Release Notes

OmniAccess Stellar AP

AWOS Release 5.0.1 – GA Release

These release notes accompany the OmniAccess Stellar Operating System (AWOS) Release 5.0.1 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.

Release Notes
Part Number 033771-10 Rev. A

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://myportal.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://myportal.al-enterprise.com/.

Hardware Supported

- AP1101, AP1201, AP1220 series, AP1230 series, AP1251, AP1251-RW-B, AP1261-RW-B, AP1201H, AP1201L, AP1201HL, AP1320 series, AP1360 series, AP1201BG, AP1301, AP1301H, AP1311, AP1331, AP1351, AP1451, AP1431, AP1411, AP1511.

Supported Mode

- The AWOS 5.0.1.27 is ONLY applicable for Express mode and OmniVista 2500 and OmniVista Cirrus 4, can NOT be used for OmniVista Cirrus 10.

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
MLO Configuration	AP1511
Enable/Disable PSE POE of AP1301H and AP1360 through UI	AP1301H, AP1360
Secondary RADIUS Server on Express	All Wi-Fi7 Wi-Fi 6/6E products: AP1320 series, AP1360 series, AP1301, AP1301H, AP1311, AP1331, AP1351, AP1451, AP1431, AP1411, AP1511
Enhance Stellar Client-Context	All Wi-Fi7 Wi-Fi 6/6E products: AP1320 series, AP1360 series, AP1301, AP1301H, AP1311, AP1331, AP1351, AP1451, AP1431, AP1411, AP1511
Certificate Renewal in OV2500 and OVC	ALL
ICMP Policy Condition Support Missing in Unified Policy	ALL
AWOS support for OVE L3 HA	All Wi-Fi7 Wi-Fi 6/6E products: AP1320 series, AP1360 series, AP1301, AP1301H, AP1311, AP1331, AP1351, AP1451, AP1431, AP1411, AP1511
AWOS Support for Hotspot2.0 with Ameriband Parameters	All Wi-Fi7 Wi-Fi 6/6E products: AP1320 series, AP1360 series, AP1301, AP1301H, AP1311, AP1331, AP1351, AP1451, AP1431, AP1411, AP1511
FDB Update with ARP/GARP Enabled by Default in all Modes	ALL
Load Balancing with Roaming Devices	ALL
AWOS Must Completely Stop the AP Management Web Server	ALL
AWOS Support "AP Location" in Suboption2 in DHCP Option 82	All Wi-Fi7 Wi-Fi 6/6E products: AP1320 series, AP1360 series, AP1301, AP1301H, AP1311, AP1331, AP1351, AP1451, AP1431, AP1411, AP1511
AWOS BLE IoT Support Enable "Discover all devices"	Except AP1301, AP1221, AP1230, AP1250, AP1101, AP1201L, AP1201HL, AP1201H, AP1261-RW-B, AP1301L
AWOS BLE IoT sSupport "iBeacon & RawData"	Except AP1301, AP1221, AP1230, AP1250, AP1101, AP1201L, AP1201HL, AP1201H, AP1261-RW-B, AP1301L
OV4/AWOS Support 6GHz Band at RF Profile for Costa Rica, Guatemala, Argentina, and Dominican Republic.	AP1411, AP1431, AP1451, AP1511
MAC-Authentication-with-IoT-client-profile-check	ALL
Syslog message always show "Notice" in Severity on Syslog Server	ALL

Fixed Problem Reports Between Build 4.0.7MR6 and 5.0.1.27

PR	Description
ALEISSUE-1773 Case number: 00729492	**Summary:** The WIPS functionality is not performing as expected with the Stellar AP. **Explanation:** 1. Change the WIPS suppression message interval to 1 second 2. Simulate bidirectional sending of disassociation request messages Click for additional information
ALEISSUE-1798 Case number: 00658943	**Summary:** AP1101 rebooted due to kernel panic | Kernel panic - not syncing: Fatal exception in interrupt. **Explanation:** Chipset vendor provides two patches for wireless driver to solve this problem. Click for additional information
ALEISSUE-1854 Case number: 00744752	**Summary:** Certificate-based authentication (EAP-TLS) fails. **Explanation:** Modify gso-size to ensure that UDP packets can be properly fragmented and forwarded through the GRE tunnel. Click for additional information
ALEISSUE-1956 Case number: 00770918	**Summary:** Stellar AP1361: eth1 and SFP interface not visible on GUI. **Explanation:** Add eth1 and eth2 interface to the default configuration for AP1361. Click for additional information
ALEISSUE-1954 Case number: 00770720	**Summary:** Request for Remediation of Reported Vulnerabilities (Stellar AP) TCP ports 8883 and 1884. **Explanation:** Fix related vulnerabilities. Click for additional information
ALEISSUE-1964 Case number: 00773223	**Summary:** Stellar AP1321-1301: After rebooting, the Ap restart in loop. **Explanation:** Remove redundant and non-valuable power supply from lldp module. 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
WCF	WCF feature is not supported when WLAN Client is running behind an HTTP Proxy.	No workaround.
WCF	WCF feature is not supported when WLAN Client is using mobile applications, there is no restrictions (packets are not dropped by AP, no redirection to Restricted Web page).	No workaround.
Management VLAN	When the management VLAN is enabled, setting the static IP may fail.	The static IP must be set first, and then enable the management VLAN.
DPI	[reflexive] configure link tracking. DPI_DROP does not take effect.	After modifying the reflexive, the client needs to go online and offline again, which can return to normal.
AP stateful IPv6 address	The IPv6 address of the dual-stack AP is a stateful address. After configuring the open type of WLAN, to associate the WLAN with the wireless network card of win 7 11n set to single-stack V6, check the network on-off condition of the V6 address.	When you manually configure a V6 address of the same network segment on the client as the gateway address, you can communicate with the same network address.
DPI FTP policy	Create one policy list binding and two policies, results that the user cannot access the FTP.	No workaround.
WCF	WCF does not support L3 roaming scenarios.	No workaround.
Option82	After enabling option82 feature, in some scenarios, user roaming and reacquiring IP addresses can cause a brief broadcast storm.	Will be fixed in future release.
AP1411 Radio Configration	After switching the radio, the previously unused band is set to a disabled state (Express).	Manually enable the band in AP RF.
SNMPv3	Some special characters can cause SNMP communication issues. The special characters include the following: $,",()	Don't using these special characters.
6G wIPS	6G radio does not support wIPS feature.	Will be supported in future release.
mDNS	AP1411/AP1431 does not support mDNS feature.	Will be supported in future release.
DPI	DPI memory leak issue.	Will be fixed in future release.
Mesh	1.If AP working on DFS channel, the client/mesh client can't connect to AP. 2.Create new WLAN on band different from Mesh, will cause reconnect on mesh network.	1.Change the channel to non-DFS channel. 2.Will be fixed in future release.
Captive Portal	The client can access the network without CP authentication in roaming scenarios.	Set a default ARP in Authentication Strategy.
Dynamic VLAN	1. When dynamic VLAN is assigned for client, ACL and Client isolation for wired user will not take effect. 2. When client roaming with dynamic VLAN, client IP may not be displayed on UI.	Will be supported in future release.

	3. Kick off iPhone client, and then connect to WLAN with dynamic VLAN, it can't obtain IP address sometimes, it can be recovered by forgetting the network and connect again. No issue on other type of client.	
Enhanced Open	Modify Enhanced Open WLAN to Open, Client can't obtain IP address, this issue happens only on AP1101.	Disable/Enable WLAN. Will be fixed in future release.
Static WEP	Wireless client can still connect to WLAN when configured index value different from the WLAN's index.	Will be fixed in future release.
Wired Client	For devices which supports downlink port, there are issues below: 1. Wired Client will go offline and online when modify Wireless WLAN or Downlink port config. 2. Plug and unplug Wired Client to OAW-AP1301H and move it to other ports of Switches in the same LAN, then plug it back to OAW-AP1301H, will cause FDB learn error in rare cases. Disable and enable the corresponding port can recover.	Will be fixed in future release.
DPI	The memory of AP1431/AP1411 may suddenly decrease, causing the AP to reboot due to memory issues after enabling DPI function.	Disable DPI for AP1431/AP1411. Will be fixed in future release.
Client Isolation	If the wired client is configured with a static IP, the wired isolation function for this client will not take effect	Will be fixed in future release.
Roaming	AP will not resend client information to its neighbors after they restart for some reason. This can lead to some roaming failure issues.	Will be fixed in future release.
DRM	DRM will not trigger active scanning if the current channel is not in the user configured channel list. This will lead to uneven distribution of channels.	Will be fixed in future release.
Syslog	The multi syslog server function for AP1511 is not effective, which can result in the backup server being unable to receive syslog when the primary server is unavailable.	Will be fixed in future release.
Wi-Fi 7 MLO	Simultaneously enabling MLO and 11R roaming will cause the client's 11R roaming to fail for AP1511.	Will be fixed in future release.
Wi-Fi 7 MLO	When the MLO client accesses AP1511, the Rx rate/Tx rate values in the throughput graph of the monitoring module are incorrect.	Will be fixed in future release.
Mesh	The AP1361 mesh root traffic stuck, the non-root AP can't connect to root.	Reboot mesh root AP. Will be fixed in future release.
AP freezing	The AP1221 freezing and getting down.	Will be fixed in future release.

Limitations and/or Dependencies

Feature	AP Model	Limitations and/or Dependencies
WCF	All	1. WCF does not support http over proxy scenario. 2. WCF does not support blocking mobile applications access. Client's packets are not restricted (packet not dropped by AP, no redirection to Restricted Web Page) 3. WCF does not support RAP scenario. 4. When using Iphone roaming between Aps, reject page can't be redirected when using Safari, but it works ok for other browser such as Chrome 5. If the mobile device has already cached the DNS for the corresponding URL, the WCF functionality will not take effect. 6. WCF Feature is not supported when WLAN Client enabled secure DNS (DoT or DoH).
HTTPs CP over proxy	All	For iOS does not support to configure URL to bypass the proxy, this function does not work on iOS devices.
AP 802.1x client	All	Wireless clients can't connect to internet on untag VLAN with AOS switch due to AOS switch treat all untag devices as 802.1x client.
Wired Port	AP1201HL	1. AP1201HL switches to a Group with downlink configuration, wired client cannot access it. 2. AP1201HL enables trust tag and option 82, wired client may not obtain IP address.
DRM	All	In some cases, when the channel utilization reaches more than 90%, the channel does not switch automatically, which seriously affects the user experience.
IGMP Snooping	All Stellar Wi-Fi 6 AP Models	For 11AX devices, if there is no multicast querier in the environment, the conversion from multicast to unicast may fail. We recommend that the switch of IGMP Snooping feature be turned on by default.
Mesh	All	Multicast to unicast is not supported in Mesh mode.
DPI	AP1201/ AP1220 series/ 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.
Bypass VLAN	AP1201H/ AP1201HL	If the bypass VLAN function is enabled, setting VLAN id A, and setting the management VLAN to tag VLAN id is also A, which will cause the AP itself to be inaccessible and affect the operation of AP. Therefore, there is a restriction here that the tag for managing VLAN cannot be the same as bypass.
mDNS	AP1201H/ AP1201HL /AP1261-RW-B	AP1201H/1201HL/AP1261-RW-B Downlink Terminal does not support mDNS message forwarding.
Show device name	All	When some clients connect to wlan, there is no option12 field in the dhcp message, so its hostname cannot be displayed.
Management VLAN Static IP LACP	AP1351/AP1451	When configure LACP + Management VLAN + Static IP for AP1351, the network will not be reachable after AP reboot if LACP aggregated link is formed, the workaround of this issue should be disable LACP on switch side.
Link aggregation	All	Link aggregation with management VLANs has a certain probability of failure.
Link aggregation	AP1351	There is very low probability on AP1351 that ethernet PHY fail to receive messages in the scenario of link aggregation.
ALEISSUE-1294	All	This improvement might cause some lower version of SSH clients cannot connect to Stellar AP running this new build, upgrade SSH client version will avoid this problem.
ALEISSUE-1343	AP1201H(L)	VLAN 4090-4094 is not allowed configured.
11K	Aps without scan radio	To make sure 11k function work as expected, we should configure the AP background scanning on "Working Channel and Non-working Channel".

Enhanced Open WLAN	All	Mobile devices with Apple iOS do not support OWE, Mobile devices with Android 10 or later support OWE, Computers with Windows 10 version 2004 or later and a wireless adapter that supports OWE.
Client Isolation	All	1. Client A connect to WLAN1 with ARP1, and Client B connect to WLAN2 with ARP2, in this case, If Client A and B needs to communicate to each other, both of the two clients need to be added into whitelist, either one of Clients add into whitelist can't ensure communication between these two clients. 2. In case of Express mode, configure WLAN using internal portal + external MAC authentication, client isolation will not work, suggest using internal or external portal authentication only.
Express mode WLAN number	All	Starting with AWOS 4.0.5 in Express mode, we can create 15 user SSIDs on clusters with following models. • AP1301H, AP132x, AP1331, AP136x, AP1351 & AP1451 If a cluster has any of the following models, limit remains at 7 user SSIDs. • AP1311, AP1301, AP12xx and AP1101
ALEISSUE-1367	All	OV IP was not supposed to be included in the local breakout IP range.
RAP wired downlink port	All Stellar AP with downlink wired port.	1. Trust tag VLAN ID should not be same as Mac VLAN ID. 2. After enabled trust tag, should not use VLAN0. 3. Don't support authentication and policy rules.
Certificate management	All	In express mode, the password of the certificate does not support special characters.
WPA3+11r	All	Some clients do not support WPA3+11r.
Enhanced Open Transition Mode	All	Mobile devices with Android OS connects to Enhanced Open Transition Mode WLAN, sometimes it connects to Open WLAN and sometimes it connects to OWE WLAN, When the issue happens AP works as expected broadcasting beacons with related Transition mode info IE. It is suggested to upgrade mobile devices to latest software version.
USB flash drive	OAW-AP1301	Plug in the USB flash drive, and doing factory reset or OS upgrade, AP can't obtain IP address when AP boots up again, power cycle the device will recover.
Mesh	All	When AP create a new WLAN on MESH AP, the mesh connection will be interrupted briefly.
802.1x	All	AP doesn't support CoA messages in case of 802.1x authentication.
Wi-Fi 7 MLO	AP1511	Clients that support Wi Fi 7 MLO features may not be able to access the MLO 6G radio configured on AP1511 due to compatibility issues.
Wi-Fi 7 MLO	AP1511	WPA3 encryption is required for WLAN configured with MLO.
Wi-Fi 7 MLO	AP1511	Enhanced Open (Transition Mode) WLAN does not support MLO configuration.
Second Radius Server	All	The current logic of switching from backup server to primary server has issues with adapting to radsec scenarios.
Wired Port	All Stellar AP with downlink wired port.	The scenario where the AP wired downstream port is connected to a switch and the switch is connected to a wired PC is currently not supported, which will cause the 1x authentication of the PC under the switch to fail.
BLE	All Stellar AP with BLE chip	When the Discover all Devices/iBeamonRawData configuration is issued to an old version AP, it may result in no scan data reporting due to the AP's inability to parse the configuration.
DPI	AP1511	AP1511 does not support DPI function.

New Software Feature Descriptions

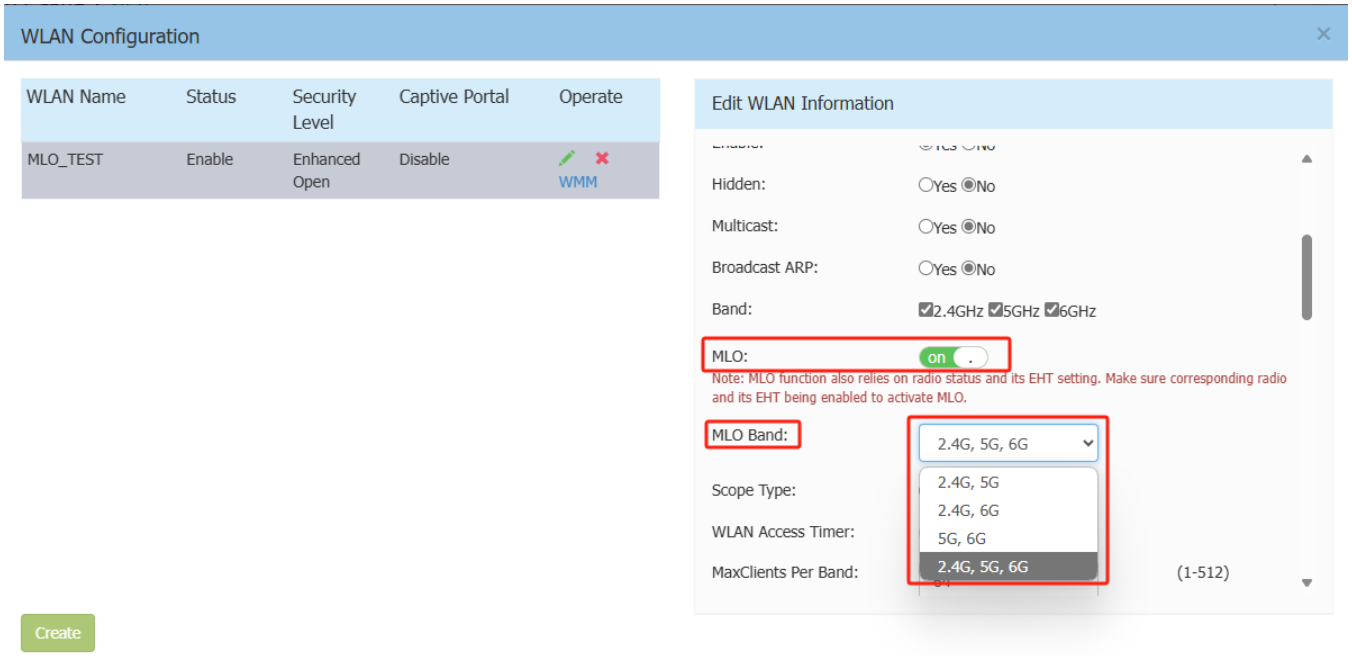
MLO Configuration

MLO is a key technological innovation in Wi-Fi 7, which allows devices to simultaneously utilize multiple frequency bands (such as 2.4GHz, 5GHz, and 6GHz) for data transmission. This multi-band aggregation method enables Wi-Fi 7 devices to significantly improve the efficiency and speed of data transmission.

Among the devices supporting Wi-Fi 7 in AWOS 5.0.1, MLO is an important feature for users. The configuration of MLO in Express mode is mainly reflected in the following aspects:

a) MLO WLAN Configuration

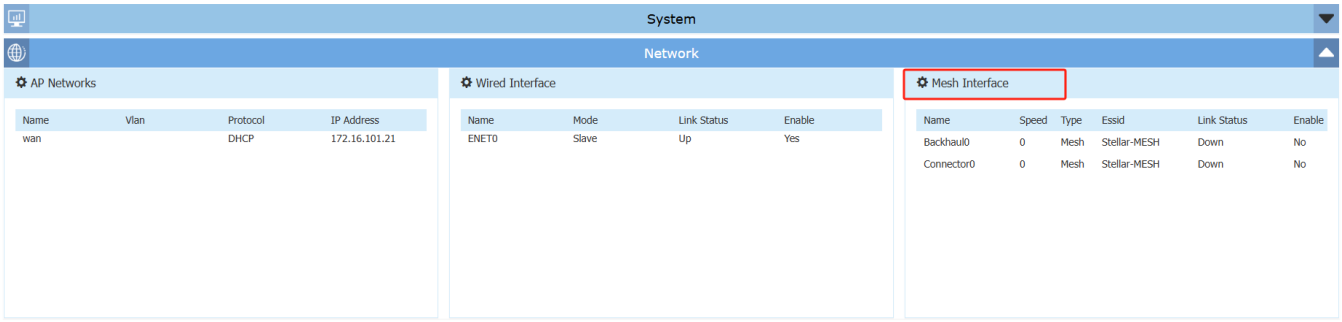
On the regular WLAN creation page, added are two parameters MLO & MLO band for Wi-Fi 7 feature. When multiple bands are selected, MLO can be enabled and two or three bands can be selected to aggregate into MLO bands, as follows:

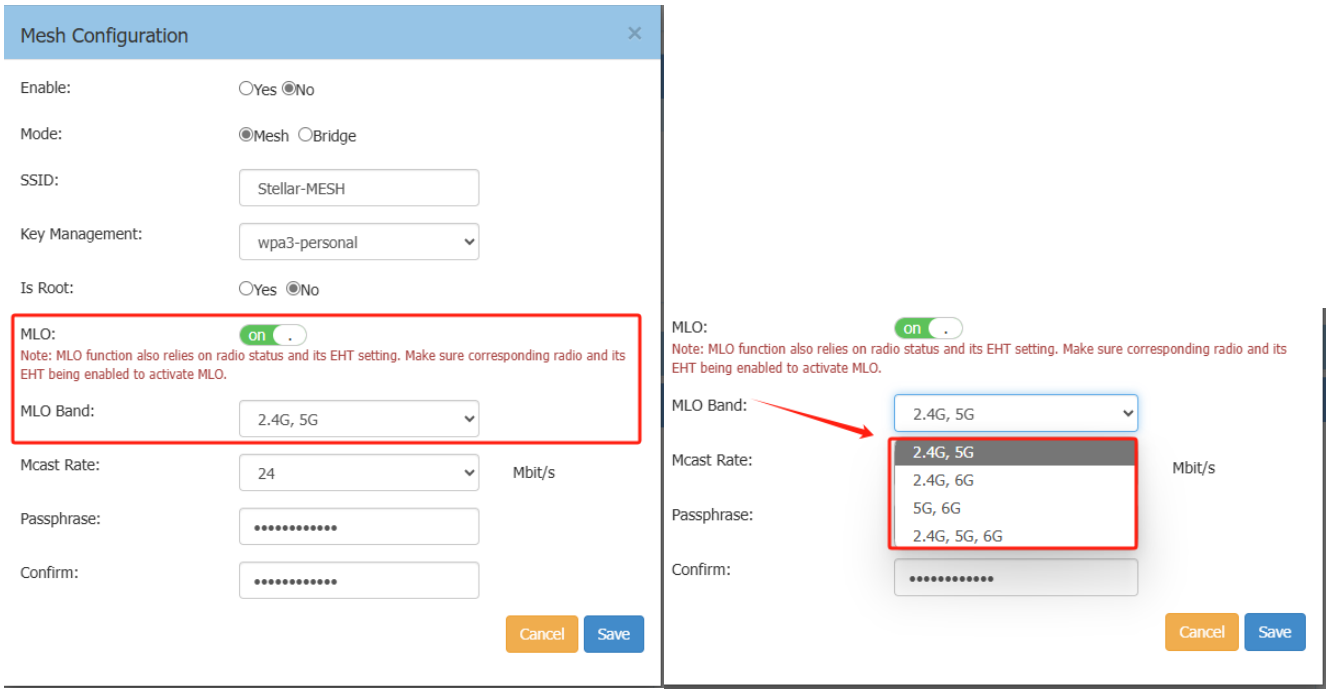


Note: MLO function also relies on radio status and its EHT setting. Make sure corresponding radio and its EHT are enabled to activate MLO.

b) MLO MESH Configuration

On the basic of a regular Mesh configuration page, added are two parameters MLO & MLO band for Wi-Fi 7 feature. When Mesh enables MLO, any combination of 2.4G, 5G, and 6G can be used, with 6G only supporting WPA3 personal encryption. As follows:

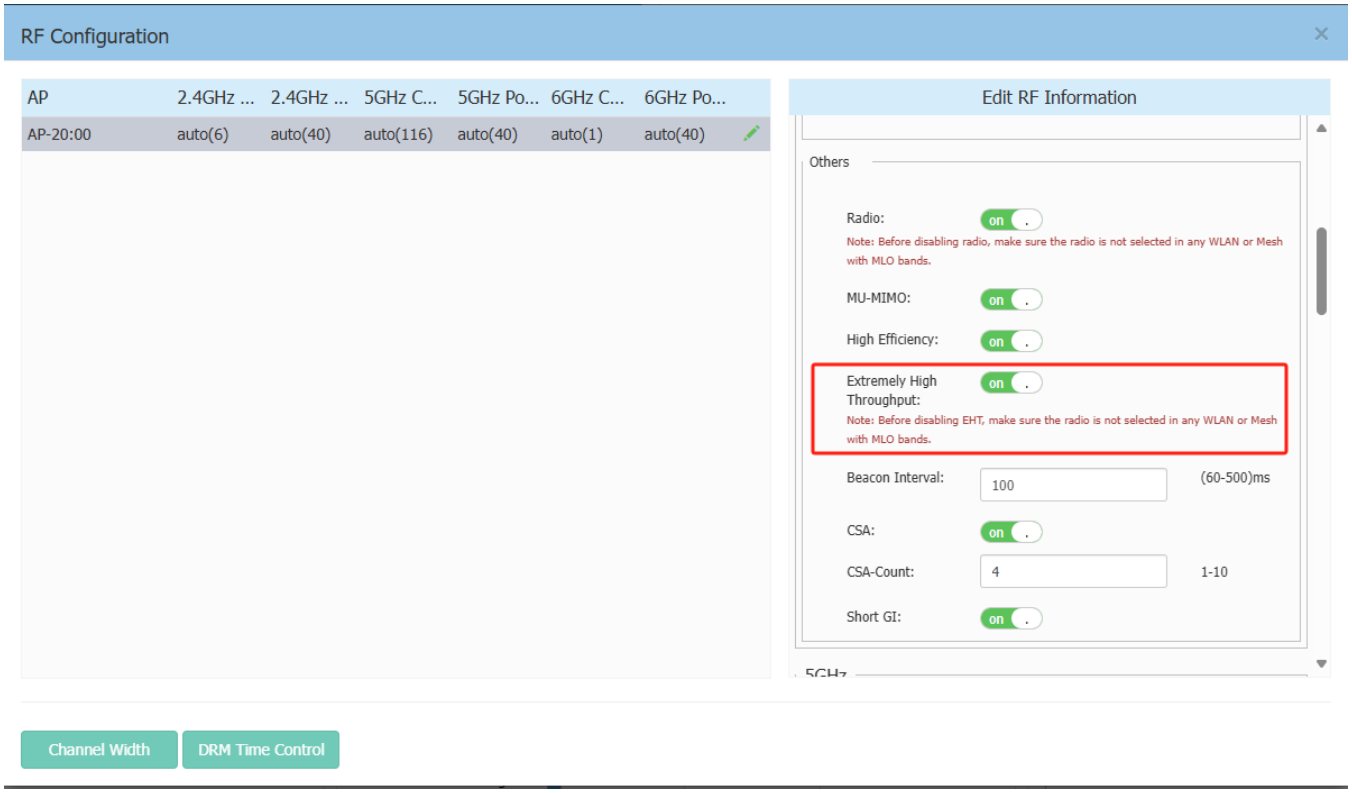




Note: MLO function also relies on radio status and its EHT setting. Make sure corresponding radio and its EHT are enabled to activate MLO.

c) MLO RF Configuration

In the RF configuration, added Extremely High Throughput configuration for Wi-Fi 7 feature. Only when Extremely High Throughput is enabled, MLO related configurations and other Wi-Fi7 feature will take effect.

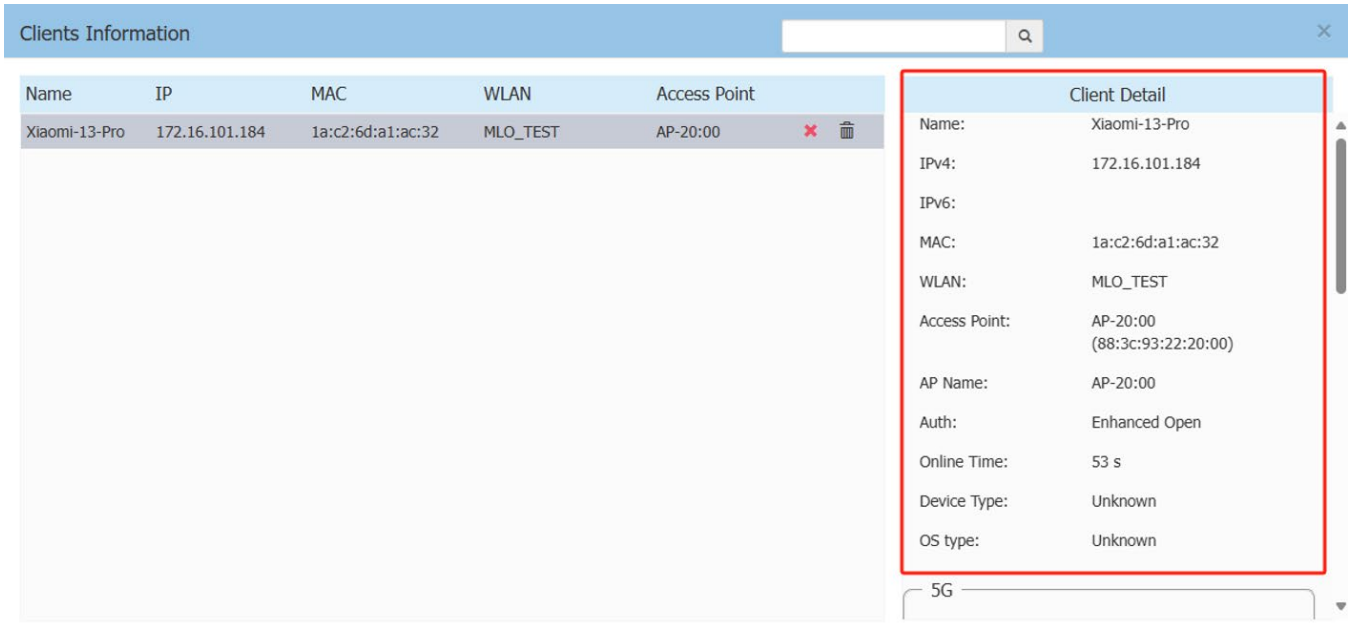


Note: Before disabling Extremely High Throughput, make sure the radio is not selected in any WLAN or Mesh with MLO bands.

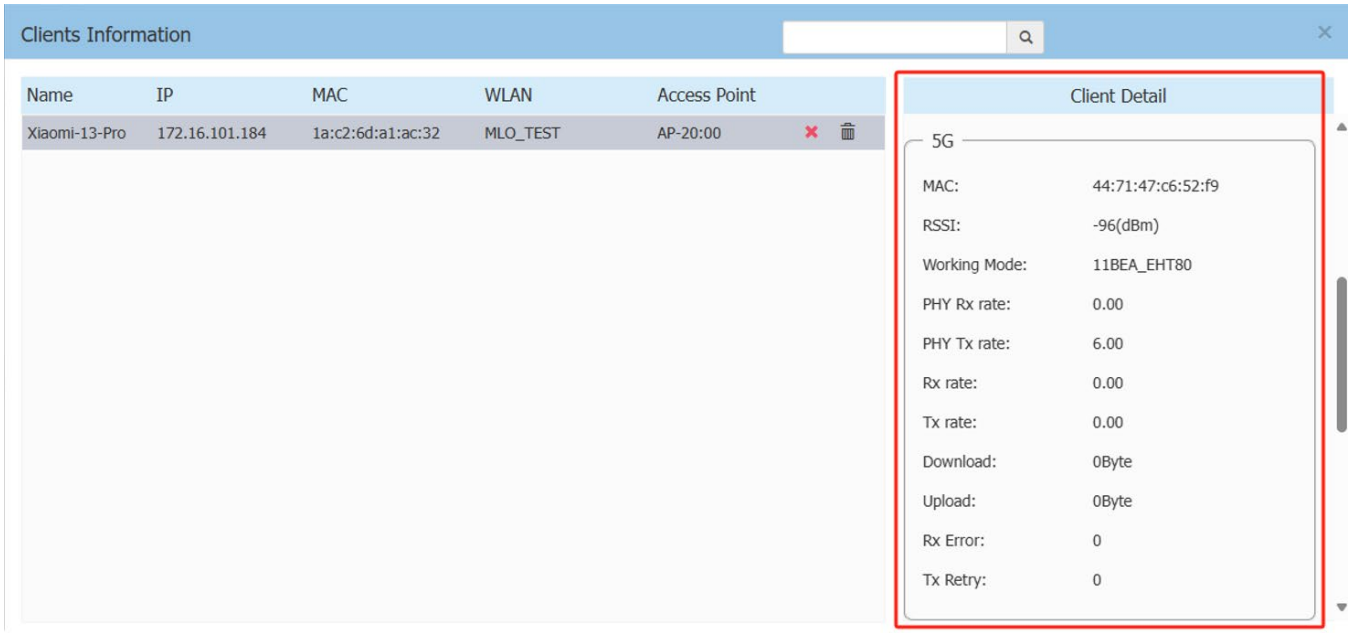
d) MLO Client

When the MLO client connects to the MLO WLAN, the MLD address of the MLO client is displayed in the client information, and detailed address information on the MLO Band will be displayed below.

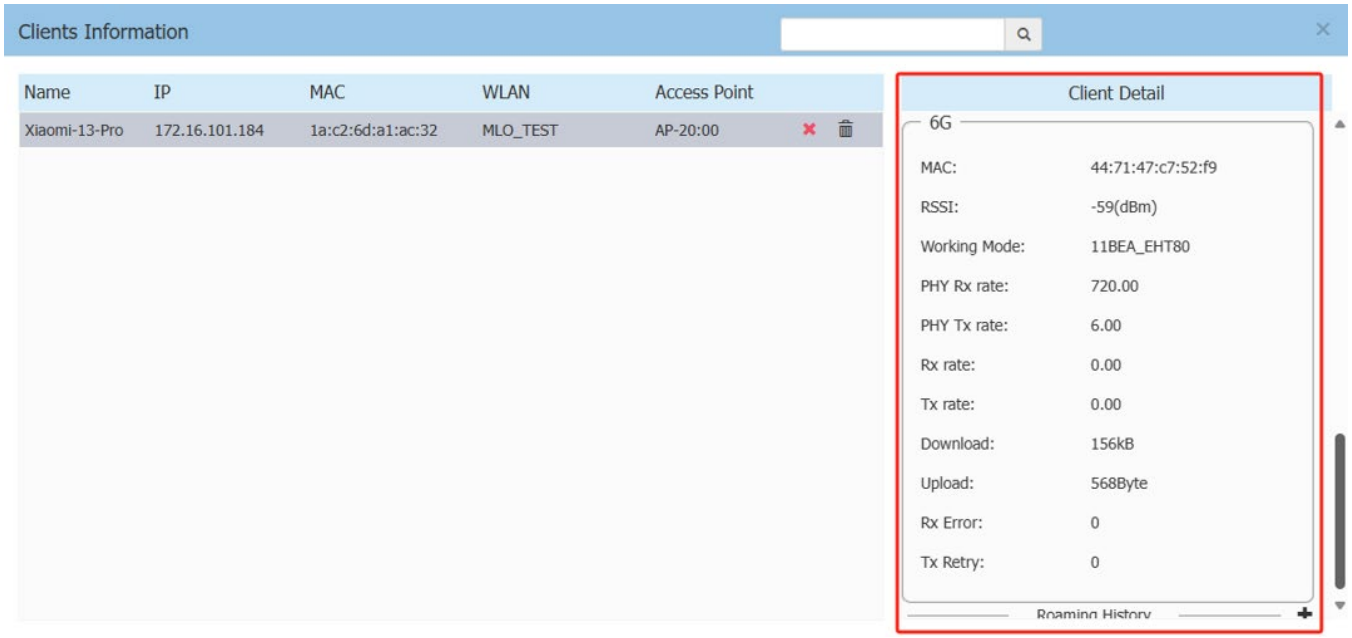
Below is the detailed information of the MLO client on the link using MLD address:



Below is the detailed information of MLO client on 5G band:



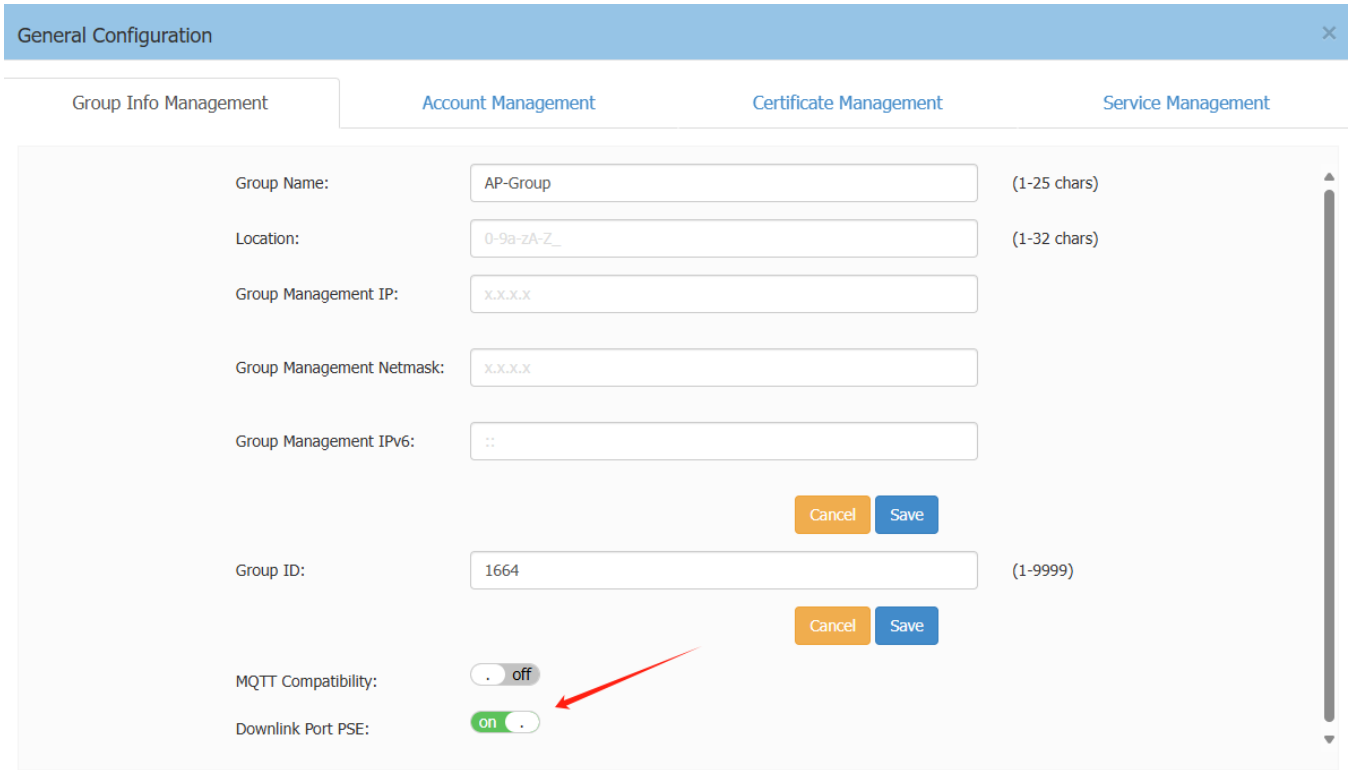
Below is the detailed information of MLO client on 6G band:



Enable/Disable PSE POE of AP1301H and AP1360 Through UI

The enhancement is Express UI to support PSE POE enable/disable on the downlink ports of AP1301H and AP1360 Series.

For the AP1301H and AP1360 series, PSE POE can be turned on and off in Express mode. We can configure it through group configuration, Go to Express UI System, Click General and choose Group Info Management, then enable or disable PSE by clicking the button Downlink Port PSE.



Regarding this feature, there are several guidelines as follows:

1. Considering compatibility, the default PSE configuration on the page is enabled to ensure that customers will not perceive any changes when upgrading from an old build to AOWS 5.0.1 release.

2. This function overlaps with the current physical power supply constraints of AT/AF/BT.

a. When the physical power supply is at full load, the downstream port PSE configuration should be applied.

b. When the physical power supply is limited and PSE is turned off, the downstream PSE configuration can be turned on, but the underlying layer will not take effect.

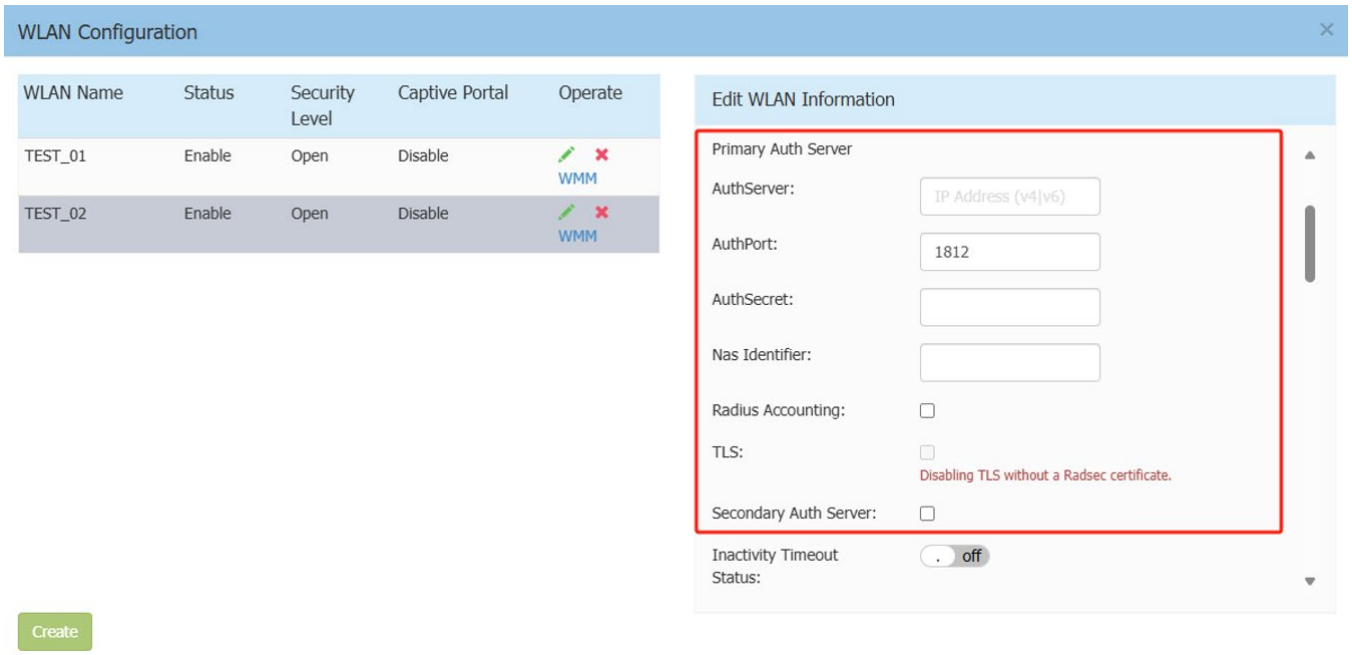
c. When the physical power supply is limited and PSE is enabled, the downstream port PSE configuration should be applied.

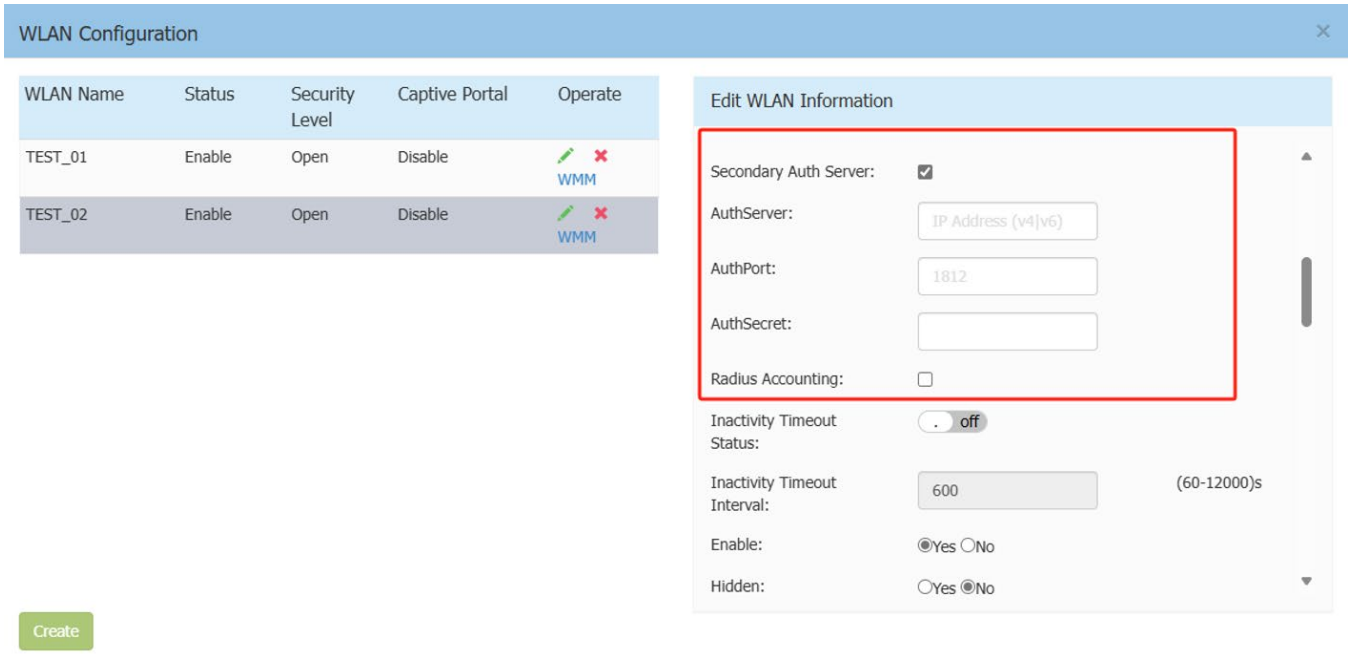
Secondary RADIUS Server on Express

In the previous build, OV mode already supported configuring up to 4 servers, but Express mode only supports configuring a single server.

On AWOS 5.0.1, added a configuration for the Secondary server (Authentication and Accounting) on the Express mode web page.

Go to Express UI WLAN->WLAN Configuration, click Create.





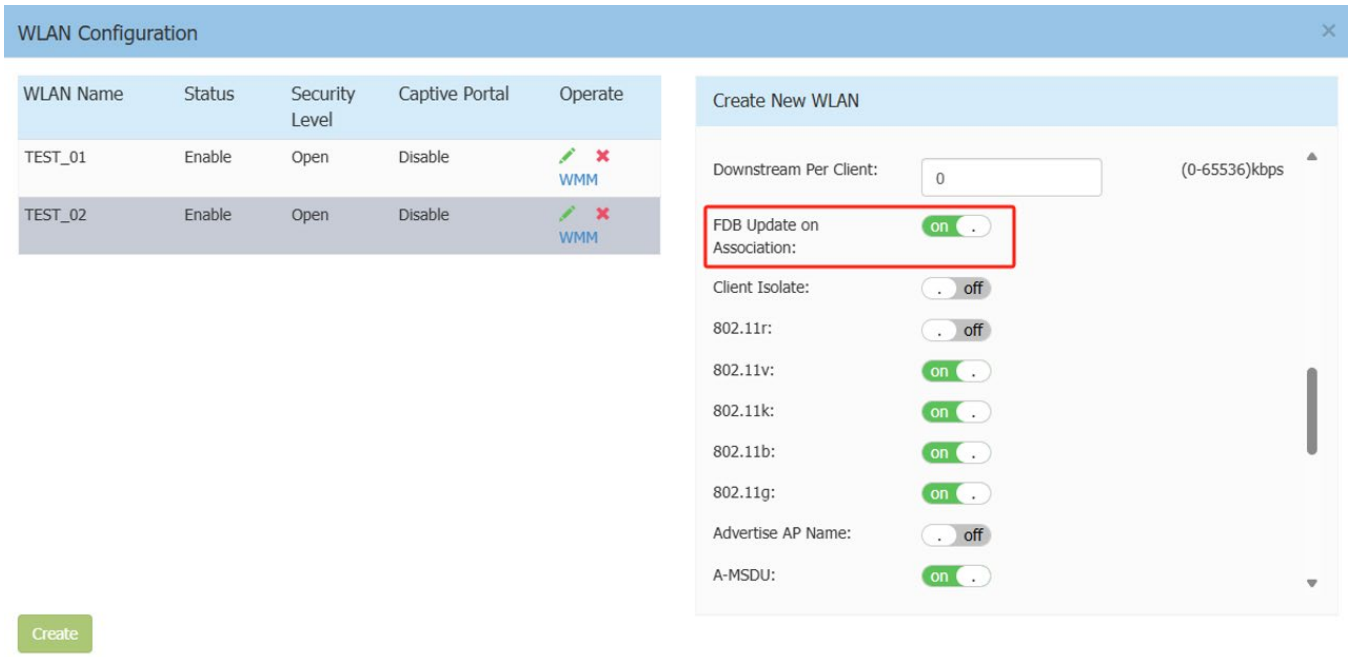
Note: There are several guidelines as follows:

1. TLS functionality only supports Primary Server.

2. The logic and time for switching between primary and backup are consistent with OV mode

FDB Update with ARP/GARP Enabled by Default in All Modes

In previous mechanisms, the FDB Update with ARP feature required administrators to manually enable it. In AWOS 5.0.1, FDB Update with ARP/GARP functionality is enabled by default when creating WLAN.



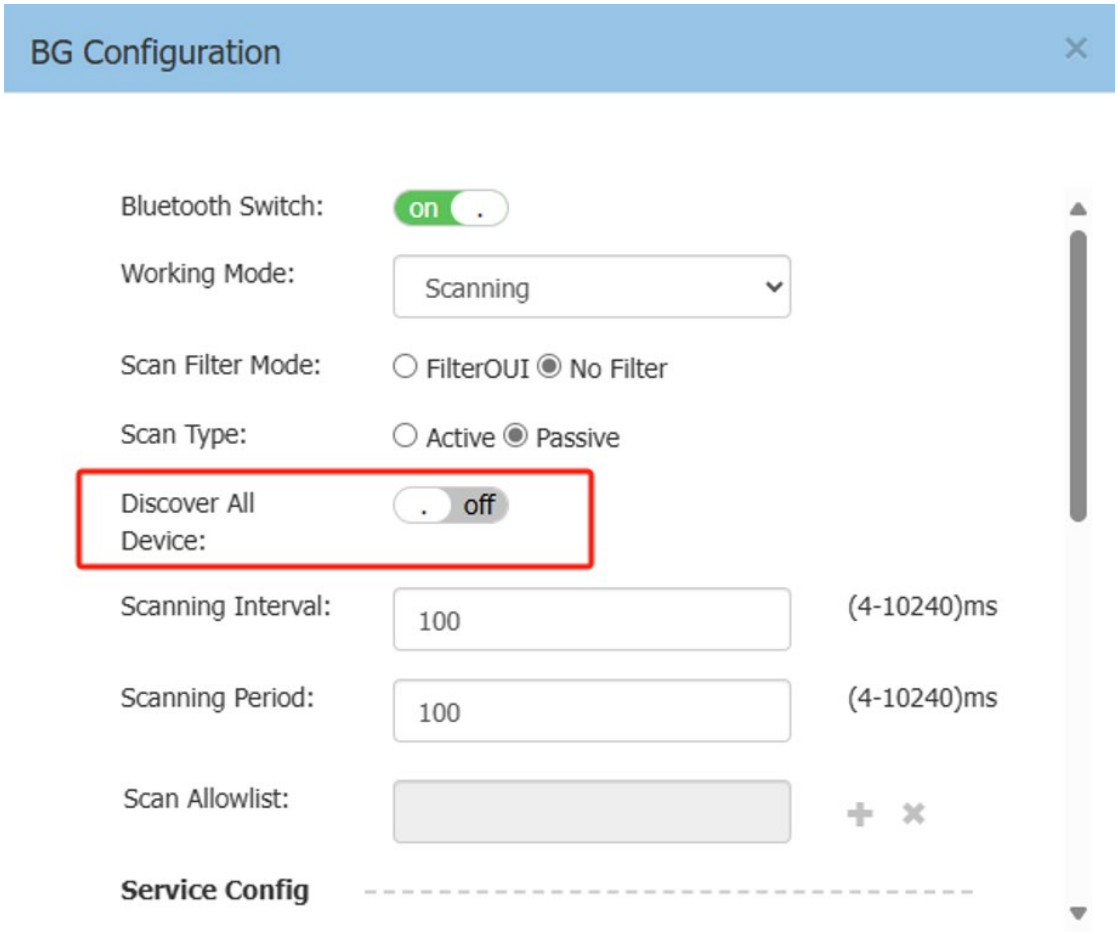
Note: Although the feature is enabled by default, customers can manually disable it when creating WLAN.

AWOS BLE IoT Support Enable "Discover all devices"

Due to considerations of Bluetooth power consumption and business, the initial Bluetooth scanning mode we set was Discover Generic, which means Bluetooth will scan limited and generic discoverable BLE devices.

The customer has added a batch of Bluetooth tags in the AT project, which do not work in limited and generic discoverable modes, causing our AP to be unable to scan the data of these Bluetooth tags.

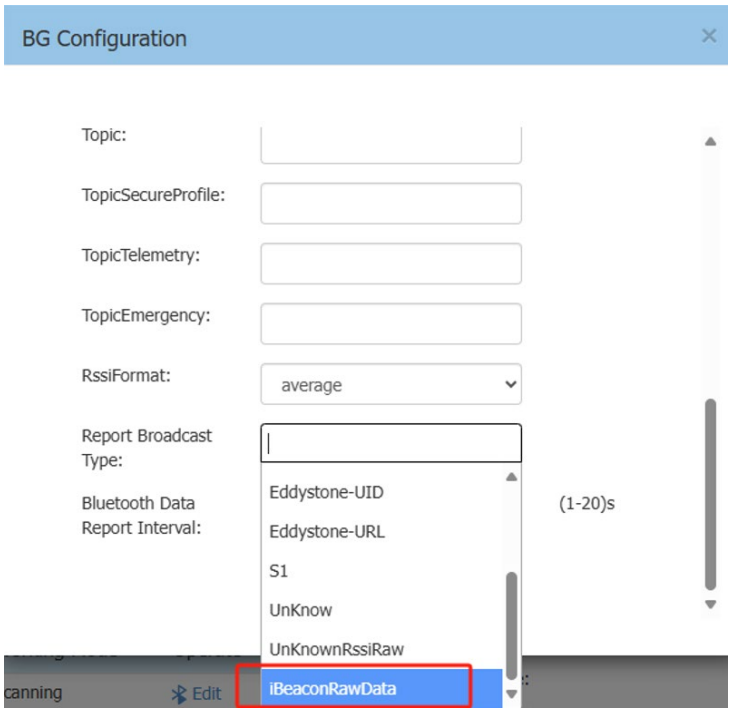
In AWOS 5.0.1 build, have added Discover All Device Mode, which will allow our AP to scan all Bluetooth devices.



Note: When enabling Discover All Device, it may double the number of Bluetooth adv packets scanned by the AP. It is recommended to open it when there is a real demand.

AWOS BLE IoT Support "iBeacon & RawData"

In some scenarios, customers not only need to filter broadcast messages of type iBeacon, but also need to know the complete raw data of iBeacon messages. Have added configuration support for iBeacon&Raw reporting type in Express mode.


BG Configuration
Topic:
TopicSecureProfile:
TopicTelemetry:
TopicEmergency:
RssiFormat:
average
Report Broadcast Type:
Bluetooth Data Report Interval:
(1-20)s
Eddystone-UID
Eddystone-URL
S1
UnKnow
UnKnownRssiRaw
iBeaconRawData
canning
Edit

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: ale.welcomecenter@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://myportal.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.