



## **GAC7000** Multi-WAN CONTROLLER Authentication Gateway & Controller



# User Manual of **Gateway & WLAN Controller**

This manual is subject to tell users how to use this WLAN management platform properly, suit for those familiar with basic networking knowledge and terminology, Then this user manual including the product main features, packing content, hardware introduce and connection, Log in , Controller and Management, LAN Setting and WAN setting. Pre-reading this manual before operation is highly recommended;

## Content:

Chapter 1 Product Main Features and Packing Content.....	3
Chapter 2: Hardware Introduce and Connection.....	4
Chapter 3: Hardware Introduce and Connection.....	5
Chapter 4: WEB GUI Configuration.....	5
4.1 AC.....	7
4.1.1 Address Server.....	7
4.1.2 Zero Config.....	8
4.1.3 Device Group.....	10
4.1.4 Device Log.....	11
4.1.5 AC Setting.....	11
4.2 LAN.....	13
4.3 WAN.....	14
4.3.1 WAN Setting.....	14
4.3.2 Load Balance.....	14
4.3.3 Policy Routing.....	15
4.3.4 Behavior.....	17
4.3.5 Flow Control.....	18
4.3.6 Routing Management.....	19
4.3.7 Port Mapping.....	20
4.3.8 URL Filter.....	20
4.3.9 IP Filter.....	21
4.3.10 MAC Filter.....	21
4.3.11 DMZ.....	21
4.3.12 DDNS.....	22
4.3.13 IP/Time Group.....	22
4.3.14 Authentication.....	23
4.3.15 Cloud.....	24
4.3.16 Device Management.....	24

## Chapter 1: Product Main Features and Packing Content

Item		Specification
Standard		IEEE 802.3, IEEE 802.3u
QTY of managed AP		1~300PCS wireless AP can be managed, Max 300PCS
Ports		1*10/100/1000Mbps WAN Port in Default, max 4 WAN Ports 4*10/100/1000Mbps LAN Ports in Default, min 1 LAN port
LED indicator	Power	Power LED Indicator
	Run	System LED Indicator
Environment		Working Temperature: -10°C ~ 50°C Working Humanity: 10% ~ 90%RH (No condensation) Storage Temperature: -40°C ~ 70°C Storage Humanity: 5% ~ 90%RH (No condensation)
Packing Content		GAC7000 WLAN Controller Power Adapter Setting Accessory User Manual

## Chapter 2: Hardware Introduce and Connection

### Hardware:



WAN1: WAN Port in Default

WAN2/LAN4; WAN3/LAN3; WAN4/LAN2: LAN Port in default, but can set up as WAN port in gateway operation mode based on needs.

LAN1: LAN Port in default

Reset: Press it 15 second, it return to default setting.

Power: When power on, power LED indicator will be on;

RUN: When this device run in good status, this LED indicator will be flashing

### Application and Connection:

If there is a Gateway in the whole network, then this WLAN controller work as Controller to manage wireless AP only;

If AC controller work as gateway and controller together, it can access into cloud server for captive portal authentication like Google/Facebook/SMS/WeChat/Member Log in.

The working diagram show as follow:



Working diagram as AC Controller



Working diagram as Gateway and AC Controller

## Chapter 3: Login

3.1: Setup an IP address for PC, The IP address should be anyone between 192.168.10.2~192.168.10.254;

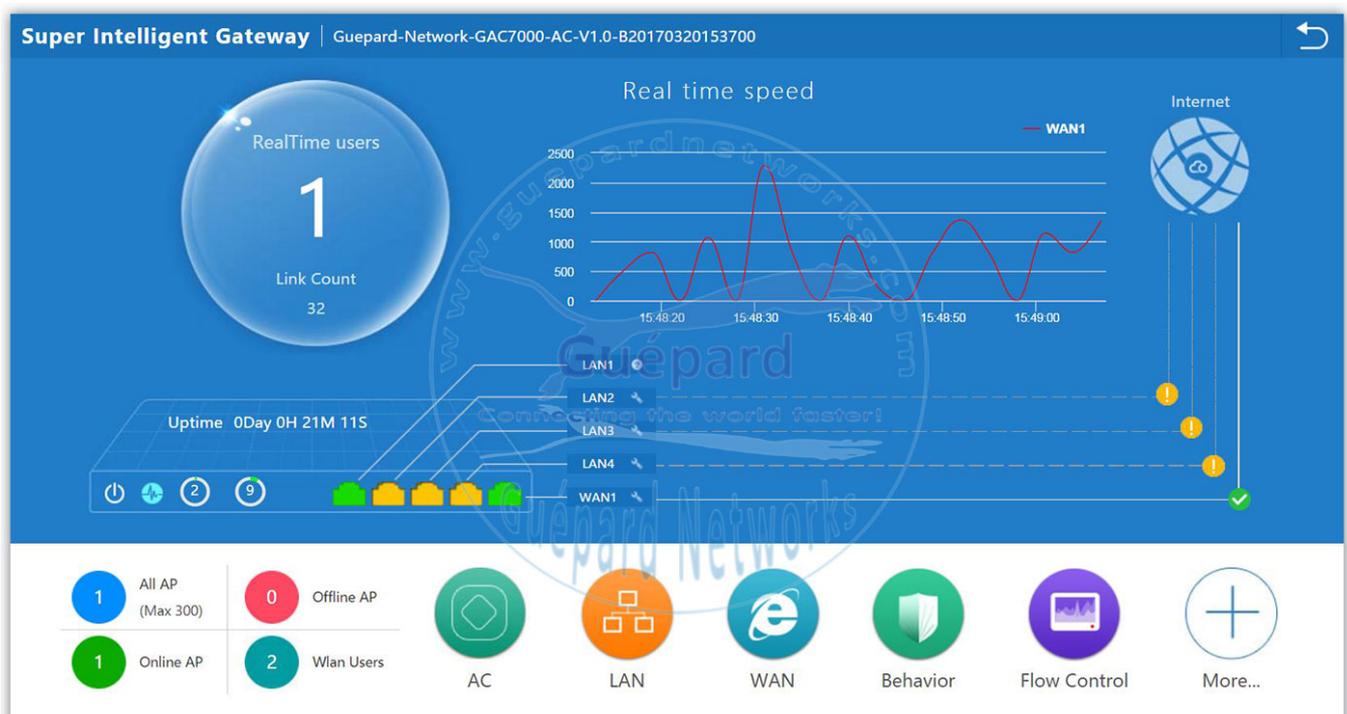
3.2 Open IE browser, input AC Controller's IP address **192.168.10.1**, Enter to log in AC controller's WEB GUI.

3.3 Choose the Language, then input **admin** and Login



## Chapter 4: WEB GUI Configuration

When login this AC controller, the following home page will pop up; let's introduce it first!



**RealTime Users:** Mean the QTY of end users access into it when it work as Gateway.

**Link Count:** Mean the QTY of

Real time speed: Mean the WAN Ethernet speed

Internet : Make this AC controller access into cloud server in Gateway mode.

**Uptime:** Mean AC controller running time

: Click to Reboot this AC controller

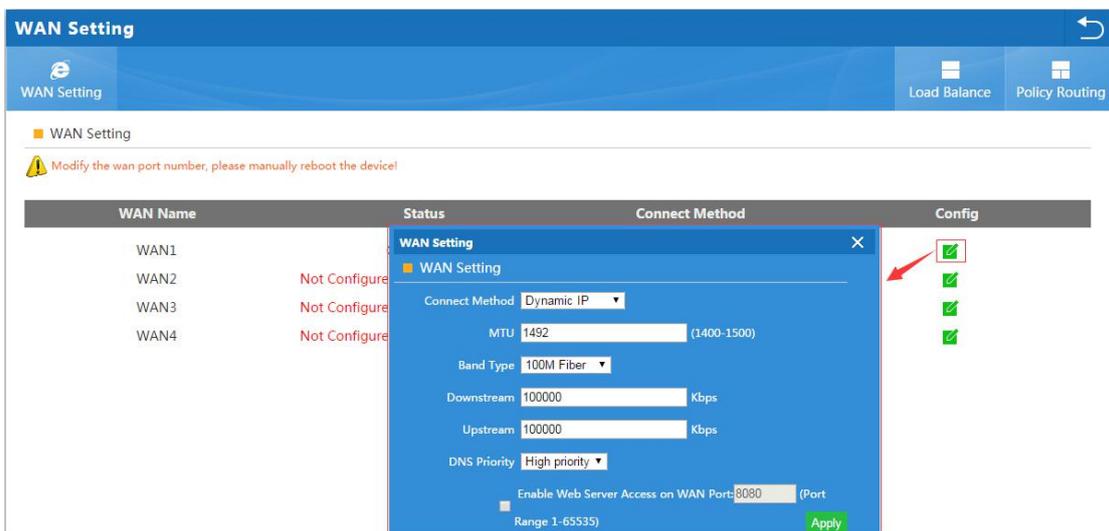
: Examination: disable in default, can enable

: CPU Usage

: Memory usage

: Yellow show disconnect, Green show connected

: Setup button, click it, will show following picture to show the status and setup WAN/LAN port; will show more in [chapter 5](#).



The screenshot shows the 'WAN Setting' configuration page. At the top, there are tabs for 'WAN Setting', 'Load Balance', and 'Policy Routing'. Below the tabs, there is a warning message: 'Modify the wan port number, please manually reboot the device!'. A table lists WAN configurations:

WAN Name	Status	Connect Method	Config
WAN1			<input checked="" type="checkbox"/>
WAN2	Not Configure		<input checked="" type="checkbox"/>
WAN3	Not Configure		<input checked="" type="checkbox"/>
WAN4	Not Configure		<input checked="" type="checkbox"/>

An overlay window titled 'WAN Setting' is open, showing configuration details for a selected WAN interface. The settings include: Connect Method (Dynamic IP), MTU (1492), Band Type (100M Fiber), Downstream (100000 Kbps), Upstream (100000 Kbps), DNS Priority (High priority), and an option to 'Enable Web Server Access on WAN Port: 8080'. An 'Apply' button is at the bottom right of the overlay. A red arrow points from the 'Config' column of the table to the 'Apply' button in the overlay.

All AP: Show QTY of wireless AP which connected with this WLAN controller

Offline AP: Show QTY of wireless AP which offline already

Online AP: Show QTY of wireless AP which online

WLAN Users: Show QTY of end users which access into this wireless AP.

AC: Wireless AP control and management

LAN: mean Local Area Network, is a computer network locally managed

WAN: Wide Area Network, it involves internet links

Behavior: end users actions based on rules or policy

Flow Control: manage the rate of data transmission between two nodes to prevent a fast sender from overwhelming a slow receivers

More: including network function and device management

Let's introduce AC, LAN, WAN, Behavior, Flow Control and other function one by one to make users with more understanding in this product.

## 4. 1. AC

Click button of AC, it will pop up following picture, which showed all the wireless AP connected into this WLAN controller.

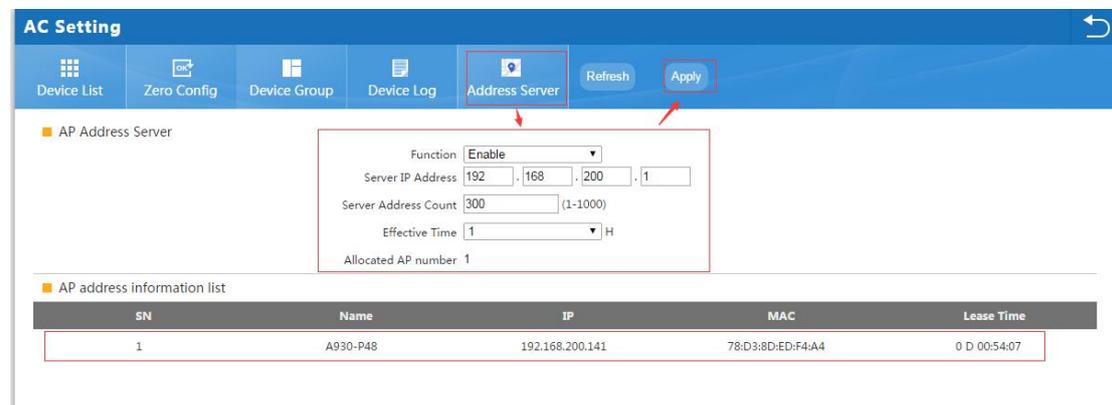


The screenshot shows the 'AC Setting' interface with a table of wireless APs. The table has columns for Select, SN, Location, Name, IP, MAC, Users, Version, Channel, Txpower, Device Model, Uptime, Group, and Config. One AP is listed with SN 1, IP 192.168.200.141, MAC 78:D3:8D:ED:F4:A4, and a green checkmark in the Config column.

Select	SN	Location	Name	IP	MAC	Users	Version	Channel	Txpower	Device Model	Uptime	Group	Config
<input type="checkbox"/>	1			192.168.200.141	78:D3:8D:ED:F4:A4	0	V2.0	7	100%	A930-P48	0:00:38	N/A	<input checked="" type="checkbox"/>

### 4.1.1: Address Server:

Address Server: Mean this AC controller can assign IP address for wireless AP automatic, no need to change wireless AP's IP address one by one



The screenshot shows the 'AC Setting' interface with the 'Address Server' configuration form. The form has fields for Function (Enable), Server IP Address (192.168.200.1), Server Address Count (300), Effective Time (1 H), and Allocated AP number (1). Below the form is an 'AP address information list' table.

SN	Name	IP	MAC	Lease Time
1	A930-P48	192.168.200.141	78:D3:8D:ED:F4:A4	0 D 00:54:07

**Refresh:** to refresh the wireless AP's IP address

**Function:** Enable/Disable, default is Enable

**Server IP address:** default is 192.168.200.1; can change to anyone you like, but pls note, if server IP is 192.168.200.1, then wireless AP's IP address will be one from 192.168.200.2~192.168.200.254 if server address count is 300.

**Server Address Count:** default is 300, can be 1~1000, based on the QTY of wireless AP.

**Effective Time:** can be 1~24 hours

**Allocated AP number:** show the QTY of wireless AP which assigned IP address by this WLAN controller.

When setup the above data, click Apply to save it.

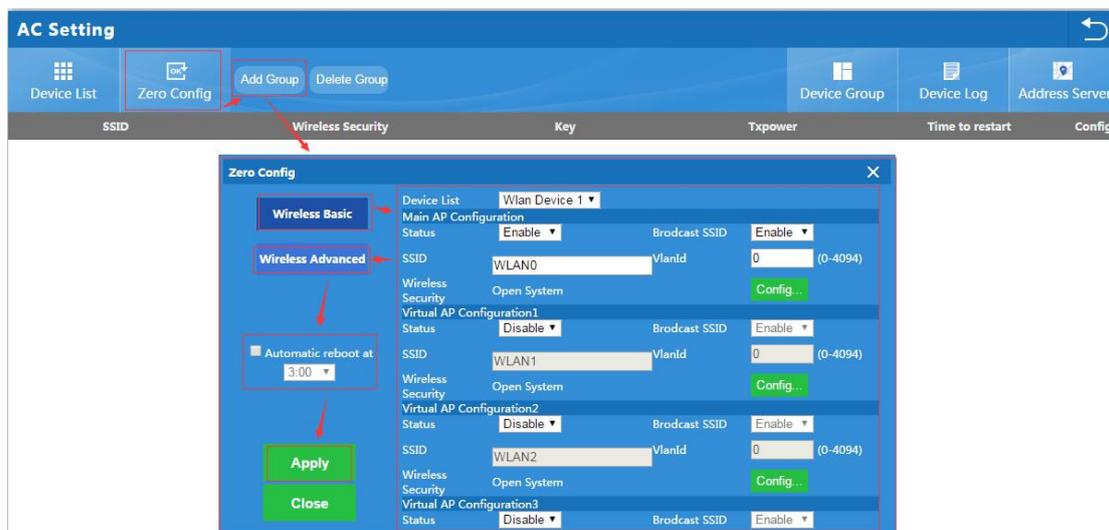
AP address information list: to show wireless AP's model number, IP address, MAC address and running time.

### 4.1.2: Zero Config

This function make wireless AP plug and play, but recommend to config this function before connect wireless AP into this network as following reason:

1. If config this function after wireless AP connected into this network, then all wireless AP should be reboot, then wireless AP will get the configuration from Zero config.

2. There is one group only in Zero config, which will make all wireless AP in same SSID, password, channel..., if want to different AP in different group, recommend Device Group function in 4.1.3.



**Wireless Basic:** to setup wireless AP's SSID, password, Tag VLAN

**Device List:** Wlan Device 1 and Wlan Device 2; Wlan Device 1 mean 2.4G Radio mainly; Wlan Device 2 mean 2.4G or 5.8G radio, based on wireless AP.

**Main AP Configuration:** setup the wireless AP's main SSID, Tag VLAN, Config Password.

**Virtual AP Configuration:** setup the wireless AP's virtual SSID, Tag VLAN, Config Password. The default status is disable for this virtual SSID.

**Automatic Reboot at:** Mean can setup this wireless AP reboot at certain time automatic, to improve the performance.

**Wireless Advanced:** to set up the channel, RF power, ShortGI, Coverage Threshold of wireless AP

**Wlan Group Config**

Wireless Basic

**Wireless Advanced**

Automatic reboot at 3:00

Apply

Close

Device List: Wlan Device 1

Channel: Auto

Client Isolation: Disable

Fragment Threshold: 2346 (256-2346)

RTS Threshold: 2347 (1-2347)

Beacon Interval: 100 (50-1024)ms

Aggregation: Enable

ShortGI: Enable

Rev Option: 5

RF Output Power: 100%

Coverage Threshold: -90 (-65dBm~-95dBm)

Channel: Auto in default, but recommend to setup channel by manual based on environment.

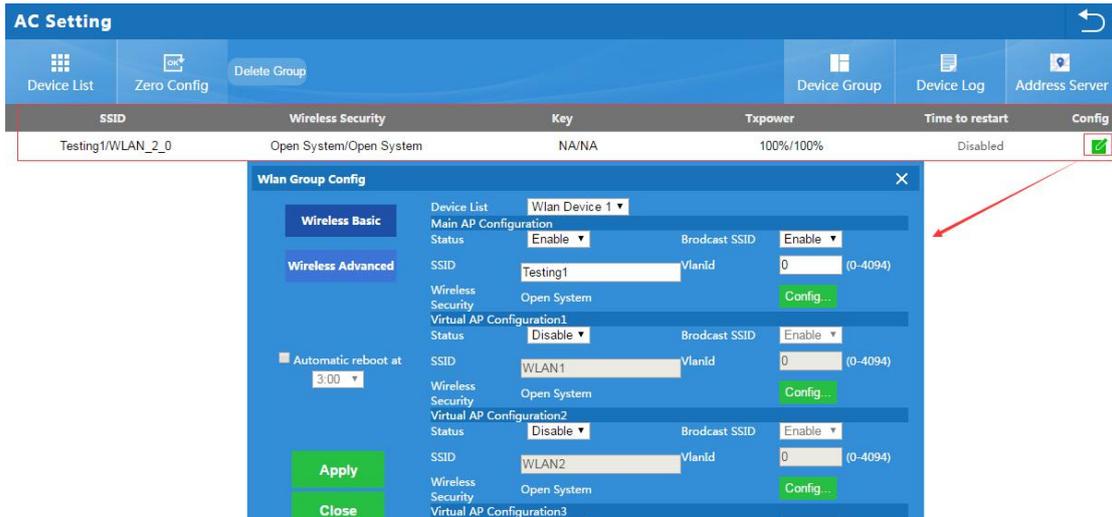
RF Output Power: 100%, 75%, 50%, 25%, 12.5%, can adjust it based on application. More RF Power, mean more WiFi Range;

**Coverage Threshold:** This make end users to connect the outdoor CPE with stronger signal strength;

For example, If one outdoor CPE with -80dBm coverage threshold data, another outdoor CPE with -95dBm coverage threshold data, then end users will connect the outdoor CPE with -95dBm coverage threshold always even this outdoor CPE with very weak signal strength.

After setup all the data, click Apply to add zero config group as follow:

Pls note, click config button  , can modify the data if you need.



**Delete Group:** If need, can delete this zero config group.

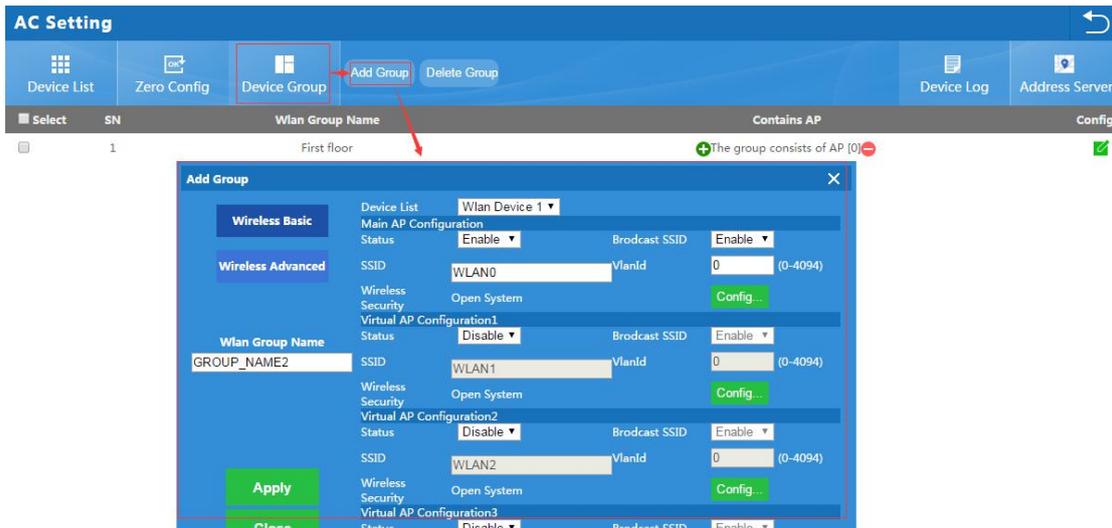
### 4.1.3 Device Group

In device group, can be more than one group, then different AP can be in different group.

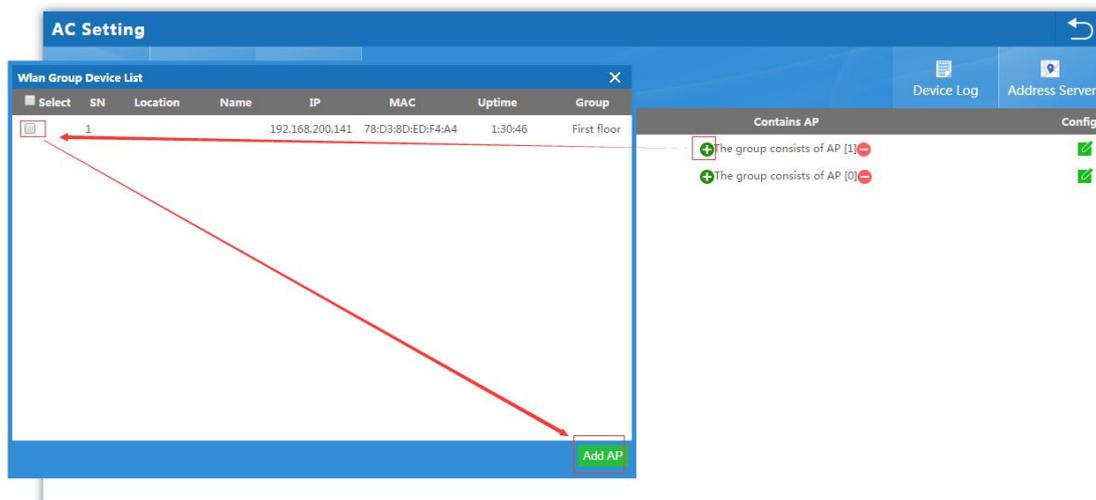
The steps is: Add Group----Config Group----Click  to Add AP into this group----Wireless AP will get data from this group.

Pls note, the configuration in device group is same as Zero Config.

### Add Group



Add AP to Group:



#### 4.1.4: Device Log

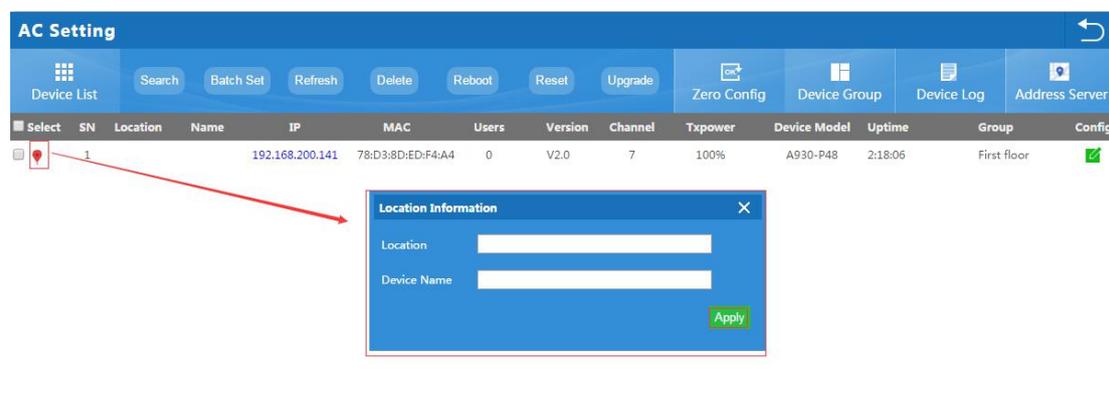
Device Log is keeping the management record of this WLAN controller.



When finish the Address Server, Zero Config and Device Group, can connect wireless AP into this network.

#### 4.1.5: AC Setting:

When back to AC setting, let's introduce more management functions:



**Location**  : Click it to setup the location and name of Wireless AP.

**Search:** Search wireless AP by IP address or MAC address

**Batch Set:** Set Channel, TX Power, Time to restart, Max users, device login password in batch.

**Refresh:** Fresh the status of wireless AP

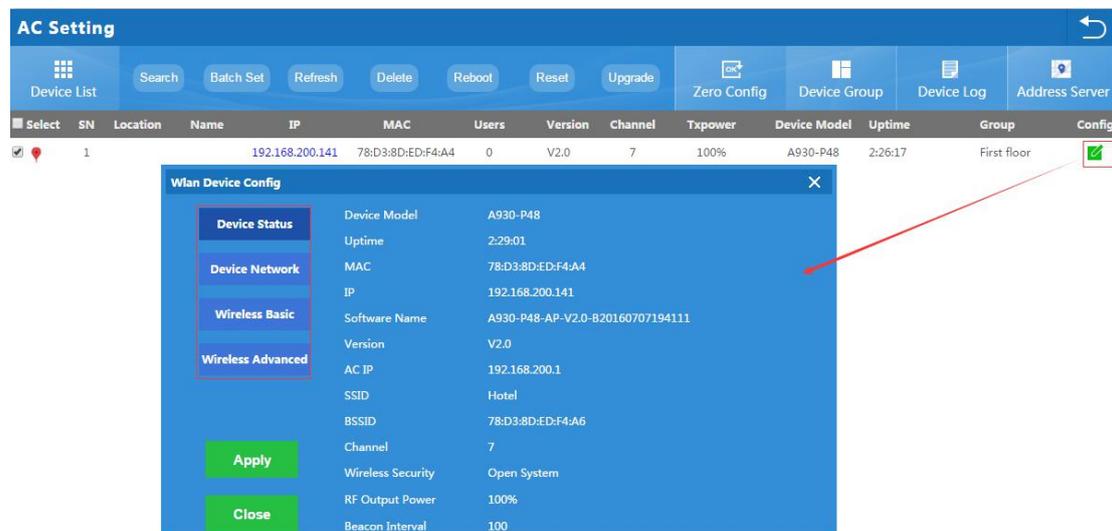
**Delete:** Delete wireless AP from this device list

**Reboot:** Restart this wireless AP

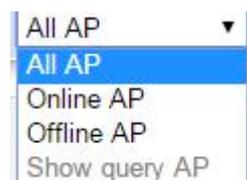
**Reset:** return to factory default

**Upgrade:** Upgrade firmware.

If need to setup wireless AP one by one, can click cofig button  to check device status, modify device network, wireless basic and wireless advanced also:

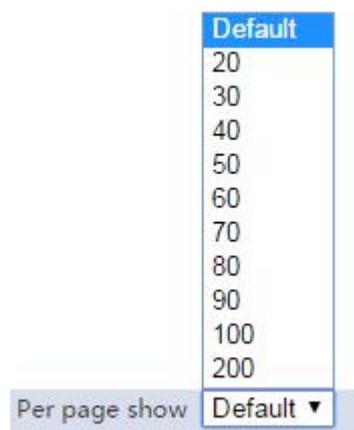


The screenshot shows the 'AC Setting' interface. At the top, there are several buttons: Device List, Search, Batch Set, Refresh, Delete, Reboot, Reset, Upgrade, Zero Config, Device Group, Device Log, and Address Server. Below these is a table with columns: Select, SN, Location, Name, IP, MAC, Users, Version, Channel, Txpower, Device Model, Uptime, Group, and Config. A single device is listed with IP 192.168.200.141 and MAC 78:D3:8D:ED:F4:A4. A red arrow points from the 'Config' button in the table to a 'Wlan Device Config' dialog box. The dialog box has tabs for Device Status, Device Network, Wireless Basic, and Wireless Advanced. The Device Status tab is active, showing fields like Device Model (A930-P48), Uptime (2:29:01), MAC (78:D3:8D:ED:F4:A4), IP (192.168.200.141), Software Name (A930-P48-AP-V2.0-B20160707194111), Version (V2.0), AC IP (192.168.200.1), SSID (Hotel), BSSID (78:D3:8D:ED:F4:A6), Channel (7), Wireless Security (Open System), RF Output Power (100%), and Beacon Interval (100). There are 'Apply' and 'Close' buttons at the bottom of the dialog.



The screenshot shows a dropdown menu with the following options: All AP, All AP (highlighted), Online AP, Offline AP, and Show query AP.

This button can show all AP, online AP or Offline AP;



The screenshot shows a 'Per page show' dropdown menu. The menu is open, showing a list of numbers: 20, 30, 40, 50, 60, 70, 80, 90, 100, and 200. The 'Default' option is selected at the top of the list. Below the list, there is a 'Per page show' label and a 'Default' dropdown arrow.

: this show how many AP in each page for better checking.

## 4.2 LAN

This including LAN setting,DHCP Server Setting and Static DHCP

The screenshot shows the LAN configuration interface. At the top, there is a blue header with 'LAN' and a refresh icon. Below the header, there are two tabs: 'LAN Settings' and 'Static DHCP'. The 'LAN Settings' section includes fields for IP Address (192.168.10.1), Subnet Mask (255.255.252.0), and a Spanning Tree dropdown menu set to 'Enable'. The 'DHCP Server Setting' section includes a DHCP Server Setting dropdown menu set to 'Enable', an Initial allocation base address field (50), a Maximum DHCP address allocation field (500), a DHCP Lease Time dropdown menu (24 H), and a DHCP allocation quantity field (1) with a 'DHCP List' button.

**IP address:** mean AC controller's IP address

**Subnet Mask:** to set the subnet of LAN

**Spanning Tree:** Enable to show the assigned IP list in DHCP list; Disable mean will not show it.

**DHCP Server Setting:** Enable mean can assign IP address automatic.

**Initial allocation base address:**

**Maximum DHCP address allocation:** QTY of max DHCP address

**DHCP Lease Time:** the IP address lease time by DHCP server

**DHCP allocation quantity:** QTY of IP address that DHCP assigned.

**Static DHCP:** Can add, delete the IP address set by static.

The screenshot shows the Static DHCP configuration interface. At the top, there is a blue header with 'LAN' and a refresh icon. Below the header, there are two tabs: '局域网设置' and 'Static DHCP'. The 'Static DHCP' section includes buttons for 'Add', 'Delete', and 'Apply'. Below the buttons, there is a table with columns for 'Select', 'SN', 'IP Address', 'MAC', 'Mark', and 'modify info'. The table contains one row with SN 1, IP Address 192.168.10.45, MAC 28:D2:44:FB:C7:D1, and Mark My PC. A 'Manually Add' dialog box is open, showing fields for IP Address, MAC, and Mark, with a 'Search User' button and an 'Apply' button.

## 4.3. WAN

If AC controller work as Gateway also in the whole networking, then we should click WAN, which including WAN setting, Load Balance, Policy Routing

### 4.3.1 WAN Setting:

WAN1 is WAN port in default; WAN2, WAN3, WAN4 is LAN ports in default, but can config as WAN ports, which make Ethernet backup.

When click WAN, it will show following picture, click config button, will show Connect Method, MTU, Band Type, Downstream, Upstream, DNS Priority, Remote control

In connect method, it including Dynamic IP, PPPoE, Static IP, here show one by one:

The image displays three screenshots of the WAN Setting configuration interface. The top screenshot shows the main WAN Setting page with a table of WAN ports and a configuration dialog for Dynamic IP. The middle and right screenshots show detailed configuration for PPPoE(ADSL) and Static IP methods, respectively.

WAN Name	Status	Connect Method	Config
WAN1	Configured	Dynamic IP	✓
WAN2	Not Configured [Ca		✓
WAN3	Not Configured [Ca		✓
WAN4	Not Configured [Ca		✓

**Dynamic IP Configuration:**

- Connect Method: Dynamic IP
- MTU: 1492 (1400-1500)
- Band Type: 100M Fiber
- Downstream: 100000 Kbps
- Upstream: 100000 Kbps
- DNS Priority: High priority
- Enable Web Server Access on WAN Port: 8080 (Port Range 1-65535)

**PPPOE(ADSL) Configuration:**

- Connect Method: PPPOE(ADSL)
- User Name: [ ]
- User Password: [ ]
- MTU: 1452 (1400-1492)
- Service Name: [ ] If not, please do not fill out
- Server Name: [ ] If not, please do not fill out
- Band Type: 100M Fiber
- Downstream: 100000 Kbps
- Upstream: 100000 Kbps
- DNS Priority: High priority
- Enable Web Server Access on WAN Port: 8080 (Port Range 1-65535)

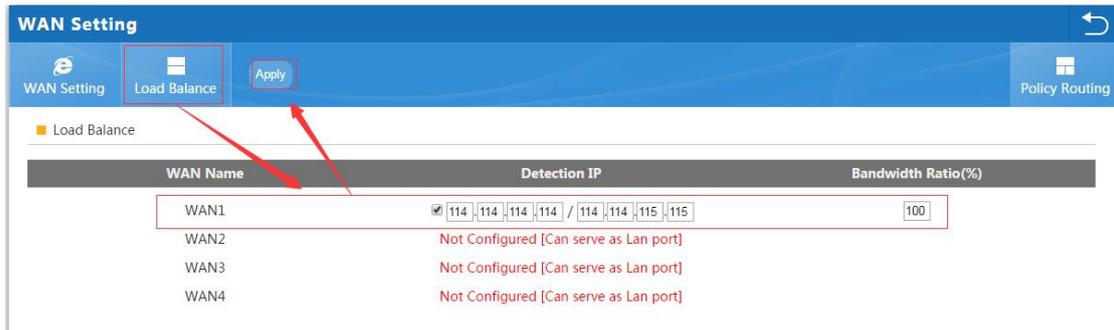
**Static IP Configuration:**

- Connect Method: Static IP
- IP Address: 172 . 1 . 1 . 1
- Subnet Mask: 255 . 255 . 255 . 0
- Default Gateway: 172 . 1 . 1 . 254
- MTU: 1500 (1400-1500)
- Primary DNS: 8 . 8 . 8 . 8
- Secondary DNS: 4 . 4 . 4 . 4
- Band Type: 100M Fiber
- Downstream: 100000 Kbps
- Upstream: 100000 Kbps
- DNS Priority: High priority
- Enable Web Server Access on WAN Port: 8080 (Port Range 1-65535)

### 4.3.2 Load Balance

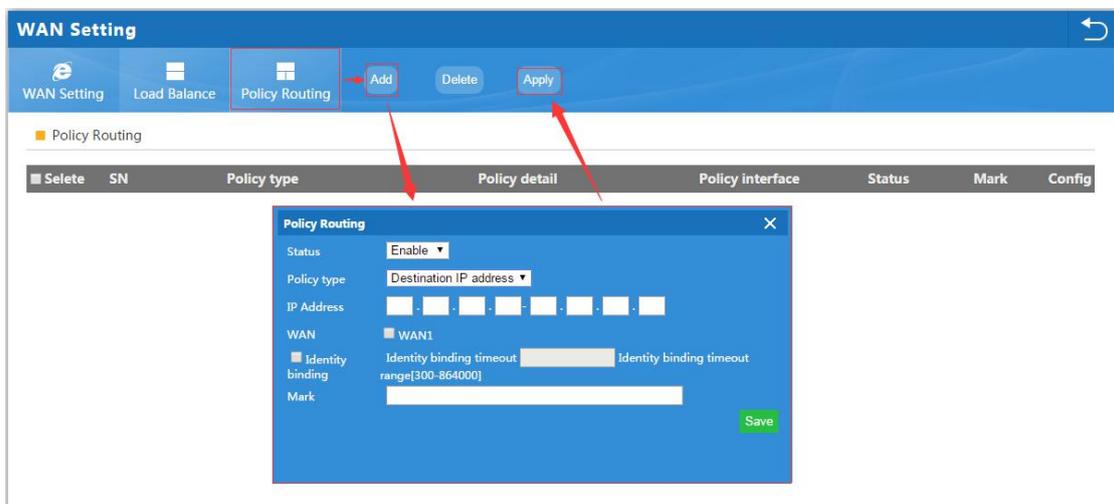
Load Balance is set bandwidth when there are multiple WAN ports; It can detect the IP address auto or manual;

But pls note, when WLAN controller is in multiple WAN, pls restart the WLAN controller by manual.



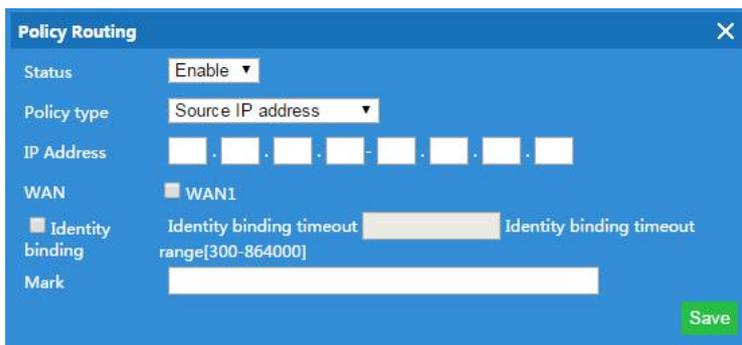
### 4.3.3 Policy Routing

Policy Routing is some policy to control the router; Manager can make this policy to control the router.



#### Policy Type:

Source IP Address: Policy based on source IP address



**Destination IP address:** Policy based on destination IP address

The screenshot shows the 'Policy Routing' configuration window. The 'Status' is set to 'Enable'. The 'Policy type' is 'Destination IP address'. The 'IP Address' field is empty. Under 'WAN', 'WAN1' is selected. The 'Identity binding' checkbox is checked, with a slider for 'Identity binding timeout' and a range of [300-864000]. The 'Mark' field is empty. A 'Save' button is in the bottom right.

**Source MAC address:** Policy based on source MAC address

The screenshot shows the 'Policy Routing' configuration window. The 'Status' is 'Enable'. The 'Policy type' is 'Source MAC address'. The 'MAC' field is empty with a 'Scan MAC' button. Under 'WAN', 'WAN1' is selected. The 'Identity binding' checkbox is checked, with a slider for 'Identity binding timeout' and a range of [300-864000]. The 'Mark' field is empty. A 'Save' button is in the bottom right.

**Network Interface:** Policy based on router interface

The screenshot shows the 'Policy Routing' configuration window. The 'Status' is 'Enable'. The 'Policy type' is 'Network Interface'. Under 'LAN', 'LAN1', 'LAN2', 'LAN3', and 'LAN4' are all selected. Under 'WAN', 'WAN1' is selected. The 'Identity binding' checkbox is checked, with a slider for 'Identity binding timeout' and a range of [300-864000]. The 'Mark' field is empty. A 'Save' button is in the bottom right.

**Domain Policy:** Policy based on router domain

The screenshot shows the 'Policy Routing' configuration window. The 'Status' is 'Enable'. The 'Policy type' is 'Domain policy'. The 'URL' field is empty. Under 'WAN', 'WAN1' is selected. The 'Identity binding' checkbox is checked, with a slider for 'Identity binding timeout' and a range of [300-864000]. The 'Mark' field is empty. A 'Save' button is in the bottom right.

**Destination Port:** Policy based on destination port.

**Policy Routing**

Status: Enable

Policy type: Destination port

Destination port: [ ] can not be empty, port range:1-65535

WAN:  WAN1

Identity binding: Identity binding timeout range[300-864000]

Mark: [ ]

Save

### 4.3.4 Behavior

In behavior part, it allow/reject end users some behavior based on rules.

**Behavior**

Behavior Setting

Selete	SN	Group Name	Time Group	Application Info	Action	Status	Mark	Config
<input type="checkbox"/>	1	Any	Any	WeChat	Reject	Enable		<input checked="" type="checkbox"/>

**Behavior Setting**

Status: Enable

IP Group: Any [Add IP Group]

Time Group: Any [Add Time Group]

Application Class: Instant messaging [Select all the software in the class]

Application Info: WeChat

Action: Reject

Mark: [ ]

Apply

**Status:** Enable or Disable

**IP Group:** Can add the IP group if need based on following picture

**IP/Time Group**

IP Group Management

Selete	SN	Group Name	IP Range	Mark	Config
<input type="checkbox"/>	1	Sales	192.168.10.10-192.168.10.39	Sales Department	<input checked="" type="checkbox"/>

**IP Group**

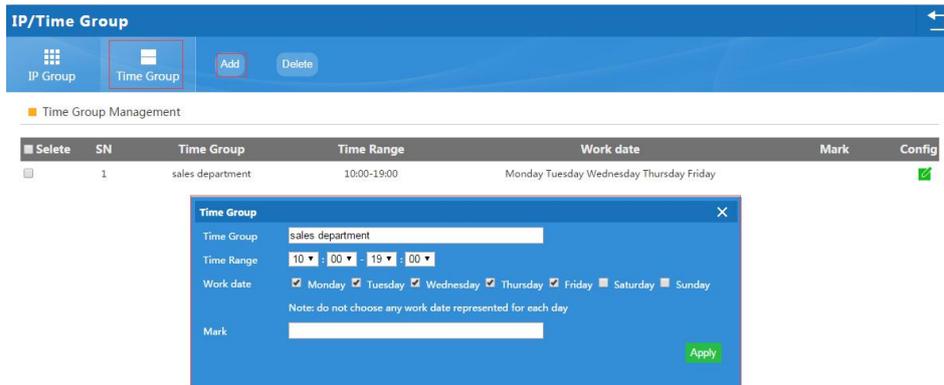
Group Name: Sales

IP Range: 192.168.10.10 - 192.168.10.39 [Search User]

Mark: Sales Department

Apply

**Time Group:** Can add time group based on requirement in following picture:



**Application Class:** Including

Instant messaging (QQ, Trade Manager, WeChat);

Network Download (Thunder, BT, Edonkey);

Network Video (Youtube, PPTV, Tencent Video, Ppstream, Youku, Sohu Video, Letv, RSTP, Douyu, Storm web version, funsh, YY)

Office (FTP, DNS, Http, NTP, NFS, DHCP, RTSP, IRC, Telnet, Stun, System Log, IPSEC, IGMP, SSH, TFTP, PPTP, Radius, OpenVPN)

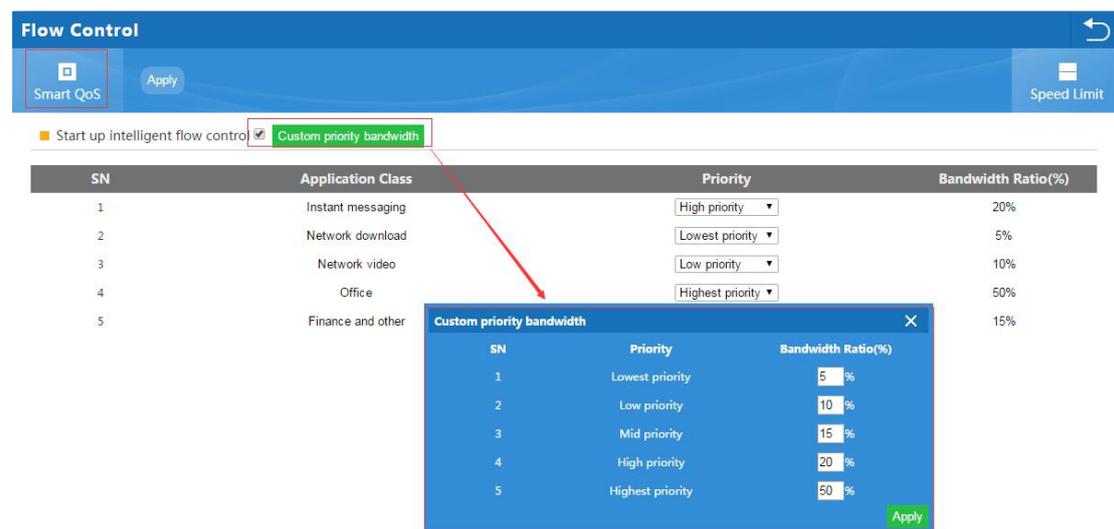
Finance and other (ICMP, Flush, DZH, Eastmoney)

### 4.3.5 Flow Control

It is including smart QoS and Speed Limit in Flow Control.

**Smart QoS**

It is set priority bandwidth for application class to make it work freely.



**Speed Limit**

Speed Limit: Mean limit end users Ethernet speed;

Should add IP group first, then choose the limited mode.

Pls note: Shared Mode: mean all users end this IP group share the downstream and

upstream Ethernet speed; Exclusive Mode mean each end users in this IP group get the downstream and upstream.

**Flow Control**

Smart QoS | Speed Limit | Add | Delete | Apply

IP speed limit setting

Selete	SN	Group Name	Time Group	Limited Mode	Upstream	Downstream	Status	Mark	Config
<input type="checkbox"/>	1	Sales	sales department	Shared mode	2000Kbps	1000Kbps	Enable		<input checked="" type="checkbox"/>

**IP speed limit setting**

Status: Enable

IP Group: Sales Add IP Group

Time Group: sales department Add Time Group

Limited Mode: Shared mode

Downstream: 2000 kbps

Upstream: 1000 kbps

Mark:

Apply

### 4.3.6 Routing Management

Including system routing and static route  
 In System routing, it show system routing form as follow:

**Routing Management**

System Routing | Refresh | Static Route

Routing Management

SN	Destination	Gateway	Subnet Mask	Metric	Network Interface
1	192.168.8.0	0.0.0.0	255.255.252.0	0	br0
2	192.168.200.0	0.0.0.0	255.255.252.0	0	br0

Static Route: add the static router based on destination IP address.

**Routing Management**

System Routing | Static Route | Add | Delete | Apply

Static Route Settings

Selete	SN	Destination	Gateway	Subnet Mask	Metric	Network Interface	Status	Mark	Config
--------	----	-------------	---------	-------------	--------	-------------------	--------	------	--------

**Static Route Settings**

Status: Enable

Destination:

Subnet Mask:

Gateway:

Metric: 0

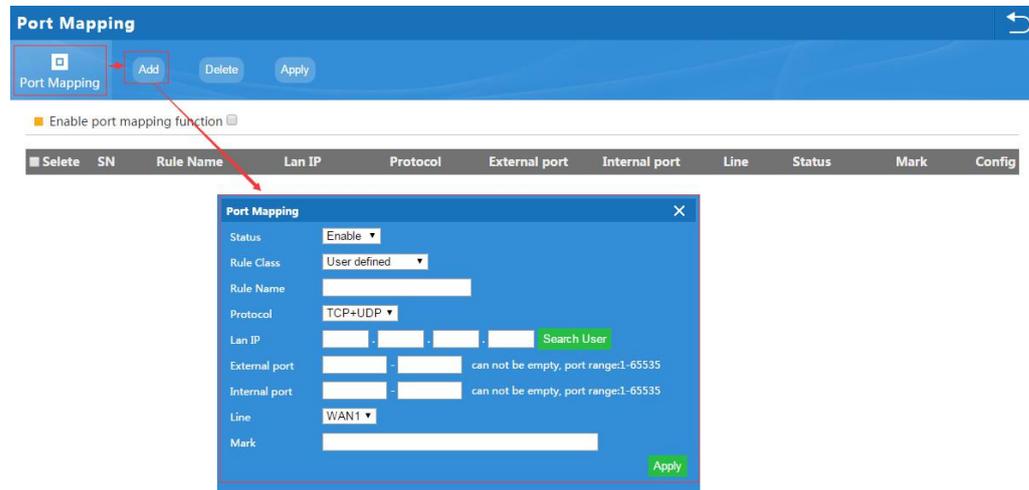
Network Interface: WAN1

Mark:

Apply

### 4.3.7 Port Mapping

Port forwarding: called port forwarding also, it an application of network address translation(NAT) that redirects a communication request from one address and port number combination to another while the packets are traversing a network gateway, such as a router or firewall



**Status:** Enable/Disable

**Rule Class:** Including user defined, http, https, FTP, POP3, SMTP, DNS, telnet, IPSEC, Remote Desktop

**Rule name:** Show the name of choosed rule class;

**Protocol:** Including TCP, UDP, TCP+UDP

**LAN IP:** port mapping LAN IP address

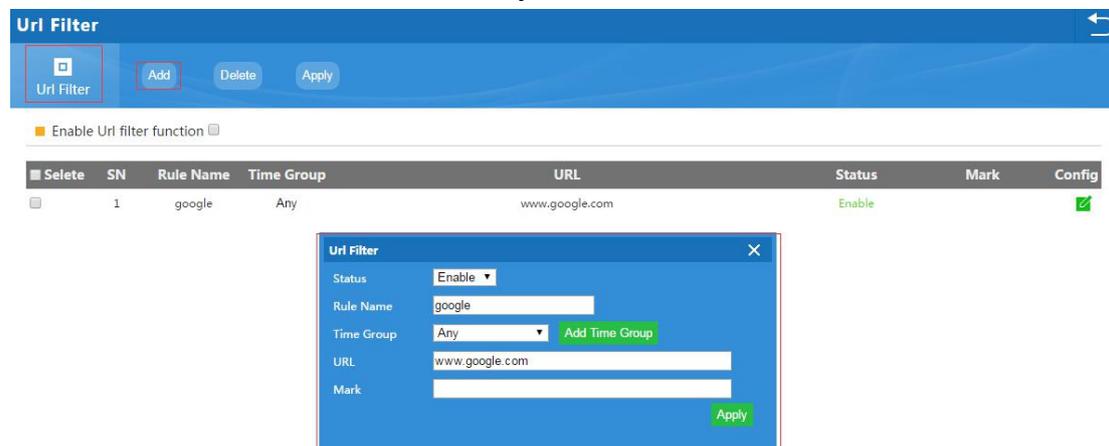
**External Port:** Set external port rule

**Internet Port:** Set internal port rule

**Line:** the Ethernet Line which will be applied in this rules

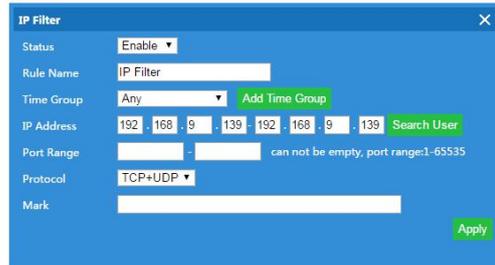
### 4.3.8 URL Filter

When enable URL filter, the router can reject users to visit the denied URL.



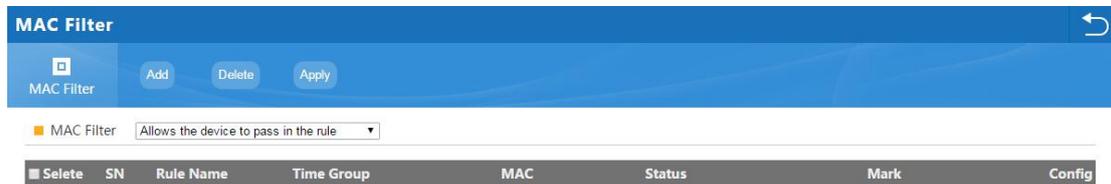
### 4.3.9 IP Filter

When enable this function, router will allow or limited this IP address to access into this router based on rules.



### 4.3.10 MAC Filter

When enable MAC filter, router will allow or prohibit this MAC address to access into this router based on rules.



## 4.3.11 DMZ

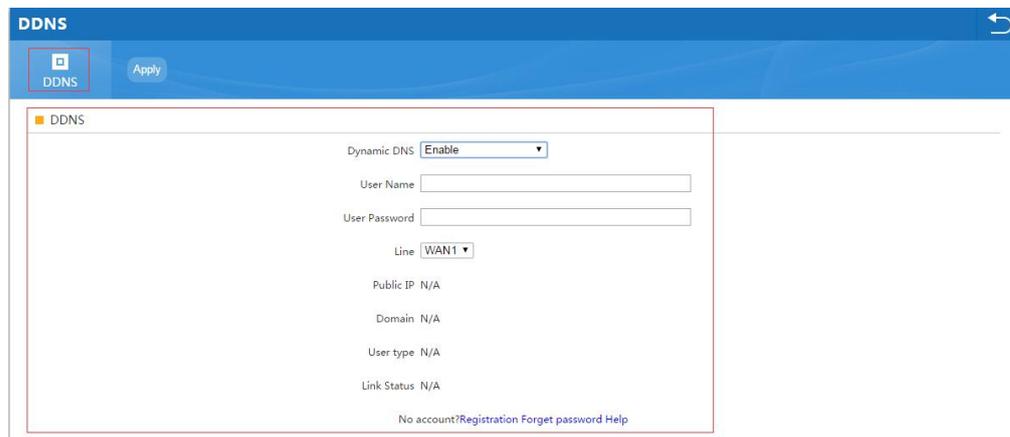
Demilitarized Zone:



The screenshot shows the DMZ configuration page. At the top, there is a blue header with the word "DMZ" and a back arrow. Below the header, there is a navigation bar with "DMZ" and "Apply" buttons. The main content area has a sub-header "DMZ" and a checkbox for "Enable DMZ Function" which is checked. Below this, there are four input fields for the DMZ Host IP address: "192", "168", "10", and "45". To the right of these fields is a green "Search User" button.

## 4.3.12 DDNS

DDNS:



The screenshot shows the DDNS configuration page. At the top, there is a blue header with the word "DDNS" and a back arrow. Below the header, there is a navigation bar with "DDNS" and "Apply" buttons. The main content area has a sub-header "DDNS" and a dropdown menu for "Dynamic DNS" set to "Enable". Below this, there are two input fields for "User Name" and "User Password". There is also a dropdown menu for "Line" set to "WAN1". Below these fields, there are several status indicators: "Public IP N/A", "Domain N/A", "User type N/A", and "Link Status N/A". At the bottom, there is a link for "No account?Registration Forget password Help".

## 4.3.13 IP/Time Group

For this part, pls check more on chapter 4.3.4 Behavior

## 4.3.14 Authentication

There are local authentication and remote authentication.

### Remote Authentication:

Remote authentication need to access into cloud server, then make this cloud server as an authentication server;

After finish configuration in WLAN controller, should config cloud server, which will show more in 4.3.14 chapter.

■ Authentication

Authentication **Remote Authentication**

Port  Default:2060 Range[1-65535]

Authentication server

Authentication server Port  Default:80 Range[1-65535]

Authentication server path

Client Timeout  Default:20 min Range[20-65535min]

External domain white list

MAC white list

Free authentication port  LAN1  LAN2  LAN3  LAN4

**Local Authentication:**

Local authentication, no need access into cloud server, but can show advertisement only.

A. set up the local authentication in following picture:

**Authentication** ↶

Authentication  Local auth

■ Authentication

Authentication **Local Authentication**

Client Timeout  Default:20 min Range[20-65535min]

External domain white list

MAC white list

Free authentication port  LAN1  LAN2  LAN3  LAN4

B. Upload advertisement pictures in local auth showed in following picture:

**Authentication** ↶

Authentication

■ Local auth

Advertising Pictures   Choosing picture  Picture(280×280jpg) can not be more than 1M

First pictures button name

First pictures redirect uri

Second pictures button name

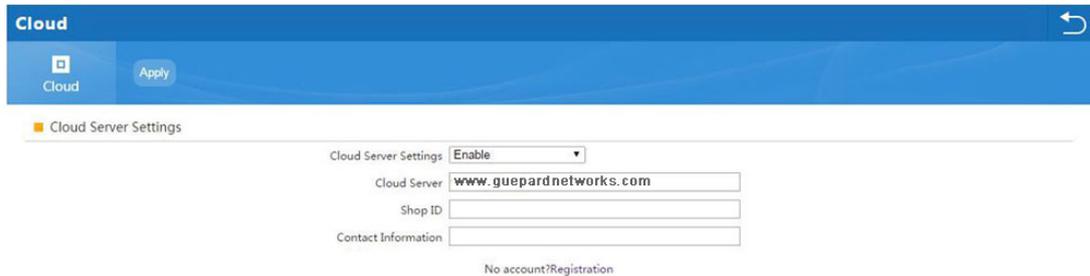
Second pictures redirect uri

Third pictures button name

Third pictures redirect uri

### 4.3.15 Cloud

This chapter to show how to make WLAN controller access into cloud server in gateway mode; Take our cloud server [www.guepardnetworks.com](http://www.guepardnetworks.com) for example (This function will be available on final quarter of 2018):



Cloud Server: input the cloud server's IP address

Shop ID: This is the shop account showed as follow:

Contact information: no need fill.

### 4.3.16 Device Management

This is management for WLAN Controller, such as backup, reset, reboot, device log, upgrade firmware, modify password...

