



XT-2500AC

## Access Controller User Manual



## Menu

1. Product Overview.....	4
2. WEB Login.....	4
3. Product Features .....	5
3. 1. System Status .....	5
Device Info.....	5
Interface Status.....	6
LAN IP Flow.....	7
Application Flow.....	8
3. 2. Network Configure.....	9
WAN Configure .....	9
LAN/DHCP.....	10
Physical Port Definition .....	12
Multi-line Diversion Rules.....	13
Static Route .....	15
DDNS.....	16
NAT/Port Forwarding .....	17
3. 3. Flow Control Policy.....	19
Smart Flow Control .....	19
Bandwidth Control.....	19
Free Flow Control .....	20
3. 4. AC Management .....	21
AP List .....	21
AP Configure Template.....	24
AP Upgrade .....	24
Seamless Roaming.....	25
Auto Channel Select .....	25
3. 5. Auth Internet Access .....	27
Auth Configure .....	27
PPPoE Auth.....	27
Portal Auth .....	28
Radius Billing .....	29
Auth User.....	29
Auth User Status.....	30
Department/Level Definition .....	30
3. 6. Behavior Control.....	31
Application Firewall .....	31
URL Redirect .....	32
Domain Redirect .....	32

3. 7. Object Management .....	33
Time Object.....	33
Source IP Object.....	33
Port Object.....	34
Destination IP Object .....	34
Built-in Application Object .....	35
Custom Application Object .....	35
3. 8. Safety Protection .....	37
IP-MAC Banding .....	37
Connection Quantity Limit .....	37
LAN Abnormal Detection.....	38
LAN Attack Protection .....	38
WAN Ping Forbid/WAN Login.....	39
3. 9. Log Record.....	39
User Auth Log .....	39
Online User Log .....	40
Interface Flow Log.....	40
System Log .....	41
3. 10. VPN.....	41
PPTP .....	41
L2TP .....	42
VTUNS.....	43
3. 11. Device Maintenance .....	44
Firmware Upgrade .....	44
Modify Password.....	45
Authority Management .....	45
Ping Detection.....	46
Configure File Maintenance .....	47
Restart Device .....	48
Time Task .....	48
Time Synchronization.....	49
Cloud Configure .....	50

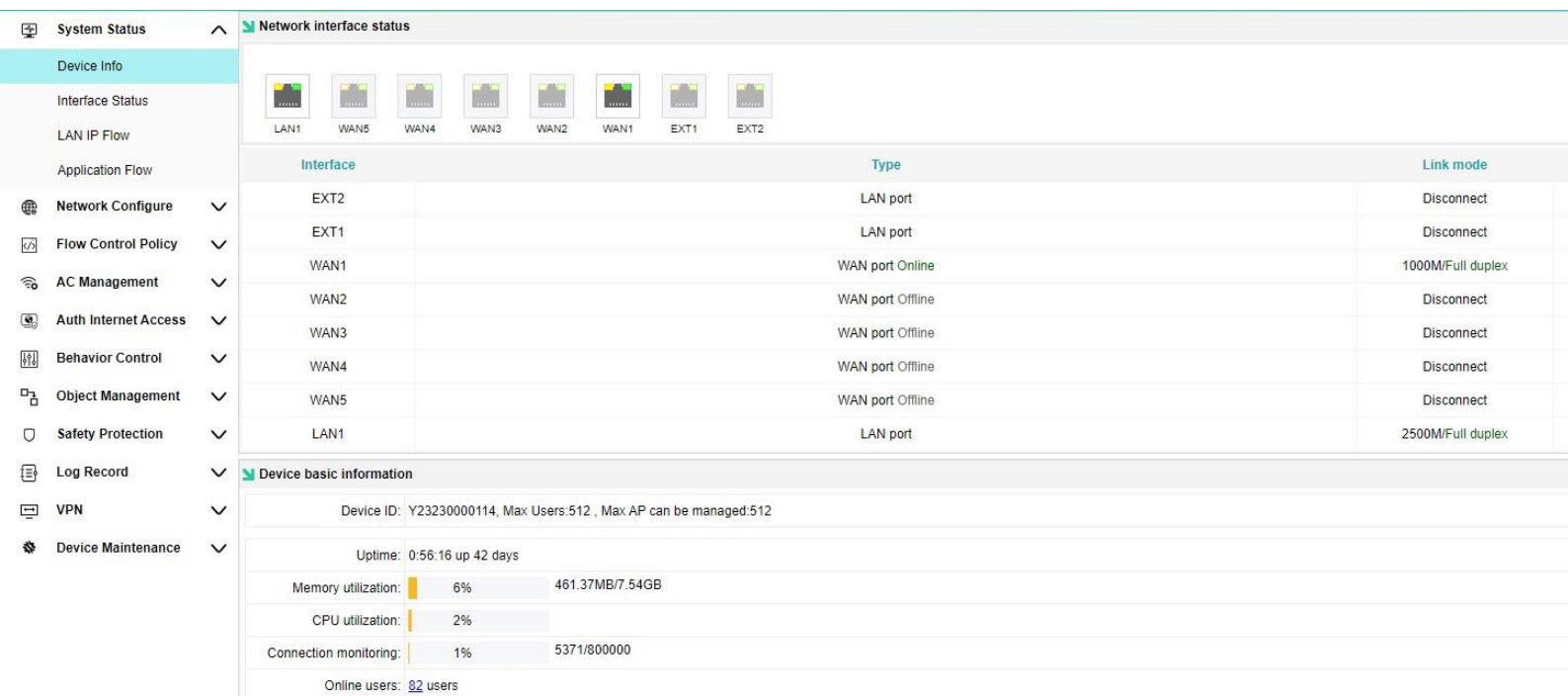
# 1. Product Overview

XonTel XT-2500AC is a multi-functional flow control gateway wireless control AC, which has the function of multi-line shunting and multi-line overlapping load balancing. It provides wireless data control services with large capacity, high performance, high reliability, easy installation and maintenance, and has the advantages of flexible networking, green energy conservation, etc.

# 2. WEB Login

2. 1. Power on gateway, when “Run” led blink regularly, connect computer to LAN port by ethernet cable.
2. 2. Visit default LAN IP **172.16.0.1:2011** in browser, default username & password are both: **admin**

Main page after login successfully:



The screenshot displays the 'Network interface status' page in the XonTel web management interface. The left sidebar contains navigation options such as System Status, Device Info, Interface Status, LAN IP Flow, Application Flow, Network Configure, Flow Control Policy, AC Management, Auth Internet Access, Behavior Control, Object Management, Safety Protection, Log Record, VPN, and Device Maintenance. The main content area shows a table of network interfaces with their status and link modes.

Interface	Type	Link mode
EXT2	LAN port	Disconnect
EXT1	LAN port	Disconnect
WAN1	WAN port Online	1000M/Full duplex
WAN2	WAN port Offline	Disconnect
WAN3	WAN port Offline	Disconnect
WAN4	WAN port Offline	Disconnect
WAN5	WAN port Offline	Disconnect
LAN1	LAN port	2500M/Full duplex

Below the interface status table, the 'Device basic information' section provides the following details:

- Device ID: Y23230000114, Max Users:512, Max AP can be managed:512
- Uptime: 0:56:16 up 42 days
- Memory utilization: 6% (461.37MB/7.54GB)
- CPU utilization: 2%
- Connection monitoring: 1% (5371/800000)
- Online users: 82 users

## 3. Product Features

### 3.1. System Status

Display a comprehensive information of the gateway, including the status of each interface, information of intranet clients, uplink and downlink, real-time uplink and downlink speed and total traffic of each application.

### Device Info

The screenshot displays the 'Network interface status' and 'Device basic information' sections. The interface status table lists various ports (EXT2, EXT1, WAN1-WAN5, LAN1) with their types, link modes, IP addresses, MAC addresses, and receive speeds. The device basic information section shows the device ID, uptime, memory and CPU utilization, connection monitoring, online users, and device model name.

Interface	Type	Link mode	IP address	MAC address	Receive sp
EXT2	LAN port	Disconnect	172.23.0.1	7C-27-3C-48-B4-0D	0.00 KB
EXT1	LAN port	Disconnect	172.22.0.1	7C-27-3C-48-B4-0C	0.00 KB
WAN1	WAN port Online	1000M/Full duplex	192.168.8.2	7C-27-3C-48-B4-0B	124.84 KB
WAN2	WAN port Offline	Disconnect	--	7C-27-3C-48-B4-0A	0.00 KB
WAN3	WAN port Offline	Disconnect	--	7C-27-3C-48-B4-09	0.00 KB
WAN4	WAN port Offline	Disconnect	--	7C-27-3C-48-B4-08	0.00 KB
WAN5	WAN port Offline	Disconnect	--	7C-27-3C-48-B4-07	0.00 KB
LAN1	LAN port	2500M/Full duplex	192.168.1.1	7C-27-3C-48-B4-06	86.20 KB

Device basic information:

- Device ID: Y23230000114
- Max Users: 512, Max AP can be managed: 512
- Uptime: 1:0:15 up 42 days
- Memory utilization: 6% (453.34MB/7.54GB)
- CPU utilization: 1%
- Connection monitoring: 1% (6008/800000)
- Online users: 32 users
- Device model: AC950, Firmware version: V5.11 B20231125

SN 1: Display the physical connection of the interface, and the color icon represents connected

SN 2: Display interface IP address

SN 3: Device unique ID, used for remote access

SN 4: User quantity (AP quantity is excluded)

SN 5: Device model name

Click online users to filter AP and terminals according to three types of users, IP and MAC addresses, and view the corresponding relationship between IP and MAC.

Online user list

**IP-MAC address table**

Notice: click to bind the IP address and MAC address, click to Unbind, click can be quickly added as a user object!

User  Search

User	IP	User	MAC	Auth method	Connection time	Operation
1	192.168.234.3	-	00-21-CC-71-3D-49	--	11-17 09:08:35	
2	192.168.234.4	-	44-D1-FA-59-2F-ED	--	11-17 15:12:26	

## Interface Status

Check the comprehensive information of current interfaces.

SN 1: View interface details and WAN port speed.

System Status

Device Info

**Interface Status**

Interface name	Interface type	Upstream bandwidth(KB)	Downstream bandwidth(KB)	IP	Status	Connection quantity	Line quality	Upstream speed(KB/S)	Downstream speed(KB/S)	Total upstream flow	Total downstream flow	Operation
LAN1	LAN port	-	-	192.168.1.1	Online	-	-	57.60	94.31	156.80GB	633.00GB	
WAN5	DHCP	100000	100000	--	Offline	-	-	-	-	-	-	
WAN4	DHCP	100000	100000	--	Offline	-	-	-	-	-	-	
WAN3	Static IP	100000	100000	--	Offline	-	-	-	-	-	-	
WAN2	Static IP	100000	100000	--	Offline	-	-	-	-	-	-	
WAN1	Static IP	100000	100000	192.168.8.2	Online	4955	Excellent	52.55	93.77	141.58GB	632.29GB	

LAN1	LAN port	-	-	192.168.1.1	Online	-	-	-	45.42	-	154.11	156.80GB
WAN5	DHCP	100000	100000	--	Offline	-	-	-	-	-	-	-
WAN4	DHCP	100000	100000	--	Offline	-	-	-	-	-	-	-
WAN3	Static IP	100000	100000	--	Offline	-	-	-	-	-	-	-
WAN2	Static IP	100000	100000	--	Offline	-	-	-	-	-	-	-
WAN1	Static IP	100000	100000	192.168.8.2	Online	4955	Excellent	52.55	93.77	141.58GB	632.29GB	-
EXT1	LAN port	-	-	-	-	-	-	-	-	0.00	0.00	0.00B
EXT2	LAN port	-	-	-	-	-	-	-	-	0.00	0.00	0.00B

**Interface details**

Interface name: LAN1

Interface status: Enable

Interface type: LAN(Intranet port)

Operation mode: 2500M/Full duplex

TCPMSS: 1460

MTU: 1500

MAC: 7C-27-3C-48-B4-06

IP address: 192.168.1.1

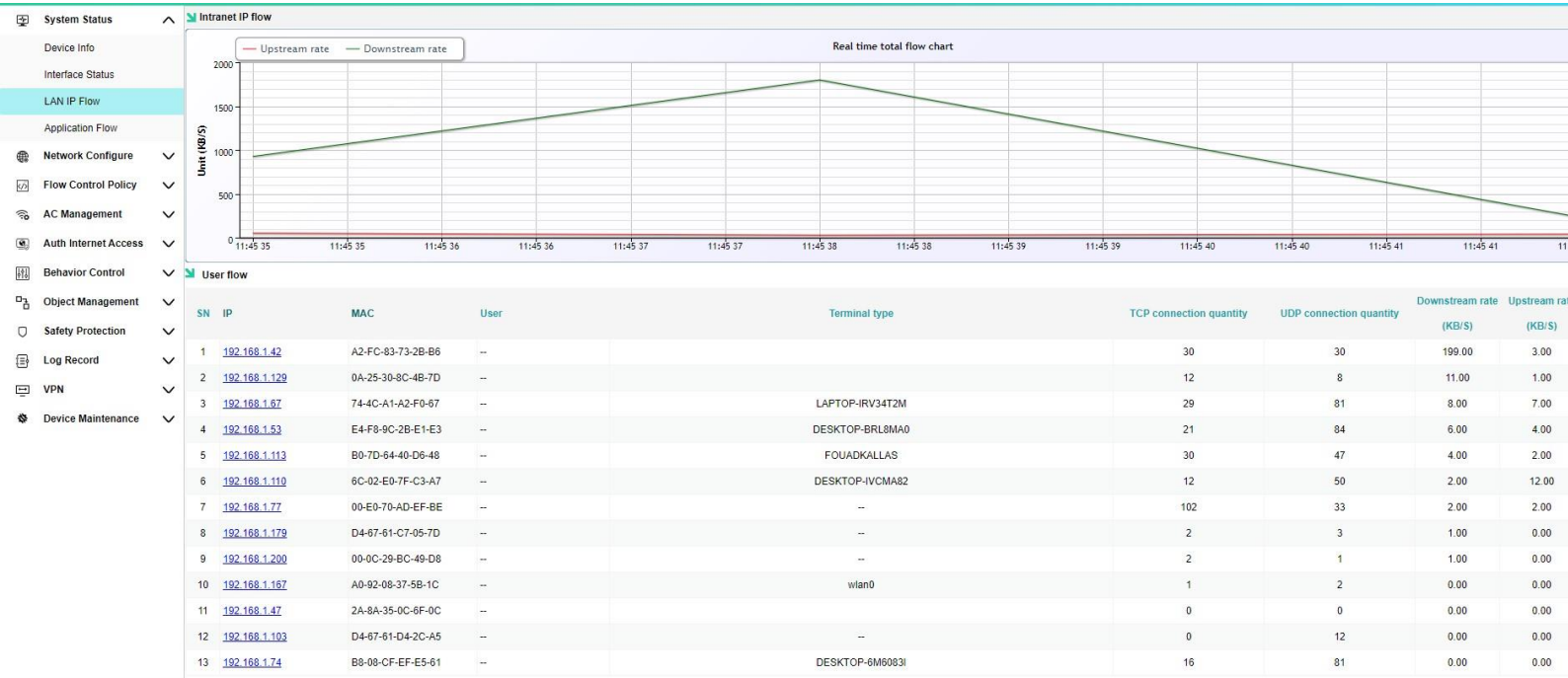
Netmask: 255.255.255.0

Send speed: 154.11

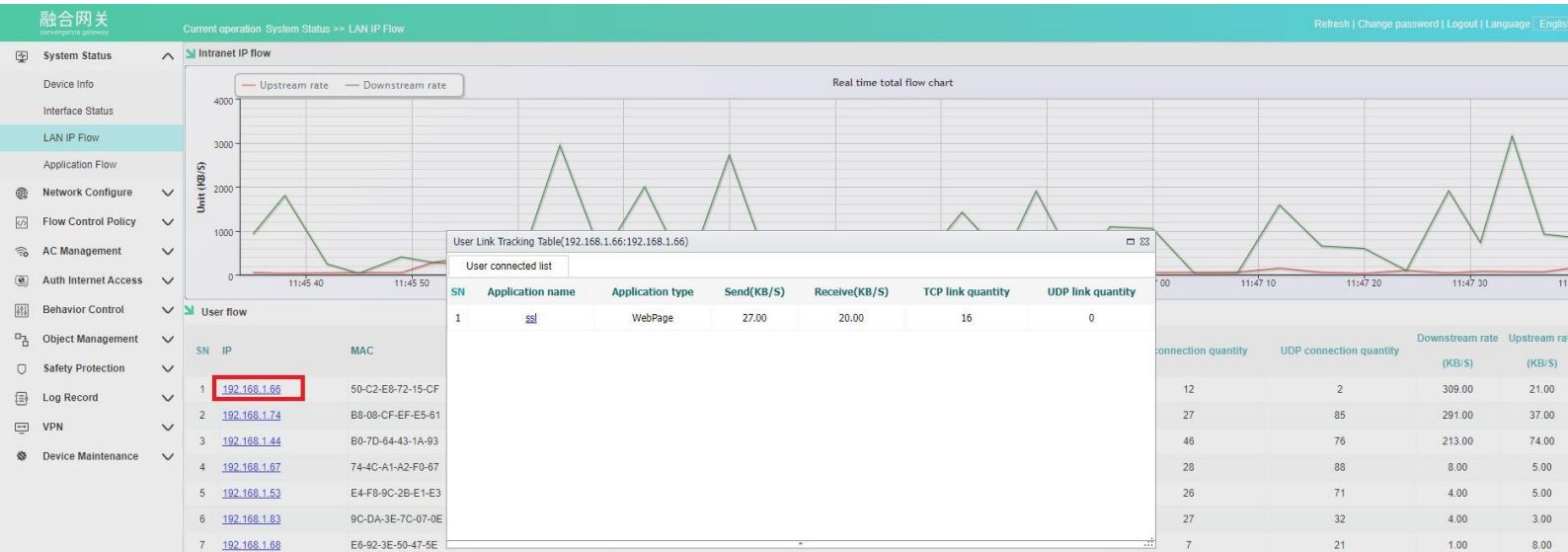
Receive speed: 45.42

## LAN IP Flow

View the traffic information independently used by each terminal of the intranet, as well as the link tracking table.



View the traffic type, speed, and number of protocol connections of selected user.



# Application Flow

View the proportion of download and upload traffic.

- System Status
- Device Info
- Interface Status
- LAN IP Flow
- Application Flow**
- Network Configure
- Flow Control Policy
- AC Management
- Auth Internet Access
- Behavior Control
- Object Management
- Safety Protection
- Log Record
- VPN
- Device Maintenance

**Application flow**

**Application Flow Distribution Map (Download)**

Application	Percentage
WebPage	29.46%
Unknown	22.88%
Web Downloads	21.06%
Live Chat	14.01%
Cloud service	0.03%
other	0%

**Application Flow Distribution Map (Upload)**

Application	Percentage
Live Chat	60.66%
WebPage	19.55%
Unknown	13.11%
Network Management	3.67%
Web Downloads	2.98%
Cloud service	0.01%
other	0.01%

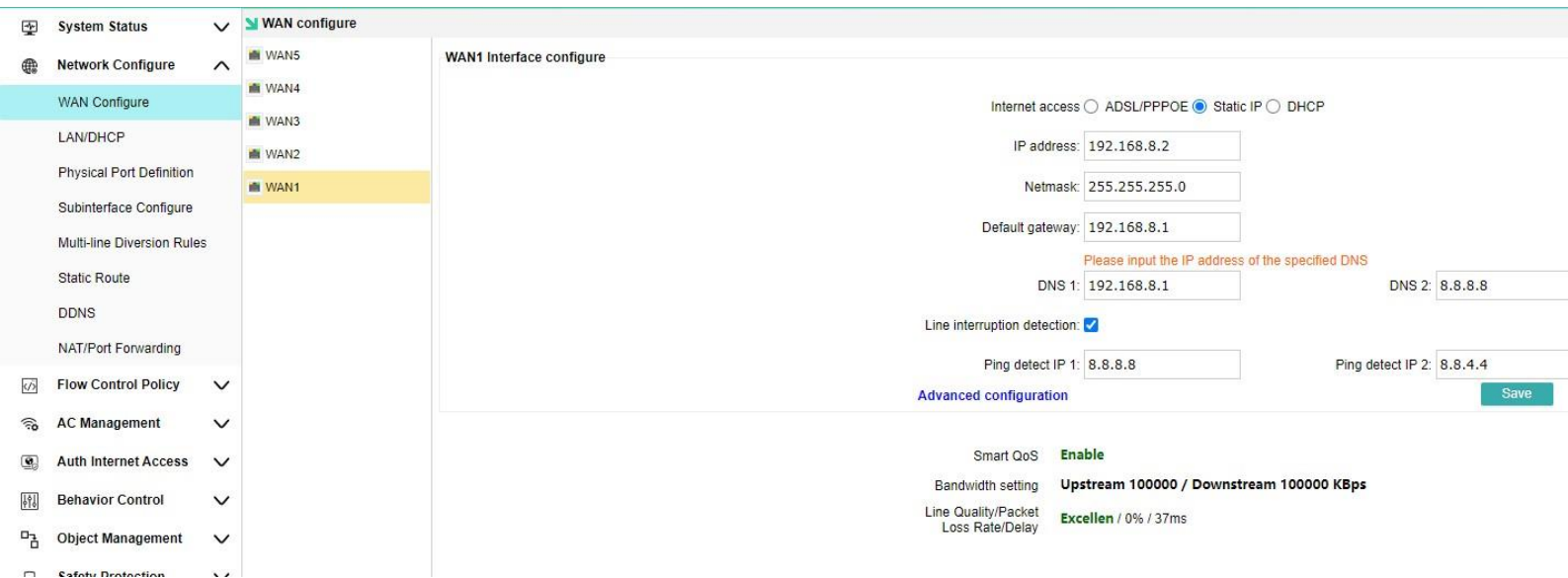
SN	Application name	Downstream speed (KB/S)	Upstream speed (KB/S)	Total downstream flow	Total upstream flow
1	ssl	0.00	0.00	62.43MB	5.70MB
2	weixin	0.00	0.00	47.15MB	48.18MB
3	http_browse	0.00	0.00	29.13MB	1.71MB
4	http_post	0.00	0.00	5.42MB	7.06MB
5	standard	0.00	0.00	42.26MB	2.47MB
6	360safe	0.00	0.00	0.00B	6.68KB
7	dream platform update	0.00	0.00	2.34KB	3.24KB
8	stun	0.00	0.00	106.00B	1.14KB
9	http_download	0.00	0.00	60.93MB	2.06MB



## 3. 2. Network Configure

Used to set the configuration information of the external network and the internal network, and the routing of the internal network.

### WAN Configure



Internet access-Select the Internet access mode according to the actual situation

- **ADSL/PPPOE:** Fill account and password supplied by operator
- **Static IP:** Fill IP, Netmask, Gateway, DNS supplied by operator
- **DHCP:** Directly insert the line provided by the operator to obtain the IP address.

**Line interruption detection** - Ping detection (Google, Facebook...). If the continuous ping fails, the delay is high, and there is no data interworking, it will be considered as a line exception. When the quality is poor, dial-up attempts to redial, DHCP attempts to retrieve, and fixed IP addresses are processed offline. Offline lines do not participate in the load. Multi line environment, it is recommended to enable line interruption detection, and automatic switching can only be performed when individual lines are offline.

Marks: If the operator prohibits ping, line detection cannot be enabled.

PING detection IP: 0.0.0.0 by default, which means the built-in IP (114DNS, Tencent official website, Alibaba DNS, Baidu DNS) is used for detection. If the local DNS can be pinged, or other public IP with lower latency can be pinged, it can be filled in as the detection basis.

Tips: It is suggested that professional technicians should fill in the test IP after evaluation.

## LAN/DHCP

SN 1: LAN1 IP address.

SN 2: IP address pool: IP address for users & APs managed by gateway. Can't be same IP segment as obtained WAN IP address.

SN 3: DHCP, can manage banded IP and MAC.

The screenshot displays the XonTel LAN/DHCP configuration interface. On the left, a navigation menu includes System Status, Network Configure, WAN Configure, LAN/DHCP, Physical Port Definition, Subinterface Configure, Multi-line Diversion Rules, Static Route, DDNS, NAT/Port Forwarding, Flow Control Policy, AC Management, Auth Internet Access, Behavior Control, Object Management, Safety Protection, Log Record, VPN, and Device Maintenance. The main content area is titled 'LAN/DHCP' and has two tabs: 'LAN/DHCP configure' (active) and 'DHCP allocation status'. Under 'LAN/DHCP configure', there are sub-sections for 'LAN1 interface configure' and 'DHCP configure'. The 'LAN1 interface configure' section contains fields for IP Address (192.168.1.1), Netmask (255.255.255.0), Custom MAC (disabled), Intranet MAC Broadcast (Enable), and Operation mode (Self negotiation). The 'DHCP configure' section has a 'Function Enabled' toggle (Enabled, click to disable), 'Basic parameters' for Main DNS (192.168.1.1), Alternate DNS (192.168.1.1), and Address lease time (3600 sec). Below this is an 'IP assignment policy of an AP' section with radio buttons for 'IP assigned only to AP' and 'IP not assigned to AP'. At the bottom, there is an 'IP address pool' table with columns for Start IP and End IP, showing a pool from 192.168.1.5 to 192.168.1.199. To the right, a 'DHCP static allocation' table is shown with columns for SN, MAC Address, IP Address, Remarks, and Operati, currently empty with a note 'IP-MAC is not currently defined!'.

### View DHCP allocation status

System Status	LAN/DHCP	SN	Interface	IP Address	MAC Address
Network Configure	LAN/DHCP configure	DHCP allocation status			
WAN Configure	All interface	1	LAN1	192.168.1.7	00-A8-59-FB-A5-74
LAN/DHCP	LAN1	2	LAN1	192.168.1.9	0C-11-05-07-8B-68
Physical Port Definition	EXT1	3	LAN1	192.168.1.10	D4-67-61-D4-2E-79
Subinterface Configure	EXT2	4	LAN1	192.168.1.11	00-A8-59-FB-F9-A1
Multi-line Diversion Rules		5	LAN1	192.168.1.12	D4-67-61-A9-64-B0
Static Route		6	LAN1	192.168.1.13	D4-67-61-D4-05-5B
DDNS		7	LAN1	192.168.1.14	D4-67-61-C7-09-76
NAT/Port Forwarding		8	LAN1	192.168.1.15	4C-3B-74-03-8E-FD
Flow Control Policy					

Markes: If gateway works as by pass mode, need to select "IP assigned only to AP".

LAN/DHCP configuration details for LAN1 interface:

- IP Address: 192.168.1.1
- Netmask: 255.255.255.0
- Custom MAC:
- Intranet MAC Broadcast: Enable
- Operation mode: Self negotiation

DHCP configuration:

- Function Enabled:  Enabled, click to disable
- Basic parameters:
  - Main DNS: 192.168.1.1
  - Alternate DNS: 192.168.1.1
  - Address lease time: 3600 sec (The default fill in: 3600)
- IP assignment policy of an AP:  IP assigned only to AP  IP not assigned to AP
- IP address pool:
 

Start IP	End IP
192.168.1.5	192.168.1.199

## Physical Port Definition

Divide multiple WAN ports and LAN ports according to requirements.

- System Status
- Network Configure
  - WAN Configure
  - LAN/DHCP
  - Physical Port Definition
  - Subinterface Configure
  - Multi-line Diversion Rules
  - Static Route
  - DDNS
  - NAT/Port Forwarding
- Flow Control Policy
- AC Management
- Auth Internet Access
- Behavior Control
- Object Management
- Safety Protection
- Log Record
- VPN
- Device Maintenance

### Physical port definition

5LAN + 1WAN



4LAN + 2WAN



3LAN + 3WAN



2LAN + 4WAN



1LAN + 5WAN



Save

Note: After the physical port feature definition is modified, the router needs to be reconfigured.

## Multi-line Diversion Rules

The screenshot displays the 'Multi-line diversion rules' configuration page. A dialog box titled 'Policy shunt rule' is open, showing the following configuration options:

- Source address: According to  Address  User  Level  Department
- Time: ANY
- Destination IP: ANY
- Destination Port: ANY
- Application type: ANY
- Shunt mode:  Session shunt  Source + Destination address shunt  Source IP shunt
- Line selection:
  - WAN5
  - WAN4
  - WAN3
  - WAN2
  - WAN1

A note at the bottom of the dialog box states: 'Session shunt: diversion in connection session unit'. The 'Confirm' and 'Cancel' buttons are visible at the bottom right of the dialog.

Single line cannot be configured with shunting rules; When two or more WAN ports are connected to the external network, different source addresses and diversion modes can be selected for setting. There are three modes:

- **Session shunt:** Distribute all Internet connections to each line. For example, Jason started IDM downloading. Many concurrent links of IDM were distributed to three lines, and each line was connected to generate traffic, which was summarized to IDM, achieving the effect of bandwidth superposition.
- **Source+Destination address shunt:** On the basis of session shunting, determine that the source address and destination address are loaded onto each line. For example, Zhang San opened three websites at the same time, namely ICBC, Jingdong Mall and Taobao (for the purpose of explanation, it is considered that the IP addresses of these three websites are only A, B and C). Use source+destination address diffuence to divert all users to three external networks. The final effect is: Zhang San's ICBC fixed line 1; Jingdong Mall fixed line 2, Taobao fixed line 3.

- Source IP shunt: It is always shunted on one line according to the source address. Taking the environment of 3 extranets and 9 people online as an example, IP shunts all people to 3 extranets. The result is: Zhang San fixed line 1; Li Si fixed route 2; Wang Wu fixed route 3; Zhao Liu fixed the first route, apportioning the 9 people on 3 lines in turn. Since everyone is fixed on a line, the speed of Internet access is limited by the bandwidth of the line.

Weight: weight can be understood as "proportion", which is only effective for IP shunting. Taking the environment where 12 people access the Internet in 3 extranets as an example, IP shunting owners are shunted to 3 extranets, with line 1 weighting 3, line 2 weighting 2, and line 3 weighting 1. As a result, 6 people will be awarded for line 1, 4 for line 2, and 2 for line 3.

(The weight is the proportion. For example, the weight of the three lines is 4, 2, 1, and the effect is 4:2:1)

Conclusion: IP shunting is applicable to the condition that there are a lot of lines, so as to reduce the IP of WAN ports being consumed by multiple people at the same time and improve the utilization of IP. It is mainly used to do Taobao in the community broadband, and Amazon e-commerce users are also used in some game studios (because too many people access from a WAN port, e-commerce may regard it as a swipe and hang up).

Session shunt is applicable to streaming multi-threaded download services that require extreme streaming, such as streaming P2P downloads and game update servers.

Source+Destination address shunt, is recommended by default to achieve better compatibility on the basis of session splitting.

## Static Route

Generally, when using the private network, it is required to set the terminal to access the corresponding IP segment and forward it to the corresponding gateway.

The screenshot shows the 'Static routing' configuration page. A modal window titled 'Static routing config' is displayed, allowing the user to add a new static route. The fields are filled with the following values:

- Destination address: 192.168.12.0
- Netmask: 255.255.255.0
- Gateway: 192.168.1.1

Buttons for 'Confirm' and 'Cancel' are visible at the bottom of the modal.

## Check static routing form

The screenshot shows the 'Static routing' configuration page with a table listing the configured static routes. The table has the following columns: SN, Destination address, Gateway, Interface, and Routing type.

SN	Destination address	Gateway	Interface	Routing type
1	127.0.0.0/255.0.0.0	--	WAN5	Network segment, local
2	127.0.0.0/255.0.0.0	--	WAN4	Network segment, local
3	172.22.0.0/255.255.0.0	--	EXT1	Network segment, local
4	172.23.0.0/255.255.0.0	--	EXT2	Network segment, local
5	192.168.0.0/255.255.255.0	--	WAN3	Network segment, local
6	192.168.1.0/255.255.255.0	--	LAN1	Network segment, local
7	192.168.2.0/255.255.255.0	--	WAN2	Network segment, local
8	192.168.8.0/255.255.255.0	--	WAN1	Network segment, local
9	192.168.12.0/255.255.255.0	192.168.1.1	LAN1	Network segment, forwarding

## DDNS

The route is managed from the external network, that is, the dynamic domain name is accessed through the dynamic domain name, which is mainly provided by the dynamic domain name service provider.

The screenshot displays the DDNS configuration page in the XonTel web interface. On the left, the 'Network Configure' menu is expanded, and 'DDNS' is selected. The main content area is titled 'Dynamic domain name configure'. It features a 'Function enable' toggle switch set to 'Enabled, click to disable'. Below this, there are four fields: 'Service provider' (a dropdown menu with options like PubYUN, GN WAY, MeiBu, DYN DNS), 'Dynamic domain name', 'Account', and 'Password'. A yellow key icon is visible next to the password field.

Marks:

- 1, Routing is only for IP reporting. The correctness and speed of the resolution depend on the 3322 service provider.
- 2, Some operators allocate the Internet access IP as a LAN IP, such as 10.10.99.99, which is a LAN IP and cannot be accessed by the external network. If it is a LAN IP, it is useless to configure a dynamic domain name.



# NAT/Port Forwarding

Used to map LAN ports to the public network

SN	Protocol	LAN IP	LAN port	WAN port	WAN	
<input type="checkbox"/>	1	UDP	192.168.1.109	5060	5092	
<input type="checkbox"/>	2	TCP	192.168.1.9	5080	5080	
<input type="checkbox"/>	3	TCP	192.168.1.9	10000-20000	10000-20000	
<input type="checkbox"/>	4	TCP	192.168.1.8	80	80	
<input type="checkbox"/>	5	TCP	192.168.1.185	8000	8000	
<input type="checkbox"/>	6	UDP	192.168.1.179	4569	4569	
<input type="checkbox"/>	7	TCP	192.168.1.181	8081	8081	
<input type="checkbox"/>	8	TCP	192.168.1.181	443	8082	
<input type="checkbox"/>	9	TCP	192.168.1.109	5091	5091	
<input type="checkbox"/>	10	UDP	192.168.1.179	10000-20000	10000-20000	
<input type="checkbox"/>	11	TCP	192.168.1.181	13505	13505	
<input type="checkbox"/>	12	TCP	192.168.1.118	5061	5061	WAN2,WAN1
<input type="checkbox"/>	13	TCP	192.168.1.179	6040	6040	WAN1
<input type="checkbox"/>	14	TCP	192.168.1.140	443	4443	WAN2,WAN1

**Port forwarding**

Protocol: TCP

LAN IP: 192.168.1.100

LAN port range: 80 ~

WAN port range: 80 ~

WAN interface selection:

WAN5  WAN4

WAN3  WAN2

WAN1

Remark:

Confirm Cancel

## DMZ Host

To solve the problem that the external network cannot access the internal network server after the firewall is installed, click to open the DMZ host, and manually fill in the address and external network port to confirm that this function takes effect.

SN	Extranet line	Host address	
<input type="checkbox"/>	1	WAN2	192.168.1.200

**DMZ host**

Extranet line: WAN2

Host address: 192.168.1.200

Remark: pbx

Confirm Cancel

### Src NAT

NAT/Port forwarding

Port forwarding DMZ host **Src NAT** Dst NAT

Add Delete

SN Source network address Destination network address

**Src NAT** X

Source network address: 192.168.1.0  
Netmask: 255.255.255.0

Destination network address: 192.168.1.0  
Netmask: 255.255.255.0

Translation address: 192.168.1.200  
Remark:

Confirm Cancel

### Dst NAT

NAT/Port forwarding

Port forwarding DMZ host Src NAT **Dst NAT**

Add Delete

SN Source network address Destination network address

**Dst NAT** X

Source network address:   
Netmask: 255.255.255.0

Destination network address:   
Netmask: 255.255.255.0

Translation address:   
Remark:

Confirm Cancel

### 3.3. Flow Control Policy

Manage the network speed of the terminal, and implement average bandwidth allocation or limit the bandwidth of the terminal.

## Smart Flow Control

For example, the uplink 20M and downlink 100M dial-up optical fiber can be configured with an uplink capacity of 2000KB and a downlink capacity of 10000KB. It is very important to configure the line bandwidth. The intelligent flow control automatically limits the speed according to the configured bandwidth. (You need to check the "Enable intelligent flow control" option to configure the bandwidth value.)

## Bandwidth Control

Speed limit according to different source address rules

## Free Flow Control

The setting is not restricted by the overall network speed control of intelligent flow control, and its maximum bandwidth needs to be separately limited in the policy speed limit.

The screenshot shows the XonTel web interface. On the left is a navigation menu with items like System Status, Network Configure, Flow Control Policy, AC Management, etc. The main content area is titled 'Free flow control'. A yellow note at the top states: 'Note: The free flow control IP is not constrained by the smart flow control. Please configure the bandwidth control to limit its maximum bandwidth.' Below this is a table with columns for SN, Source IP, Destination IP, and Destination port. A modal window titled 'Free flow control rules' is open, showing 'Enable' selected and 'Disable' unselected. It has three dropdown menus: Source IP (ANY), Destination IP (ANY), and Destination port (ANY), each with an 'Add' button. 'Confirm' and 'Cancel' buttons are at the bottom of the modal.

### 3. 4. AC Management

#### AP List

Display all APs managed by AC, easy check and management.

The screenshot shows the 'AP List' page in the XonTel management system. The interface includes a sidebar with navigation options like 'System Status', 'Network Configure', and 'AC Management'. The main area displays a table of APs with columns for SN, AP name, Device IP, MAC address, SSID, User, Channel, Power, AP model, AP version, Status, and AP remarks. Red boxes and numbers 1 through 8 highlight specific features: 1. Online AP quantity/Total AP-2/2; 2. Filter buttons (Restart AP, Reset AP, Delete AP); 3. Filter dropdowns (All device, device model filter); 4. Search conditions dropdown (Device IP); 5. Edit icon for a specific AP; 6. Channel analysis tool; 7. SSID and channel information; 8. Device IP address.

SN	AP name	Device IP	MAC address	SSID(2.4G/5.8G)	User	Channel(2.4G/5.8G)	Channel Analysis	Power	AP model	AP version	Status	AP remarks
1	Corridor	192.168.1.20	7C-27-3C-17-6B-84	XonTel2G / XT16W XonTel5G	2	Auto[9] Auto[52]	2.4G 5.8G	100% 50%	XT-5400AX	V2.0-Build20240112134759	online	14:4:0 up 46 days
2	Office	192.168.1.21	7C-27-3C-17-6B-6C	XonTel2G / XT16W XonTel5G	21	Auto[3] Auto[36]	2.4G 5.8G	100% 50%	XT-5400AX	V2.0-Build20240112134759	online	14:3:59 up 46 days

SN 1: View the number of online APs. Green represents the number of online APs, and red represents the total number of connected APs.

SN 2: Filter displays only online or offline APs.

SN 3: Filter displays by single model APs.+

SN 4: Select to search according to the IP/MAC/name/model/version number of the AP device.

SN 5: Edit the parameters and configuration of a single AP.

SN 6: WIFI analyzer, used to scan WIFI of all channels in 2.4G or 5.8G frequency band of the AP.

SN 7: The SSID (wireless WIFI name) and channel of 2.4G, 5.8G and 5.8G2 of the AP are displayed. Click the green villain to display the terminal connected to the AP.

SN 8: AP server login address.

Online AP quantity/ Total AP: 2 / 2

SN	AP name	Device IP	MAC address	SSID(2.4G/5.8G)	User	Channel(2.4G/5.8G)	Channel Analysis	Power	AP model	AP version	Status
1	Corridor	192.168.1.20	7C-27-3C-17-6B-84	XonTel2G / XT16W	12	Auto[9]	2.4G	100%	XT-5400AX	V2.0-Build20240112134759	online 2:40:49 up 43 days
2	Office	192.168.1.21	7C-27-3C-17-6B-6C	XonTel2G / XT16W	41	Auto[3]	2.4G	100%	XT-5400AX	V2.0-Build20240112134759	online 2:40:48 up 43 days

SN	Terminal mac	Channel	Signal strength
1	A0-92-08-41-86-77	2.4G	📶
2	7E-68-A2-A0-7C-82	2.4G	📶
3	24-A1-60-37-1B-91	2.4G	📶
4	12-4F-22-3B-BE-66	2.4G	📶
5	44-42-01-C2-B3-DA	2.4G	📶
6	8A-E6-A2-38-C6-95	2.4G	📶
7	FE-8D-6D-BC-D2-73	2.4G	📶
8	CE-76-79-B2-B4-2F	2.4G	📶
9	D4-67-61-C8-0A-4B	2.4G	📶
10	00-08-22-61-13-51	2.4G	📶
11	D4-67-61-C8-0A-19	2.4G	📶

Click to edit AP configs

Config AP

AP name: Office

AP remarks: [empty]

AP manage password: [masked]

WIFI Time off: Close

AP coverage threshold: -80 (-65dBm--95dBm)

User isolate: Disable

LAN1 VLANID Disable (0,3-4094) LAN2 VLANID Disable (0,3-4094)

LAN3 VLANID Disable (0,3-4094) LAN4 VLANID Disable (0,3-4094)

Select the band to be configured: 2.4G Wireless device

Wireless status: Enable

SSID: XonTel2G

Safe mode: WPA/WPA2PSK-T

Key: [masked]

Mode: 802.11AX 40MHz

tx power: 100%

VLANID 0 (0,2-4095) Access user number 64 (0 means unlimited)

Main editorial columns:

SN 1: Select band need to edit (2.4G/5.8G).

SN 2: Edit SSID name.

SN 3: Encryption, WPA2PSK is recommended.

SN 4: Edit wireless password. Click to view password.

SN 5: Select protocol mode.

Mode	802.11B/G/N 20MH ▾
WMM	default
LANID	802.11B/G
	802.11B
	802.11G
	<b>802.11B/G/N 20MHz</b>
	802.11B/G/N 40MHz

Secondary columns:

**AP name, AP remarks:** It is used to distinguish all positions of the AP. Generally, it can be marked as installation position or coverage position.

**Time restart:** Set AP to auto-restart by hours/ days.

**AP manage password:** AP web login password.

**Wireless status:** Enable/ disable selected band (2.4G/5.8G).

**Channel:** Automatic channel can be selected. AP will automatically search for the optimal channel, or manually select the specified channel.

**Broadcast SSID:** Enable/ disable SSID broadcast.

**User isolate:** Enable/ disable the terminals under the AP to access each other.

**Tx power:** default 100%, optional: 75%/50%/25%/12%.

**AP coverage threshold:** If the connection strength of the detection terminal is weaker than the threshold value, the AP chooses to eliminate the terminal.

**Access user number:** Allowed accessed users quantity.

**Virtual wireless:** Up to 3 virtual WIFIs can be created in each frequency band, and different SSIDs and passwords can be set.

Virtual wireless	
Status	Disable ▾
SSID	VAP_Wireless
Safe mode	OPEN ▾
Key	<input type="password"/>
Broadcast SSID	Enable ▾
User isolate	Disable ▾
VLANID	0 (0,2~4095)
WMM	Enable ▾

## AP Configure Template

Select a model to add a template, configure the SSID and password, and then select all APs of the same model in the AP to select the corresponding template for application configuration.

The screenshot displays the 'AP configuration template' section of the management console. On the left, a sidebar lists various system and network configuration options. The main area shows a table with columns for 'SN', 'Template name', and 'Device model'. Two templates are listed: 'office' (AX850-P2) and 'Config template' (XT-5400AX). An 'AP template config' dialog box is open, showing configuration options for the selected template. The dialog includes fields for 'Template name' (office), 'AP manage password', 'WIFI Time off' (Close), 'Timed restart' (Disabl), 'User isolate' (Disable), 'LED' (Open), 'AP coverage threshold' (-90), and four LAN/VLAN settings (LAN1-4, all set to VLANID 0). It also features a 'Select the band to be configured' dropdown (2.4G Wireless device), 'Wireless status' (Enable), 'Channel' (Auto), 'SSID' (XonTel2G), 'Broadcast SSID' (Enable), 'Safe mode' (WPA/WPA2/PSK-T), and a 'Key' field. 'Confirm' and 'Cancel' buttons are at the bottom right.

## AP Upgrade

Upgrade online or upload firmware for local upgrade.

The screenshot shows the 'AP upgrade' section. At the top, there are buttons for 'Batch online upgrade', 'Batch local upgrade', 'Upload mirror', and 'Refresh'. Below these are search filters for 'Version' and 'Device model'. The main area contains a table with columns: 'SN', 'AP name', 'IP', 'MAC', 'Status', 'Device model', 'Current version', and 'Online up'. Two APs are listed: 'Corridor' (192.168.1.20) and 'Office' (192.168.1.21), both with status 'Online' and device model 'XT-5400AX'. The 'Current version' for both is 'V2.0-Build20240112134759'. The left sidebar highlights 'AP Upgrade'.



## Seamless Roaming

Automatic roaming is enabled by default.

- System Status
- Network Configure
- Flow Control Policy
- AC Management
  - AP List
  - AP Configure Template
  - AP Group Definition
  - AP Upgrade
  - Black and white list
  - Seamless Roaming
  - Auto Channel
  - Audit Configuration
  - Locating server

### Seamless Roaming

KVR parameter

2G handover threshold:  (-55dBm ~ -94dBm)

5G handover threshold:  (-55dBm ~ -94dBm)

Enable roaming:  When the roaming function is enabled, the WIFI names, encryption modes, and passwords of aps must be the same

Enable 5G First:  When 5G priority is enabled, the WIFI name, encryption mode, and password between 2G and 5G on the AP must be the same

[Save](#)

## Auto Channel Select

- System Status
- Network Configure
- Flow Control Policy
- AC Management
  - AP List
  - AP Configure Template
  - AP Group Definition
  - AP Upgrade
  - Black and white list
  - Seamless Roaming
  - Auto Channel
  - Audit Configuration

### Auto Channel

Auto Channel | Channel table

Automatic channel switch

Automatic channel assignment:  Enabled, click to disable

Turn on this feature when there is no channel available for intensive deployment

Intensive deployment network optimization:

Channel reallocation of AP on time

Timed redistribution:

[Save](#)

Channel table: View all APs SSID, channel, RSSI.

System Status		Auto Channel				
Network Configure		Auto Channel		Channel table		
Flow Control Policy		AP_MAC	Wireless type	Auto Channel	Near AP_MAC	AP Name
AC Management		7C-27-3C-17-69-E5 192.168.1.36 --	2G	8 Unassigned	24-FB-65-41-FB-06	--
AP List					7C-27-3C-17-6B-6E	Office
AP Configure Template					82-27-3C-17-6B-6E	--
AP Group Definition					86-27-3C-17-6B-6E	--
AP Upgrade					E0-24-81-B3-D0-BE	--
Black and white list					7C-27-3C-17-69-E6	--
Seamless Roaming					24-FB-65-41-FB-06	--
Auto Channel					7C-27-3C-17-6B-6E	Office
Audit Configuration		82-27-3C-17-6B-6E	--			
Locating server		86-27-3C-17-6B-6E	--			
Auth Internet Access		7C-27-3C-17-69-F1 192.168.1.38 --	2G	6 Unassigned	7C-27-3C-17-69-E6	--
Behavior Control					24-FB-65-41-FB-06	--
Object Management					7C-27-3C-17-6B-6E	Office
Safety Protection					82-27-3C-17-6B-6E	--
Log Record		7C-27-3C-17-69-E7	5G	56 Unassigned	86-27-3C-17-6B-6E	--
					E0-24-81-B3-D0-BE	--
		7C-27-3C-17-69-E7	--		7C-27-3C-17-6B-6F	Office

### 3.5. Auth Internet Access

Generally, Internet users can access the Internet directly by configuring the IP address of the network card or by routing DHCP to assign the address to obtain the IP address.

Authenticated Internet access means that you need to be a "user" before you can access the Internet.

### Auth Configure

Control the authentication switch of the corresponding LNA port.

Marks: As long as any one of the switches is turned on, it means that the LAN1 port is intercepted. Only authenticated users are allowed to access the Internet

	Auth switch		Free auth IP		
	One key auth config: <span>Enable all</span> <span>Disable all</span>				
	Notes: PPPoE authentication switch needs to be used in conjunction with PPPOE authentication, that is, if an interface opens the PPPoE authentication switch, the PPPoE authentication of this interface must be configured; Portal authentication				
	Interface name	PPPoE auth switch	Portal auth switch	IP auth switch	MAC auth switch
Auth Internet Access	LAN1	<input type="checkbox"/> Disable	<input type="checkbox"/> Disable	<input type="checkbox"/> Disable	<input type="checkbox"/> Disable
Auth Configure	EXT1	<input type="checkbox"/> Disable	<input type="checkbox"/> Disable	<input type="checkbox"/> Disable	<input type="checkbox"/> Disable
PPPoE Auth	EXT2	<input type="checkbox"/> Disable	<input type="checkbox"/> Disable	<input type="checkbox"/> Disable	<input type="checkbox"/> Disable
Portal Auth					
Radius Billing					
Auth User					
Auth User Status					
Department/Level Definition					

### PPPoE Auth

PPPoE authentication --- used for cell broadband. Intranet users can access the Internet through PPPoE dial-up. The dial-up account password is created on the route (for the connection with radius billing, it needs to be created on the radius billing system).

It is recommended to use the LAN address for the allocation of the address pool. The IP address of the LAN port must not be the same as the network segment. For example, the IP address of the LAN port is 192.168.1.1. The address pool here cannot be 192.168.1.xxx

DNS suggests to assign DNS of local operators.

## Portal Auth

**Free auth:** It is used in hotels to prevent pinhole cameras from linking to WIFI network. One more manual click step is required. Equivalent to self-service click to release.

**WEB auth:** Users connected to the AP (such as mobile phones) can enter their username and password in the pop-up authentication window to access the Internet. The account password of the WEB password is created on the route (for the connection with radius billing, it needs to be created on the radius billing system)

# Radius Billing

- System Status
- Network Configure
- Flow Control Policy
- AC Management
- Auth Internet Access
  - Auth Configure
  - PPPoE Auth
  - Portal Auth
  - Radius Billing
  - Auth User
  - Auth User Status
  - Department/Level Definition

### Radius Billing

Function enable: Enabled, click to disable

Billing outlet circuit: Default 💡 Specify the billing exit line, and if the billing server is on the Intranet, you must select the default

Selection of docking type:  For PPPoE authentication  For Portal authentication

Authentication IP:  💡 The IP address of the billing server

Shared key:

Charging ID:

Authentication Port: 0 💡 The default radius authentication port for the server is: 1812

Charging port: 0 💡 The default toll port of the Radius server is: 1813

Save

# Auth User

The following figure shows five types of users.

MULTI-FUNCTION GATEWAY

- System Status
- Network Configure
- Flow Control Policy
- AC Management
- Auth Internet Access
  - Auth Configure
  - PPPoE Auth
  - Portal Auth
  - Radius Billing
  - Auth User
  - Auth User Status
  - Department/Level Definition
- Behavior Control

Current operation: Auth Internet Access >> Auth User

Refresh | Change password | Log

### Authentication user

Total 0

Add
Batch add
Enable all
Export user
Delete
User departm
User level filtr
User type filtr
Stat
Acc
Exact Search

SN	Name	Department	User level	User type	Notes	Creat time	Due time	Operation
<div style="border: 1px solid #ccc; padding: 10px; width: 80%; margin: 0 auto;"> <h4 style="margin: 0;">Authentication user</h4> <div style="display: flex; justify-content: space-between;"> <div> <p>Account: <input style="width: 100px;" type="text"/></p> <p>Department: <span style="border: 1px solid #ccc; padding: 2px;">default</span></p> <p>User type: <span style="border: 1px solid #ccc; padding: 2px;">PPPoE dial-up</span></p> <p>MAC Binding: <span style="border: 1px solid #ccc; padding: 2px;">IP address auth</span></p> <p>Create time: <input style="width: 100px;" type="text"/></p> <p>Name: <input style="width: 100px;" type="text"/></p> <p>Tel: <input style="width: 100px;" type="text"/></p> <p>Notes: <input style="width: 100%; height: 20px;" type="text"/></p> </div> <div> <p>Password: <span style="border: 1px solid #ccc; padding: 2px;">4424603</span></p> <p>Level: <span style="border: 1px solid #ccc; padding: 2px;">default</span></p> <p>Account type: <span style="border: 1px solid #ccc; padding: 2px;">Enabl</span></p> <p>Expire time: <input style="width: 100px;" type="text"/> <a href="#">Add time</a></p> <p>ID: <input style="width: 100px;" type="text"/></p> <p>Address: <input style="width: 100px;" type="text"/></p> </div> </div> <p style="text-align: right; margin-top: 10px;"> <span style="background-color: #4caf50; color: white; padding: 5px 15px; border-radius: 5px;">Confirm</span> <span style="background-color: #4caf50; color: white; padding: 5px 15px; border-radius: 5px; margin-left: 10px;">Cancel</span> </p> </div>								

## Auth User Status

Users can be seen online, and the green icon represents the online users, allowing online access.

MULTI-FUNCTION GATEWAY Current operation Auth Internet Access >> Auth User Status Refresh | Change password | Logout

- System Status
- Network Configure
- Flow Control Policy
- AC Management
- Auth Internet Access
  - Auth Configure
  - PPPoE Auth
  - Portal Auth
  - Radius Billing
  - Auth User
  - Auth User Status
  - Department/Level Definition

### Auth user status

Anonymous Us  Online  
Total user quantity[0/0]

User level filter User type filter Due time filter Status Account  Search

SN	User	Level	Tel	Address/Remark	Due time	IP	Online status	Auth status
No record currently								

## Department/Level Definition

Management department and level, used to bind the Internet users

- System Status
- Network Configure
- Flow Control Policy
- AC Management
- Auth Internet Access
  - Auth Configure
  - PPPoE Auth
  - Portal Auth
  - Radius Billing
  - Auth User
  - Auth User Status
  - Department/Level Definition

### Department division

Department division Level division

Department division purposes: User objects must choose the departments they belong to, so before defining users, they need to divide departments. For companies, departments are usually divided according to administrative departments, such as sales department, production department, etc. For residential areas, departments are usually divided according to the location of access users, such as: East 35 buildings, West 88 buildings. After dividing the departments, users can make various control rules according to the dividing departments.

[Add](#)

SN	Department name	Operation
1	default	

MULTI-FUNCTION GATEWAY Current operation Auth Internet Access >> Department/Level Definition Refresh | Change password | Logout

**User level division** Interactive completion

Department division | Level division

**Add**

Level-dividing purposes: User objects must select the level which they belong to, so they need to be graded before defining users; for companies, they are usually graded according to the user's authority and position, such as senior executives, ordinary employees, etc. For residential area, it is usually classified according to the bandwidth purchased by the user, such as 2M, 4M. After grading, various control or speed limit rules can be made according to the grading.

SN	Name	Operation
1	default	

### 3. 6. Behavior Control

## Application Firewall

Configure the required release and direct blocking destination IP, port and application according to the source and time.

**Application firewall**

Function enable:  Enabled, click to disable

**Add** **Delete**

SN	Source address object	Time	Action	Operation
----	-----------------------	------	--------	-----------

**Firewall rules**

Enable  Disable

Source address: According to  Address  User  Level  Department

ANY

Time: ANY

Destination IP: ANY

Destination port: ANY

Application: ANY

Policy: Release

Release

Block directly

**Confirm** **Cancel**

## URL Redirect

When the terminal accesses the original website, it will automatically jump to the destination website. (Takes effect after clearing the browser cache)

MULTI-FUNCTION GATEWAY Current operation Behavior Control >> URL Redirect Refresh | Change password | Logout

System Status Network Configure Flow Control Policy AC Management Auth Internet Access Behavior Control Application Firewall URL Redirect Domain Redirect Object Management Safety Protection Log Record VPN Device Maintenance

URL redirect Add Batch add Delete

SN	Original URL	Redirected URL	Operation

URL redirect definition

Original URL:   
Such as: www.aaa.com( Don't contain"http://")

Destination URL:   
Such as: www.aaa.com/a.htm (Do not contain http://, but can be with path)

Confirm Cancel

## Domain Redirect

Set that when the terminal accesses the domain name, it automatically resolves to the specified IP (takes effect after clearing the browser cache)

MULTI-FUNCTION GATEWAY Current operation Behavior Control >> Domain Redirect Refresh | Change password | Logout

System Status Network Configure Flow Control Policy AC Management Auth Internet Access Behavior Control Application Firewall URL Redirect Domain Redirect Object Management Safety Protection Log Record VPN Device Maintenance

Domain redirect Add Batch add Delete The below defined domain name will be resolved directly to corresponding IP address without the DNS server

SN	Domain name	IP	Operation

Domain name resolution definition

Domain name:   
The format is: www.mydomain.com

IP:

Confirm Cancel



### 3.7. Object Management

#### Time Object

#### Source IP Object

Here you can define the range of IP addresses which you can use for example for multi diversion rules

SN	Name	Address range	Operation
1	ANY	Any addr	[Edit] [Delete]
2	FASTTELCO	172.16.41.2 - 172.16.41.254	[Edit] [Delete]
3	Zain5G	172.16.41.2 - 172.16.41.254	[Edit] [Delete]

## Port Object

System Status | Network Configure | Flow Control Policy | AC Management | Auth Internet Access | Behavior Control | Object Management

**Port object**

Add Delete

SN	Name	Content description	Operation
1	ANY	Protocol:TCP&UDP Port:Ar	
2	DNS	Protocol:UDP Port:53	
3	HTTP	Protocol:TCP Port:80	
4	ICMP	Protocol:ICMP Port:1	
5	SSL	Protocol:TCP Port:443	
6	TCP	Protocol:TCP Port:Any port	
7	UDP	Protocol:UDP Port:Any port	

**Port object**

Name:

Protocol	Start Port	End Port
TCP	80	80
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>

## Destination IP Object

System Status | Network Configure | Flow Control Policy | AC Management | Auth Internet Access | Behavior Control | Object Management

**Destination IP object**

Add

ID	Name	Remark	Operation
4	Fasttelco range		
5	merge		

**Destination IP object**

Name:

Remark:

Click the button to obtain the online destination address table, and modify the destination address table format to IP/netmask numbers, such as 1.25.0.0/15

Select online address table :

## Built-in Application Object

MULTI-FUNCTION GATEWAY Current operation Object Management >> Built-in Application Object Refresh | Change password | Logout

**Built-in app object**

Built-in app object upgrade Built-in app object

App name:  Search

SN	App name	App class	Description
<input type="checkbox"/>	1	11dota	Online game
<input type="checkbox"/>	2	175pt	Online game
<input type="checkbox"/>	3	300hero	Online game
<input type="checkbox"/>	4	360-speed	Madsl
<input type="checkbox"/>	5	360safe	Software Update
<input type="checkbox"/>	6	3guohero	Online game
<input type="checkbox"/>	7	3guohero2	Online game
<input type="checkbox"/>	8	6rooms	Web Video
<input type="checkbox"/>	9	7fame	Online game
<input type="checkbox"/>	10	acfun	Web Video
<input type="checkbox"/>	11	aion	Online game

## Custom Application Object

System Status Network Configure Flow Control Policy AC Management Auth Internet Access Behavior Control Object Management

**Customize app object**

Customize app object Define app by domain Define app by IP + port

Add

SN	App name	App type	Operation
<input type="checkbox"/>	1	11dota	Online game
<input type="checkbox"/>	2	175pt	Online game
<input type="checkbox"/>	3	300hero	Online game
<input type="checkbox"/>	4	360-speed	Madsl
<input type="checkbox"/>	5	360safe	Software Update
<input type="checkbox"/>	6	3guohero	Online game
<input type="checkbox"/>	7	3guohero2	Online game
<input type="checkbox"/>	8	6rooms	Web Video
<input type="checkbox"/>	9	7fame	Online game
<input type="checkbox"/>	10	acfun	Web Video
<input type="checkbox"/>	11	aion	Online game

**Customize app**

App Name:

App type:

Description:

Confirm Cancel

Define applications according to domain name or destination IP+port as shown in the figures below

MULTI-FUNCTION GATEWAY Current operation Object Management >> Custom Application Object Refresh | Change password | Logout

System Status Network Configure Flow Control Policy AC Management Auth Internet Access Behavior Control Object Management

Customize app object Define app by domain Define app by IP + port

Add

Domain

Define app by domain

Domain:

App name: 11dota

Confirm Cancel

Operation

MULTI-FUNCTION GATEWAY Current operation Object Management >> Custom Application Object Refresh | Change password | Logout

System Status Network Configure Flow Control Policy AC Management Auth Internet Access Behavior Control Object Management

Customize app object Define app by domain Define app by IP + port

Add

SN App name

Define app by IP + port

Start address:

End address:

Protocol: TCP/UDP

Start port:

End port:

App name: 11dota

Confirm Cancel

Operation

### 3.8. Safety Protection

#### IP-MAC Banning

After the IP-MAC is bound, the IP address cannot be modified at will, so it can avoid IP conflicts that affect other users' normal Internet access.

SN	IP	User	MAC	Auth method	Connection time	Operation
1	172.16.40.101	-	F8-0D-AC-BE-90-65	--	03-19 17:38:42	[Icons]
2	172.16.40.103	-	CC-D2-81-5B-AD-7C	--	03-21 02:01:41	[Icons]
3	172.16.40.105	-	4E-7D-3D-4B-D4-E2	--	03-21 02:19:31	[Icons]
4	172.16.40.109	-	56-57-E8-4D-A1-42	--	03-21 02:18:54	[Icons]
5	172.16.41.103	-	78-C8-81-E0-98-C0	--	03-19 17:45:05	[Icons]
6	172.16.41.104	-	80-60-B7-1B-2C-C7	--	03-20 23:26:33	[Icons]

#### Connection Quantity Limit

Limit the maximum number of TCP and UDP connections of the source object.

SN	Source address object	Time	TCP connection quantity	UDP connection quantity	Enable	Operation
1	ANY				[Green Check]	[Edit] [Delete]

Enable  Disable

Source address object: Click  Address  User  Level  Department

Time: ANY

Maximum quantity of TCP connections: 5000

Maximum quantity of UDP connections: 5000

Confirm Cancel

## LAN Abnormal Detection

Enable DHCP detection to search whether there are other DHCP servers in the LAN that cause IP address assignment conflicts.

It is normal for the AC gateway to find the main route when it is used as by pass mode.

Turn on loop detection to determine whether there is link loopback in the LAN switch, which causes a network broadcast storm and slow and unstable Internet access quality.

- System Status
- Network Configure
- Flow Control Policy
- AC Management
- Auth Internet Access
- Behavior Control
- Object Management
- Safety Protection
- IP-MAC Binding
- Connection Quantity Limit
- LAN Abnormal Detection

### Intranet anomaly detection

DHCP detection: Enabled,click to disable 💡 detect whether there are other DHCP servers in the intranet.

Loop detection: Enabled,click to disable 💡 Check whether there are some loops on the intranet (for intranet fault location)

PPPoE detection: Enabled,click to disable 💡 detect whether there are other PPPoE services in the intranet.

Clear status Intranet loop detection is in progress...

✔ **Intranet DHCP service detection result:** No other DHCP service have been found on the intranet!

## LAN Attack Protection

- System Status
- Network Configure
- Flow Control Policy
- AC Management
- Auth Internet Access
- Behavior Control
- Object Management
- Safety Protection
- IP-MAC Binding
- Connection Quantity Limit
- LAN Abnormal Detection
- LAN Attack Protection
- WAN Ping Forbid/WAN Login

### Intranet attack protection

Function enable: Enabled,click to disable

Select the interface to protect

LAN1  
 LAN2  
 LAN3

Parameter settings

Package threshold:  (Number of packets / per second)

💡 Package threshold: The maximum number of packets allowed to be sent per second for a single IP. The reference value is between 5000 and 10000.

Whether the LAN port is connected to the Layer 3 switch 💡 Do not select it if there is no layer 3 switch.

Save

## WAN Ping Forbid/WAN Login

View remote login parameters and configurations.

The screenshot shows the configuration page for 'WAN Ping Forbid/WAN Login'. The left sidebar contains a navigation menu with the following items: System Status, Network Configure, Flow Control Policy, AC Management, Auth Internet Access, Behavior Control, Object Management, Safety Protection, IP-MAC Binding, Connection Quantity Limit, LAN Abnormal Detection, LAN Attack Protection, and WAN Ping Forbid/WAN Login (highlighted). The main content area is titled 'Extranet prohibited to PING/ Extranet login' and includes a 'Host security' section with the following settings:

- Prohibit ping router from extranet
- Allow administrator to log in remotely via extranet IP
- WEB service port: 2011
- Master DNS: 114.114.114.114 (Note: The DNS server address is needed as a network terminal by the local computer(router))
- Update line options: Default (Note: Specify device system upgrades and protocol update lines!)
- Remote management server: www.demo.yowifi.net (Remote access routing link address: http://Y24190000467.demo.yowifi.net:20110)
- Device name: [ ]  Display on the login page

A 'Save' button is located at the bottom right of the configuration area.

## 3. 9. Log Record

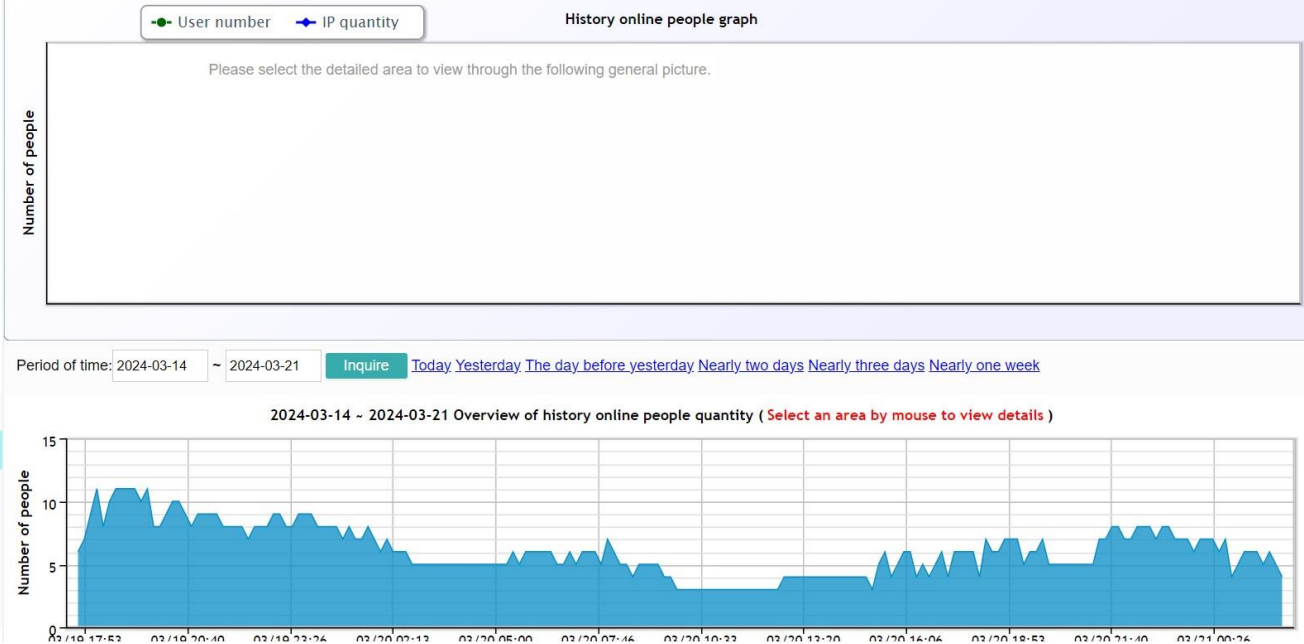
### User Auth Log

View users online/ offline records.

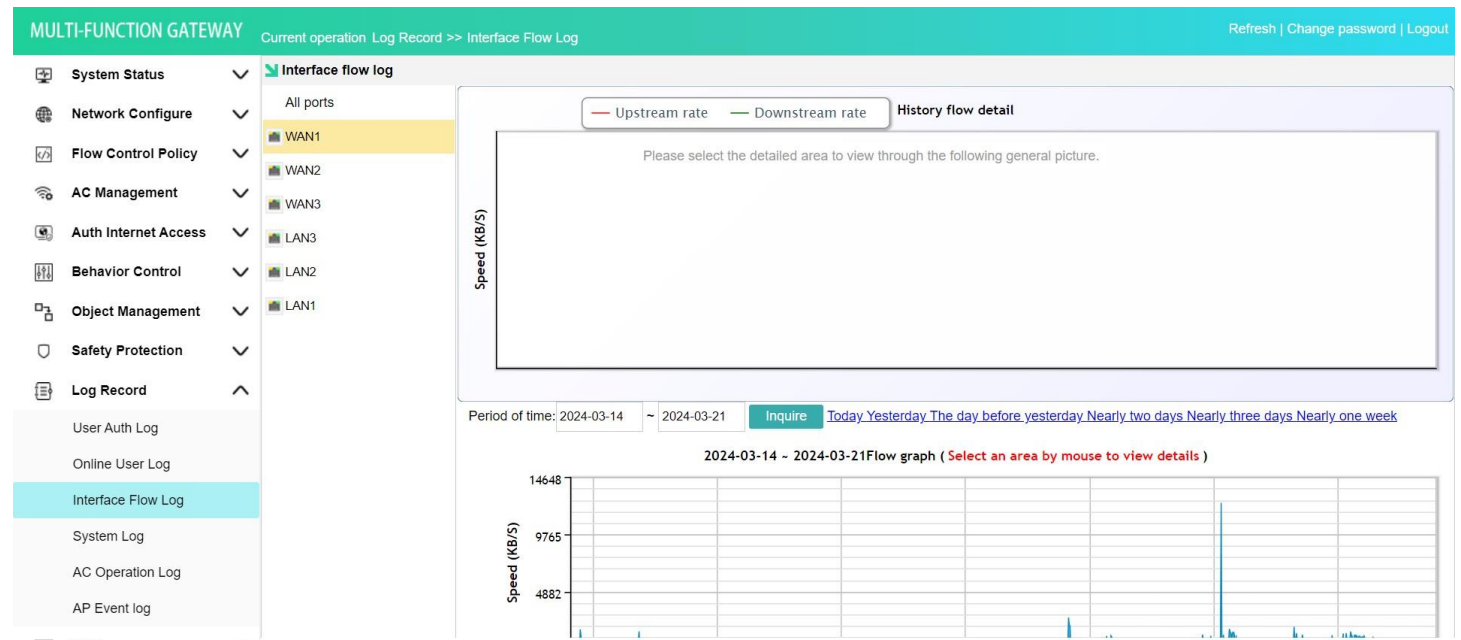
The screenshot shows the 'User auth log' page. The left sidebar contains a navigation menu with the following items: System Status, Network Configure, Flow Control Policy, AC Management, Auth Internet Access, Behavior Control, Object Management, Safety Protection, Log Record, User Auth Log (highlighted), Online User Log, Interface Flow Log, System Log, AC Operation Log, and AP Event log. The main content area is titled 'User auth log' and includes a search bar and a table with columns for 'SN', 'Time', and 'Description'. The table is currently empty, with the message 'There are no records currently'. Below the table, there are navigation links: Home, Pre page, Next page, Last Page, Turn to page [ ] GO, Total 0, Current page 1.

## Online User Log

- System Status
- Network Configure
- Flow Control Policy
- AC Management
- Auth Internet Access
- Behavior Control
- Object Management
- Safety Protection
- Log Record
  - User Auth Log
  - Online User Log**
  - Interface Flow Log
  - System Log
  - AC Operation Log
  - AP Event log



## Interface Flow Log





## System Log

SN	Time	Description
1	2024-03-19 17:36:03	Interface:WAN3 online,ip:192.168.202.2
2	2024-03-19 17:34:49	Interface:WAN2 online,ip:172.16.20.4
3	2024-03-19 17:32:53	Interface:WAN1 online,ip:178.61.168.14
4	2024-03-19 17:32:13	Interface:WAN3 online
5	2024-03-19 17:32:13	Interface:WAN2 online

Home Pre page Next page Last Page Turn to page  GO Total 1,Current page 1

### 3. 10. VPN

#### PPTP

To use this function, AC is required as the primary route, and the WAN interface is connected to the public IP provided by the external network for the operator. Gateway IP and address pool are set according to the actual needs of DNS.

MULTI-FUNCTION GATEWAY Current operation: VPN >> PPTP Refresh | Change password | Logout

**PPTP**

PPTP VPN server PPTP VPN access status

Function enable:  Enabled, click to disable

Client IP address range

Gateway IP:

Start IP address:  End IP address:

DNS configure

Master DNS:  Auxiliary DNS:

Detect the online time:

MTU:  Enable customer MTU  
MRU:  Enable customer MRU  
MPPE-128:  Support MPPE-128

⚡ Tips: point-to-net VPN dialing users, are unified in Auth Internet Access, User Management, Auth user

Save

Click Authentication User to jump to Create VPN Authentication User

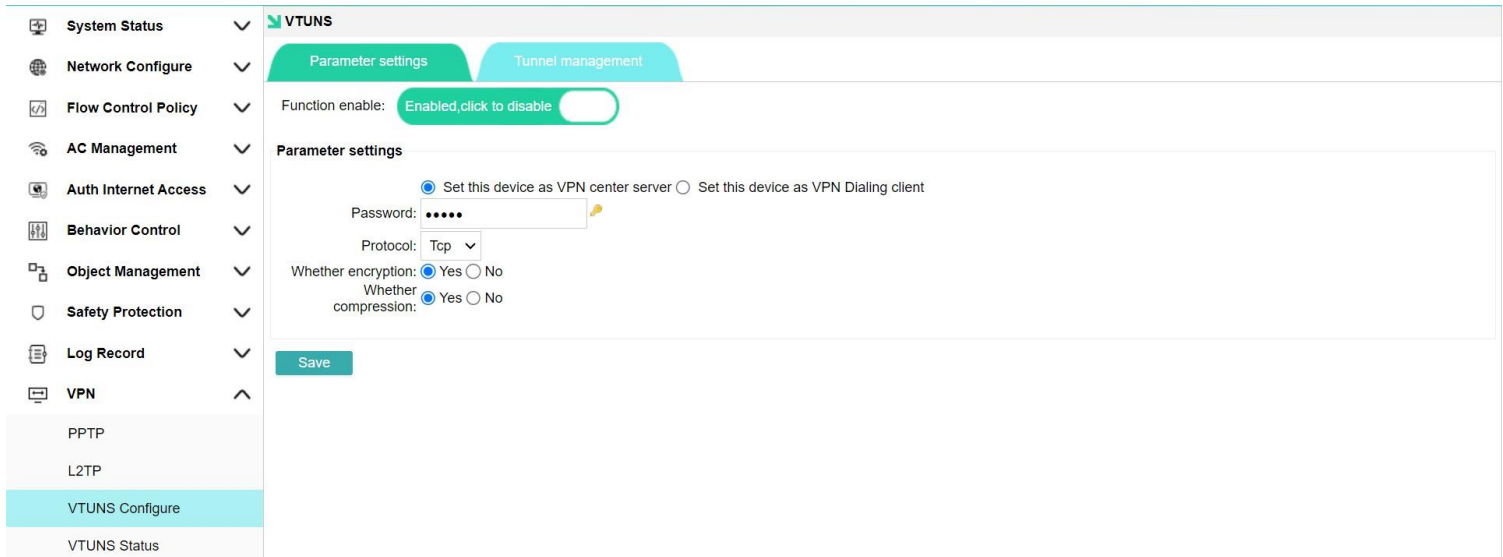
## L2TP

To use this function, AC is required as the primary route, and the WAN interface is connected to the public IP provided by the external network for the operator.

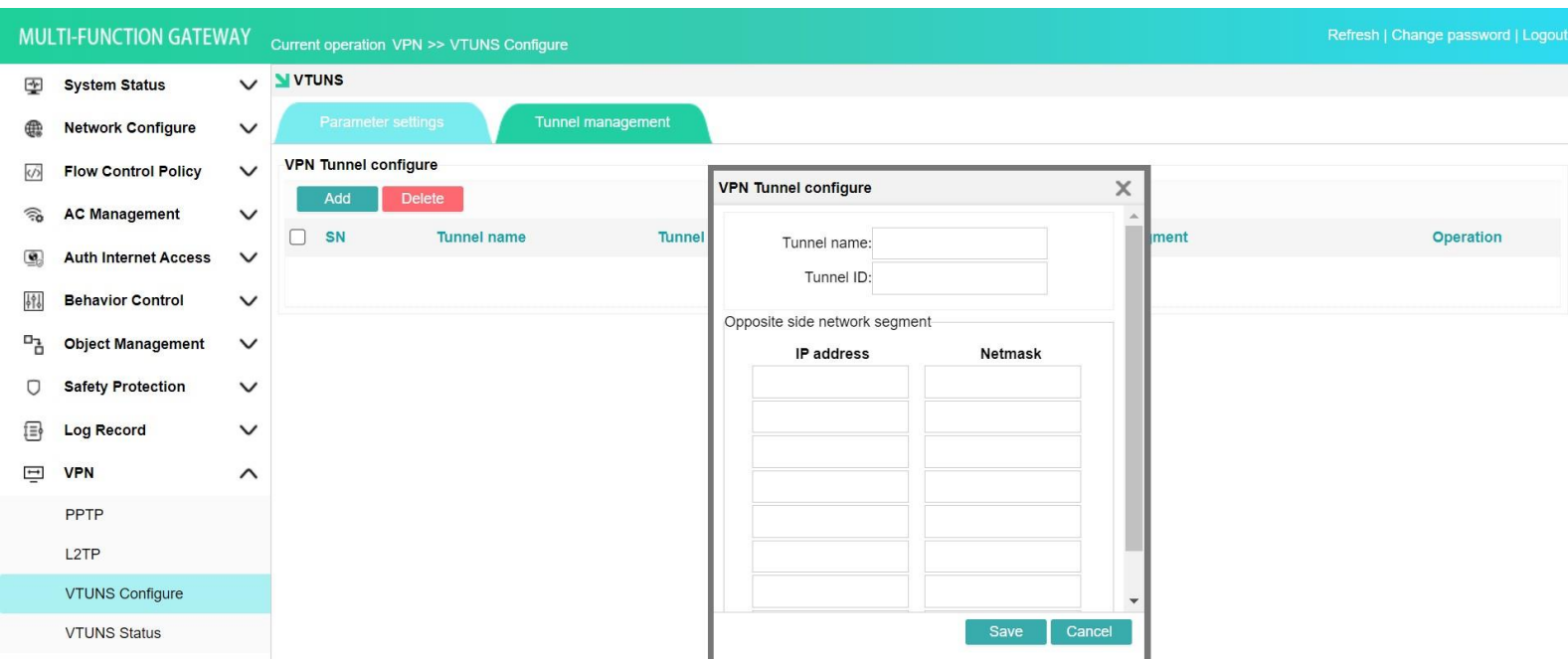
Gateway IP and address pool are set according to the actual needs of DNS.

## VTUNS

The network to network virtual channel over TCP/IP is established for the combination of two LANs. The one with good performance is set as the server. The LAN segments on both sides cannot be the same. The server needs to have a public IP address.



Tunnel management: Add the custom tunnel name and tunnel ID, and fill in the intranet segment of the VPN client, such as 192.168.1.0 and 255.255.255.0. Note that the tunnel name and tunnel ID must be consistent between the server and the client



## 3. 11. Device Maintenance

### Firmware Upgrade

Online upgrade, or select a specific local firmware upgrade

The screenshot displays the 'Firmware upgrade' section of the XonTel management interface. On the left, a sidebar menu lists various system functions, with 'Firmware Upgrade' highlighted. The main content area is divided into two sections: 'Upgrade by loading upgrade package' and 'Online upgrade'. The first section includes a file path input field with a 'Choose File' button and a 'Start to upgrade' button. The second section displays a message: 'The current version is already the latest version, does not require any upgrade!'.

- Auth Internet Access
- Behavior Control
- Object Management
- Safety Protection
- Log Record
- VPN
- Device Maintenance
  - Firmware Upgrade**
  - Modify Password
  - Authority Management
  - Ping Detection
  - Configure File Maintenance
  - Restart Device
  - Timed Task
  - Time Synchronization
  - Cloud Configure

**Firmware upgrade**

Upgrade by loading upgrade package

File path:  No file chosen

**Online upgrade**

The current version is already the latest version, does not require any upgrade!

## Modify Password

Here you modify administrator user login password

**Modify password**

Modify the system password, please remember the new password, the default password is: admin

Old password:

New password:

Confirm password:

**Modify password**

## Authority Management

Here you can create multiple users with custom permissions as shown below

**Authority Management**

**Add**

Account	Remarks
---------	---------

**Administrators**

Account

Password

Remarks

**Authority**

**Confirm** **Cancel**

**Authority Management**

Account Remarks

**Administrator Permission Settings**

Module	Authority	If no permissions are set, all functions are read-only	
All Authority	<input type="checkbox"/> Set Authority	<input type="checkbox"/> Interface Status	<input type="checkbox"/> LAN IP Flow
<input checked="" type="checkbox"/> System Status	<input checked="" type="checkbox"/> Device Info <input type="checkbox"/> Application Flow	<input checked="" type="checkbox"/> LAN/DHCP	<input checked="" type="checkbox"/> Physical Port Definition
<input checked="" type="checkbox"/> Network Configure	<input checked="" type="checkbox"/> Subinterface Configure <input checked="" type="checkbox"/> DDNS	<input checked="" type="checkbox"/> Multi-line Diversion Rules <input checked="" type="checkbox"/> NAT/Port Forwarding	<input checked="" type="checkbox"/> Static Route
<input type="checkbox"/> Flow Control Policy	<input type="checkbox"/> Smart Flow Control	<input type="checkbox"/> Bandwidth Control	<input type="checkbox"/> Free Flow Control
<input type="checkbox"/> AC Management	<input type="checkbox"/> AP List <input type="checkbox"/> AP Upgrade <input type="checkbox"/> Auto Channel	<input type="checkbox"/> AP Configure Template <input type="checkbox"/> Black and white list <input type="checkbox"/> Audit Configuration	<input type="checkbox"/> AP Group Definition <input type="checkbox"/> Seamless Roaming <input type="checkbox"/> Locating server
<input type="checkbox"/> Auth Internet Access	<input type="checkbox"/> Auth Configure <input type="checkbox"/> Radius Billing <input type="checkbox"/> Department/Level Definition	<input type="checkbox"/> PPPoE Auth <input type="checkbox"/> Auth User	<input type="checkbox"/> Portal Auth <input type="checkbox"/> Auth User Status
<input type="checkbox"/> Behavior Control	<input type="checkbox"/> Application Firewall	<input type="checkbox"/> URL Redirect	<input type="checkbox"/> Domain Redirect
<input type="checkbox"/> Object Management	<input type="checkbox"/> Time Object <input type="checkbox"/> Destination IP Object	<input type="checkbox"/> Source IP Object <input type="checkbox"/> Build-in Application Object	<input type="checkbox"/> Port Object <input type="checkbox"/> Custom Application Object
<input type="checkbox"/> Safety Protection	<input type="checkbox"/> IP-MAC Binding <input type="checkbox"/> LAN Attack Protection	<input type="checkbox"/> Connection Quantity Limit <input type="checkbox"/> WAN Ping Forbid/WAN Login	<input type="checkbox"/> LAN Abnormal Detection
<input type="checkbox"/> Log Record	<input type="checkbox"/> User Auth Log <input type="checkbox"/> Interface Flow Log <input type="checkbox"/> AP Event log	<input type="checkbox"/> Online User Log <input type="checkbox"/> System Log	<input type="checkbox"/> AC Operation Log

## Ping Detection

Use to check whether there is a path between AC and the specified IP.

**Ping inspection - single ping**

Single ping Multi ping

WAN1 ping IP: 62.215.1.162 Start

```

PING 62.215.1.162 (62.215.1.162) from 178.61.168.14: 56 data bytes
64 bytes from 62.215.1.162: seq=0 ttl=255 time=2.497 ms
64 bytes from 62.215.1.162: seq=1 ttl=255 time=2.411 ms
64 bytes from 62.215.1.162: seq=2 ttl=255 time=2.342 ms
64 bytes from 62.215.1.162: seq=3 ttl=255 time=3.783 ms
64 bytes from 62.215.1.162: seq=4 ttl=255 time=2.276 ms
64 bytes from 62.215.1.162: seq=5 ttl=255 time=2.260 ms

--- 62.215.1.162 ping statistics ---
6 packets transmitted, 6 packets received, 00x96e1b30packet loss
round-trip min/avg/max = 2.260/2.594/3.783 ms
    
```

## Multi Ping

- Auth Internet Access
- Behavior Control
- Object Management
- Safety Protection
- Log Record
- VPN
- Device Maintenance
  - Firmware Upgrade
  - Modify Password
  - Authority Management
  - Ping Detection
  - Configure File Maintenance
  - Restart Device
  - Timed Task
  - Time Synchronization
  - Cloud Configure

Ping inspection - multi ping

Single ping
Multi ping

Interface <input checked="" type="checkbox"/> Select all	Ping address (The default is gateway interface address)	Ping result
<input checked="" type="checkbox"/> LAN1 IP:172.16.40.1	<input type="text" value="8.8.8.8"/>	PING 8.8.8.8 100 data bytes:
<input checked="" type="checkbox"/> LAN2 IP:172.16.41.1	<input type="text" value="8.8.4.4"/>	PING 8.8.4.4 100 data bytes:
<input type="checkbox"/> LAN3 IP:172.18.0.1	<input type="text" value="0.0.0.0"/>	
<input type="checkbox"/> WAN3 IP:192.168.202.2	<input type="text" value="192.168.202.1"/>	
<input checked="" type="checkbox"/> WAN2 IP:172.16.20.4	<input type="text" value="172.16.20.1"/>	PING 172.16.20.1 100 data bytes:
<input checked="" type="checkbox"/> WAN1 IP:178.61.168.14	<input type="text" value="62.215.1.162"/>	PING 62.215.1.162 100 data bytes:

## Configure File Maintenance

Export and import the configuration information of the gateway and restore it to the factory.

- Auth Internet Access
- Behavior Control
- Object Management
- Safety Protection
- Log Record
- VPN
- Device Maintenance
  - Firmware Upgrade
  - Modify Password
  - Authority Management
  - Ping Detection
  - Configure File Maintenance
  - Restart Device
  - Timed Task
  - Time Synchronization

Configuration file maintenance

Configuration file maintenance
Email backup

**Export configuration**

💡 Export and save the configuration file, which can be imported and recovery later

Export configuration

---

**Import configuration**

💡 Select configuration file, import to recover the configuration

File path:  No file chosen Import configuration

---

**Restore to factory setting**

💡 Restore to factory setting, all previous configuration will be lost

Restore to factory setting

## Restart Device

From here you can restart XT-2500AC or shutdown the device

The screenshot shows the 'Device Maintenance' menu on the left with 'Restart Device' highlighted. The main content area shows a 'Reboot device' button and a warning message: 'Before reboot the device, make sure that the device is not in the process of upgrading, otherwise the device may not be able to start and repair!'.

## Time Task

Set the timing operation of the gateway

The screenshot shows the 'Timed Task' configuration dialog box. It includes options to 'Enable' or 'Disable' the task, a 'Cycle execution' dropdown set to 'Select All', and checkboxes for days of the week (Sun, Mon, Tue, Wed, Thu, Fri, Sat). The 'Start time' field is empty. The 'Execution command' dropdown is set to 'Reboot', and the command field contains 'reboot'. A note specifies 'Time format: 24-hour system, (HH: mm), such as 13:10'. 'Confirm' and 'Cancel' buttons are at the bottom.



## Time Synchronization

Different time zones and main time servers can be selected

- Auth Internet Access
- Behavior Control
- Object Management
- Safety Protection
- Log Record
- VPN
- Device Maintenance
  - Firmware Upgrade
  - Modify Password
  - Authority Management
  - Ping Detection
  - Configure File Maintenance
  - Restart Device
  - Timed Task
  - Time Synchronization**
  - Cloud Configure

### Time synchronization

Configure the correct network time server domain name or IP, the device will be timed (30 minutes) synchronize with the server.

time zone: (GMT+03:00)Baghdad, Kuwait, Riyadh

Master time server: ntp.api.bz

Alternate time server: time.windows.com

Save configuration

Current device time: 2024-03-21 02:49

Local computer time: 2024-03-21 02:48

Synchronize time

## Cloud Configure

Cloud configuration will allow you to manage your XT-2500AC remotely.

Create account in the cloud management (<http://97.74.85.146:9090/>) and Configure cloud management in controller.

### MULTI-FUNCTION GATEWAY

Current operation Device Maintenance >> Cloud Configure

- Auth Internet Access
- Behavior Control
- Object Management
- Safety Protection
- Log Record
- VPN
- Device Maintenance

#### Cloud platform configure

Function enable:  Enabled,click to disable

Cloud server address:

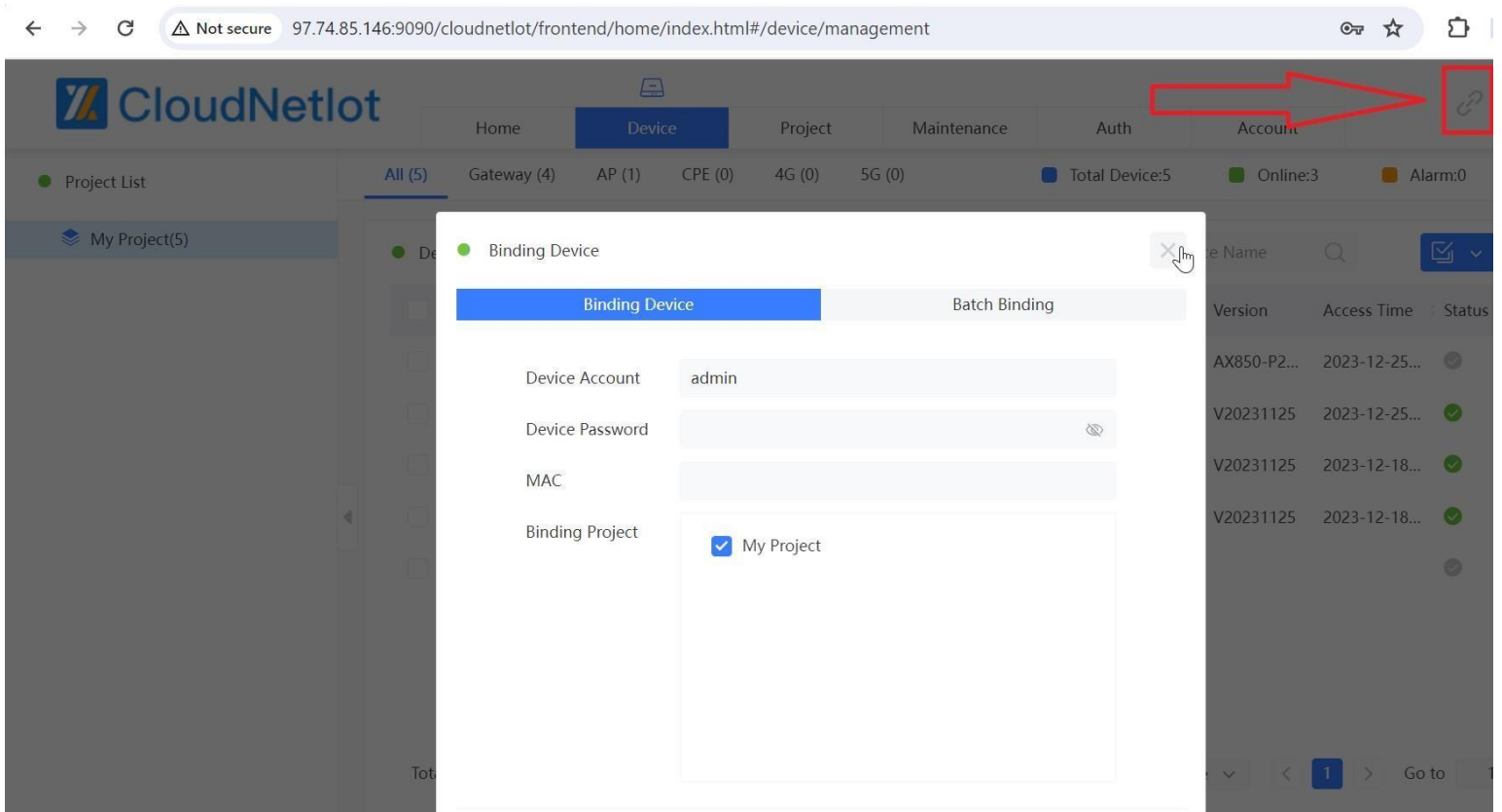
[Register](#)

[Save configuration](#)

- Firmware Upgrade
- Modify Password
- Authority Management
- Ping Detection
- Configure File Maintenance
- Restart Device
- Timed Task
- Time Synchronization

[Cloud Configure](#)

After logging successfully to your cloud management account successfully click on binding device as shown below.



Copy the active LAN MAC address from controller to setup in cloud management as shown in the figures below.

MULTI-FUNCTION GATEWAY Current operation System Status >> Device Info Refresh | Change password

**System Status** **Network interface status**

Device Info

Interface Status

LAN IP Flow

Application Flow

Network Configure

Flow Control Policy

AC Management

Auth Internet Access

Behavior Control

Object Management

Safety Protection

Log Record

VPN

Interface	Type	Link mode	IP address	MAC address	Receive speed	Send speed
WAN1	WAN port Online	1000M/Full duplex	89.203.21.208	94-09-D3-12-7F-A5	0.08 KB/S	0.01 KB/S
WAN2	WAN port Online	1000M/Full duplex	172.16.20.4	94-09-D3-12-7F-A4	0.12 KB/S	0.09 KB/S
WAN3	WAN port Online	1000M/Full duplex	192.168.202.2	94-09-D3-12-7F-A3	1.37 KB/S	0.98 KB/S
LAN3	LAN port	Disconnect	172.18.0.1	94-09-D3-12-7F-A2	0.00 KB/S	0.00 KB/S
LAN2	LAN port	Disconnect	172.17.0.1	94-09-D3-12-7F-A1	0.00 KB/S	0.00 KB/S
LAN1	LAN port	Disconnect	172.16.40.1	94-09-D3-12-7F-A0	0.00 KB/S	0.00 KB/S

**Device basic information**

Device ID: Y24190000467, Max Users:1024, Max AP can be managed:1024

Uptime: 4:35:3 up 0 days

Memory utilization: 19% 350.36MB/1.82GB

CloudNetlot

Home Device Project Maintenance Auth Account

All (5) Gateway (4) AP (1) CPE (0) 4G (0) 5G (0) Total Device:5 Online:3 Alarm:0 Offline:2

Project List

My Project(5)

Binding Device

Binding Device Batch Binding

Device Account admin controller username and password

Device Password .....

MAC 94:09:D3:12:7F:A0 Controller LAN MAC Address

Binding Project  My Project

After binding controller successfully, you can manage the settings remotely as shown below

The screenshot shows the CloudNetlot interface with the 'Device' tab selected. A table lists five devices. The second device, 'A\_latifMUK', has its 'Info' button highlighted with a red box. The table columns are: SN, MAC, IP, Name, Type, Mode, Version, Access Time, Status, and Config.

SN	MAC	IP	Name	Type	Mode	Version	Access Time	Status	Config
1	7C:27:3C:17:6B:6C	192.168.1.18	ap-xontel	AX850-P2	AP	AX850-P2...	2023-12-25...	✓	...
2	94:09:D3:12:7F:A0	172.16.40.1	A_latifMUK	AC-BW1000	GateWay	V20231125	2023-12-25...	✓	Info
3	7C:27:3C:48:B3:FE	192.168.8.1	hassanh	AC-BW520	GateWay	V20231125	2023-12-25...	✓	Unbind
4	7C:27:3C:48:B4:06	192.168.1.1	office	AC-BW520	GateWay	V20231125	2023-12-18...	✓	...
5	94:09:D3:11:70:06							✓	...

The screenshot shows the configuration page for device 'A\_latifMUK'. It displays device details like MAC, Mode, Name, and Type. Below this, there are tabs for 'User List', 'Alarm setting', and 'Other set'. The 'User List' tab is active, showing a table with columns for SN, Name, MAC, IP, Up/Down status, and Config. The table is currently empty.

SN	Name	MAC	IP	↑ Up	↓ Down	Config
Empty Data						

CloudNetlot

Home **Device** Project Maintenance Auth Account

Version: V20231125 CPU 0% Memory 17%

Uptime 00:00:35

MAC 94:09:D3:12:7F:A0 Name A\_latifMUK  
Mode GateWay Type AC-BW1000

User List Alarm setting **Other set**

Remote Management

Remote Management **Enable**

Remote connection

If no new window pop up after click the blue button, please **copy address** parts it into the browser address bar to open the remote management link.

CloudNetlot Converged Gateway

Not secure y24190000467.demo.yowifi.net:20110/index.htm

**MULTI-FUNCTION GATEWAY** Current operation System Status >> Device Info Refresh | Change password | Log out

System Status

Device Info

Interface Status

LAN IP Flow

Application Flow

Network Configure

Flow Control Policy

AC Management

Auth Internet Access

Behavior Control

Object Management

Safety Protection

Log Record

VPN

Device Maintenance

**Network interface status**

LAN1 LAN2 LAN3 WAN3 WAN2 WAN1

Interface	Type	Link mode	IP address	MAC address	Receive speed	Send speed
WAN1	WAN port Online	1000M/Full duplex	89.203.21.208	94-09-D3-12-7F-A5	0.13 KB/S	0.06 KB/S
WAN2	WAN port Online	1000M/Full duplex	172.16.20.4	94-09-D3-12-7F-A4	0.10 KB/S	0.07 KB/S
WAN3	WAN port Online	1000M/Full duplex	192.168.202.2	94-09-D3-12-7F-A3	1.34 KB/S	0.39 KB/S
LAN3	LAN port	Disconnect	172.18.0.1	94-09-D3-12-7F-A2	0.00 KB/S	0.00 KB/S
LAN2	LAN port	Disconnect	172.17.0.1	94-09-D3-12-7F-A1	0.00 KB/S	0.00 KB/S
LAN1	LAN port	Disconnect	172.16.40.1	94-09-D3-12-7F-A0	0.00 KB/S	0.00 KB/S

**Device basic information**

Device ID: Y24190000467, Max Users:1024 , Max AP can be managed:1024

Uptime: 4:39:3 up 0 days

Memory utilization: 19% 352.32MB/1.82GB

CPU utilization: 0%

Temperature: 28°C

Current user:admin[2.2.2.2] Device time:2023-12-25 18:03:55 System alert: The device is running normally!