** RSSI Threshold deassociation should not cause a deletion of client-context	Will be optimized in R3.0.4 release.
ALEISSUE-164	**Summary:** The output of "iwlist ath01 txpower" is incorrect on AP1101	There is no known workaround at this time.

New Software Feature Descriptions

AP WEB UI

Group web management system is the primary interface for cluster configuration as well as monitoring. AP UI is a dedicated web interface to monitor and configure a single AP. In AP UI, you can:
(1) Learn the WLANs status, connecting clients on the AP;
(2) Configure DHCP/DNS/NAT services on the AP;
(3) Configure wireless Mesh/Bridge feature for the AP;
(4) Maintenance – Upgrade/Reset/Reboot the AP.

When AP is working in the Express mode, you need to login the group web management. In the AP List of group web, you can click the AP IP link to open a specific AP UI.

DHCP Server

The AP supports a built in DHCP server that can be configured from AP UI → Service menu. This is only intended for small SMB environments where you don't expect a separate DHCP server. Configure any AP in the group to function as DHCP server.

DNS Cache

The AP supports a built in DNS cache that can be configured from AP UI → Service menu. This is only intended for small SMB environments where you don't expect a separate DNS cache/proxy. Configure any AP in the group to function as DNS cache/proxy. The AP maintains up to 1000 cache entries.

NAT

The AP supports source and destination NAT. This can be configured from AP UI → Service menu. This is only intended for small SMB environments (up to 8 APs) where you don't expect a separate NAT router. Configure any AP in the group to function as a NAT router. The AP supports up to 128 source/destination NAT rules.

MESH/ BRIDGE (beta)

MESH/BRIDGE functionality is now supported on OmniAccess Stellar APs (not supported on AP1101).
You can configure the AP to operate as either a pure BRIDGE AP helping connect two sites wirelessly. In this mode no clients are allowed to associate to the AP.
You can configure the AP to operate as either a MESH root (providing wired WAN uplink), or a MESH non-root. In this mode clients can associate to the MESH APs. The client and MESH SSIDs should be different. Both P2P and P2MP MESH is supported. You can configure using the AP UI → Network → AP Interface
- ENET0 – Uplink interface of the AP.
- Backhaul1 – Uplink interface of the Mesh/Bridge link.
- Connector1 – Downlink interface of the Mesh/Bridge link.

External Captive Portal Integration
External captive portal vendors, provide rich customizable guest portal solutions to address hospitality needs of PMS, SMS, Social login domain, Customer application integration etc.
We provide a generalized integration capability so Stellar WLAN can deliver these customized external captive portal solutions over the infrastructure.

Smart Sticky Avoidance
Mobility is one of the key drivers of WiFi. However, as clients roam they have a tendency to remain glued to the initial association AP even when the WiFi coverage gets choppy. OmniAccess Stellar APs now also support standard based 802.11k and 802.11v protocols. This enables modern clients and APs to share network and RSSI information and help the clients to seamlessly migrate to a nearby AP delivering consistent high quality WiFi experience.
Note: For detail instructions on the feature configuration please refer to user guide.

Certificate Management (Express Mode)
The OmniAccess Stellar APs support 3 types of build-in certificates. Users can customize their own certificate for:
1. Internal Web Server - For secure management
2. Internal Captive Portal Server
3. External Captive Portal Server

Northbound RESTful API
The OmniAccess Stellar APs now support northbound RESTful interface. Users can now user RESTful APIs to:
1. Create time-based SSIDs
2. Get PVC IP
3. Get list of APs in the Express AP Group

Appendix A: Problems fixed from 3.0.0.57 to 3.0.2.2078

Fixed Problem Reports Between Builds 3.0.2.2076 and 3.0.2.2078

PR	Description
Internal	**Summary**: In Enterprise mode when AP running with 3.0.2.2076 or older reboots or when setting up a new AP, it cannot connect to OV. **Explanation**: The AP certificate used for secure encryption to OV for configuration expired on May 2nd, 2018. This new AP software has been patched to address this. Additionally, "OmniVista 4.2.2. Build 115 Patch 2" addresses this issue and "OmniVista 4.3R1" has an option as part of the VA menu, to configure if AP certificates are tightly checked or not". **Note**: If you still have an AP that is failing to connect to OV, please call customer support for further assistance.

Fixed Problem Reports Between Builds 3.0.2.1065 and 3.0.2.2076

PR	Description
ALEISSUE-111	**Summary:** EIRP for AP 1251 in 3.0.0.60 code is always 10 dBm. **Explanation:** The issue was in the display.
ALEISSUE-122	**Summary:** Handheld scanners on 2.4Ghz don't roam properly on AP1101 cluster. **Explanation:** Option now available to disable 802.11b rates on the 2.4Ghz.
ALEISSUE-139	**Summary:** AP Throughput goes low periodically. **Explanation:** The issue is happened when disable background scanning, throughput drops in a large amount.
ALEISSUE–146	**Summary:** Client IP is not consistent. **Explanation:** This happens in a special kind of environment, when Net camera works as a HTTP server associate to the AP.
ALEISSUE–161	**Summary:** ACS needs to choose 20 or 40 MHz channel width when working in Israel. **Explanation:** ACS to choose 20/40 MHz wide channels when operating in a country code that has limited 5 GHz channels.
ALEISSUE–170	**Summary:** Compatibility issue of the stellar AP1101 with IE browser. **Explanation:** UTF-8 encoding automatically when access WEB GUI now.

Fixed Problem Reports Between Builds 3.0.2.40 and 3.0.2.1065

PR	Description
ALEISSUE-127	**Summary:** APs in 5Ghz band using same channel though Automatic channel configuration is enabled. **Explanation:** Optimization on DRM module, especially when Country Code changed.
ALEISSUE-138	**Summary:** Allow space in SSID name. **Explanation:** Create/Edit strings beginning with space and end with space will be deleted when finish saving this configuration; If there is multiple spaces in the middle of the strings,the length of SSID will include the length of those multiple spaces.
ALEISSUE-134	**Summary:** 5 Ghz band not broadcasting.

	Explanation: Fixed one possible trap in DRM, which may cause this.
ALEISSUE–109	**Summary:** When PVC role changes from one AP to another, there is no notification **Explanation:** Add logs when PVC role changed include performing the "update to PVC" action.
OVE-837	**Summary:** Client status takes about 5-10 mins to update in OV WLAN dashboard and WMA->Client UI. **Explanation:** part of this issue was solved as follows: 1. AP Status display Down – need your help to debug the root cause ("UP" in AP list in below screenshot); 2. Client "Attached Band" shows 'nullGHz' – WMA polling cycle is too long, AP needs to optimize to send multiple messages to ensure the information is complete in next release.
HOS30-1475	**Summary:** 【802.11r roaming】802.11r roaming has problem in R3.0.2.38. **Explanation:** This happens in Germany Customer environment, when Client roaming between multiple APs, Client needs to finish a complete process of PSK authentication.
HOS30-1491	**Summary:**【Cluster】Privilege Escalation Vulnerability in AWOS v3.0.2.x (and all previous). **Explanation:** User can simulate Tech Support HTTP request to execute commands in AP, for security reasons, from this build on, the commands send to AP are encapsulated in the same format, without any common shell commands, Sanity check with user input, only supported commands can be executed.

Fixed Problem Reports Between Builds 3.0.2.38 and 3.0.2.40

PR	Description
OVCLOUD–2774	**Summary:** Cloud connection status in AP. **Explanation:** Add "ocloud_show" command for trouble shooting in support account.
OVCLOUD–3251	**Summary:** AP cannot call home successful to AS in PreProd env. **Explanation:** This happens in specific environment when VPN connection takes a fairly long time.
OVCLOUD–3139	**Summary:** Cannot apply AV profile to AP 1251. **Explanation:** This issue cause by too small username and password buffer (only 32 char) for sftp. we have change buffer size to 128.

Fixed Problem Reports Between Builds 3.0.0.63 and 3.0.2.38

PR	Description
ALEISSUE-133	**Summary:** Client is taking few minutes to connect to the network. it is a PSK SSID. **Explanation:** This issue was caused by the load balance algorithm. The algorithm is now been optimized to avoid getting into this situation.
ALEISSUE-130	**Summary:** Duplicate APs in the cluster. **Explanation:** This issue was caused by the AP obtaining an incorrect mac address at the bootup. It is fixed in this release.
ALEISSUE-100	**Summary:** AP-1101 running in express mode does not accept the class-B IP address as Group Management IP. **Explanation:** This was an AP GUI's problem and fixed in this release.

ALEISSUE-99	**Summary:** Band Steering doesn't work on Express Mode Release 3.0.0.57. **Explanation:** This issue was caused by the load balance algorithm. The algorithm is now been updated to felicitate correct band-steering.
ALEISSUE-95	**Summary:** Guest operator account security issues **Explanation:** The fix blocks from users from altering guest operator's privileges from browser inspector.
ALEISSUE-65	**Summary:** ÖÄÅ characters are not supported. **Explanation:** These characters are now supported.
ALEISSUE-82	**Summary:** Config changes made are not updated when the OLD PVC comes up. **Explanation:** This is fixed by preventing an old PVC from overriding the config done with new PVC after it comes back up.

Fixed Problem Reports Between Builds 3.0.0.61 and 3.0.0.63

PR	Description
ALEISSUE-105	**Summary:** Static channel assignment gets changed automatically **Explanation:** Channel assignment changes automatically even if the channel is set manually.
ALEISSUE-106	**Summary:** Roaming not working when both 2.4 GHz & 5 GHz radio configured with or without 802.11r **Explanation:** There were no synchronization messages sent to the new neighbor AP resulting in roaming failure

Fixed Problem Reports Between Builds 3.0.0.57 and 3.0.0.61

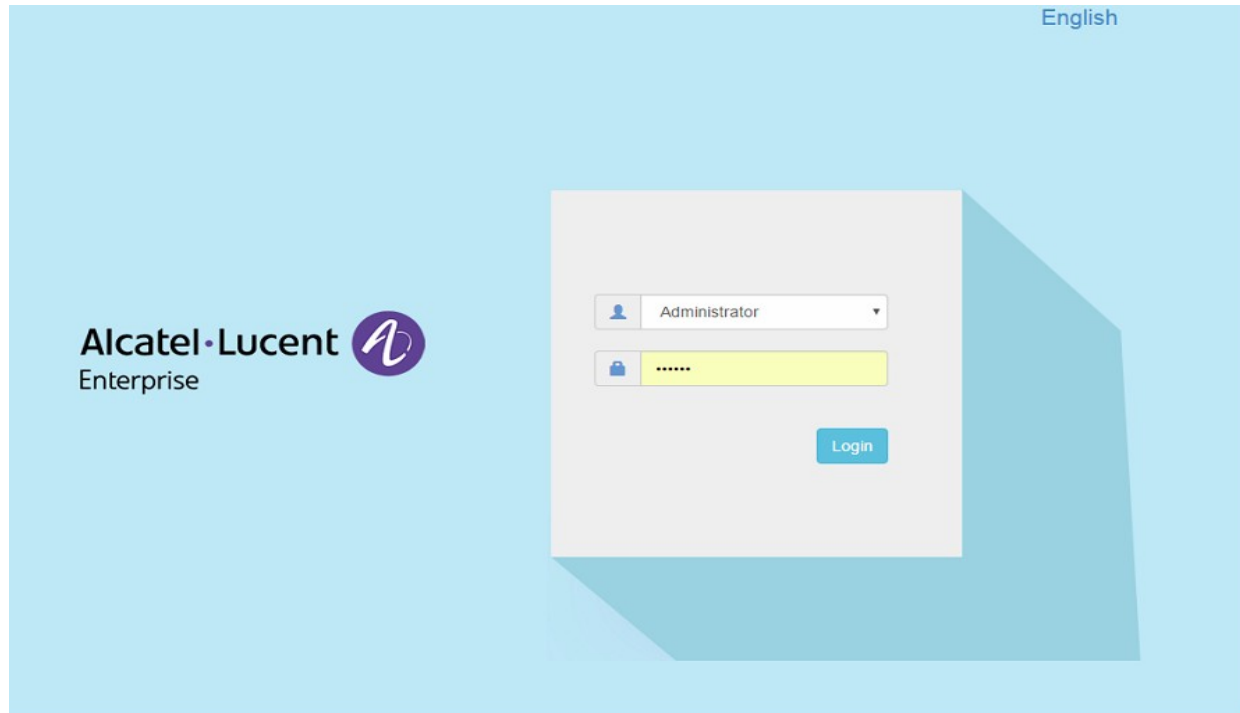| PR	Description
None	**Summary:** KRACK / WPA2 Key Reinstallation Vulnerabilities. **Explanation:** Flaws in WPA2 key management may allow an attacker to decrypt, replay, and forge some frames on a WPA2 encrypted network.
ALEISSUE-101	**Summary:** Apple AirPlay stopped working, after upgrades AP1101 to release 3.0.0.57. **Explanation:** Two clients on the same SSID and band were not able to communicate.
ALEISSUE-102	**Summary:** 5 GHz band not broadcasting. **Explanation:** Initial setup with 2.4GHz and 5GHz is OK. Overnight 5 GHz band disappears and only see 2.4GHz band can be seen.
ALEISSUE-108	**Summary:** Performance issue in 2.4G band. **Explanation:** Wireless performance degrades over time, devices experience slow connection.

Appendix B – Upgrade Instructions

Mandatory Upgrade of the OAW-AP1101
Release 2.1 is not compatible with Release 3.0. All the Stellar AP1101 APs running R2.1 MUST be upgraded to the latest software release version available from customer support so that all the APs can form a cluster with release 3.0 or can be managed by OmniVista. Please Visit https://businessportal2.alcatel-lucent.com to get the latest software and follow the upgrade instructions below.

General Software Upgrade Instructions (WiFi Express)

1. Login to AP using Administrator account with default password 'admin'.

2. Click on the AP tab to open up the AP Configuration page.

3. On AP Configuration Page, click **Upgrade All Firmware.**

4. Select the firmware file and click **Upload To All**, this will upgrade the firmware and reboot the AP.

Technical Support

Alcatel-Lucent Enterprise technical support is committed to resolving our customer's technical issues in a timely manner. Customers with inquiries should contact us at:

Region	Phone Number
North America	1-800-995-2696
Latin America	1-877-919-9526
Europe Union	+800 00200100 (Toll Free) or +1(650)385-2193
Asia Pacific	+65 6240 8484

Email: ebg_global_supportcenter@al-enterprise.com

Internet: Customers with Alcatel-Lucent service agreements may open cases 24 hours a day via Alcatel-Lucent's support web page at: https://businessportal2.alcatel-lucent.com.

Upon opening a case, customers will receive a case number and may review, update, or escalate support cases on-line. Please specify the severity level of the issue per the definitions below. For fastest resolution, please have telnet or dial-in access, hardware configuration—module type and revision by slot, software revision, and configuration file available for each switch.

Severity 1 - Production network is down resulting in critical impact on business—no workaround available.
Severity 2 - Segment or Ring is down or intermittent loss of connectivity across network.
Severity 3 - Network performance is slow or impaired—no loss of connectivity or data.
Severity 4 - Information or assistance on product feature, functionality, configuration, or installation.