# Release Notes – Rev. A

## OmniAccess Stellar AP

## AWOS Release 4.0.1 – GA Release

These release notes accompany the OmniAccess Stellar Operating System (AWOS) Release 4.0.1 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.

# Table of Contents

# Related Documentation

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

## Hardware Supported

- AP1101, AP1201, AP1220 series, AP1230 series, AP1251, AP1251-RW-B (model addressed for specific country), AP1201H, AP1201L, AP1201HL, AP1320 series, AP1360 series, AP1201BG

## 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 |
|---|---|
| Out-of-Box MESH (Cluster&OVE&OVC) | All |
| IPv6 Managed Infrastructure (OVE&OVC) | All |
| PERWIFI-143: Allow Reflexive Policies on AP (OVE & OVC) | All |
| mDNS service network with policy control - (OVE & OVC) | Except AP1101 |
| RAP-Support VLAN tag via GRE tunnel | Except AP1101 |
| RAP-Support Local breakout | Except AP1101 |
| AP Management VLAN Support | All |
| Security vulnerabilities | All |
| AP wireless scanning enhancement:BG-S | All |
| Support MU-MIMO enable/disable | All |
| Support 11ax AP support HE mode enable/disable | 11AX |
| Support Beacon Interval Configuration | All |
| Support IGMP Snooping Configuration | All |

Notes:

- 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 4.0.1.44

| PR | Description |
|---|---|
| Case: **00494467**<br>ALEISSUE-796/<br>ALEISSUE-806/<br>ALEISSUE-819/<br>ALEISSUE-831/<br>ALEISSUE-842/<br>ALEISSUE-846/<br>ALEISSUE-856/<br>ALEISSUE-865/<br>ALEISSUE-868 | **Summary:** Unknow reason reboot.<br>**Explanation:**<br>Root cause :<br>With the “memory-access error”, the kes logs might overwrite the data of the area/address for Linux system, that could lead to different abnormal reboots.<br>Solution:<br>Reallocate the memory usage for “kes log” to reserve a special area to avoid the Memory out of bounds by “kes log”.<br>Click for additional information |
| Case: **00492778**<br>ALEISSUE-810/<br>ALEISSUE-807 | **Summary:** AP reboot with policy exception.<br>**Explanation:** Fix a policy process crash issue.<br>Click for additional information |
| Case: **00502500**<br>ALEISSUE-857 | **Summary:** Heatmap with AP-1321 is not displayed.<br>**Explanation:** After AP bootup OV will get the AP RF information from AP once, but sometimes the wireless interface is not ready and causes the OV get null information. Optimization of the software to ensure OV can get the correct information.<br>Click for additional information |
| Case: XXX | **Summary:** Channel 144 missing in OV for Singapore County code. |

| | |
|---|---|
| ALEISSUE-820 | **Explanation**: Wireless driver add support for channel 144.<br>Click for additional information |
| Case: XXX<br>ALEISSUE-861 | **Summary**: Stellar AP Data tunnel not able to support packet size more than 1354 Bytes.<br>**Explanation**: The management frame doesn't support IP fragmentation, so it will be dropped during transmission due to MTU. Management interface MTU set to 1420 by default, also the value can be configured in SUPPORT account. |
| Case: XXX<br>ALEISSUE-408 | **Summary**: Information disclosure via Rsync default credentials in Express mode.<br>**Explanation**: Rsync credentials encrypted to enhance security. |
| Case: XXX<br>ALEISSUE-713 | **Summary**: Configured SSID detected as interference AP by the same AP's scanning function(AP13xx).<br>**Explanation**: Fixed this scanning issue. |
| Case: **00486920**<br>ALEISSUE-770 | **Summary**: Multicast traffic flooded on all SSID's with different VLANs.<br>**Explanation**: In order to roam faster, all the traffic will be forwarded when a client roams to a new AP even if it doesn't finish authentication. But that also causes all packets to be leaked between VLANs since forwarding logic in macvlan layer doesn't distinguish VLAN-ID. In 4.0.1 build packets will be dropped if the VLAN-ID is not the same as the interface VLAN-ID.<br>Click for additional information |
| Case: **00490818**<br>ALEISSUE-785 | **Summary**: AP eth1,2 and 3 are coming up even before the AP is completely up.<br>**Explanation**: The downlink port stays disabled if the link between AP and OV is not established completely.<br>Click for additional information |
| Case: XXX<br>ALEISSUE-818 | **Summary**: AP1231 does not disable 5g High radio even though its unchecked in RF profile.<br>**Explanation**: Optimize code logic, AP does not upload radio information if this band is disabled. |
| Case: **00498265**<br>ALEISSUE-826 | **Summary**: Default STP priority for mesh root AP's.<br>**Explanation**: STP function is disabled in 4.0.1 build.<br>Click for additional information |
| Case: **00459427**<br>ALEISSUE-666 | **Summary**: Even if the inactive time is disabled, the captive portal users are getting disconnected after 15 minutes.<br>**Explanation**: The inactivity timeout setting is restricted by wireless driver and the maximum value is 12000 seconds, increase the range from [1-1200s] to [1-12000s].<br>Click for additional information |
| Case: **00484996**<br>OVE-7859/<br>OVE-8174 | **Summary**: Stellar WLAN – reduce DPI manager memory consumption.<br>**Explanation**: Fixed the bug that memory of DPI process increased when loading preconfig messages.<br>Click for additional information |
| Case: **00483124**<br>ALEISSUE-766 | **Summary**: Users are getting less bandwidth when we connect to OAW-AP1101 with the mixed cluster-setup<br>**Explanation**: Optimization done in AWOS 4.0.1 and AWOS 4.0.0 MR-4 to fix this problem<br>Click for additional information |
| Case: **00467457**<br>OVE-8881 | **Summary**: The data can be forwarded from VPN VA when guest tunnel with vlan.<br>**Explanation**: Because VLAN-ID field in the packet takes 4-bytes the data interface MTU is set to 1542 by default. Also the value can be configured in SUPPORT account.<br>Click for additional information |

## 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 |
|---|---|---|
| Apple device connection issue on 1320/1360 series. | **Summary:** When the VLANID in SSID is modified, all clients will be kicked off, but Apple device may not send DHCP request when reconnecting with this SSID, that will cause to keep using old IP address and unable to connect to the network. | Disconnect and re-join this network with the Apple device. |
| SSID is not created on 11ax device after changed group on OV. | **Summary:** If AP with RF disabled change to a new OV group with RF enabled, SSID interface cannot be up. | Re-enable RF configuration on OV UI. |
| DPI function doesn't' work if the reflexive is disabled. | **Summary:** Because DPI depends on first packets of the same contrack session, it might not work if the traffic matches NOTRACK policy. | Configure "YES" for reflexive policy. |
| ALEISSUE-869 | **Summary:** If run as "dedicated scan mode: once" on OV UI, no result seen in RF Scan View. | Utilize the "dedicated scan mode" function instead or perform the "dedicated scan mode: once" in AP UI. |
| ALEISSUE-836 | **Summary:** If manually set the Tx-power to a static maximum value in 5G band3 (Channels above 100) on 11ax device, the actual value went wrong after upgrading. | Set the Tx-power to auto for 5G static band3 channel. |

## Limitations and/or Dependencies

| Feature | AP Model | Limitations and/or Dependencies |
|---|---|---|
| Rogue AP | All | When an AP MAC is configured as "Friendly AP", the network will ensure to not classify it as interfering/rogue AP. Please ensure to not delete the default Stellar MAC OUIs in OV mode (34: e7:0b and dc: 08:56). Note that you can have a maximum of 32 Friendly MAC OUIs/MAC addresses configured. With Rogue AP containment enabled, for any AP classified as rogue, clients attempting to connect to Rogue AP will get disconnected. |
| Cluster Preemption | All | AP1320 series and AP1360 11AX AP is higher priority than 11AC platform products in the cluster. The 11AX AP will take over the PVM role when it joins an existing 11AC cluster. |
| Management VLAN | All | Loading management VLAN configuration takes some time when AP boots up, it may cause one cluster to be established between APs with different management VLAN. To prevent this problem, when management VLAN is set to non-0, cluster ID will be increased 20000, which makes AP separate from original cluster. After management VLAN is removed, cluster ID is also restored to original value. |

| | | |
|---|---|---|
| IPv6 | All | If AP works in single IPv6 environment (pure IPv6), because wireless client information synchronization does not support IPv6 address, client roaming does not work in this case. |
| Link Aggregation | AP1360 series,<br>AP1251 | Dual ethernet ports do not support forming a link aggregation for AP uplink. |
| RAP | Except AP1101 | • Local breakout does not support handing for multiple VLANs<br>• AP1201H downlink port handing for tagged and untagged traffic |
| DRM | AP1201H/AP1201HL | Band Steering and Smart Load balancing not supported since AWOS401GA because of resource limitation and new feature introducing - mDNS service network with policy control. |
| DPI | AP1201<br>AP1220 series,<br>AP1251 | When DPI function is enabled, it is recommended to have an initial free memory size of about 30MB after AP booting up for system stable running. If the booting up free memory size is far less than 30MB, suggest removing unnecessary WLAN/VLAN/Policy/DPI rule on AP1201/AP1220/AP1251. |

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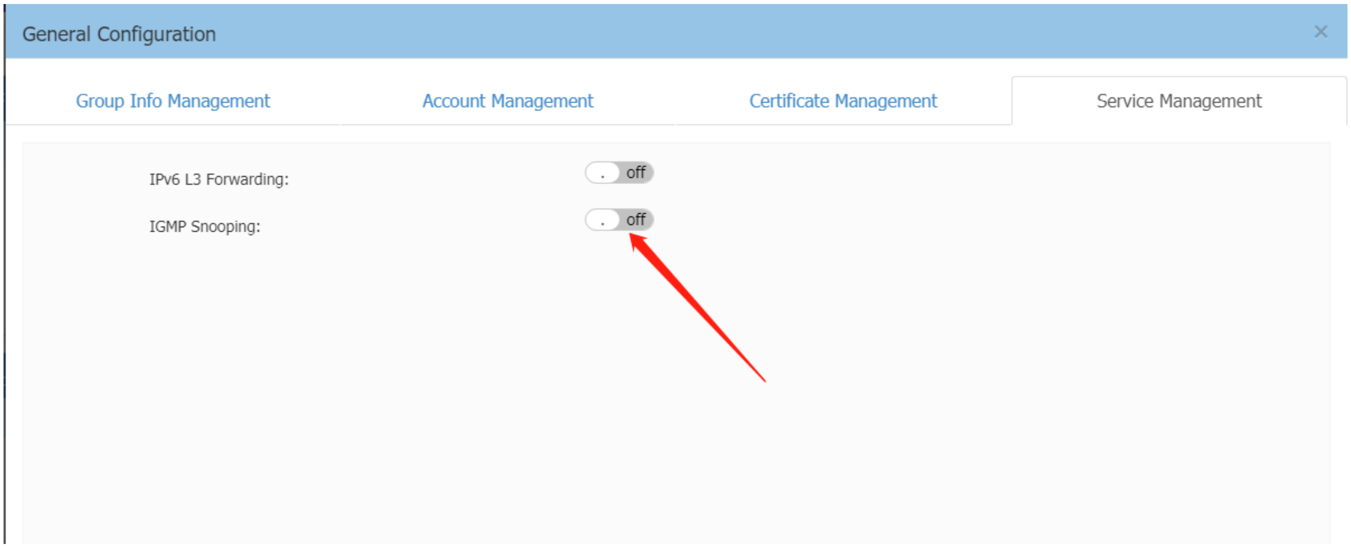
# New Software Feature Descriptions

## IGMP-snooping Configuration

IGMP-snooping configuration is supported in 4.0.1 release, users can enable or disable this switch as required.

### Web UI

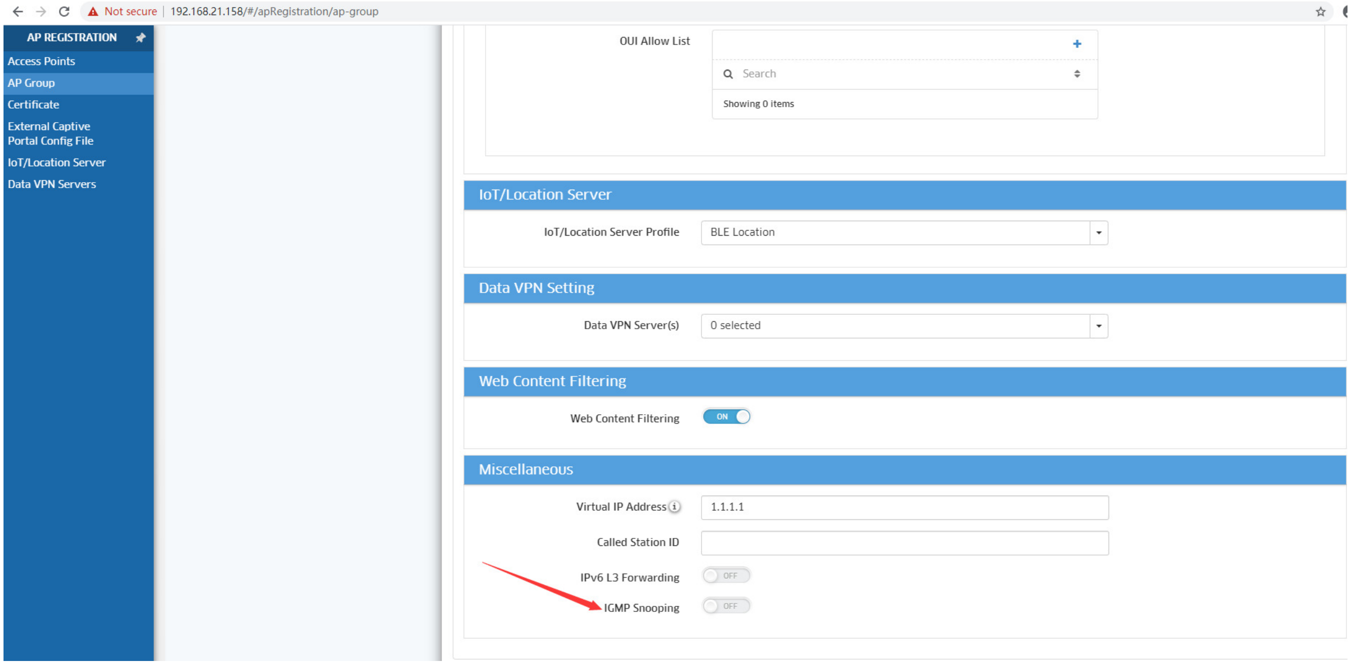


General Configuration

IPv6 L3 Forwarding: off

IGMP Snooping: off

### OV UI



Not secure | 192.168.21.158/#/apRegistration/ap-group
AP REGISTRATION
Access Points
AP Group
Certificate
External Captive Portal Config File
IoT/Location Server
Data VPN Servers

OUI Allow List

Search

Showing 0 items

IoT/Location Server

IoT/Location Server Profile: BLE Location

Data VPN Setting

Data VPN Server(s): 0 selected

Web Content Filtering

Web Content Filtering: ON

Miscellaneous

Virtual IP Address: 1.1.1.1

Called Station ID:

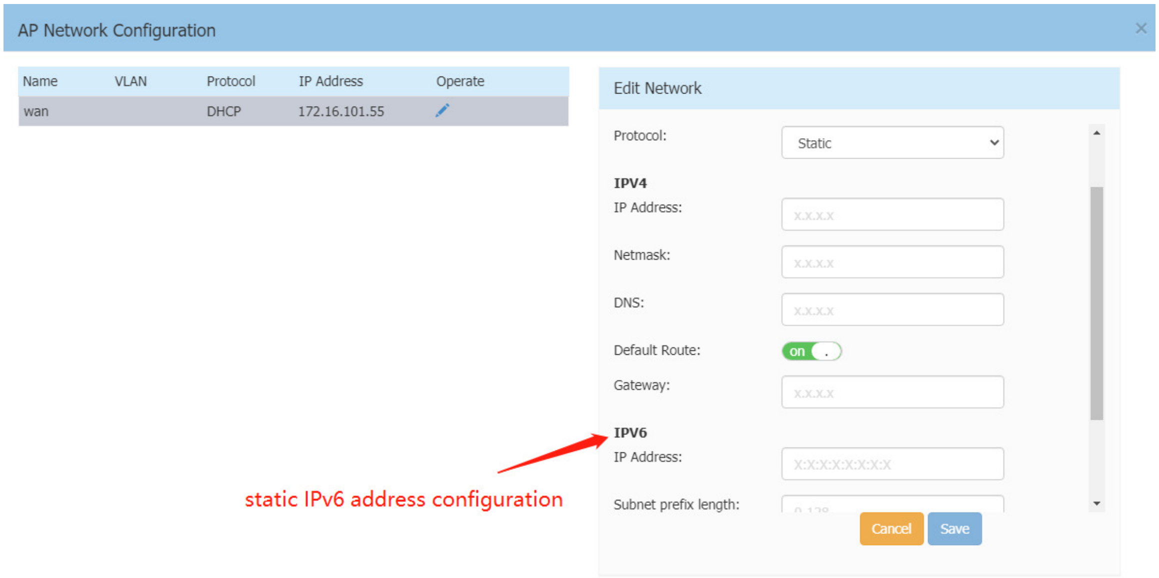
IPv6 L3 Forwarding: OFF

IGMP Snooping: OFF

## Static IPv6 address configuration

Static IPv6 address configuration is added on Network Configuration page, when network protocol is specified as “static”, customers can edit interface static IPv4 and IPv6 address.

### Web UI



AP Network Configuration

| Name | VLAN | Protocol | IP Address | Operate |
|---|---|---|---|---|
| wan | | DHCP | 172.16.101.55 | |

Edit Network

Protocol: Static

**IPV4**

IP Address: x.x.x.x

Netmask: x.x.x.x

DNS: x.x.x.x

Default Route: on

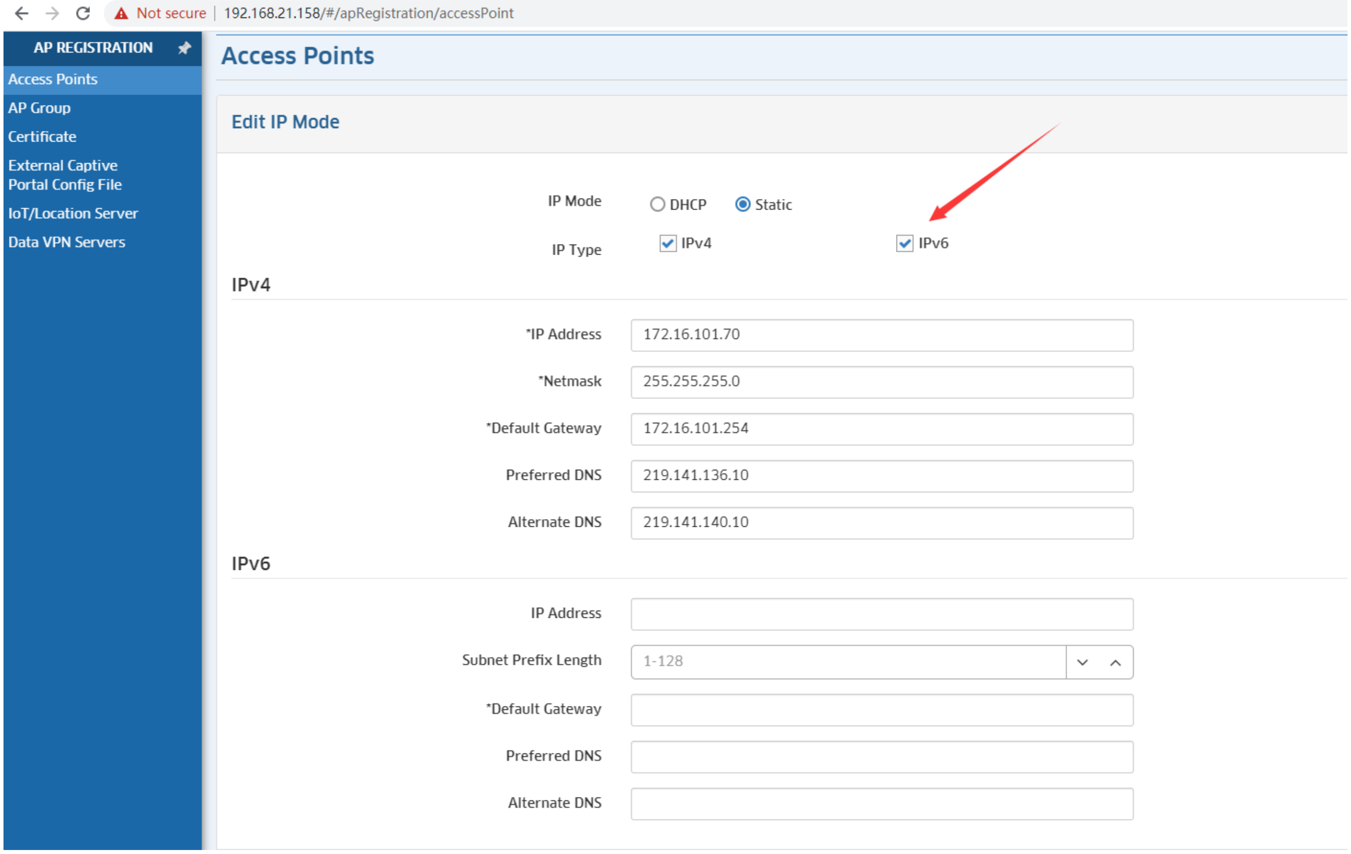
Gateway: x.x.x.x

**IPV6**

IP Address: X:X:X:X:X:X:X:X

Subnet prefix length: 0-128

**OV UI**



Not secure | 192.168.21.158/#/apRegistration/accessPoint

Access Points

Edit IP Mode

IP Mode ○ DHCP ● Static

IP Type ☑ IPv4 ☑ IPv6

IPv4

*IP Address: 172.16.101.70

*Netmask: 255.255.255.0

*Default Gateway: 172.16.101.254

Preferred DNS: 219.141.136.10

Alternate DNS: 219.141.140.10

IPv6

IP Address:

Subnet Prefix Length: 1-128

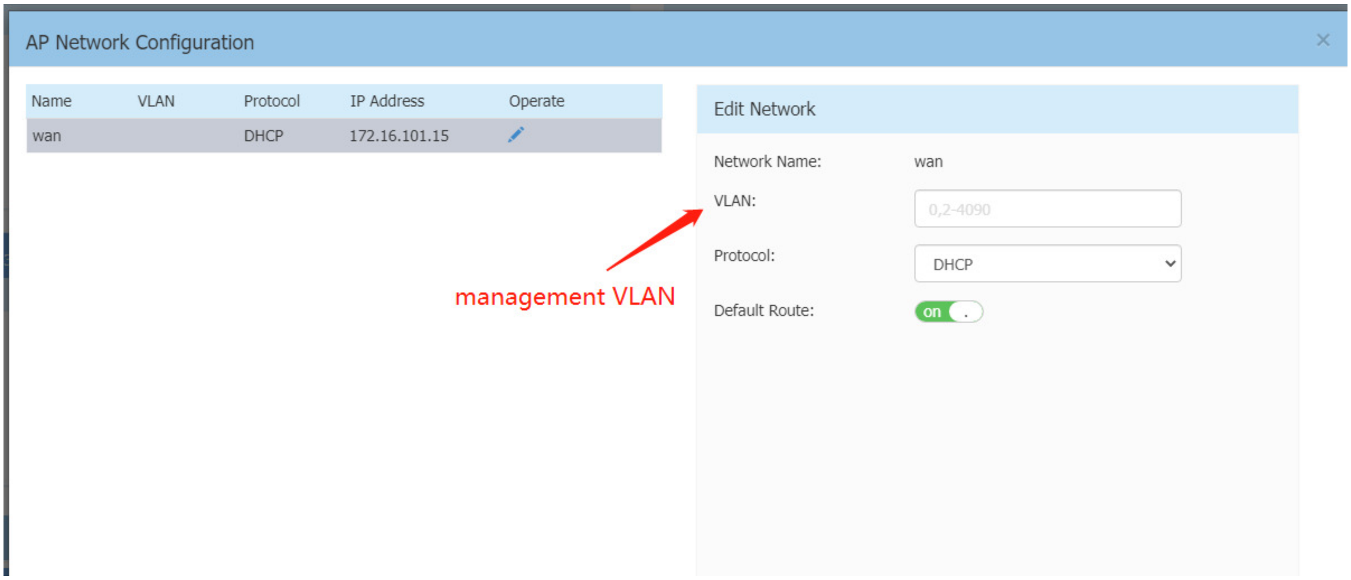
*Default Gateway:

Preferred DNS:

Alternate DNS:

## Management VLAN

Since 4.0.1 Release AP supports management VLAN, customers can configure management VLAN-ID in AP UI



AP Network Configuration

| Name | VLAN | Protocol | IP Address | Operate |
|---|---|---|---|---|
| wan | | DHCP | 172.16.101.15 | |

Edit Network

Network Name: wan

VLAN: 0,2-4090

Protocol: DHCP

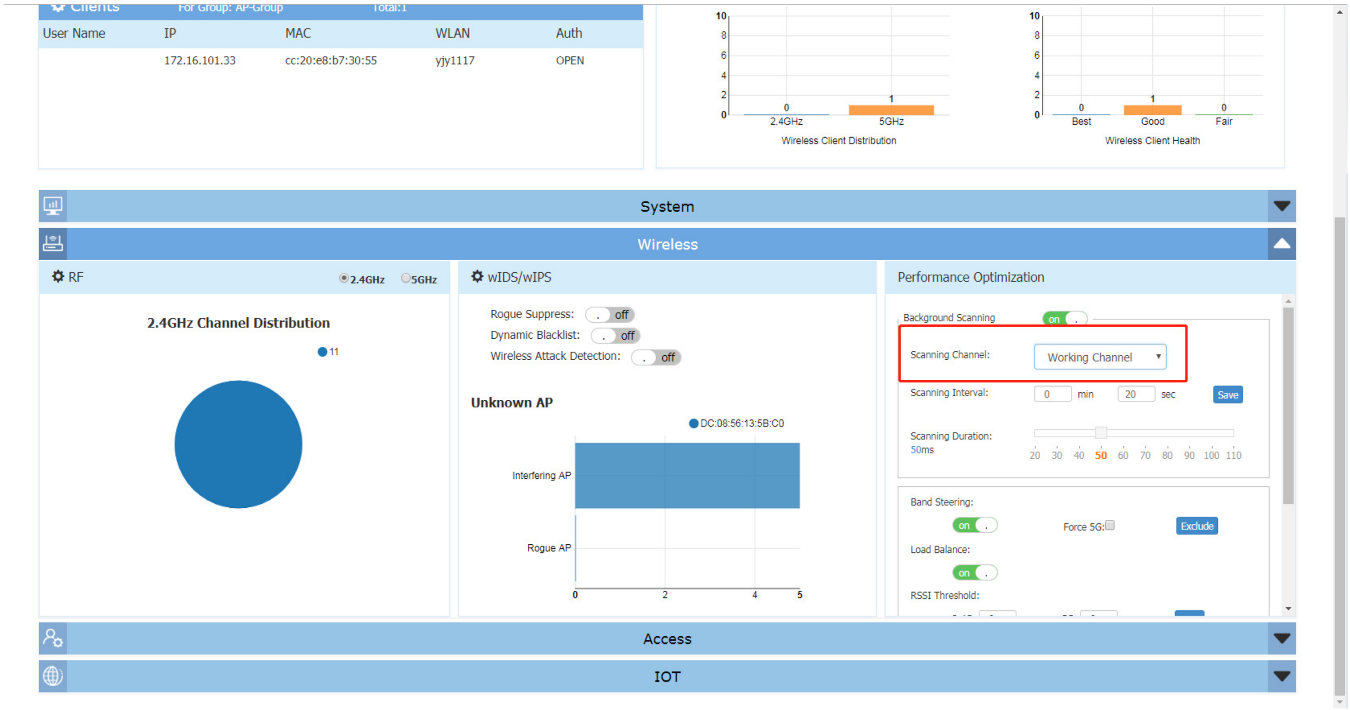
Default Route: on

management VLAN

## Scanning channel

Scanning channel configuration is used to specify scanning works on current channel or all channels.

### Web UI



Clients For Group: AP-Group Total:1

| User Name | IP | MAC | WLAN | Auth |
|---|---|---|---|---|
| | 172.16.101.33 | cc:20:e8:b7:30:55 | yjy1117 | OPEN |

Rogue Suppress: off

Dynamic Blacklist: off

Wireless Attack Detection: off

Performance Optimization

Background Scanning: on

Scanning Channel: Working Channel

Scanning Interval: 0 min 20 sec Save

Scanning Duration: 50ms

Band Steering: on

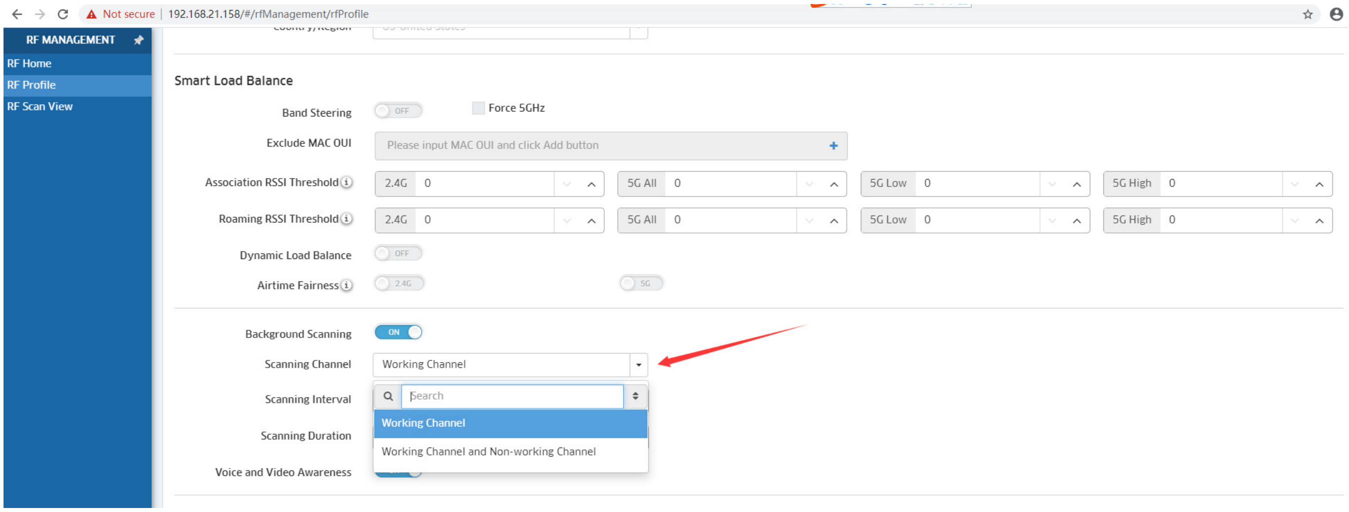
Force 5G: □

Exclude

Load Balance: on

RSSI Threshold:

### OV UI



192.168.21.158/#/rfManagement/rfProfile

RF MANAGEMENT
- RF Home
- RF Profile
- RF Scan View

Smart Load Balance

Band Steering: OFF □ Force 5GHz

Exclude MAC OUI: Please input MAC OUI and click Add button

| | | | | |
|---|---|---|---|---|
| Association RSSI Threshold | 2.4G 0 | 5G All 0 | 5G Low 0 | 5G High 0 |
| Roaming RSSI Threshold | 2.4G 0 | 5G All 0 | 5G Low 0 | 5G High 0 |

Dynamic Load Balance: OFF

Airtime Fairness: 2.4G 5G

Background Scanning: ON

Scanning Channel: Working Channel
- Working Channel
- Working Channel and Non-working Channel

Scanning Interval

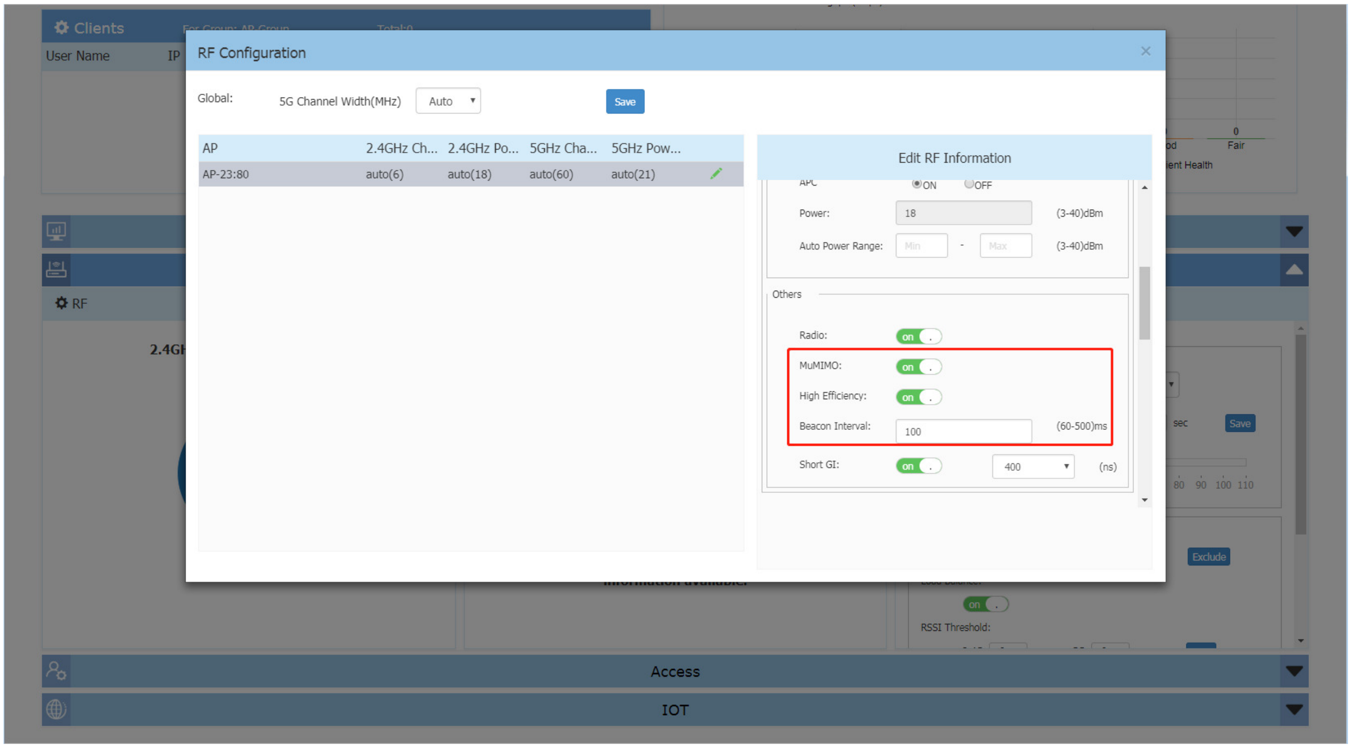
Scanning Duration

Voice and Video Awareness

## Additional RF configuration

We add 3 new RF configurations per band (MU-MIMO, High Efficiency and Beacon Interval), please refer to the screenshot below.

### Web UI



RF Configuration

Global: 5G Channel Width(MHz) Auto Save

| AP | 2.4GHz Ch... | 2.4GHz Po... | 5GHz Cha... | 5GHz Pow... |
|---|---|---|---|---|
| AP-23:80 | auto(6) | auto(18) | auto(60) | auto(21) |

Edit RF Information

APC: ● ON ○ OFF

Power: 18 (3-40)dBm

Auto Power Range: Min - Max (3-40)dBm

Others

Radio: on

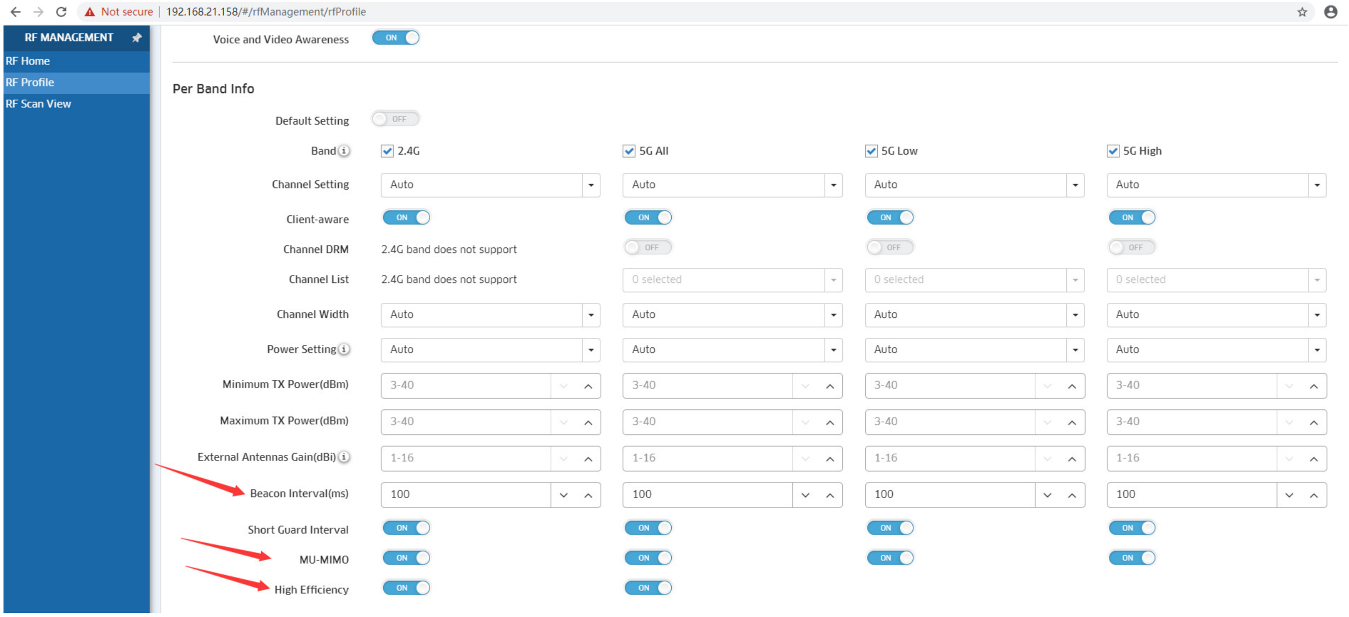
MuMIMO: on

High Efficiency: on

Beacon Interval: 100 (60-500)ms

Short GI: on 400 (ns)

### OV UI



Voice and Video Awareness: ON

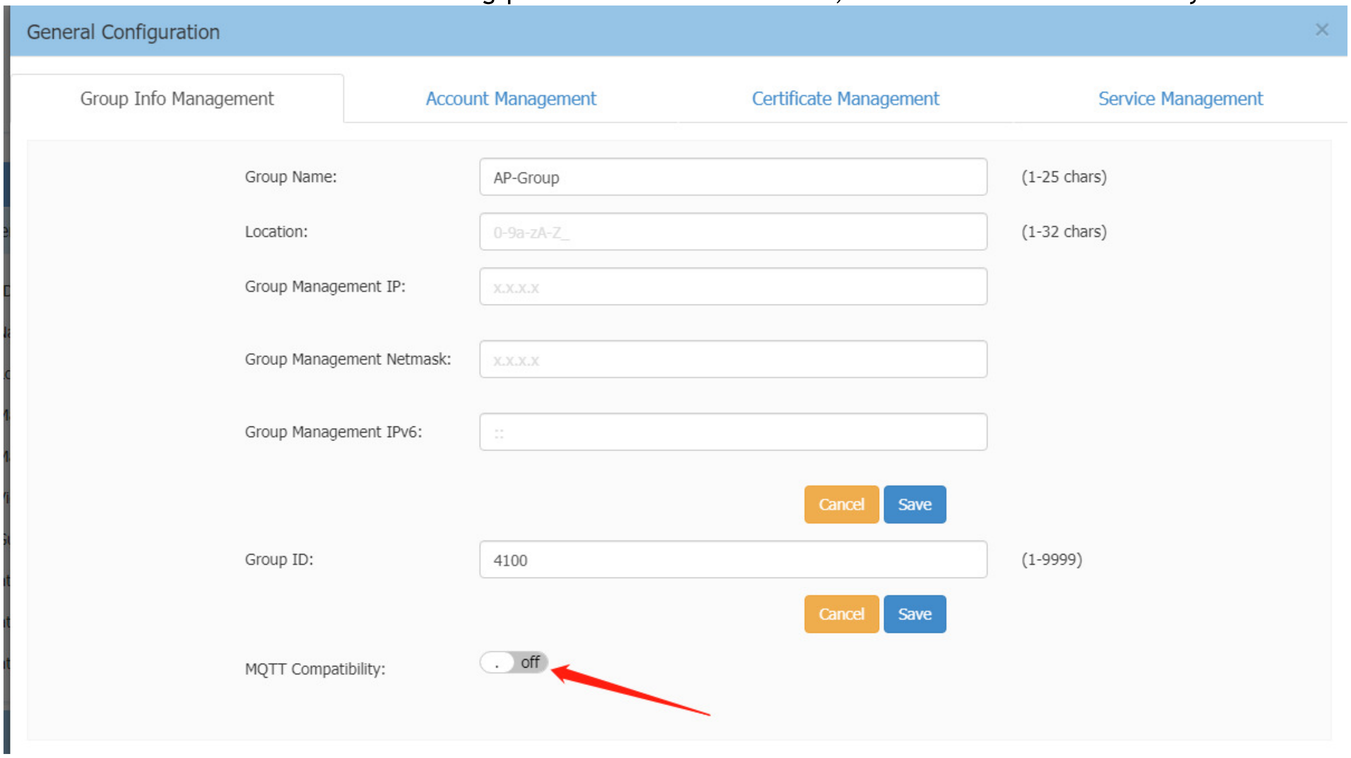
Per Band Info

Default Setting: OFF

| | | | | |
|---|---|---|---|---|
| Band | ☑ 2.4G | ☑ 5G All | ☑ 5G Low | ☑ 5G High |
| Channel Setting | Auto | Auto | Auto | Auto |
| Client-aware | ON | ON | ON | ON |
| Channel DRM | 2.4G band does not support | OFF | OFF | OFF |
| Channel List | 2.4G band does not support | 0 selected | 0 selected | 0 selected |
| Channel Width | Auto | Auto | Auto | Auto |
| Power Setting | Auto | Auto | Auto | Auto |
| Minimum TX Power(dBm) | 3-40 | 3-40 | 3-40 | 3-40 |
| Maximum TX Power(dBm) | 3-40 | 3-40 | 3-40 | 3-40 |
| External Antennas Gain(dBi) | 1-16 | 1-16 | 1-16 | 1-16 |
| Beacon Interval(ms) | 100 | 100 | 100 | 100 |
| Short Guard Interval | ON | ON | ON | ON |
| MU-MIMO | ON | ON | ON | ON |
| High Efficiency | ON | ON | | |

## MQTT Compatibility

In 4.0.1 Release MQTT tunnel is encrypted to enhance security, for compatibility, MQTT Compatibility must be set to "on" if cluster contains AP running previous version. Otherwise, cluster cannot form correctly.

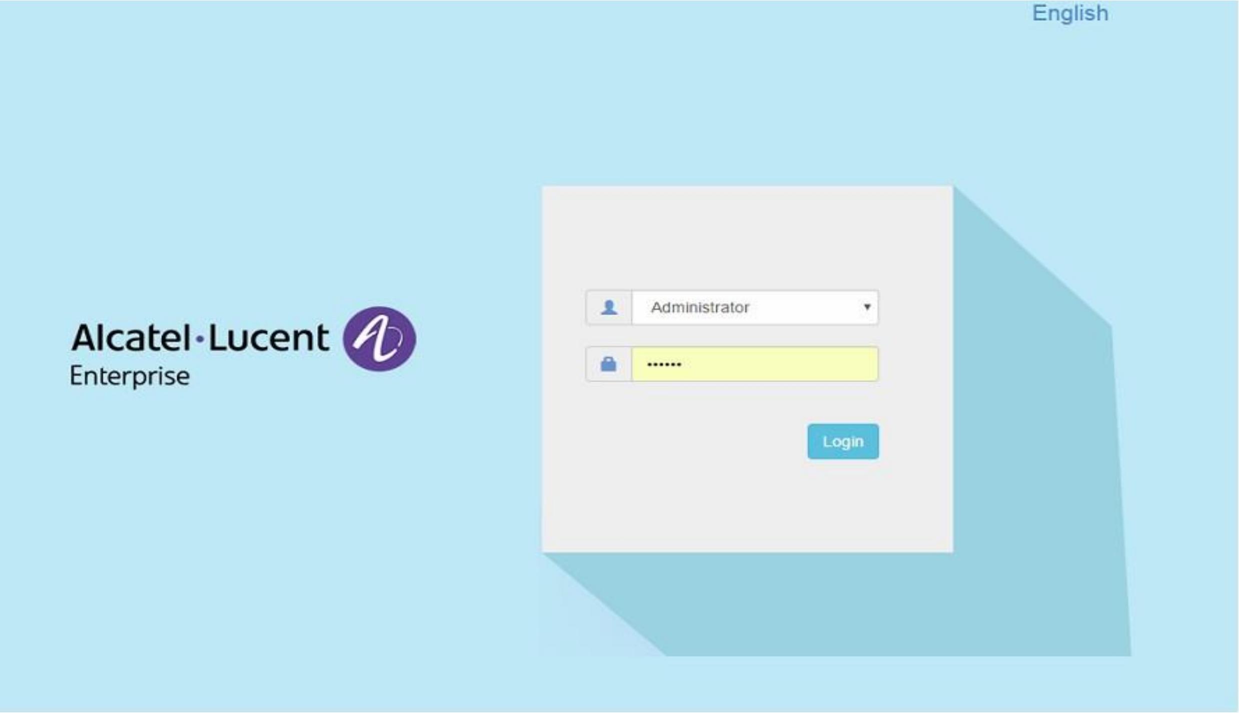


| | | |
|---|---|---|
| Group Name: | AP-Group | (1-25 chars) |
| Location: | 0-9a-zA-Z_ | (1-32 chars) |
| Group Management IP: | x.x.x.x | |
| Group Management Netmask: | x.x.x.x | |
| Group Management IPv6: | :: | |
| Group ID: | 4100 | (1-9999) |
| MQTT Compatibility: | off | |

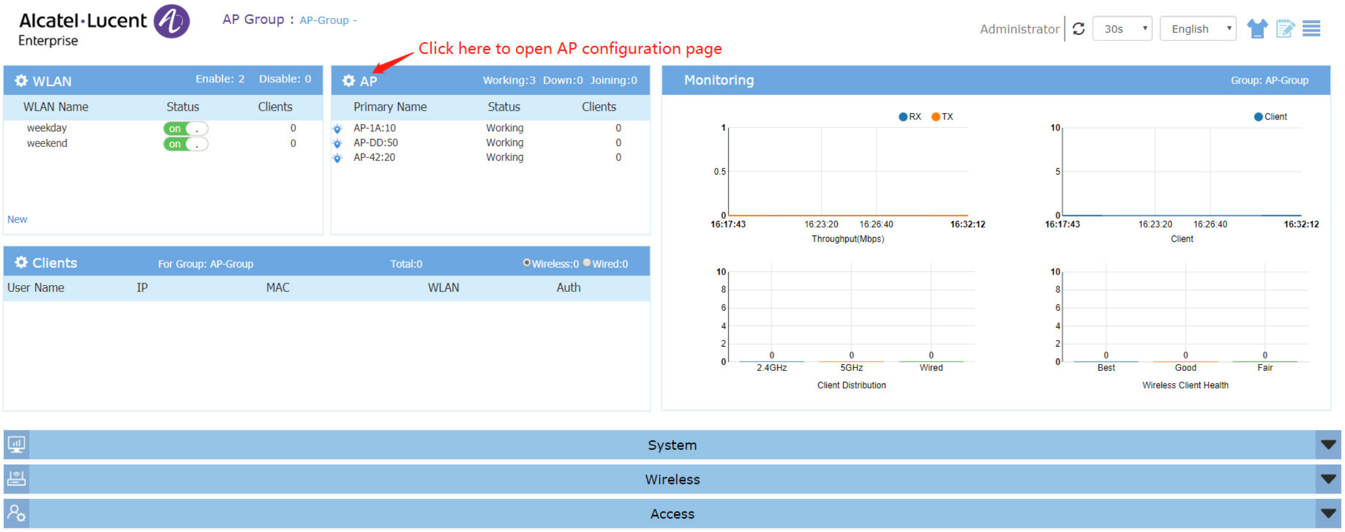
# Appendix – Upgrade Instructions

## 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.



Click here to open AP configuration page

WLAN Enable: 2 Disable: 0

| WLAN Name | Status | Clients |
|---|---|---|
| weekday | on | 0 |
| weekend | on | 0 |

New

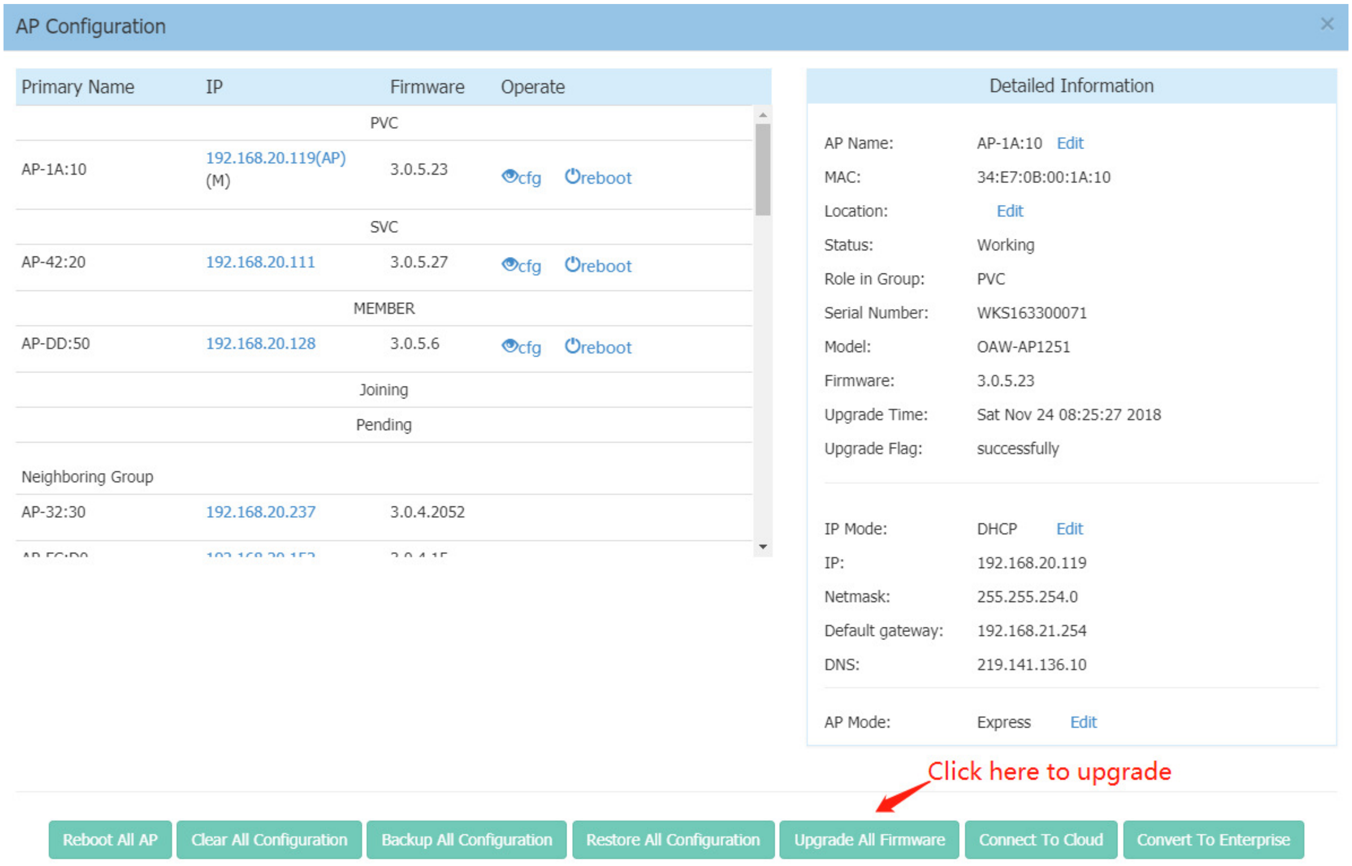
AP Working:3 Down:0 Joining:0

| Primary Name | Status | Clients |
|---|---|---|
| AP-1A:10 | Working | 0 |
| AP-DD:50 | Working | 0 |
| AP-42:20 | Working | 0 |

Clients For Group: AP-Group Total:0 ○Wireless:0 ●Wired:0

| User Name | IP | MAC | WLAN | Auth |
|---|---|---|---|---|

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



AP Configuration

| Primary Name | IP | Firmware | Operate |
|---|---|---|---|
| | | PVC | |
| AP-1A:10 | 192.168.20.119(AP)<br>(M) | 3.0.5.23 | cfg reboot |
| | | SVC | |
| AP-42:20 | 192.168.20.111 | 3.0.5.27 | cfg reboot |
| | | MEMBER | |
| AP-DD:50 | 192.168.20.128 | 3.0.5.6 | cfg reboot |
| | | Joining | |
| | | Pending | |
| Neighboring Group | | | |
| AP-32:30 | 192.168.20.237 | 3.0.4.2052 | |

Detailed Information

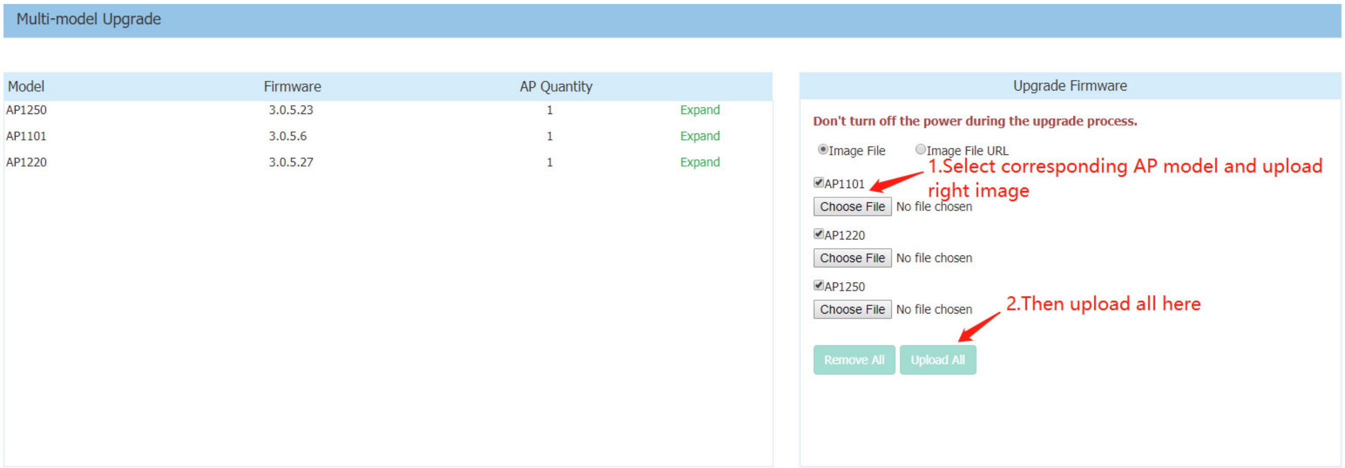
AP Name: AP-1A:10 Edit
MAC: 34:E7:0B:00:1A:10
Location: Edit
Status: Working
Role in Group: PVC
Serial Number: WKS163300071
Model: OAW-AP1251
Firmware: 3.0.5.23
Upgrade Time: Sat Nov 24 08:25:27 2018
Upgrade Flag: successfully

IP Mode: DHCP Edit
IP: 192.168.20.119
Netmask: 255.255.254.0
Default gateway: 192.168.21.254
DNS: 219.141.136.10

AP Mode: Express Edit

Click here to upgrade

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



Multi-model Upgrade

| Model | Firmware | AP Quantity | |
|---|---|---|---|
| AP1250 | 3.0.5.23 | 1 | Expand |
| AP1101 | 3.0.5.6 | 1 | Expand |
| AP1220 | 3.0.5.27 | 1 | Expand |

Upgrade Firmware

Don't turn off the power during the upgrade process.

● Image File ○ Image File URL

☑AP1101

Choose File No file chosen

☑AP1220

Choose File No file chosen

☑AP1250

Choose File No file chosen

1.Select corresponding AP model and upload right image

2.Then upload all here

## 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<br>+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://businessportal.al-enterprise.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.