# COMMANDO AirONE APO300 Outdoor Access Points Configuration Guide

OVERVIEW

COMMANDO AirONE series Outdoor APO enables communication between wireless and wired computers/laptops and mobile devices in the network. It complies with IEEE 802.11b/g/n standard and comes with single band 2.4GHz along with build in High Gain 5dBi Omni Antenna, Separate WAN 10/100Mbps port along with 24V POE & LAN 10/100Mbps port along with IP65 casing. It has a wireless speed of up to 300Mbps with input power 1000mW which support up to 400 meters and above for wireless clients with 5 in 1 mode of operation like AP, Gateway, WISP, Super WDS Mode, Repeater with maximum 64, recommended 50 wireless clients at a time.
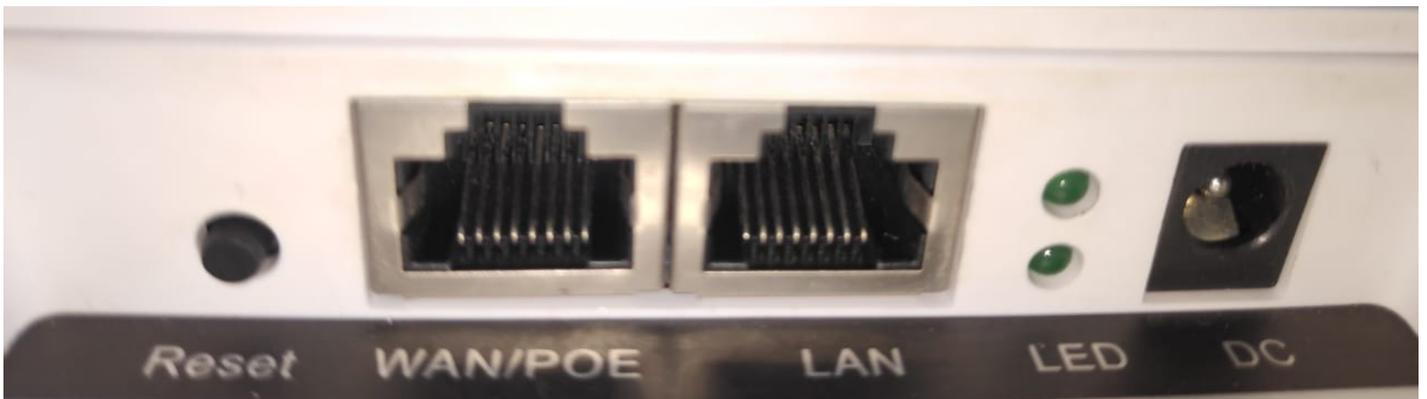
Fig 1. Physical port on AirONE APO300

Table 1. Physical port on AirONE APO300 Description.

Physical Port	Description
Reset	Reset Button, makes APO revert to default settings after pressing for 15sec.
WAN/PoE	WAN Port, connect with PoE Switch or internet gateway.
LAN	LAN Port to end users Switch or PC for accessing device via WEBGUI.
LED	Upper LED for WAN port and Lower LED for LAN port (Green and Blinking to show ACT/Link connection).

Physical Port	Description
DC	DC input power 12V, 1.5 A.

Table 2. COMMANDO AirONE APO300 LED indication

LED Indicator	LED Status
Power	Green Blinking: Power ON Indication Blue and Blinking: Wi-Fi indication that SSID now available for use.
WAN	Upper LED WAN: Connect with Gateway or PoE devices and Green Blinking shows activity on WAN port.
LAN	Lower LED LAN: Connect to end users and Green ON shows activity on LAN port.

It is 5 in 1 mode, Outdoor Access Point with Gateway Mode, Super WDS Mode, WISP Mode, Repeater Mode & AP Mode (Default Mode) with range up to 400 meters and above in all directions with up to 1000mW input Power. It is industrial grade Wall/Ceiling Outdoor Access Point with speed up to 300Mbps. It equipped with separate Gigabit WAN & LAN port which enhances the sharing of files, photo, audio, video and gaming experience over wireless network. It can also be used as DHCP server and works as layer 3 device when configured in gateway mode. It supports 24V PoE, which helps in easy installation by eliminating the need of a dedicated power source and need of a power adapter. It can identify and determine the correct transmission speed and half/full duplex mode of the attached devices. It also supports standard Auto-MDI/MDI-X that can detect the type of connection to any Ethernet device without requiring special straight or crossover cables, Store-and-Forward forwarding scheme to ensure low latency and high data integrity.

You can access and manage AirONE APO300 using the Web based GUI (Graphical User Interface), also called Web GUI interface

INTRODUCTION

COMMANDO AirONE APO300 is WEB GUI based easy to use and manage device. It requires minimal configuration, so setup is simple and hassle-free. Auto-negotiation senses the link speed of a network device in wired 10 or 100Mbps and also for wireless clients. It intelligently adjusts for compatibility and optimal performance by DFS and setting channel bandwidth 20/40MHz wireless band and also can check free channels available with inbuilt Wi-Fi analysis. Its compact size makes it ideal for Outdoor desktops/wall/ceiling with limited space. Dynamic LED lights provide real-time work status display and basic fault diagnosis. Easy Plug-and-play installation with no configuration required. It operates quietly, making it ideal for use in virtually any room or office. Perfect for noise sensitive environments. It has Dual power options with DC input power or 24V PoE power input which protect from power failures and increases life of device. With Inbuilt security features protect your business by losing network sensitive information and data of wireless users/surveillance cameras connected to them.

It supports energy-efficient Ethernet that can save power. It automatically adjusts power consumption according to the link status to limit the carbon footprint of your network. It also complies with RoHS, CE, FC prohibiting the use of certain hazardous materials. Besides that most of the packaging material can be recycled and reused.

It has State of art quality product that can serve on real time high-speed Performance with dual input power, cost effective, highly reliable, conformance to international open standards, durable, serviceable, aesthetics, perceived quality, enhanced performance leads to value to money.

Hardware Highlights

Solid performance with non-blocking architecture

• Up to 16 MB Flash, 32MB RAM

• LAN and WAN ports capable of Fast Ethernet speed with (Auto-Negotiation/Auto MDI/MDIX).

• Solid performance with non-blocking architecture.

Physical Ports and Networking Interfaces

• Up to 2 x 10/100 Mbps Rj45 Ethernet Ports with combined 24V PoE with WAN and

separate LAN port

• LED Indicators: Power, LAN/WAN (Link/Act)

• Reset Button

Extra Long operational life

• Dual input Power Either DC 12V/1.5A or 24V PoE via WAN port.

• High Quality PCB Circuit Board and PCB Surface Treatment Using Gold Sinking Process.

• Support temperature range 0° C to 50° C

• Desktop and Wall mount design that enables to mounts Which enables horizontal and vertical wall mounting.

• Comes with one-year default warranty – optionally extendable up to 3 years.

Noise-free Operation

• The ports support reduced power modes for silent operation. Perfect for noise sensitive environments.

Software Highlights

• Multiple Operational Modes like Gateway, Super WDS, Repeater, WISP and AP mode (Default mode).

• Multiple SSID with Up to 4 SSIDs with VAP.

• Supports IEEE 802.11b/g/n 2.4GHz with Antenna RF input Power of 30dBm.

• Support wireless RF power adjustable as per user movements from AP.

• Access end users up to 64 max with concurrent 50 end users.

• Support tag VLAN and VLAN management.

• Supports intelligent load balance based on users.

• Support seamless roaming and low-rate terminal access.

• Support inbuilt WI-FI channel analysis.

• Internal Antenna enabling maximum client density deployments with no interference.

• Supports Wi-Fi client distance up to 400 meters (1312 feet) in all directions and above depending on surrounding conditions.

• Support Open or encryption like WPA/WPA2PSK_TKIPAES.

How to take access of COMMANDO AirONE APO300?

1. Wired access Via LAN port connected to PC.

Power ON AirONE APO300.

Connect LAN port of AirONE APO300 to PC via RJ-45 cable.

Open Network and sharing center.

Go to Change adapter settings.

Double click on Local Area Connection. Go to Properties. Double click on Internet Protocol Version 4 (TCP/IPv4) option and set any IP address from 192.168.188.1 to 252 and Gateway of PC to be set as 192.168.188.253 to as shown below.

Fig 2. IP setting in PC connected to AirONE APO300

2. Wireless access Via SSID connected to PC.

Power ON AirONE APO300.

Connect Default SSID named "COMMANDO APO300 2.4G" with the help of default Wi-Fi Password "66666666" or "commando" – refer product label for password.

Click on properties of SSID "COMMANDO APO300 2.4G".

Edit IP setting from DHCP to Manual and set any IP address from 192.168.188.1 to 252 and Gateway of PC to be set as 192.168.188.253.
Note: All Default SSID and password can be changed as per user requirement.
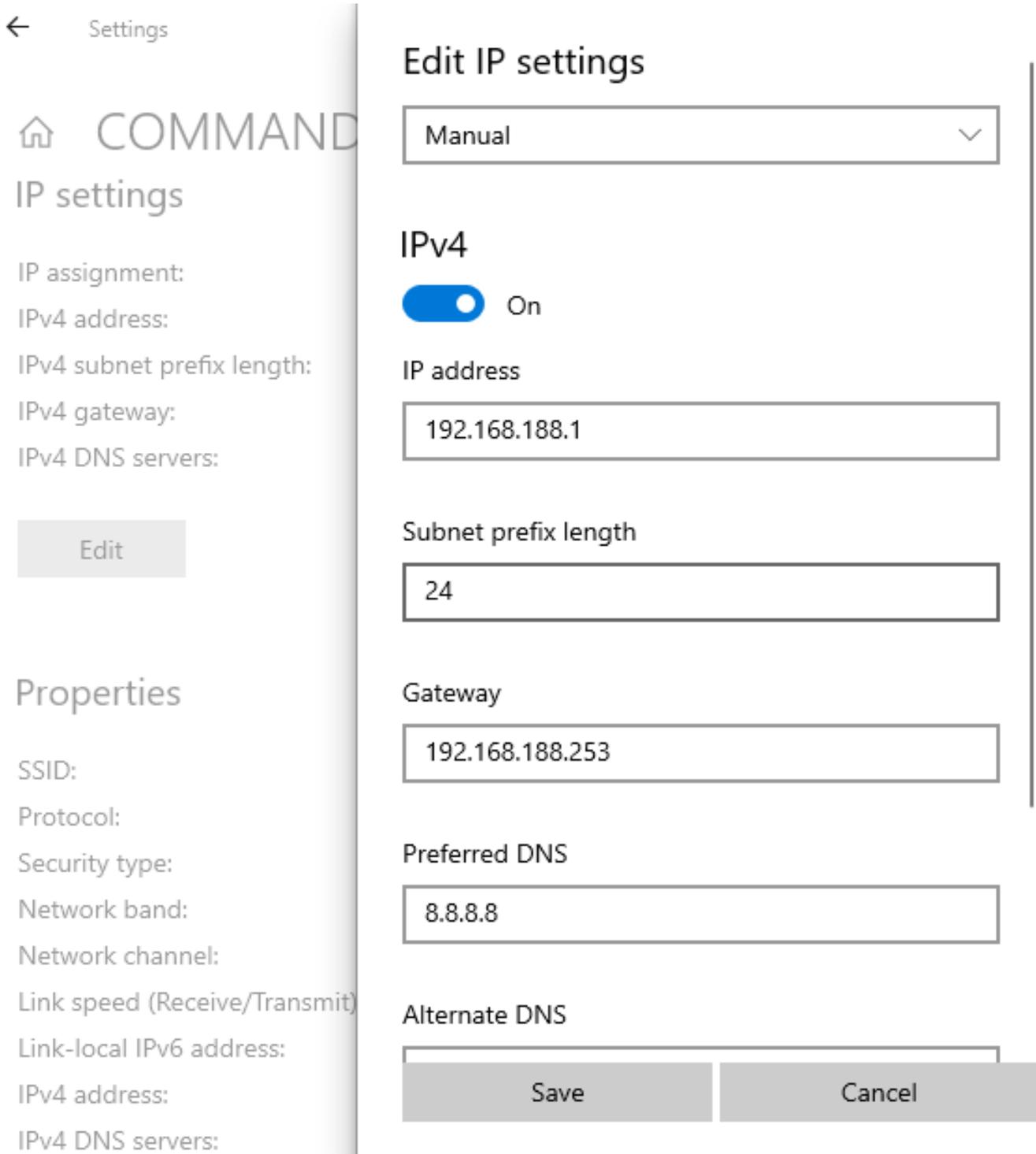
Fig 3. Edit IP setting from DHCP to Manual as shown for COMMANDO AIR-APO300 2.4G

Open any Web browser like Chrome/Firefox/Internet Explorer/Opera etc. and enter default IP address **192.168.188.253** in address field.

Caution:
If you have already taken any Other COMMANDO wireless device access. Then before taking access of this device, you are required to clean the browser history to avoid catch pages issue.
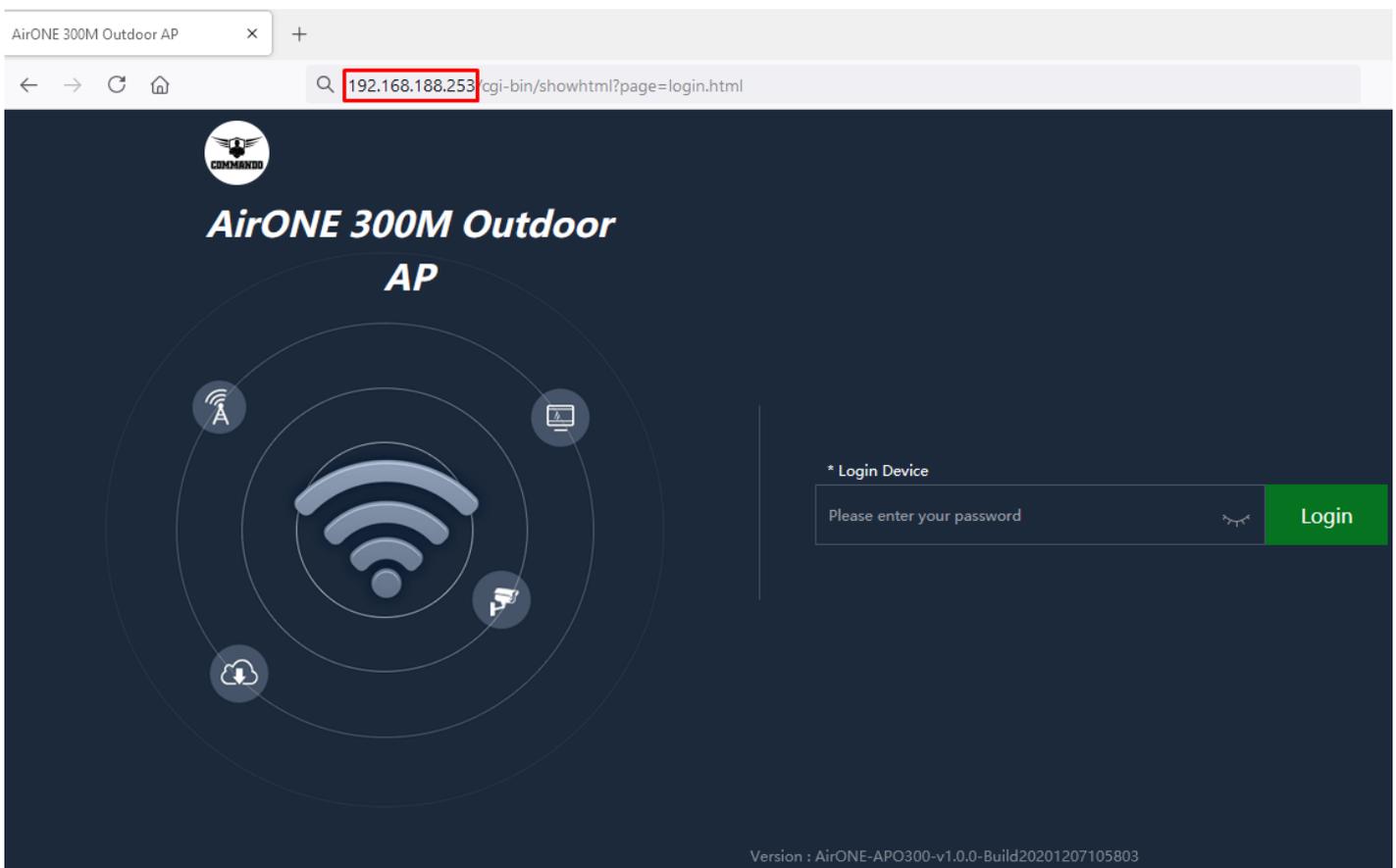
Fig 4. Login page for AirONE APO300

Default Password: **admin** or **commando**

Note: Password can be changed as per user choice. Default password is written on backside of device. According to firmware default password can either admin or commando.

After giving proper password Home page is displayed giving device information like CPU usage, memory usage, LAN Information like IP Mode Get IP From AC/Gateway/Static, Status with 2G Wi-Fi Clients Status with information like SSID, Channel, Bandwidth,

Encrypt, MAC Address, Operation Mode configure like AP/ Fat APO Mode with Uptime, Flow in bps for APO downstream and APO upstream
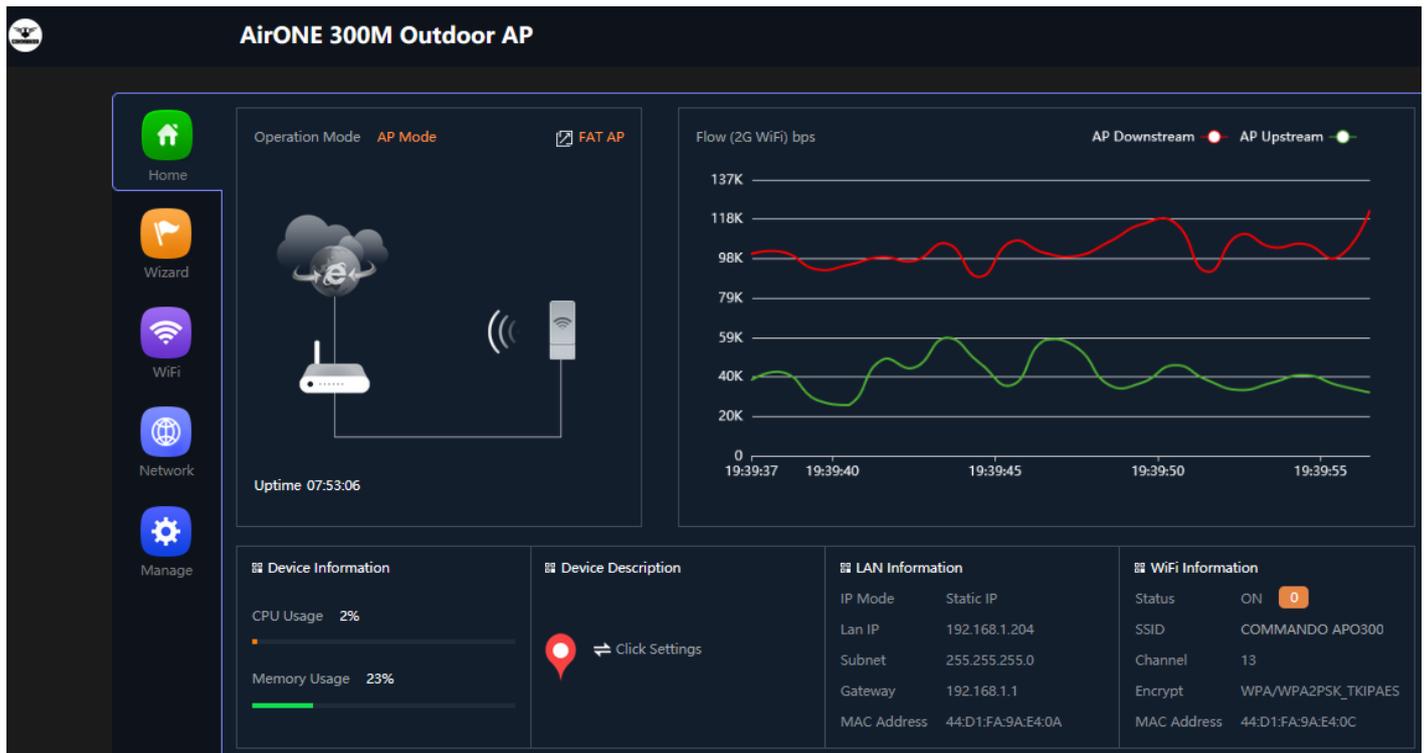
Fig 6. Home page after login AirONE APO300

HOME

After login, home page will be showed. This page will show device Information like CPU Usage, Memory Usage, LAN/WAN Information like IP Mode Get IP From AC/Gateway/Static, Status with 2G Wi-Fi Clients Status with information like SSID, Channel, Bandwidth, Encrypt, MAC Address, Operation Mode configure like AP/ Fat AP Mode with Uptime, Flow in bps for APO downstream and APO Up stream. All information can help to troubleshoot network issue, if any very easily.
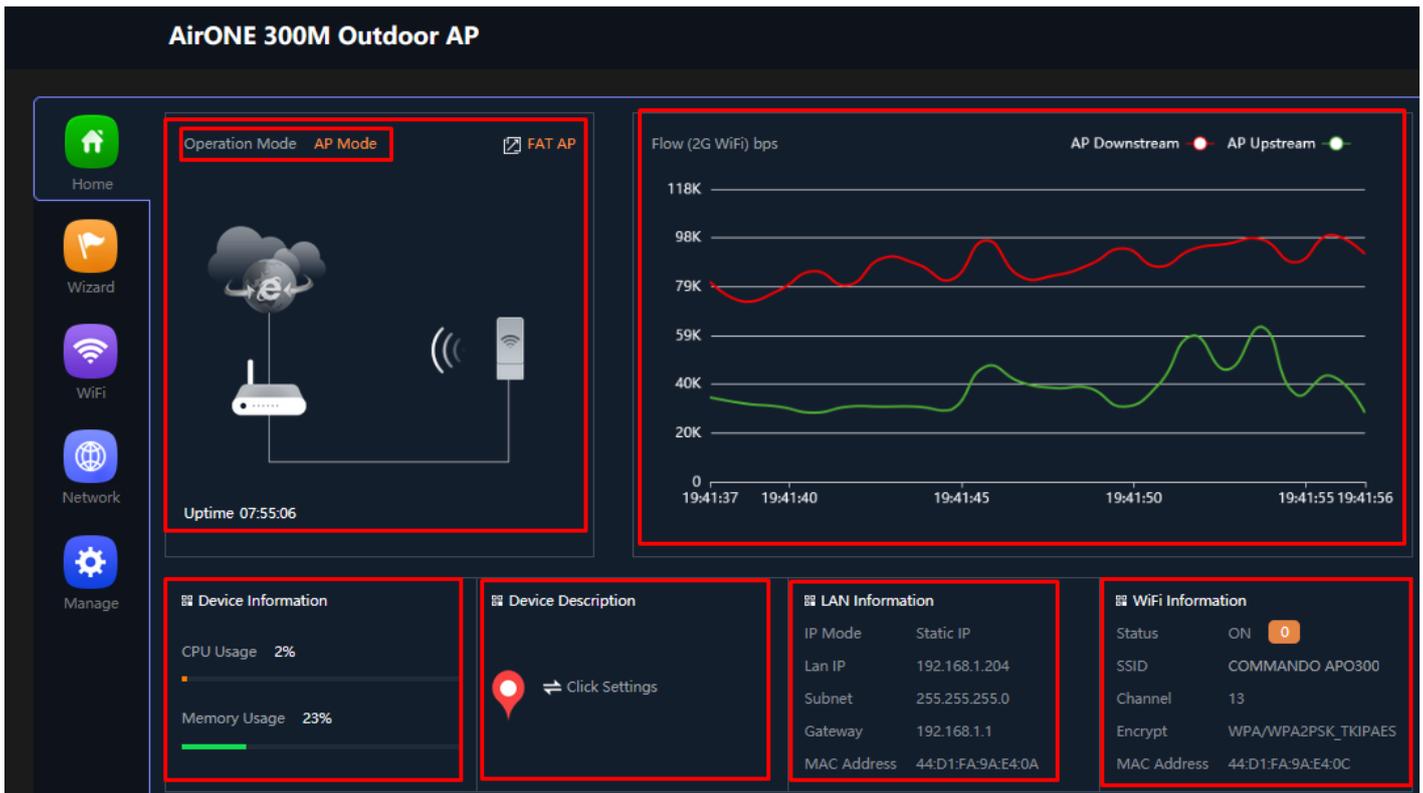
Fig 1.1 Home page Components of AirONE APO300

1.1 Device Information

In Device Information, Current CPU Usage percentage and Memory Usage percentage of the APO is shown.
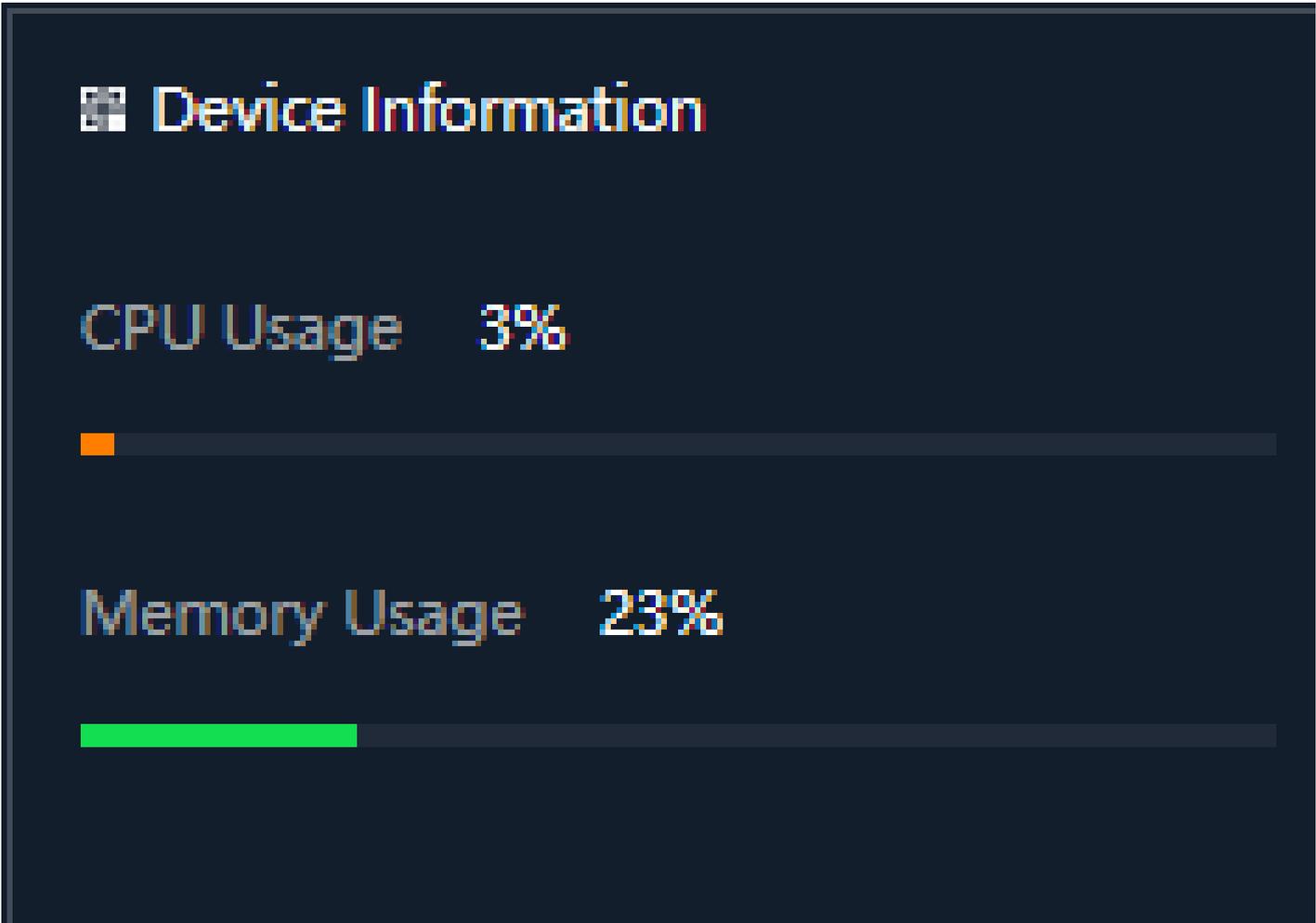
Fig 1.1.1 Home page Components of AirONE APO300

In Device Description you can add the APs description by clicking on Click Settings
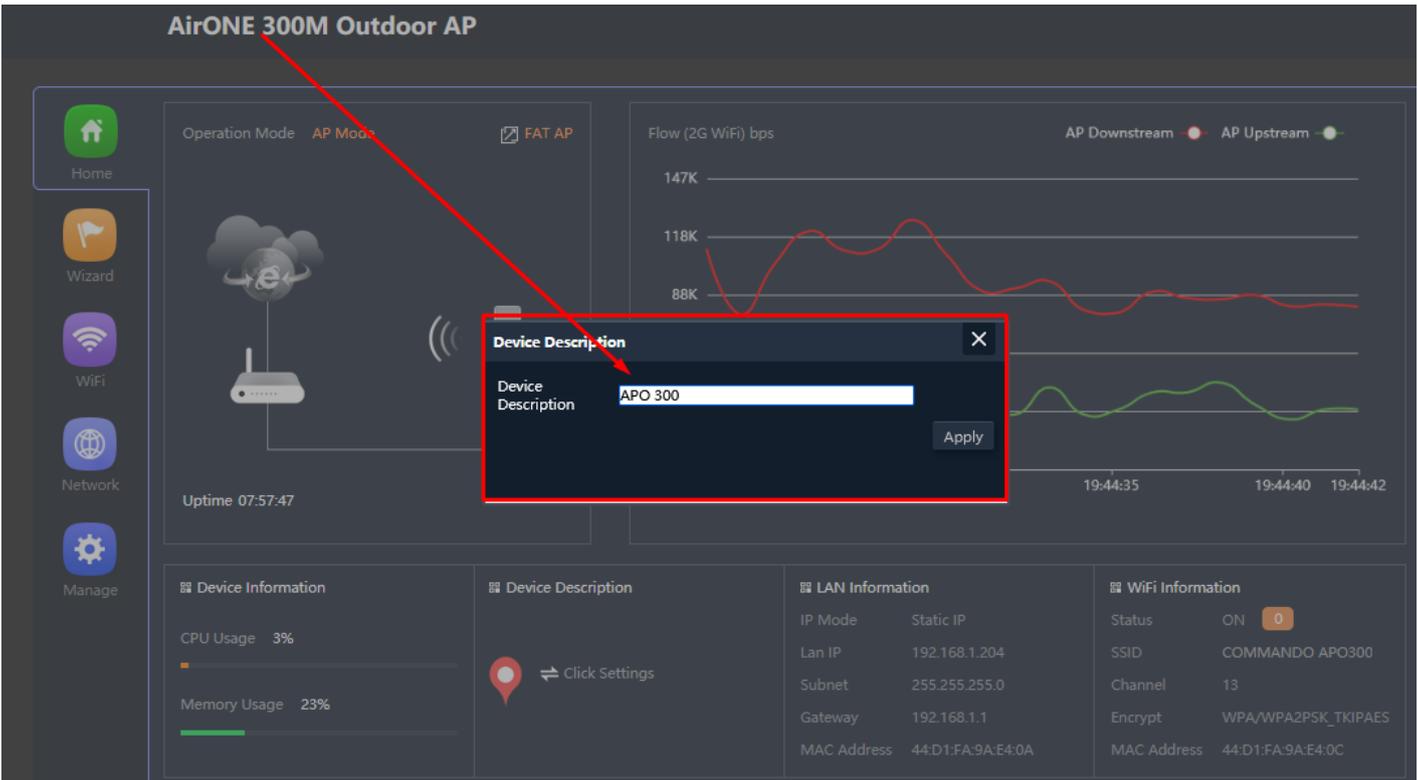
Fig 1.1.2 Changing Device Description of AirONE APO300
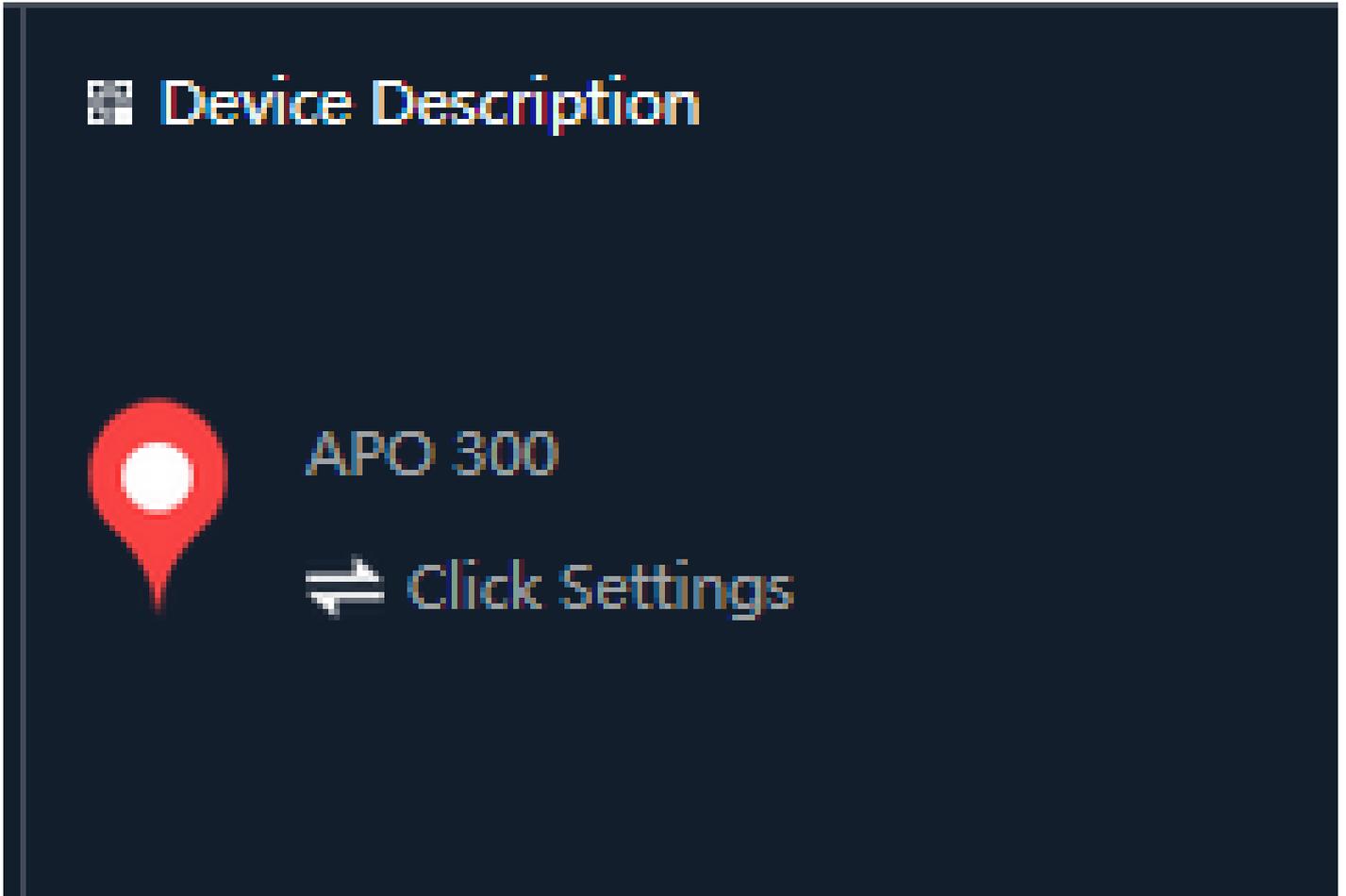
Fig 1.1.3 New Device Description of AirONE APO300

1.2 LAN/WAN Information

In LAN Information you can find the IP Mode, LAN IP, Subnet, Gateway and MAC Address. In WAN Information like WAN IP address, Gateway, DNS and MAC Address.

LAN Information

IP Mode	Static IP
Lan IP	192.168.188.253
Subnet	255.255.255.0
Gateway	192.168.188.1
MAC Address	44:D1:FA:30:65:A1

Fig 1.2.1 LAN information of AirONE APO300

Fig 1.2.2 WAN information of AirONE APO300

1.3 Wi-Fi Information

In Wi-Fi Information, Status along with number of clients connected to AP, SSID, Channel used, Encryption and MAC Address of APO is shown.

Fig 1.3.1 Wi-Fi Information of AirONE APO300

1.4 Clients List

Clients list along with number of clients connected to AP, MAC address of clients connected, Signal strength of clients' connection along with connection time is shown. We can learn about users in network with all vital information.
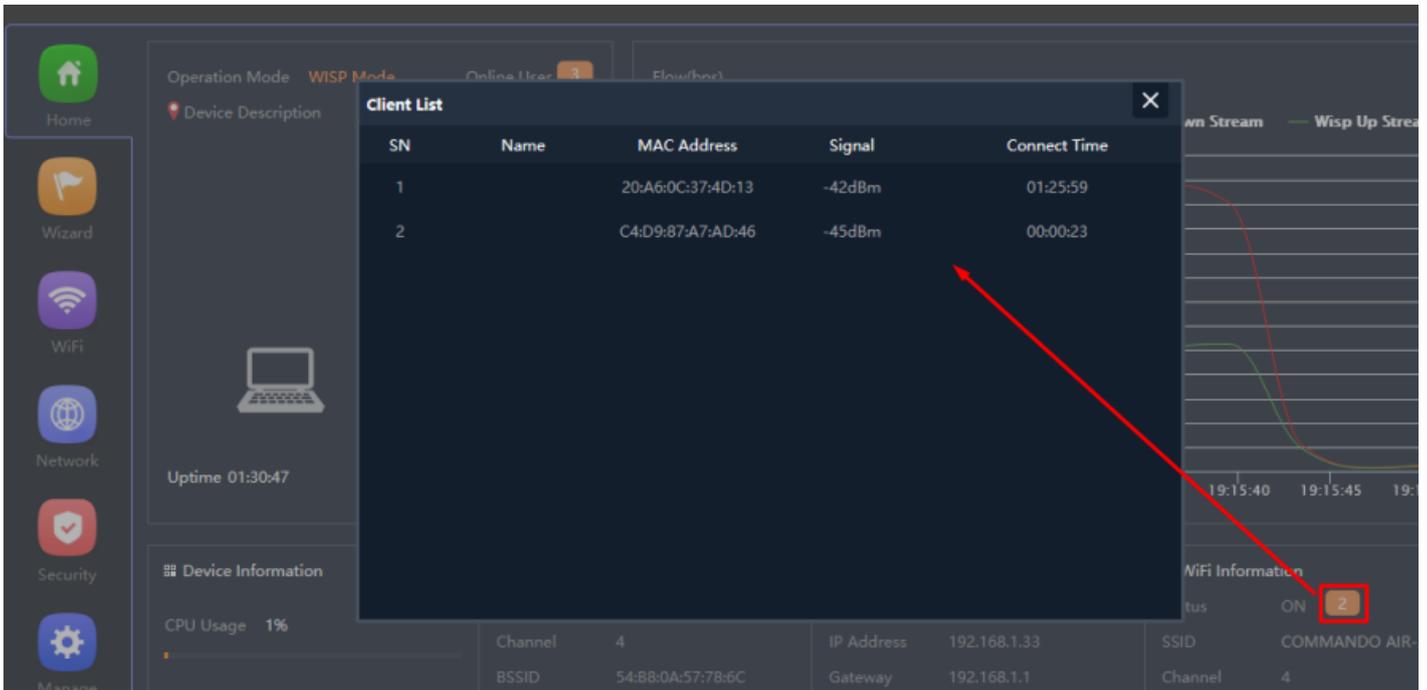
Fig 1.4.1 Clients list of AirONE APO300

1.5 Operation Mode configuration

Default operation is Fat AP where it integrates the WLAN physical layer functions, service data encryption, user authentication, QoS, network management, roaming technologies, and application layer functions. It can provide wireless access independently. Each AP is an independent node. The channels and power on each AP are configured independently. All APs work independently and support advanced and independent security policy.

A Fit AP has only Select the IP mode along with reset and reboot options.
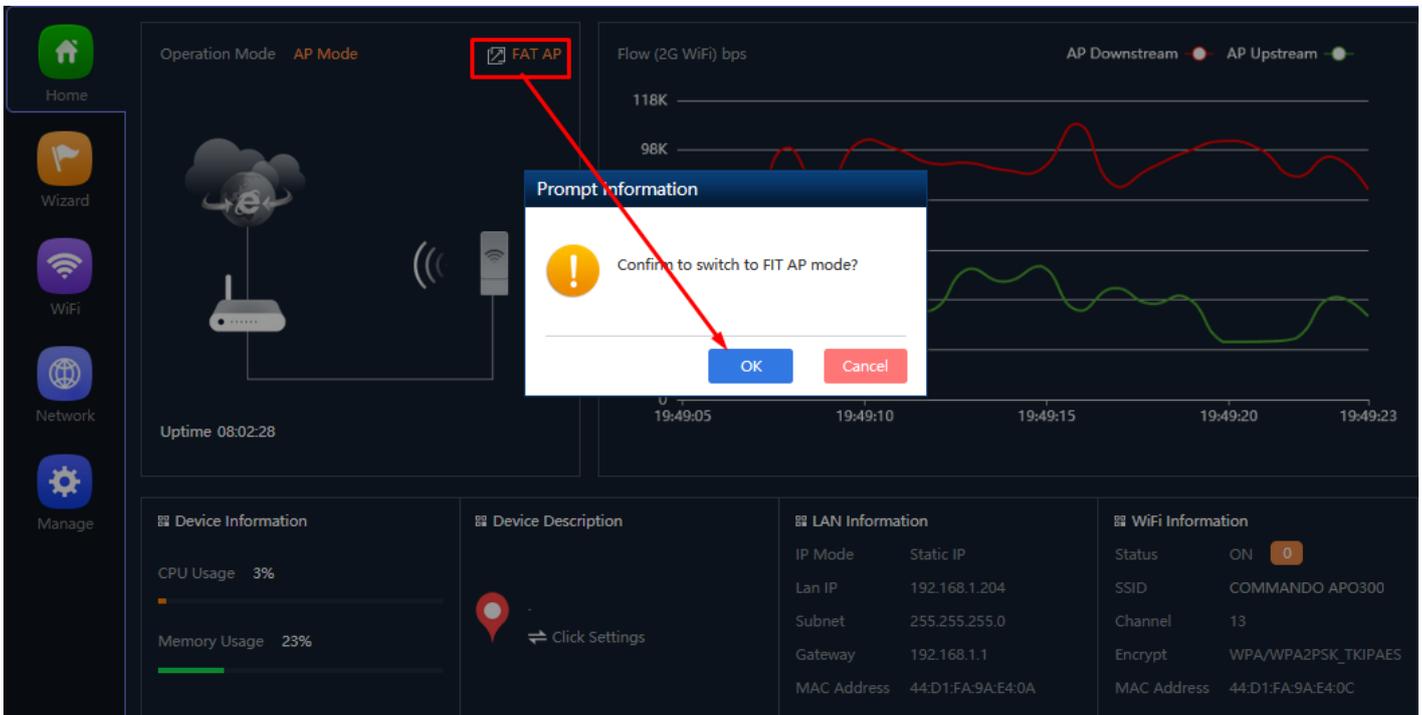
Fig 1.5.1 Fat AP mode of AirONE APO300
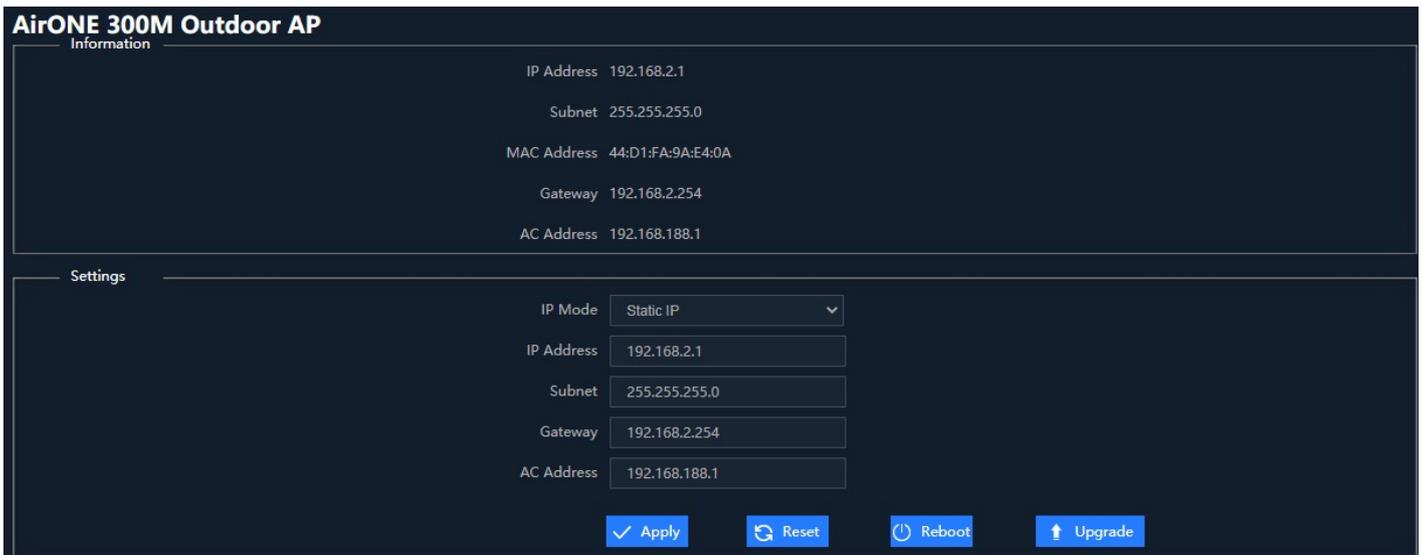
Fig 1.5.2 Fit APO mode

Note:
Same Password to be used for login in Fit and Fat mode of operation.

1.6 APO UP/Down stream Flow (2G Wi-Fi) bps

In Flow (2G Wi-Fi) bps you can monitor the AP's Upstream and Downstream bandwidth in bps.
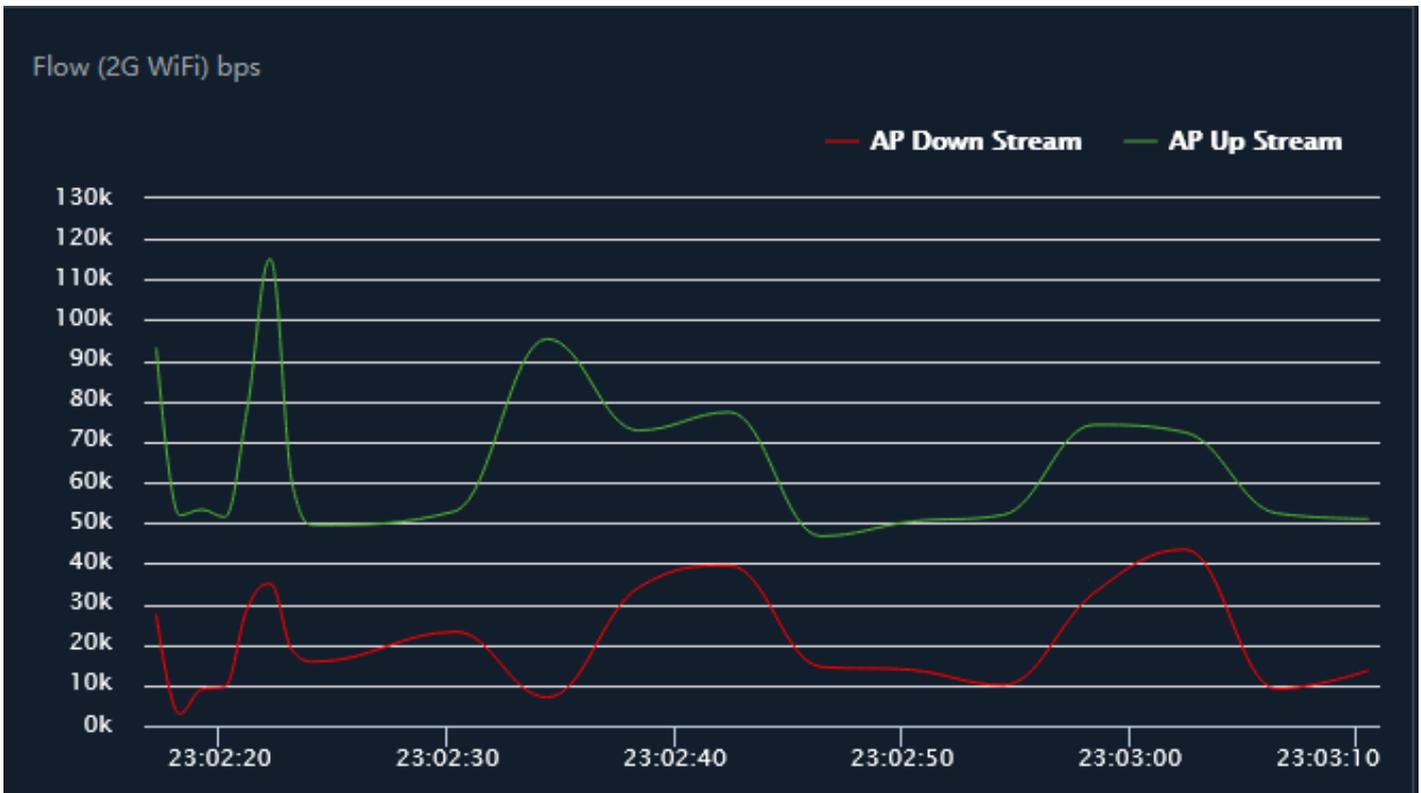
Fig 1.6.1 Flow (2G Wi-Fi) bps of AirONE APO300

WIZARD

After clicking Wizard page, you can set device in Gateway Mode, Super WDS Mode, WISP Mode, Repeater Mode and AP Mode (Default Selection). It provides flexibility to configure wireless AP's operation mode based on network scenario making this APO future proof. You are required to select corresponding operation mode first before starting the configuration. Clicking Wizard will pop up following page to configure the operation mode along with photos with explanation for each operation mode.

Gateway Mode:
In Gateway mode, all Ethernet are bridged together, and wireless clients will connect ISP access point or router connecting directly to the Internet via WAN PORT. NAT is enabled and PCs in Ethernet LAN port share the same IP to ISP through wireless LAN.

Super WDS Mode:
A Wireless Distribution System (WDS) is a system that enables the wireless interconnection of access points in an IEEE 802.11 network. It allows a wireless network to be expanded using multiple access points without the need for a wired backbone to link them, as is traditionally required. In Super WDS mode, device can act as APO as well as Bridge both simultaneously and can connect other bridges and APs.

WISP Mode:
In WISP mode, the device connects to ISP station or hot spot wirelessly to share network with local wired and wireless devices.

Repeater Mode:
In Repeater mode is used to extend the range of wireless coverage of existing Wi-Fi network. This mode is suitable when you are in a Wi-Fi dead-zone or a place with weak wireless signal, and you want to have a larger effective range of the wireless signal throughout your home or office.

WISP Mode:
In WISP mode, the device connects to ISP station or hot spot wirelessly to share network with local wired and wireless devices.

AP Mode:
In AP mode, the device works as an access point to transform your existing wired network into a wireless network.

2.1 Gateway Mode

In Gateway mode, your internet provider's RJ-45 is connected to WAN port of APO300. Internet provider WAN setting can have Static IP, PPPoE, or DHCP accordingly select option. Then configure the wireless parameters as per your choice of SSID, Channel width, Encryption and Time reboot if required.

Fig 2.1.1 Gateway mode of AirONE APO300
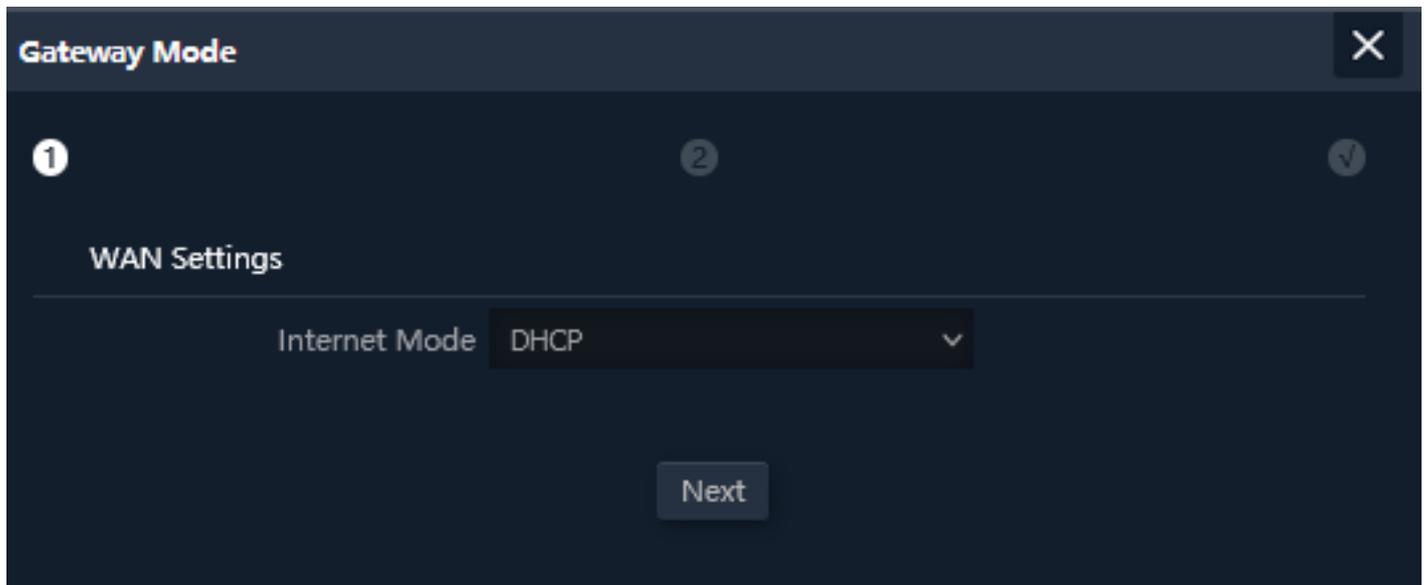
Fig 2.1.2 Gateway mode WAN Setting of AirONE APO300
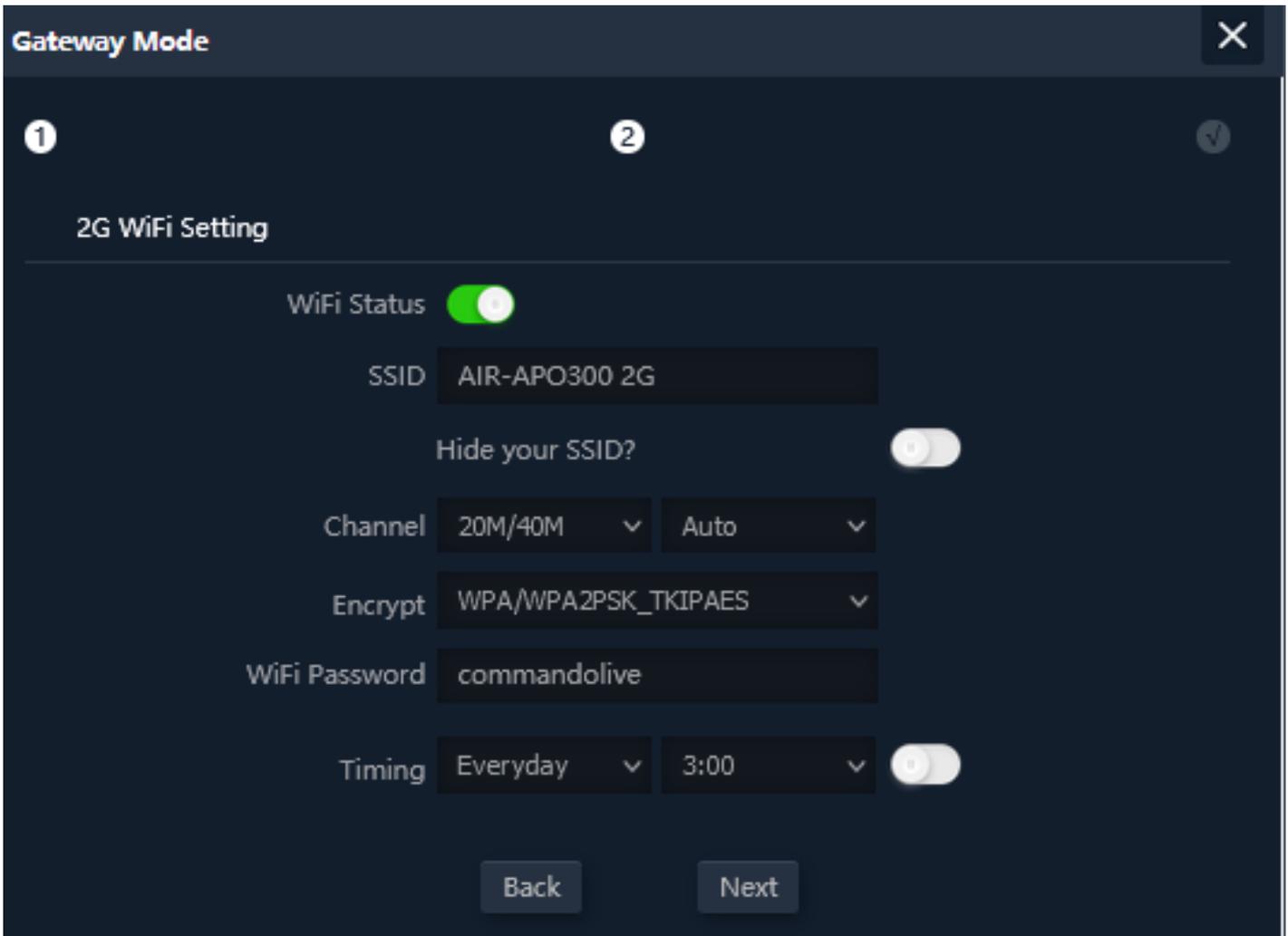
Fig 2.1.3 Gateway mode 2G Wi-Fi Setting of AirONE APO300

Note: The device will restart for the changes to take effect for mode changes to Gateway mode.

2.2 Super WDS Mode

In Super WDS mode, Scan Repeater SSID whose password is known and configure WDS setting. Then configure the wireless parameters as per your choice of SSID, Channel width, Encryption and Time reboot if required.

Note: Just in case if you don't have any RJ 45 cable running to site then in Super WDS mode you have to just power on the device and wirelessly can connect to clients as well as any SSID (BSSID). No need of connecting physically LAN as well as WAN port.
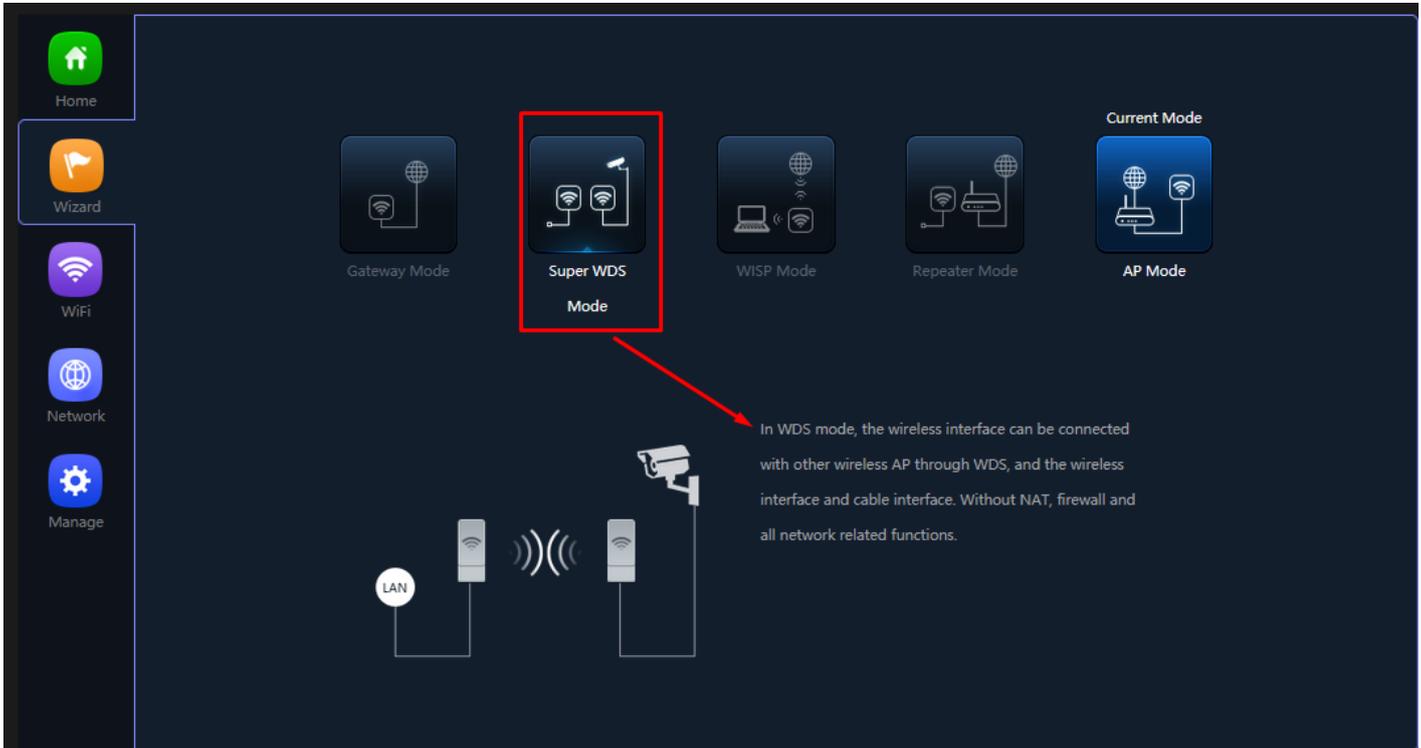
Fig 2.2.1 Super WDS mode of AirONE APO300
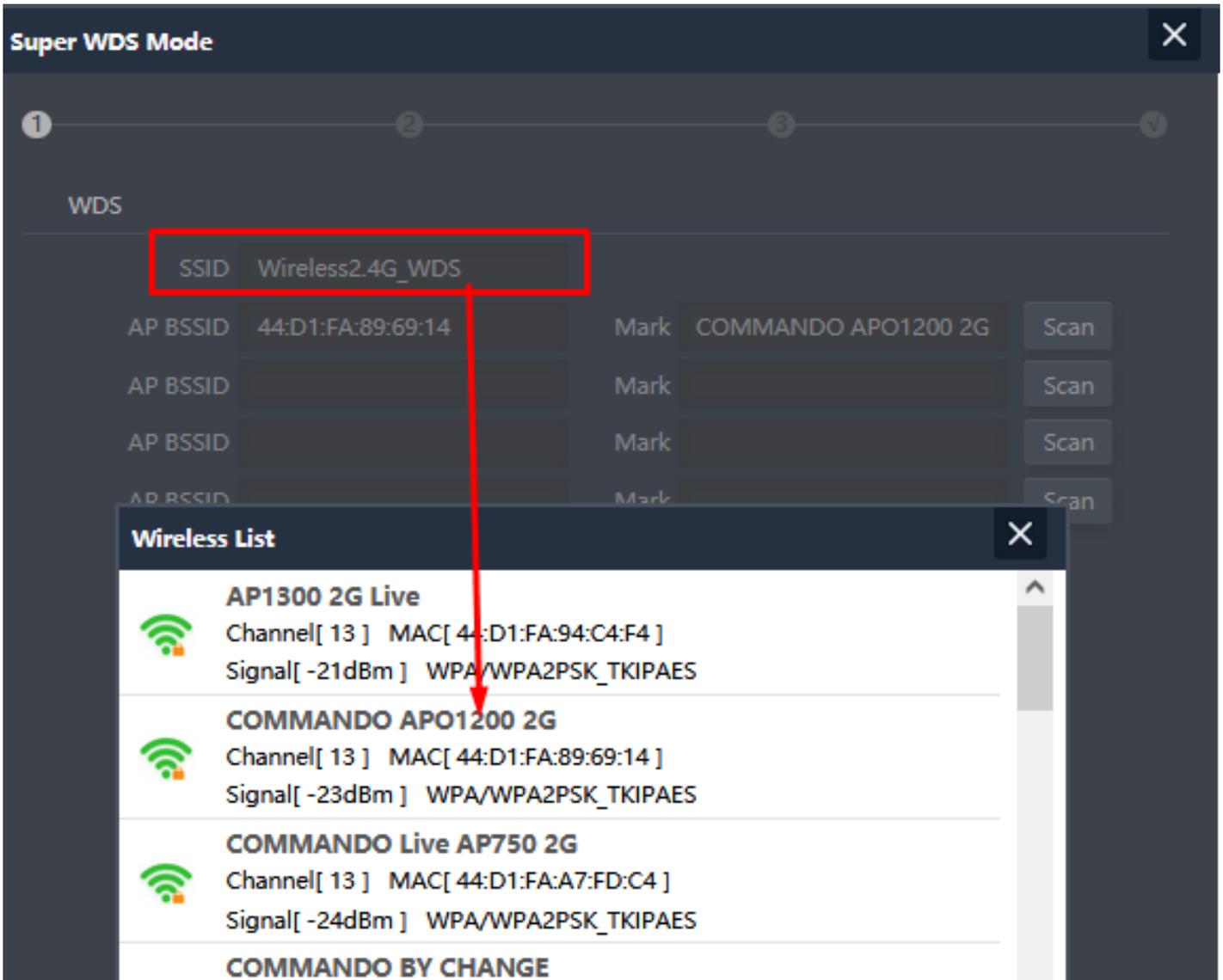
Fig 2.2.2 Repeater Setting Super WDS Mode of AirONE APO300

Note:
This repeater SSID password is password of scan SSID with matching encryption.
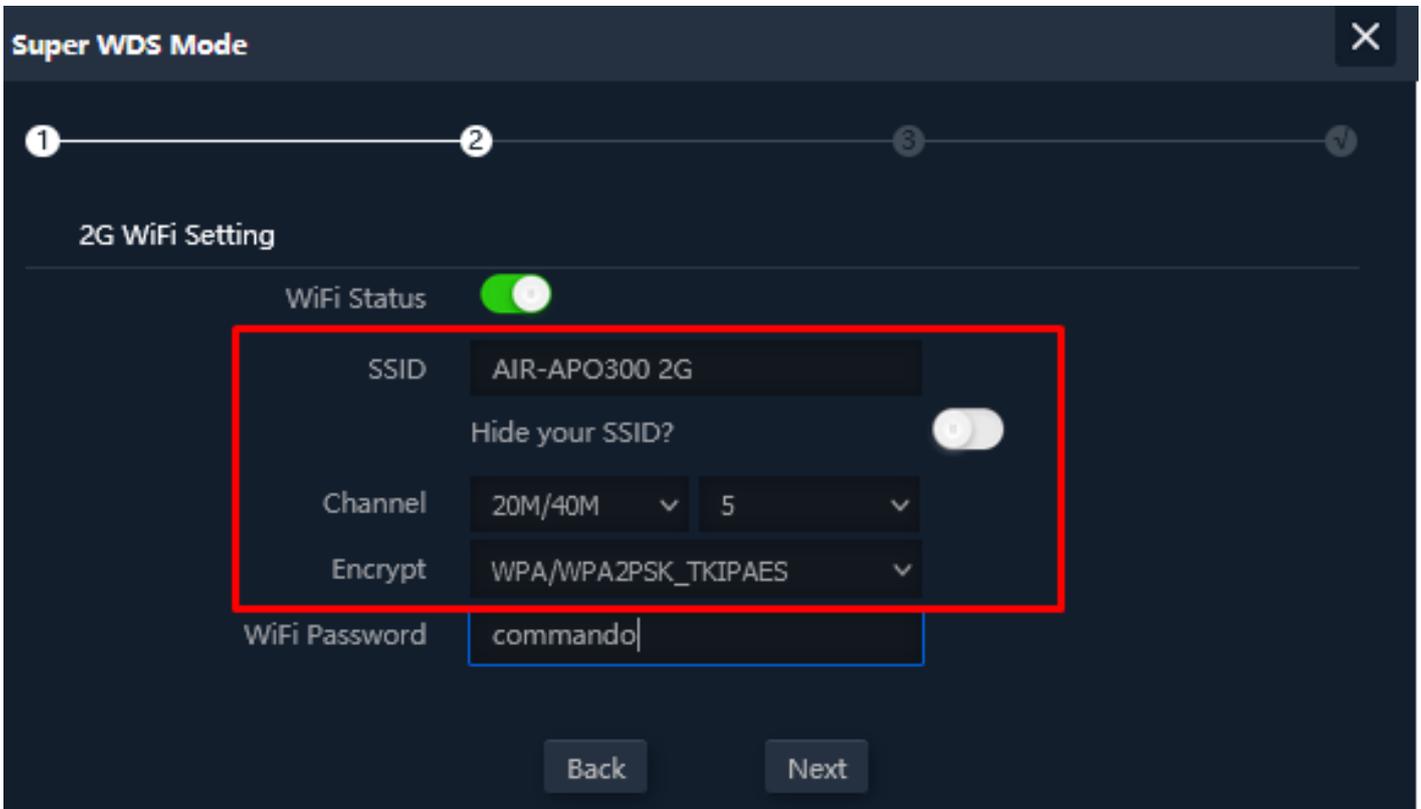
Fig 2.2.3 WAN Setting Super WDS Mode of AirONE APO300
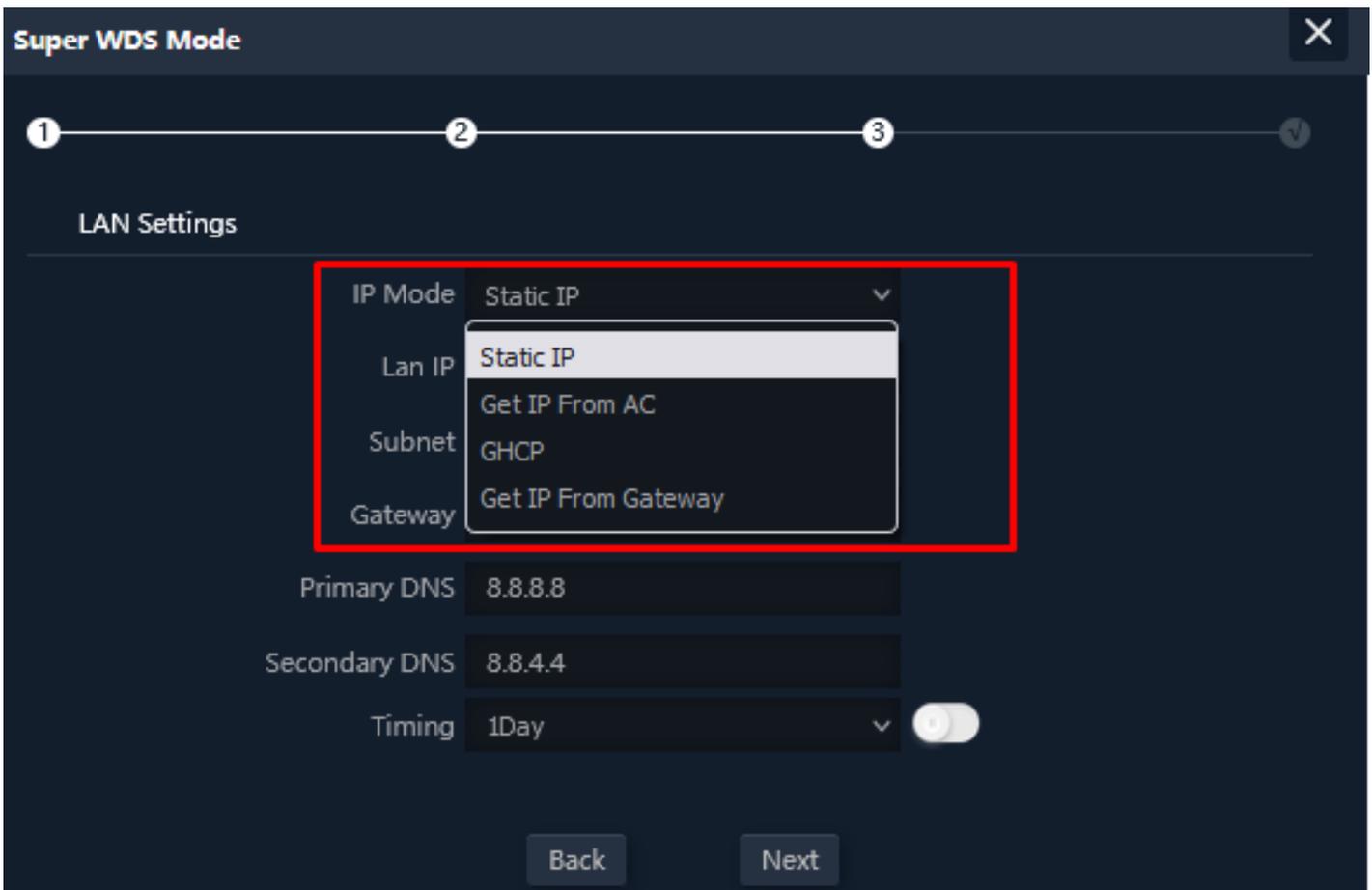
Fig 2.2.4 2G Wi-Fi Setting Super WDS mode of AirONE APO300

Note: The device will restart for the changes to take effect for mode changes to Super

WDS Mode.

2.3 WISP Mode

In WISP mode, Scan Repeater SSID whose password is known and configure WAN setting. Then configure the wireless parameters as per your choice of SSID, Channel width, Encryption and Time reboot if required.

Note: Just in case if you don't have any RJ 45 cable running to any room then, In WISP mode you have to just power on the device and wirelessly can connect to clients as well as ISP router (BSSID). No need of connecting physically LAN as well as WAN port.
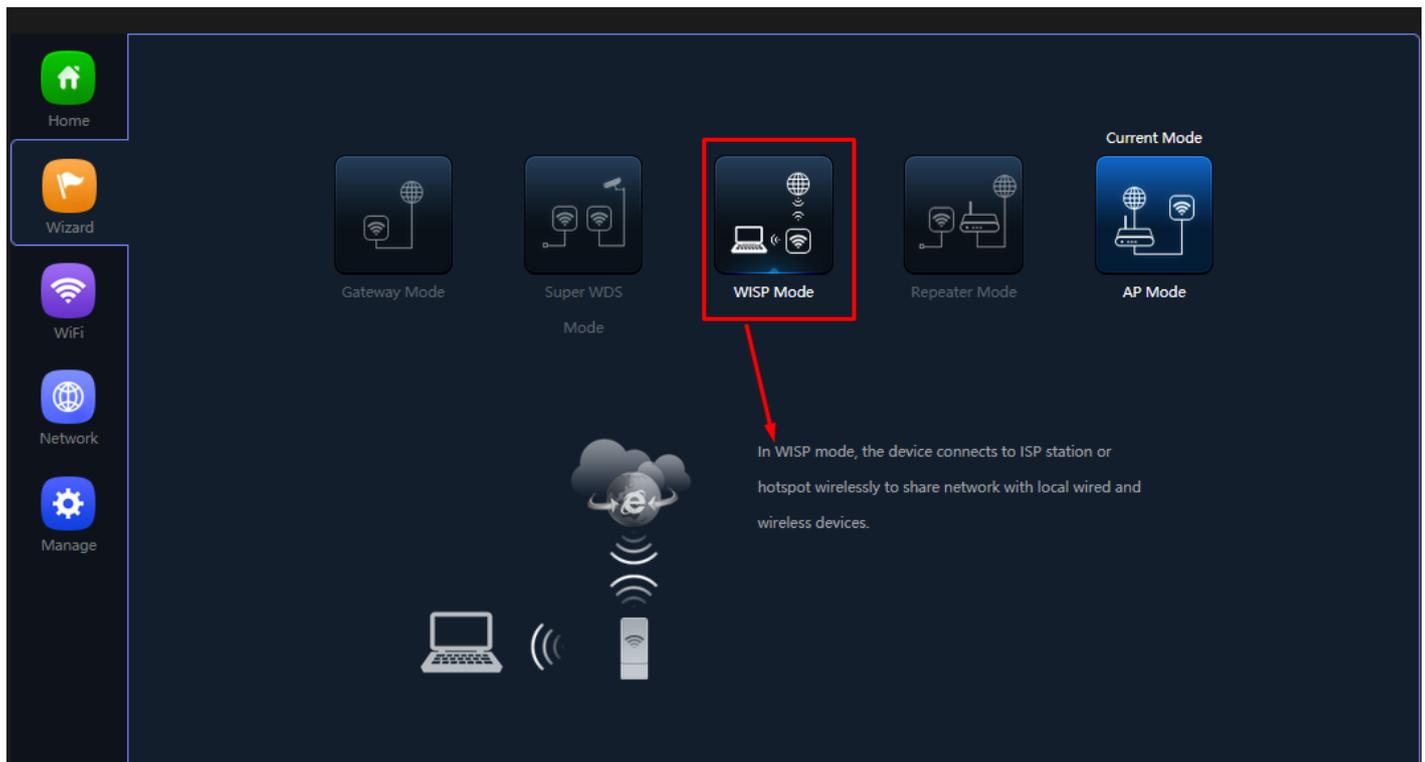
Fig 2.3.1 WISP mode of AirONE APO300
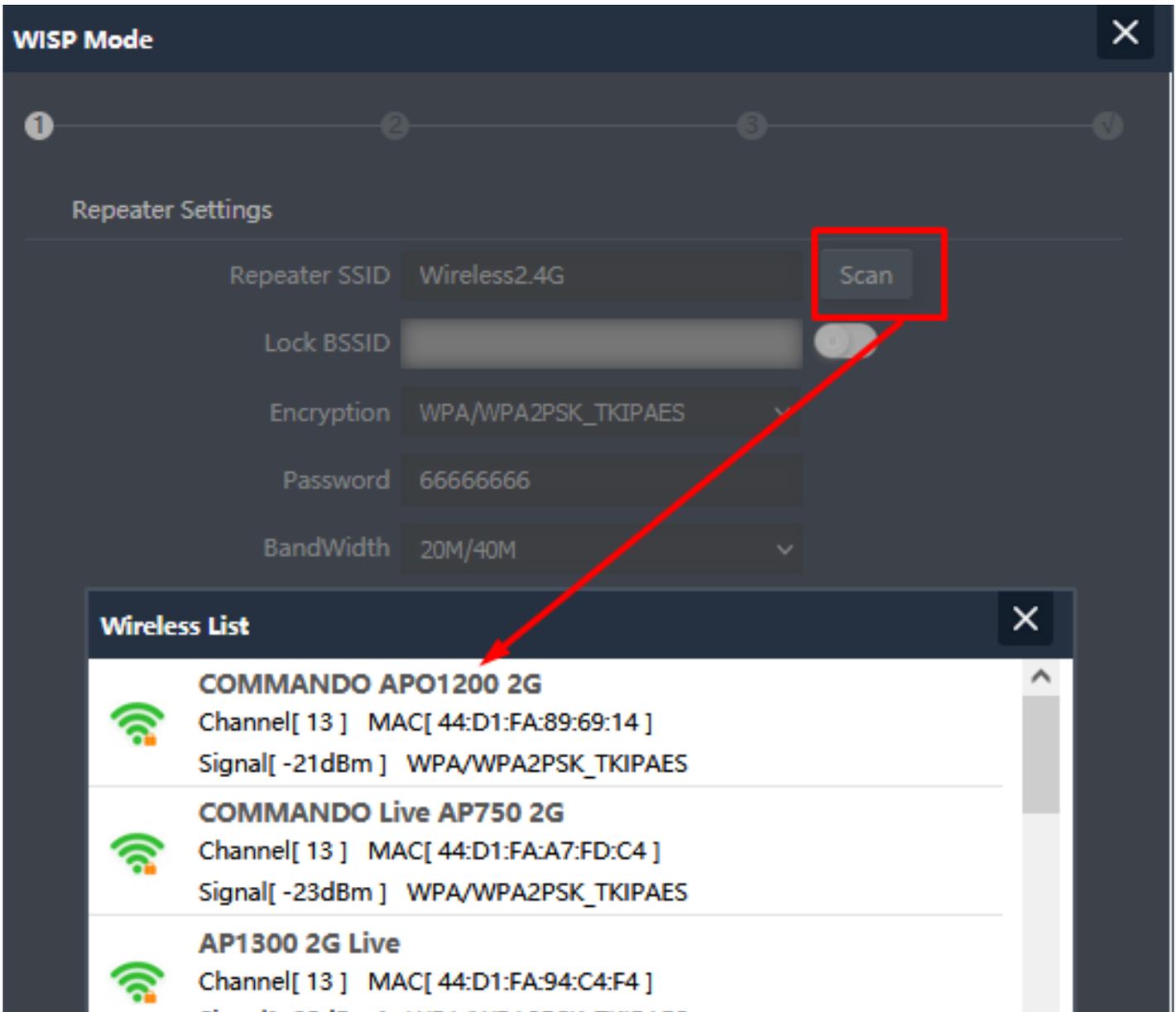
Fig 2.3.2 Repeater Setting WISP mode of AirONE APO300

Note: This repeater SSID password is password of scan SSID with matching encryption.
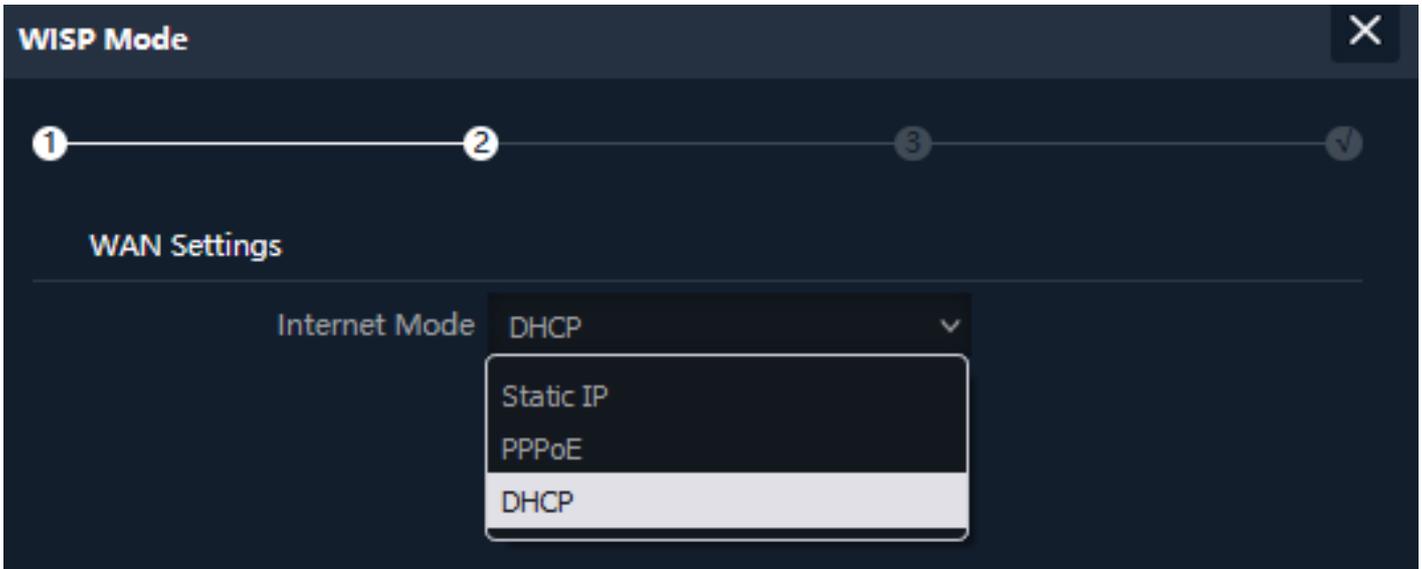
Fig 2.3.3 WAN Setting WISP mode of AirONE APO300
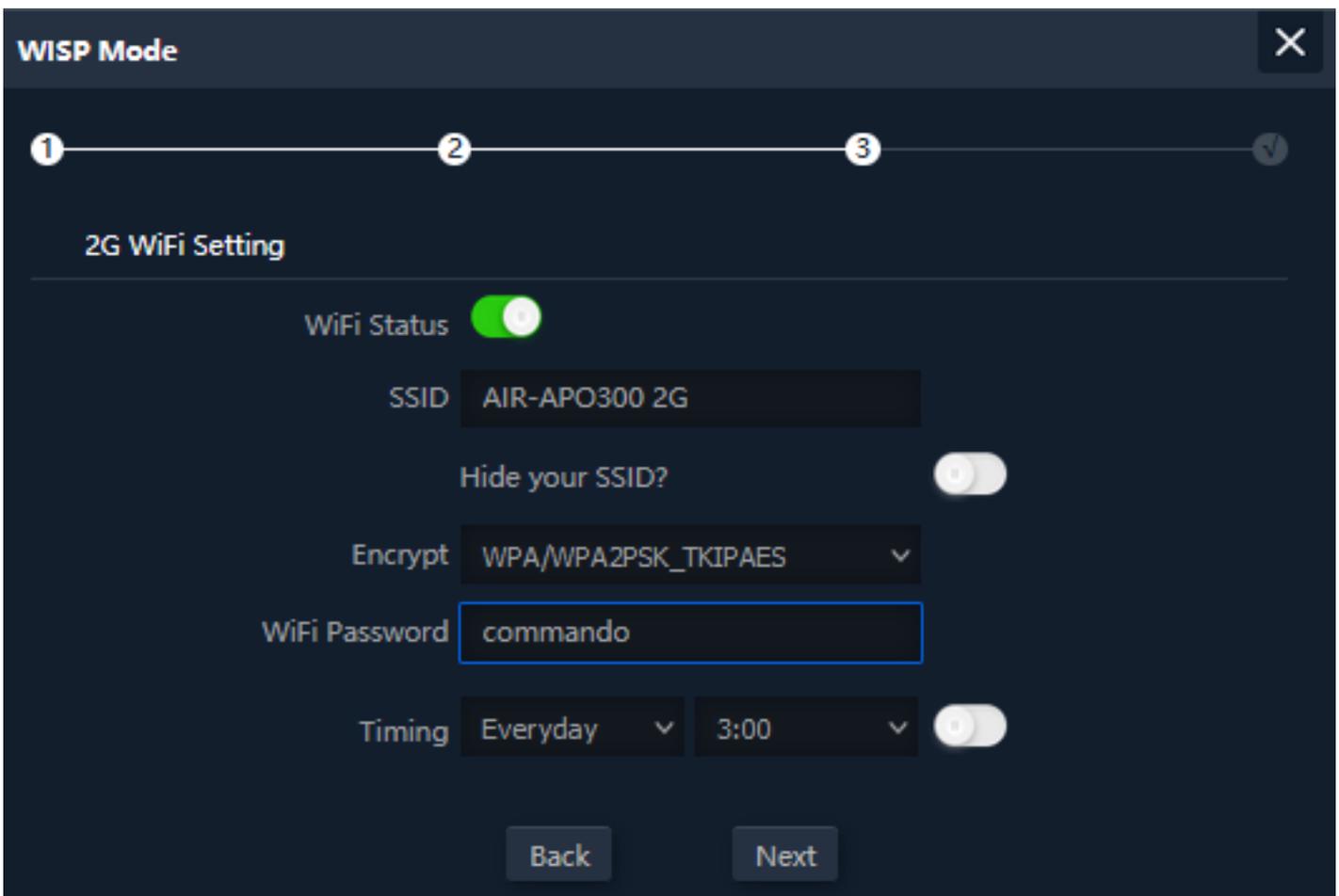
Fig 2.3.4 2G Wi-Fi Setting WISP mode of AirONE APO300

Note: The device will restart for the changes to take effect for mode changes to WISP mode.

2.4 Repeater Mode

In Repeater mode, Scan Repeater SSID whose password is known. Then configure the wireless parameters as per your choice of SSID, Channel width, Encryption and Time reboot if required.

Suggestion: Just in case if you don't have any RJ 45 cable running to any room then In Repeater mode you have to just power on the device and wirelessly can connect to clients as well as available SSID (BSSID). No need of connecting physically LAN as well as WAN port.

Fig 2.4.1 Repeater mode of AirONE APO300
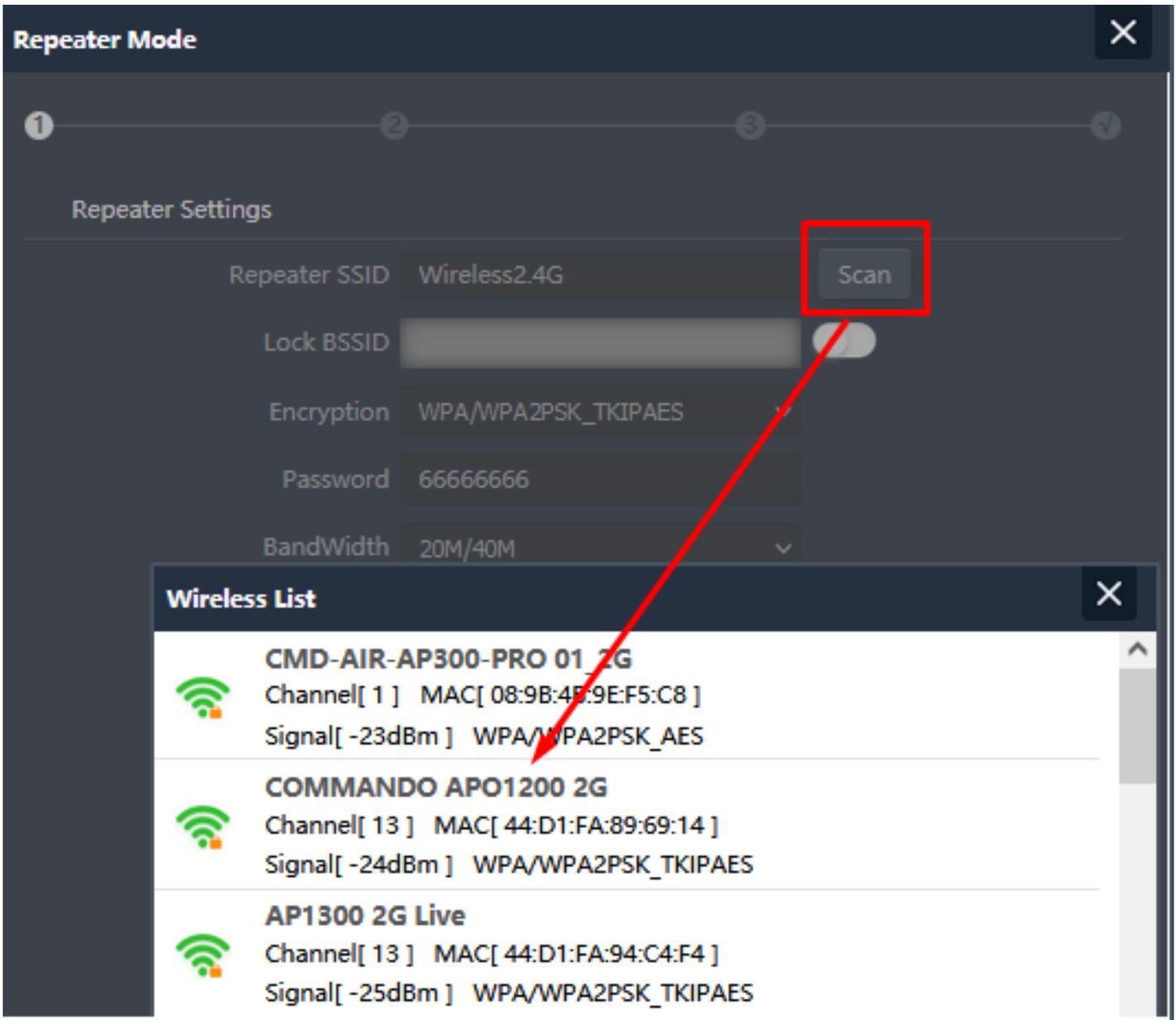
Fig 2.4.2 Selecting Repeater SSID of AirONE APO300

Note: This repeater SSID password is password of scan SSID with matching encryption.
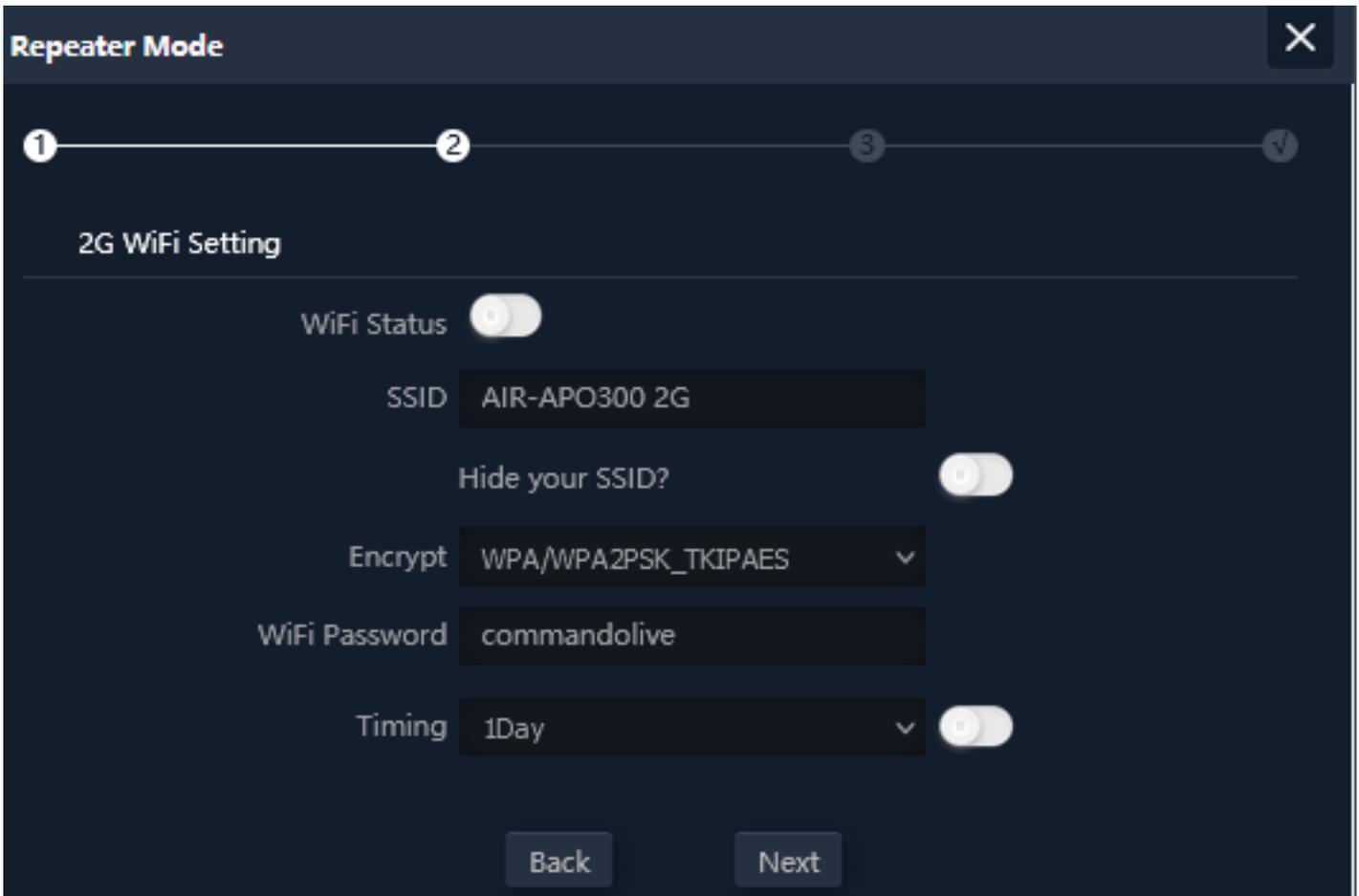
Fig 2.2.3 Setting 2G Wi-Fi setting of AirONE APO300
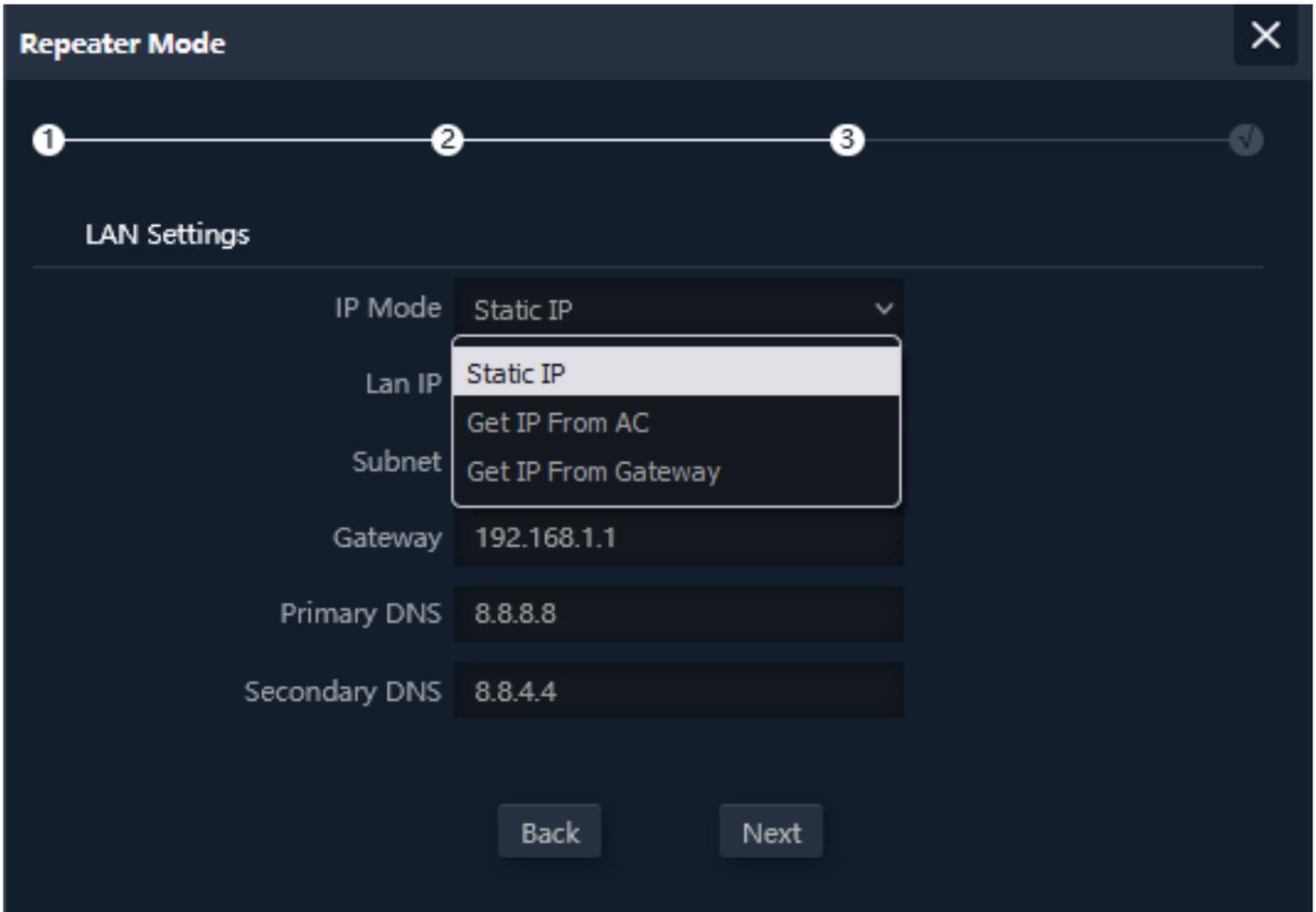
Fig 2.2.4 LAN Setting in Repeater mode of AirONE APO300

Note: The device will restart for the changes to take effect for mode changes to Repeater mode.

2.5 AP Mode

In AP mode, Set LAN setting from static IP, AC or gateway. Then configure the wireless parameters as per your choice of SSID, Channel width, Encryption and Time reboot if required.

Note: This is a default mode of operation for device.
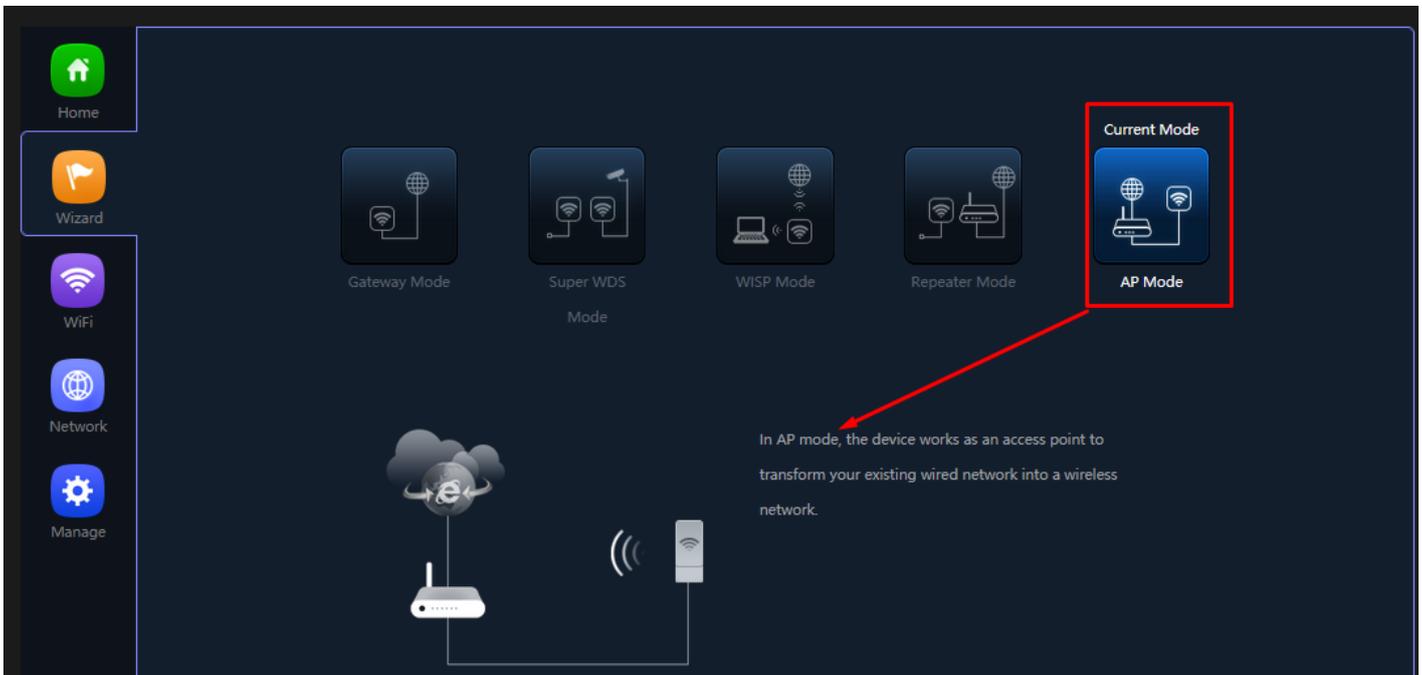
Fig 2.5.1 AP mode of AirONE APO300
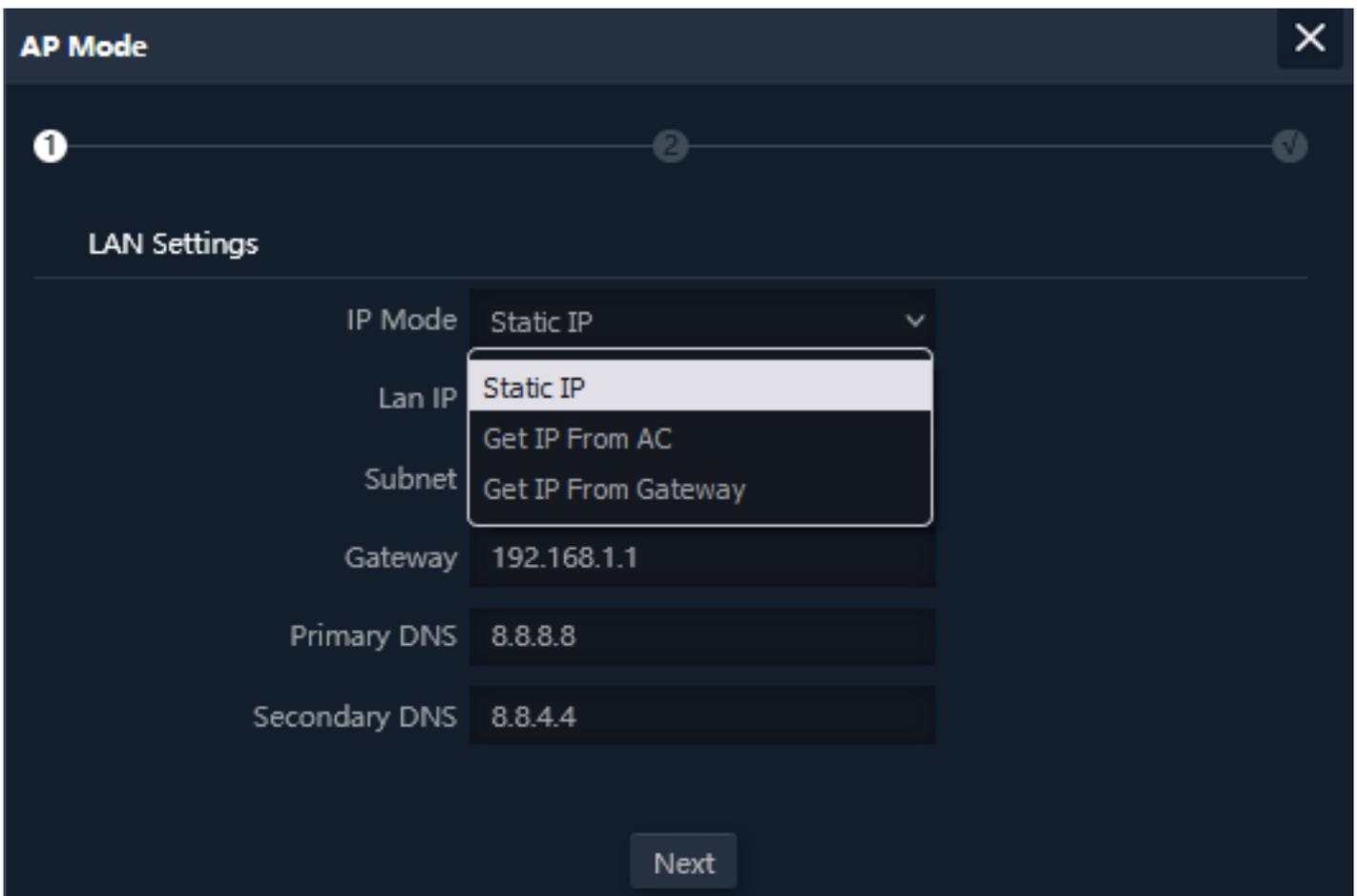
Fig 2.5.2 Setting IP mode for AP mode of AirONE APO300
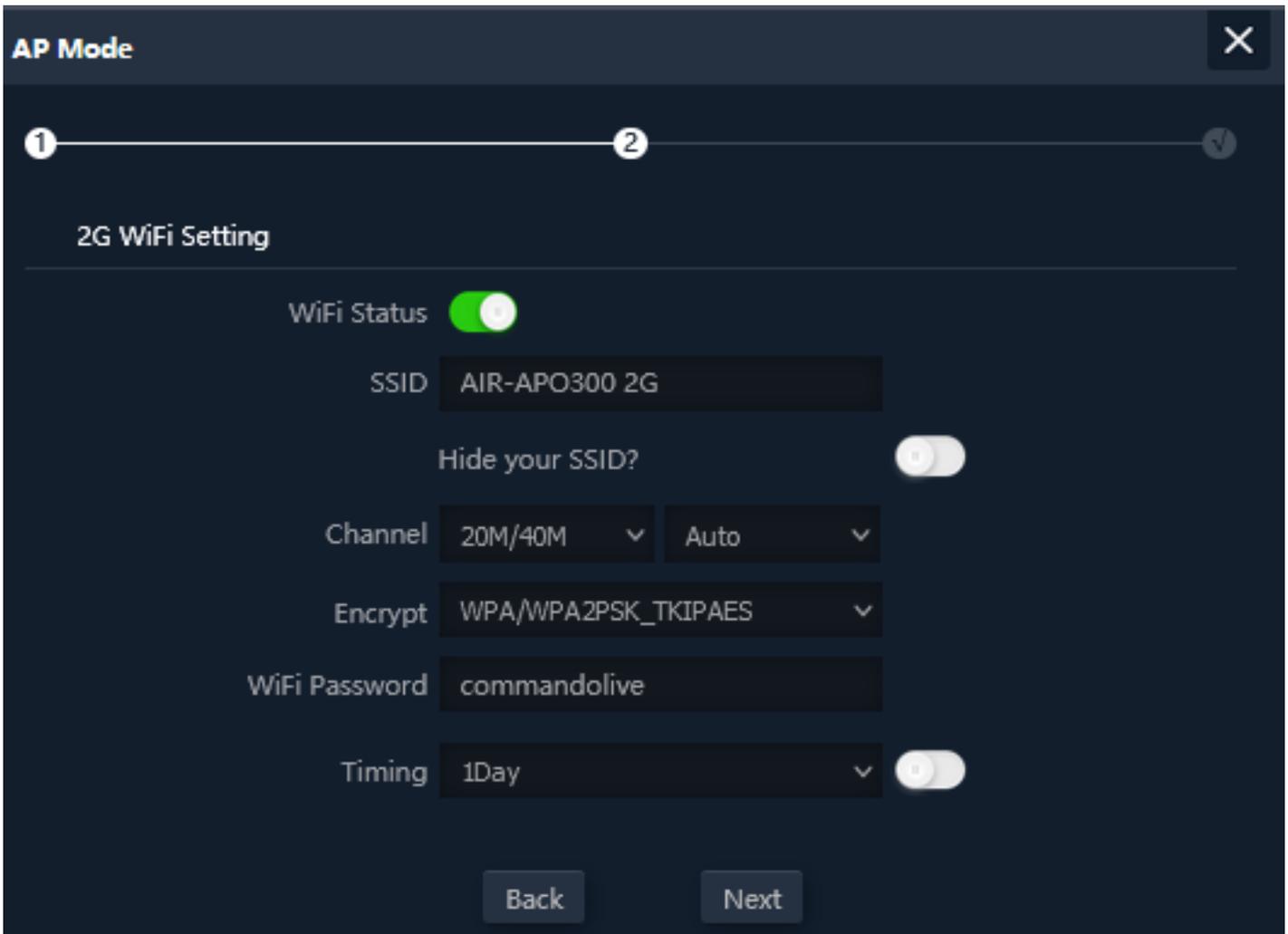
Fig 2.5.3 Setting 2G Wi-Fi for AP mode of AirONE APO300

Note: The device will restart for the changes to take effect for mode changes to AP mode.

WI-FI

In Wi-Fi setting you can set the 2.4G, MAC ACL, Repeater, Wi-Fi Timer off and Advanced settings.

2G Wi-Fi Settings:
Can set Multi SSID along with Basic SSID all other VAP 1, VAP 2, VAP 3 SSID can be set. You can ON/OFF particular SSID with this setting.

Repeater Settings:
Repeater can be turn ON or OFF. Selecting scanning repeater SSID with lock BSSID and password and encryption setting.

MAC ACL Settings:
Can allow and prohibit wireless clients based on MAC address.

Wi-Fi Timer Settings:
Wi-Fi Timer ON/ Off along with setting Time Frame.

Advanced Settings:
In Advanced setting can set Country Region, 2G Mode, Multicast Fast, Maximum wireless clients for APO (Range 1-64), WLAN Partition, Short GI, Coverage Threshold and Transmit Power

Note:
All *italic config* options are only available in WISP and Gateway mode only.

3.1 2G/5G Wi-Fi Setting

We can set 2.4G Wi-Fi with Basic Setting along with Virtual AP setting. You can enable or disable Wi-Fi by

Wi-Fi Status: On mean SSID is available for wireless clients.

Wi-Fi Status: Off mean SSID not available.

Note: By default Basic Wi-Fi SSID "COMMANDO APO300 2.4G"
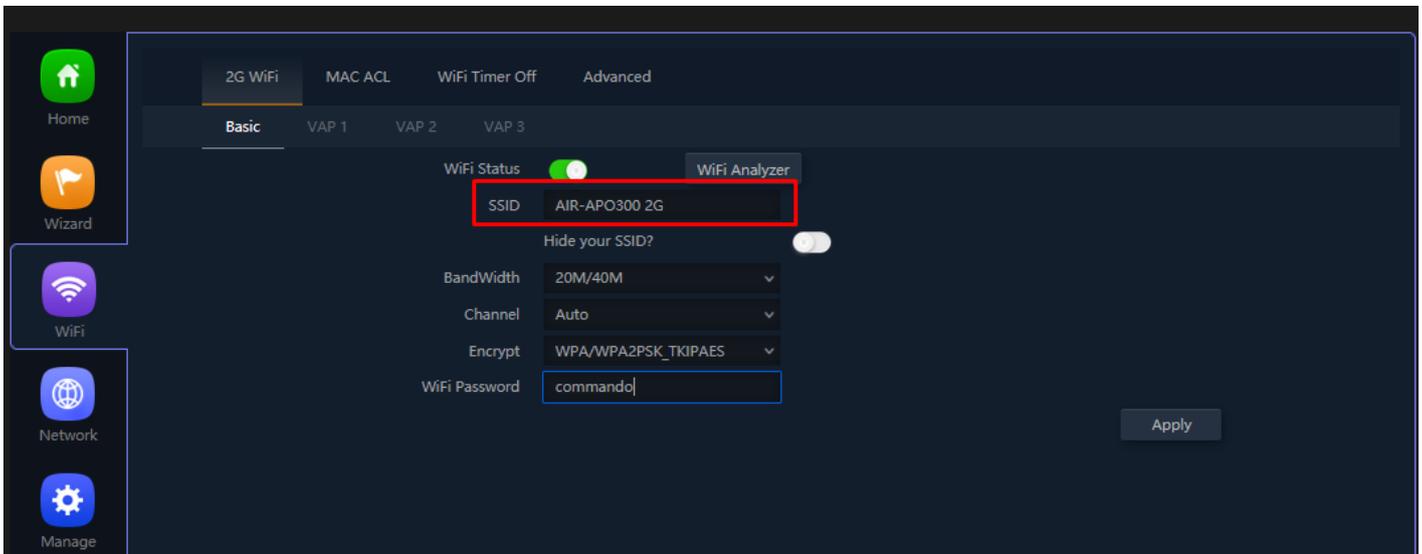
Fig 3.1.1 2G Basic Wi-Fi of AirONE APO300

Wi-Fi Analyzer is a handy tool which helps you to select a better channel and mainly to analyze the AP's signal strength and channel, to make user easier to choose the channel with less Wireless Interference.
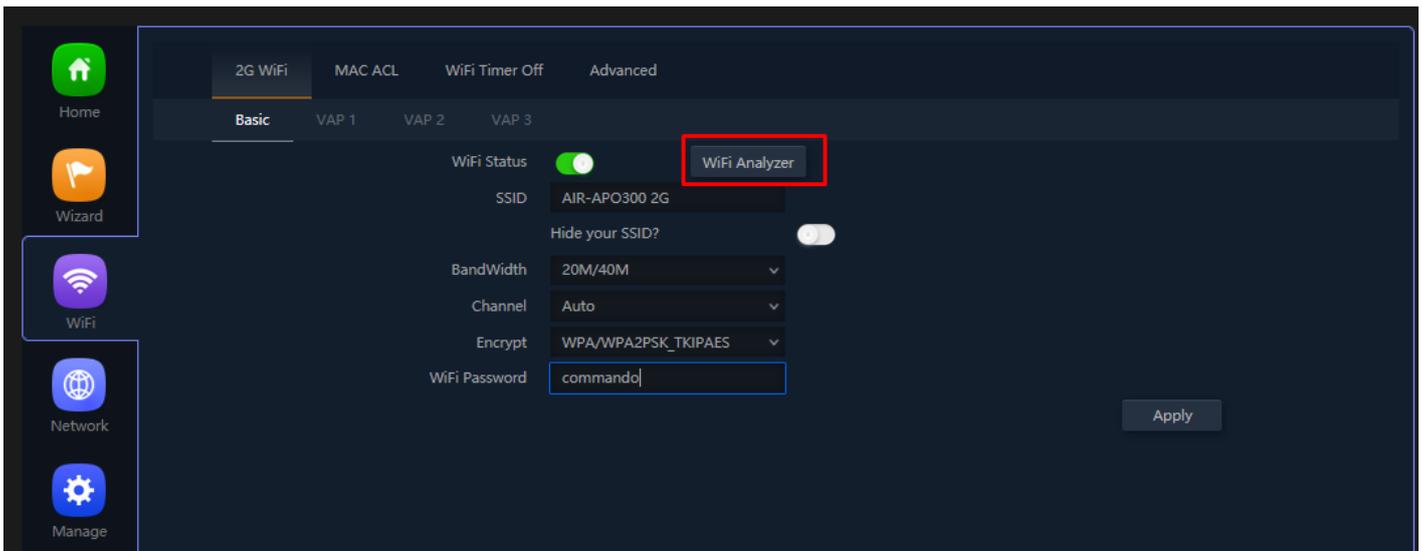
Fig 3.1.2 2G Wi-Fi Analyzer button of AirONE APO300
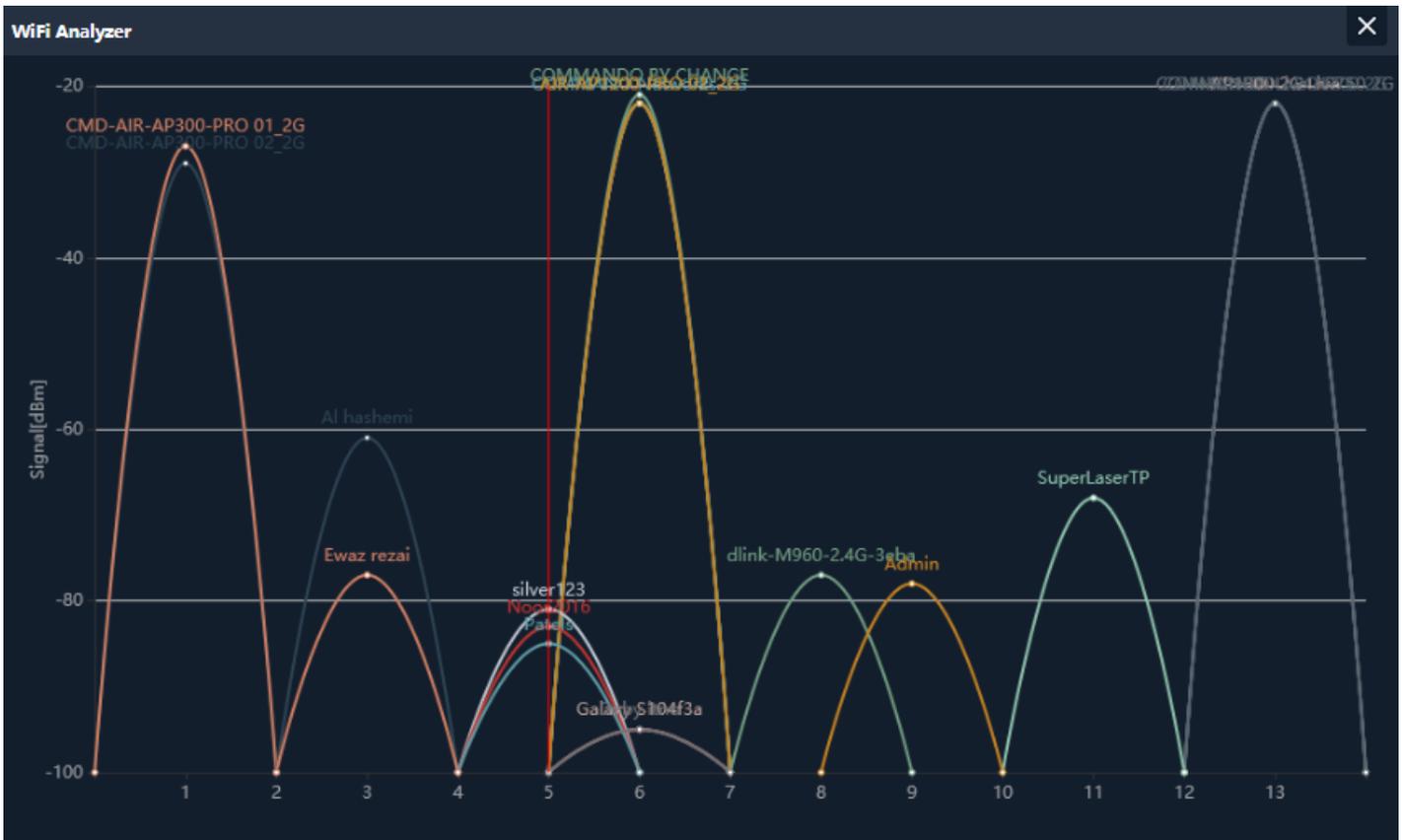
Fig 3.1.3 2G Wi-Fi Analyzer of AirONE APO300
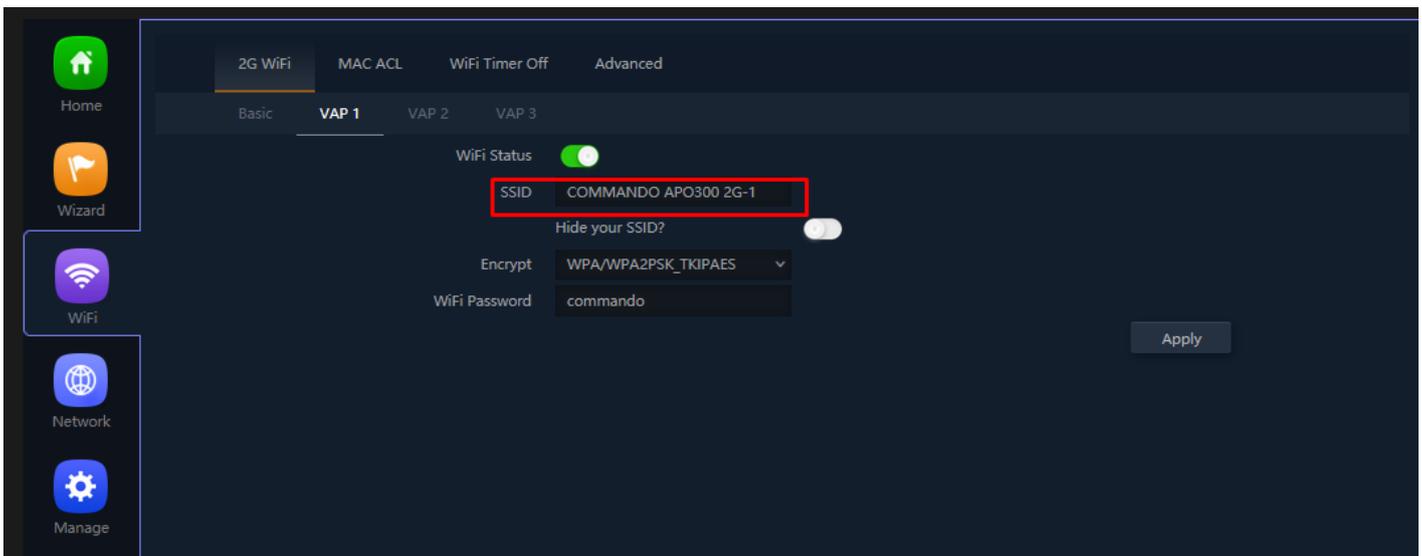
Fig 3.1.4 Enabling 2G VAP 1 of AirONE APO300

Important Note:

You can change All SSID name, Encryption and Wi-Fi password as per your choice to be used by wireless clients.

Note: You can have Multi SSID up to 4 configured on AirONE APO300. All SSID will use same channel in 2G band and channel width as set as per Basic SSID but each Virtual Access Point (VAP) can set different name, encryption and password.

3.2 Repeater Settings

Repeater Settings like scan Repeater SSID, Encryption, Password of scan SSID and bandwidth can be set.
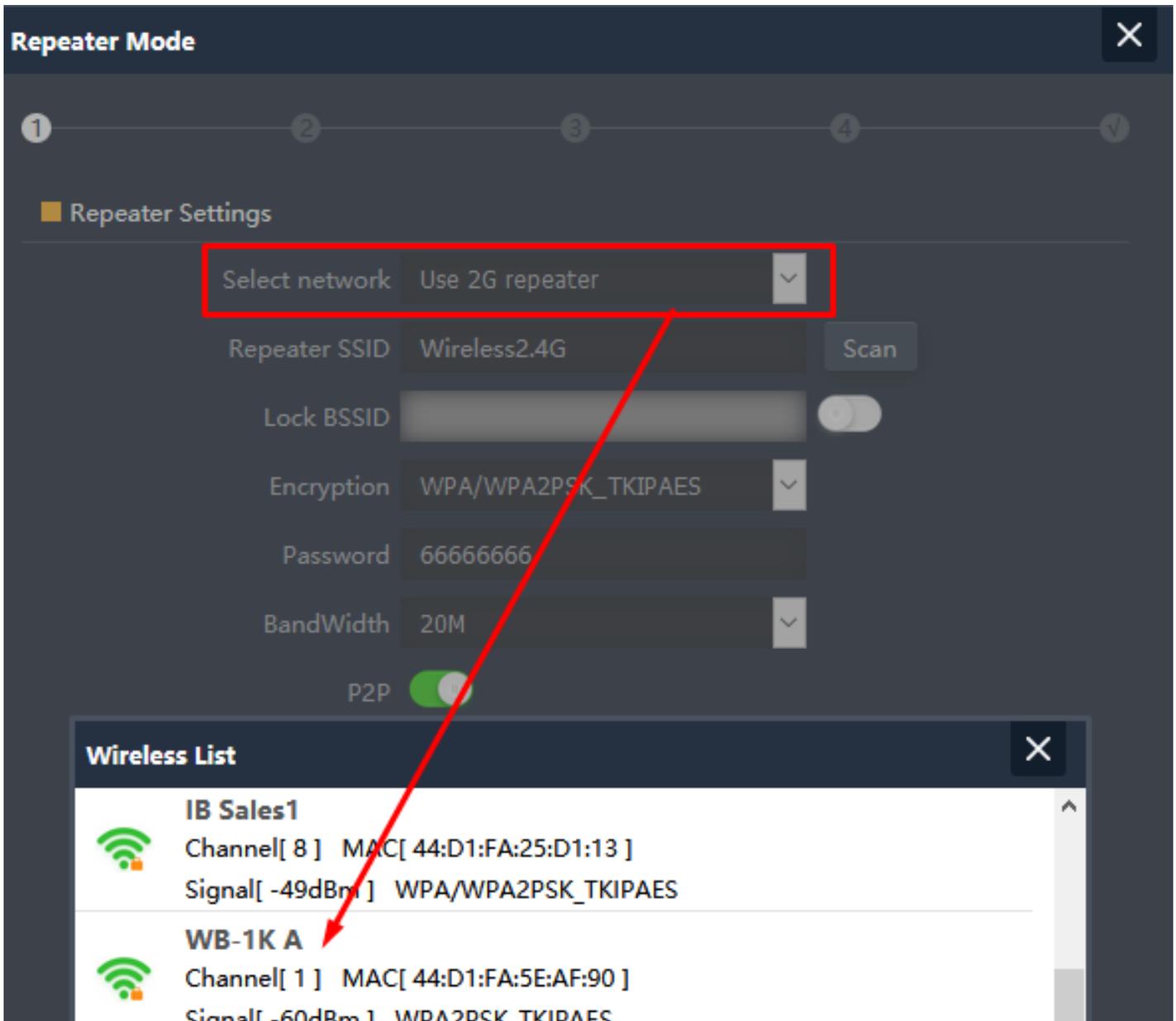
Fig 3.2.1 Scan 2G Repeater SSID AirONE APO300

3.3 MAC ACL Settings

MAC ACL Allow or prohibits the wireless users access into this device based on MAC address. Filters using MAC address of wireless client. If you permit or allow few clients, then automatically all other non-allowed client cannot associate with AP. When a client is denied access through a MAC-based filter, the client cannot associate with the AP.
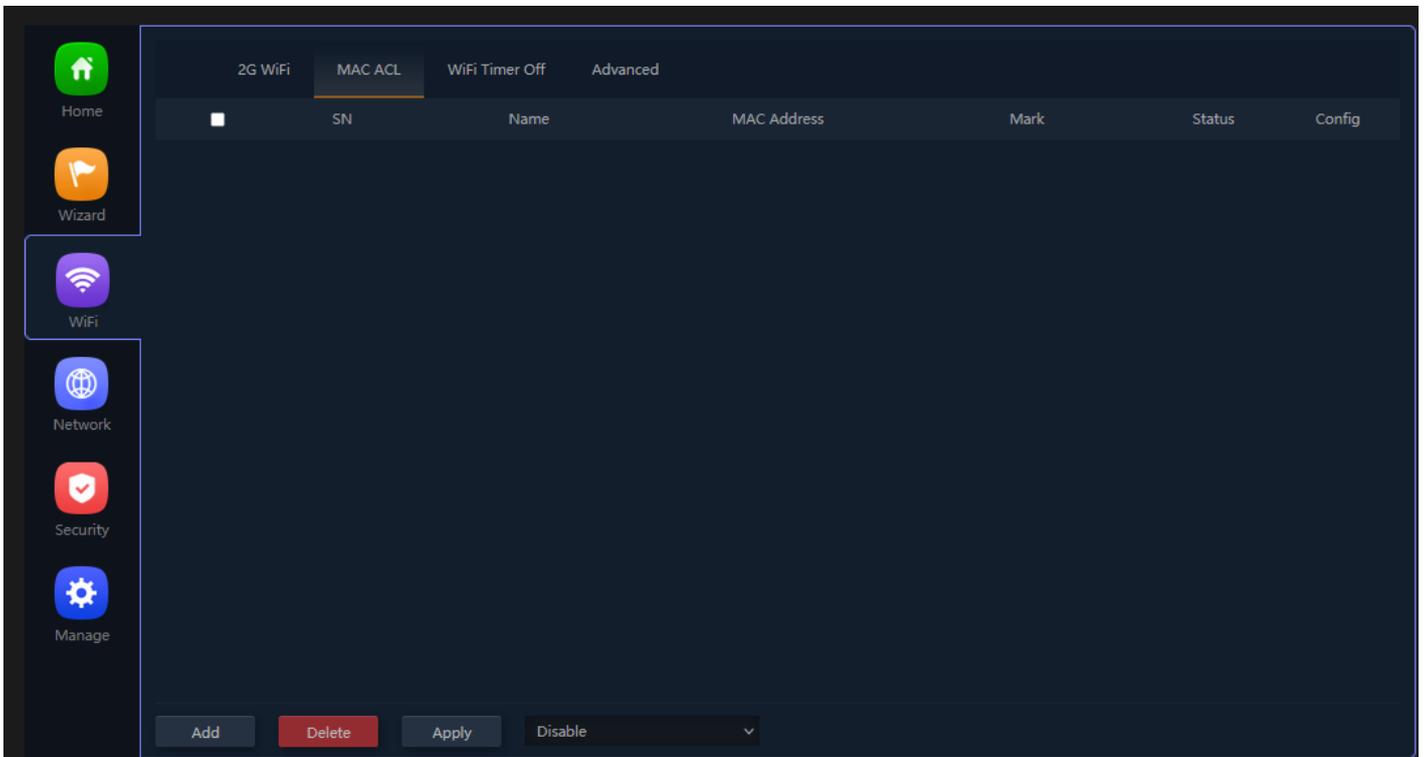
Fig 3.3.1 Default MAC ACL of AirONE APO300
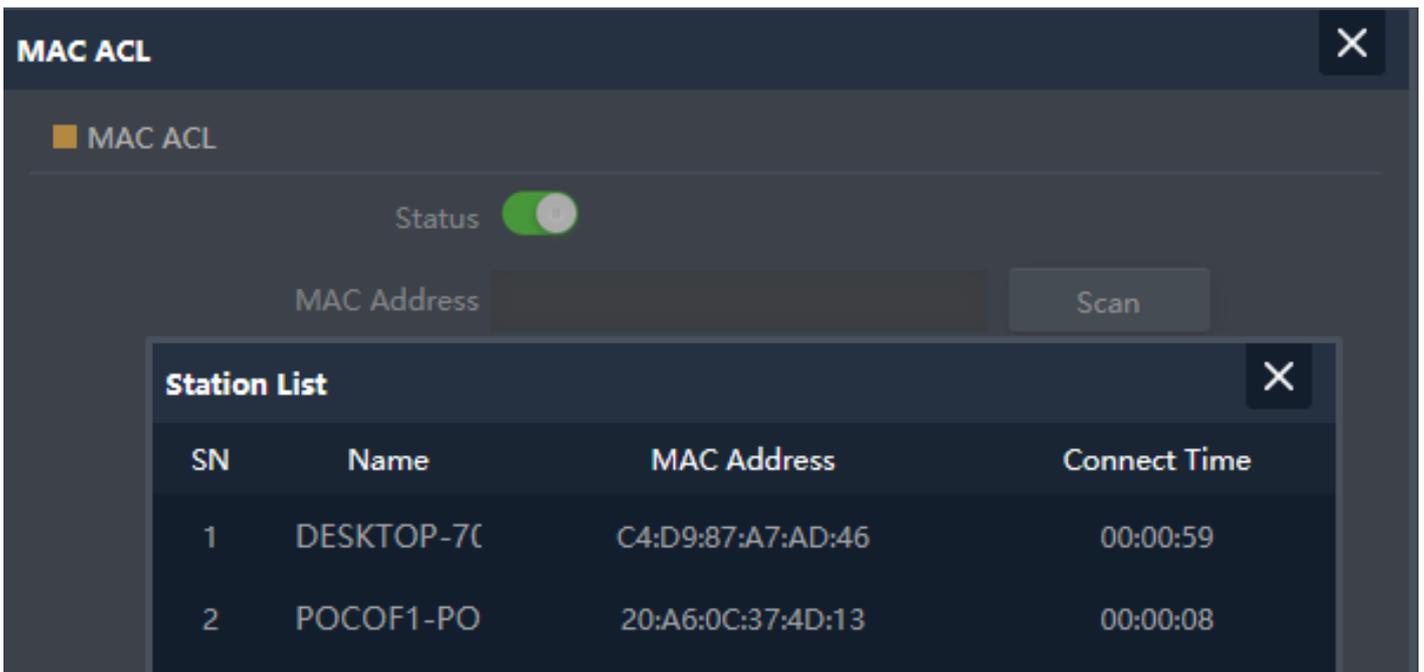
Fig 3.3.2 Add MAC ACL of AirONE APO300
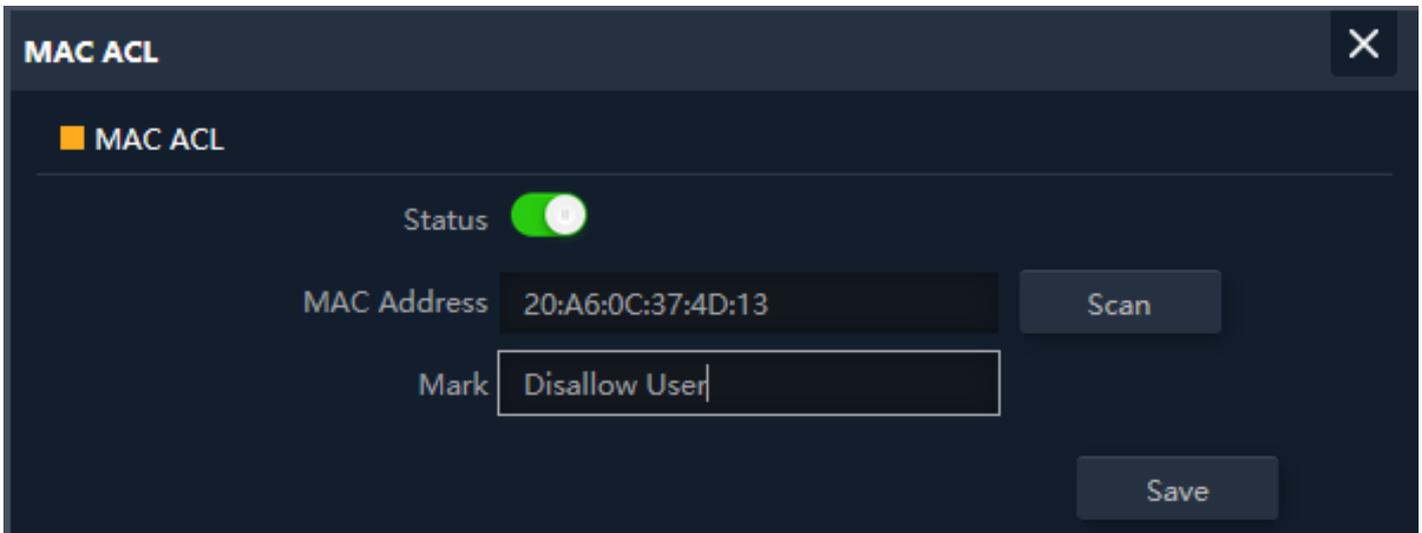
Fig 3.3.3 Select MAC address of AirONE APO300

3.4 Wi-Fi Timer Settings

Enable **Wi-Fi Timer Off** to turn off the SSID in the specified time. It schedules, turning your Wi-Fi OFF at a given time so that wireless client cannot associate with AP.

Recommendation:
It is not recommended to make Wi-Fi Timer to be OFF in Wizard as well as in this setting to enjoy Wi-Fi all the time.
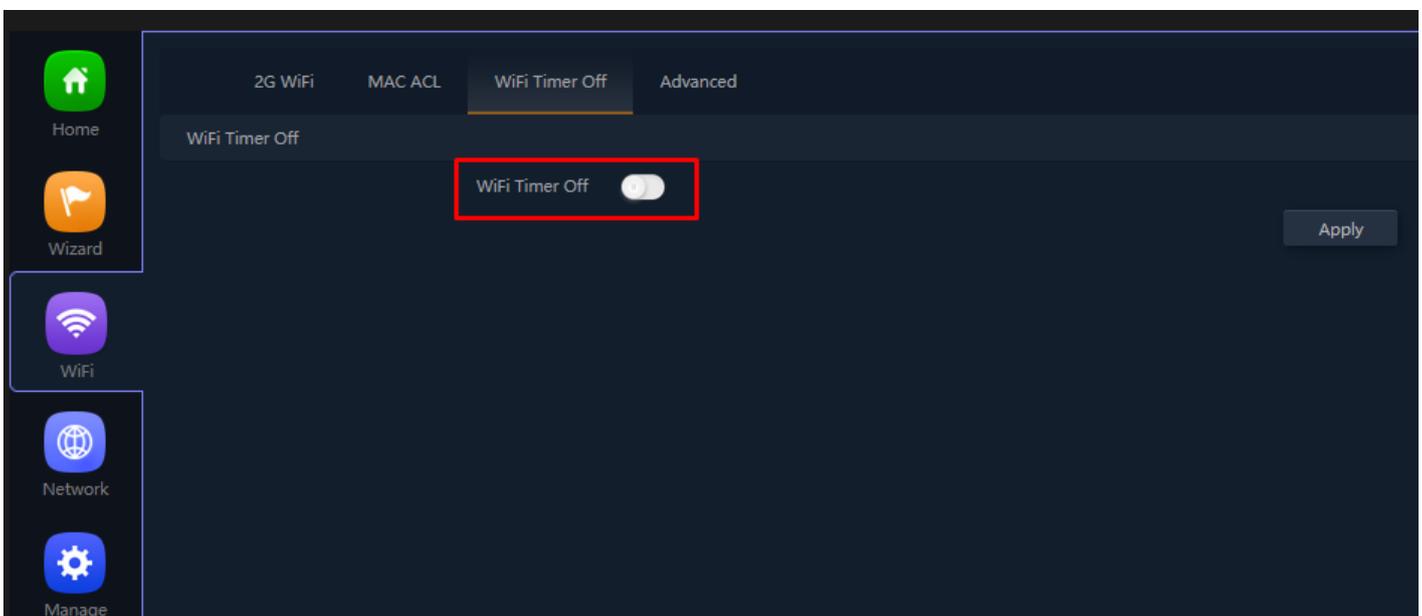
Fig 3.4.1 Default Wi-Fi Timer Off for AirONE APO300

How to shutdown Wi-Fi after office time?

Assume office time is from 9:00AM to 10:00PM and you wish to turn off Wi-Fi access but want to keep power ON for other use. Then you have to turn OFF Wi-Fi from 22:00 to 09:00 as shown.
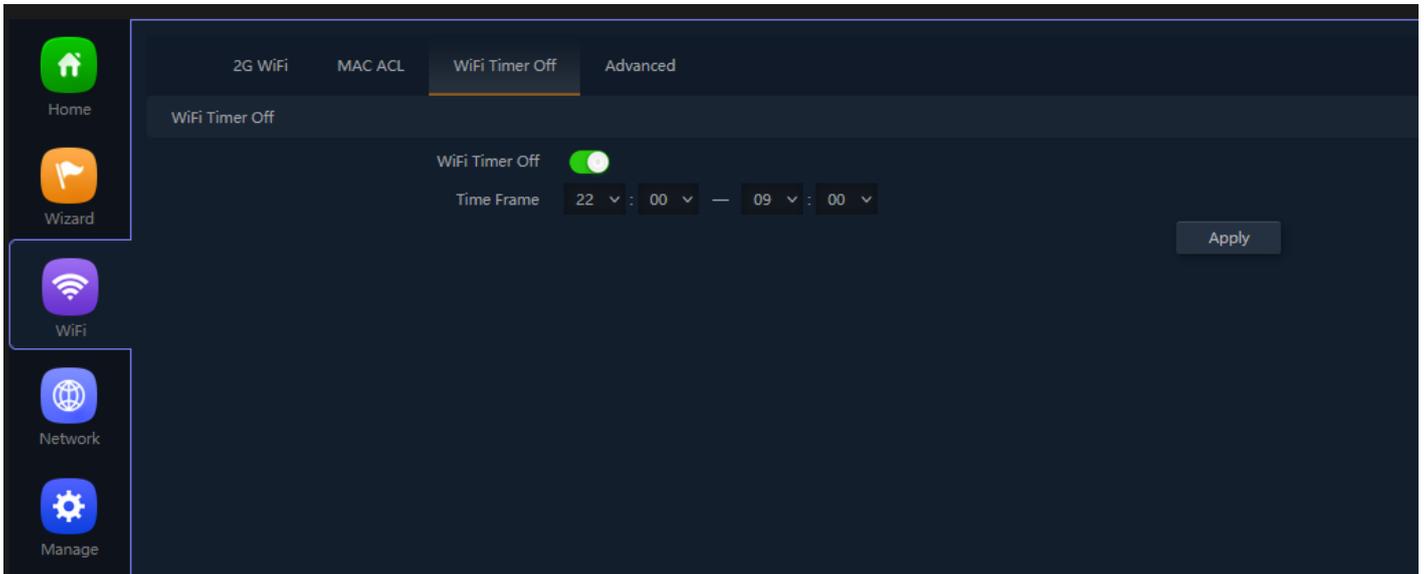
Fig 3.4.2 Wi-Fi Timer Off for AirONE APO300

3.5 Advance Setting

In Advanced setting can set Country Region, 2G/5G Mode, Multicast Fast, Maximum wireless 128 clients for AP (Range 1-64) in 2G and AP (Range 1-64) in 5G, WLAN Partition, Short GI, Coverage Threshold and Transmit Power.
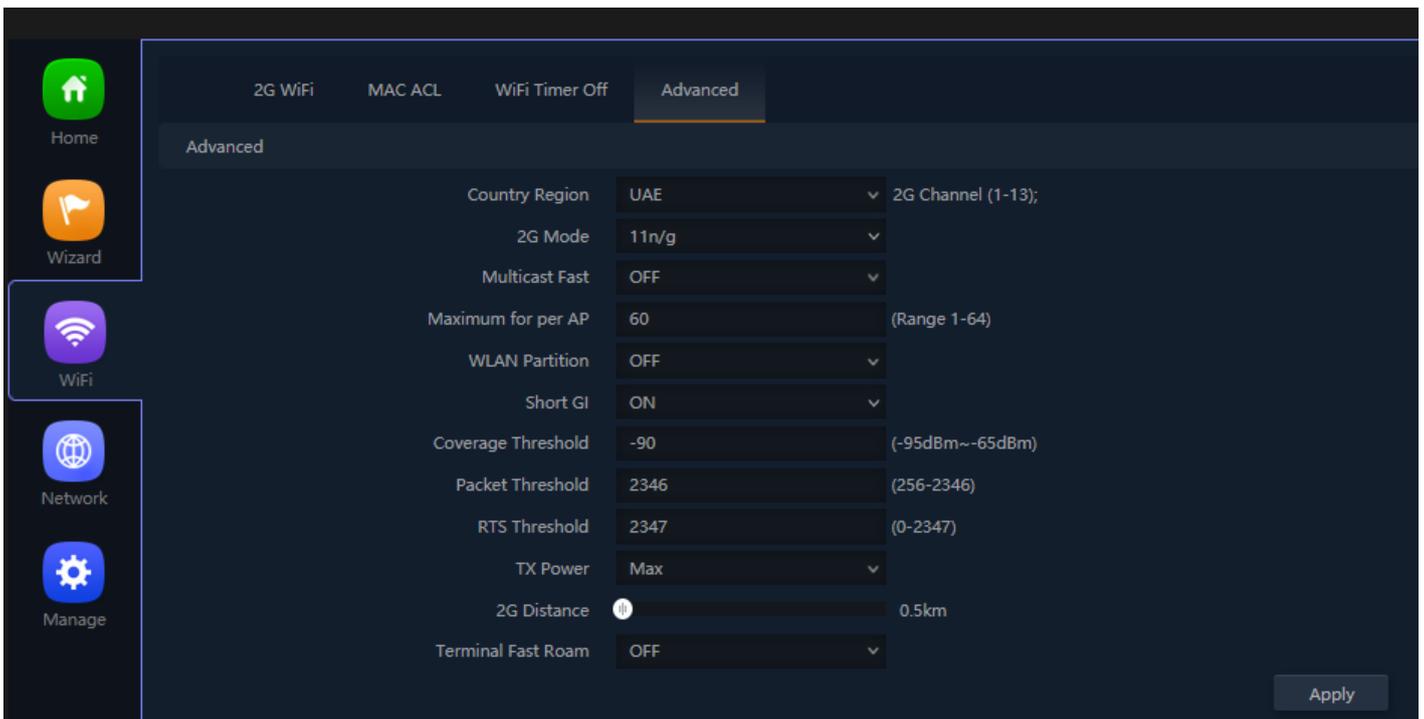
Fig 3.5.1 Default Advanced setting for AirONE APO300
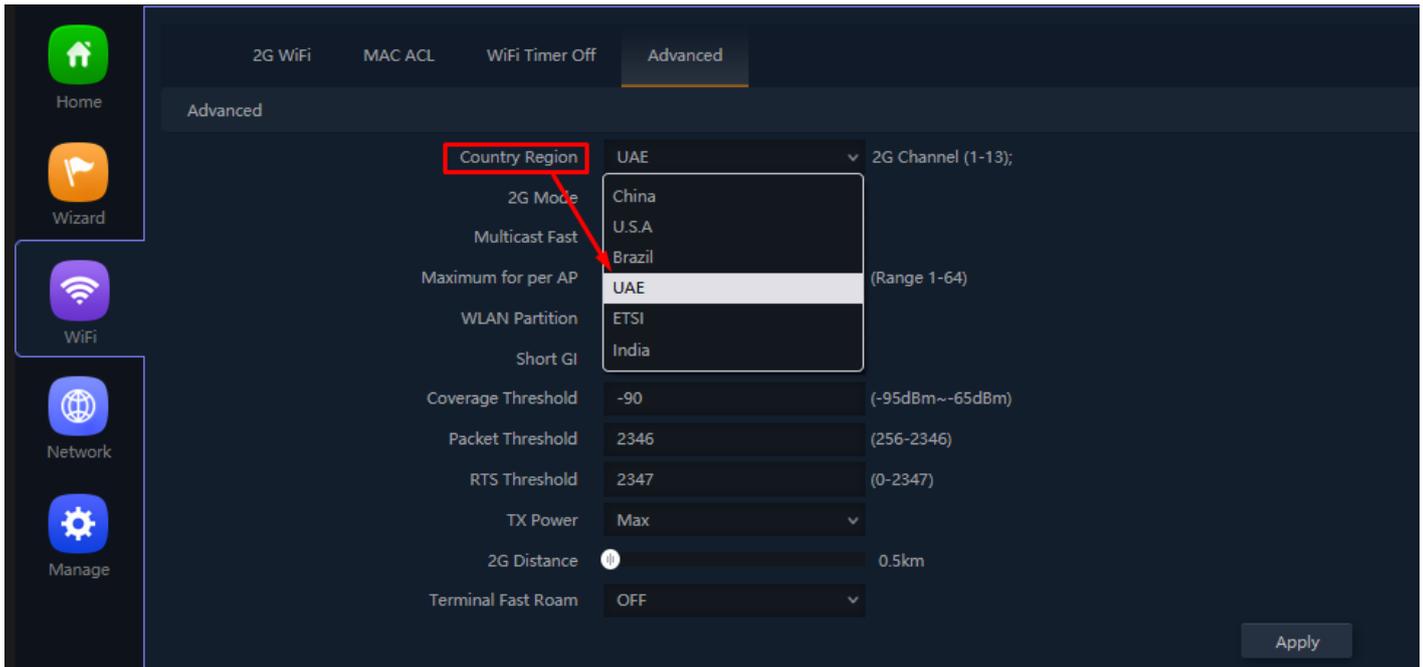
Fig 3.5.2 Selecting Country Region for AirONE APO300
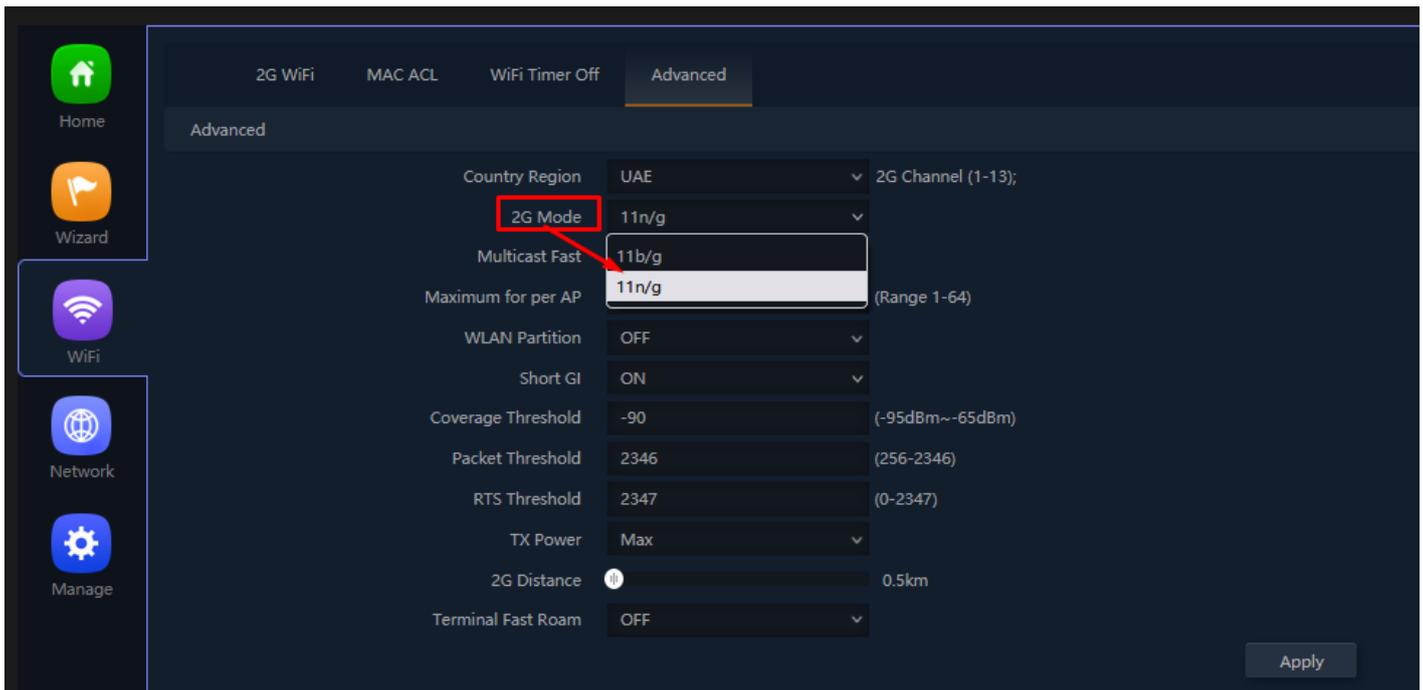
Fig 3.5.3 Selecting 2G Mode for AirONE APO300
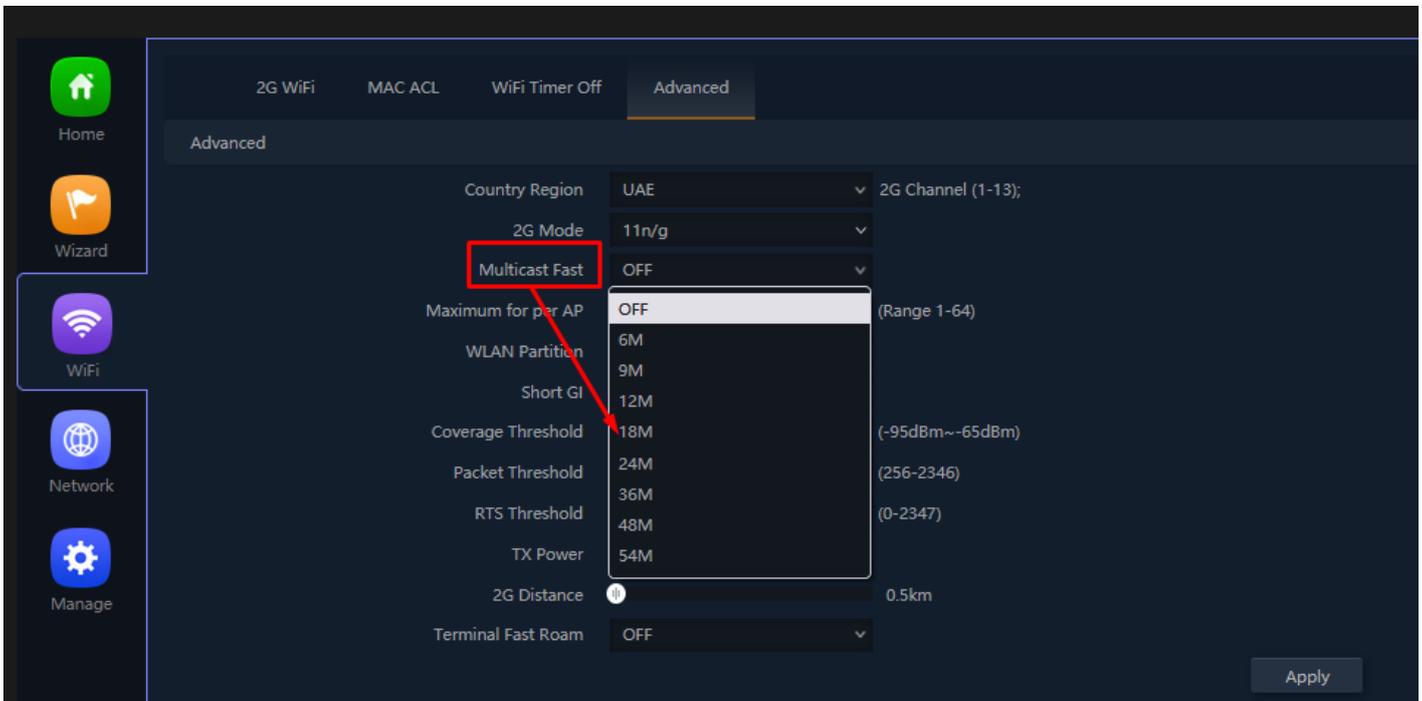
Fig 3.5.5 Selecting Multicast Fast for AirONE APO300
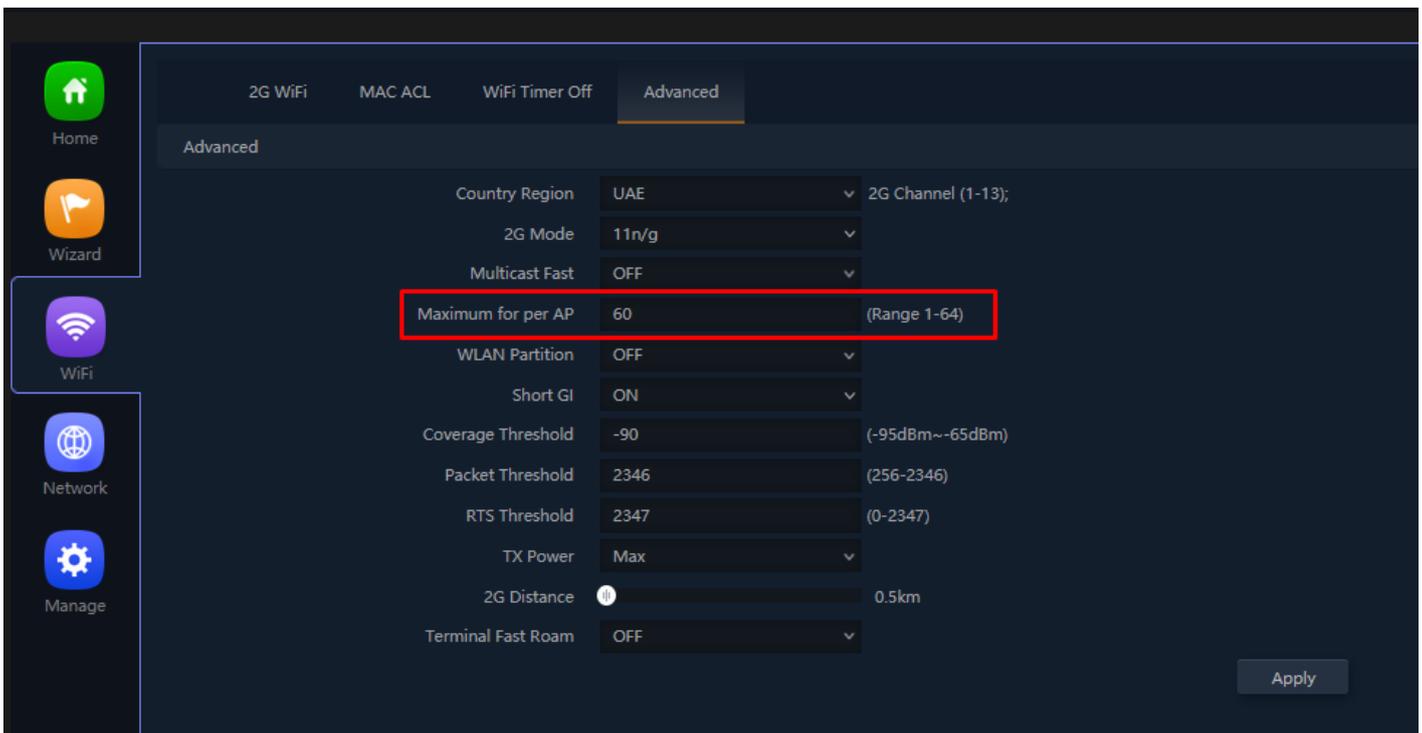
Fig 3.5.6 Setting Maximum wireless clients in 2G/5G for AirONE APO300
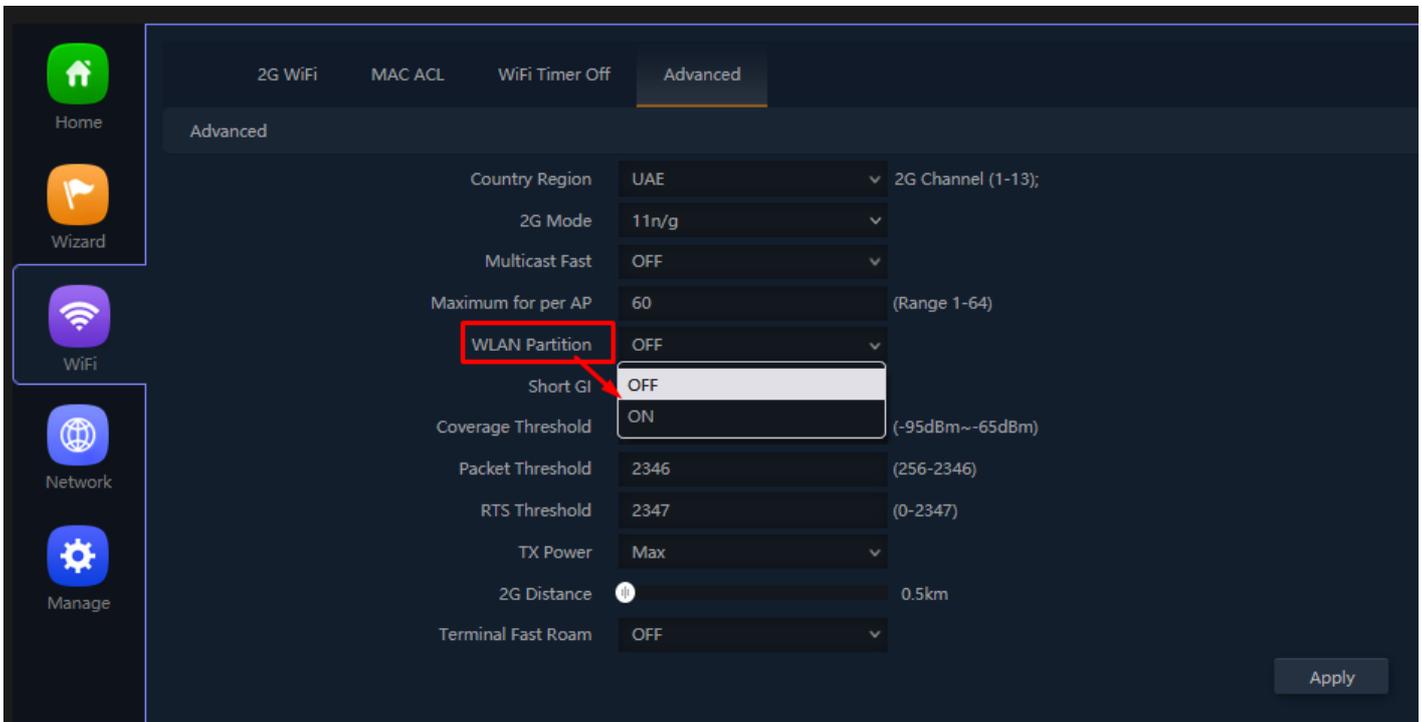
Fig 3.5.7 Selecting WLAN Partition for AirONE APO300
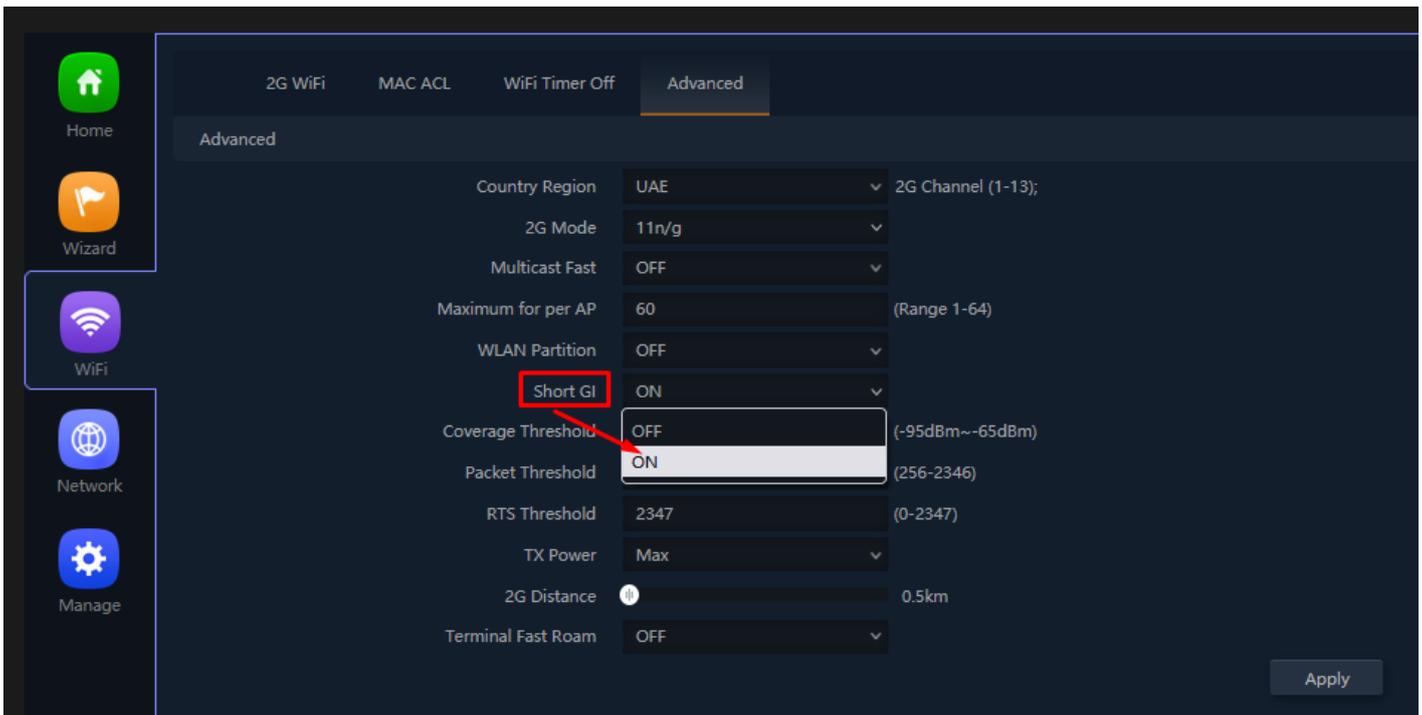
Fig 3.5.8 Selecting Short GI for AirONE APO300
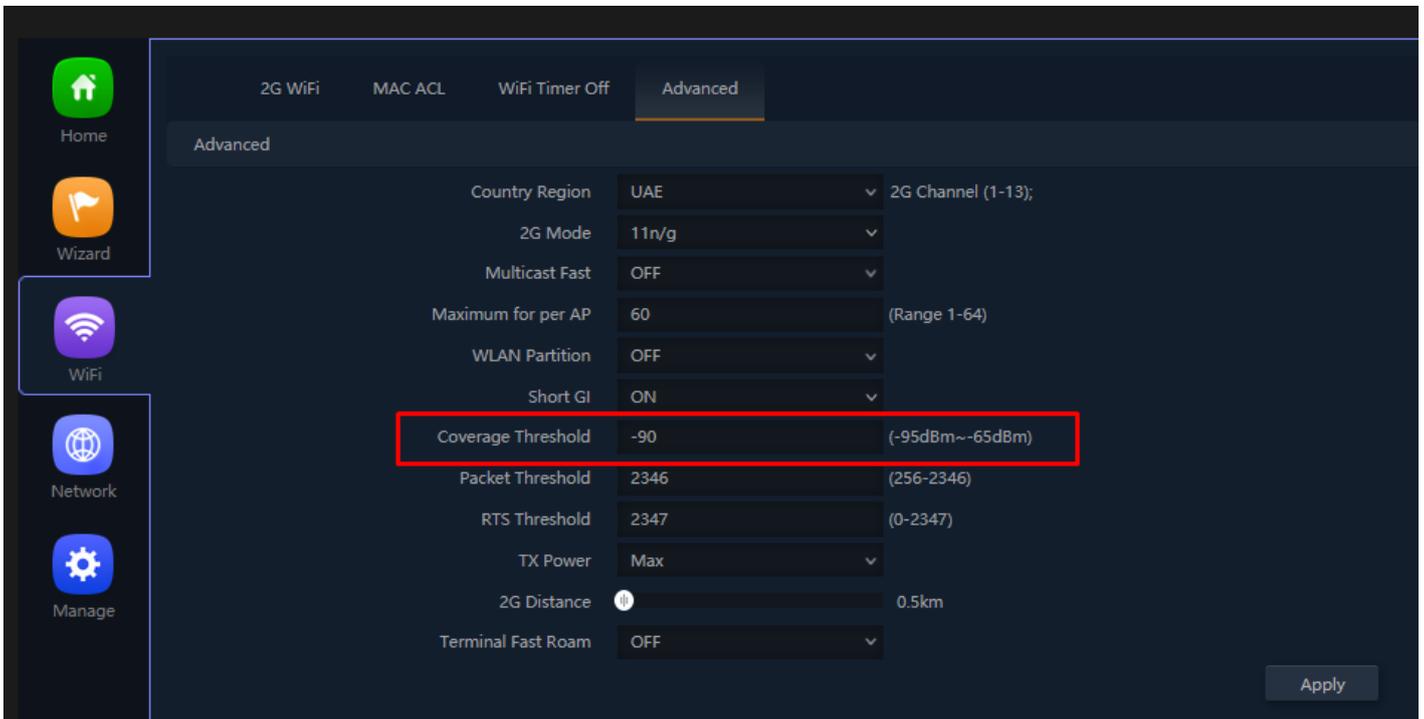
Fig 3.5.9 Setting Coverage Threshold for AirONE APO300
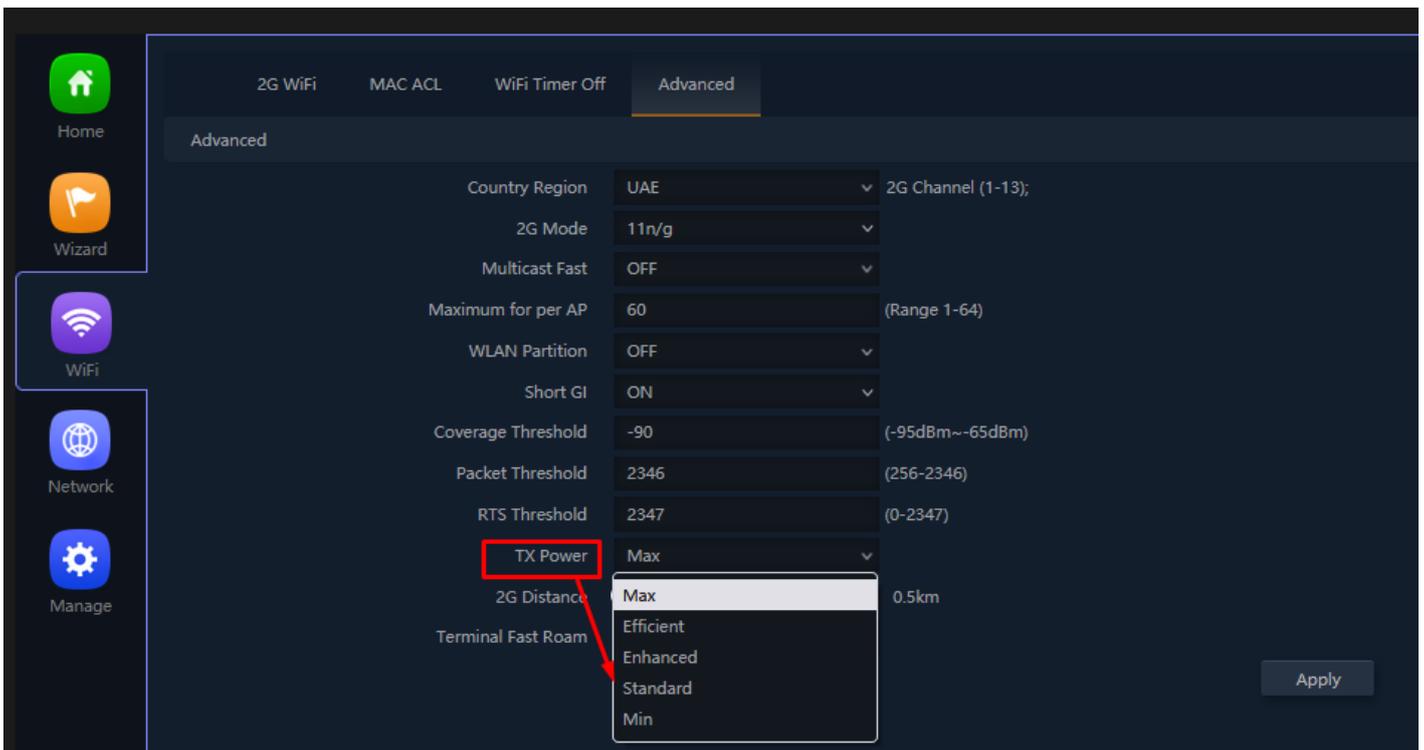
Fig 3.5.10 Setting Tx Power for AirONE APO300
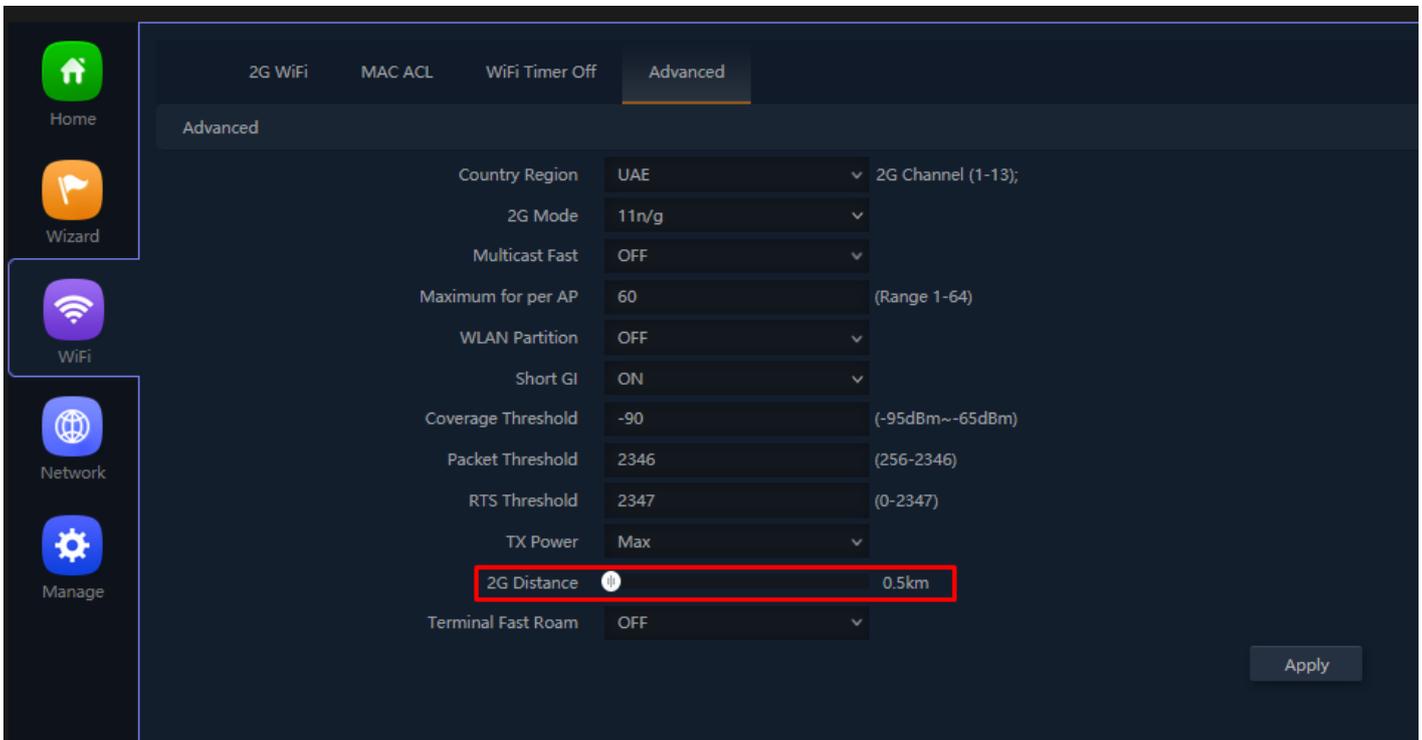
Fig 3.5.11 Setting 2G distance for AirONE APO300
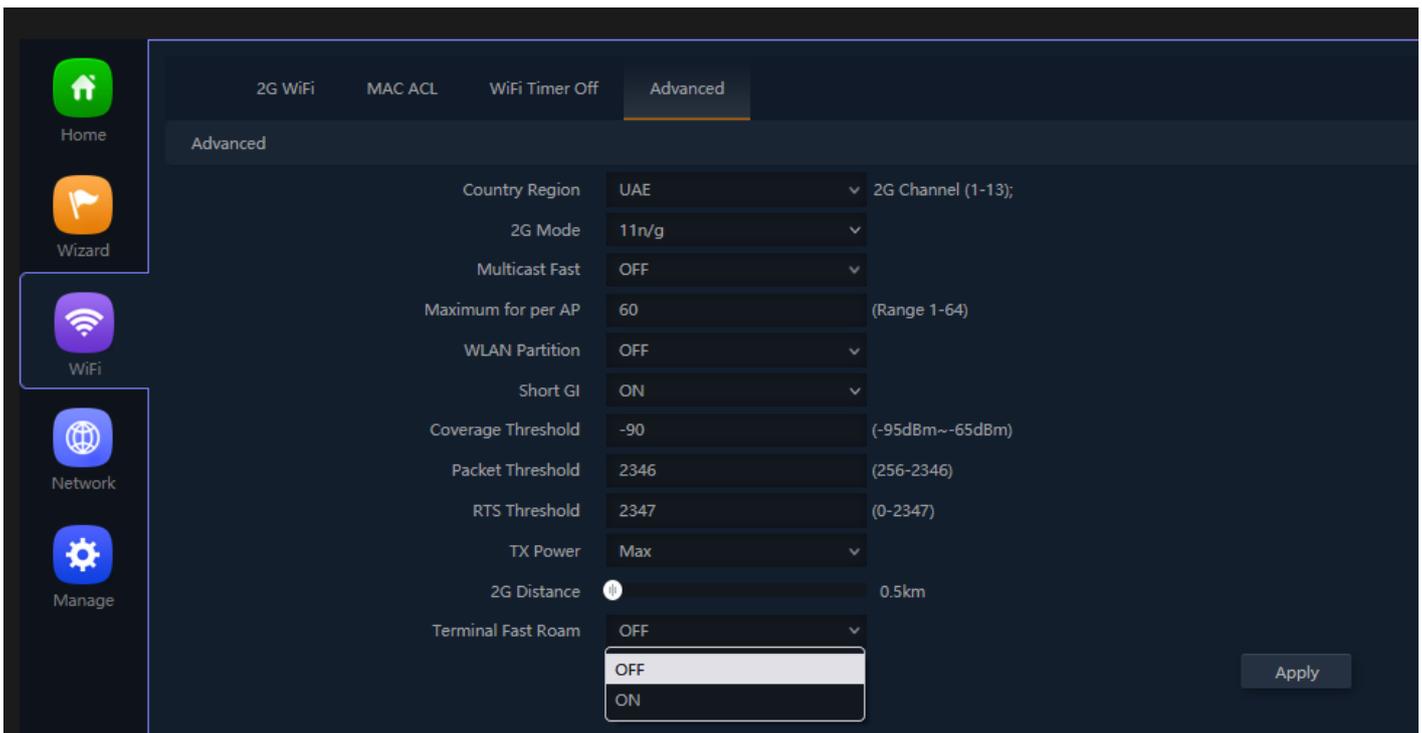
Fig 3.5.12 Setting Terminal Fast Roam for AirONE APO300

NETWORK

LAN Settings:

It can set Lan IP (Access IP), Subnet and STP along with DHCP Server, Start and maximum DHCP address, DHCP Lease Time and client list along with utilized IP count.

VLAN Settings:

Multi SSID can be provided with different VLAN ID to set different network with separate broadcast domain.

Static DHCP:
The DHCP Static IP Mapping feature enables assignment of static IP addresses with MAC address without taking IP addresses from DHCP pool with manual bindings.

WAN Settings:
You can set WAN Connect Method, MTU and DNS Manually along with Primary, Secondary DNS.

WAN Advanced Settings:
It can Enable Web server access on WAN ports from 1 to 65535. It can set MAC Clone, Enable or disable Ping Access on WAN. Enable or disable IPsec, PPTP, L2TP pass through on VPN connection.

Cloud Server Settings: You can set Cloud server URL along with binding code.

URL Mapping:
URL mappings work for the new Portal installation. URL mapping redirection to particular Website.

Note: All *italic config* options are only available in WISP and Gateway mode only

4.1 LAN Settings

IN LAN Setting you can set access IP for APO along with subnet. You can enable STP to avoid loops in network and preventing broadcast storms. You can set DHCP Server which acts as a network server that automatically provides and assigns IP addresses, default gateways and other network parameters to client devices. It relies on the standard protocol known as Dynamic Host Configuration Protocol or DHCP to respond to broadcast queries by clients.
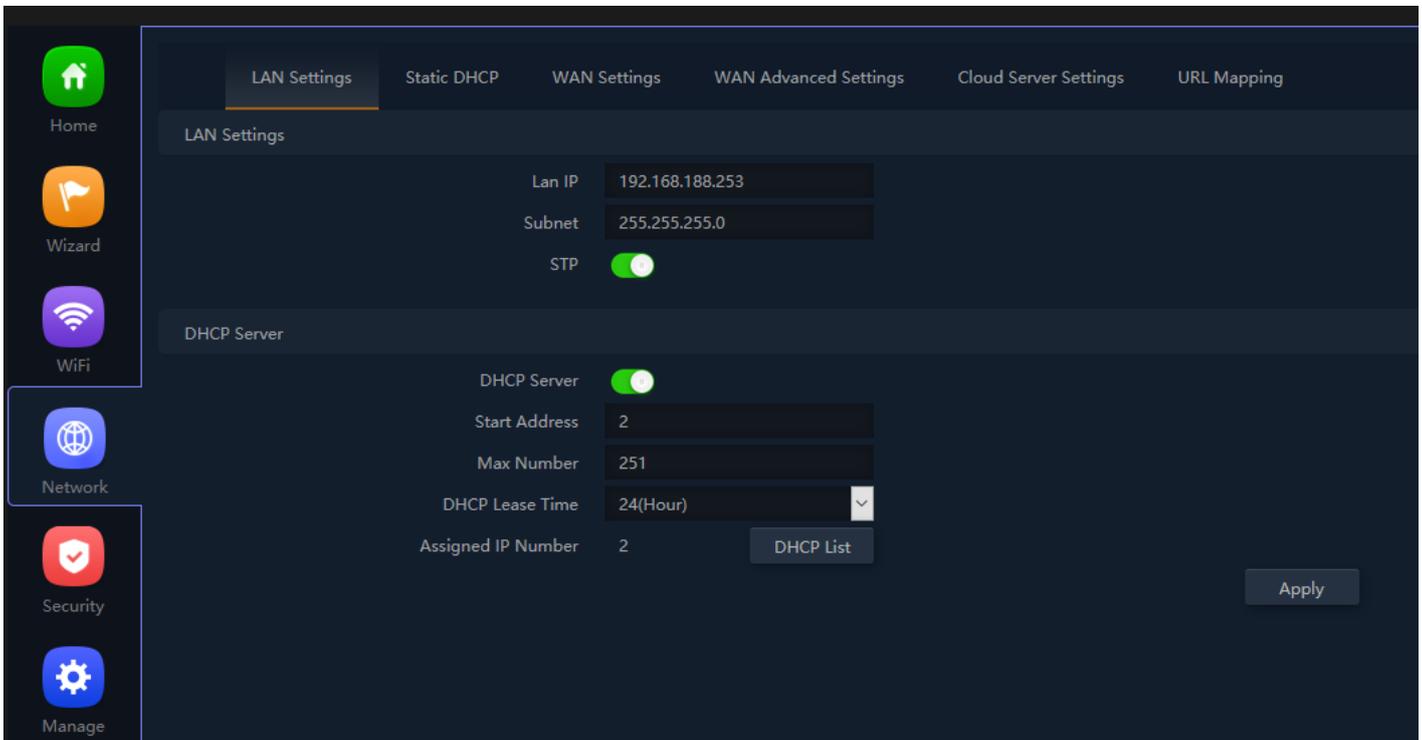
Fig 4.1.1 Setting LAN IP which used as access IP for AirONE APO300

STP: The Spanning Tree Protocol (STP) is a network protocol that builds a loop-free logical topology for Ethernet networks. The Spanning Tree Protocol (STP) is responsible for identifying links in the network and shutting down the redundant ones, preventing possible network loops. The purpose of STP is to allow redundant connection between devices while ensuring a loop-free topology for a LAN. It can also automatically re-enable redundant paths as backup paths in case the active path fails.
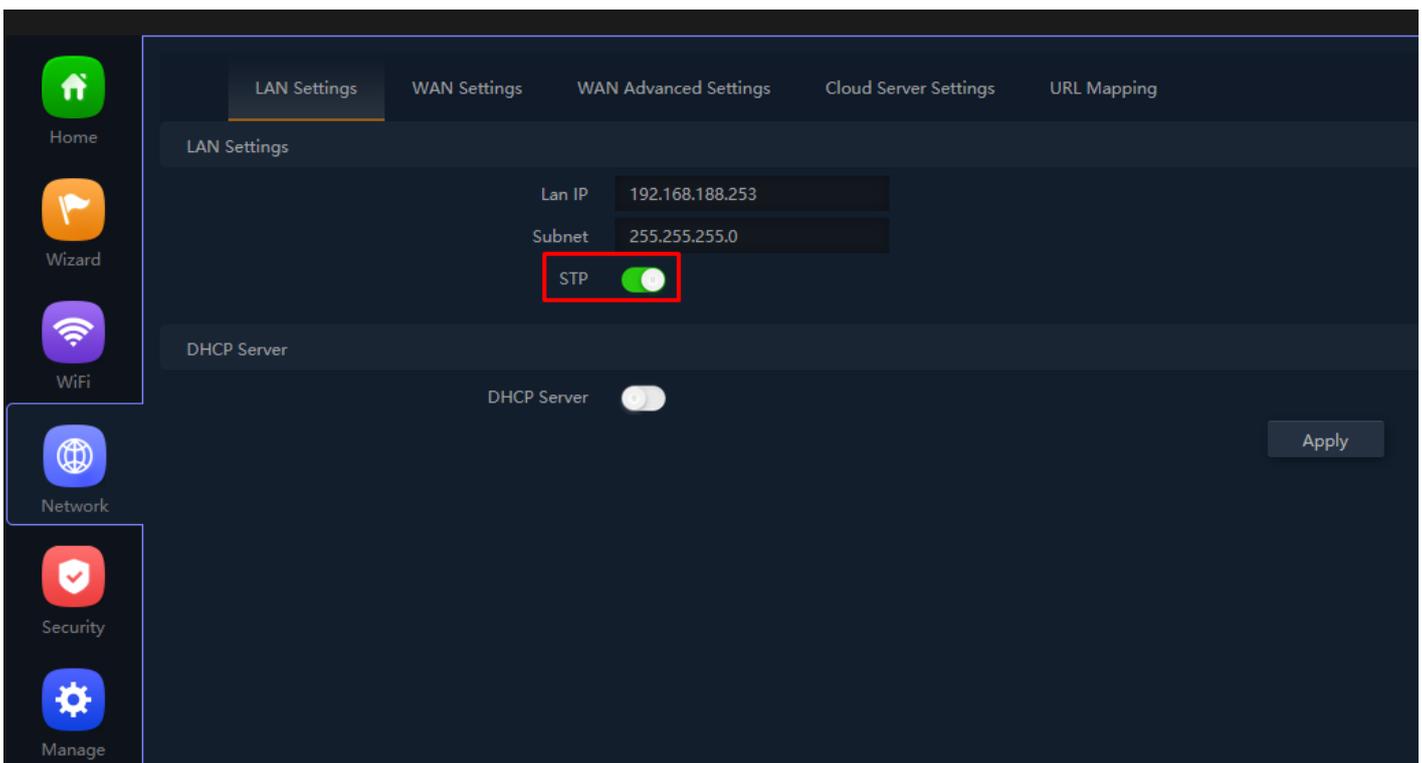
Fig 4.1.2 Enabling STP for AirONE APO300

DHCP Server:

A DHCP Server is a network server that automatically provides and assigns IP addresses to wireless client devices. It relies on the standard protocol known as Dynamic Host Configuration Protocol or DHCP to respond to broadcast queries by clients.
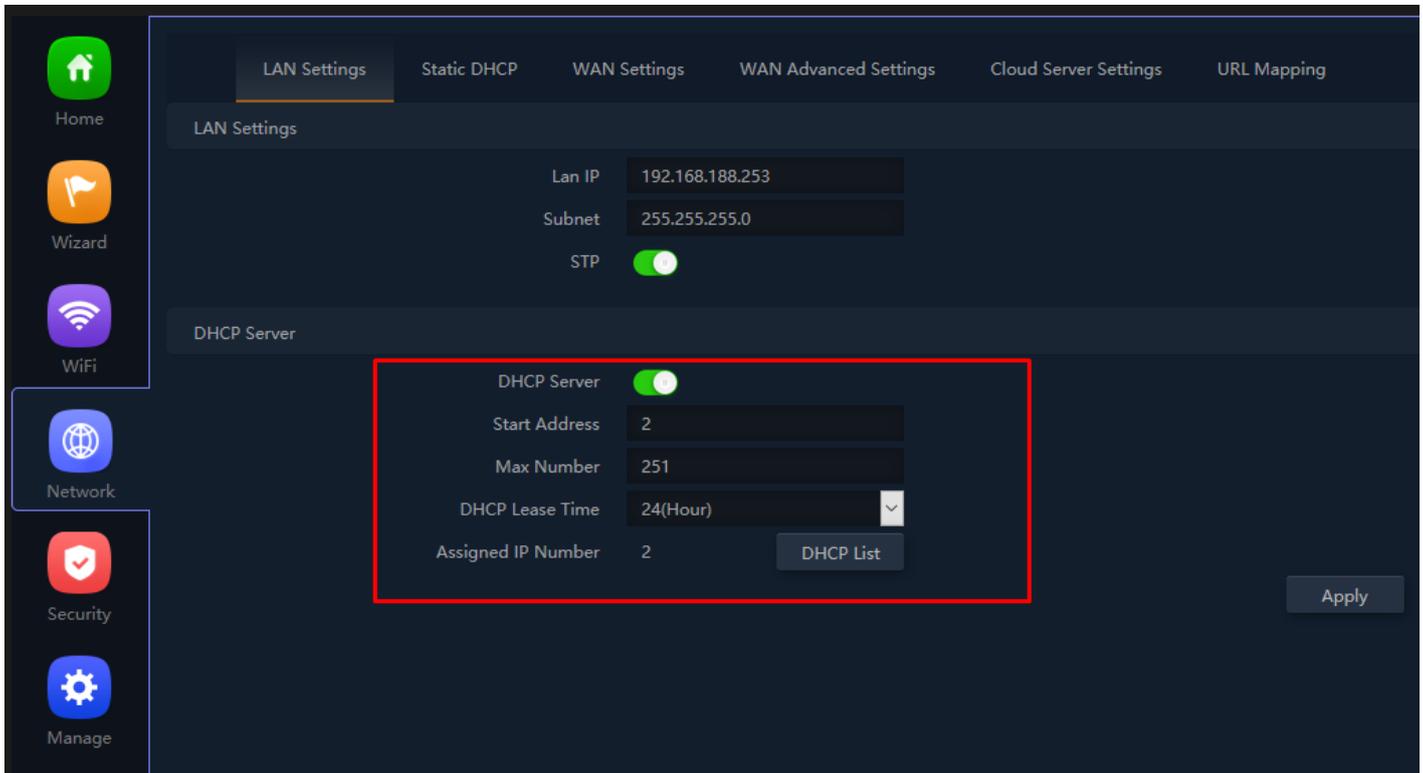
Fig 4.1.3 Setting DHCP for AirONE APO300
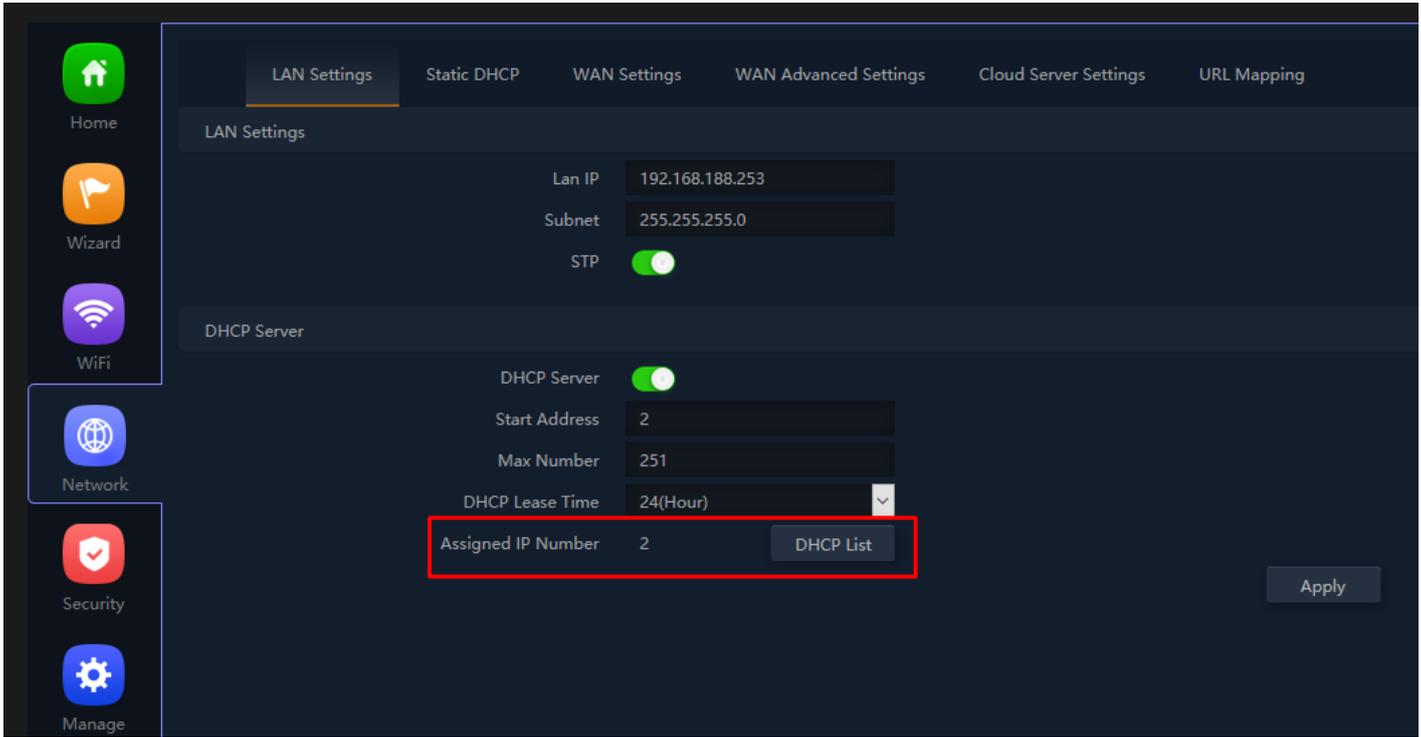
Fig 4.1.4 DHCP Assigned list for AirONE APO300
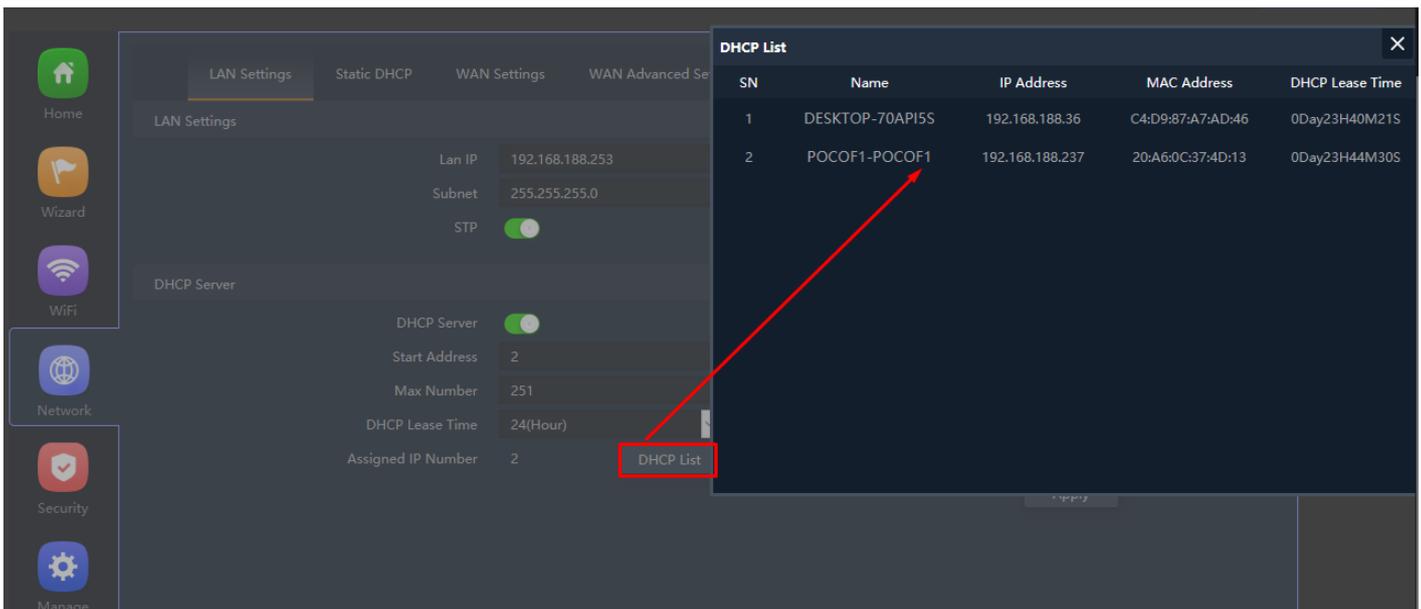
Fig 4.1.5 DHCP client list for AirONE APO300

4.2 VLAN Setting

In VLAN Setting, you need a L2/L3 switch that make use of multiple VLAN. You can give wireless clients member of multiple VLAN using multi SSID. It is required to enable basic and VAP. These Multi SSID can be provided with different VLAN ID to set different network with separate broadcast domain.
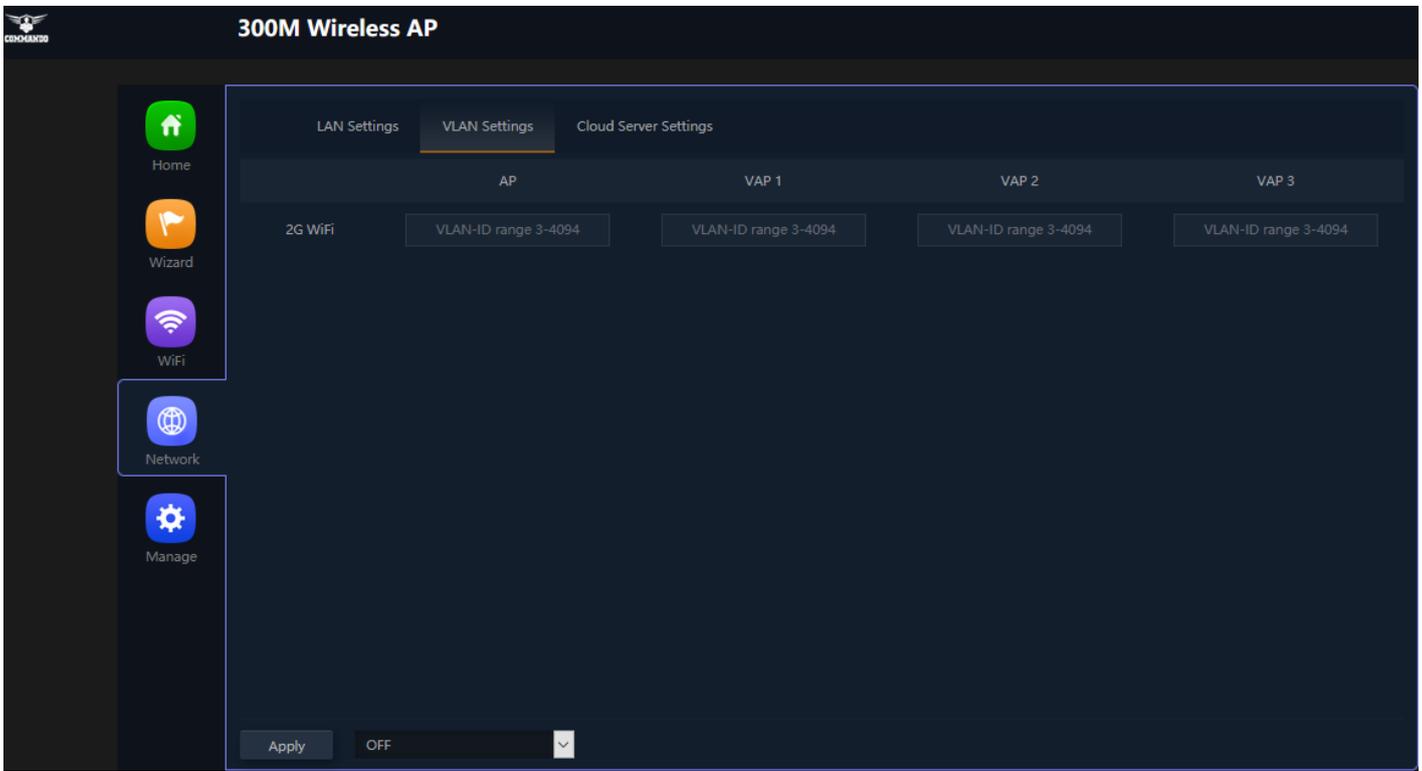
Fig 4.2.1 Default VLAN setting for AirONE APO300
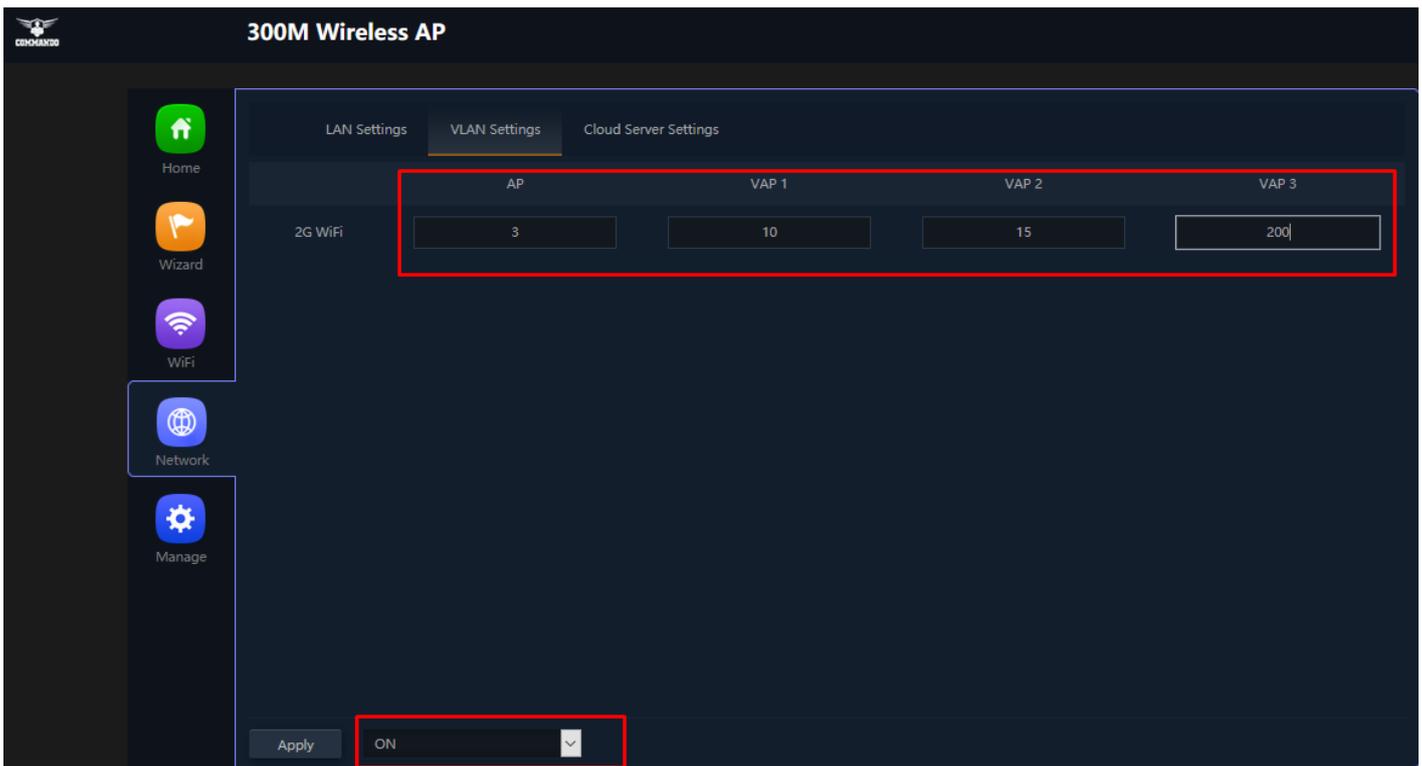
Fig 4.2.2 VLAN setting for AirONE APO300

4.3 Static DHCP Setting

A static IP address binding is ultimately set by an administrator and does not change. Although DHCP stands for dynamic host configuration protocol, you can still set up static IP addresses using DHCP. This allows the network server to always get the same IP even

after it reboots, without dynamically assigning the IP. The DHCP Static IP Mapping feature enables assignment of static IP addresses with MAC address without taking IP addresses from DHCP pool with manual bindings. Compatible ARP binding list is statically assigned.
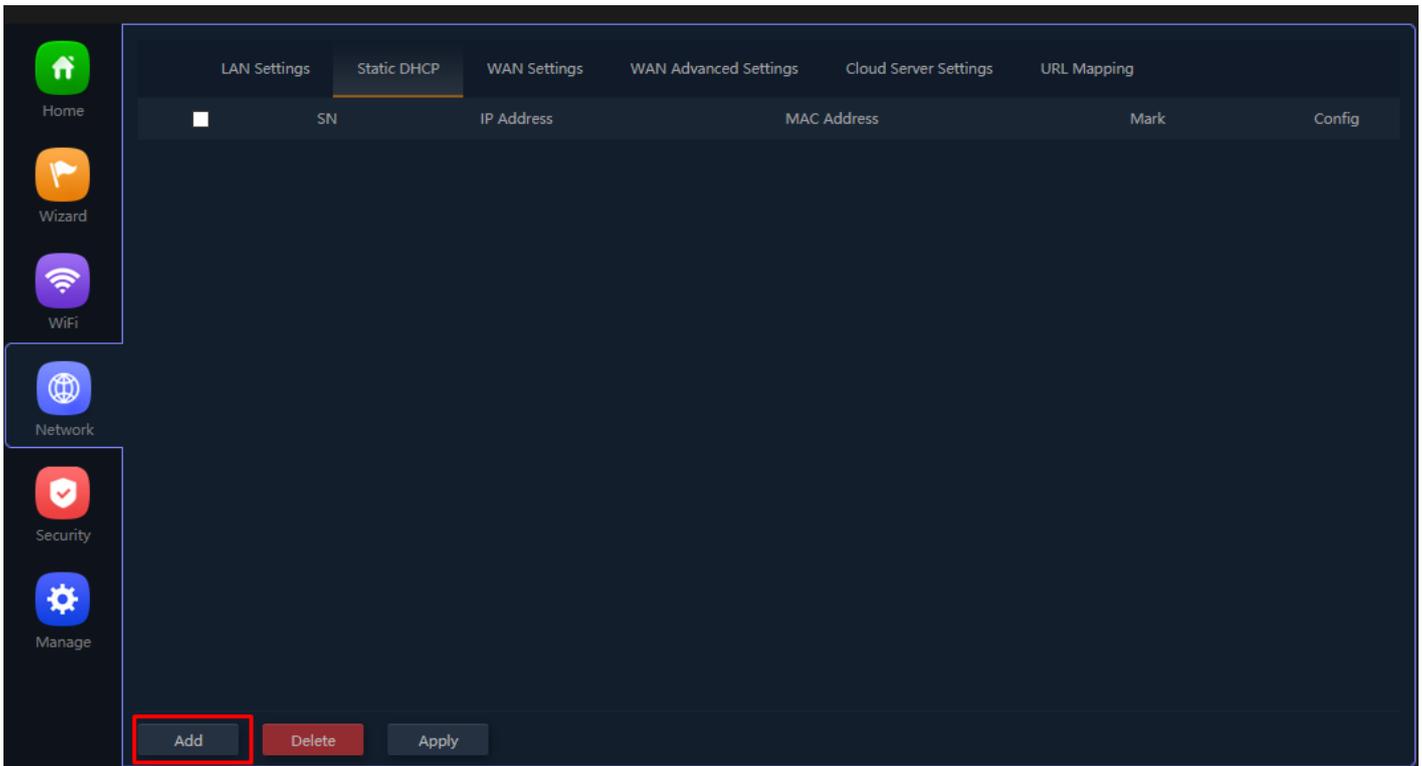
Fig 4.3.1 Default Static DHCP for AirONE APO300
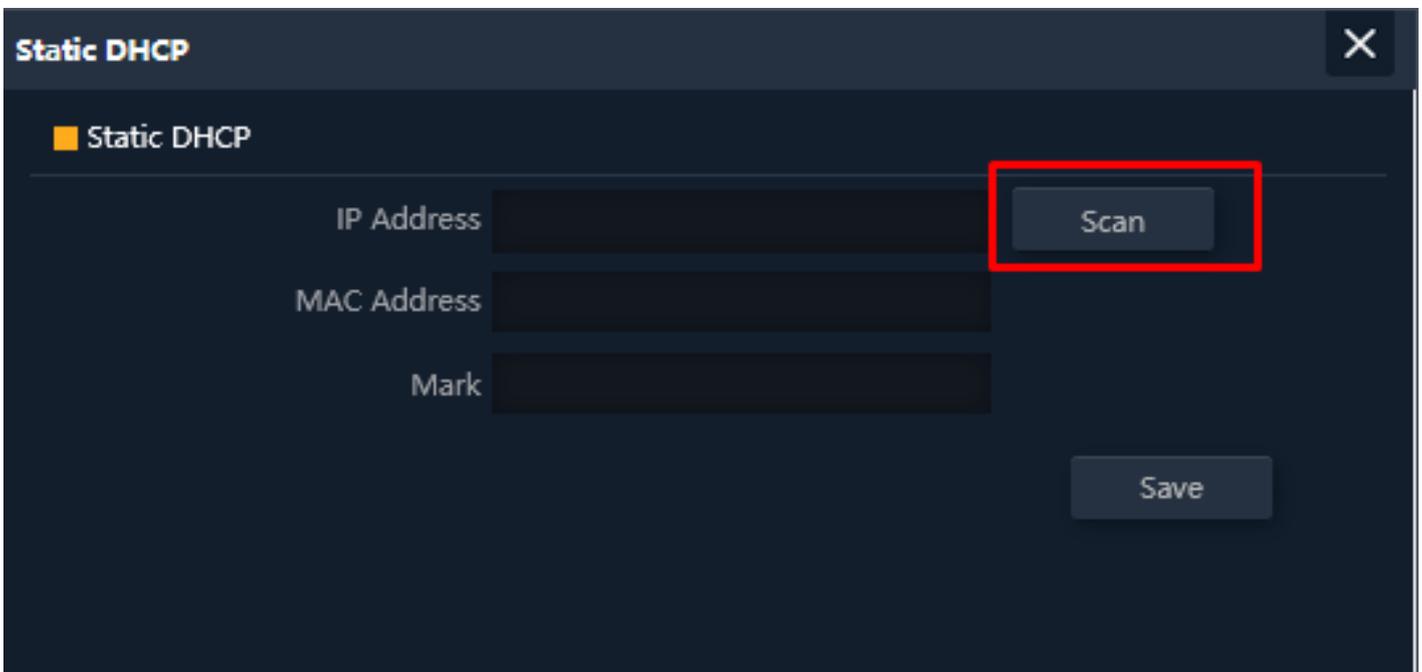
Fig 4.3.2 Static DHCP scan for AirONE APO300
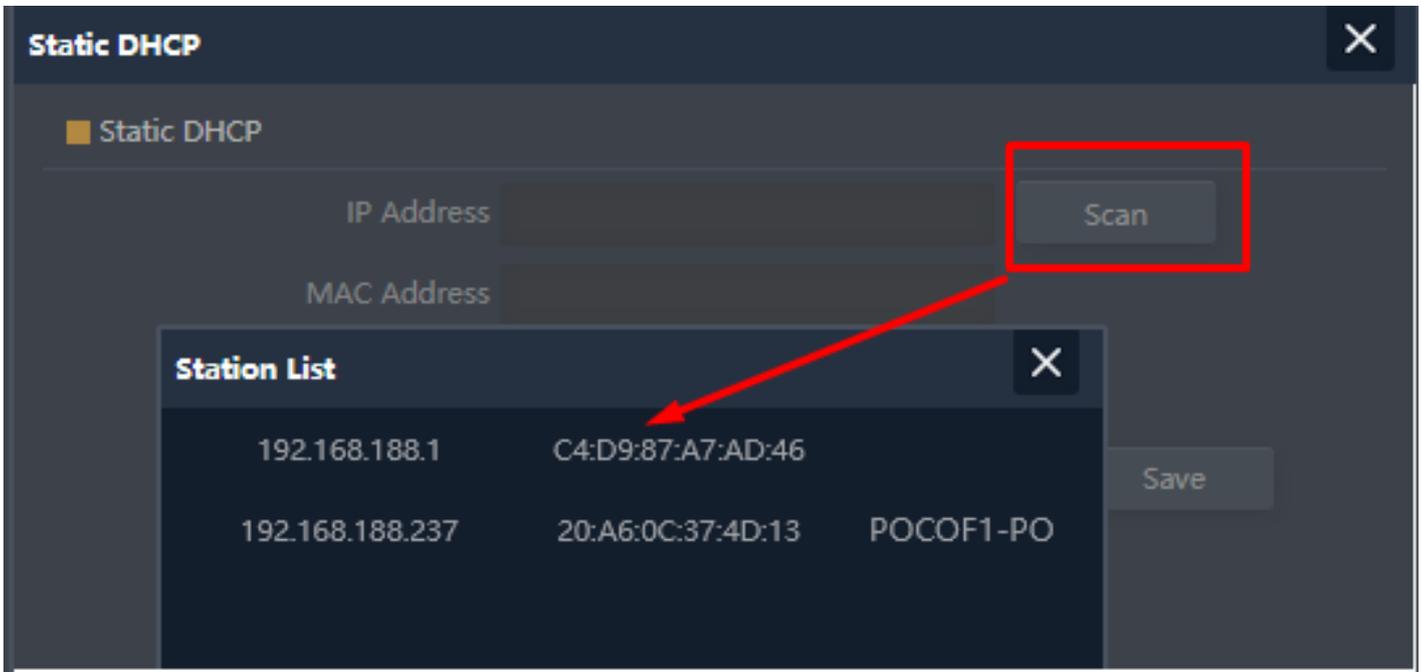
Fig 4.3.3 Station list for AirONE APO300
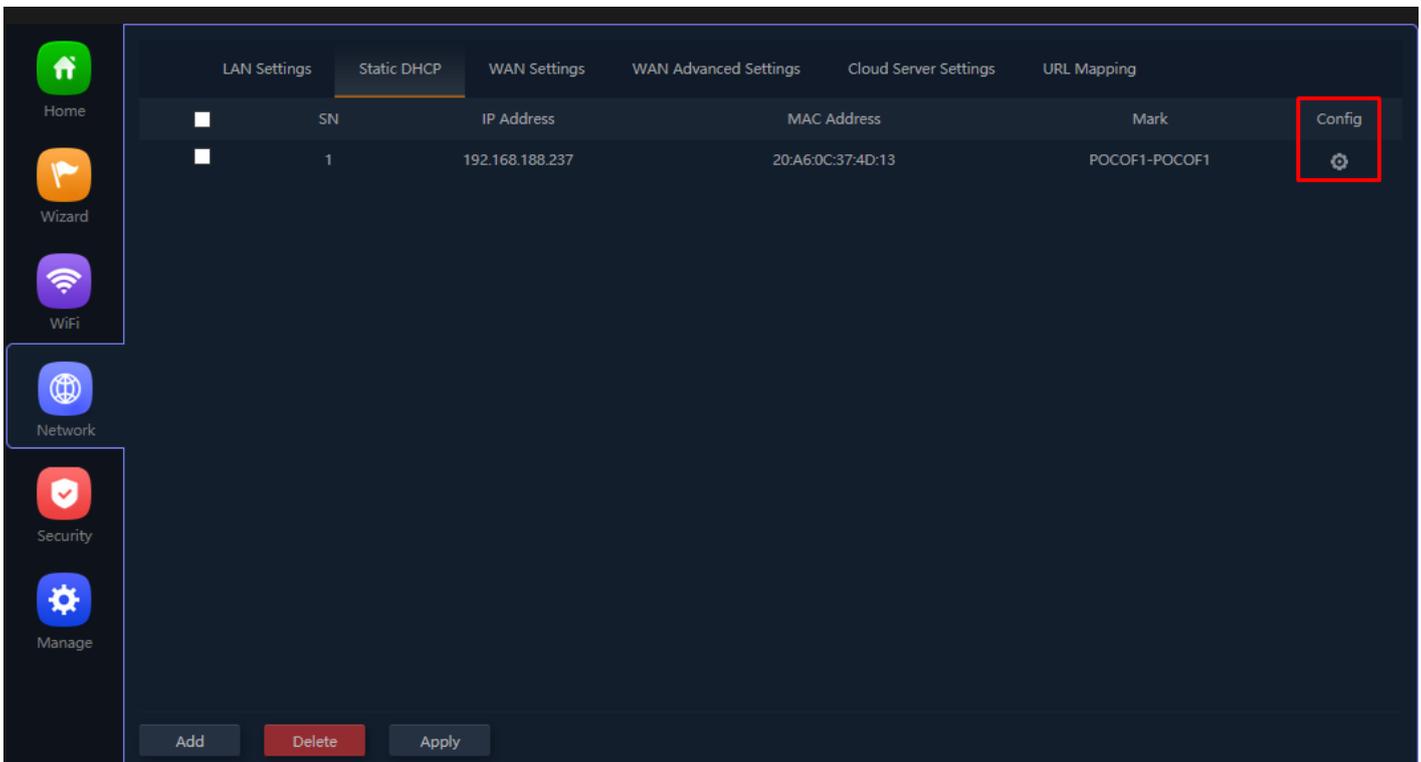
Fig 4.3.4 Static DHCP for AirONE APO300
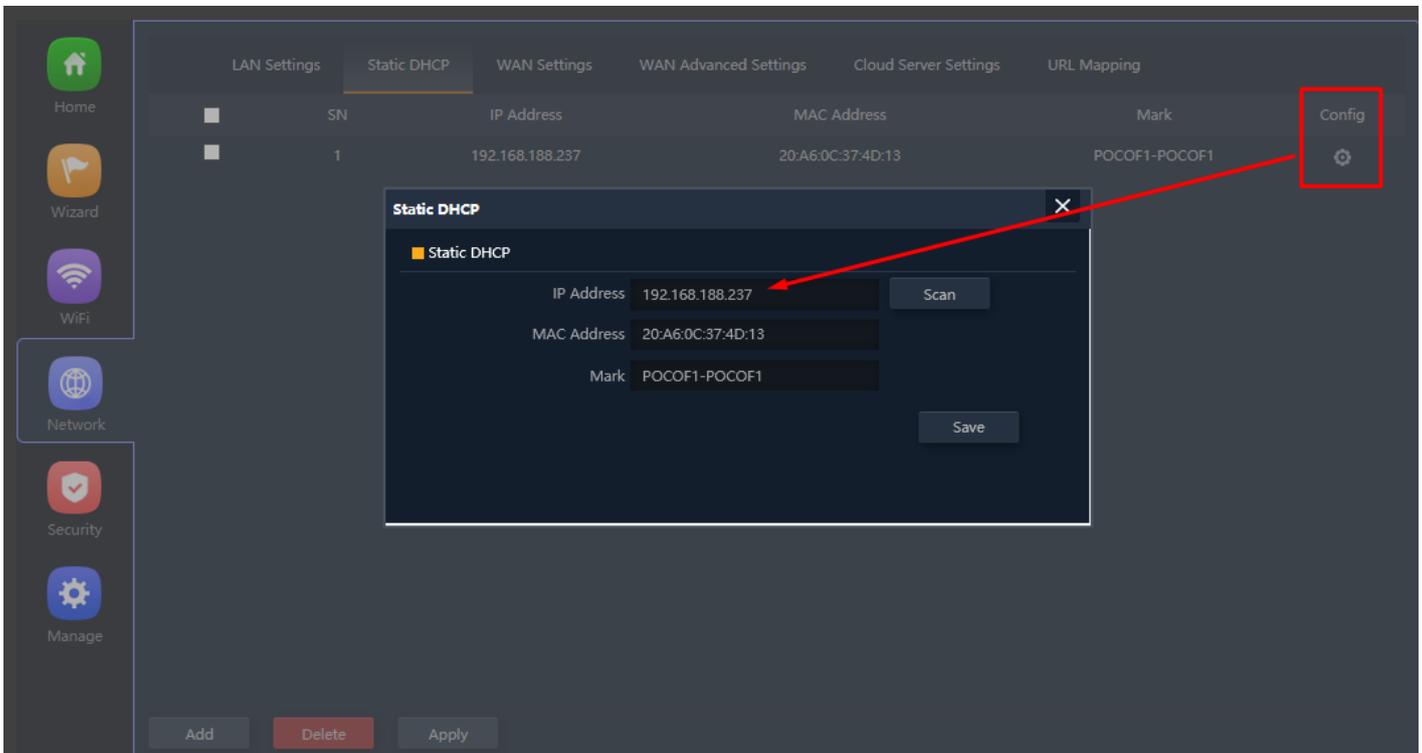
Fig 4.3.5 Config Button for Static DHCP for AirONE APO300

4.4 WAN Settings

You can set WAN Connect Method, MTU and DNS Manually along with Primary, Secondary DNS.
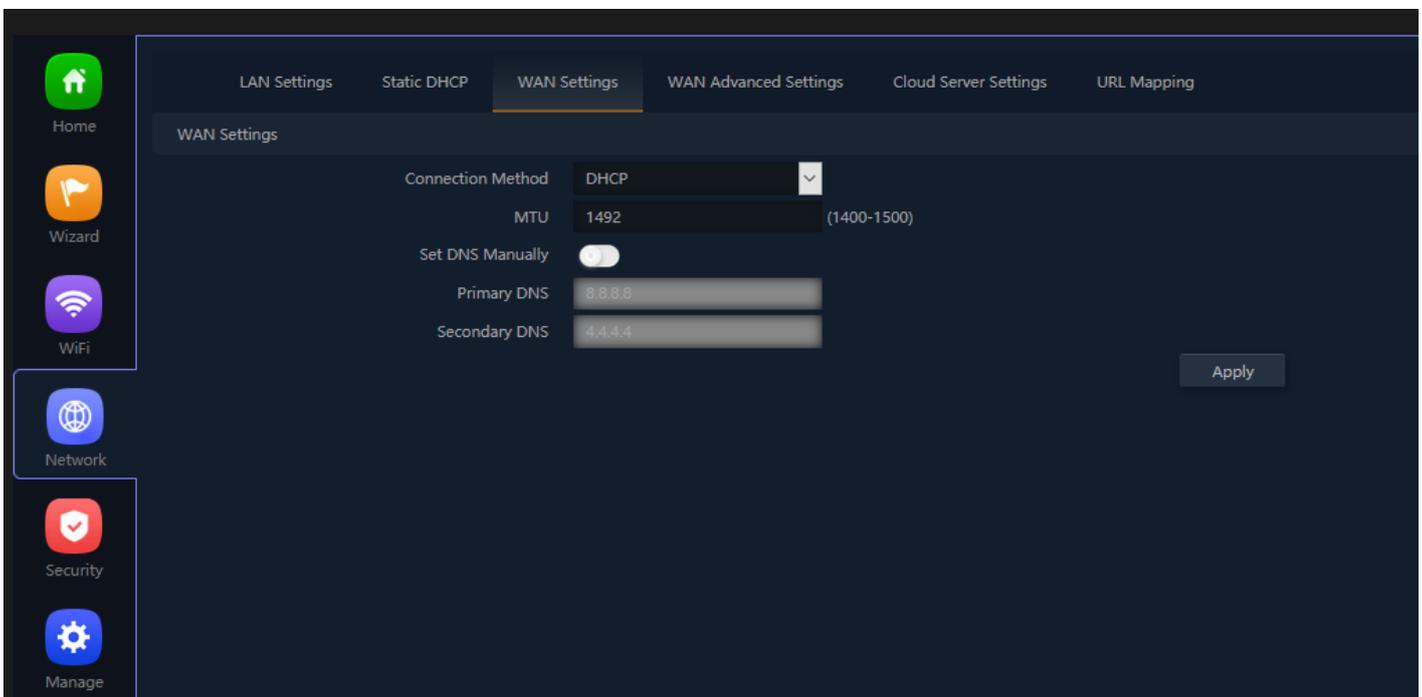
Fig 4.4.1 Default WAN Setting for AirONE APO300
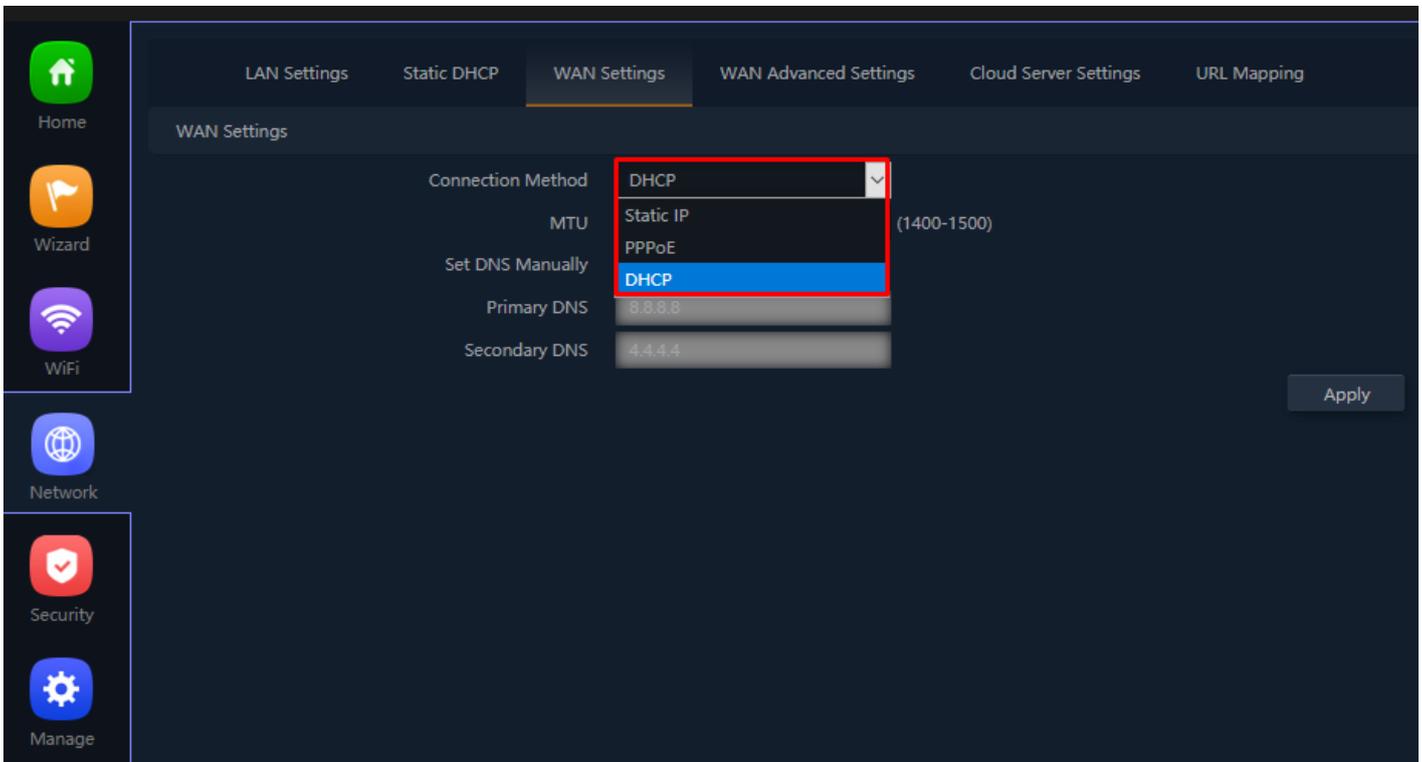
Fig 4.4.2 Changing Connect type manually for AirONE APO300
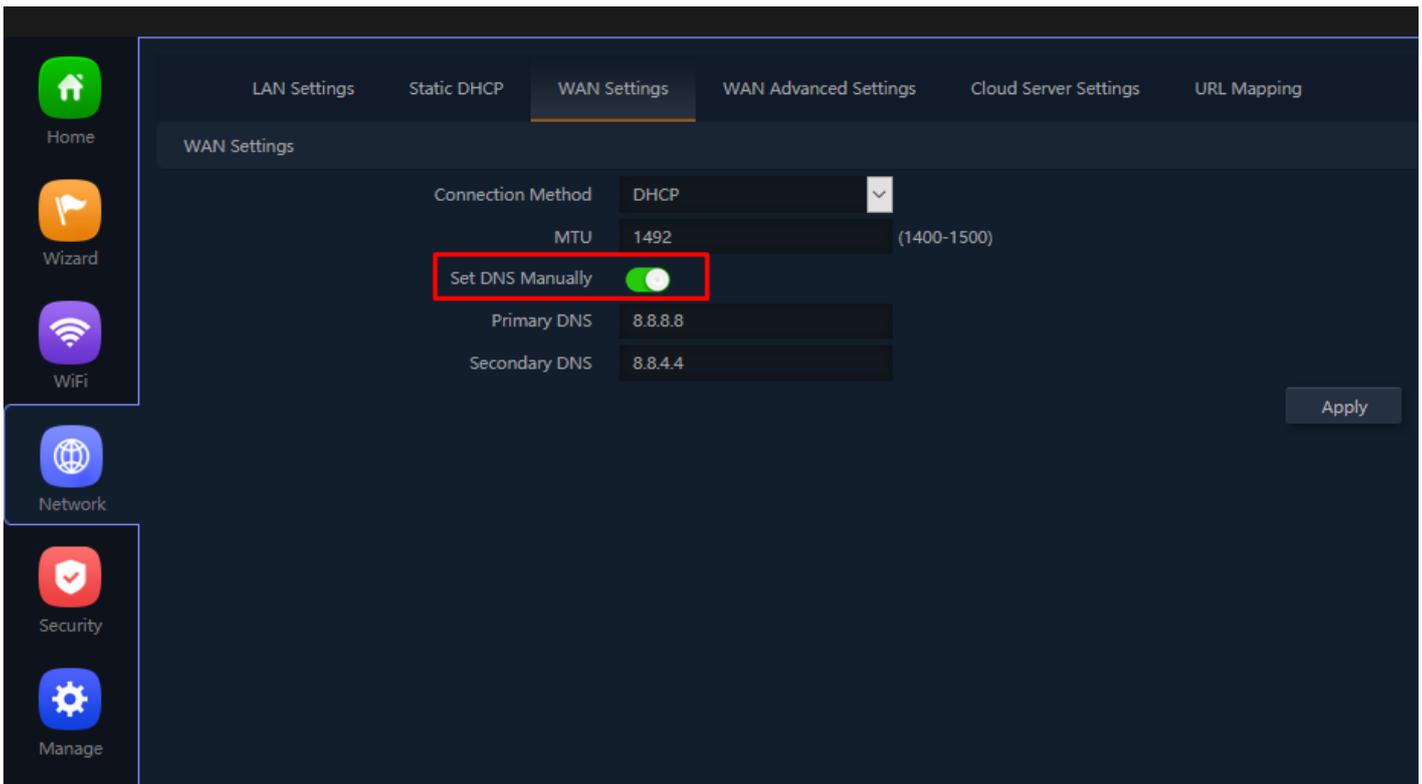
Fig 4.4.3 Set DNS manually for AirONE APO300

4.5 WAN Advanced Settings

It can Enable Web server access on WAN interface on per ports basis from 1 to 65535. You also can set MAC Clone, Enable or disable Ping Access on WAN. Enable or disable IPsec, PPTP, L2TP pass through on VPN connection and Line Detection.
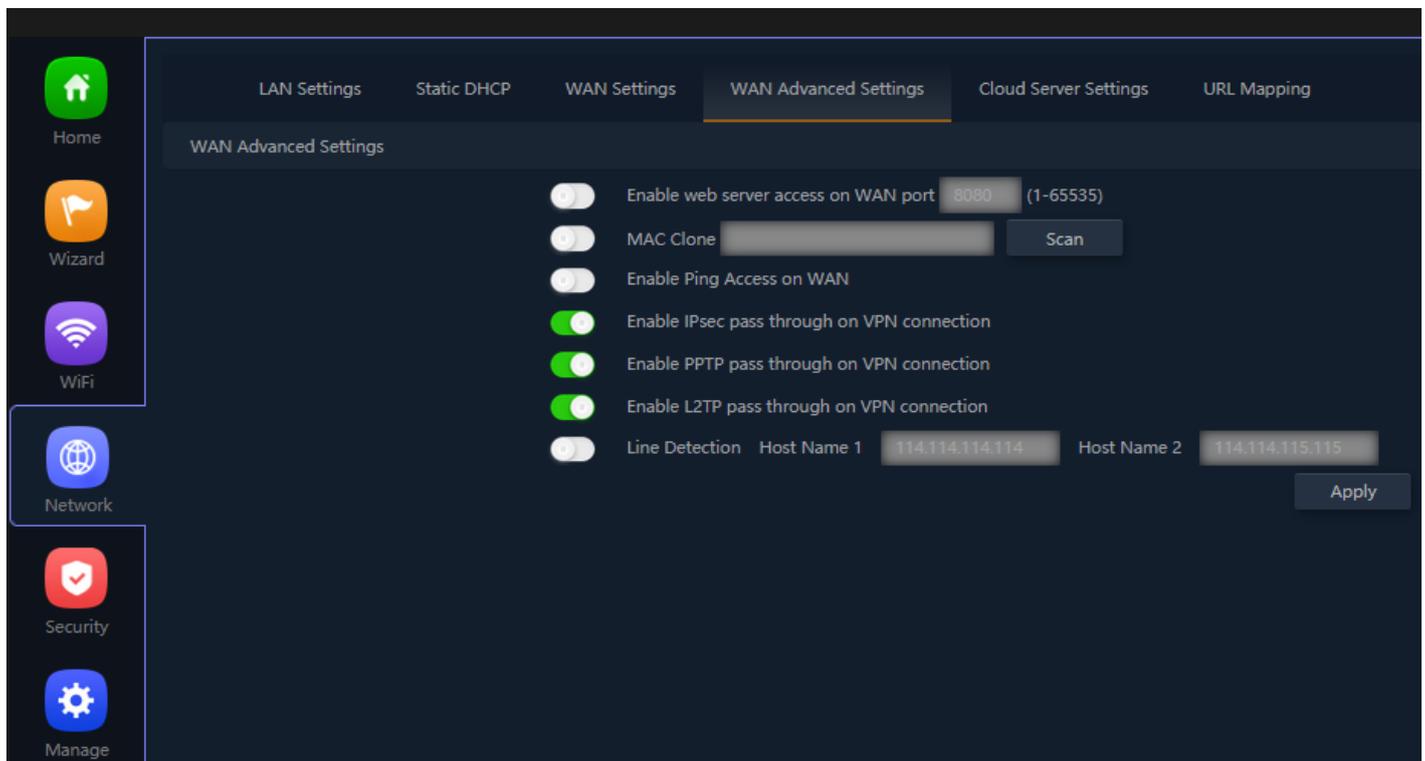
Fig 4.5.1 Default WAN Advanced setting for AirONE APO300
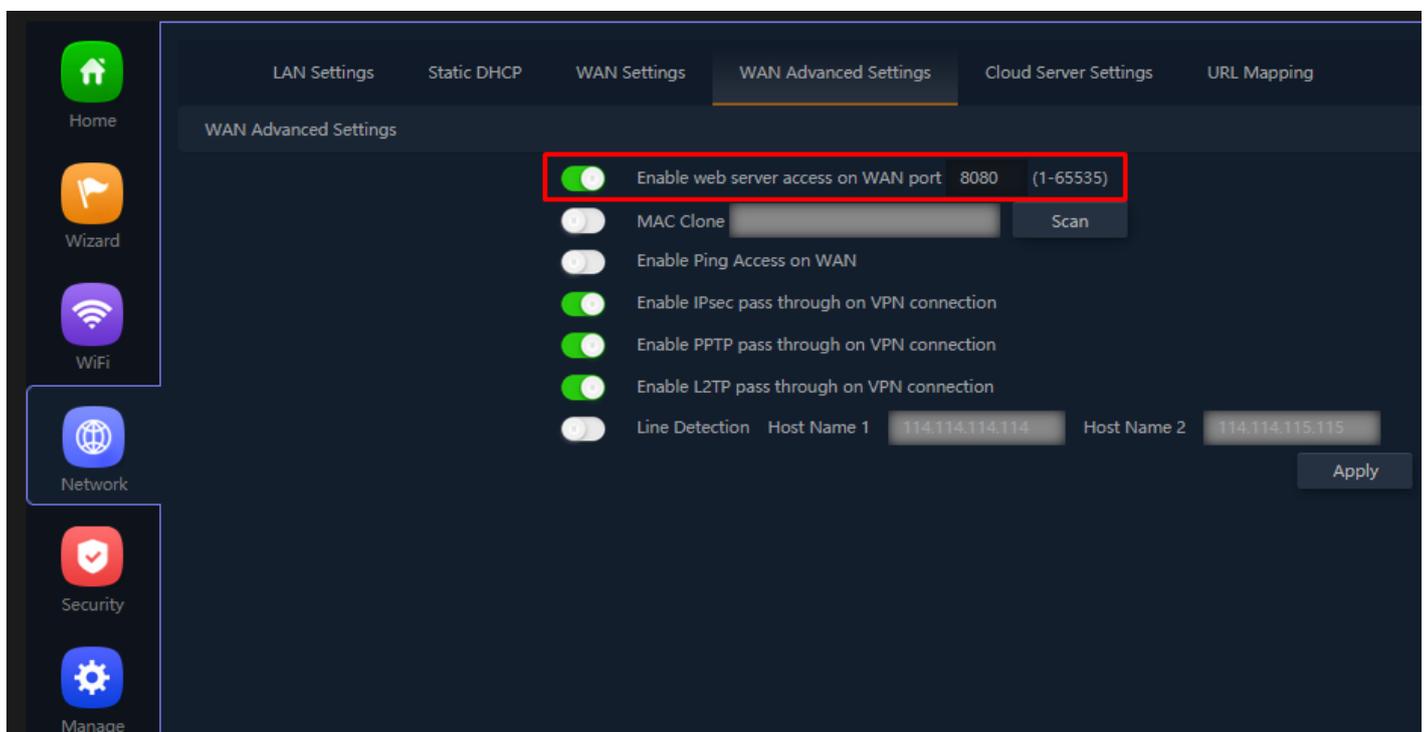
Fig 4.5.2 Enable Port setting for WEB server for AirONE APO300
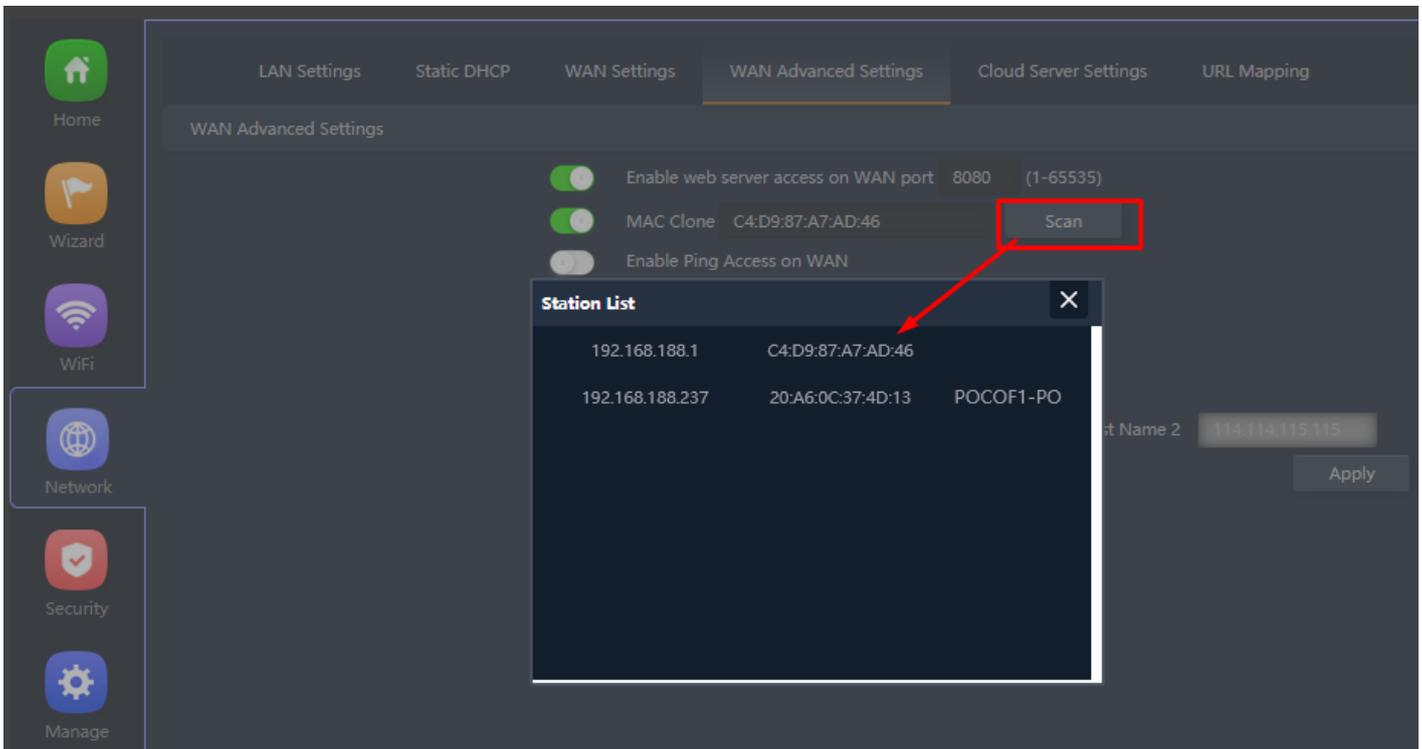
Fig 4.5.3 Configuration of MAC clone for AirONE APO300
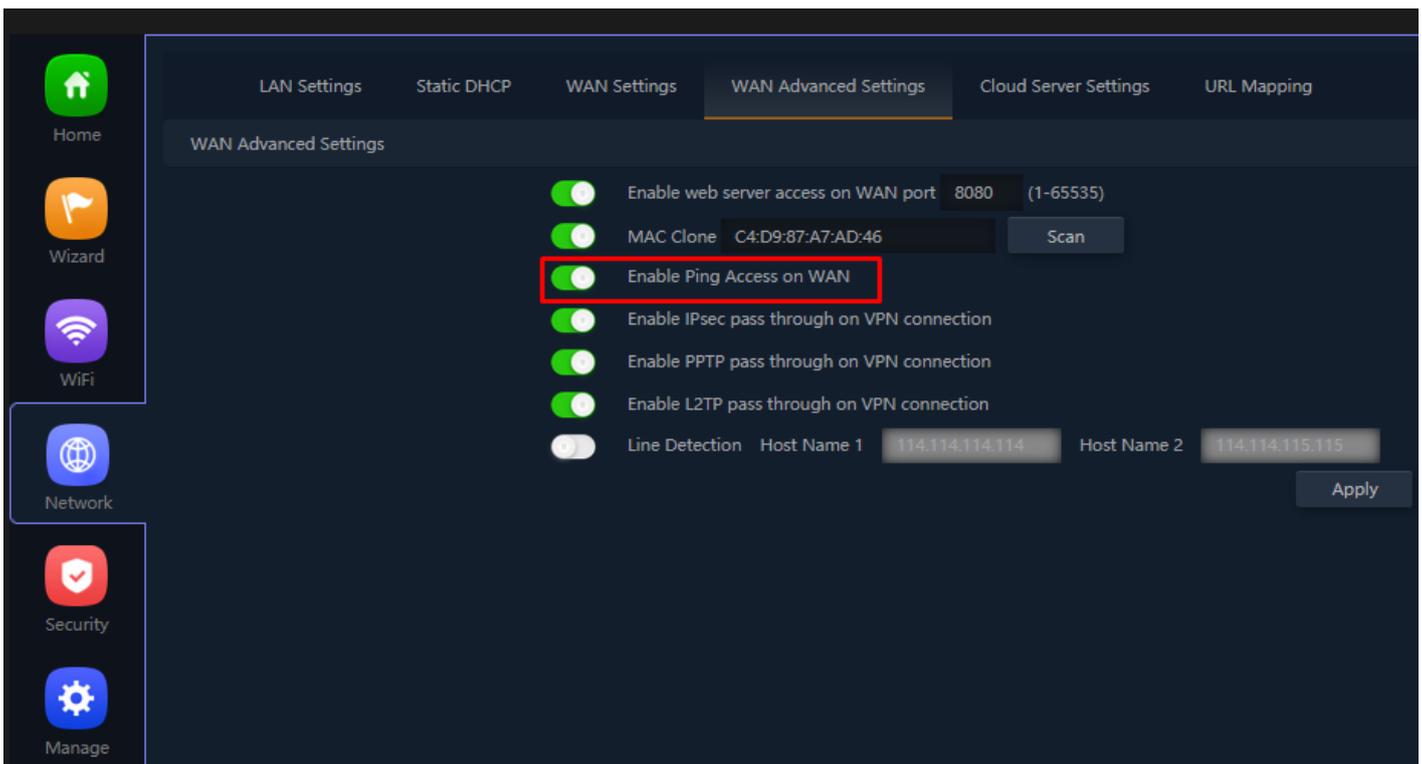
Fig 4.5.4 Enabling Ping access through WAN for AirONE APO300
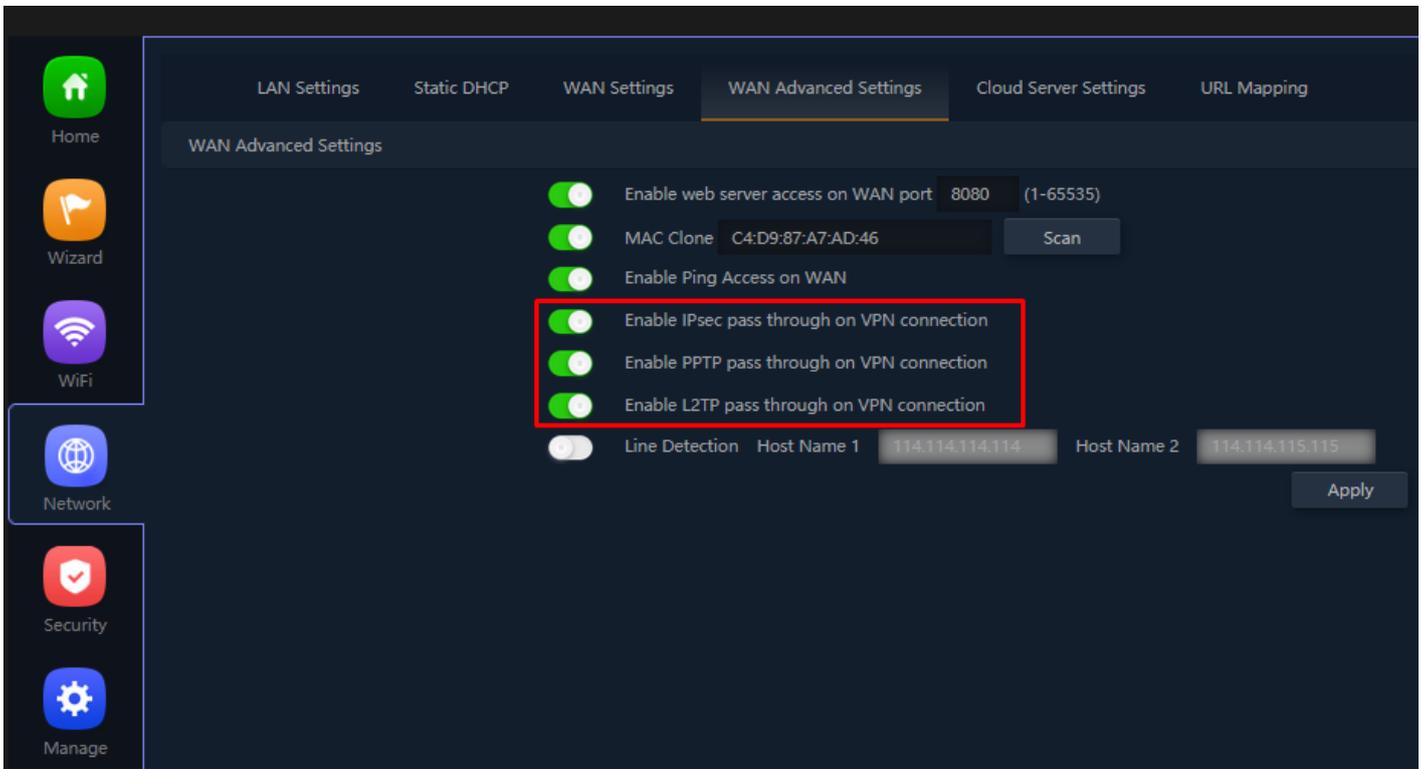
Fig 4.5.5 Enabling IPSec/PPTP/L2TP access through VPN for AirONE APO300
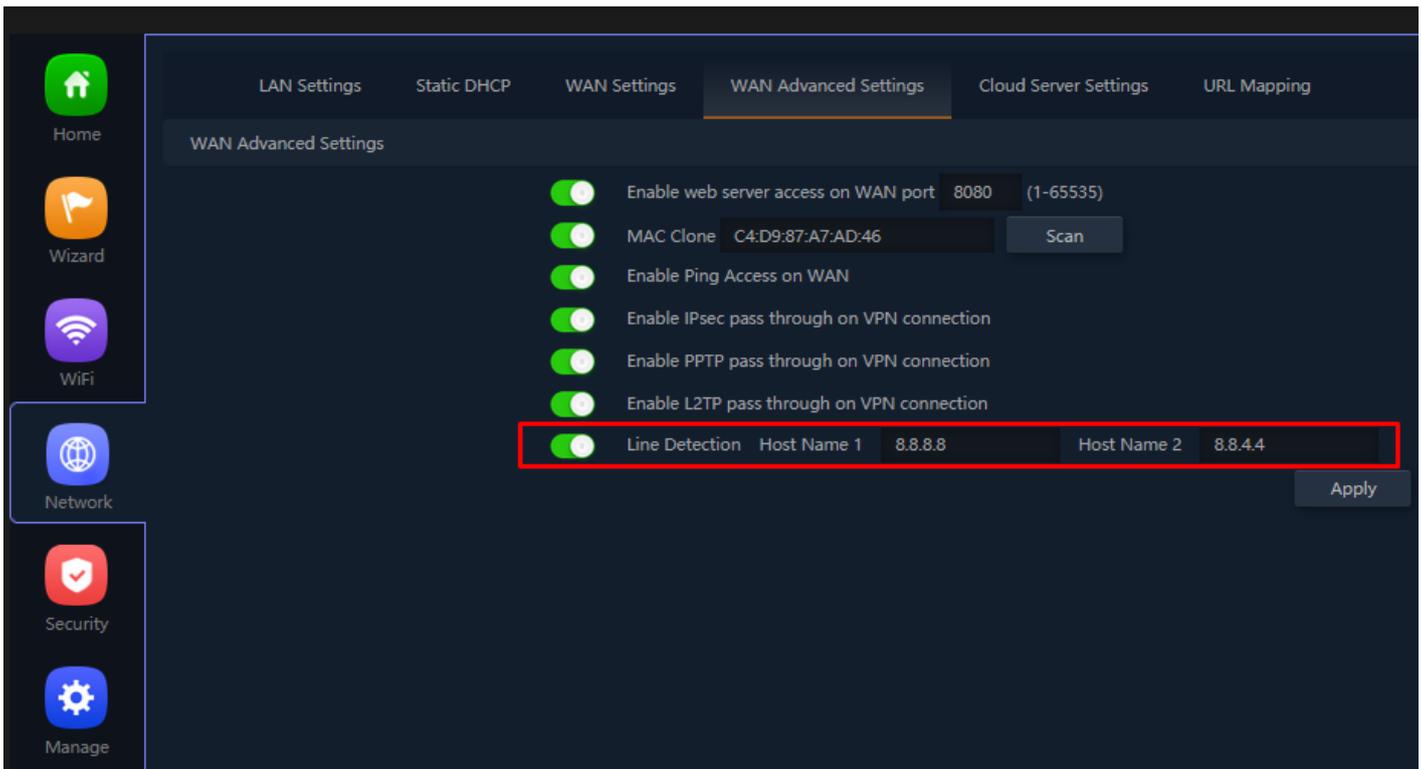
Fig 4.5.6 Line Detection for AirONE APO300

4.6 Cloud Server Setting

A cloud-managed access point or networking solution allows business owners to manage Wi-Fi and network infrastructure over the cloud with zero maintenance charges, centralize control painlessly. This means businesses can connect to the cloud by

subscribing freely or pay-as-you-go, on-demand model.

Note: This function is currently not available.
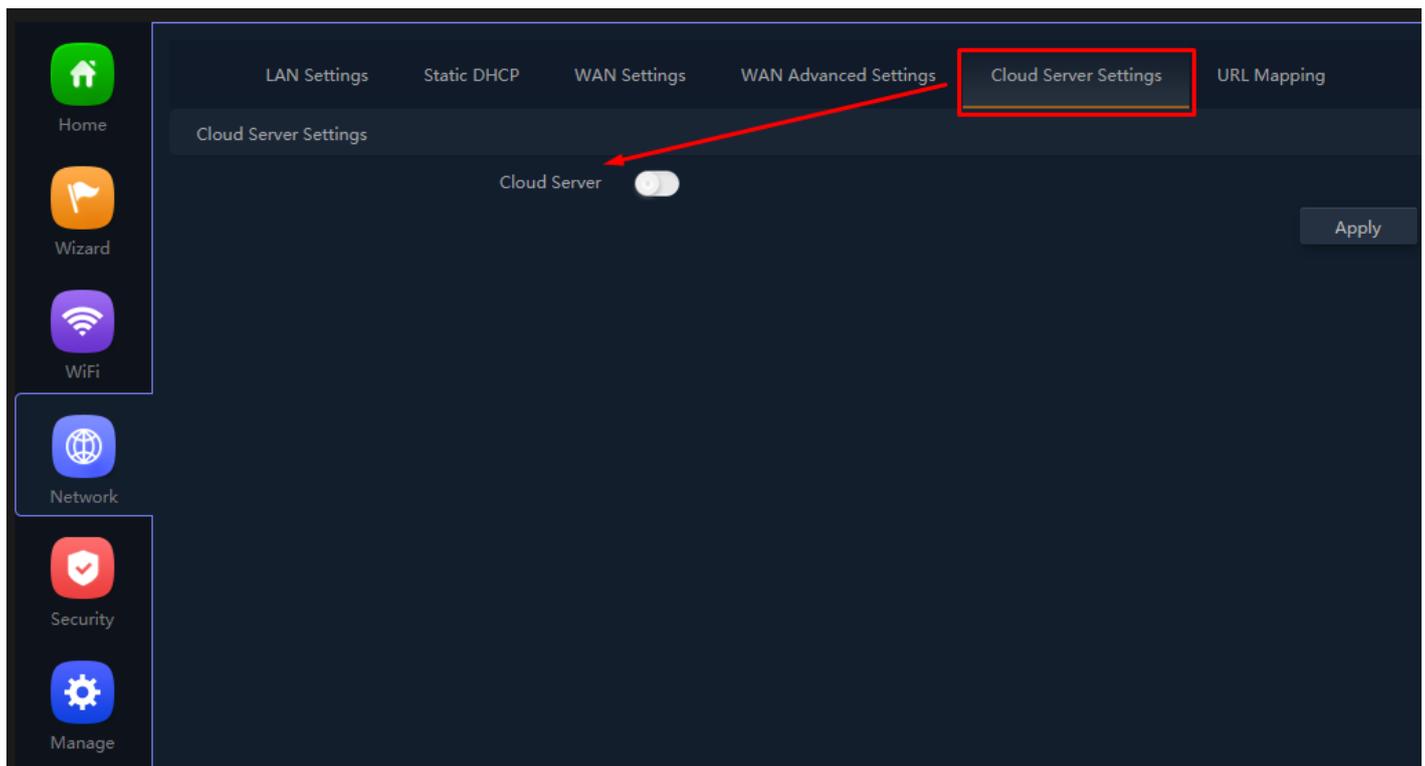
Fig 4.6.1 Default Cloud server setting for AirONE APO300
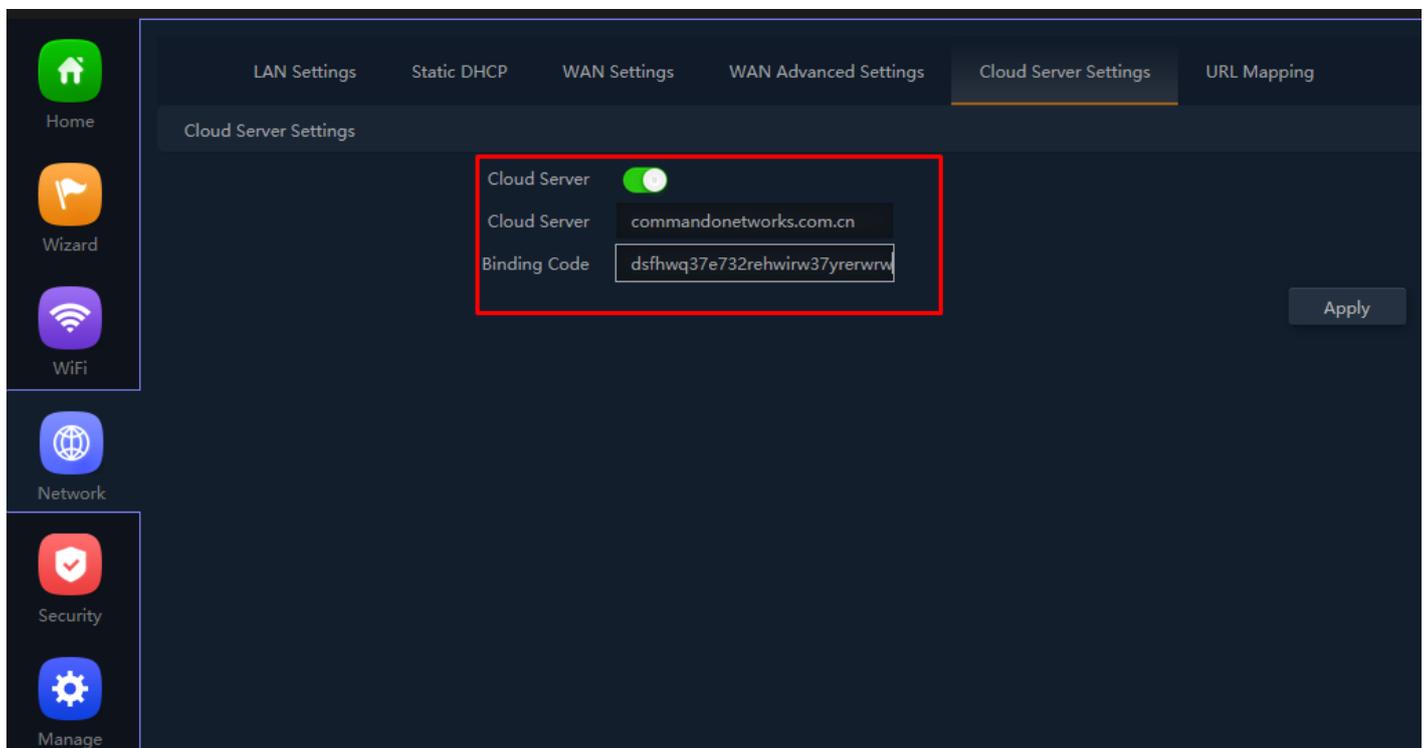
Fig 4.6.2 Enabling Cloud server setting for AirONE APO30

4.7 URL Mapping

URL mappings work for the new Portal installation. URL mapping redirection to particular

Website. You can replace URL for a selected IP.
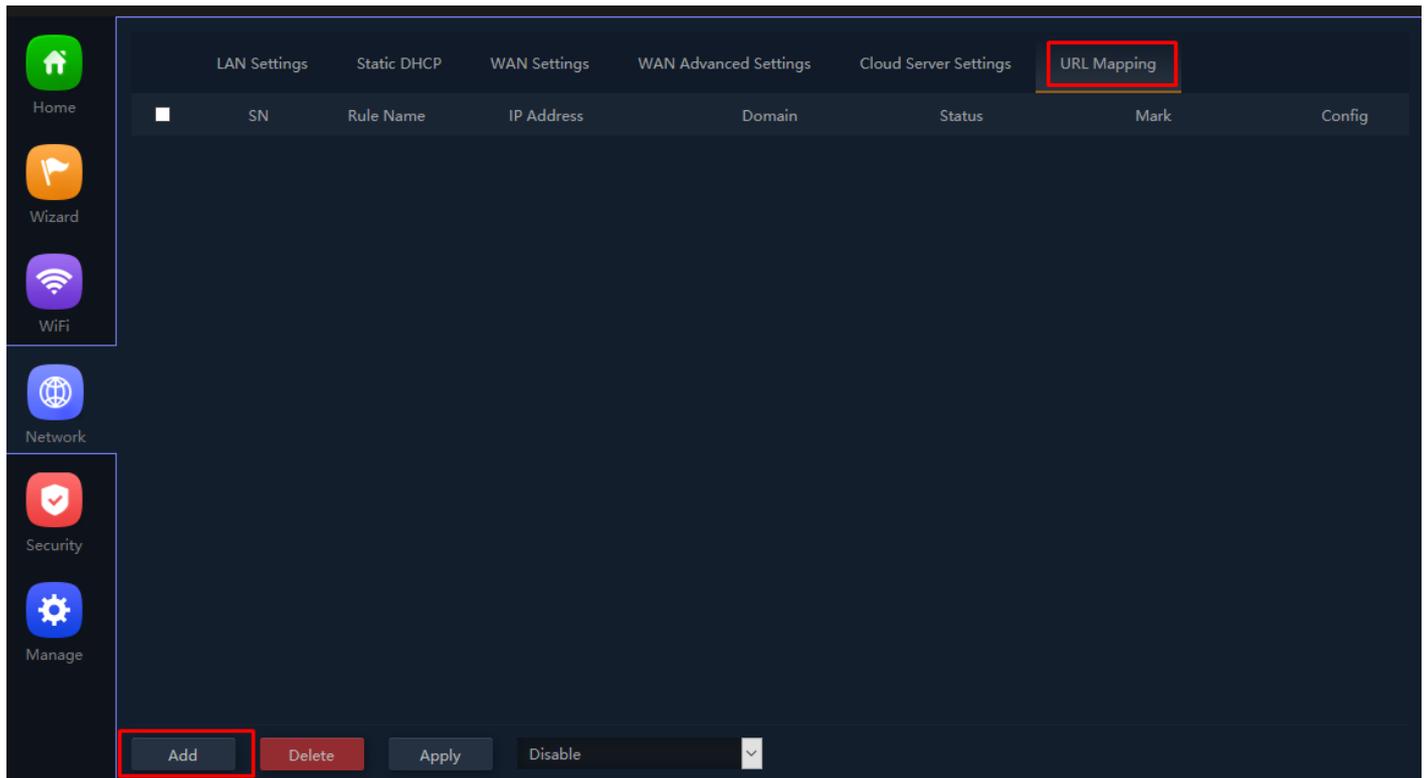
Fig 4.7.1 Default URL Mapping setting for AirONE APO300
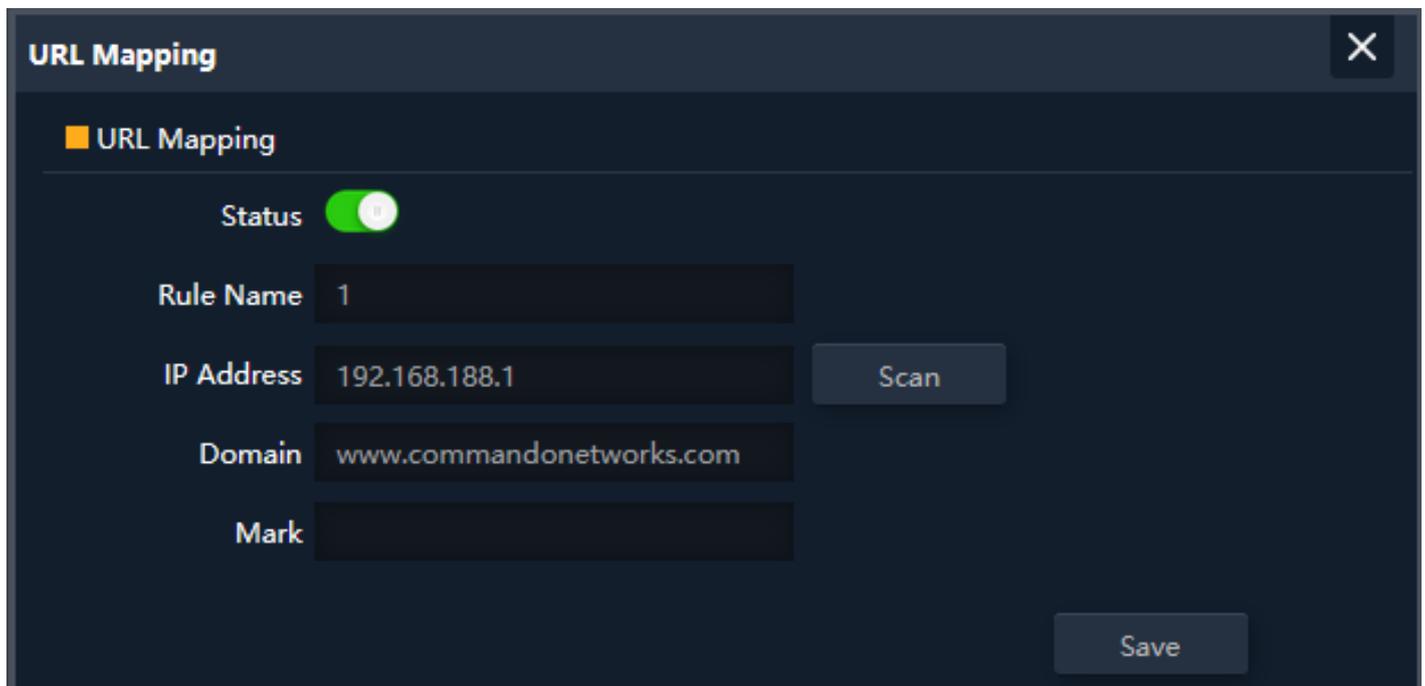
Fig 4.7.2 Configure URL Mapping setting for AirONE APO300
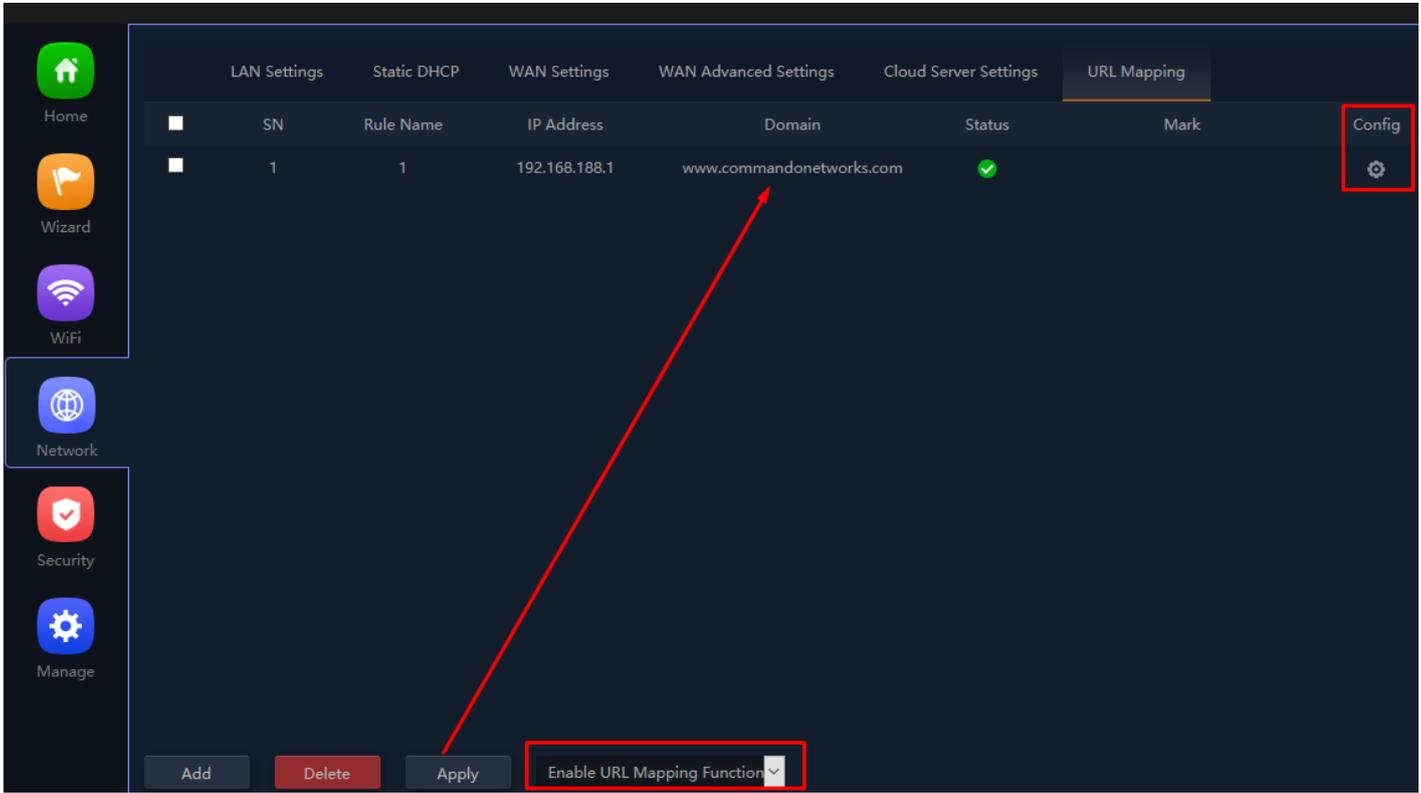
Fig 4.7.3 URL Mapping setting for AirONE APO300

SECURITY

URL Filter Settings:
URL filtering is a type of Web filtering and is used to restrict Web content.

IP Filter Settings:
IP Filter bars filter IP to access the APO SSID.

MAC Filter Settings:
MAC Filter bars filter particular MAC to access the APO SSID.

Security Settings:
It can set Rule for particular TCP or UDP Protocol for selected wireless client IP with port mapping function.

DMZ Settings:
It can set DMZ Host IP to provide an internal network with an additional security layer by restricting access.

Note:
All *italic config* options are only available in WISP and Gateway mode only.

5.1 URL Filter Settings

Organizations can create policies such as permanently allowing or blocking access to specific sites or groups of Websites, such as social networking pages to either redirect, filter or blocked. URL filtering is a type of Web filtering and is used to restrict Web content in order to restrict what content their employees can access over company networks. URL blocking refers process of allowing or denying the access to a certain websites or certain URL addresses for the Web users either temporarily or permanently. If a URL is blocked, then the user will not be able to view the URL address or its Web content.
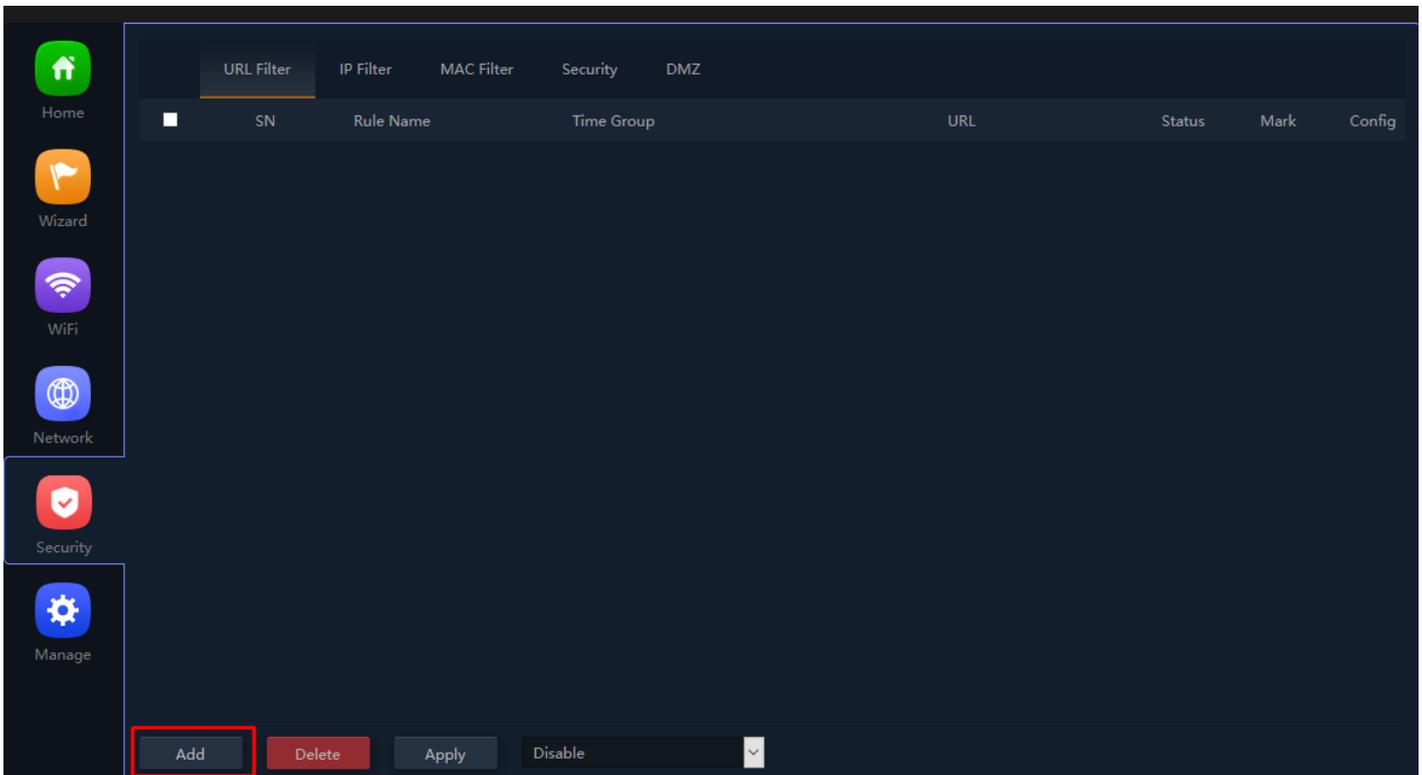
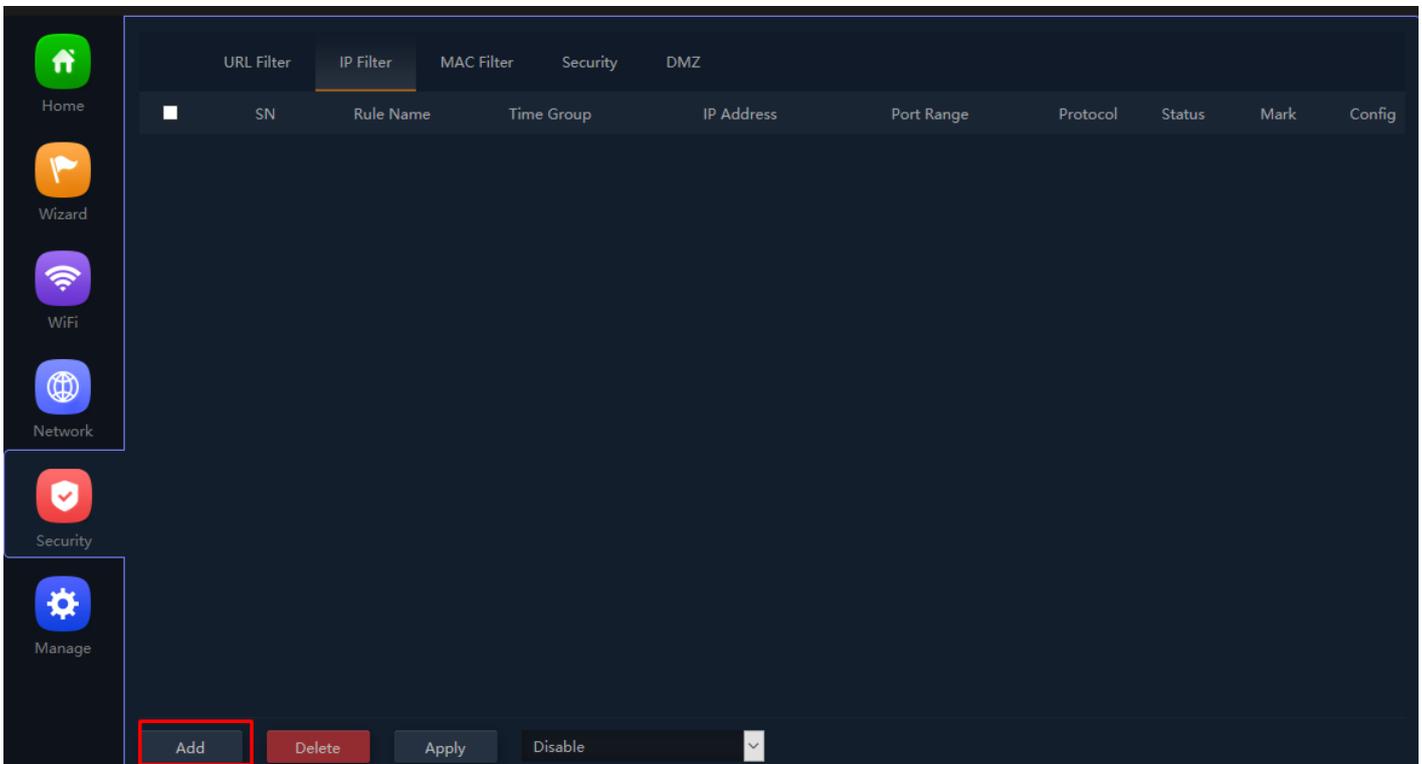**Fig 5.1.1 Default URL filter setting for AirONE APO300**
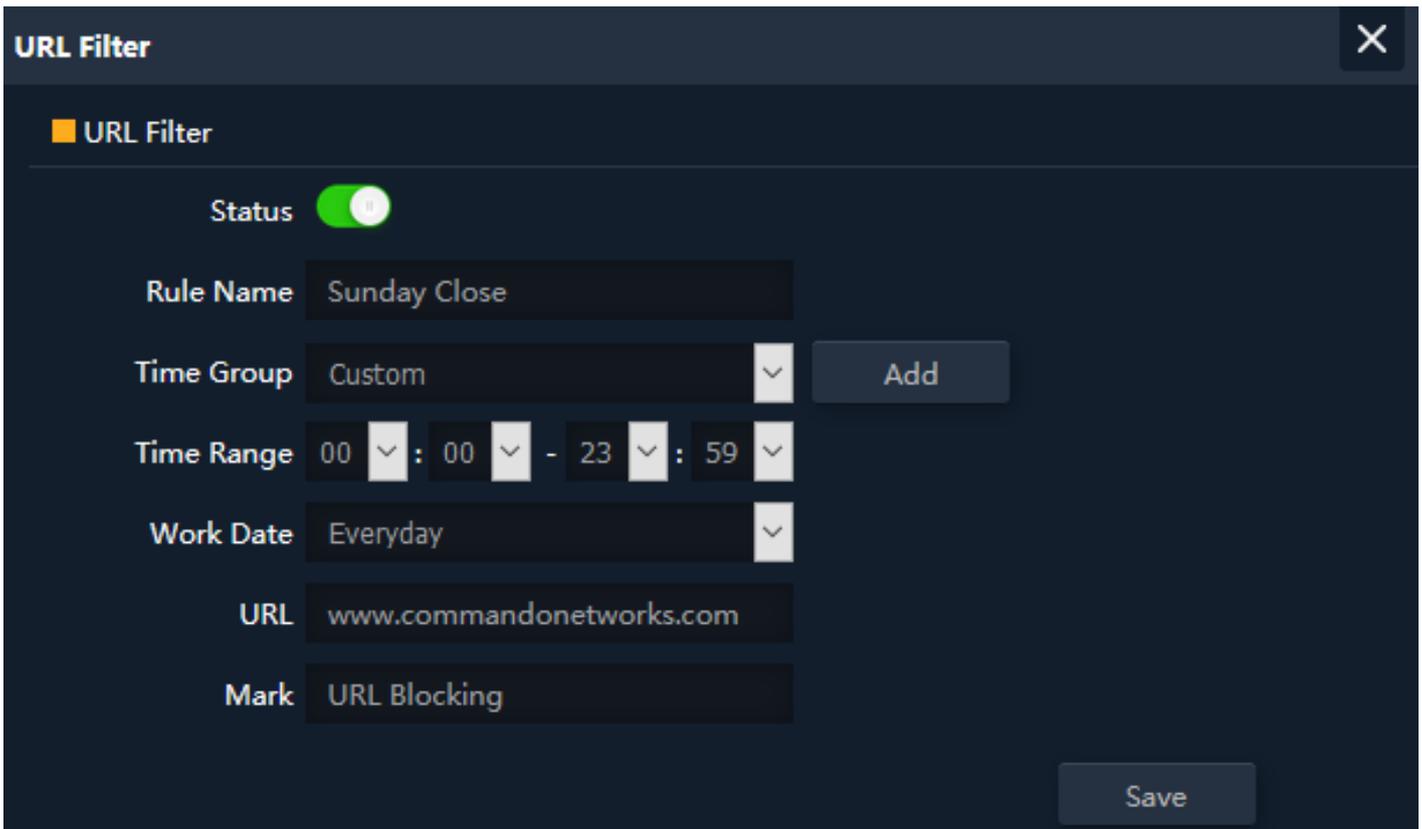
Fig 5.1.2 Setting URL filter for AirONE APO300
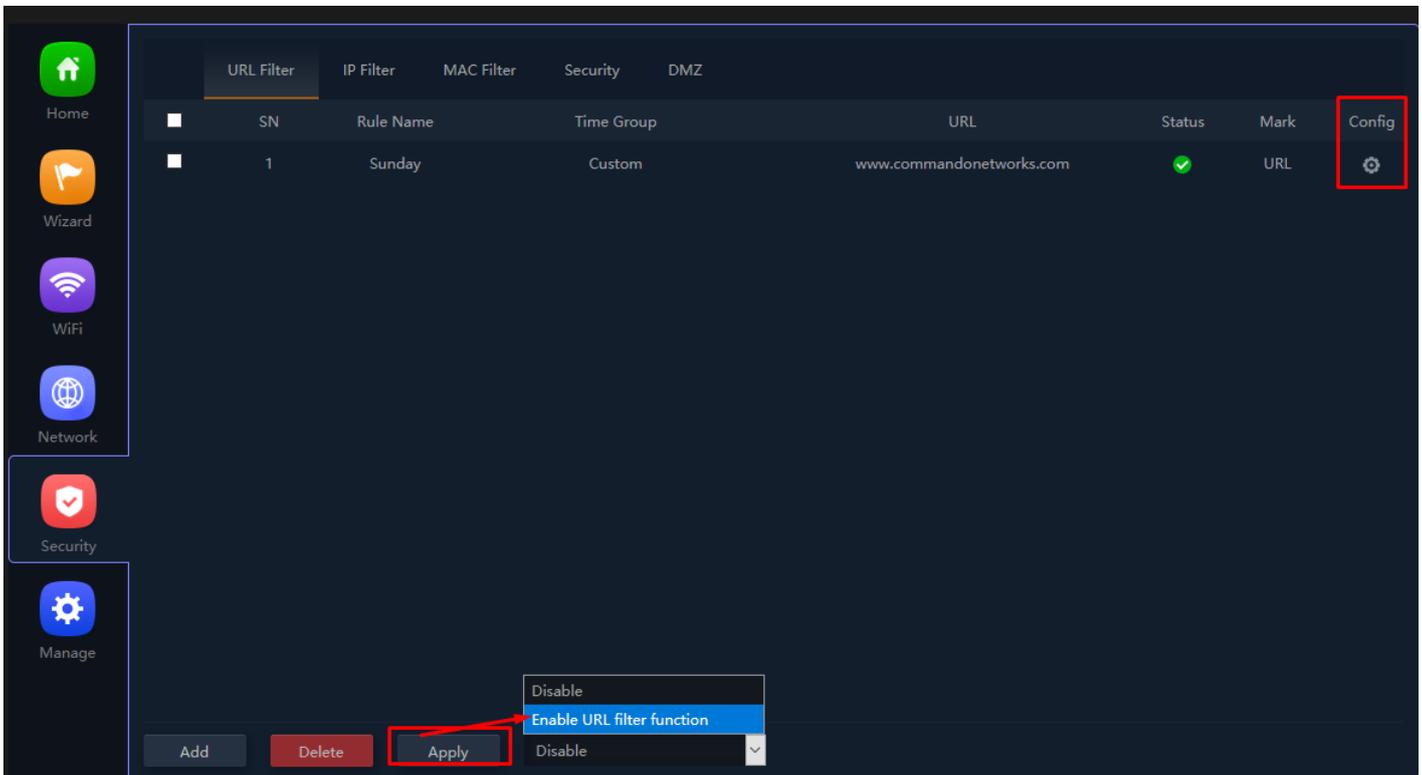
Fig 5.1.3 URL filter setting for AirONE APO300

5.2 IP Filter Settings
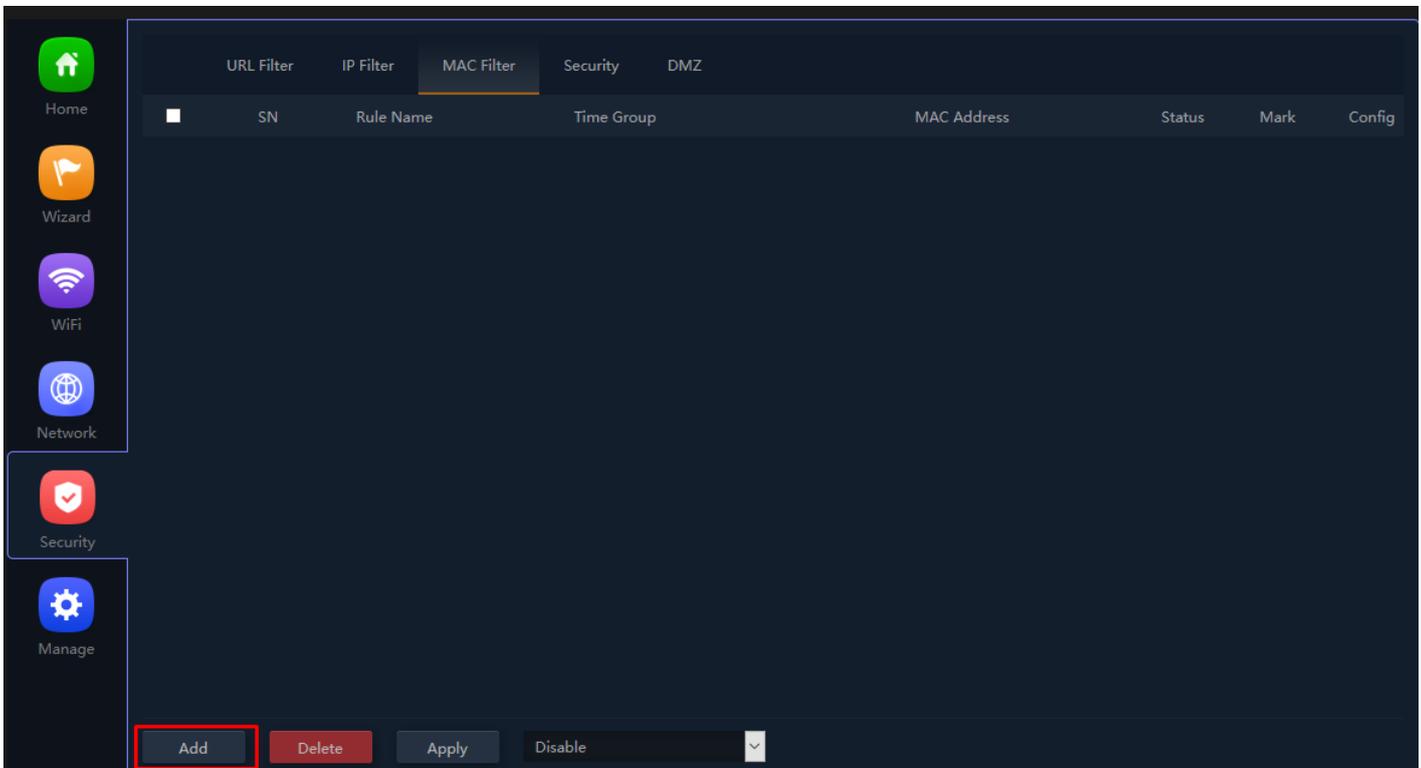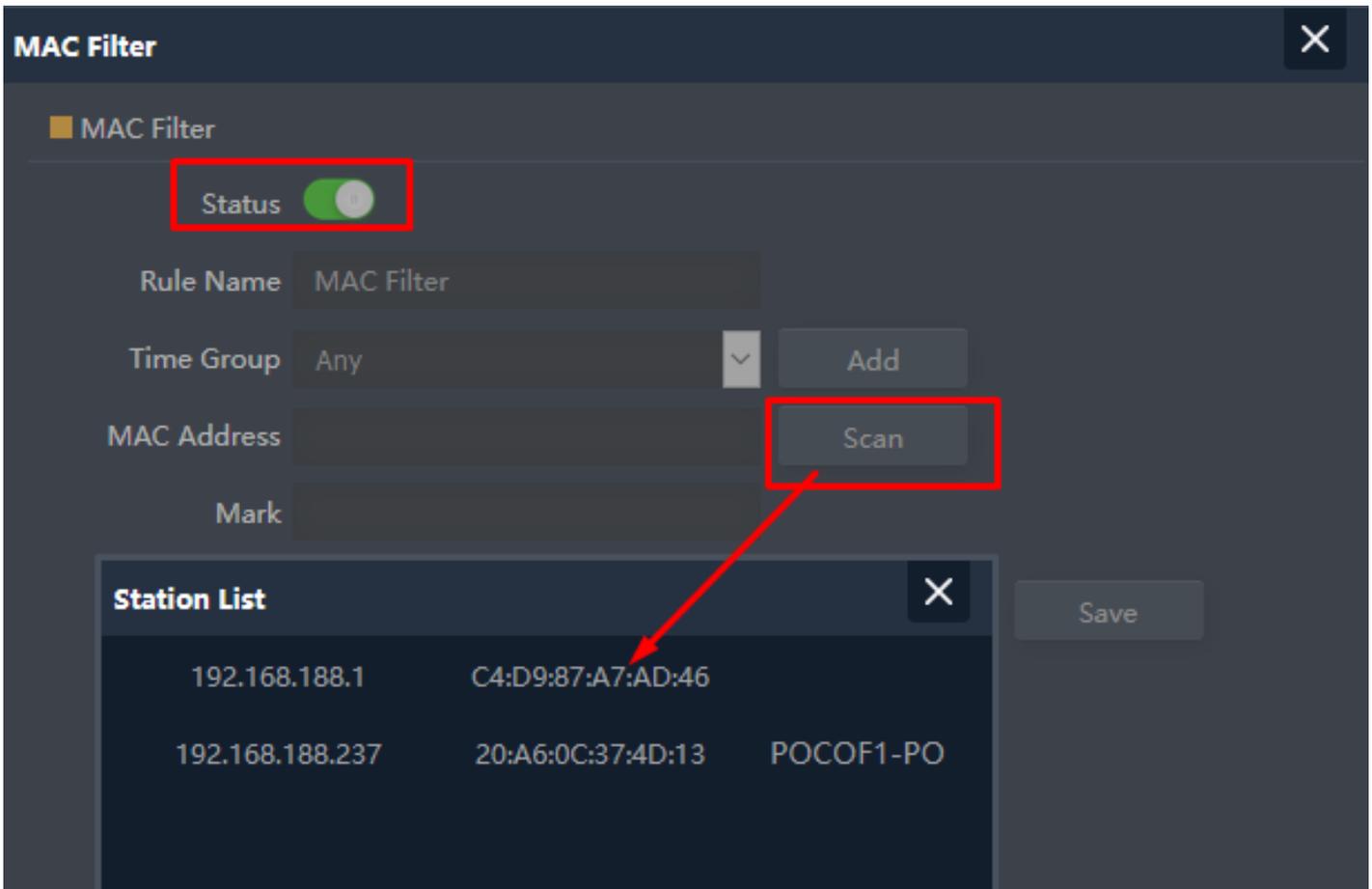
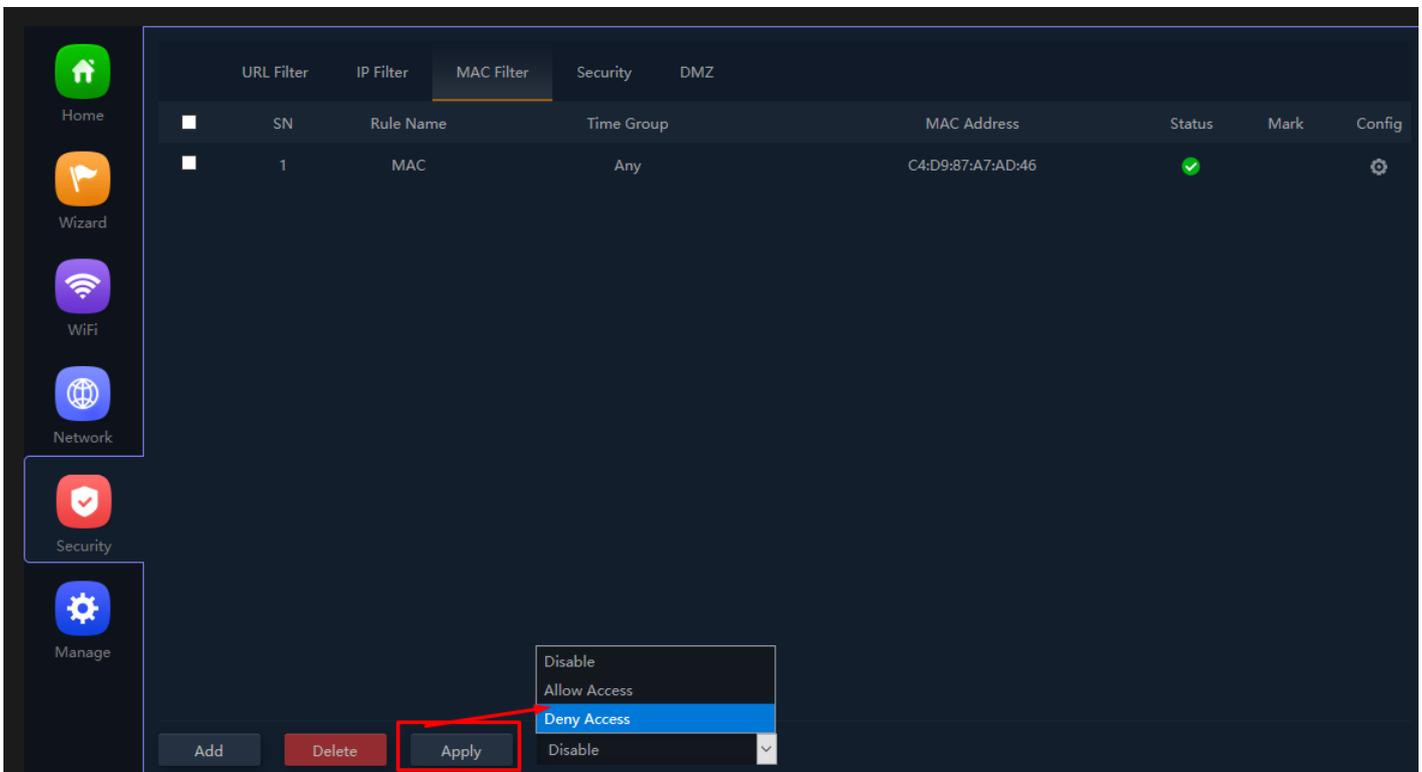IP Filter bars filter IP to access the APO SSID.



Fig 5.2.1 Default IP filter setting for AirONE APO300

Fig 5.2.2 Setting IP filter for AirONE APO300
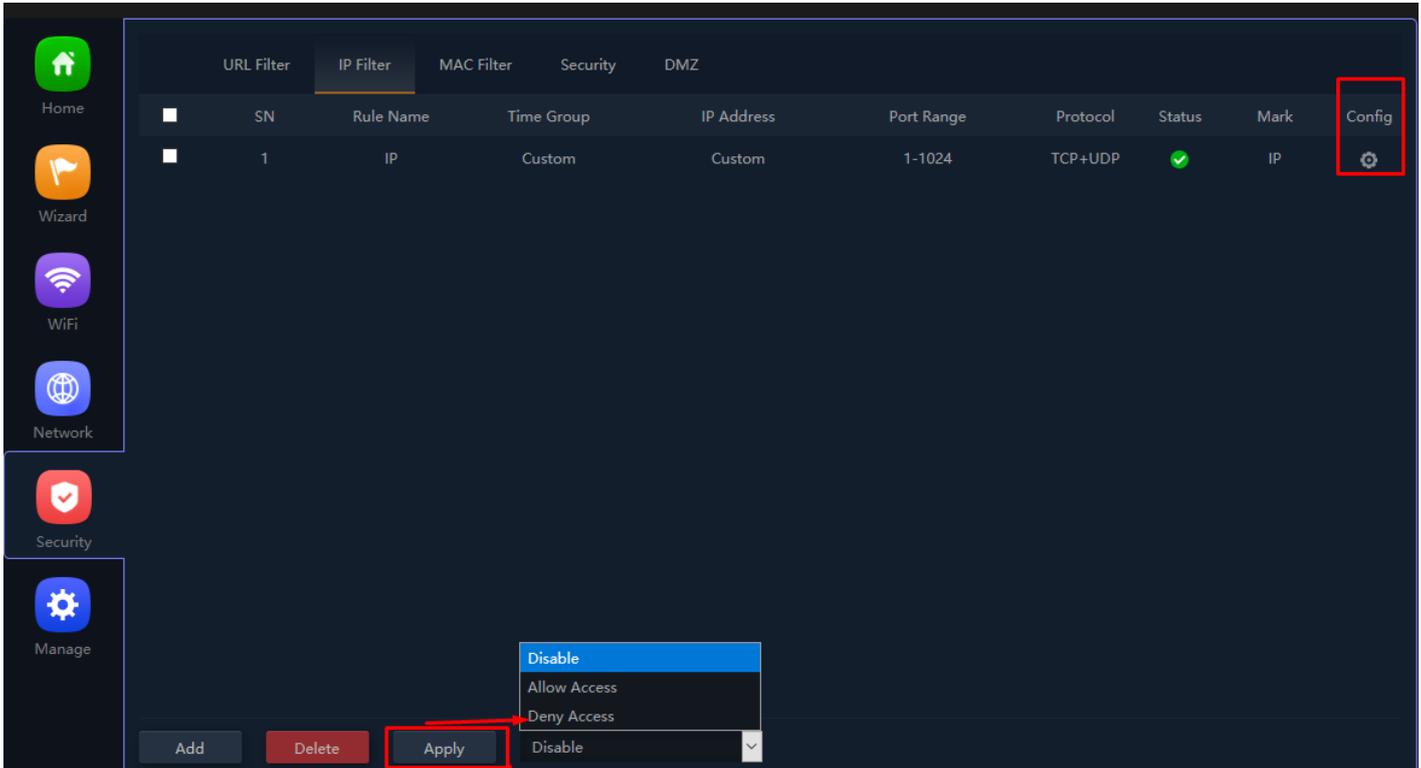
Fig 5.2.3 IP filter setting for AirONE APO300

5.3 MAC Filter Settings

MAC Filter bars filter MAC to access the APO SSID.

Fig 5.3.1 Default MAC filter setting for AirONE APO300

Fig 5.3.2 Setting MAC filter for AirONE APO300

Fig 5.3.3 MAC filter setting for AirONE APO300

5.4 Security Settings

A security setting monitors incoming and outgoing network traffic and permits, or blocks data packets based on a set of security rules. It can help protect your network by filtering traffic and blocking outsiders from gaining unauthorized access.
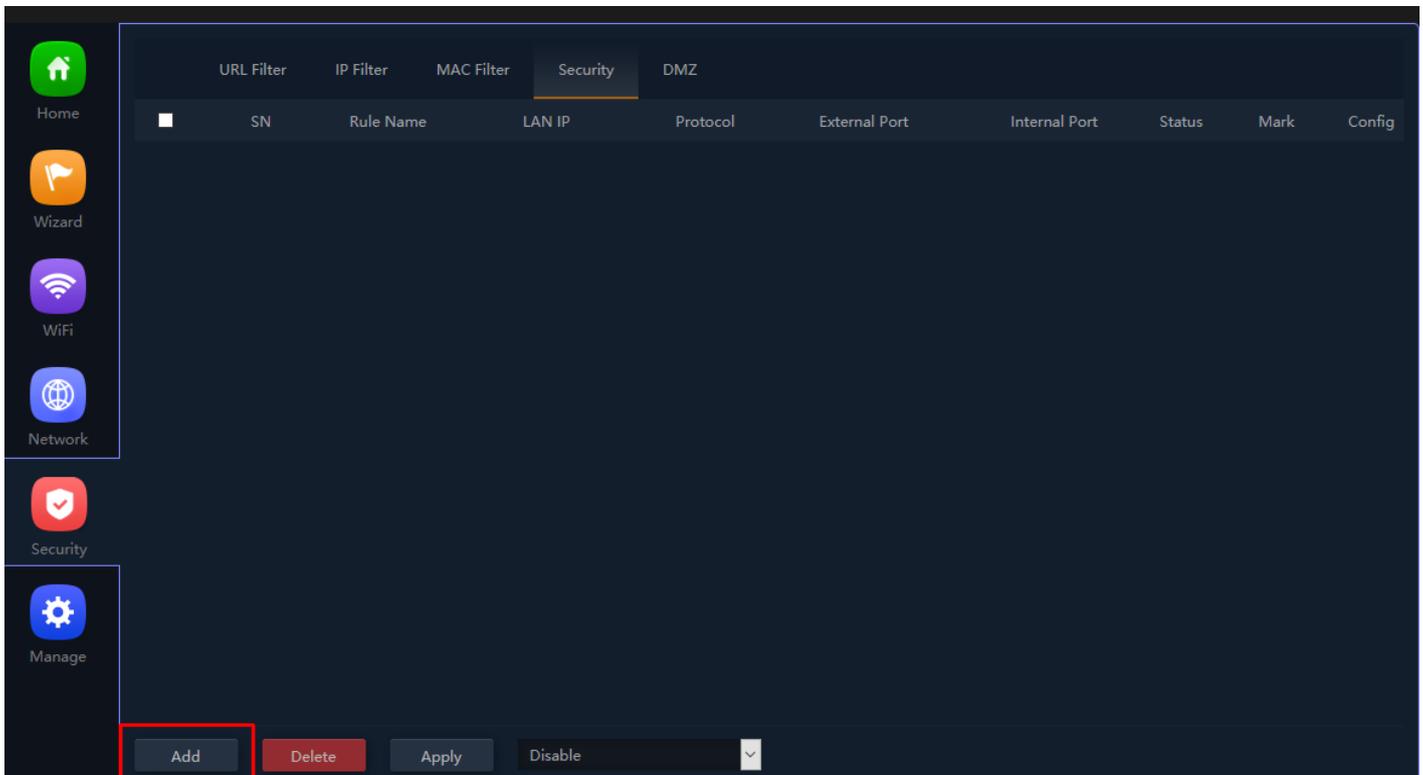
Fig 5.4.1 Default Security setting for AirONE APO300
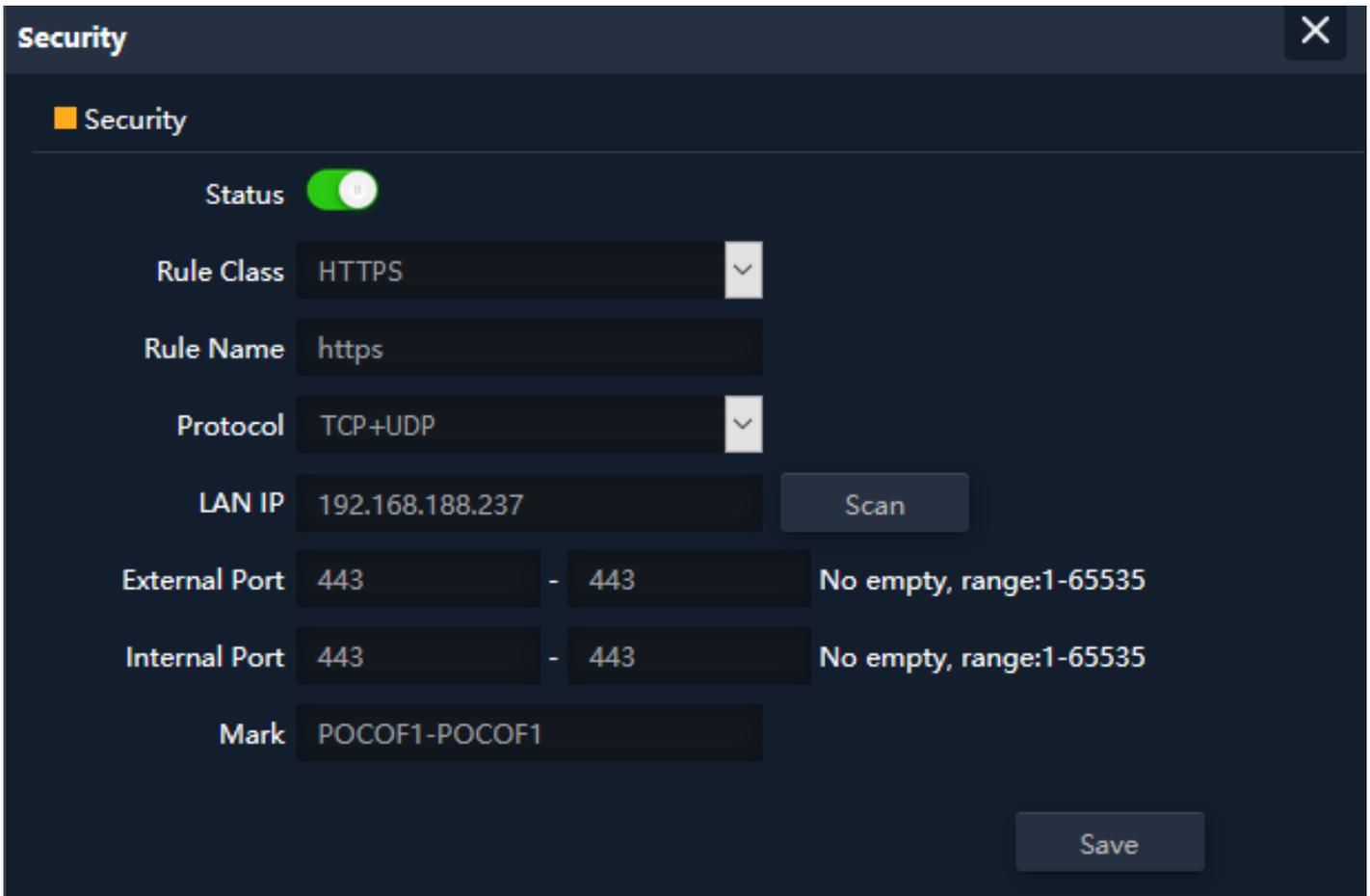
Fig 5.4.2 Security Rules setting for AirONE APO300
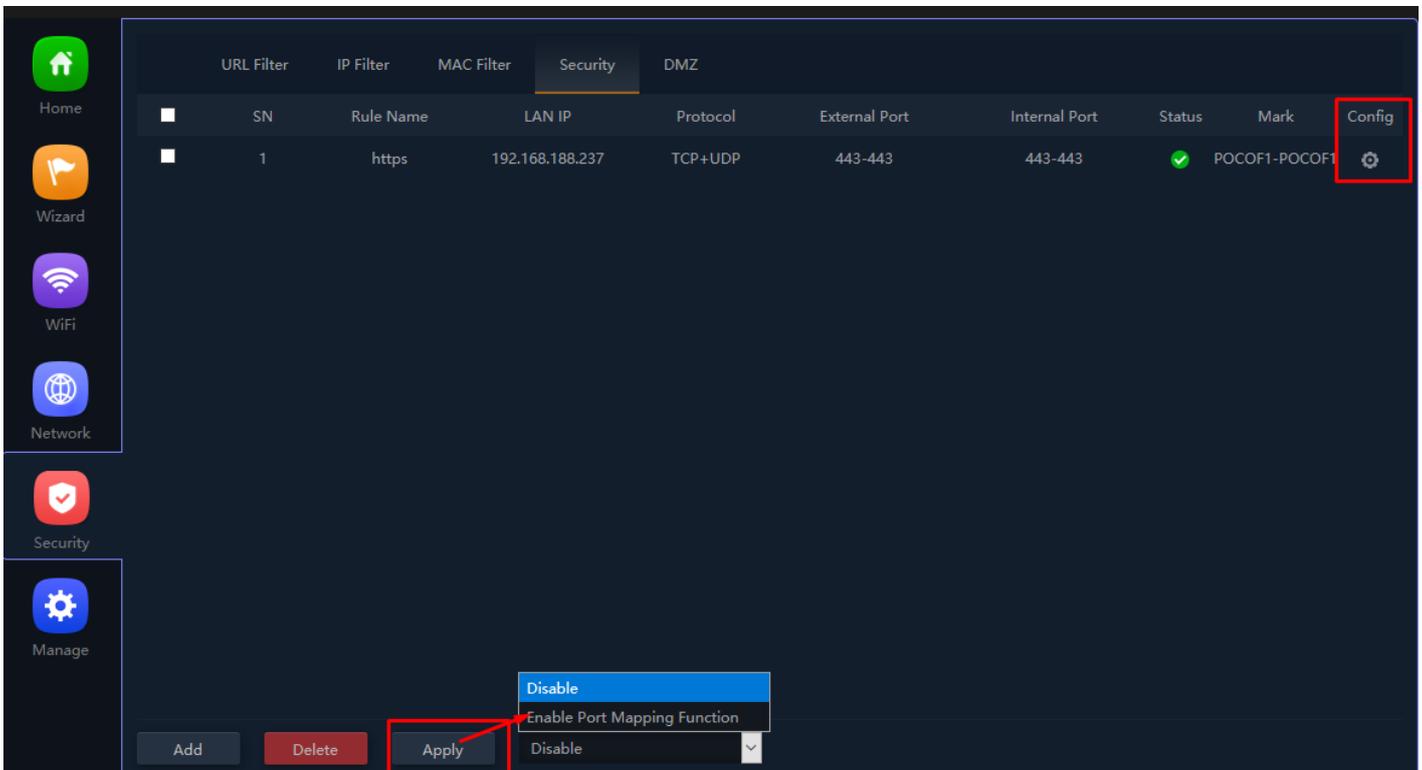
Fig 5.4.3 Security setting for AirONE APO300

5.5 DMZ Settings

DMZ or demilitarized zone is a physical or logical subnetwork that contains portion of your network carved off and isolated from the rest of your network of an organization's external-facing services to an untrusted, usually larger, network such as the Internet.

The main benefit of a DMZ is to provide an internal network with an additional security layer by restricting access to sensitive data and servers. A DMZ enables Website visitors to obtain certain services while providing a buffer between them and the organization's private network. The goal of a DMZ is to add an extra layer of security to an organization's local area network. A protected and monitored network node that faces outside the internal network can access what is exposed in the DMZ, while the rest of the organization's network is safe from attackers.
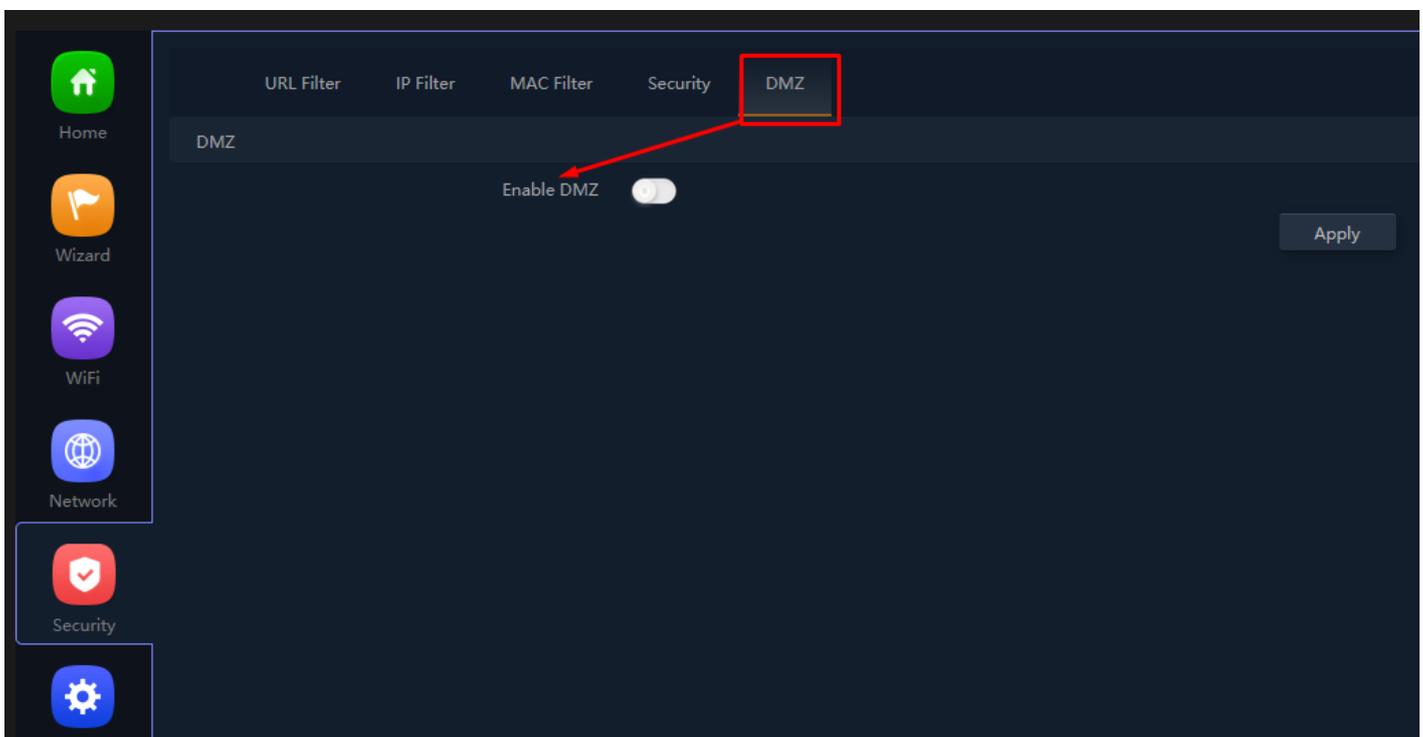
Fig 5.5.1 Default DMZ setting for AirONE APO300
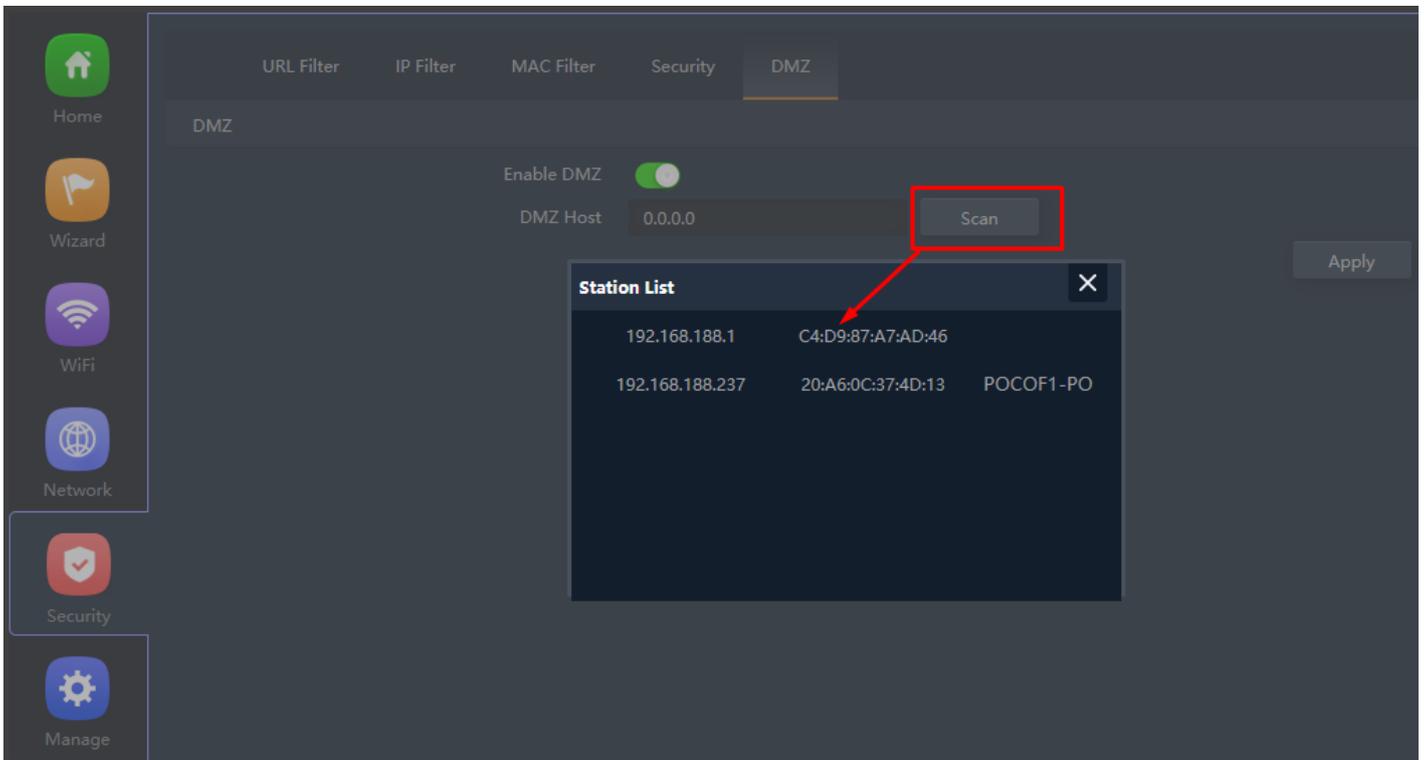
Fig 5.5.2 DMZ setting for AirONE APO300

MANAGE

Configure:
Back up to save the configuration file to PC connected. Restore APO to known configuration. Reset the factory default settings. Telnet can be Enabled or disabled.

Reboot:
It possible to schedule an automatic reboot of AP.

Modify Password:
You can create password as per your choice and even change the admin password for login to device.

Upgrade:
This setting to upgrade the APO is to get more functions and better performance.

Time:
System Time is the time displayed while the APO is running. On this page you can configure the system time.

Log:
The Logs can record APO information effectively. You can enable and disable log and also can set Log server.

Flow Control:
Enabling flow control can optimize the bandwidth and improve the network experience of important applications.

IP Group:
It can define IP group which tells APO what groups the users are defined.

Time Group:
It can create Time Group with time range and set frequency to operate time group.

DDNS Settings:
It provides a fixed domain name for DDNS client and maps its latest IP address to this domain name.

Note:
All *italic config* options are only available in WISP and Gateway mode only.
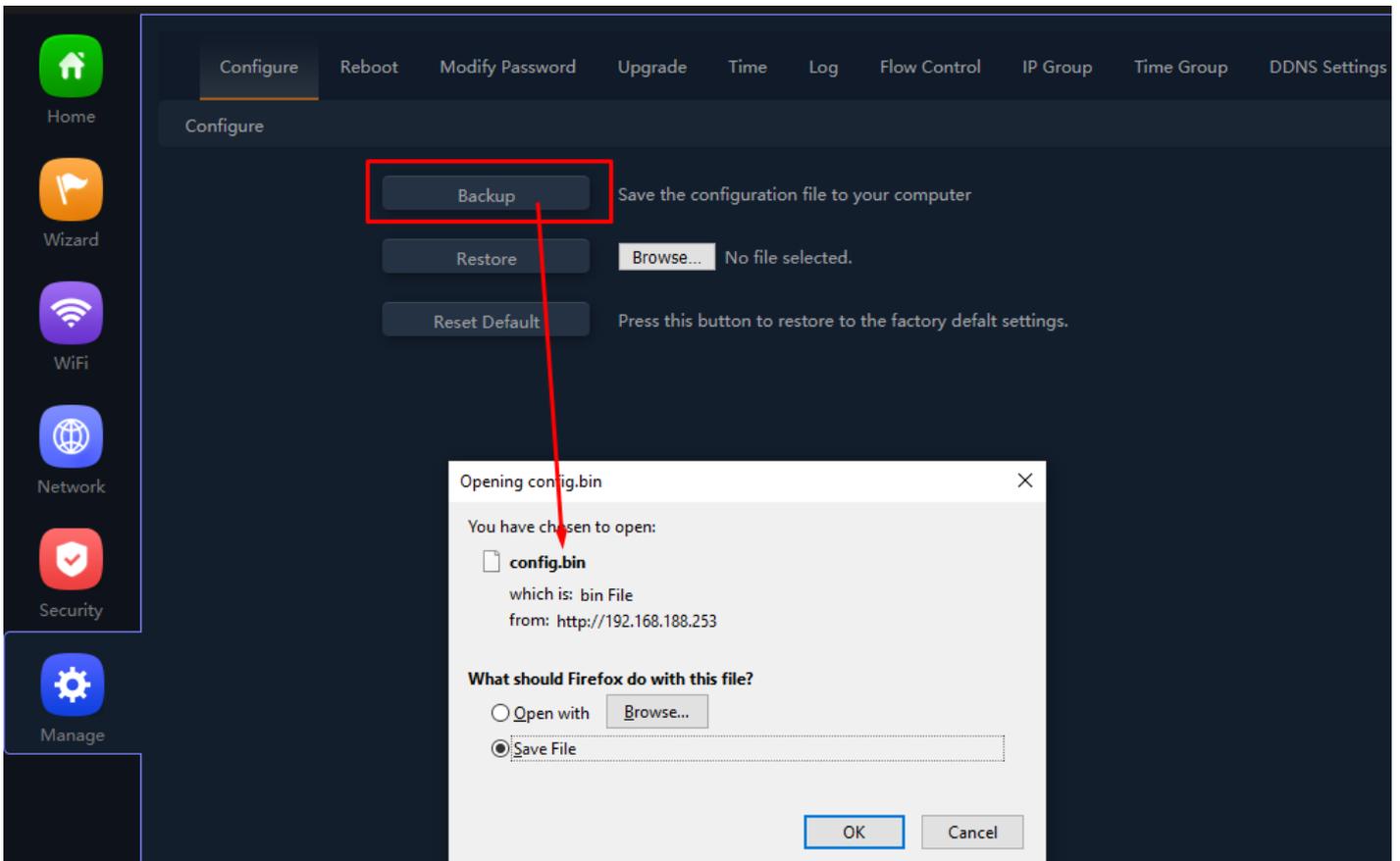
6.1 Configure Setting

The Backup and Restore configuration feature allow end users to backup all configurations made in AP. In cases when you need to reset the APO to factory default settings, you will be able to restore your previous configuration using the backup

configuration file. This will save you time by not going through the process of reconfigure the APO manually.

You can restore the APO to its factory default settings by the Reset button or by Reset Default option in this page. It must be noted that once the APO is reset, all the current configuration settings will be lost. If you want old configure files which is backup already then can use option upload backup. Use the page to restore the APO to the factory defaults or use the button to restore the APO to old configuration.
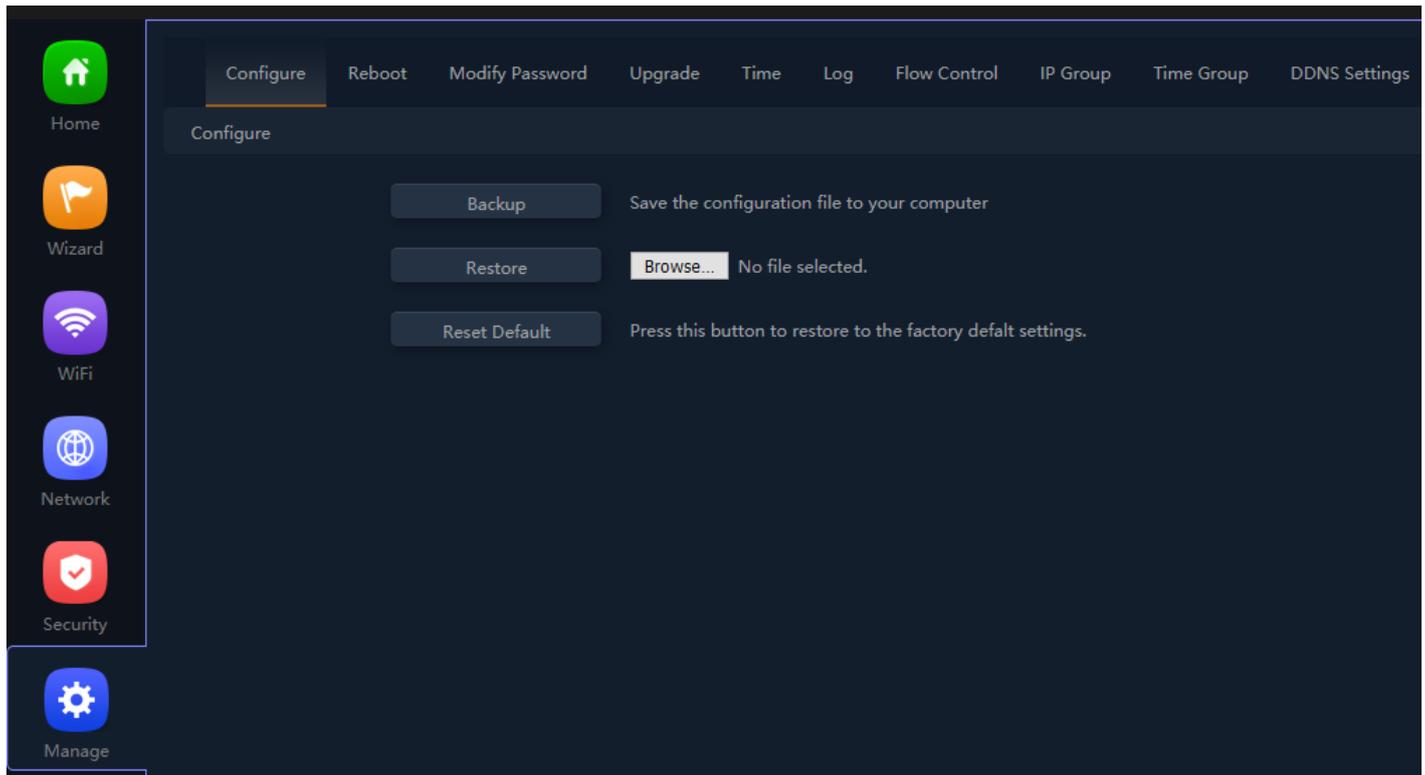
Fig 6.1.1 Default Configure setting for AirONE APO300

Fig 6.1.2 Taking backup of AirONE APO300
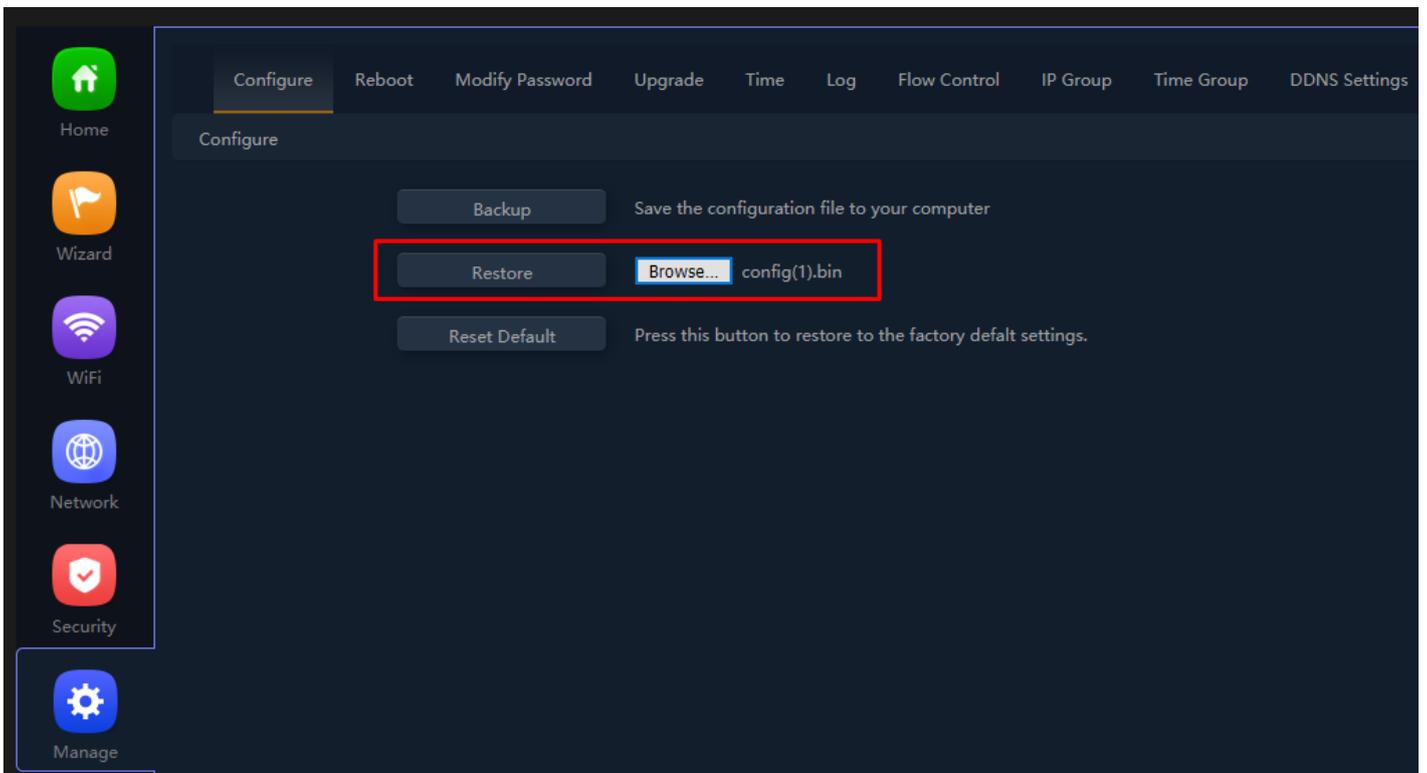
Fig 6.1.3 Restore to known Configure for AirONE APO300
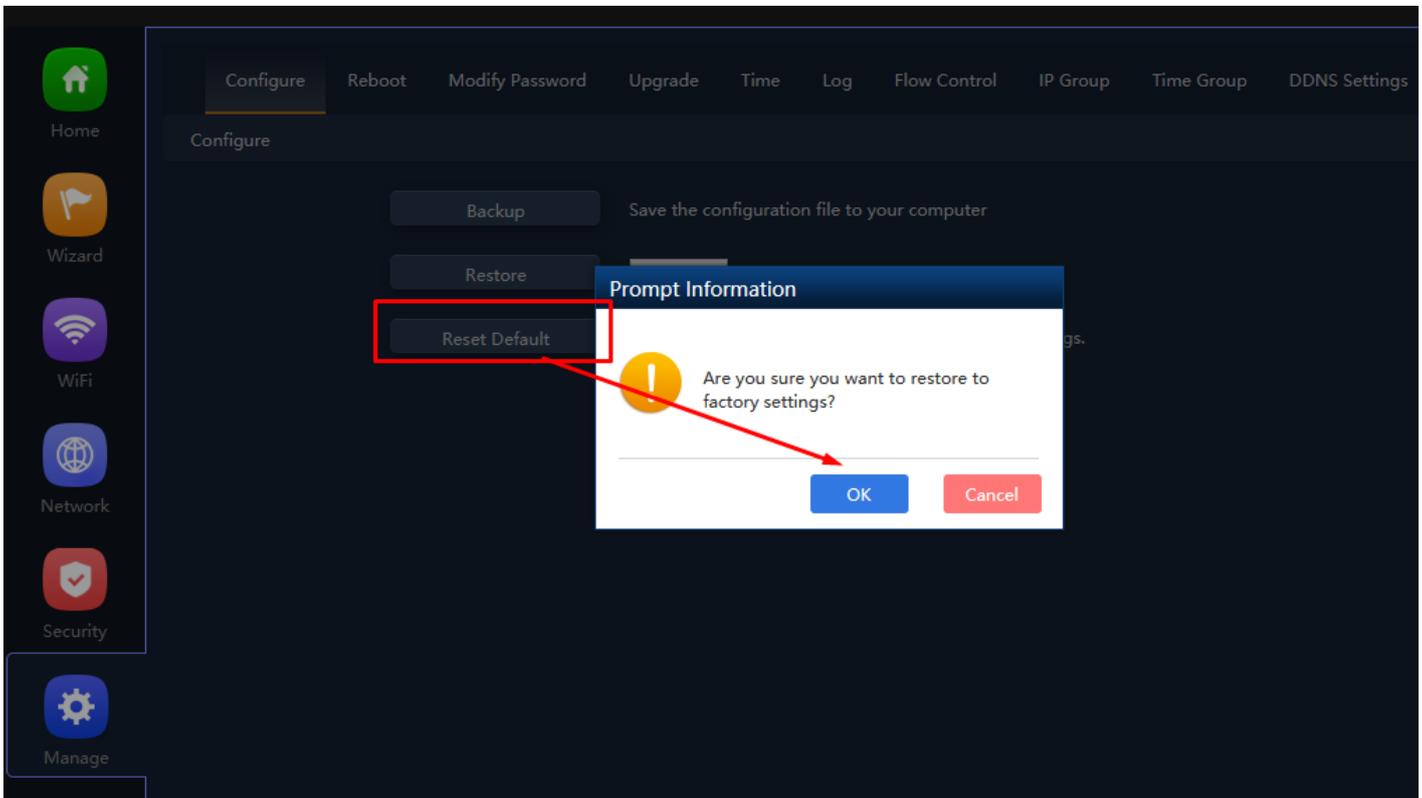
Fig 6.1.4 Reset to factory default for AirONE APO30

6.2 Reboot Setting

It possible to schedule an automatic reboot of AP. The configuration will not be lost after rebooting. The Internet connection will be temporarily interrupted while rebooting.
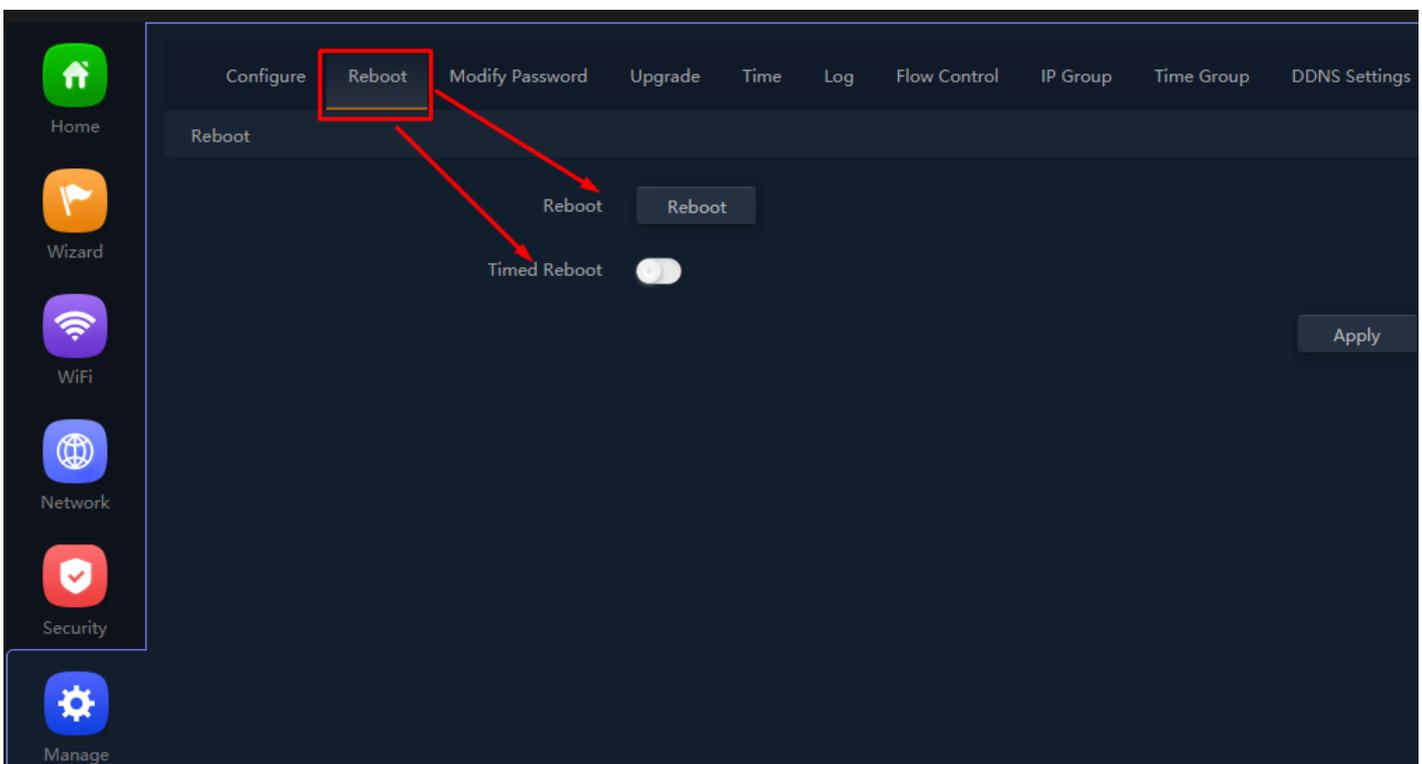
Fig 6.2.1 Default reboot setting for AirONE APO300
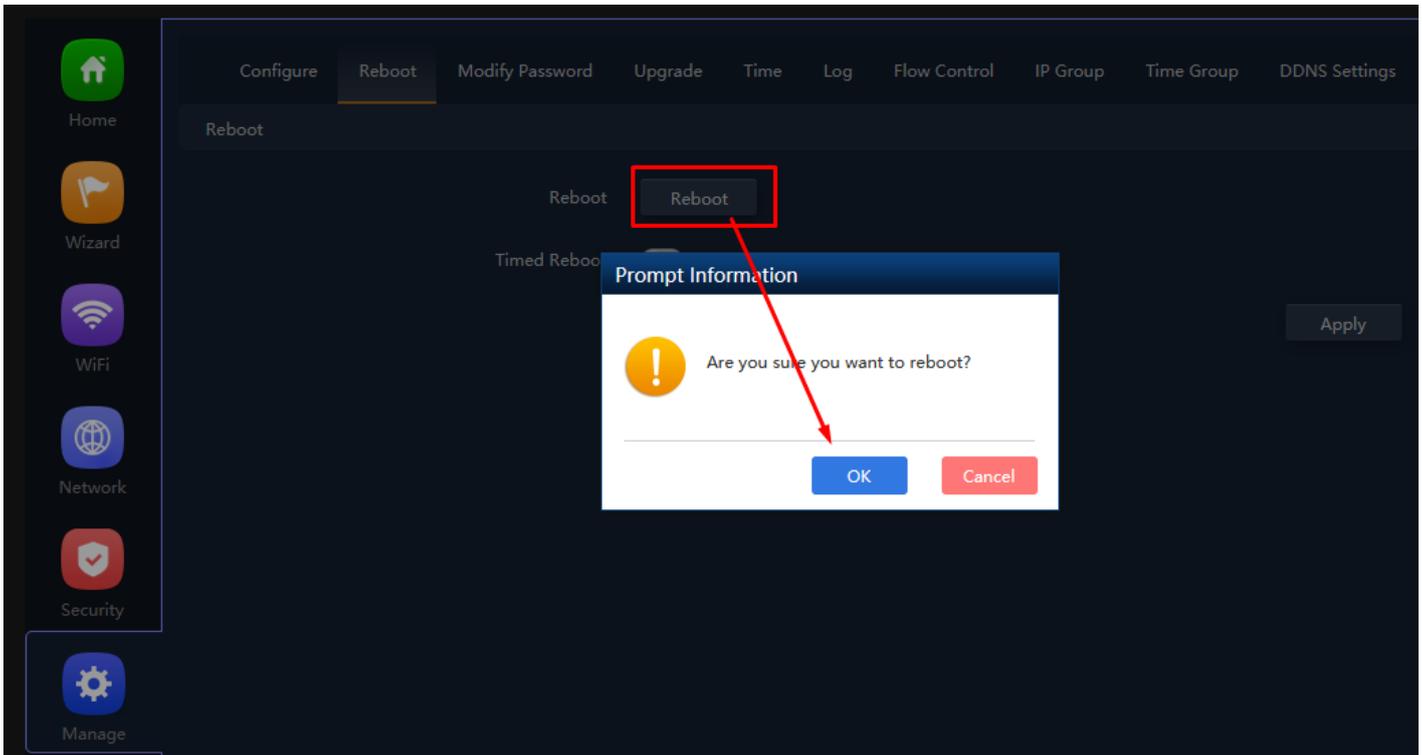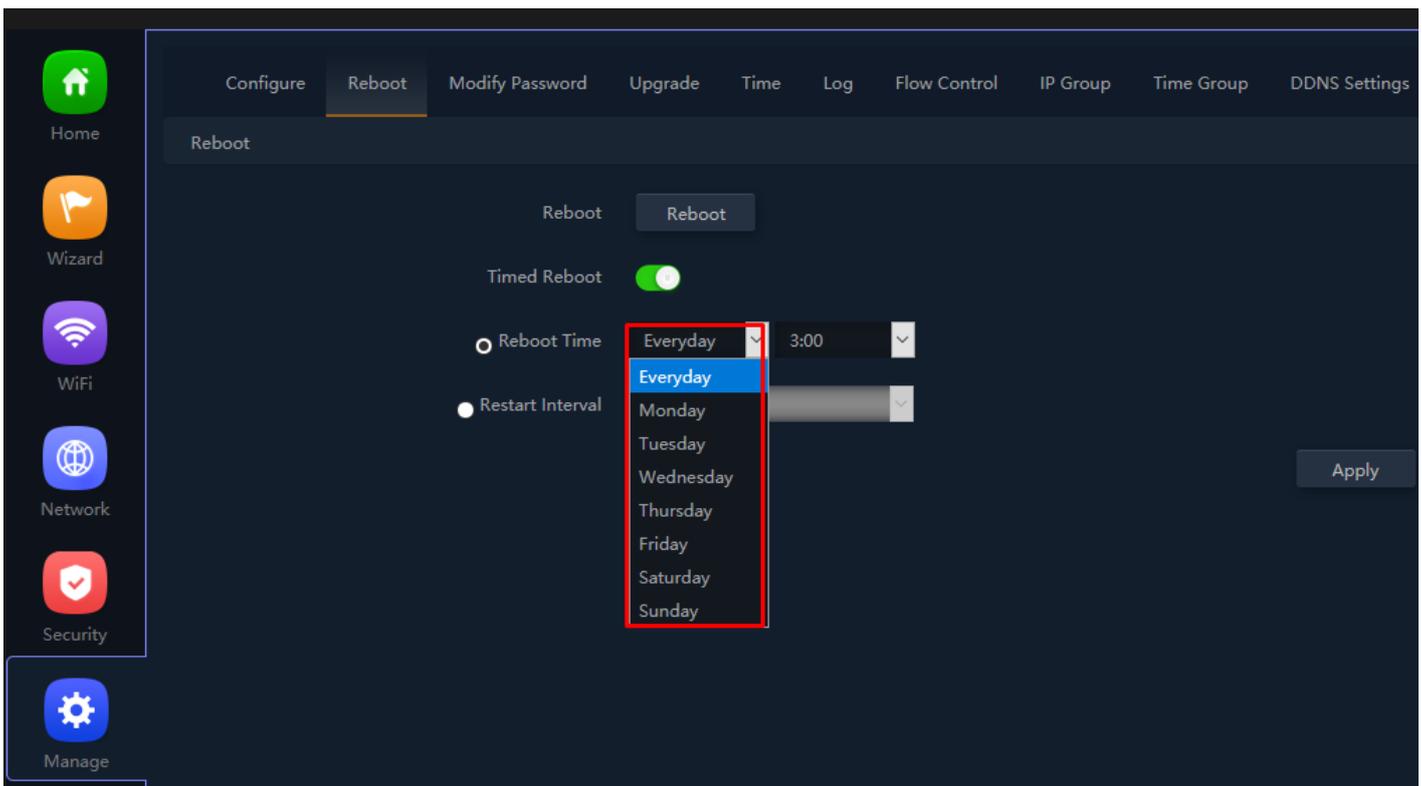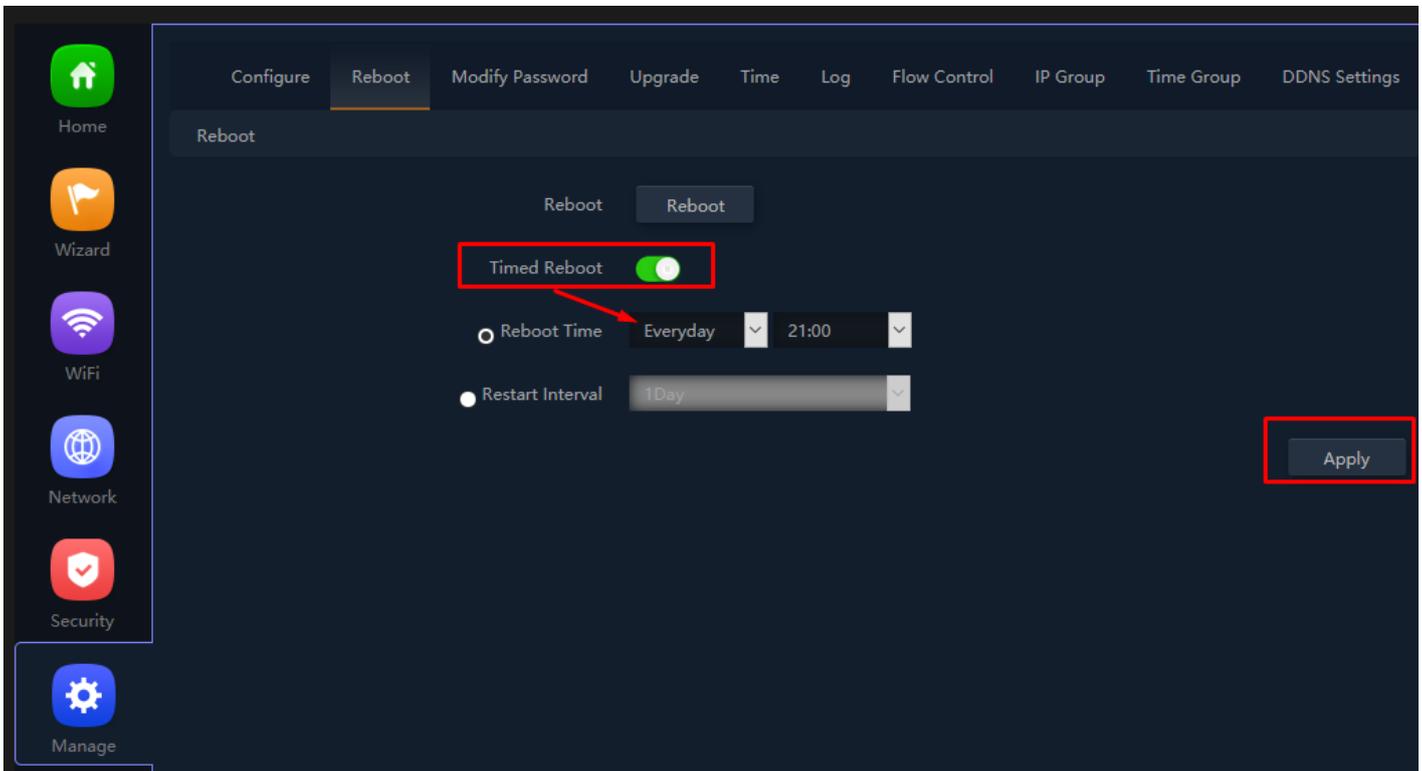
Fig 6.2.2 Instant Reboot setting for AirONE APO300

Fig 6.2.3 Enable timed reboot for AirONE APO300

Fig 6.2.4 Enable daily reboot for AirONE APO300
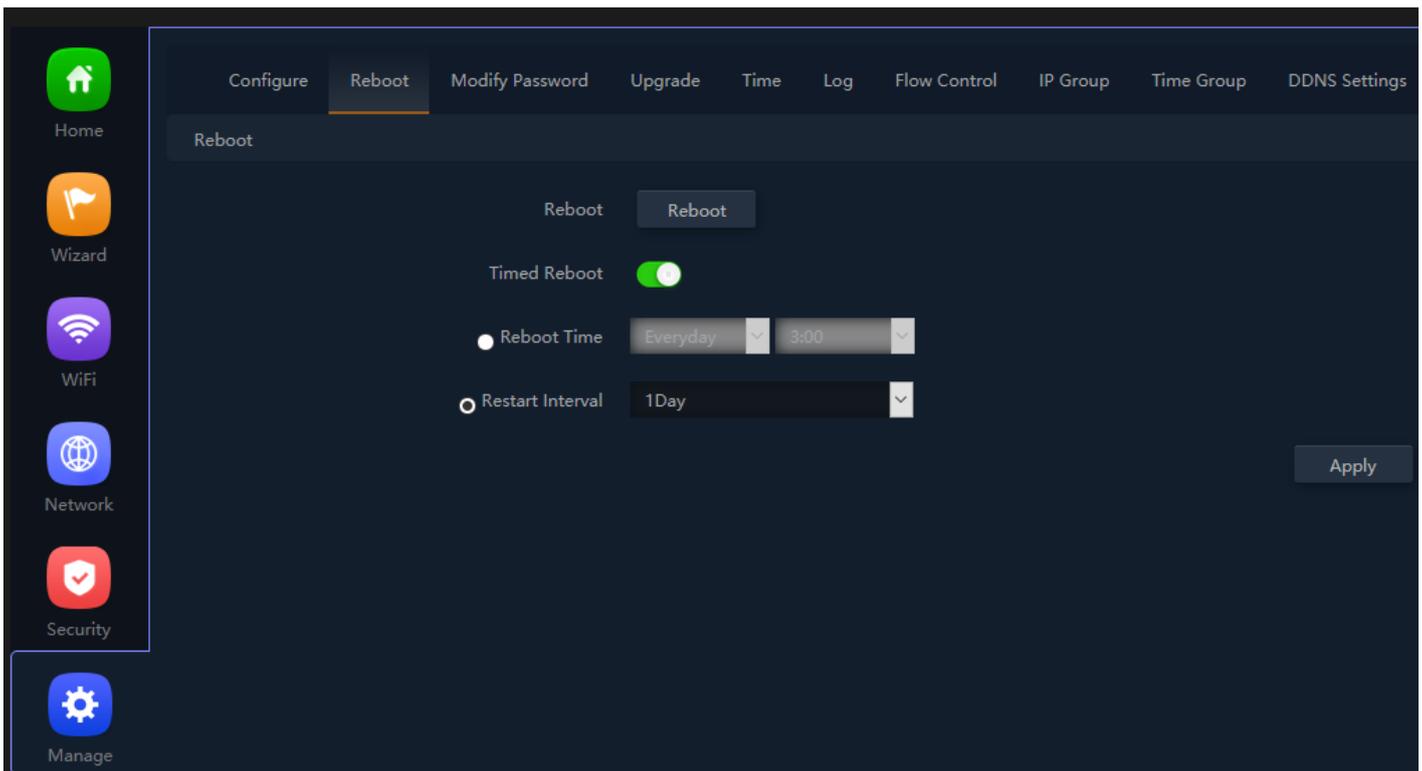
Fig 6.2.5 Enable Restart interval for AirONE APO300

Recommendation:

It is strongly recommended to disable reboot to avoid network disruption and outage.

6.3 Modify Password Setting

On this page, you create password as per your choice and even change the admin

password for login to device. You can modify the factory default password of the APO and create new user password to manage the device.

Note:
The factory default password is **admin or commando** depending on firmware version is mentioned in backside of device.
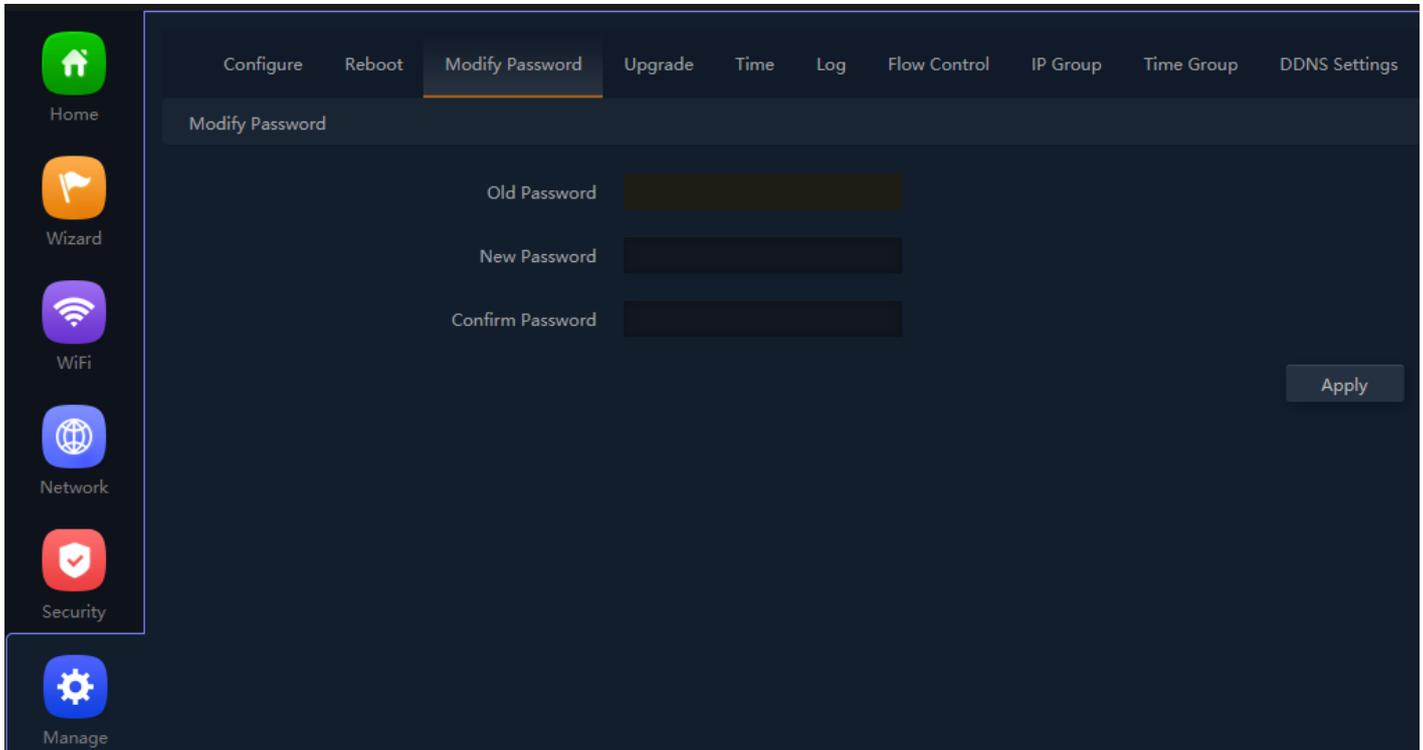
Fig 6.3.1 Modify password page for AirONE APO300
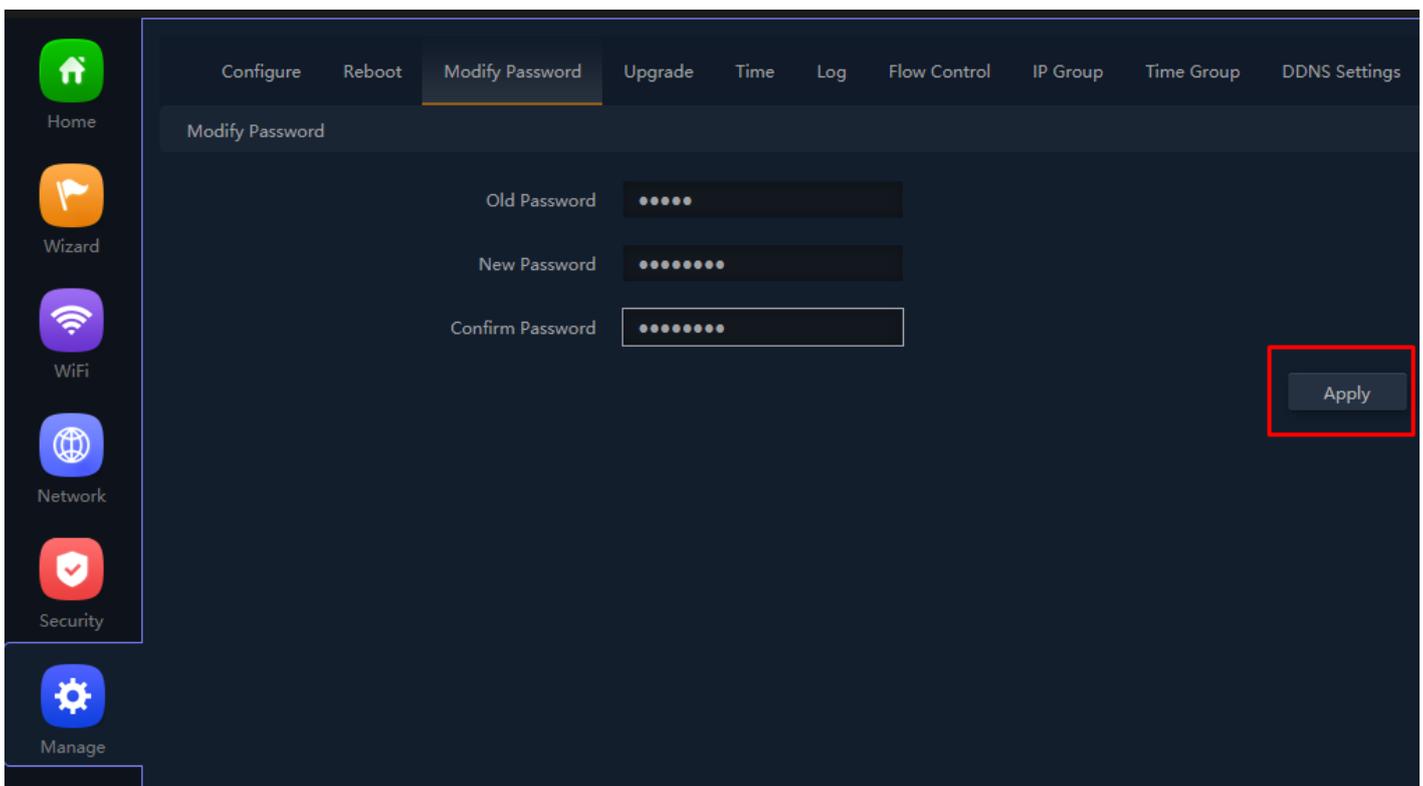
Fig 6.3.2 Setting New password for AirONE APO300
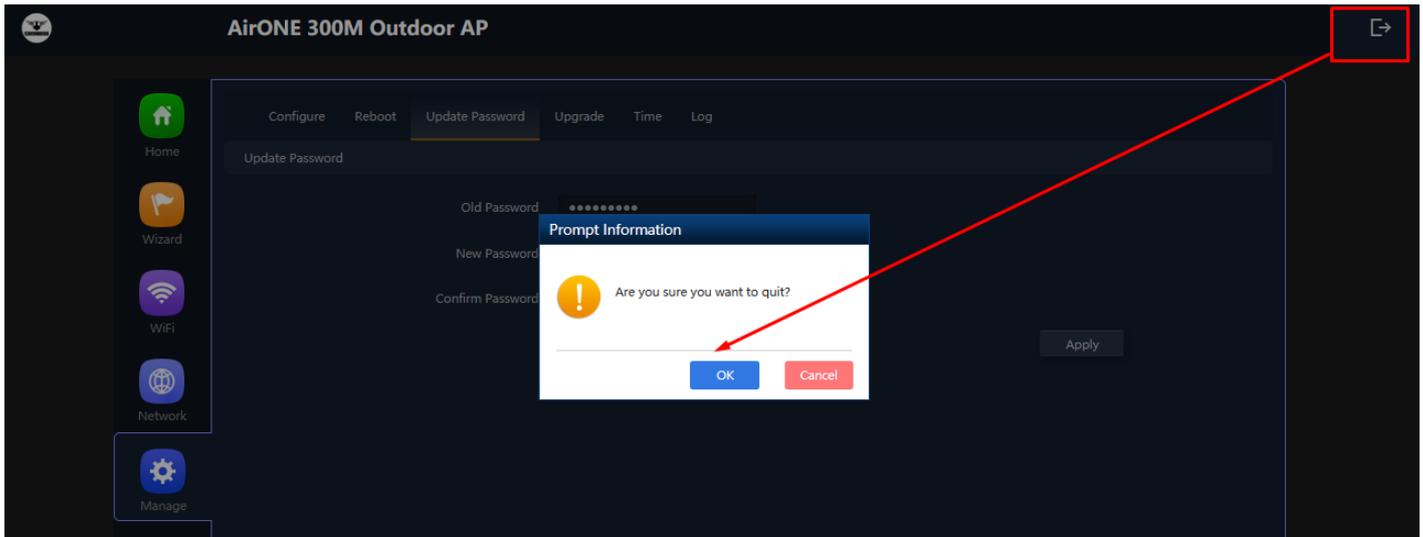
Fig 6.3.3 Log Out Button for AirONE APO300

Fig 6.3.4 New password to be entered to login AirONE APO300

Recommendation:

It is strongly recommended to change default password **admin** or **commando** which is used to access device.

6.4 Upgrade Setting

Version displays the current Configuration version of the AP. To upgrade the APO is to get more functions and better performance.

Note:

1. After upgrading, the APO will reboot automatically.
2. To avoid damage to device, please don't turn off the APO while upgrading.
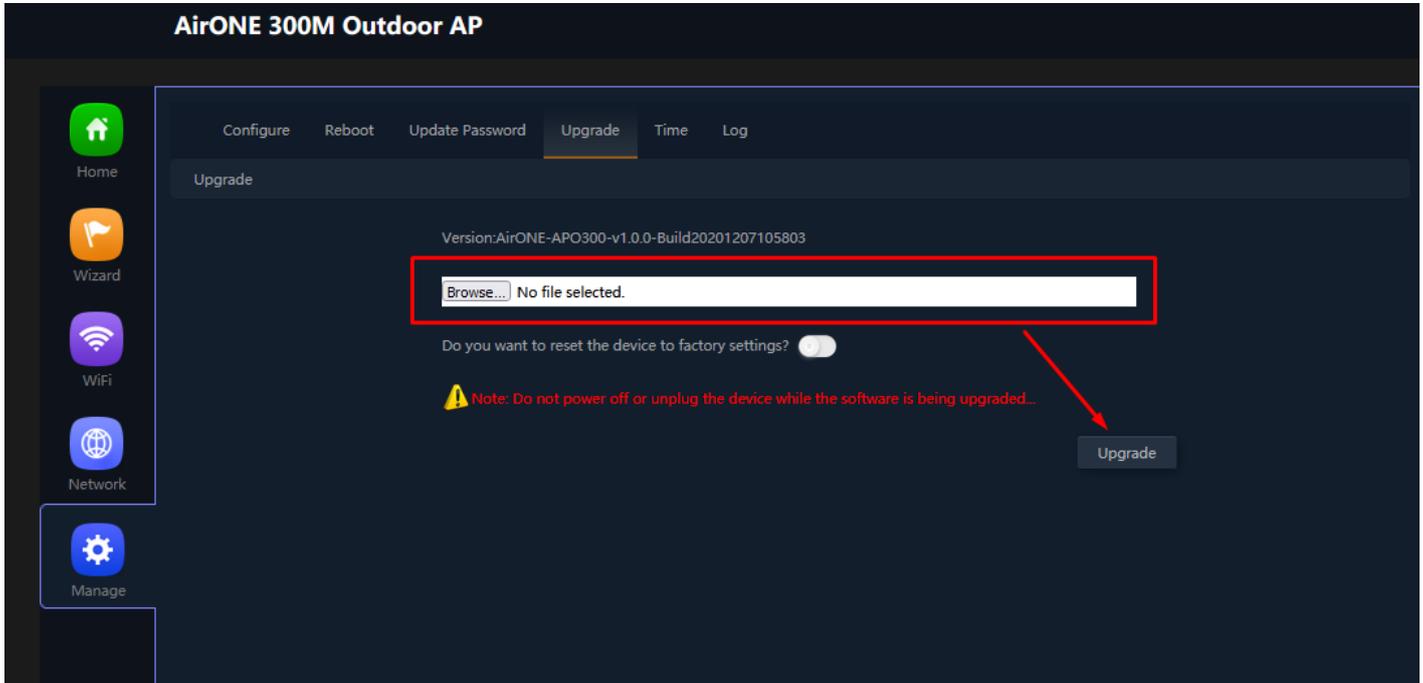
Fig 6.4.1 Default Upgrade page for AirONE APO300
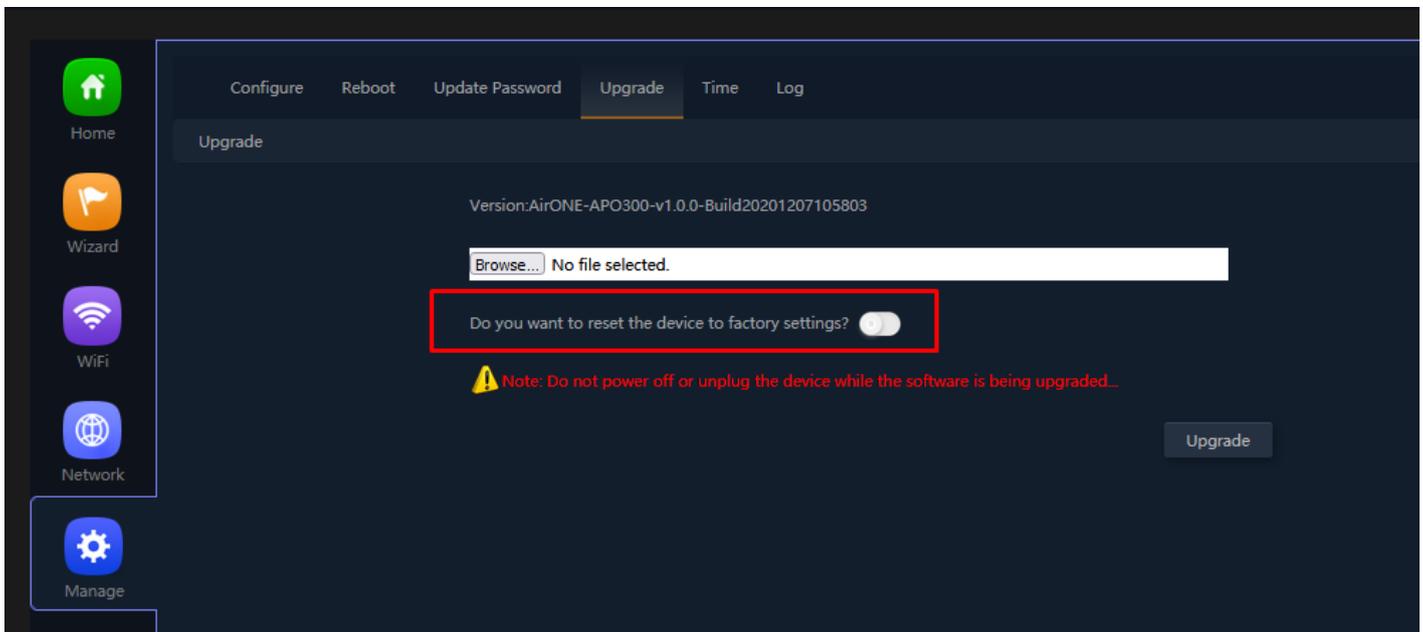
Fig 6.4.2 Upgrade with no previous configuration for AirONE APO300

Note:

It is advised to take backup of the configuration before upgrading.

6.5 Time Setting

System Time is the time displayed while the APO is running. On this page you can configure the system time and the settings here will be used for other time-based functions like Logs.

In time setting you can set System Time, Time Zone, Set Time Automatically and with help of NTP service. System Time displays the current date and time of the AP. Time Zone displays the current time zone of the AP. You can configure the time zone and NTP Server. The APO will get GMT automatically if it has connected to a NTP Server. Manual time can also be set by feeding date and time manually.
Synchronize with Host to set system time is best and recommended option. It uses administrator PC's clock for setting time.
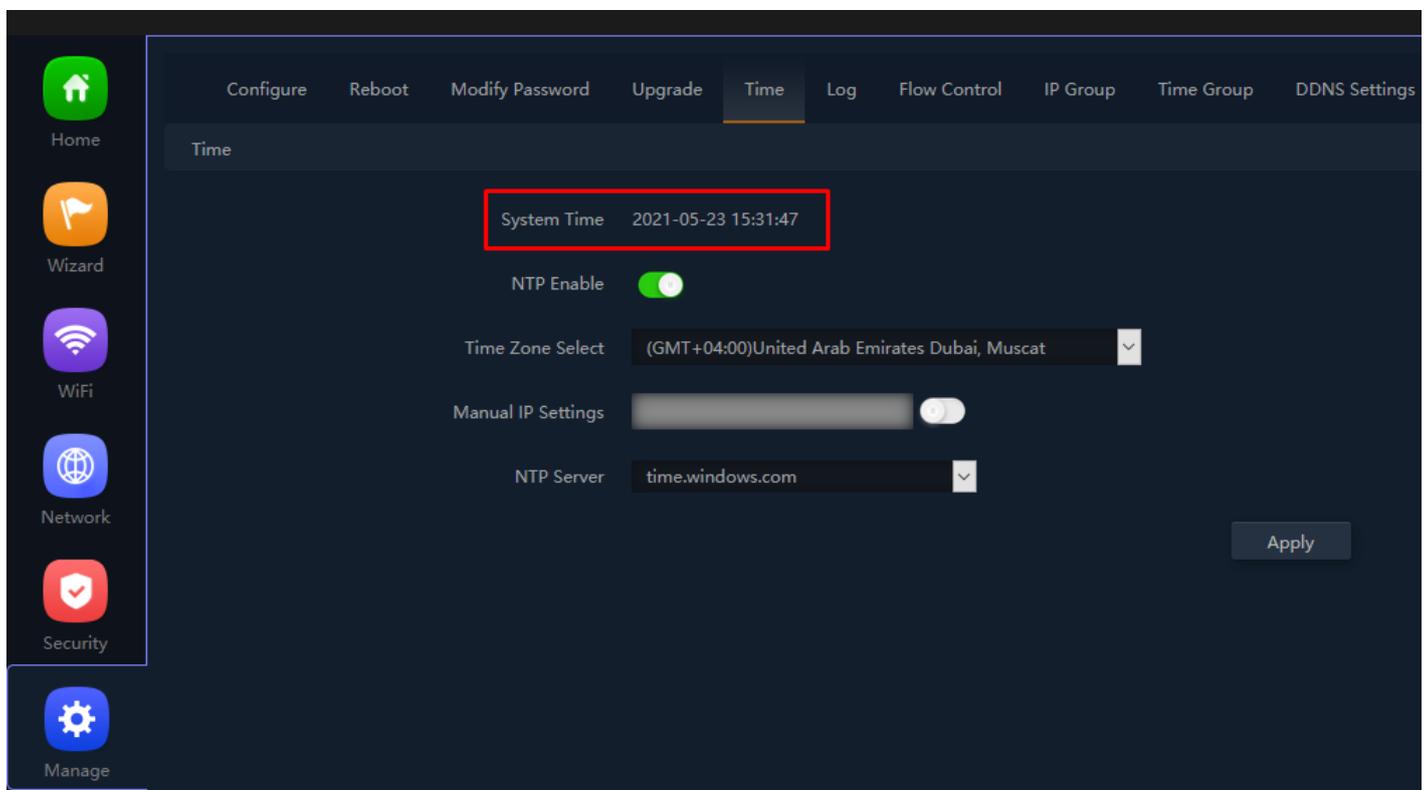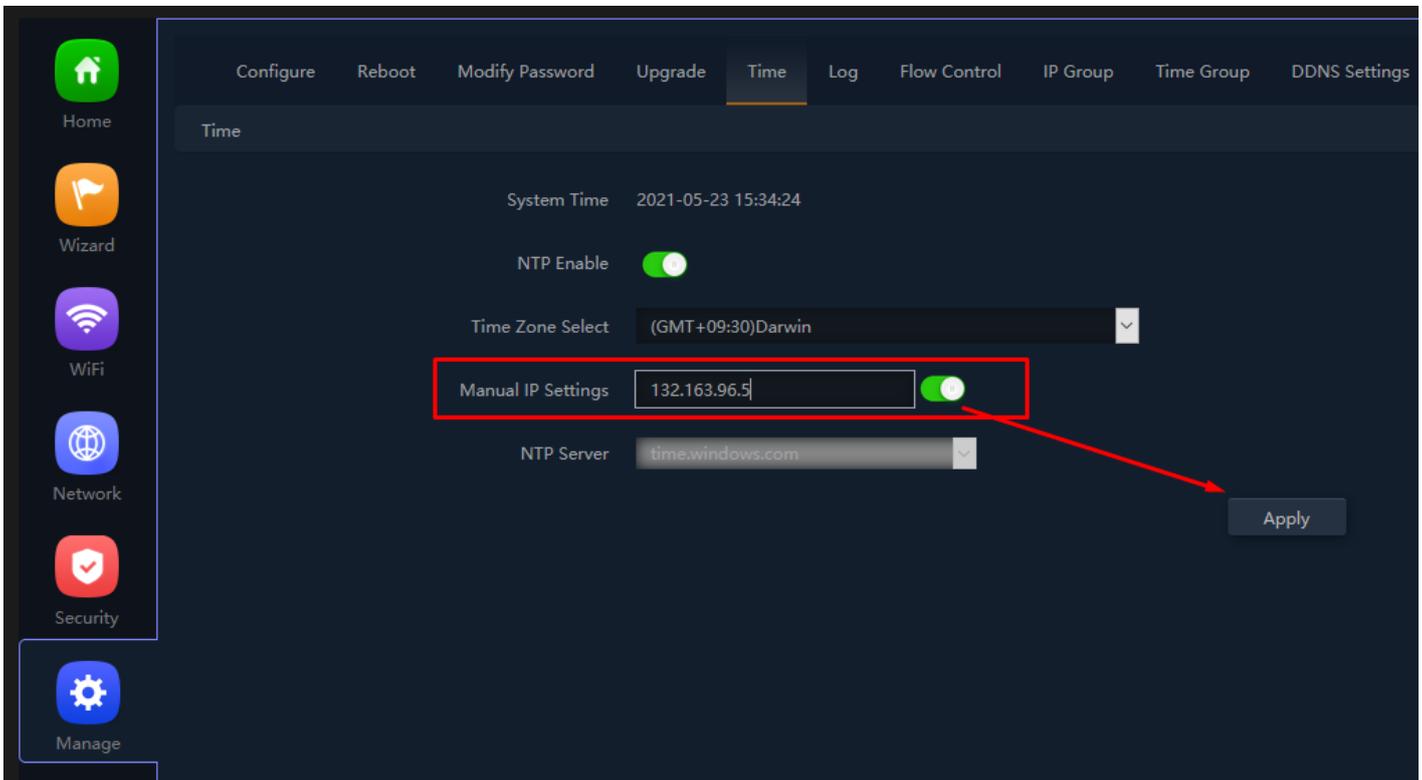

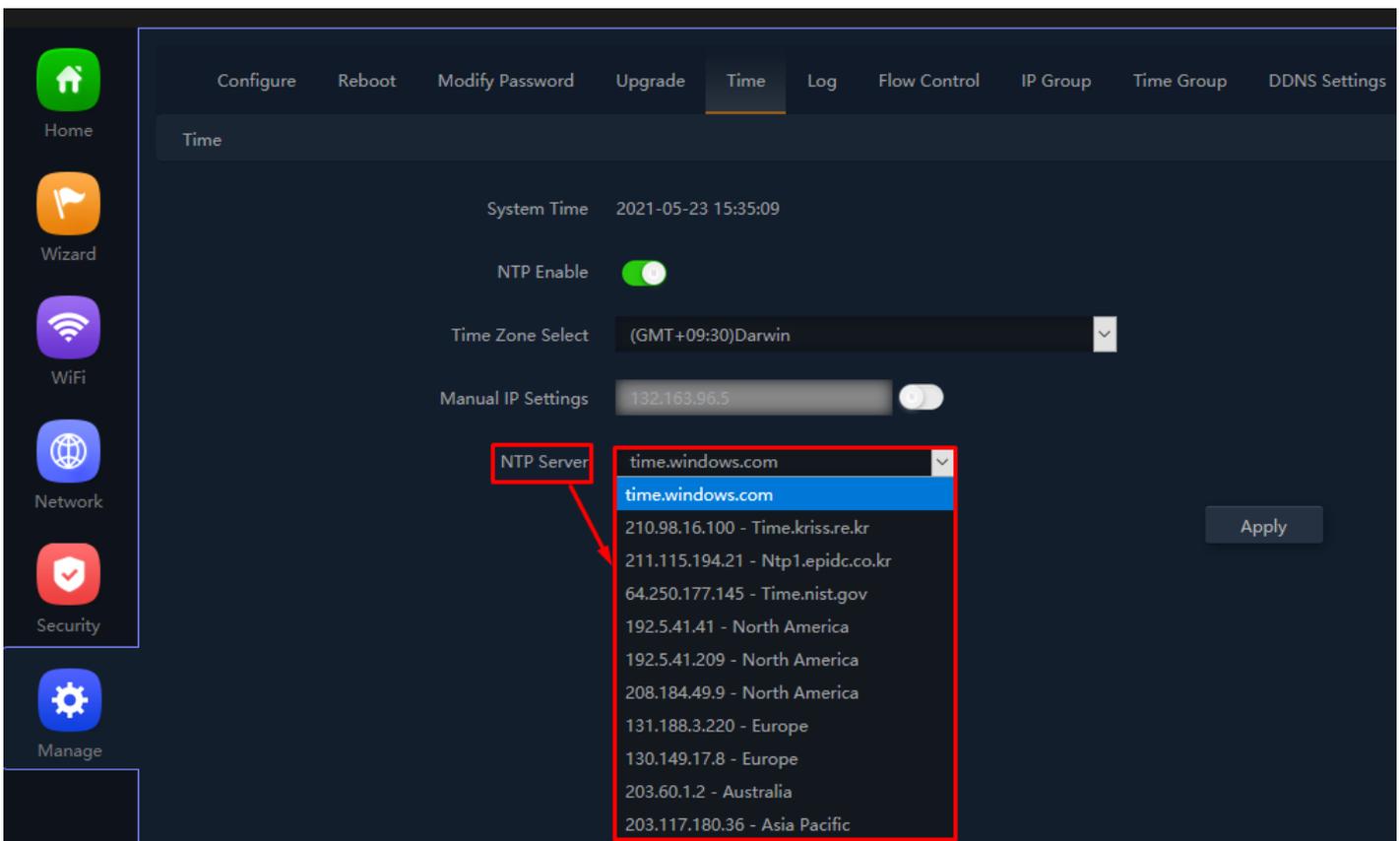**Fig 6.5.1 System Time for AirONE APO300**
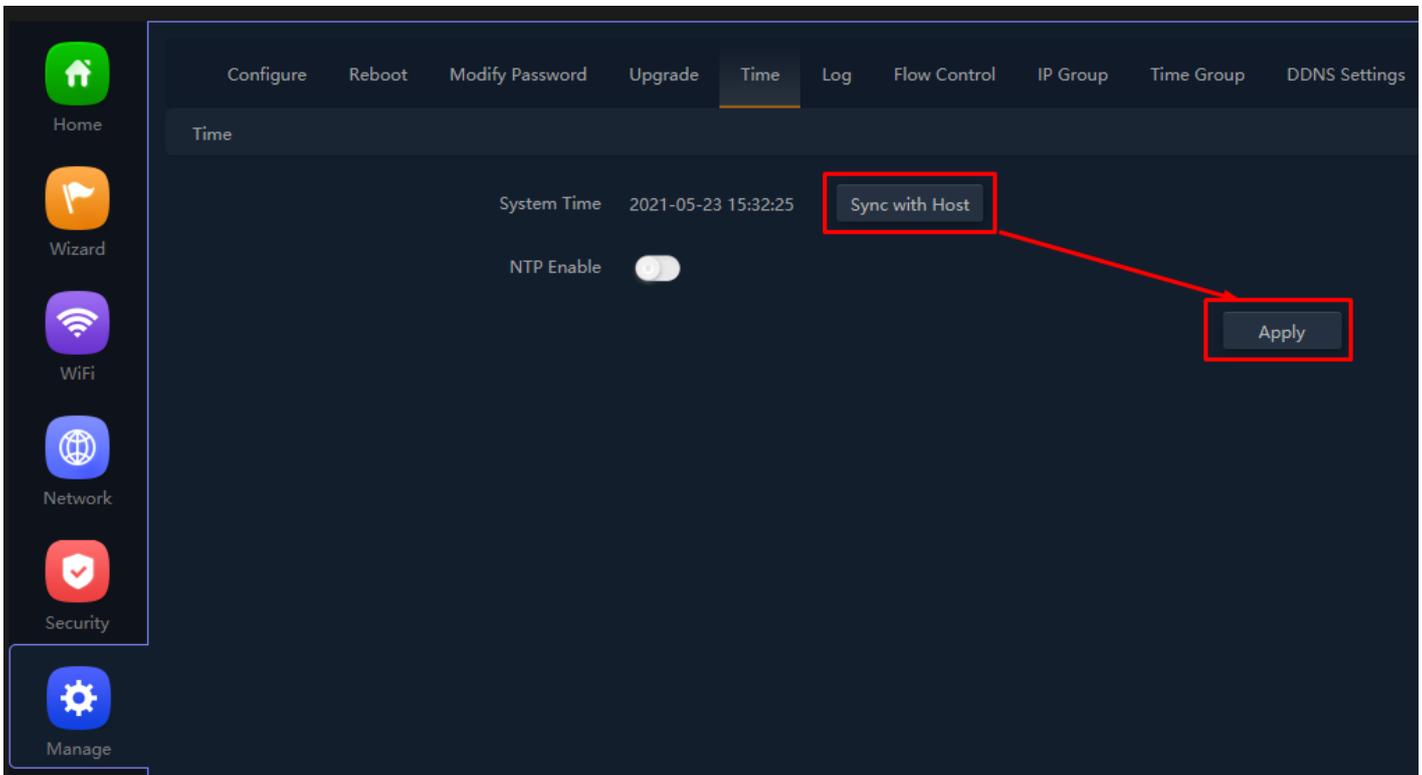
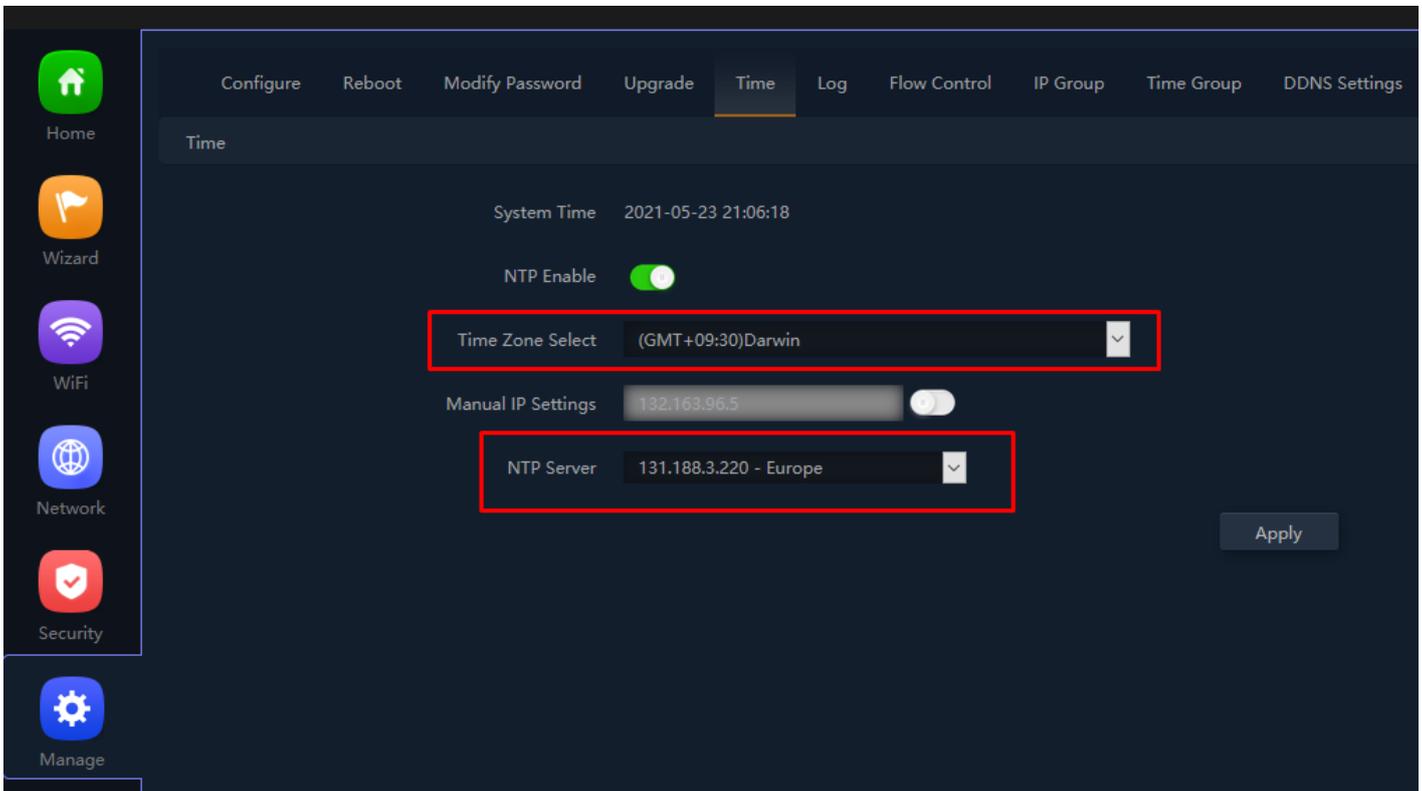**Fig 6.5.2 Disable NTP and Sync with host for AirONE APO300**
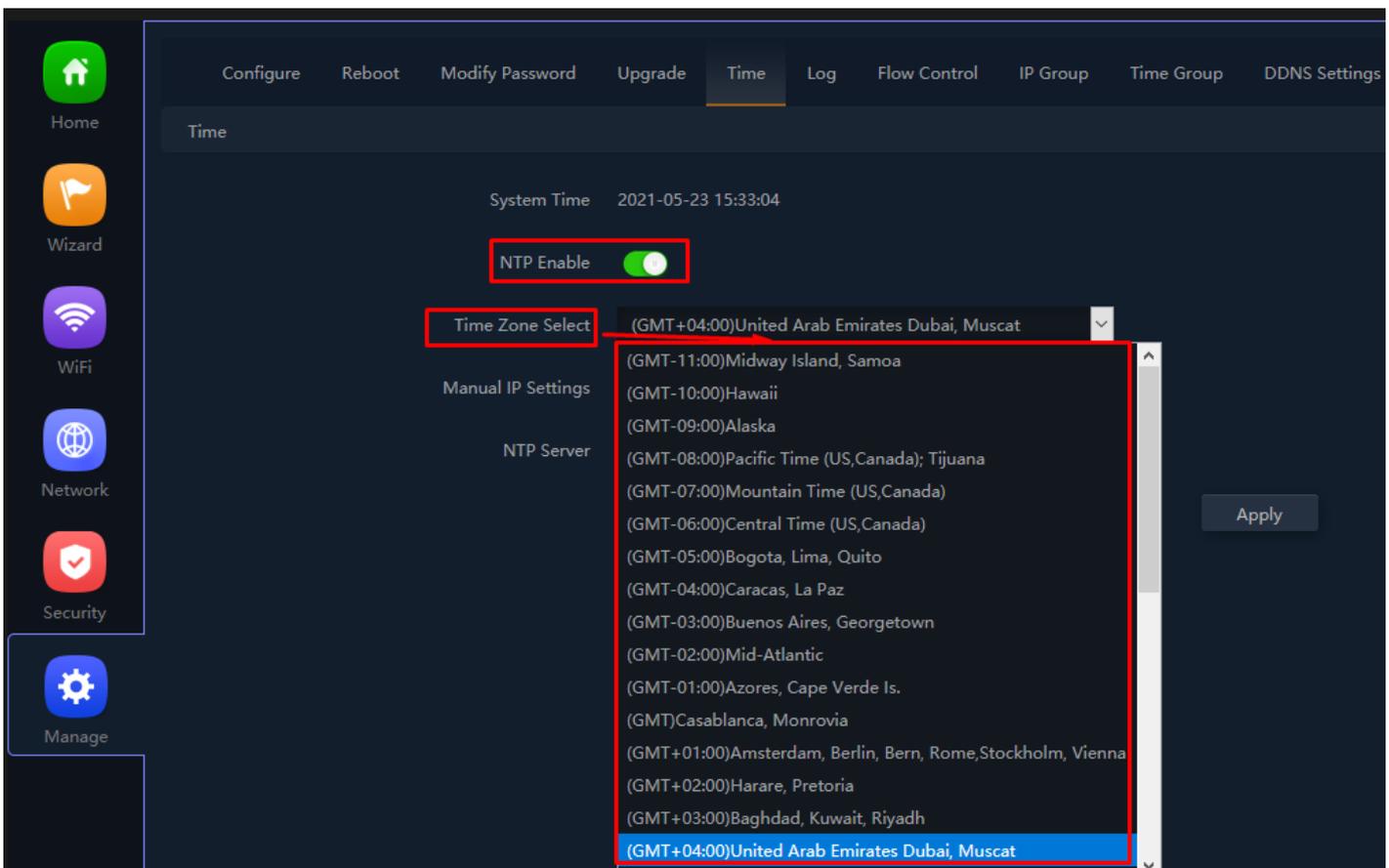
Fig 6.5.3 Enable NTP and select time zone for AirONE APO300

Fig 6.5.4 Enable NTP with Manual IP setting for AirONE APO300
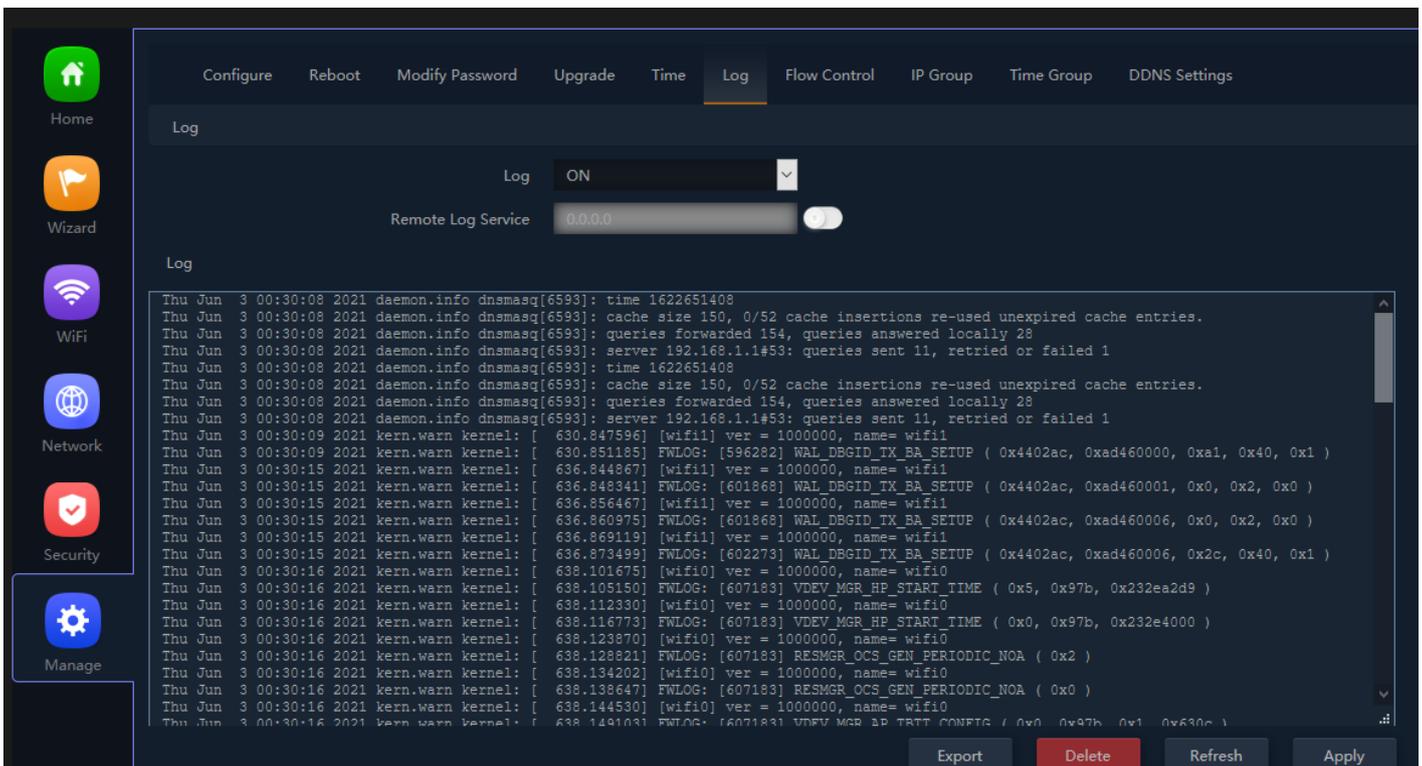

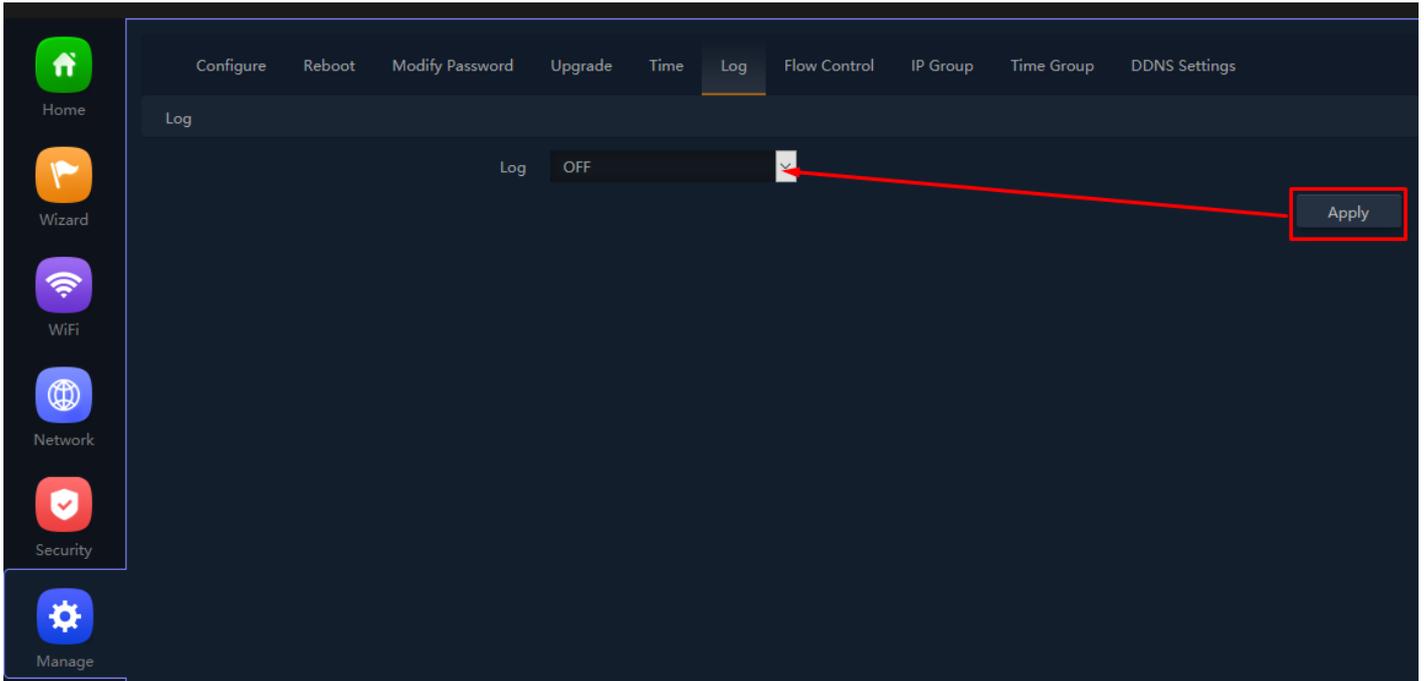**Fig 6.5.5 Selecting well know NTP server for AirONE APO300**

Fig 6.5.6 NTP server for AirONE APO300
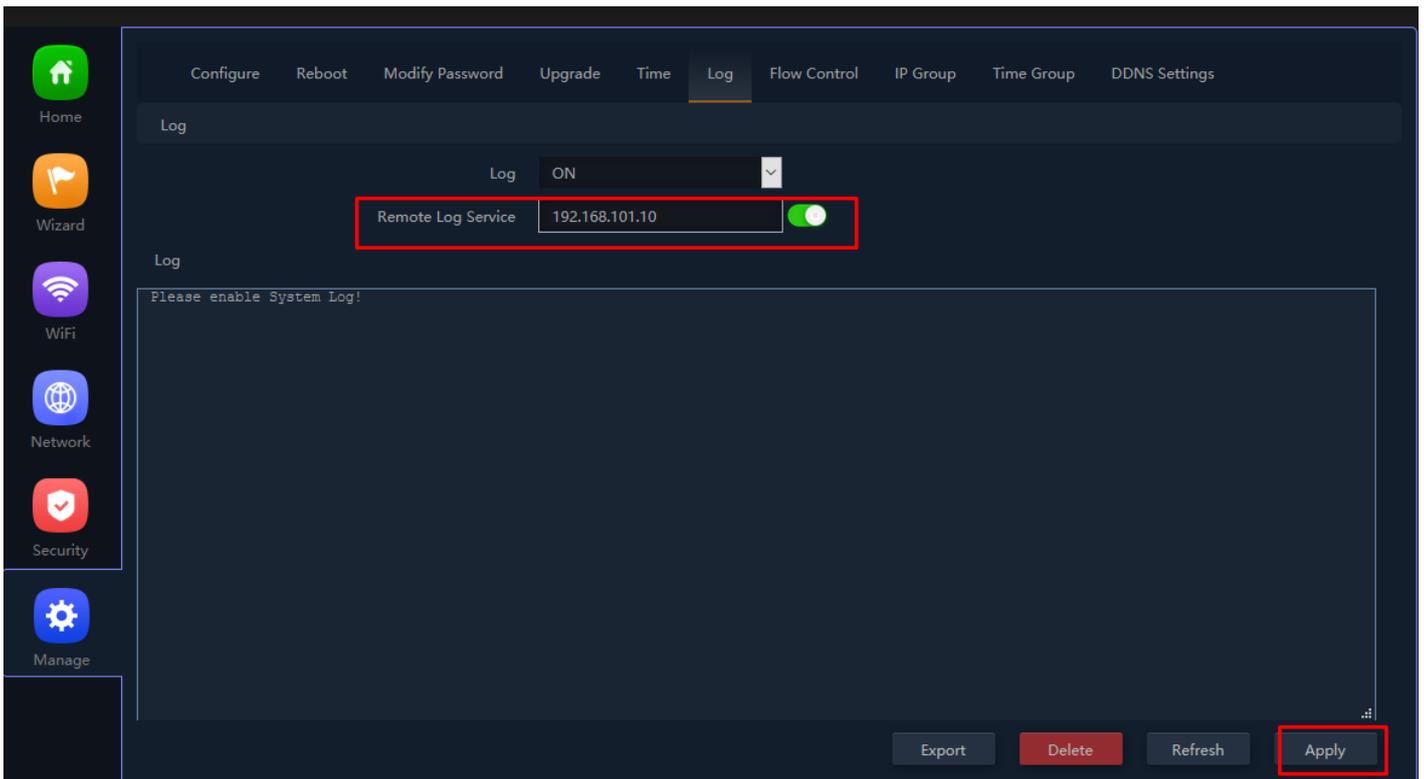
6.6 Log Setting

The Logs can record APO information effectively. The logs allow thorough tracking, alerting, and analysis when something does go wrong. It also determines the root cause of any issue.
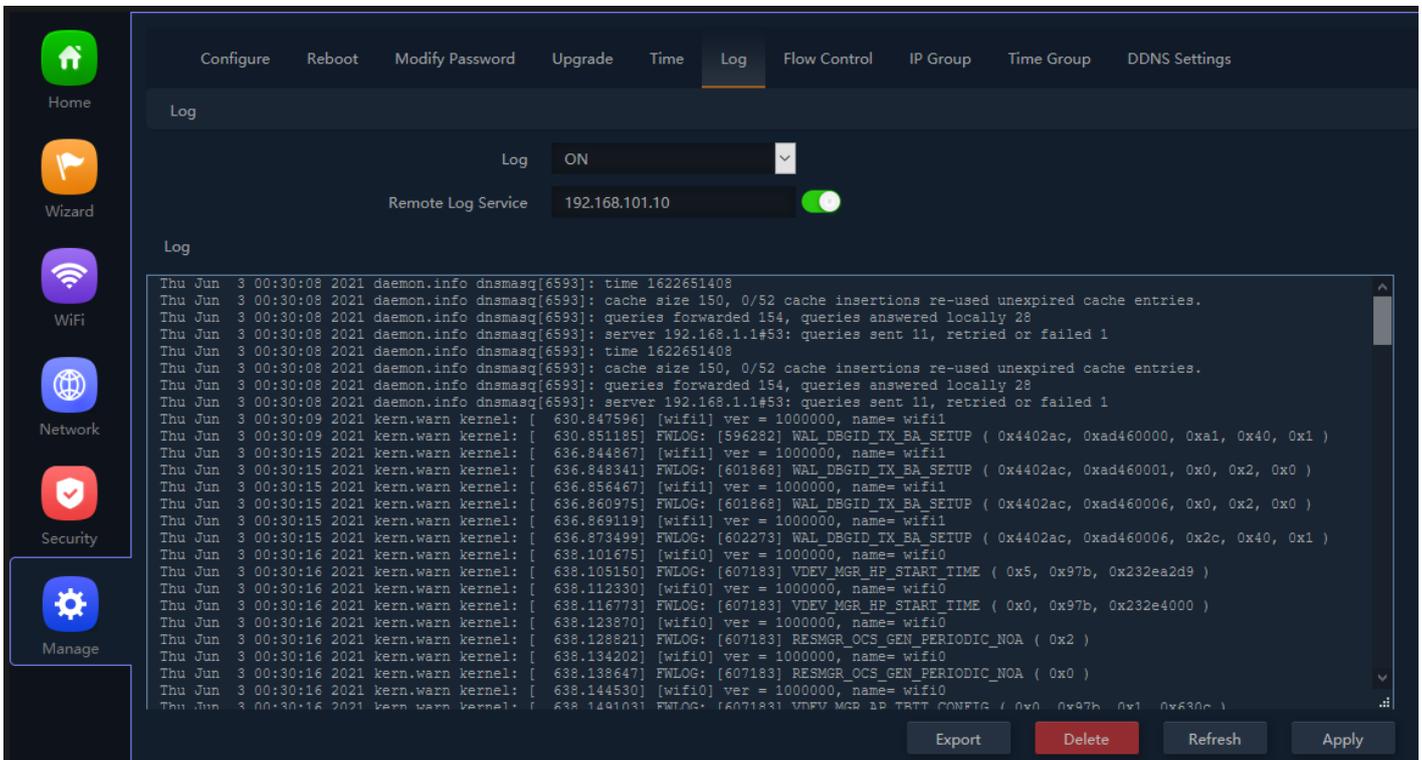
Fig 6.6.1 Default Log setting for AirONE APO300

Fig 6.6.2 Turning OFF Log setting for AirONE APO300

Fig 6.6.3 Remote Log service setting IP for AirONE APO300

Fig 6.6.4 Enabling Remote Log server setting IP for AirONE APO300

Recommendation:
It is strongly recommended to turn OFF logs to avoid excessive CPU cycles, Memory usage and hanging of APO in long term.

6.7 Flow Control

Enabling flow control can optimize the bandwidth requirement and improve the network experience for important applications, especially in the bandwidth hungry wireless client environment.
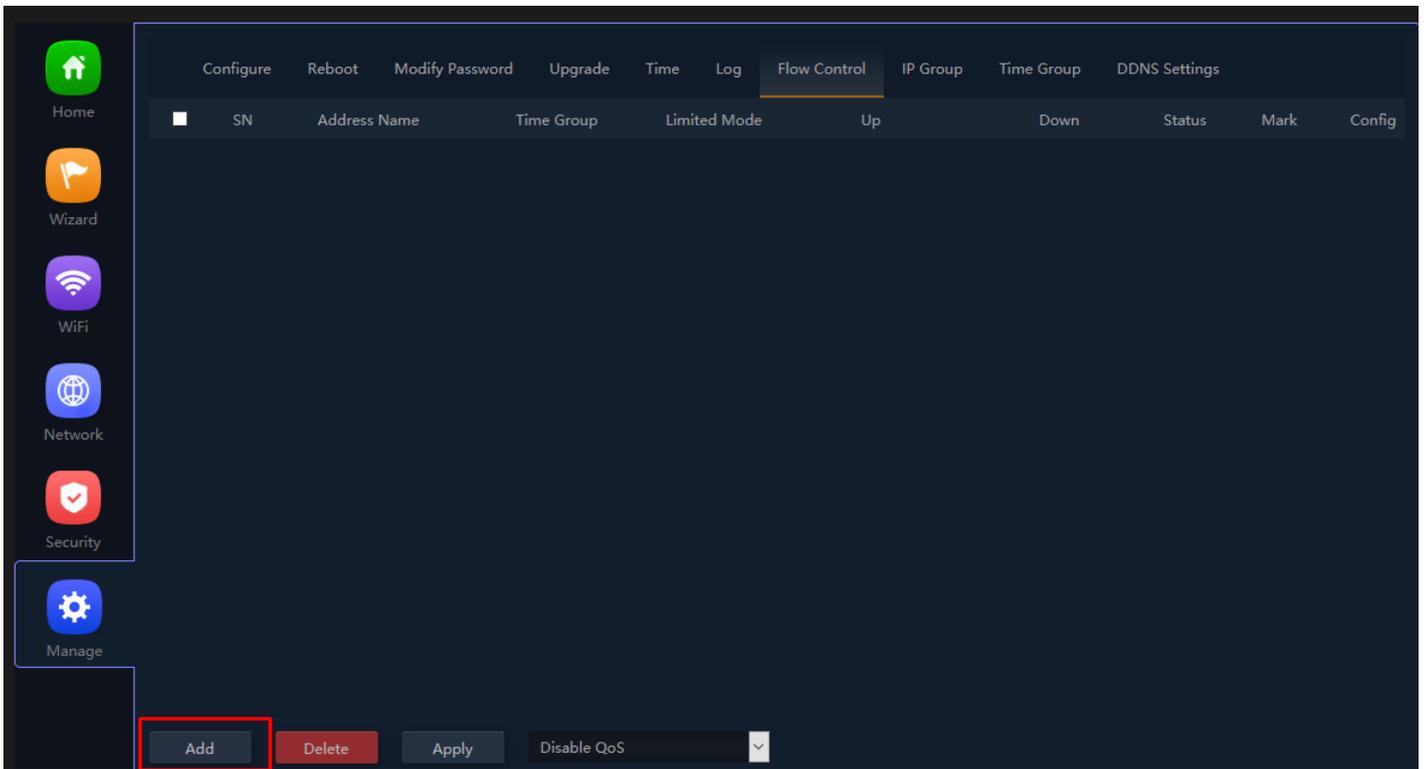
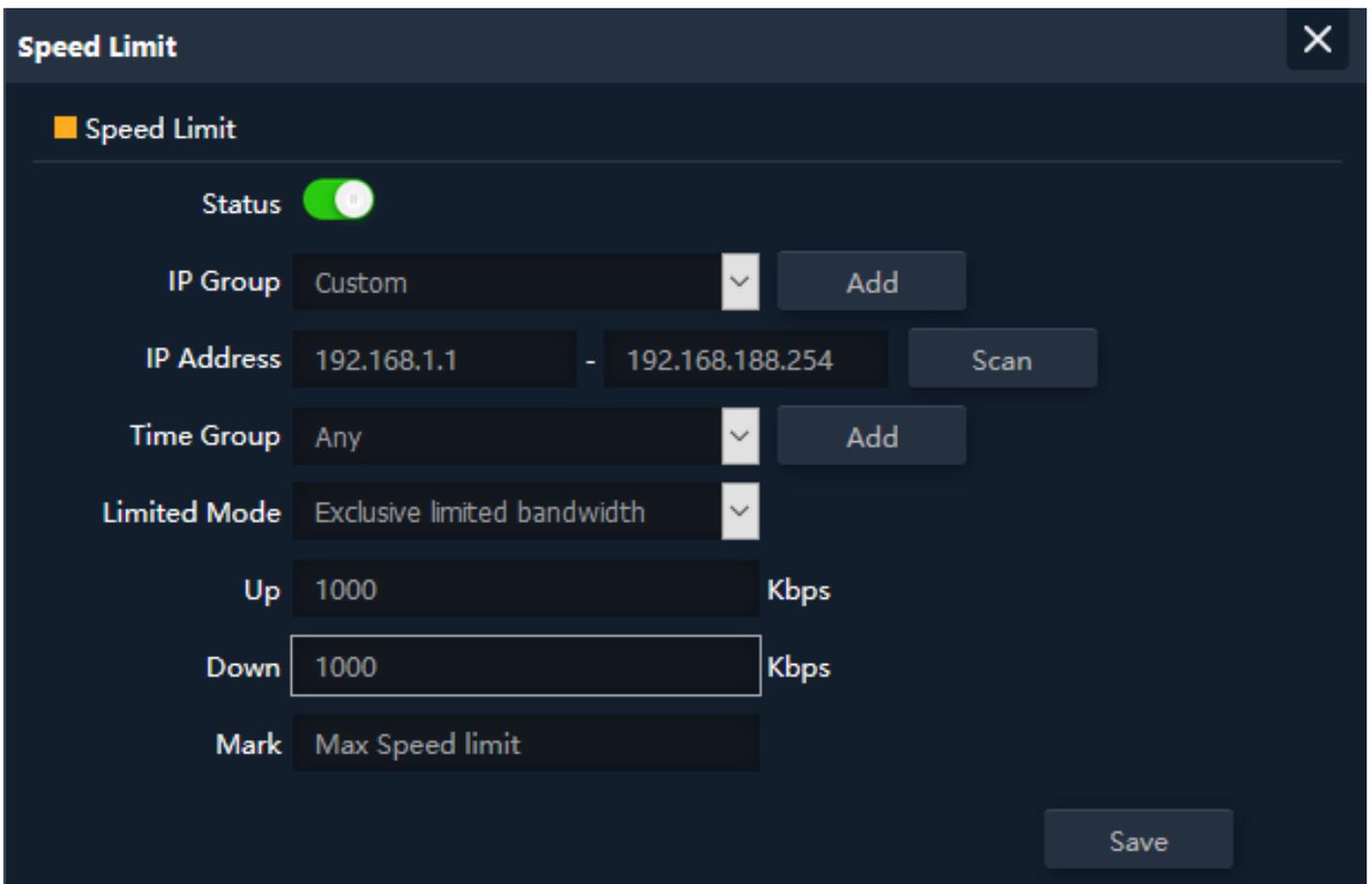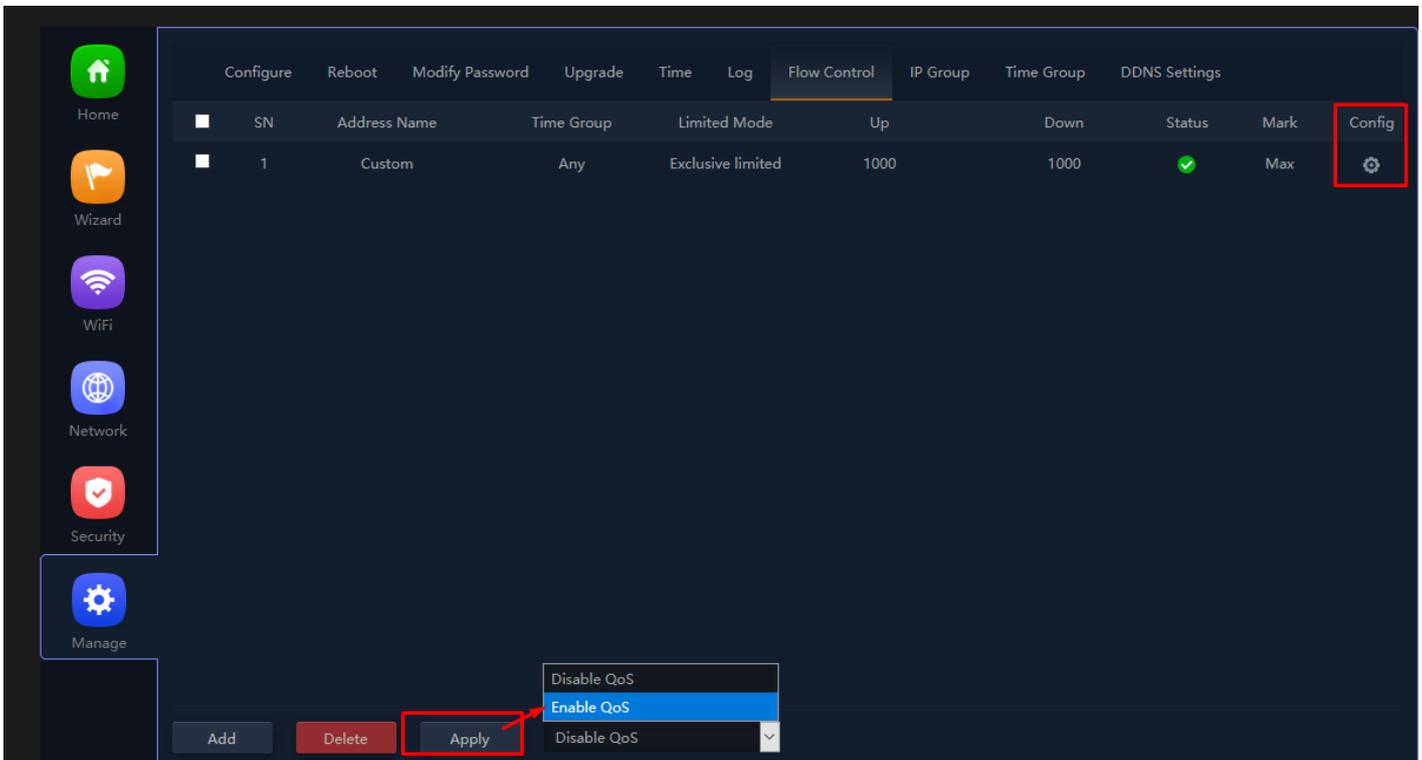**Fig 6.7.1 Default Flow control page for AirONE APO300**

Fig 6.7.2 Enabling Speed limit for AirONE APO300

Fig 6.7.3 Flow control page for AirONE APO300

6.8 IP Group

A single IP address divides into two sections: Network ID and Host ID. The Network ID defines the logical group where devices belong. Similarly, we can define IP group which tells APO what IP group name and associated IP address are available for wireless users.
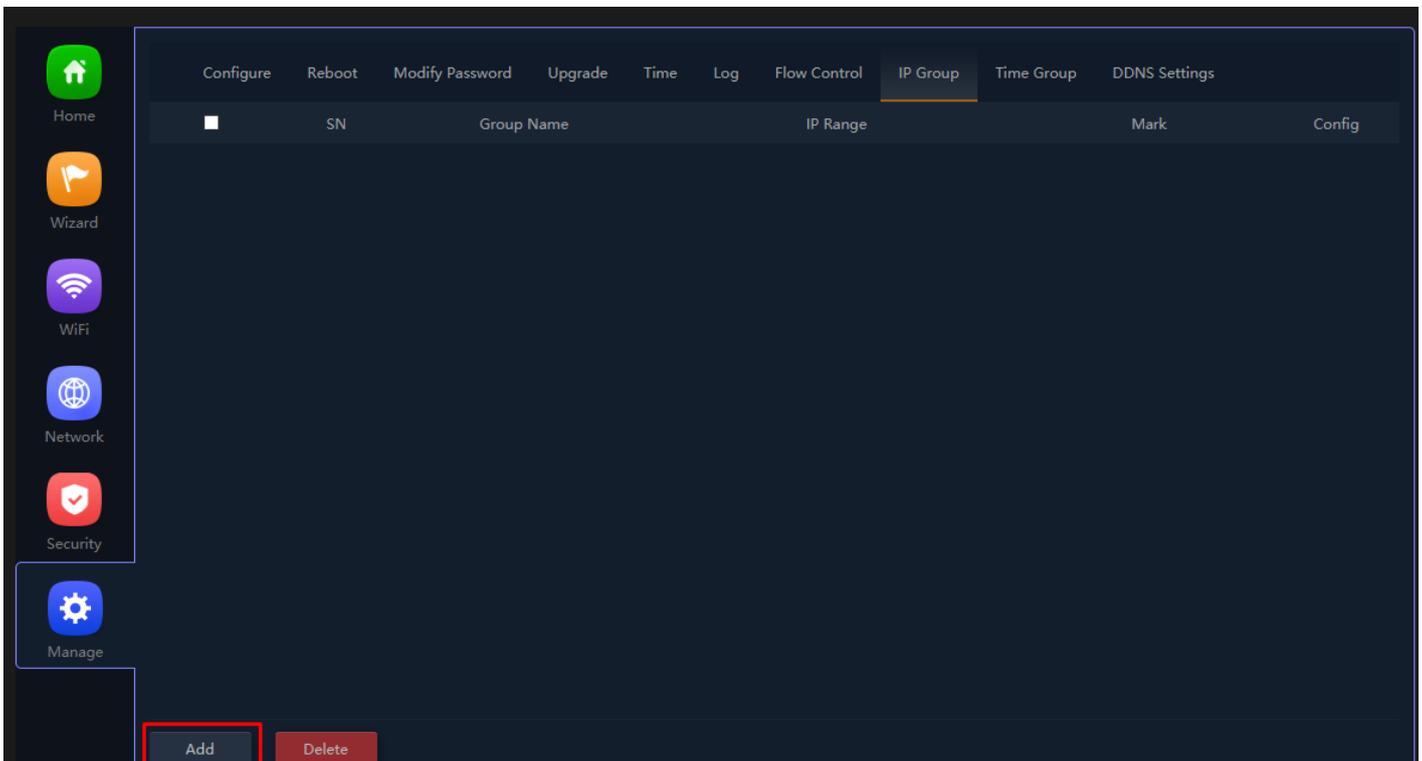
Fig 6.8.1 Default IP group page for AirONE APO300

Fig 6.8.2 IP group name and associated IP address for AirONE APO300

Fig 6.8.3 IP group page for AirONE APO300

6.9 Time Group

It can create Time Group with time range and set frequency of operation for particular activity to operate in specified time. It can give automated effect to the network.
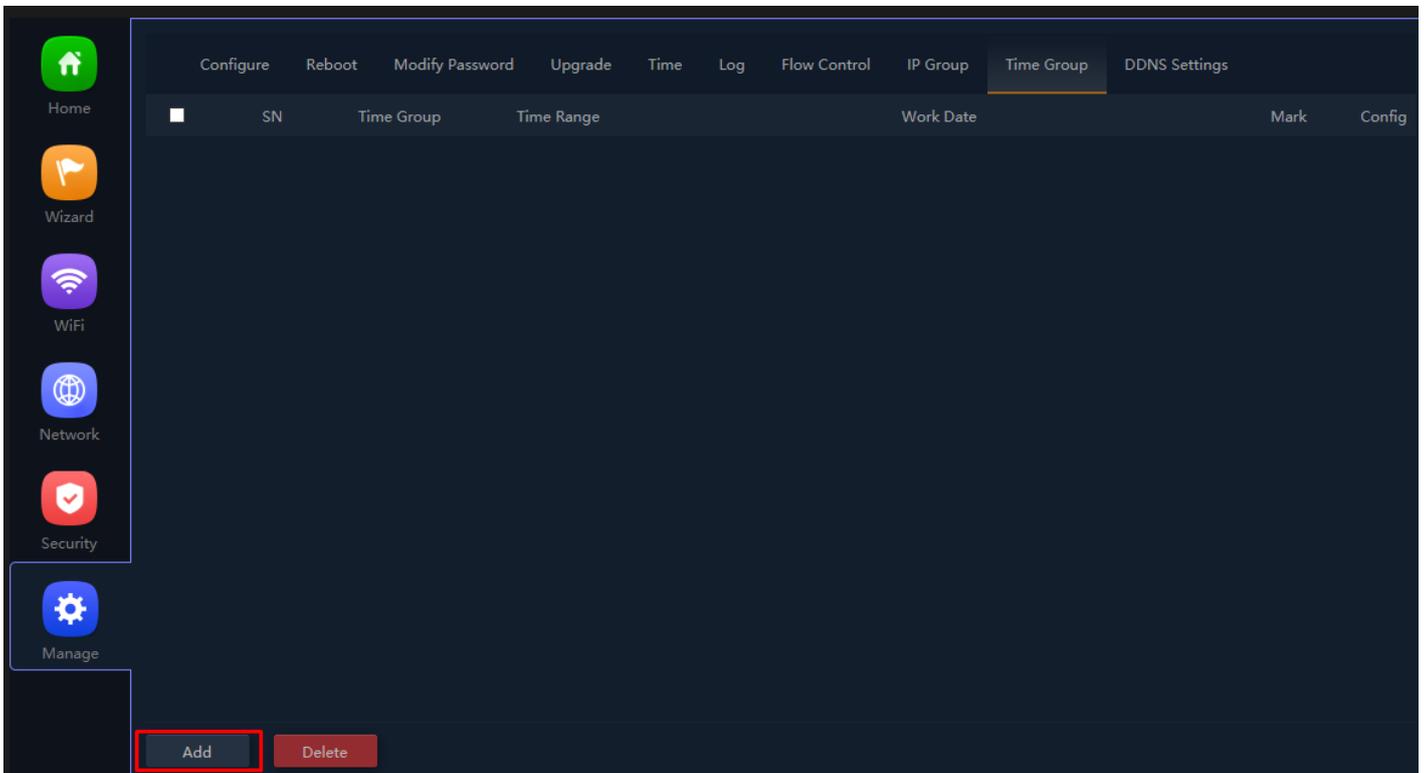
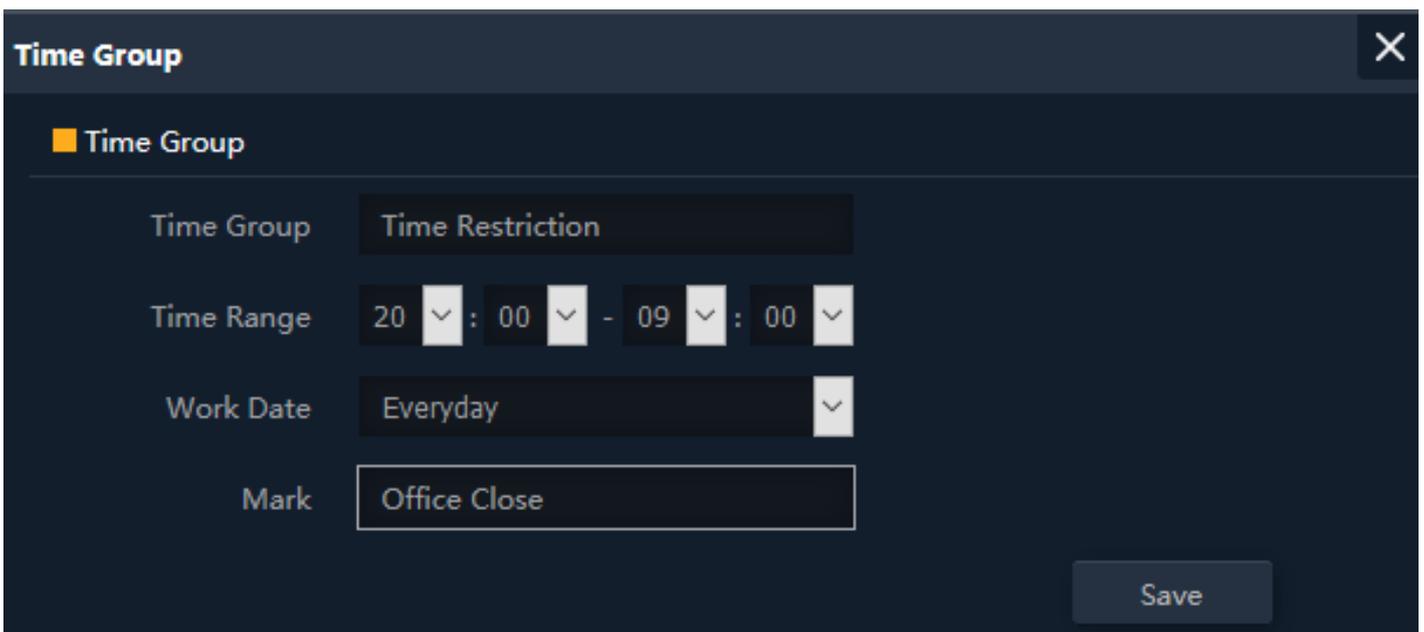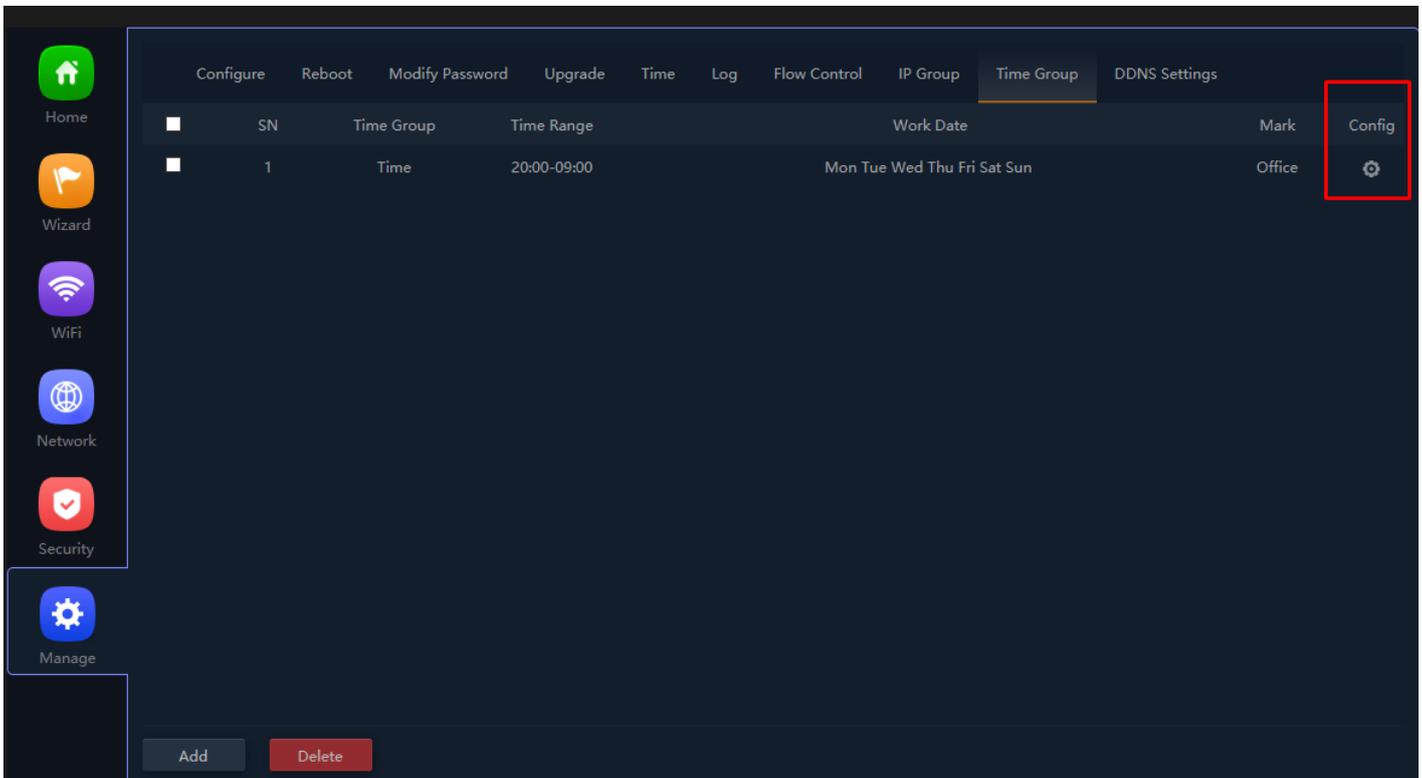**Fig 6.9.1 Default time group for AirONE APO300**

Fig 6.9.2 Setting Time group for AirONE APO300

Fig 6.9.3 Time group for AirONE APO300

6.10 DDNS Settings

DDNS (Dynamic DNS) server provides a fixed domain name for DDNS client and maps its latest IP address to this domain name. Dynamic DNS (DDNS) is an Internet service that allows controller with varying public IP addresses to be located using Internet domain names. To use DDNS, you must setup an account with a DDNS provider and set up an account with a DDNS service, the host & domain name, username, password detail will be provided by the account provider. It allows address, which enables the Internet hosts to access the router or the hosts in LAN using the domain names. As many ISPs use DHCP to assign public IP addresses in WAN, the public IP address assigned to the client is unfixed. In this way, it's very difficult for other clients to get the latest IP address of this client for access

DDNS (Dynamic DNS) server provides a fixed domain name for DDNS client and maps its latest IP address to this domain name. When DDNS server works, DDNS client informs the DDNS server of the latest IP address, the server will update the mappings between the domain name and IP address in DNS database. Therefore, the wireless users can use the same domain name to access the DDNS client even if the IP address of the DDNS client has changed. DDNS is usually used for the Internet users to access the private Website and FTP server, both of which are established based on Web server.
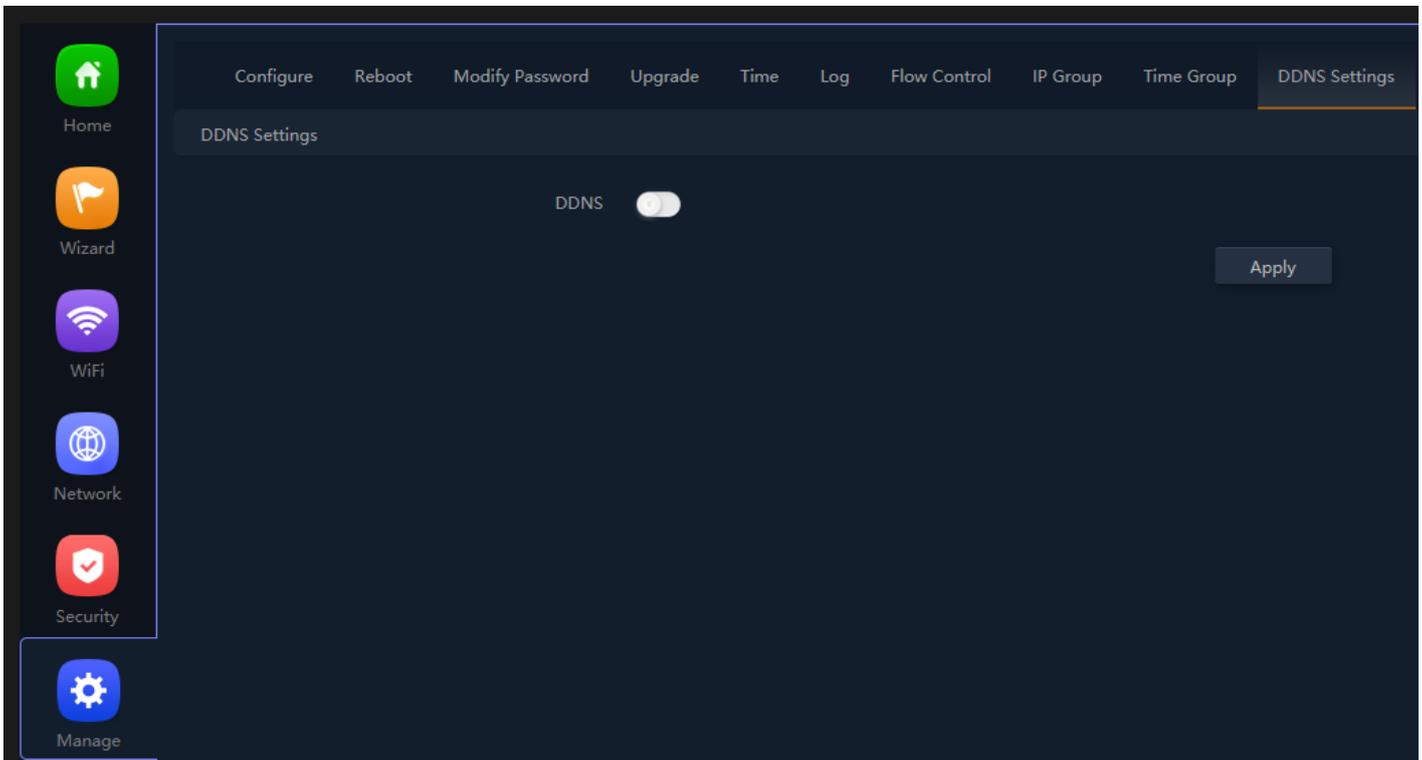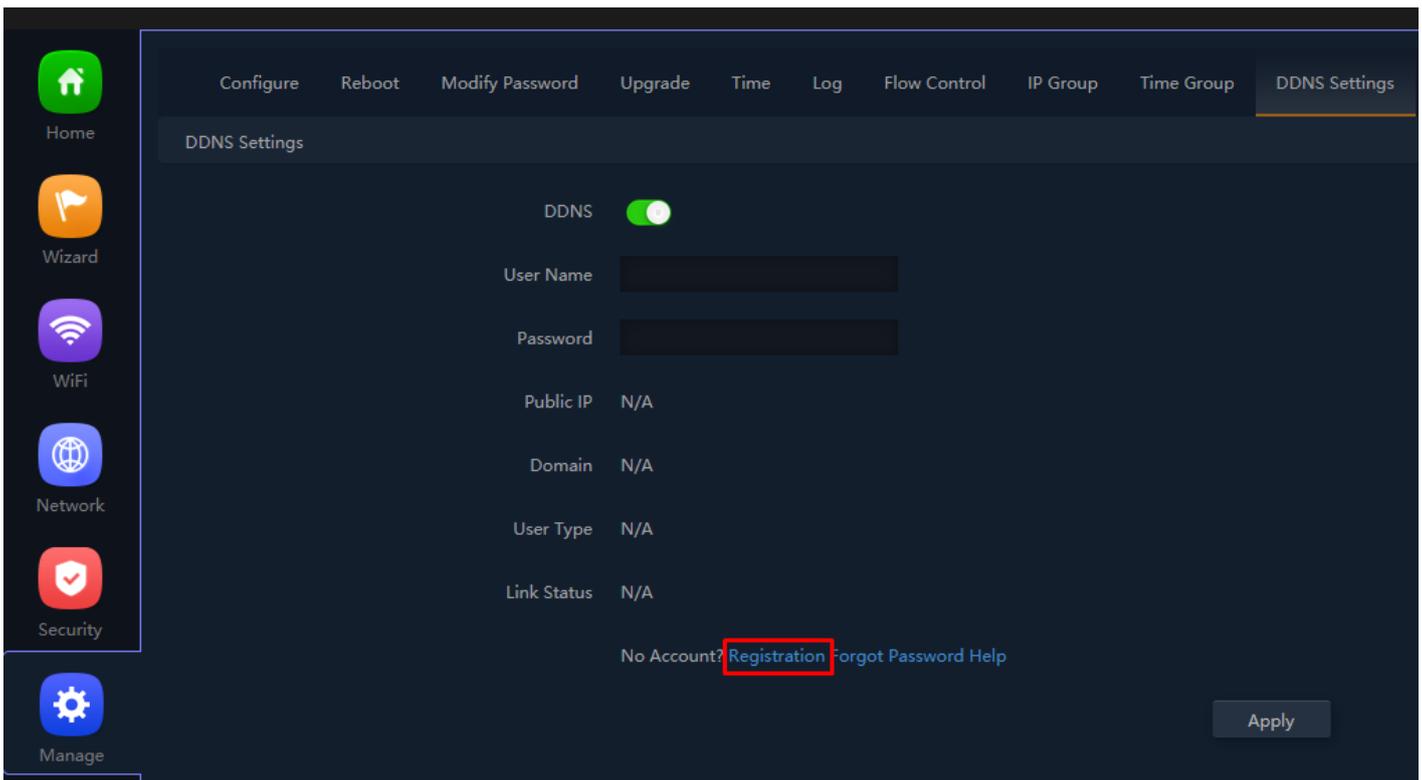
Fig 6.10.1 Default DDNS page for AirONE APO300

Fig 6.10.2 Enable DDNS page for AirONE APO300