

Ruijie Japan Cloud Service User Guide

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Audience

This manual is intended for:

- Network engineers
- Technical support and servicing engineers
- Network administrators

Obtaining Technical Assistance

- Ruijie Networks Website: https://www.ruijienetworks.com/
- Technical Support Website: https://ruijienetworks.com/support
- Case Portal: https://caseportal.ruijienetworks.com
- Community: https://community.ruijienetworks.com
- Technical Support Email: service_rj@ruijienetworks.com
- Skype: service_rj@ruijienetworks.com

Symbols

Important information. Contains helpful suggestions or references.



Use caution. Could result in equipment damage or data loss.

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User Guide Summary

1 Summary

Ruijie Cloud Service is Ruijie's easy and efficient cloud solutions for chain stores, small and medium-sized businesses and boutique hotels. The solutions include equipment deployment, monitoring, network optimization and operational lifecycle management; enabling customers with simple plug and play deployment and operation and maintenance. Meeting the needs for automatic cloud RF planning and user experience monitoring. At the same time it provides flexible wireless user access control features.

User Guide Supported Browser

2 Supported Browser

For browser, it is recommended to use the following versions or above.

Supported Browser	Version
Chrome	57.0.2987.133
Safari	10.1
Firefox	52.0.2

3 Addresses & Ports to be Permitted

Source IP	Destination	Src. port	Dst. port	Protocol	Description	Device using this rule
Your network	devicereg.ruijienetworks.co m devreg.ruijienetworks.com	Any	80, 443	ТСР	Ruijie Cloud login server	Ap/AC/Switc h/Gateway
Your network	cwmpsvr-japan.ruijienetworks.com	Any	80, 443	TCP	Ruijie Cloud server	Ap/AC/Switc h/Gateway
Your network	35.194.101.74 34.84.13.46	Any	10000-12 000	TCP	Ruijie Cloud server establishes the tunnel connection with the gateway	Gateway
Your network	cwmpsvr-japan.ruijienetworks.com devicereg.ruijienetworks.co m devreg.ruijienetworks.com	Any	3478, 3479,	UDP	Ruijie Cloud server delivers the CLI commands to the device	Ap/AC/Switc h/Gateway
Your network	cdn-japan.ruijienetworks.co	Any	80, 443	TCP	Ruijie Cloud authentication server	STA
Your network	rylog-japan.ruijienetworks.c	Any	80, 443	TCP	Device log upload	AP,AC, Switch, Gateway

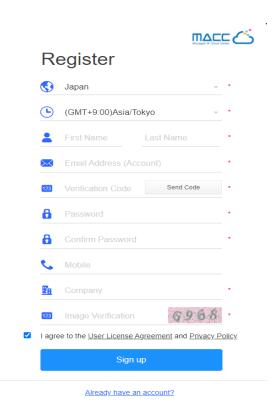
4 Register and Login

4.1 Register

1. Visit https://cloud-japan.ruijienetworks.com.

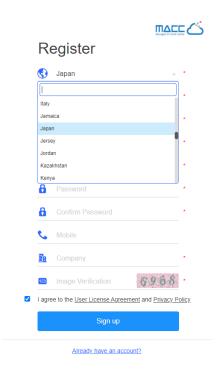


2. Click Sign up to open the Register page.

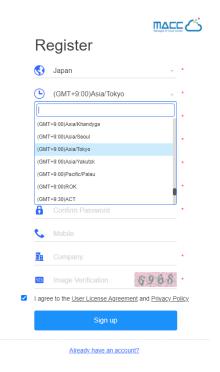


3. Select your country or region.

Note: The Server Hosting is determined by country. Please choose your country correctly, or the device may fail to go online. When the selected country or region does not match the current server, the page will automatically refresh without affecting the registration.

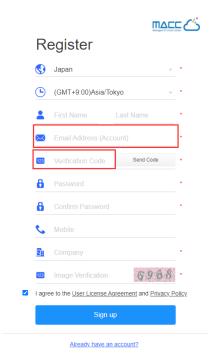


4. Select your time zone.



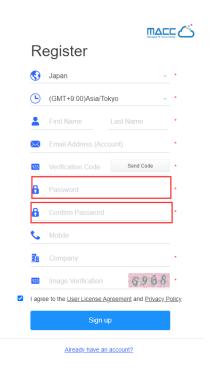
 Enter your Email address, click Get Code, and enter the security code contained in the Email into the Verification Code box.

Note: One email address can be registered once only.



6. Enter and confirm the password.

Note: The password should be a combination of two or more items among numbers, letters and special characters in the length of 5 to 12 characters. Space is not supported.



7. Fill in the rest required information and click **Sign up**. If your information is verified and saved, the registration succeeds.

4.2 Login

1. Visit https://cloud-japan.ruijienetworks.com.



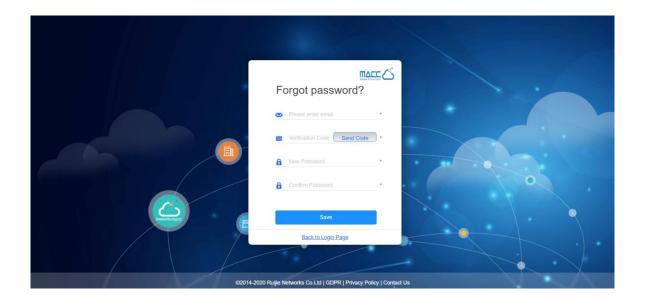
2. Enter your username and password, and click **Login**. After the information is verified, you can access the system.

4.3 Forgot Password

1. Visit https://cloud-japan.ruijienetworks.com.



2. Click **Forgot password?** to open the **Forgot password** page.



3. Enter the Email address for retrieving the password. Click **Get Security Code**, and enter the security code contained in the Email into the **Security Code** box.

Note: The Email address is generally the same as the account.

4. Enter and confirm the new password.

Note: The password should be a combination of two or more items among numbers, letters and special characters in the length of 5 to 12 characters. Space is not supported.

5. Click **Save**. If your information is verified and saved, you can use the new password to log into the system.

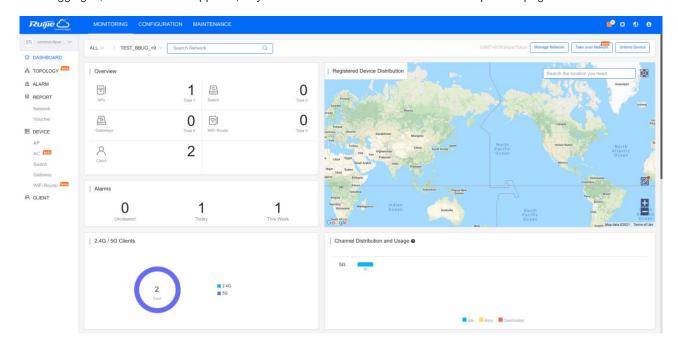
5 Monitoring

This part enables you to monitor the following items:

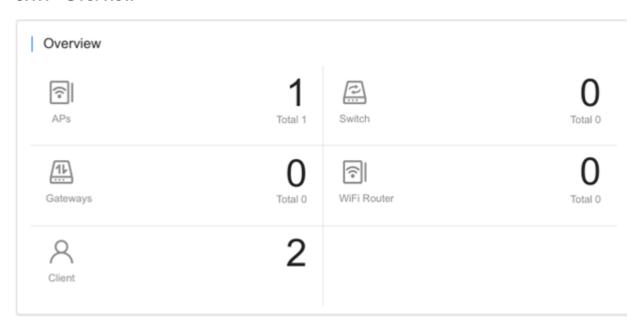
- DASHBOARD
- TOPOLOGY
- ALARM
- REPORT
- DEVICE
- CLIENT

5.1 Dashboard

After logging in, the **Dashboard** appears, or you can click **Dashboard** in the menu to open the page.



5.1.1 Overview



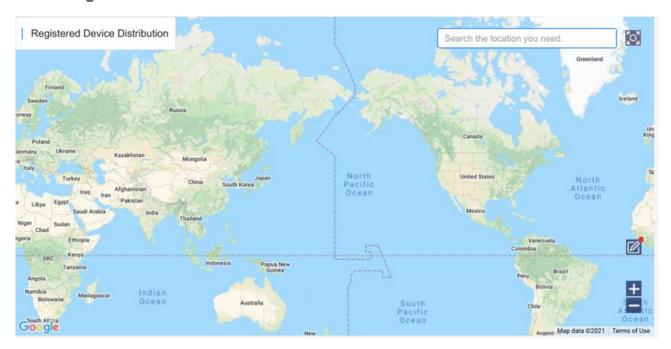
Overview displays the statistics of APs, switches, gateways and clients. The upper number indicates the number of online devices, and the lower number indicates the total number of devices.

5.1.2 Alarms

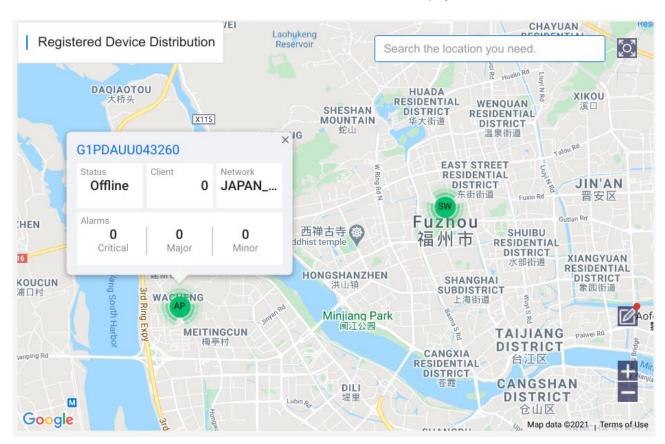


Alarms displays the number of uncleared alarms, new alarms today and total alarms generated this week.

5.1.3 Registered Device Distribution



The map displays the device distribution by default. Devices are displayed in network, and the number on icon indicates the device number. Point to the icon, and the device and alarm number are displayed.



Click to bind networks. In the **Unbound Network List**, you can drag a device to the map to bind the location; on map, you can drag a network to change its location, or click **Unbind** to unbind the location.

5.1.4 2.4G / 5G Clients

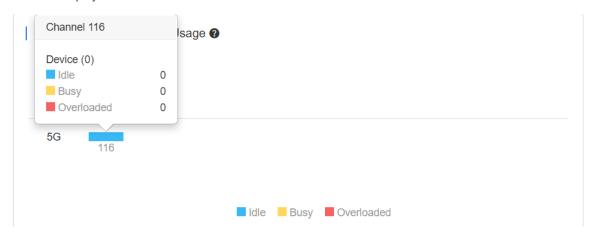


The chart displays the statistics of clients using 2.4G and 5G.

5.1.5 Channel Distribution and Usage



The chart displays the channel statistics.



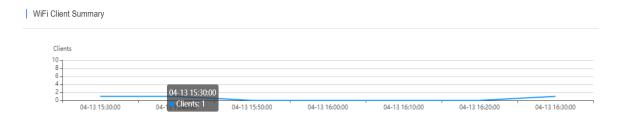
Point to a channel, and more details appear. The channel usage is graded as:

Idle: 0% to 59%

Busy: 60% to 79%

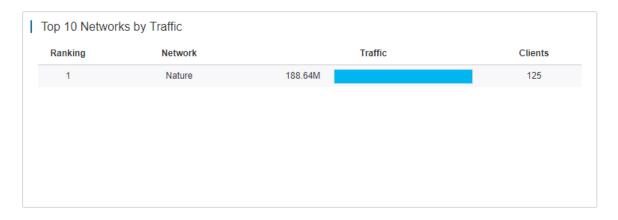
Overload: 80% to 100%

5.1.6 Client Summary



The chart displays the trend of recent clients.

5.1.7 Top 10 Networks by Traffic



The table displays the top 10 networks ranked by traffic.

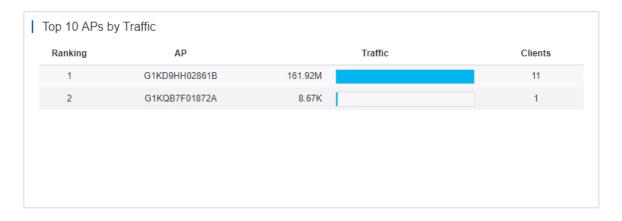
5.1.8 Top 10 Clients by Traffic

Top 10 WiFi Clients by Traffic



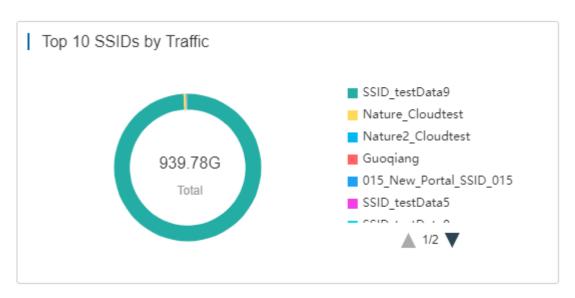
The chart displays the top 10 clients ranked by traffic.

5.1.9 Top 10 APs by Traffic



The table displays the top 10 APs based on traffic.

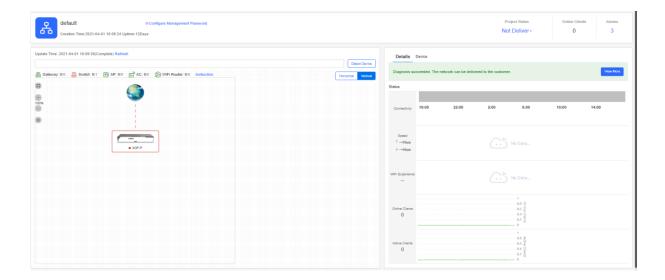
5.1.10 Top 10 SSIDs by Traffic



The chart displays the top 10 SSIDs based on traffic.

5.2 Topology (beta)

Topology displays the network topology and status, and offers the project report.



5.2.1 Data Monitoring

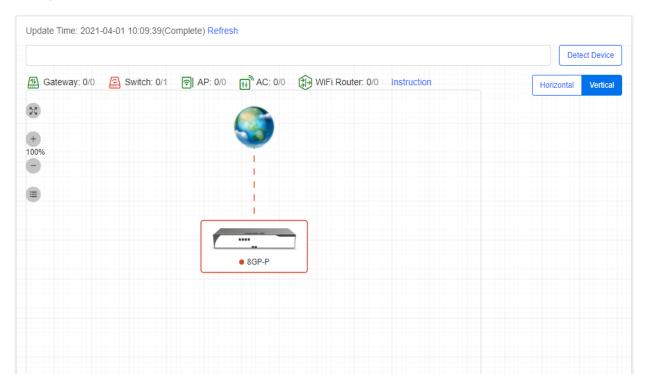
Basic Information

Including the creation time, uptime, quantity of online clients and alarms.



Network Topology

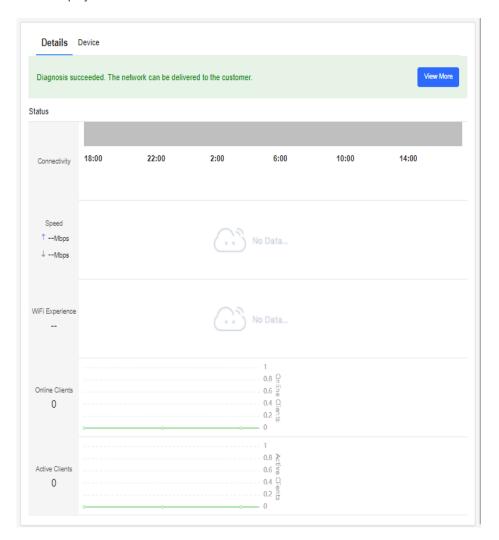
The topology displays the device connection and status. Click a device, and its detailed information will be displayed on the right.

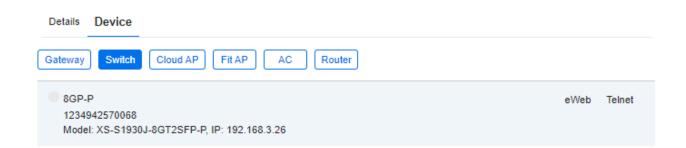


Details and Device

Details displays connectivity, network speed, WiFi experience, and online/active client quantity.

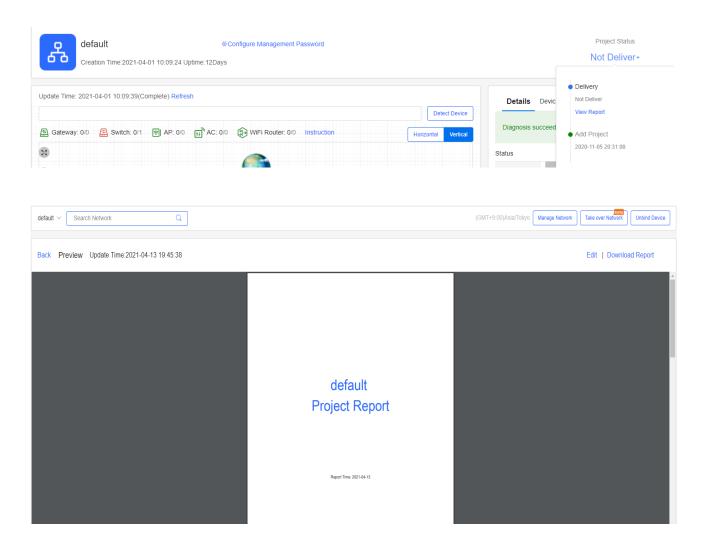
Device displays the data of different kinds of devices.





5.2.2 Report

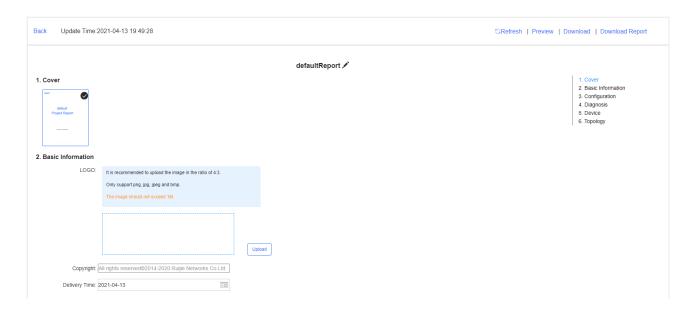
Point to **Project Status**, and click **View Report**.



5.2.2.1 Edit

You can download or edit the report. Click Edit on the upper right corner to customize the report.

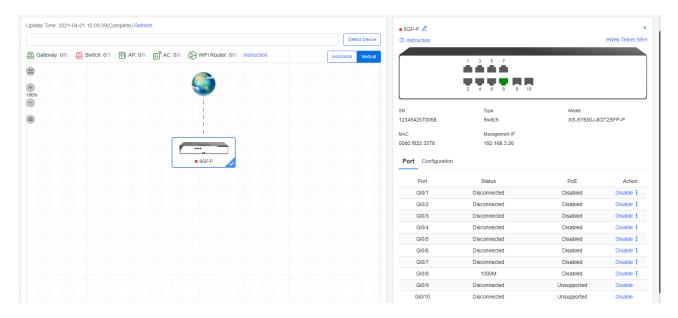




5.2.3 New Device

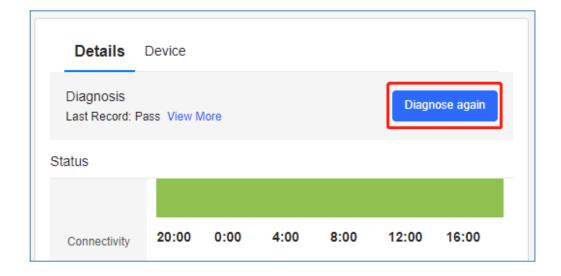
5.2.3.1 Device Information

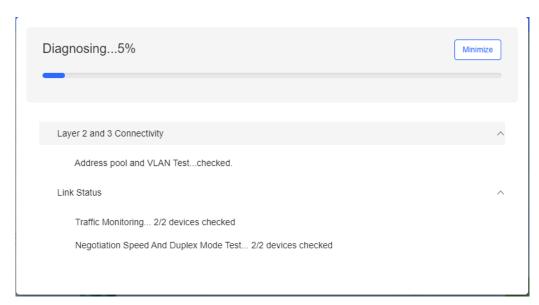
Click a device in the topology to check its configuration.



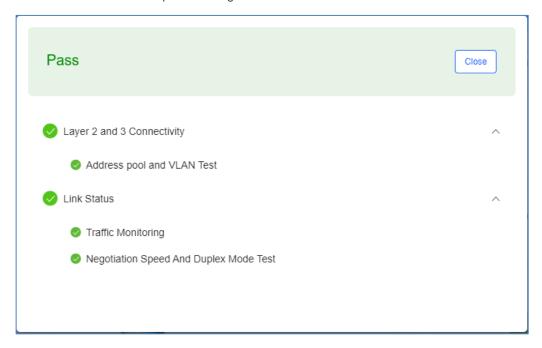
5.2.4 Diagnosis

The function diagnoses the network connectivity and link status. Click **Start Diagnosis** or **Diagnose again** on the right to start diagnosis.





Click **View More** to check the previous diagnosis results.



5.3 Alarm

5.3.1 Alarm List



- Alarm List displays the cleared alarms. Alarm List supports the search based on AP serial number, alarm type, alarm source (network/device), and alarm generation time.
- You can configure thresholds in Alarm Settings.

The following describes the conditions for generating alarms.

Туре	Condition	Description
Device goes offline	An AP goes offline.	The AP is disconnected from the Cloud
		Service, or the AP is powered off.
Device goes online and	The online/offline change times of an AP	The connection between the AP and the
offline continually	exceeds the default threshold within two	system is unstable or the AP has a firmware or
	hours.	hardware fault.
All devices are offline	All APs in a network go offline.	
High channel usage on AP	The RF channel utilization exceeds	RF channel utilization is high and interference
	80%.	is strong. It is recommended to change the
		channel.
System	The CPU or memory usage of	For AP, the default threshold for CUP usage is
usage(CPU/memory	AP/switch/gateway exceeds the	85% and for memory usage is 85%.
usage) above threshold	threshold.	For switch, the default threshold for CUP
		usage is 50% and for memory usage is 65%.
		For gateway, the default threshold for CUP
		usage is 50% and for memory usage is 65%.
		Custom values are not supported.
Switch loopback detected	A loop occurs on the switch.	
(RLDP)		
Abnormal network access	The gateway port fails to ping the	When the Ping test failed for the specified
on gateway	specified domain or IP for several times.	times, the alarm is sent. The times and
		domain/IP address can be configured
		manually.
High packet loss rate on	The packet loss rate of gateway	When the packet loss rate exceeds the
gateway	exceeds the threshold.	specified percentage of threshold for several
		times in 5 minutes, the alarm is sent. The
		times and threshold can be configured

		manually.
Uplink rate above threshold	The uplink rate exceeds the specified	When the uplink rate exceeds the specified
on gateway	percentage of threshold for several	percentage of threshold for several times, the
	times.	alarm is sent. The threshold, times and
		percentage can be configured manually.
Downlink rate above	The downlink rate exceeds the specified	When the downlink rate exceeds the specified
threshold on gateway	percentage of threshold for several	percentage of threshold for several times, the
	times.	alarm is sent. The threshold, times and
		percentage can be configured manually.
SIM card traffic exceeds	SIM card traffic exceeds a default	Only MTFi devices support this alarm.
limit	threshold.	
GPS signal is not found	GPS signal is not found.	Only MTFi devices support this alarm.
CPU usage is high	CPU usage exceeds a default threshold.	Only MTFi devices support this alarm.
Memory usage is high	Memory usage exceeds a default	Only MTFi devices support this alarm.
	threshold.	
Disk space usage is high	Disk space usage exceeds a default	Only MTFi devices support this alarm.
	threshold.	
Flash usage is high	Flash usage exceeds a default	Only MTFi devices support this alarm.
	threshold.	
CPU temperature is high	CPU temperature exceeds a default	Only MTFi devices support this alarm.
	threshold.	

5.3.2 Ignore Alarm

Select the alarm you want to ignore in **Alarm List**, and click the **Ignore Alarm** button. A popup window will be displayed. After click **OK**, the alarm will be ignored.

5.4 Report

5.4.1 Network

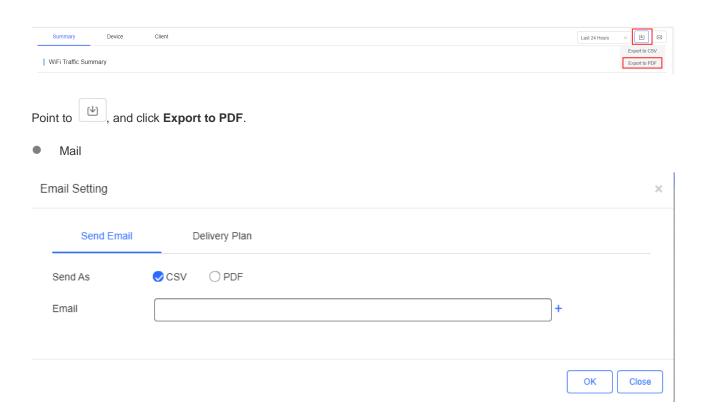
Network is divided into 3 parts: **Summary**, **Device** and **Client**. Except the statistical charts with that display real-time data and **Client** > **Experience** chart that only displays data in the last 7 days, all other charts support searching data in the last 94 days with the same query conditions. All charts automatically refresh every minute. Reports can be exported into CSV or PDF files, or sent by Email.

Export to CSV

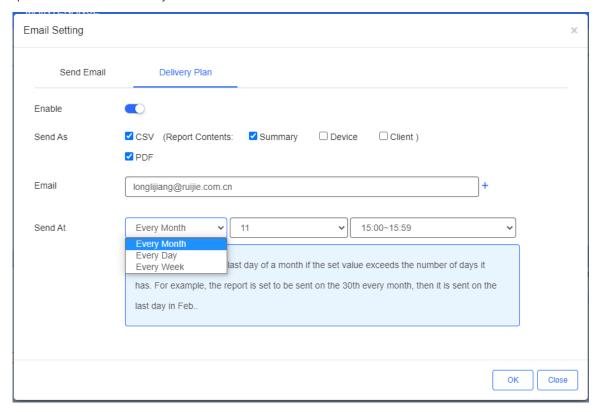


Point to , and click **Export to CSV**.

Export to PDF



Click And select **Send Email**. Choose a file type for the report, then enter Email addresses. After click **OK**, the report will be sent immediately.



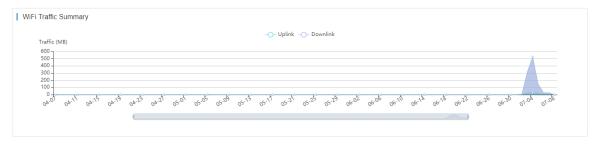
Click , and select **Delivery Plan**. Click **Enable** to send the report on the specified time.

Report includes the data of Summary, Device and Client, and supports CSV and PDF file formats.

Up to three Email addresses are supported.

Reports can be sent every month, week or day.

Summary > WiFi Traffic Summary



The uplink/downlink traffic summaries of the selected network during the specific period.

Uplink: Traffic directed from internal network to external network.

Downlink: Traffic directed from external network to internal network.

Summary > Channel Distribution and Usage



The channel distribution and usage of the selected network.



Point to a channel to view more details. The channel usage is graded as:

Idle: 0% to 59%

Busy: 60% to 79%

Overload: 80% to 100%

Summary > SSIDs by Client

S	SIDs by	Client			
	Ranking	SSID		Clients	Traffic
	1	Nature_Cloudtest	10		770.35M
	2	A_oneclick	9		21.48M
	3	nature1	7		18.69K
	4	A_voucher	7		2.55M
	5	wang1	7		49.51K
	6	A_oneclick123	6		23.38K
	7	nateure2	4		20.68K

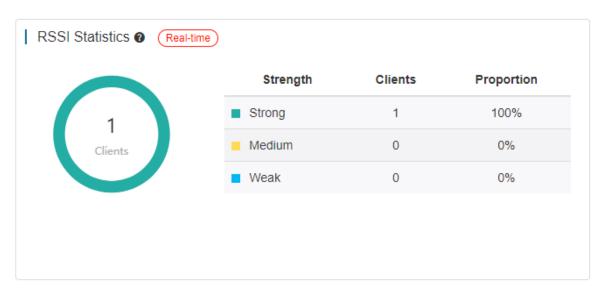
The SSIDs ranked by client number of the selected network during the specific period.

Summary > SSIDs by Traffic

SSIDs by	Traffic			
Ranking	SSID		Traffic	Clients
1	Nature_Cloudtest	770.35M		10
2	Venus_Cloudtest	181.04M		1
3	A_oneclick	21.48M		9
4	A_voucher	2.55M		7
5	wang1	49.51K		7
6	A_oneclick123	23.38K		6
7	nateure2	20.68K		4

The SSIDs ranked by traffic of the selected network during the specific period.

Summary > RSSI Statistics



The wireless signal strength of the selected network during the specific period. The signal intensity is defined below:

Weak: RSSI ≤ -80dB

Medium: -80dB < RSSI ≤ -70dB.

Strong: RSSI > -70dB

Device > Device Summary

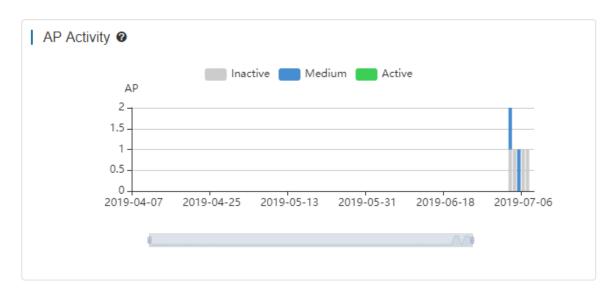
Device Summary Real-time



Device	Total	Online	Offline	Not Online Yet
■ AP	20	0	0	20
Switch	0	0	0	0
Gateway	0	0	0	0
AC	0	0	0	0
■ WiFi Router	3	0	0	3

The online status of devices of the selected network during the specific period.

Device > AP Activity



The AP activity of the selected network during the specific period. The chart does not support searching data in the last 24 hours.

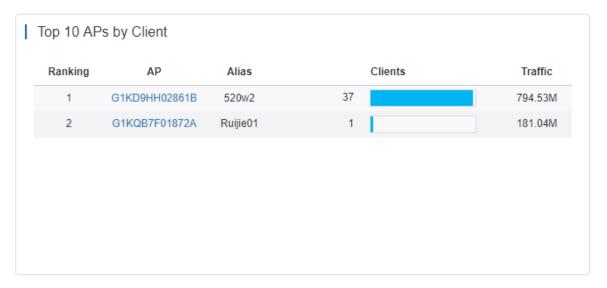
AP activity is evaluated based on the number of active clients accessing the AP in a day. APs not associated with any clients are not calculated.

Inactive: <5 active clients

Medium: 5-9 active clients

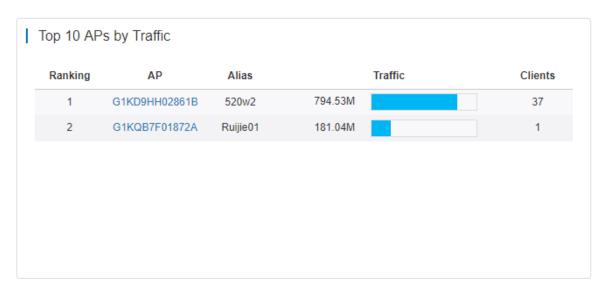
Active: ≥10 active clients.

Device > Top 10 APs by Client



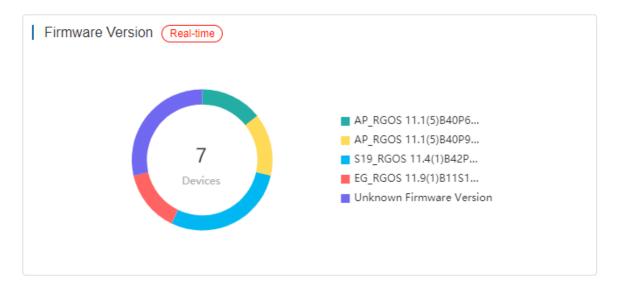
The top 10 APs ranked by client number of the selected network during the specific period.

Device > Top 10 APs by Traffic



The top 10 APs ranked by traffic of the selected network during the specific period.

Device > Firmware Version



The proportion of firmware versions of the selected network during the specific period.

Device > Hardware Version



The proportion of hardware versions of the selected network during the specific period.

Device > PoE Utilization



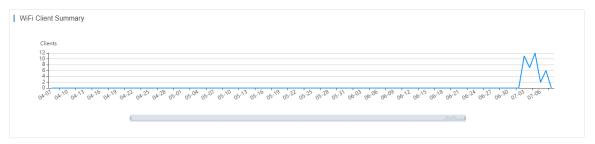
The numbers of PoE switches above and below the selected utilization percentage.

Device > PoE Power Summary



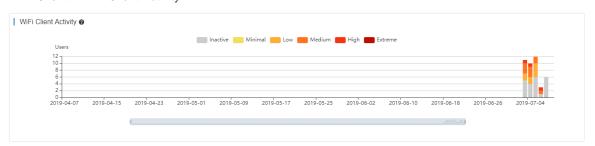
The power summary of the entire PoE device, including the total power and used power.

Client > WiFi Client Summary



The client summary of the selected network during the specific period.

Client > WiFi Client Activity



The client activity of the selected network during the specific period. The chart does not support searching data in the last 24 hours.

Client activity is evaluated based on online duration and traffic volume (from highest to lowest):

Inactive: ≤100KB traffic

Minimal: Any time and 100KB traffic

Low: 1h/d and 500K traffic

Medium: 2h/d time and 2M traffic

High: 4h/d time and 5MB traffic

Extreme: 8h/d time and 10MB traffic

Client > 2.4G / 5G Clients



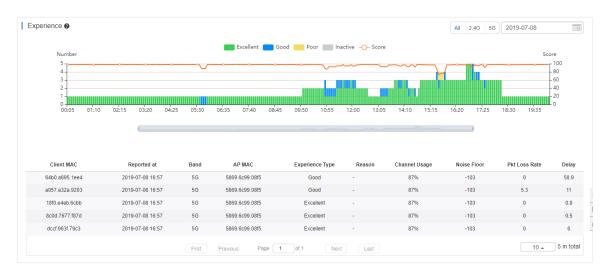
The proportion of STAs using 2.4G/5G of the selected network during the specific period.

Client > Top 10 WiFi Clients by Traffic

Ranking	MAC	Alias		Traffic	Uptime
1	64b0.a695.1ee4	Venus	472.79M		5h 32m 33s
2	a057.e32a.9203	-	395.83M		11h 59m 12s
3	3045.9609.0557	Nature	88.52M		4h 57m 0s
4	8c0d.7677.f87d	-	11.96M		28h 4m 53s
5	f018.9884.c16d	-	3.83M		1h 16m 4s
6	8c85.9090.0e7b	-	2.03M		0h 40m 46s
7	18f0.e4eb.6cbb	Venus	240.47K		0h 49m 52s

The top 10 clients ranked by traffic of the selected network during the specific period.

Client > Experience



The experience status during the specified time and collects data every 5 minutes. You can switch between 2.4GHz and 5 GHz.

Client information: Click an indicator bar to display more information.

Excellent: HDV and online game are available.

Good: communication application, Web page and VoIP are available.

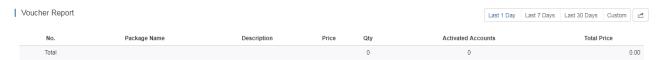
Poor: go offline frequently or hard to go online.

Inactive: check whether a client is inactive according to the traffic and power usage.

Score: Take the parameters of client delay, client packet loss, signal strength and so on as the reference, and then use the SVM algorithm to get the score.

5.4.2 Voucher

The **Voucher Report** records the sales of voucher during the specified period.



Click to export the **Voucher Report** in PDF format.

Qty: Number of vouchers generated by each package in the specified period.

Activated Accounts: Number of vouchers activated by each package in the specified period.

Total Price: Total price of vouchers activated by each package in the specified period.

Total: Number of vouchers generated by all packages, number of vouchers activated by all packages and total amount of vouchers activated by all packages.

5.5 Device

Choose MONITORING > DEVICE to display the Devices page, and select a network on the top to filter devices.

5.5.1 AP

5.5.1.1 AP List

Non-apartment Scenario



The **AP List** displays basic device information, including online/offline status, SN, configuration status, MAC, alias, management IP, public IP, client quantity, network, firmware version, offline time, model and description.

Apartment Scenario



The **AP List** displays basic device information, including the online/offline status, SN, configuration status, MAC, alias, management IP, public IP, client number, network, firmware version, offline time, model, building name, room, remark and description.

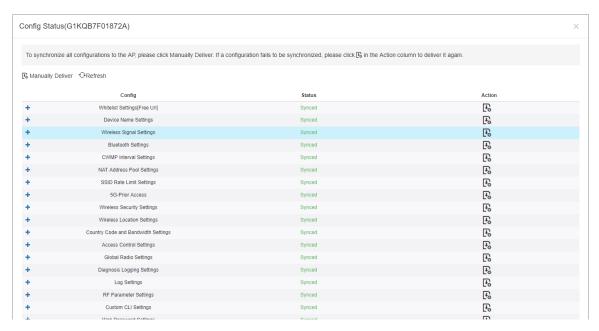
The **AP List** automatically refreshes every minute. Click function.

Auto Refresh: to enable/disable the auto refresh

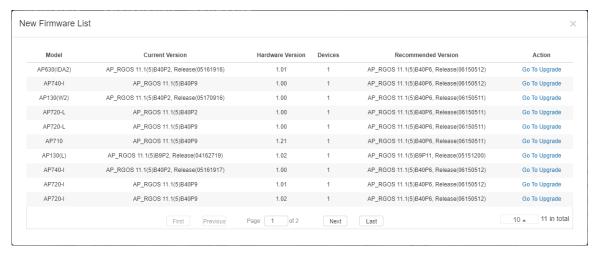
Above the list is the **Add AP**, **Web CLI and eWeb** functions. Click to display the **Move to**, **Delete**, and **Reboot** functions. For more information, refer to **Basic AP Operations**.

The **Search** function supports fuzzy queries based on the serial number, alias and description, and also supports queries based on online/offline status.

Click the record in the **Config Status** column to open the **Config Status** page. On this page, you can deliver one or all configurations.



The number of devices which have available firmware for upgrade is displayed on the upper-left corner of the AP List page. Click New Firmware to display the New Firmware List. Then click Go To Upgrade to enter the MAINTENANCE > UPGRADE > Upgrade page.



For more information, refer to Device Details.

5.5.1.2 Device Details

Click the serial number in the device list to open the details page for a single device. The page displays detailed device information, including basic information, connectivity, traffic summary, client data, online/offline status, RF information, and device log.

The AP information is described as:

AP Info



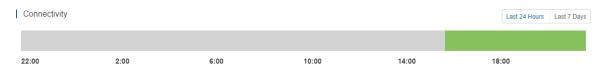
The basic information includes serial number, MAC address, management IP address, device model, configuration status, firmware version, hardware version, alias, and description.

Static



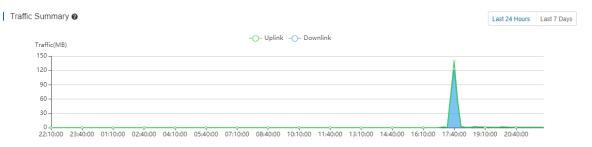
The performance data includes the AP connection status, online client count, CPU usage, and memory usage.

Connectivity



AP connectivity refers to the connectivity (online status) between AP and Cloud Service within a period (1 day or 7 days).

Traffic Summary



You can select to view the AP traffic statistics in the last 24 hours or the last 1 week.

Radio List



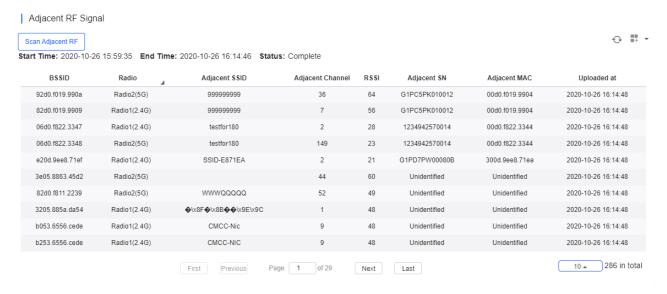
The **Radio List** page displays the RF information, including the RF type, current channel, power (percentage), channel bandwidth, and channel usage.

Client List



The client list displays information about clients currently associated with the APs, including the IP address, MAC address, SSID, RSSI, traffic, online/offline status, and terminal type.

Adjacent RF Signal



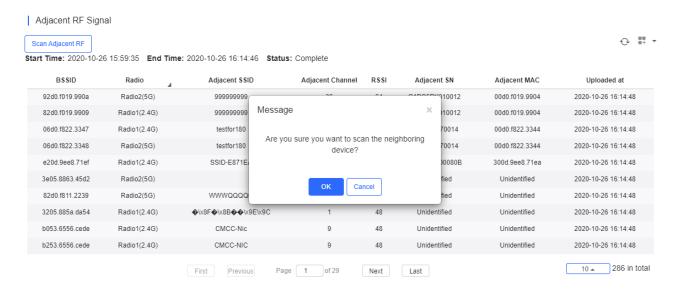
The **Adjacent RF Signal** page displays the RF signals (scanned BSSID) emitted by adjacent APs. The **Radio**, **Adjacent Channel**, and **RSSI** in the list are scanned information. If a signal comes from the AP managed by the cloud controller, the adjacent AP SN and adjacent MAC address will be identified and displayed; otherwise, these two items are in an unidentified state.

You can trigger APs to scan adjacent RF signals, and identified and unidentified RF signals can be observed. There are two known scenarios:

- Testing the number and strength of RF signals emitted by neighboring APs that are not managed by the system to predict a degree of RF interference.
- 2) Identifying RF signals emitted by neighboring APs managed by the system to diagnose the RF functions and powered-on status of neighboring APs.

On the device details page, you can perform adjacent RF scanning and check the scanning result. The following steps describe the method for scanning the adjacent RF signals:

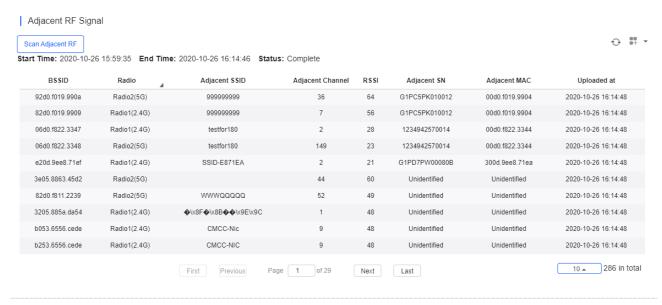
Step 1. Click Scan Adjacent RF to trigger an AP to scan adjacent RF signals.



Step 2. After the AP is triggered, the trigger time, expected completion time, and status are displayed in the status bar. Then wait for the AP to finish scanning and send the results to the cloud controller.

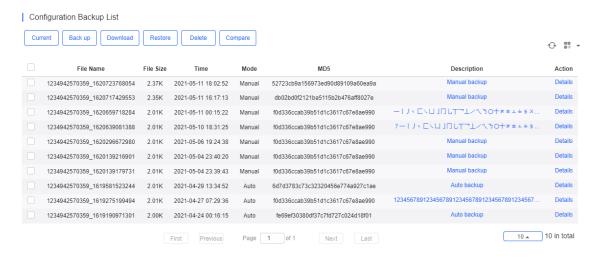


Step 3. A list of RF signals scanned by the AP is displayed after the scanning. The list supports a filtering function based on the RF type (2.4 GHz/5 GHz).



- The system stores the latest scanning results, which overwrites earlier data.
- i If the adjacent AP SN and MAC address are unidentified, it indicates that the RF source is not managed by the system; otherwise, the RF signal is emitted by an AP.
- Configuration Backup List

The function is supported only in the apartment scenario.



The backup records include configuration file name, size, time, mode and MD5.

Click **Current** to display the current configuration. Click **Backup** in the **Config Details** page to back up the current configuration.

```
version AP_RGOS 11.9(4)B1P3, Release(07211112)
!
errdisable recovery interval 300
!
wqos fs enable
fair-schedule
rldp enable
!
ipv6 access-list _ipv6passthrough
10 deny ipv6 any any
!
wids
!
black-white-list
.
```

Click Back up and then click OK in the message box to back up the current configuration.



Select one record, and click **Download** to download the configuration file.

Select one record, and click **Restore** to restore the current configuration.

Select one or multiple records, and click **Delete** to delete the backup record.

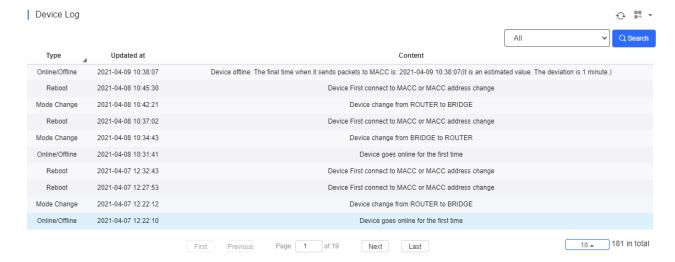
Select two records, and click **Compare** to compare the differences.



Description can be edited. Click Details in the Action column to check the backup configuration.



Device Log



The device log records the historical operations, and currently supports the online/offline records, restart records, and upgrade records, and supports queries based on the log type and period.

5.5.1.3 Basic AP Operations

Add AP



Select the network, and click Add. Both batch import and manual add are supported.

Non-apartment Scenario

To batch import APs, click **Download Template** to download the template, enter AP information, and click **'.xls' File** to import the template.

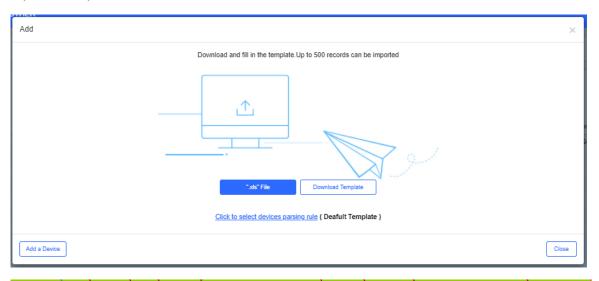


To manually add APs, click **Add a Device**, enter SN and alias of the AP, and click **OK**. Click to add multiple APs.



Apartment Scenario

To batch import APs, click **Download Template** to download the template, enter AP information, and click **'.xls' File** to import the template.



Model SN MAC PN SSID SSID Password Alias Room Building Name Remark

Model: device model, optional

SN: device serial number, mandatory

MAC: device MAC address, optional

PN: device part number, optional

SSID/SSID Password: support up to 4 SSIDs/SSID passwords, and each SSID and password need to be separated by ",",

optional

Alias: device alias, optional

Room: the room that installs the device, optional

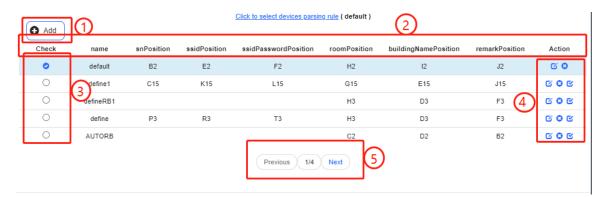
Building Name: the building that installs the device, optional

Remark: device remark, optional

You can also customize the template in EXCEL file to import devices. In order to parse the EXCEL file correctly, you should first create and specify the parse role.

Click Click to select devices parsing rule, and a new window pops up.

There will be one default rule.



1. Add button: Add a new rule

2. Menu bar: Display rule content

Name: User defined name

• snPosition: Specify the starting position of SN in template

ssidPosition: Specify the starting position of SSID in template

ssidPasswordPosition: Specify the starting position of SSID's password in template

roomPosition: Specify the starting position of room number in template

buildingNamePosition: Specify the starting position of building name in template

RemarkPosition: Specify the starting position of remark in template

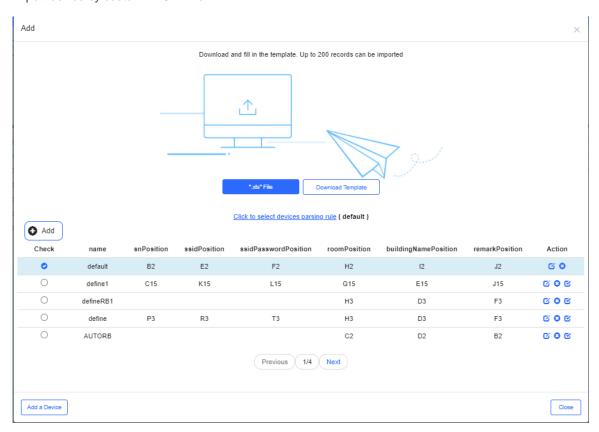
If an entry is left empty, it will not be imported when importing the template. For example, ssidPosition will not be imported if it is empty.

**User can customize the EXCEL parsing rule from columns A to Z and rows 1 to 15.

- 3. Check box: Only one rule can be selected at a time
- 4. Rule control button:

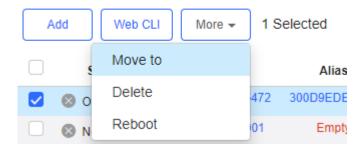
- Edit the rule
- Delete the rule
- Set the rule as default rule
- 5. Page up and down button

Import device by custom EXCEL file.

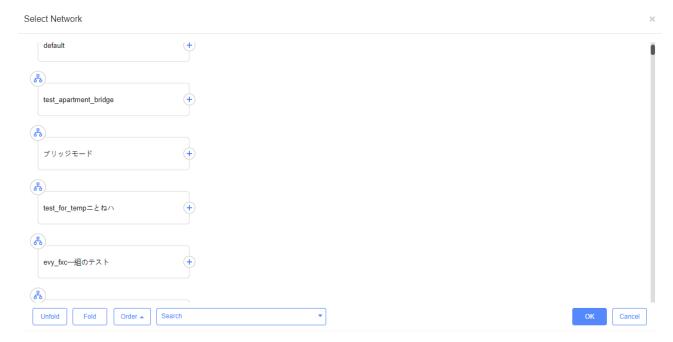


Move to

AP List

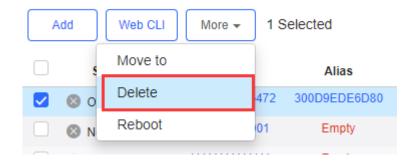


Select one or multiple devices in the AP List, click More > Move to, select the new network and click OK.



Delete

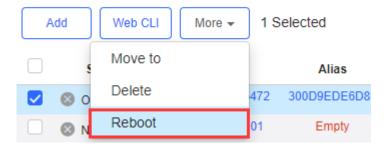
AP List



Select one or multiple devices in the AP List, click More > Delete and click OK.

Reboot

AP List



Select one or multiple devices in the AP List, and click Reboot.

5.5.2 AC (beta)

5.5.2.1 AC List



The **AC List** displays basic device information, including online/offline status, SN, alias, management IP, MAC, public IP, network, firmware version, offline time, model and description.

Auto Refresh:

The AC List automatically refreshes every minute. Click to enable/disable the auto refresh function.

Above the list are the **Add, Web CLI, eWeb** and **Upgrade** functions. Click to display **Reboot, Export** and **Delete** functions. For more information, refer to **Basic AC Operations**.

The Search function supports fuzzy queries based on the serial number, alias and description.

5.5.2.2 Device Details

Click the serial number in the device list to open the details page for a single device.

- eWeb
- Device Config



Click eWeb to open the eWeb system in a new window.

Telnet

Device Config

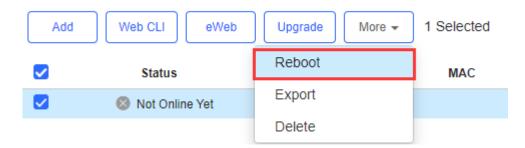


Click Telnet to connect to AC by Telnet protocol. Enter CLI commands to configure the AC.



More > Reboot

AC List (Click "SN" to view details)



Click **More** > **Reboot** to restart the AC.

Refresh



Click to refresh all data in the page.

Port Panel



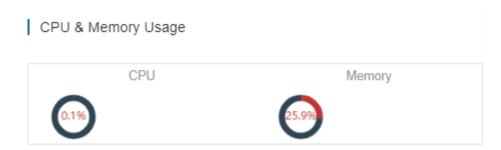
The port panel imitates the actual AC panel, displaying the port type and status.

Basic



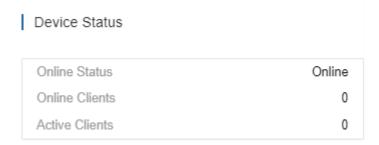
Basic information includes the alias, model, SN and other information. Alias, MGMT Password and Description can be edited.

Overview > CPU & Memory Usage



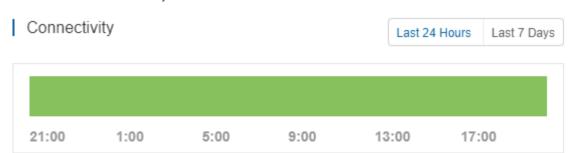
CPU & memory usage are displayed here.

Overview > Device Status



Device status includes online status, online clients and active clients.

Overview > Connectivity



Connectivity refers to the connectivity (online status) between AC and Cloud Service within a period (1 day or 7 days).

Overview > CPU/Memory Summary



CPU/memory summary over the 24 hours are displayed.

Overview > Device Log



The device log records the historical operations, including online/offline, restart, upgrade and VLAN change, and supports queries based on log type and time.

Overview > Config Log



The Config log records the historical configuration delivery, and supports queries based on status and time.

Port > Speed Summary



Uplink & downlink speed of port are displayed. This page supports queries based on day, week and month. Click refresh the summary.

G

Port > Port Status



Port information includes port name, VLAN etc.

Config > AC Configuration Backup List

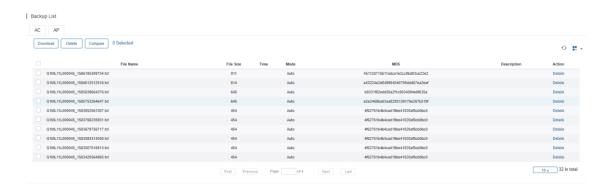


The backup records include configuration file name, size, time, mode and MD5.

Click **Current** to display the current configuration. Click **Back up** in the **Config Details** page to back up the current configuration.

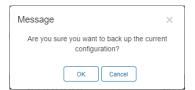


Config > AP Configuration Backup List



The backup records include configuration file name, size, time, mode and MD5.

Click Back up and then click OK in the message box to back up the current configuration.



Select one record, and click **Download** to download the configuration file.

Select one record, and click **Restore** to restore the current configuration.

Select one or multiple records, and click **Delete** to delete the backup record.

Select two records, and click Compare to compare the differences



- Tunnel > Create Tunnel
- Create Tunnel



Select the tunnel type and click Create Tunnel. The tunnel types include Telnet, eWeb and SSH.

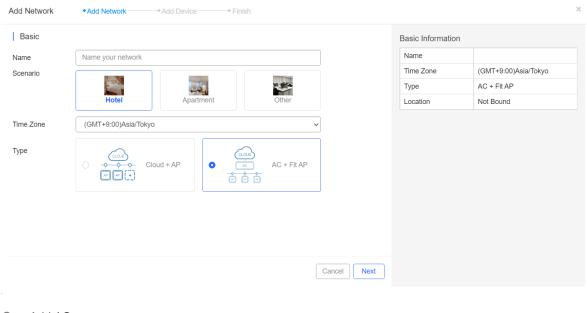
Tunnel > Tunnel List



Tunnel information includes tunnel type, host, port, destination device, expiration time and status. Click **Re-create** in the **Action** column to re-create a tunnel. Click **Telnet/eWeb** in the **Action** column to open the corresponding page.

5.5.2.3 Basic AC Operations

Add AC Network



Add AC



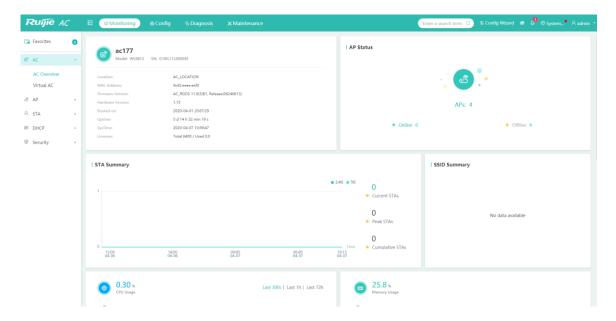
Click Add, enter the SN and Alias, and click OK to add an AC to the network. Only one AC can be added to a network.



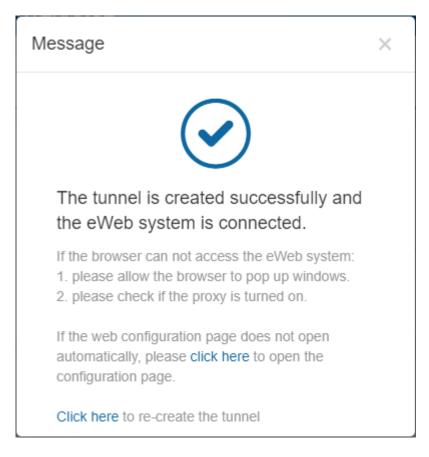
eWeb



Select the device and click **eWeb**. The system will connect to AC and automatically open the eWeb page in a new window.



If a tunnel is created successfully but the eWeb page does not automatically open, a message is displayed as below. The user can manually click the link to open the page.



Reboot



Select the device in the AC List, click More > Reboot and click OK.

Web CLI



Select the device to be managed by CLI command, click **Web CLI**. The **Web CLI** page provides commonly-used CLI commands on the left. Click the command, or manually enter the command and click **Send**. Only one AC can be configured at a time.

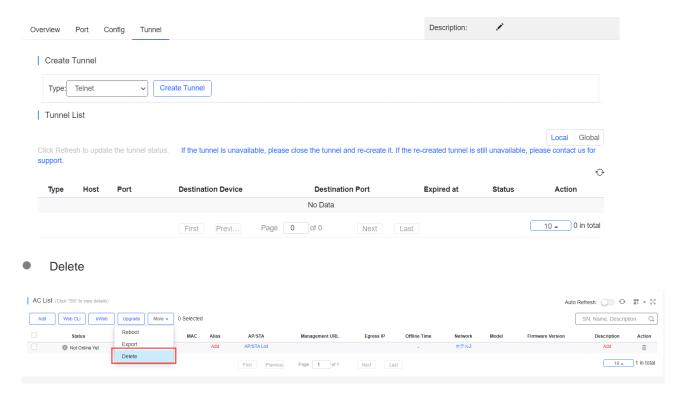
Tunnel Config



The user can create a Web-based tunnel to enter the eWeb system of an AC for more monitoring and management functions.

Note: If any security system exists in the network, such as a firewall, the traffic of destination TCP port 10000-10300 should be permitted.

Select the device for tunnel management, and click **More** > **Tunnel Config**. In the **Tunnel Management** page, only the **Web** type can be selected now, and the **Tunnel List** displays the tunnels already created.

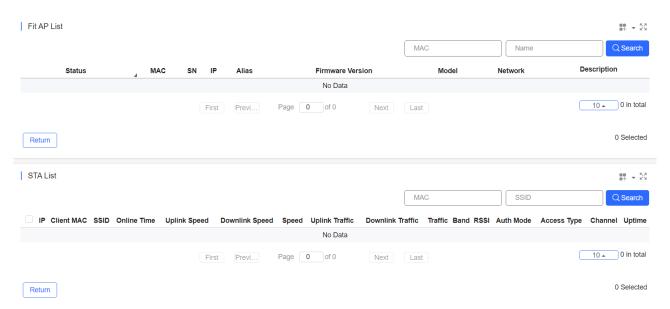


Select the device in the AC List, click More > Delete and click OK.

5.5.2.4 AP / STA List

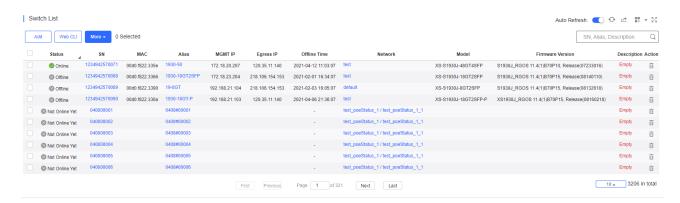


Click AP/STA List to display AP and STA list.



5.5.3 Switch

5.5.3.1 Switch List



The **Switch List** displays basic device information, including the online/offline status, SN, MAC, alias, management IP & public IP, offline time, network, model, firmware version and description.

The **Switch List** automatically refreshes every minute. Click function.

Auto Refresh: to enable/disable the auto refresh

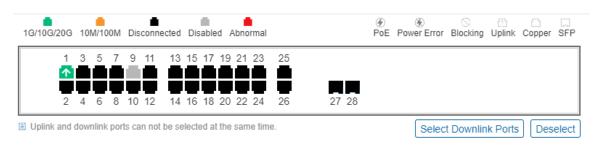
Above the list is the **Add Switch** and **Web CLI** function. Click to display the **Move to**, **Delete**, and **Reboot** functions. For more information, refer to **Basic Switch Operations**.

The **Search** function supports fuzzy queries based on the serial number, alias and description, and also supports queries based on online/offline status.

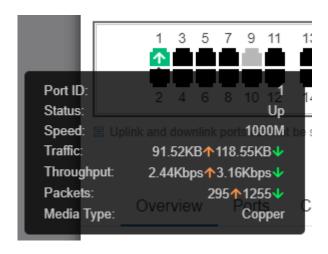
5.5.3.2 Device Details

Click the serial number in the device list to open the details page of a single device. The page displays detailed device information, including the port panel, basic information, overview, ports, config, PoE and diagnosis.

Port Panel



The port panel imitates the actual switch panel, displaying the port type, status and speed.



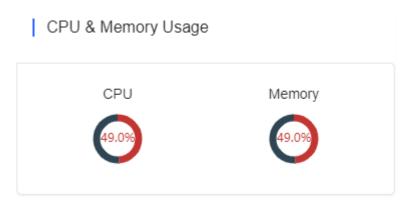
When you point the mouse to a port, the traffic, speed and other information of the port will be displayed.

Switch Info

Switch Info	
Alias:	S5750C-28GT4XS-H ✔
Model:	S5750C-28SFP4XS-H
SN:	G1MQ4UT000044
MAC:	0074.9c77.ab71
Firmware Version:	S5700H_RGOS 11.4(1)B42P1, Release(05172516)
MGMT IP:	172.17.126.6
Description:	S5750C-28SFP4XS-H ✔

Switch information includes the alias, model, SN and other information. Alias and Description can be edited.

Overview > CPU & Memory Usage



Overview > Connectivity



Connectivity refers to the connectivity (online status) between Switch and Cloud Service within a period (1 day or 7 days).

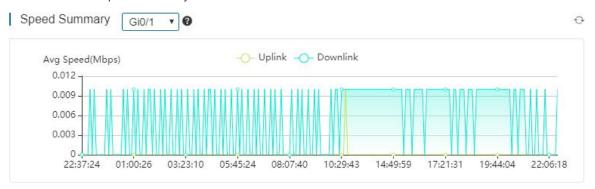
Overview > Uplink

Uplink



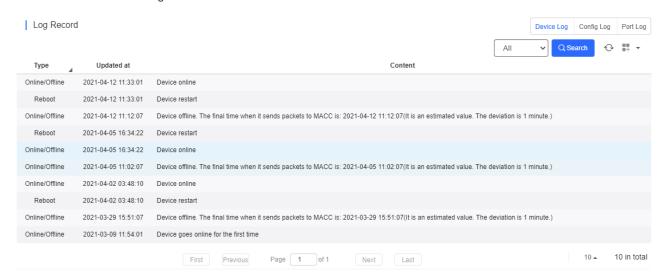
Uplink information includes the port, speed, duplex, uplink/downlink speed and uplink/downlink traffic.

Overview > Speed Summary



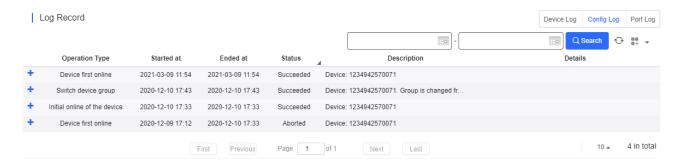
Speed summary includes the uplink/downlink speed summary over the past 24 hours.

Overview > Device Log



The device log records the historical operations, including online/offline, restart, upgrade, and VLAN change, and supports queries based on log type and time.

Overview > Config Log



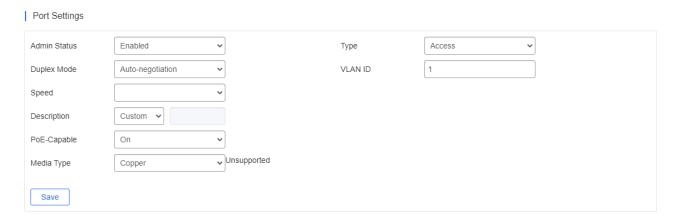
The config log records the historical configuration delivery, and supports queries based on status and time.

Overview > Port Log



The port log records the changes of port configuration, and supports queries based on port ID and time.

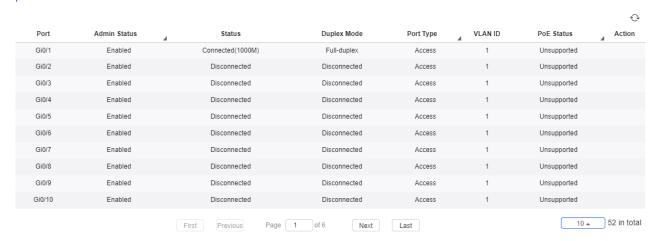
Ports > Port Settings



Select one or multiple ports in the port panel to display and edit the port configuration, including admin status, duplex mode and speed.

Ports > Port List





Port list includes the information of all ports, including port ID, admin status, port status, duplex mode, port type, VLAN ID and PoE status, and support queries based on admin status, port type and PoE status.

Config > VLAN List



VLAN list includes the VLAN ID and the correspondingly ports.

Config > SVI & DHCP

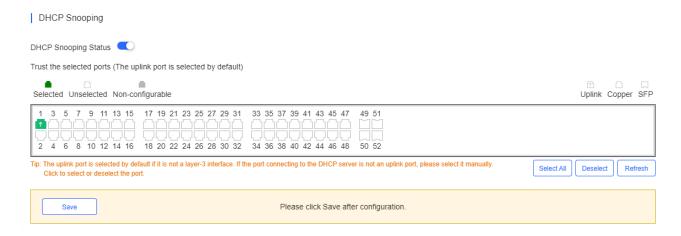


SVI & DHCP information includes VLAN ID, SVI and DHCP pool name. You can add, edit or delete the SVI or DHCP configuration.



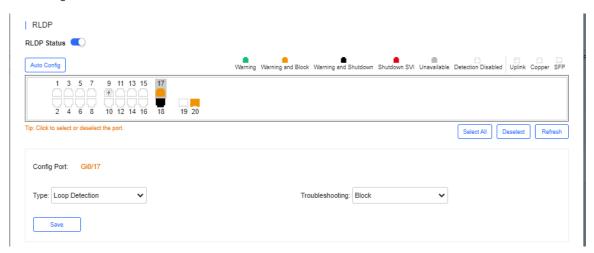
Click **Add** to configure the IP and subnet mask of a VLAN, and configure the name, IP segment, subnet mask and gateway of DHCP service.

Config > DHCP Snooping



Enable **DHCP Snooping Status**, select ports and click **Save**. The uplink port is selected by default if it is not routed port. If the port connecting to the DHCP server is not an uplink port, please select it manually.

Config > RLDP



Enable RLDP Status, select one or multiple ports, choose the troubleshooting method for a loop, and click Save. The troubleshooting methods include Warning, Warning and Block, Warning and Shutdown, and Shutdown SVI. If Warning is chosen, the Switch loopback detected (RLDP) alarm should be enabled in the Alarm Settings page.



Click **Auto Config** to enable the default configuration.

Message

Uplink port of the switch: Gi0/1

Recommended Config: Detect the loop on all ports except uplink and unavailable ports. Loop Detection The solution is Warning and Block (For Aggregate: Warning and Shutdown).

You can click Cancel to manually select ports and customize the policy.

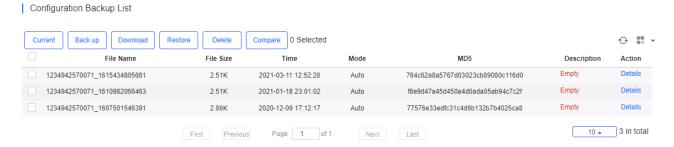


Config > Service List



Configure the admin status and login password of the eWeb service.

Config > Configuration Backup List



The backup records include configuration file name, size, time, mode and MD5.

Click **Current** to display the current configuration. Click **Backup** in the **Config Details** page to back up the current configuration.



Select one record, and click **Download** to download the configuration file.

Select one record, and click **Restore** to restore the current configuration.

Select one or multiple records, and click **Delete** to delete the backup record.

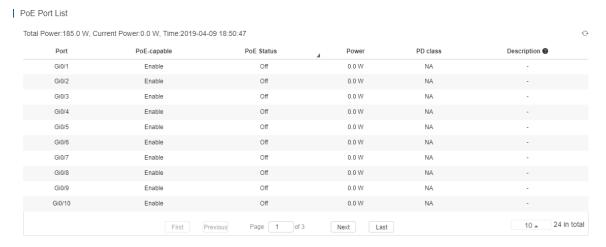
Select two records, and click **Compare** to compare the differences.



Description can be edited. Click Details in the Action column to check the backup configuration.



PoE > PoE Port List



PoE statistics are displayed above PoE Port List, including the total power, current power and time.

PoE configuration includes the port, PoE-capable, PoE status, power, PD class and description.

5.5.4 PoE > Schedule Policy



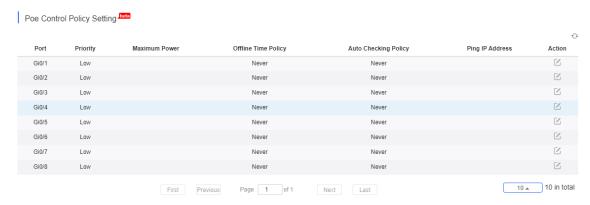
The **Schedule Policy** displays the time period policy for powering off PoE ports, including the policy name, time period, and status indicating whether the policy has been used on ports.

5.5.5 PoE > Auto Checking Policy



The **Auto Checking Policy** displays the auto-checking policy for checking the working status of a PD connected to a PoE port, including the policy name, ping interval, number of retry times, and action used upon check failure.

5.5.6 PoE > Poe Control Policy Setting

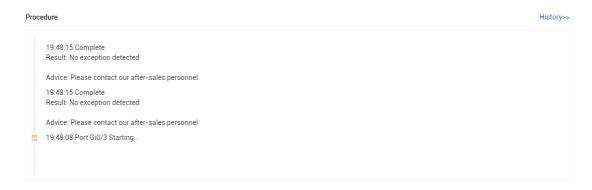


The **Poe Control Policy Setting** displays effective PoE port settings, including the power supply priority, maximum power, power supply stop policy, port auto-checking policy, and IP address for checking PDs.

Diagnose > Fault Diagnosis



There are two types of fault diagnosis: **PoE Power Supply** and **SFP Port**. Select a port in the panel, click **Diagnose**, and the diagnosis procedure is displayed as below.



Click History, and the diagnosis history is displayed.



Select a port in the panel, click **Deep Diagnose**, and click **Diagnose** in the **PoE Diagnosis** page.

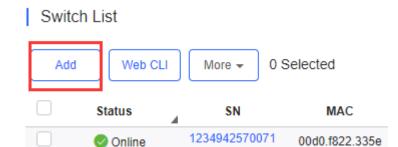
Normal diagnosis: The Cloud server delivers CLI commands to collect the switch information, and the diagnosis occurs on the Cloud server.

Deep diagnosis: The diagnosis occurs on the switch, and the results are reported to the Cloud server.



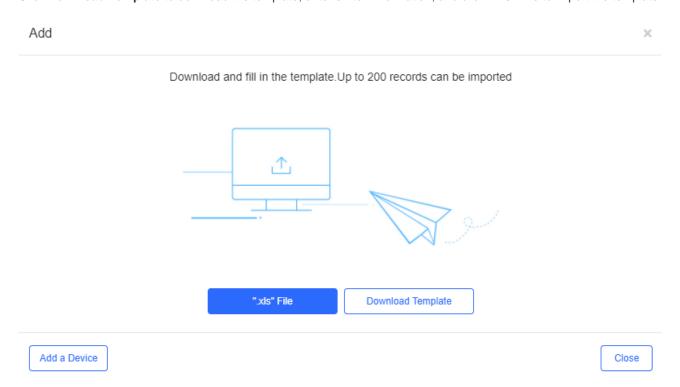
5.5.6.1 Basic Switch Operations

Add Switch



Select the network, and click **Add**. Both batch import and manual add are supported.

Click **Download Template** to download the template, enter switch information, and click '.xls' File to import the template.

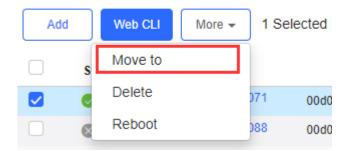


Click **Add a Device**, enter SN and alias of the switch, and click **OK**. Click [†] to add multiple switches.

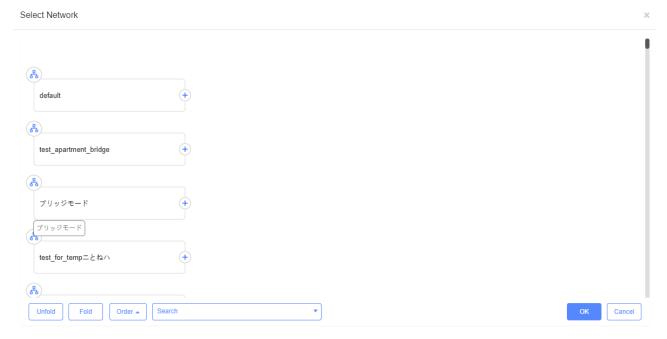


Move to

Switch List



Select one or multiple devices in the **Switch List**, click **More** > **Move to**, select the new network and click **OK**.



Delete

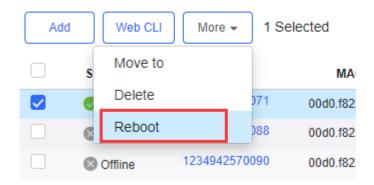
Switch List



Select one or multiple devices in the Switch List, click More > Delete and click OK.

Reboot

Switch List

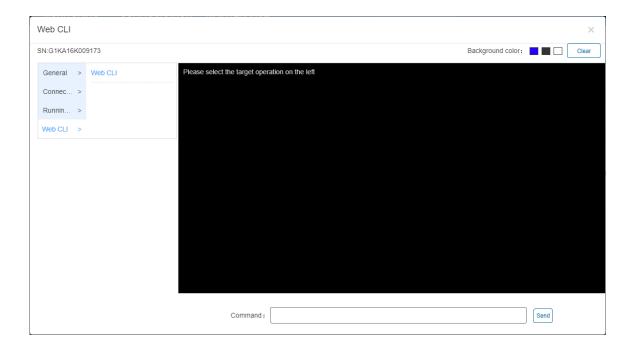


Select one or multiple devices in the Switch List, and click Reboot.

Select one or multiple devices in the **Switch List**, and click **Web CLI**. The **Web CLI** dialog box is displayed, and device information can be queried via the menus in this dialog box. The menus vary with the products.



In addition, in the command entry box, the TAB key and question mark (?) both can complete a command.



5.5.7 Gateway

5.5.7.1 Gateway List



The **Gateway List** displays basic device information, including the online/offline status, SN, alias, management IP, MAC, public IP, network, firmware version, offline time, model and description.

The **Gateway List** automatically refreshes every minute. Click function.

Auto Refresh: to enable/disable the auto refresh

Above the list are the Add Gateway, Web CLI and eWeb functions. Click to display the Move to, Reboot,

Tunnel and Delete functions. For more information, refer to Basic Gateway Operations.

The **Search** function supports fuzzy queries based on the serial number, alias and description, and also supports queries based on online/offline status.

5.5.7.2 Device Details

Web CLI



Click **Web CLI**, and the **Web CLI** page is displayed. The **Web CLI** page provides commonly-used CLI commands on the left. Click the command, or manually enter the command and click **Send**.



eWeb



Click eWeb to open the eWeb system in a new window.

Telnet



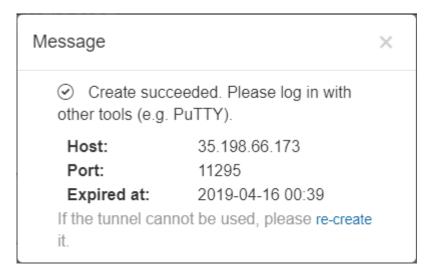
Click **Telnet**, and a window is opened to connect to the gateway by Telnet protocol. Enter CLI commands to configure the gateway.



More > SSH



Click **More** > **SSH**, and a window is opened to connect to the gateway by SSH protocol. Use other SSH tools to connect to the gateway.



More > Reboot



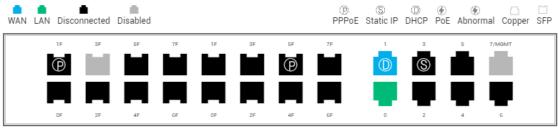
Click **More** > **Reboot** to restart the gateway.

Refresh



Click to refresh all data in the page.

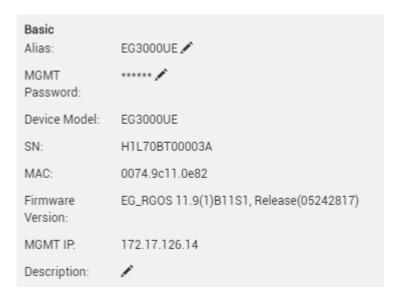
Port Panel



Please select a port to check its details.

The port panel imitates the actual gateway panel, displaying the port type and status.

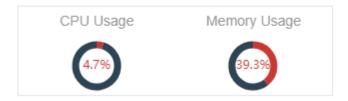
Basic



Basic information includes the alias, model, SN and other information. **Alias, MGMT Password** and **Description** can be edited.

Overview > CPU & Memory Usage

CPU & Memory Usage



CPU & memory usage are displayed here.

Overview > Device Status

Device Status

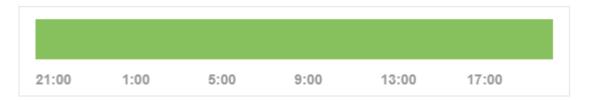
Online Status	Online
Online Clients	2
Sessions	3

Device status includes online status, online clients and sessions.

Overview > Connectivity



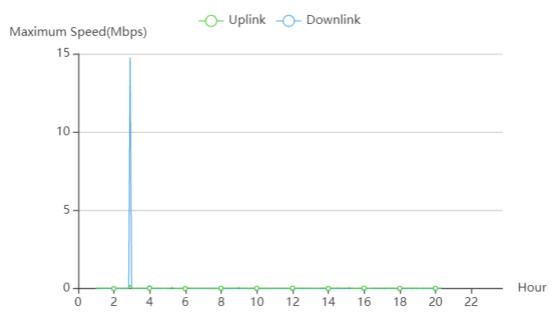




Connectivity refers to the connectivity (online status) between Gateway and Cloud Service within a period (1 day or 7 days).

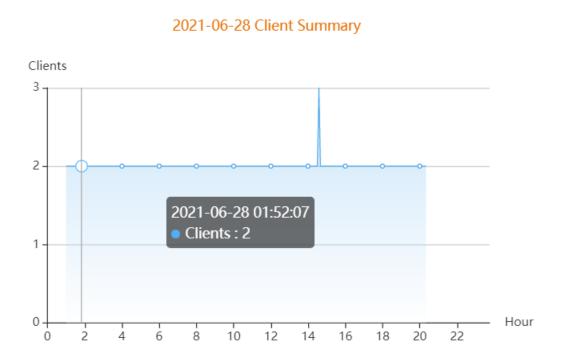
Overview > Speed Summary





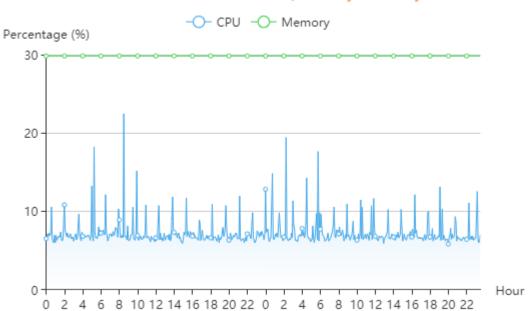
The uplink/downlink speed summary over the 24 hours is displayed.

Overview > Client Summary



The client statistics over the 24 hours are displayed.

Overview > CPU/Memory Summary

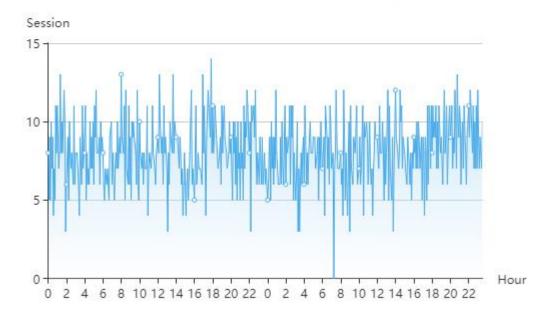


2019-02-23~2019-02-24 CPU/Memory Summary

CPU/memory summary over the 24 hours are displayed.

Overview > Session Summary

2019-02-23~2019-02-24 Session Summary



Session summary over the 24 hours is displayed.

Overview > Top 10 Applications by Traffic

Top 10 Applications by Traffic

No.	Application	Traffic
1	HTTP-BROWSE	2.17 KB ↓ /2.81 KB ↑
2	SYN_ACK	240.00 B ↓ /456.00 B ↑
3	UDP-COMMUTE	81.00 B ↓ /75.00 B ↑
4	LOOKMYPC	25.00 B ↓ /75.00 B ↑
5	DNS	0.00 B ↓ /0.00 B ↑

Top 10 applications by downlink traffic are displayed.

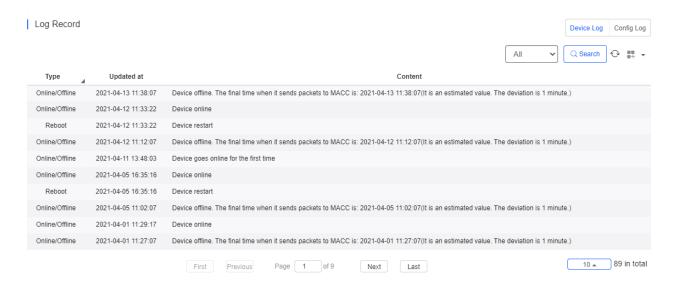
Overview > Top 10 Users by Traffic

Top 10 Users by Traffic

No.	Username	Traffic	
1	10.10.12.2	1.88 KB ↓ /1.76 KB ↑	
2	10.10.12.1	639.00 B ↓ /1.65 KB↑	

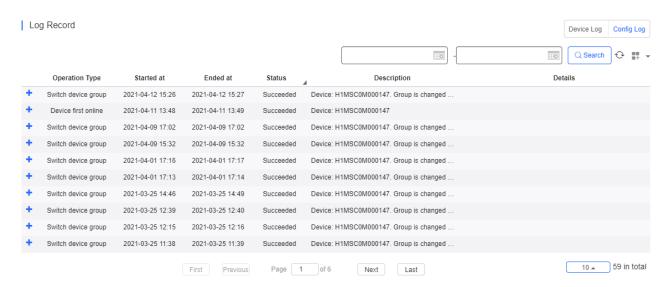
Top 10 users by downlink traffic are displayed.

Overview > Device Log



The device log records the historical operations, including online/offline, restart, upgrade and VLAN change, and supports queries based on log type and time.

Overview > Config Log



The Config log records the historical configuration delivery, and supports queries based on status and time.

WAN > Port



Select one WAN port to display the corresponding port information and rate summary.

WAN > Basic

Basic

IP: 172.17.126.2

Subnet Mask: 255.255.255.128

Description: GigabitEtherne0/6

Basic information includes the IP, subnet mask and description. If PPPoE is enabled and dialing port is configured, the PPPoE information is displayed.

PPPoE

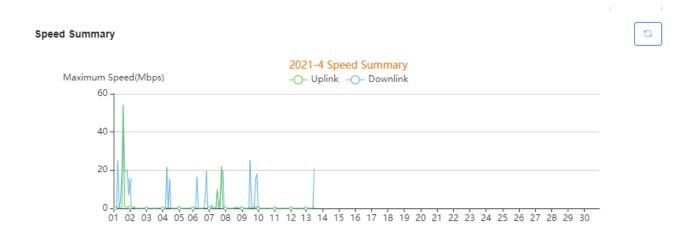
Port: di2

IP Type: adsl

Uplink Bandwidth: --

Downlink Bandwidth: --

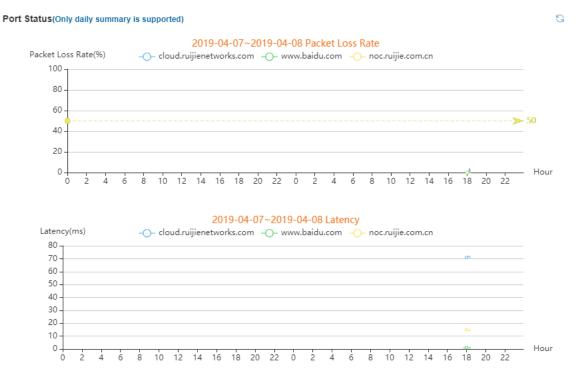
WAN > Speed Summary



Uplink & downlink rate of WAN port are displayed. This page supports queries based on day, week and month. Click to refresh the summary.

WAN > Port Status

G



Packet loss rate and latency summary are displayed. This page supports queries based on day, week and month. Click

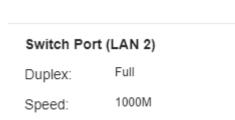
to refresh the summary.

LAN > Port



Select a LAN port to display the corresponding information of its switch port, routed port and subinterface.

LAN > Switch Port



Switch port information includes the switch port, including duplex and rate.

LAN > Routed Port

Routed Port (Gi0/2)

IP: 192.168.1.1

Subnet Mask: 255.255.255.0

LAN: LAN 1,LAN 2,LAN

3,LAN 4,LAN 5,LAN

6,LAN 7

Description: --

Routed port information includes the IP address, subnet mask, LAN and description.

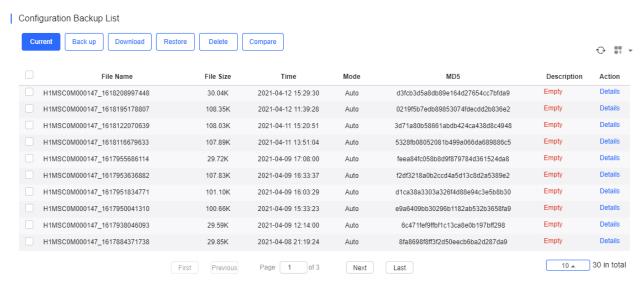
LAN > Subinterface

Subinterface (Gi0/2)

Name	IP	VLAN
Gi0/2.1	192.168.2.1	2
Gi0/2.2	192.168.3.1	3
First Previous	Page 1 of 1 Next Last	10 🛦 2 in total

Subinterface information includes the name, IP address, and VLAN.

Config > Configuration Backup List



The backup records include configuration file name, size, time, mode and MD5.

Click **Current** to display the current configuration. Click **Backup** in the **Config Details** page to back up the current configuration.



Click Back up and then click OK in the message box to back up the current configuration.

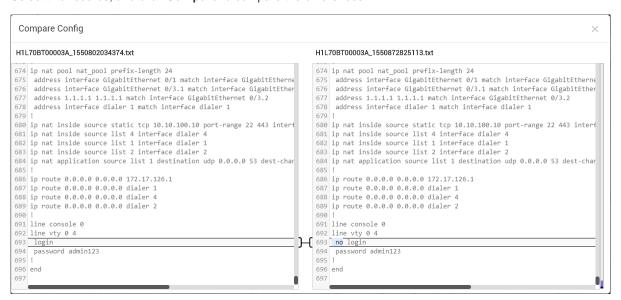


Select one record, and click **Download** to download the configuration file.

Select one record, and click **Restore** to restore the current configuration.

Select one or multiple records, and click **Delete** to delete the backup record.

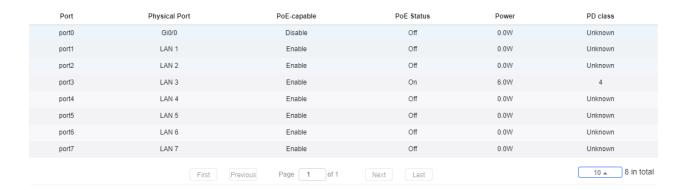
Select two records, and click Compare to compare the differences



Description can be edited. Click Details in the Action column to check the backup configuration.

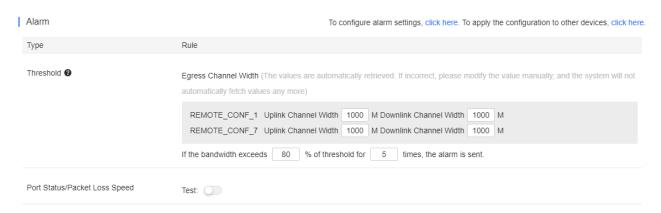


PoE > PoE List



PoE configuration includes the port, physical port, PoE-capable, PoE status, power and PD class.

Alarm

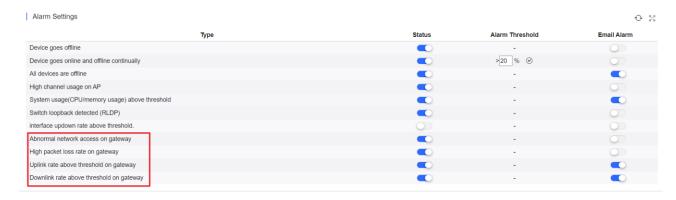


Insufficient bandwidth: When the bandwidth exceeds the specified percentage of threshold for several times, the alarm is sent. The threshold, times and percentage can be configured manually.

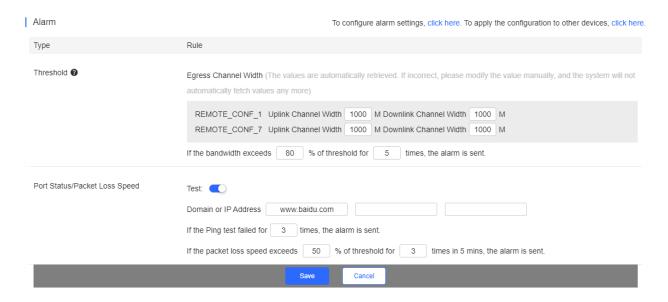
Ping failure: When the Ping test failed for the specified times, the alarm is sent. The times and domain/IP address can be configured manually.

High packet loss rate: When the packet loss rate exceeds the specified percentage of threshold for several times in 5 minutes, the alarm is sent. The times and threshold can be configured manually.

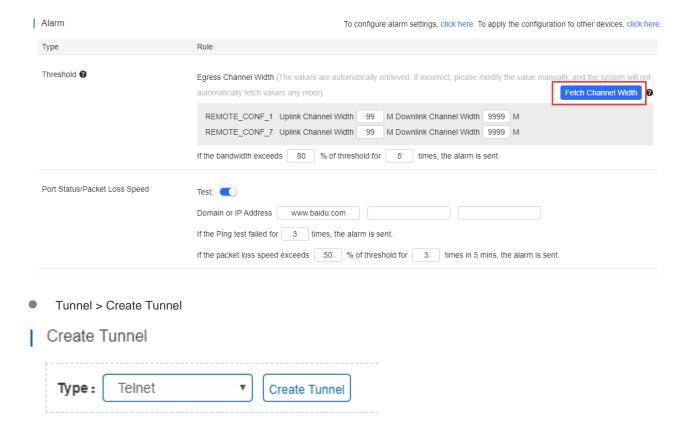
Besides, the corresponding alarm should be enabled in the **Alarm Settings** page. For insufficient bandwidth, the alarm types are **Uplink rate above threshold on gateway** and **Downlink rate above threshold on gateway**; for Ping failure, the alarm type is **Abnormal network access on gateway**; and for high packet loss rate, the alarm type is **High packet loss rate on gateway**.



After changing the configuration, click Save below.

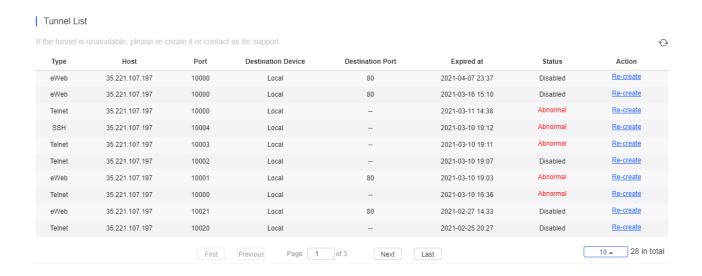


When the modified bandwidth and the actual bandwidth do not match, click **Fetch Bandwidth** to check the actual bandwidth which will then be set as the threshold.



Select the tunnel type and click Create Tunnel. The tunnel types include Telnet, eWeb and SSH.

Tunnel > Tunnel List



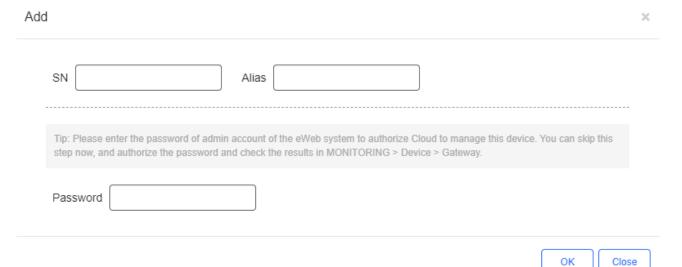
Tunnel information includes tunnel type, host, port, destination device, expiration time and status. Click **Re-create** in the **Action** column to re-create a tunnel. Click **Telnet/SSH** in the **Action** column to open the corresponding page.

5.5.7.3 Basic Gateway Operations

Add Gateway



Click **Add**, enter the SN, Alias and Web Password, and click **OK** to add a gateway to the network. Only one gateway can be added to a network.

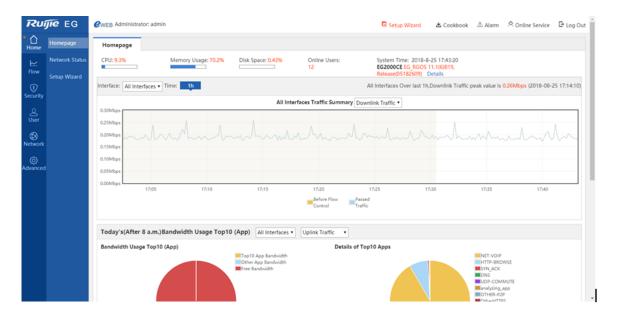




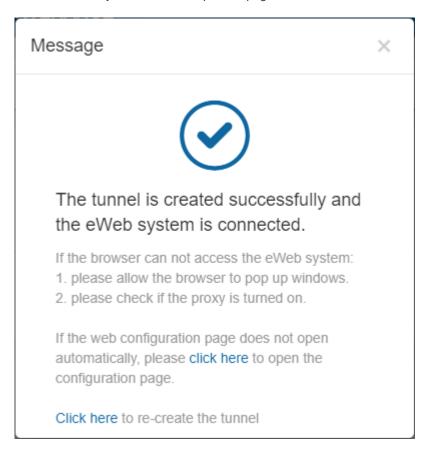
Before a gateway is authorized, it is displayed in the **Unauthorized Gateway List**. If authorization fails, you can click **Re-authorize** in the **Action** column to re-enter the Web password to re-authorize the device.



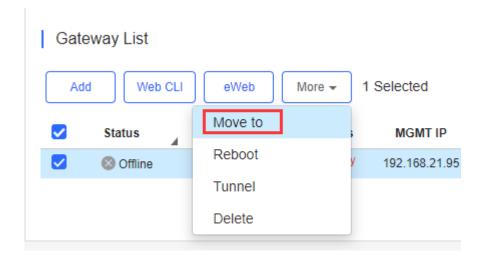
Select the device to be managed by eWeb, and click **eWeb**. The system will try to connect the gateway and automatically open the eWeb page in a new window.



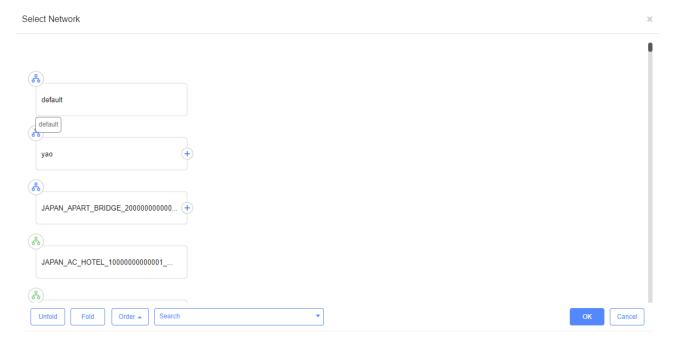
If a tunnel is created successfully but the eWeb page does not automatically open, the system will pop up a message. The user can manually click the link to open the page.



Move to

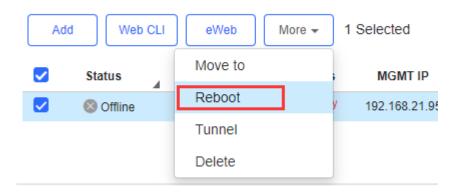


Select the device in the **Gateway List**, click **More** > **Move to**, select the new network and click **OK**. Only one gateway can be moved at a time.



Reboot

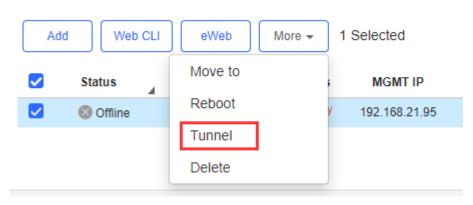
Gateway List



Select the device in the ${\bf Gateway\ List},\ {\bf click\ More} > {\bf Reboot}$ and click ${\bf OK}.$

Tunnel

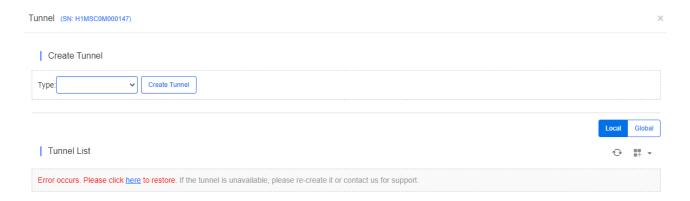
Gateway List



The user can create a Web-based tunnel to enter the eWeb system of a gateway for more monitoring and management functions.

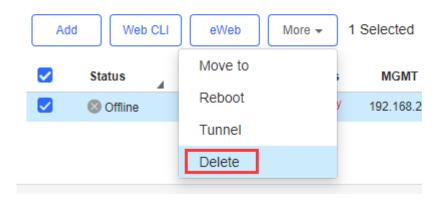
Note: If any security system exists in the network, such as a firewall, the traffic of destination TCP port 10000-12000 should be permitted.

Select the device for tunnel management, and click **More** > **Tunnel Config**. On the **Tunnel Management** page, **WEB**, **Telnet** and **SSH** types can be selected or you can customize the tunnel configuration. The **Tunnel List** displays the tunnels already created.



Delete

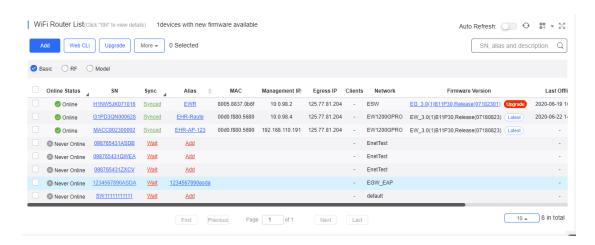
Gateway List



Select the device in the Gateway List, click More > Delete and click OK.

5.5.8 WiFi Router (beta)

5.5.8.1 WiFi Router List



The **WiFi Router List** displays basic device information, including the online/offline status, SN, MAC, alias, management IP & public IP, offline time, network, model, firmware version and description.

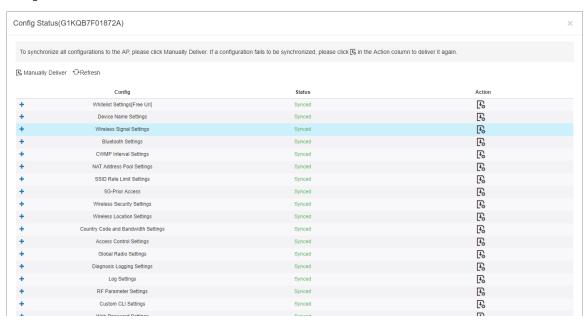
The WiFi Router List automatically refreshes every minute. Click

Auto Refresh:
to enable/disable the auto refresh function.

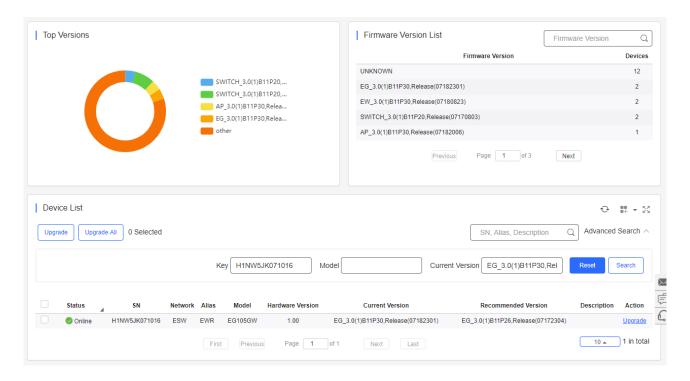
Above the list is the **Add** function. Click to display the **Move to**, **Delete**, **Export**, and **Reboot** functions. For more information, refer to **Basic Router Operations**.

The **Search** function supports fuzzy queries based on the serial number, alias and description, and also supports queries based on online/offline status.

Click the record in the **Config Status** column to open the **Config Status** page. On this page, you can deliver one or all configurations.



The number of devices which have available firmware for upgrade is displayed on the upper-left corner of the AP List page. Click New Firmware to display the New Firmware List. Then click Go To Upgrade to enter the MAINTENANCE > UPGRADE > Upgrade page.



For more information, refer to Device Details.

5.5.8.2 Device Details

Click the serial number in the device list to open the details page for a single device. The page displays detailed device information, including basic information, performance data, speed data, client data, online/offline status, and device logs.

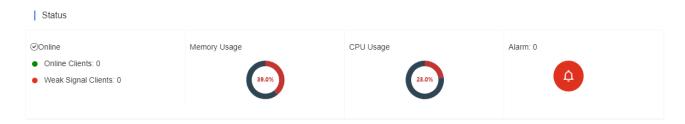
Router information is described as:

Router Info



The basic information includes serial number, MAC address, management IP address, device model, configuration status, firmware version, hardware version, alias, and description.

Status



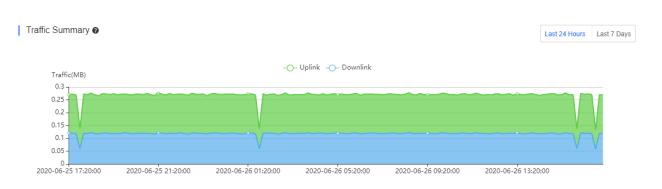
The performance data includes the router connection status, online client count, CPU usage, and memory usage.

Connectivity



Router connectivity refers to the connectivity (online status) between router and Cloud Service within a period (1 day or 7 days).

Speed Summary



You can choose to view the router speed statistics in the last 24 hours or the last 1 week.



The Device Log records the device type, update time and content.

Config Log



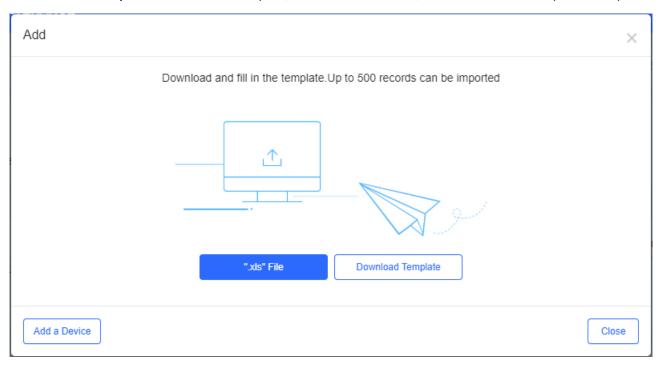
The Config Log records the historical operations, including online/offline, restart and upgrade records, and supports queries based on the log type and period.

5.5.8.3 Basic Router Operations

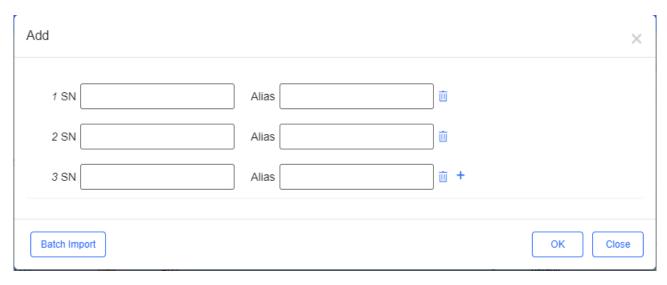
Add Router
 WiFi Router List(Click "SN" to view details)
 Add Web CLI Upgrade More → 0 Selected
 Basic RF Model
 Online Status SN Sync Alia

Select the network, and click **Add**. Both batch import and manual add are supported.

Click **download template** to download the template, enter router information, and click **'.xls' File** to import the template.



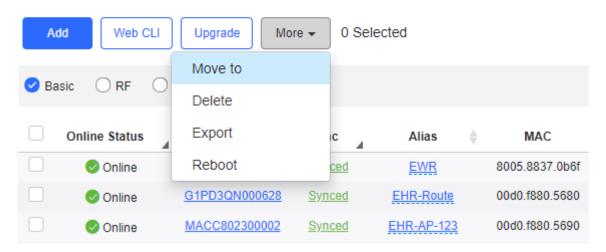
Click **Add a Device**, enter SN and alias of the AP, and click **OK**. Click to add multiple APs.



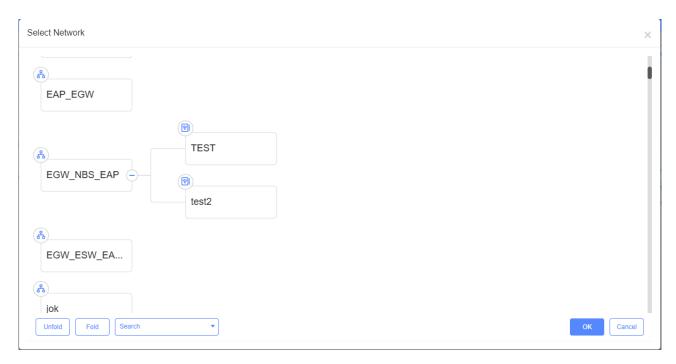
Move to

WiFi Router List(Click "SN" to view details)

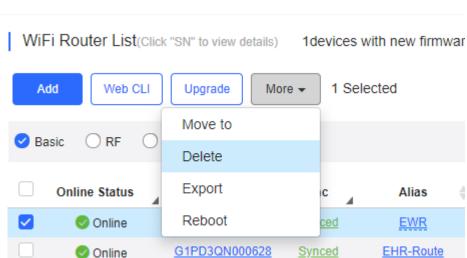
1devices with new firmware available



Select one or multiple devices in the WiFi Router List, click More > Move to, select the new network and click OK.

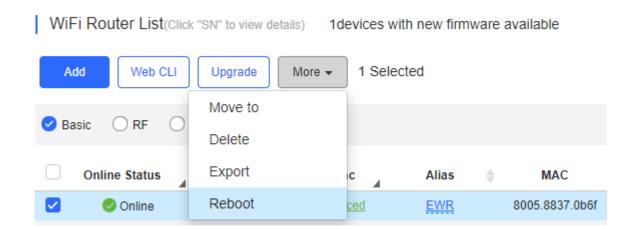


Delete



Select one or multiple devices in the WiFi Router List, click More > Delete and click OK.

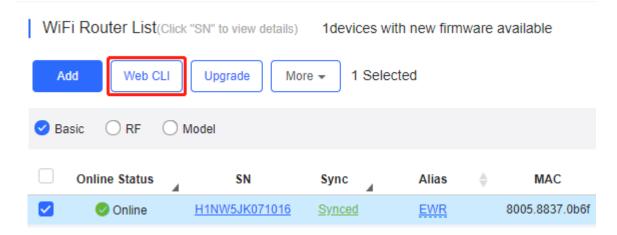
Reboot



Select one or multiple devices in the WiFi Router List, and click Reboot.

5.5.8.4 Web CLI

Select one or multiple devices in the **WiFi Router List**, and click **Web CLI**. The **Web CLI** dialog box is displayed, and device information can be queried via the menus in this dialog box. The menus vary with the products.



In the command entry box, the TAB key and question mark (?) both can complete a command.

5.6 Client

Select MONITORING > CLIENT to open the Client page.

5.6.1 Client List

- 1. This page displays the information about online clients and historical clients of the current network.
- 2. Click the drop-down list next to **Advanced Search** to switch between **Online Clients** and **History Clients**.

The client information includes basic information, band, and online time.

- 3. Search for user data by online status, MAC, AP, SN or SSID.
- 4. Click the device **MAC**, and the **Client Details** page is displayed.



5.6.2 Client Details

Client Info



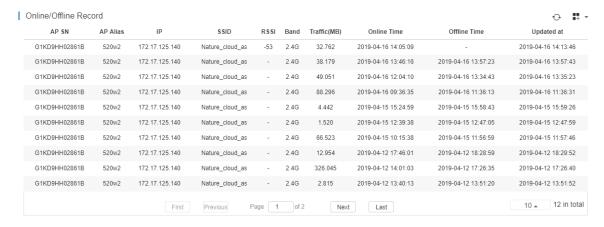
Client Info includes alias, online status, MAC etc.

Performance



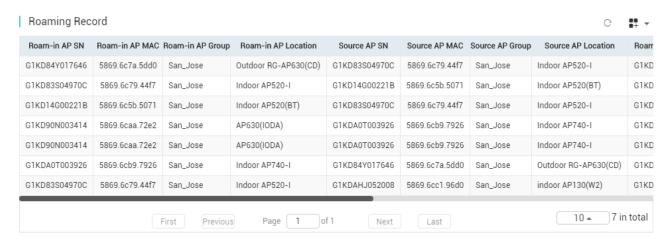
Performance displays the traffic summary etc.

Online/Offline Record



Online/Offline Record displays AP SN, AP alias, IP, SSID etc.

Roaming Record



Roaming Record displays roam-in AP, source AP, SSID etc.

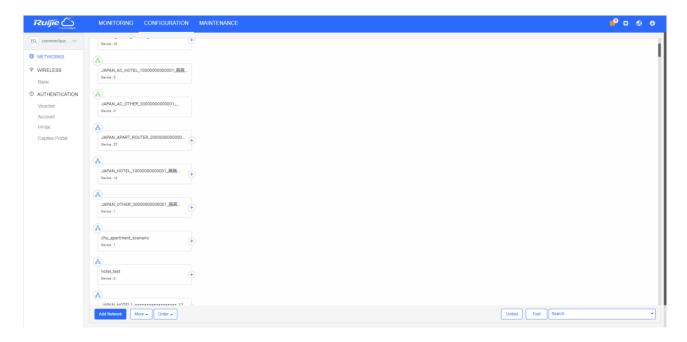
6 Configuration

The Configuration module includes two parts: NETWORKS and WIRELESS.

6.1 Networks

6.1.1 Networks

Select CONFIGURATION > NETWORKS to open the NETWORKS page.

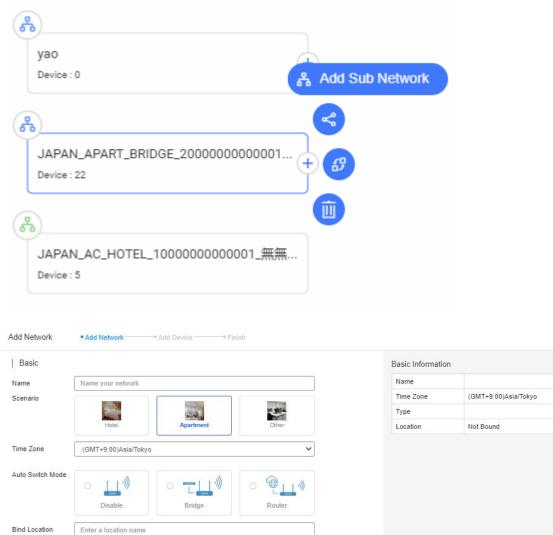


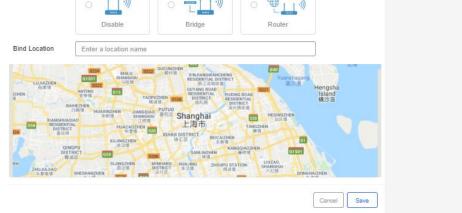
Click a network, and four operation icons are displayed around the network for adding a sub network, sharing the network, handing over the network, and deleting a network. You can click these icons or the buttons in the lower right corner to perform operations on the network.



6.1.1.1 Add Sub Networks for AP Networks

Select the network and click Add Sub Network.

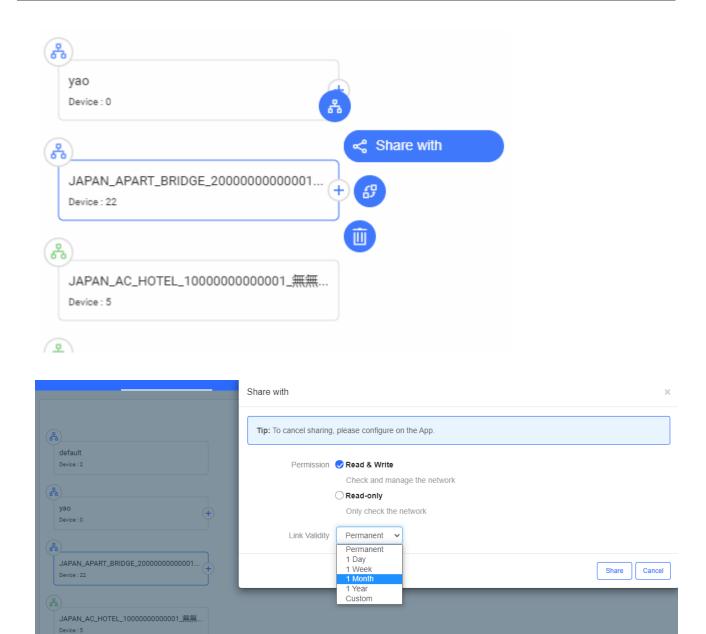




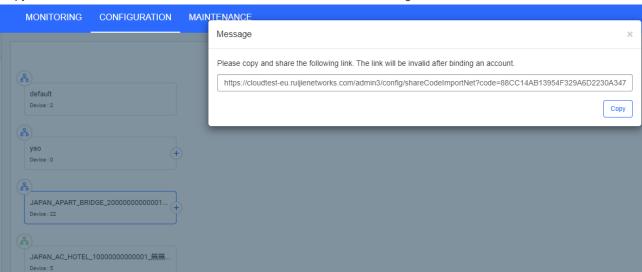
6.1.1.2 Share with

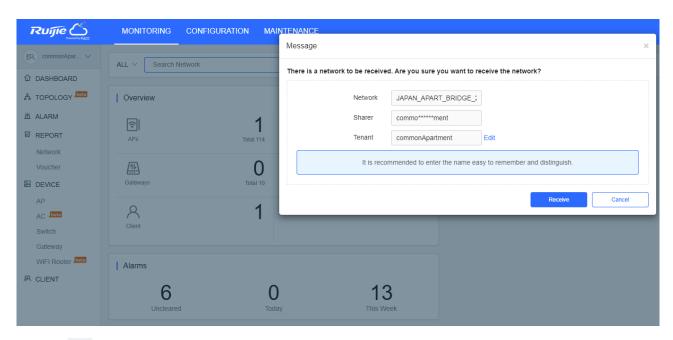
A network can be shared to other users for check and management. You can set the validity so that the network sharing will be canceled after the specified time.

Select a network and click Share with.

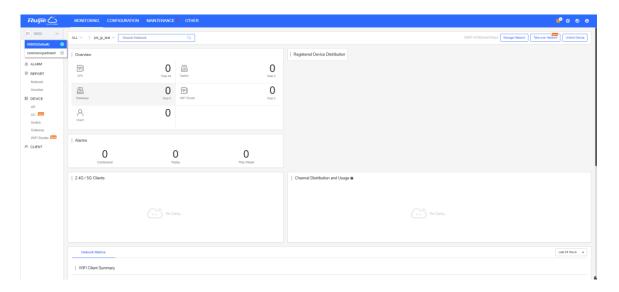


Copy the link and send to the receiver. The receiver can visit the URL and log in to receive the network.





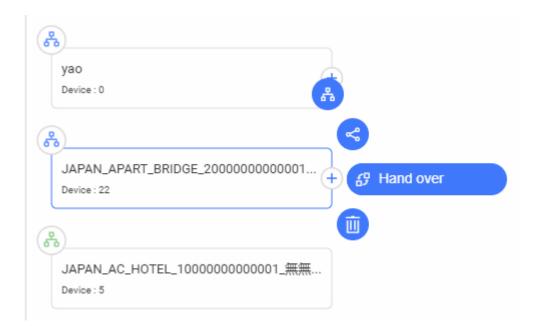
Click the on the upper left corner to switch tenant and check the shared network.



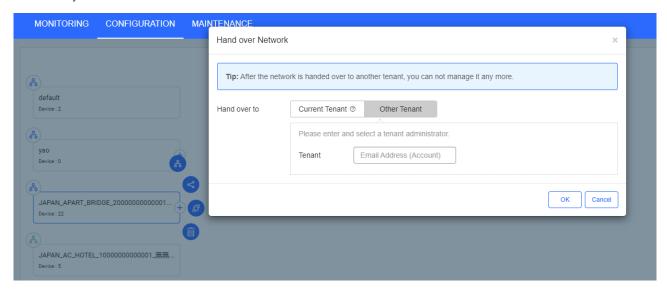
6.1.1.3 Hand over

The network can be handed over to another tenant.

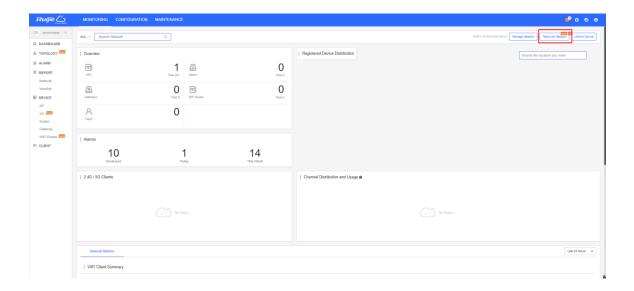
Select a network and click Hand over.



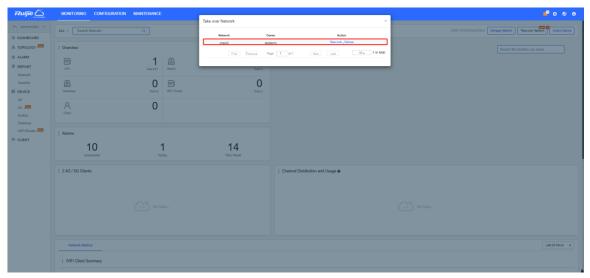
Enter the Email address of tenant, and click **OK**. After the receiver takes over the network, you can not manage the network anymore.



As the receiver logs in to Ruijie Cloud, an icon is displayed on the upper right corner.

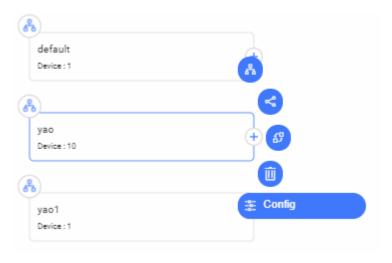


Click Take over Network to take over or refuse the network.



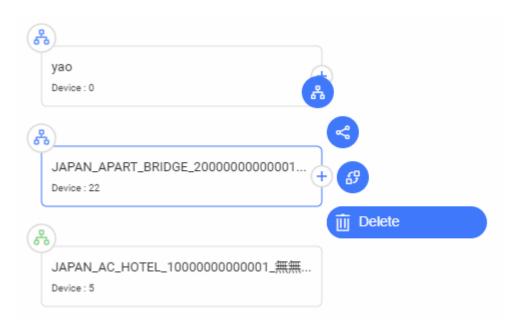
6.1.1.4 Config

Select the network and click Config.



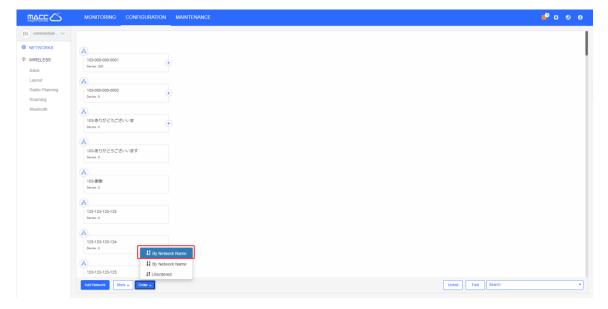
6.1.1.5 Delete

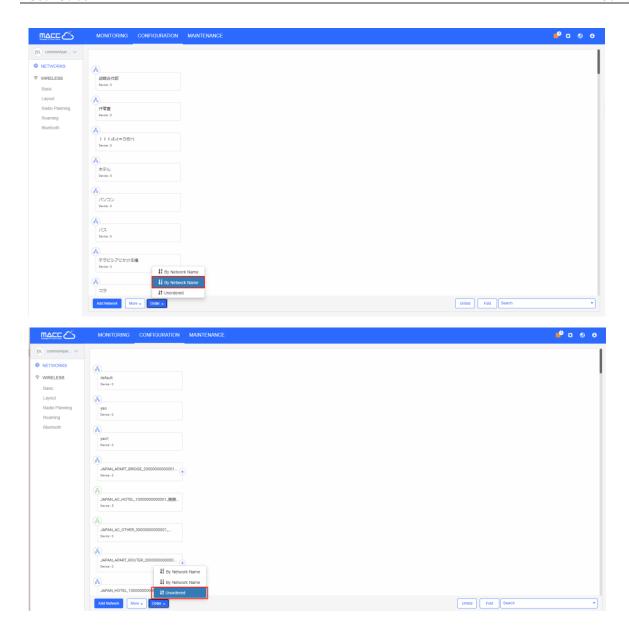
Select the network and click **Delete**. When the delete confirmation window is displayed, click **OK**.



6.1.1.6 Order Networks

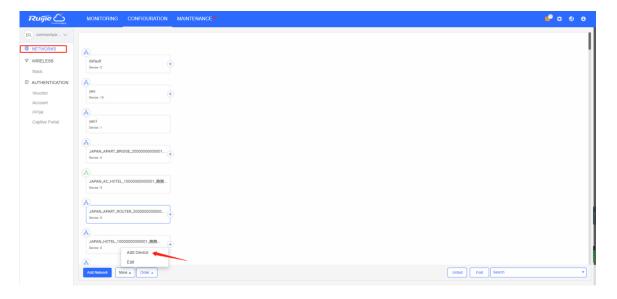
Networks can be unordered or sorted by name in the ascending/descending order.

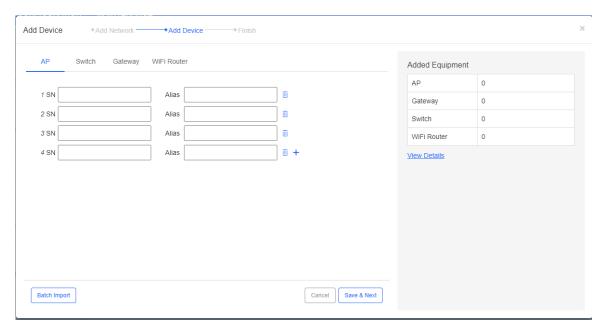




6.1.1.7 Add Device

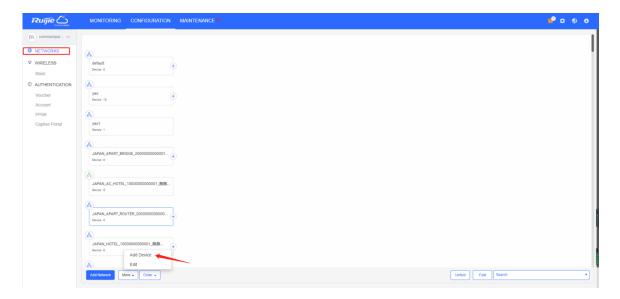
Non-apartment Mode

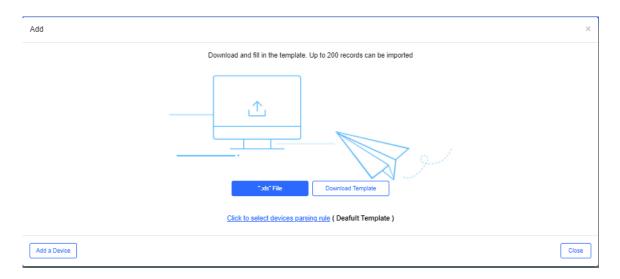




Choose **NETWORKS**, select a network in non-apartment mode, and click **More** > **Add Device** to add APs, switches, gateways, and WiFi routers.

Apartment Mode





Choose NETWORKS, select a network in apartment mode, and click More > Add Device to add APs.

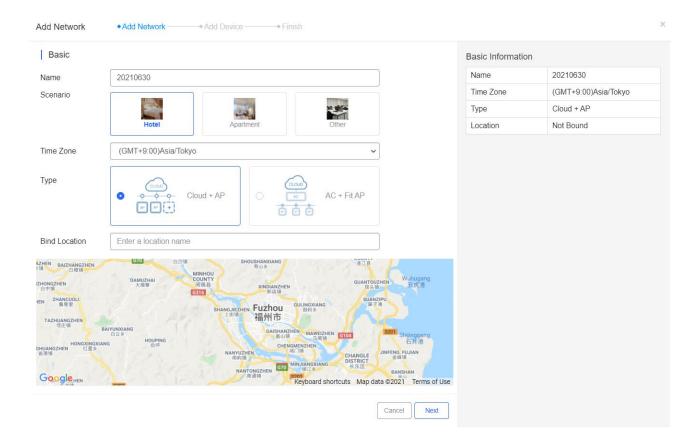
6.1.2 Add Network

Select CONFIGURATION>NETWORKS, and click Add Network.

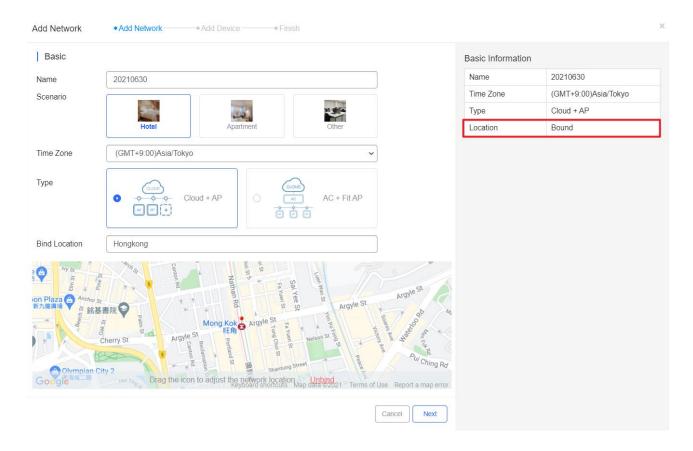


Non-apartment Scenario

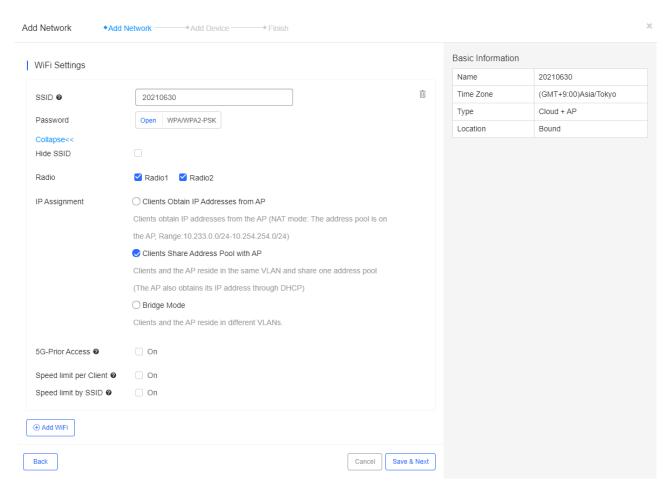
Enter the network name.



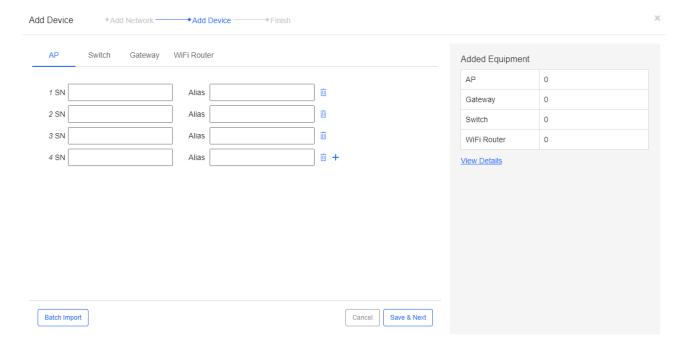
Specify the network location.



Enter the WiFi information as required.

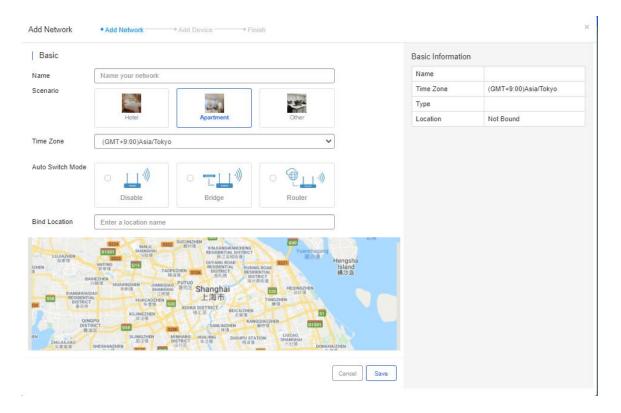


Enter the information of APs, switches and gateways, and click **Save & Next**. Or click **Batch Import** to download the template, enter the device information in the table, and then batch import devices into the system.



Apartment Scenario

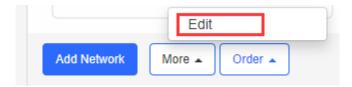
Enter the network name, select the scenario and bind the location.



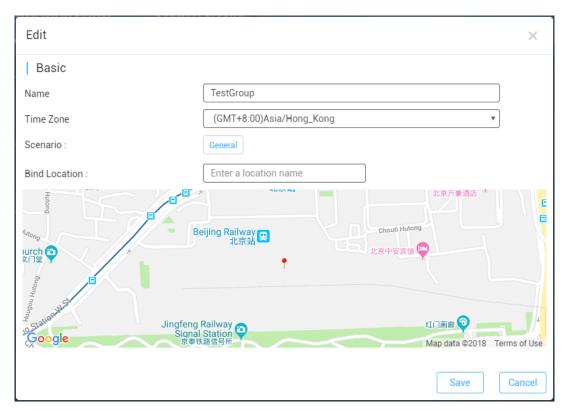
6.1.3 Edit Network

Select the network and click Edit.

Non-apartment Scenario



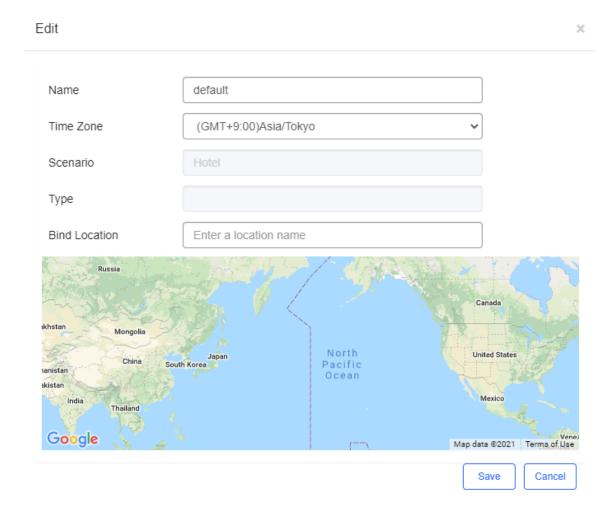
You can edit network name and time zone, and bind location here.



Apartment Scenario



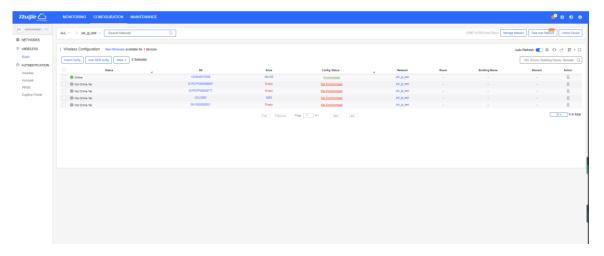
You can edit network name and time zone, and bind location here.



6.2 Wireless

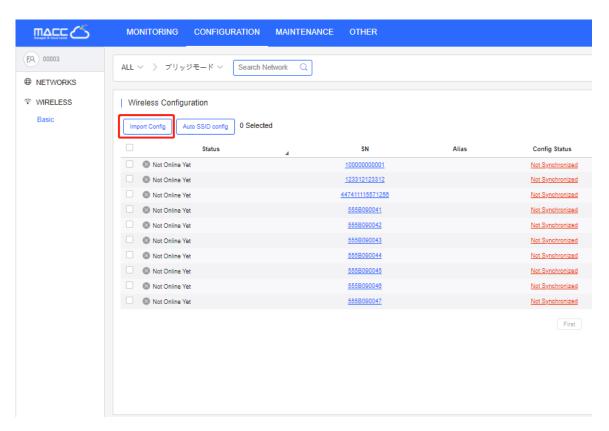
6.2.1 Basic (Apartment Scenario)

Select CONFIGURATION > WIRELESS > Basic to configure SSID and password of AP.

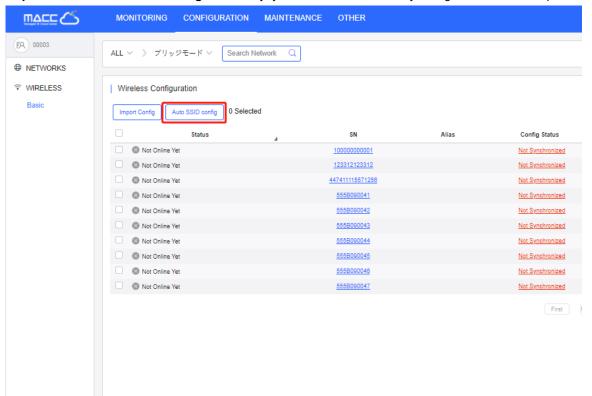


In the apartment scenario, SSID and password can be configured in 2 ways.

Click $\mbox{\bf Import Config}$ to manually import SSIDs and passwords in an EXCEL file.

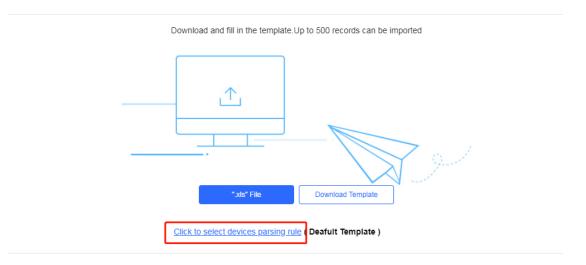


Or you can select Auto SSID Config. In this way, you don't need to manually configure the SSID and password.



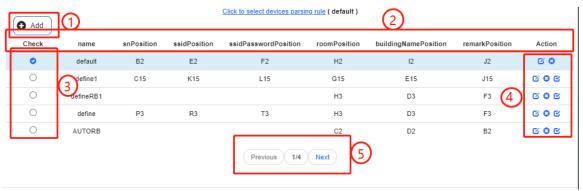
6.2.1.1 Customize Template Rules

To batch import devices or change SSIDs/passwords, you can customize the importing template.



Click Click to select devices parsing rule, the rule customizing page appears.

There will be one default rule.



1. Add button: Add a new rule

2. Menu bar: Display rule content

Name: User defined name

• snPosition: Specify the starting position of SN in template

ssidPosition: Specify the starting position of SSID in template

ssidPasswordPosition: Specify the starting position of SSID's password in template

roomPosition: Specify the starting position of room number in template

• buildingNamePosition: Specify the starting position of building name in template

RemarkPosition: Specify the starting position of remark in template

If an entry is left empty, it will not be imported when importing the template. For example, ssidPosition will not be imported if it is empty.

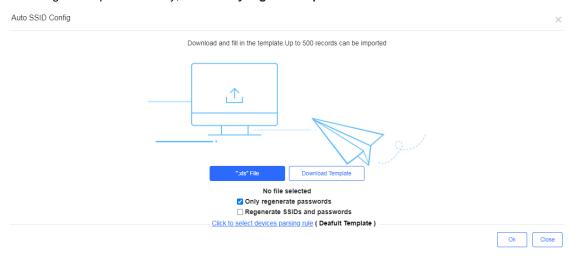
- 3. Check box: Only one rule can be selected at a time
- 4. Rule control button:
 - : Edit the rule
 - Delete the rule

- Set the rule as default rule
- 5. Page up and down button

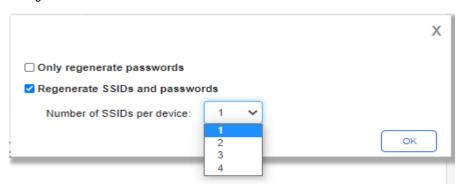
6.2.1.2 Auto SSID Config

Click **Auto SSID Config** to configure the SSID and password automatically.

To configure the password only, select **Only regenerate passwords**.



To configure both the SSID and password, select **Regenerate SSIDs and passwords**. At most 4 SSIDs can be configured.



You can use either custom template or the default template.

Use Customized Template to Configure SSID/Password

The customized template need to include SN, Building Name, Room Number, SSID, SSID Password, and Remark. The following is an example to change the SSID and password only:

A	В	C	D	E	F	G
Building Name	Room					
100001	203					
100001	204					
100001	205					

The custom rule may be set as below:

- Name: ModifySSID
- snPosition:
- ssidPosition:

- ssidPasswordPosition:
- roomPosition: B2
- buildingNamePosition: A2
- RemarkPosition:

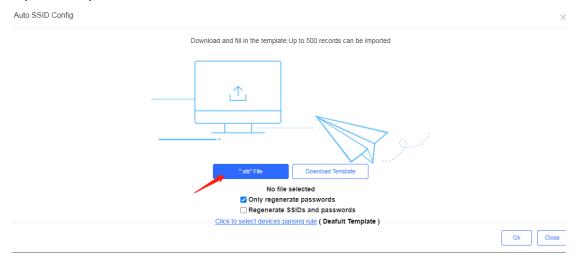
If Remark is filled in EXCEL file, the former remark saved in the Cloud will be overwritten.

Use Cloud's Default Template to Configure SSID/Password

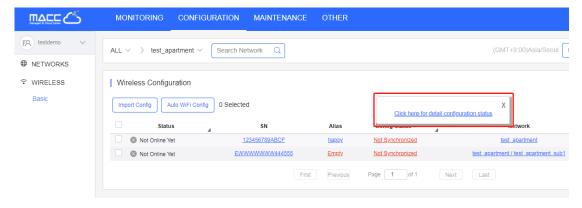
Download the template and fill the information as below:

ì	, ,	_	-		
	SN	Remark	Room	Building	
	OIV	IXeman	1200111	Name	
	SN100001	10111	203	building1	
ı	SN10002	10112	204	building2	

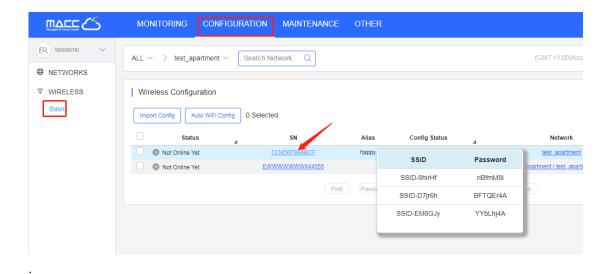
Import the template.



After the template is successfully imported, a prompt will be displayed. Click the prompt to open the Config Log page, and export the SSID configuration result.



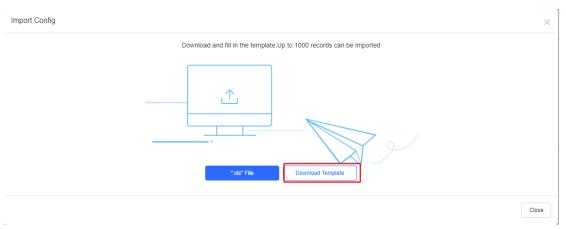
To view the configuration result of the specified device, you can also point to the device SN to check the SSID/password.



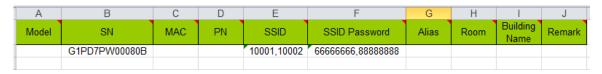
6.2.1.3 Import Config

Use Default Template to Import SSID and Password

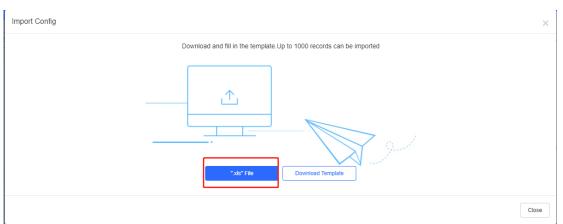
Click Download Template.



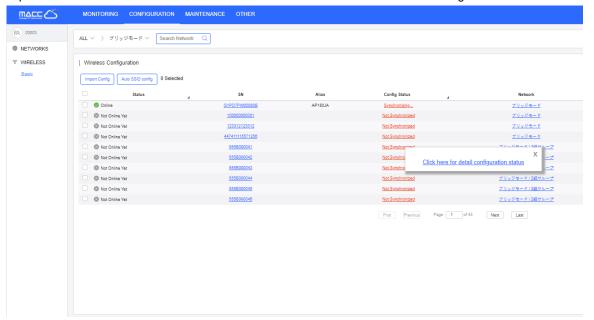
Enter SSID and password. Each AP supports at most 4 SSIDs, and SSIDs and passwords need to be separated by ','.



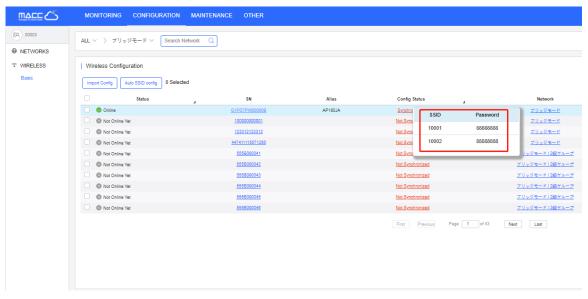
Click "xls" File to import the template.



After the template is successfully imported, a prompt will be displayed. Click the prompt to open the Config Log page, and export the SSID configuration result.



To view the configuration result of the specified device, you can also point to the device SN to check the SSID/password.



Use Customized Template to Import SSID and Password

The operation is almost the same with that in **Auto SSID Config**. The only difference is that you need to fill in the SSID and password to be changed in the template.

The custom rule may be set as below:

Name: ModifySSID

snPosition:

ssidPosition: G3

ssidPasswordPosition: H3

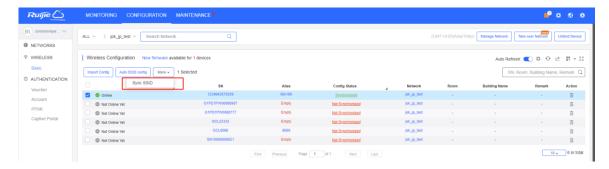
roomPosition: C3

buildingNamePosition: B3

remarkPosition: D3

If Remark is filled in EXCEL file, the former remark saved in the Cloud will be overwritten.

6.2.1.4 Sync SSID



Select devices to be synchronized, and click **More** > **Sync SSID** to synchronize the SSIDs and passwords of the devices. A maximum of 100 devices can be selected. After the synchronization, synchronized SSIDs and passwords are displayed.

6.2.1.5 Auto Sync Config File From Device



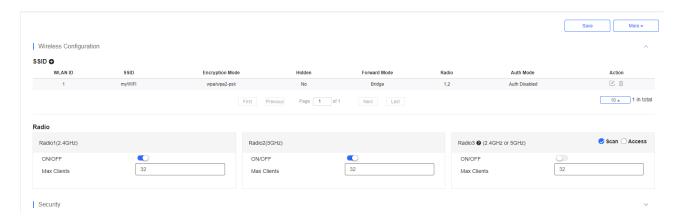
Enable the **Auto Sync Config File From Device** function. Configuration files will be automatically synchronized from the devices in the network at an interval of 20 to 28 hours.

6.2.2 Basic (Non-apartment Scenario)

If a network is not configured, it will inherit configuration from its parent network by default. You can create or import a configuration file from other networks. Note that if there is any captive portal template unavailable for the network, the configuration file can not be imported.

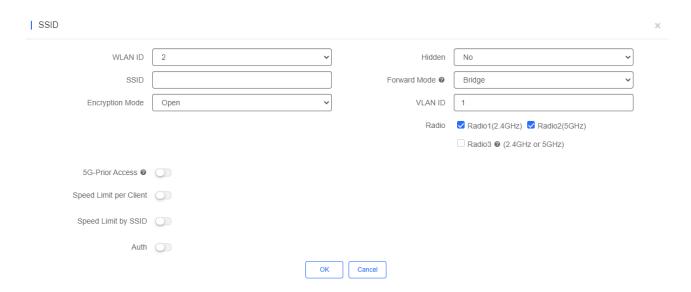


Click Save to configure the network.



On the Basic page, Wireless, Security, and Advanced Settings can be configured.

6.2.2.1 SSID



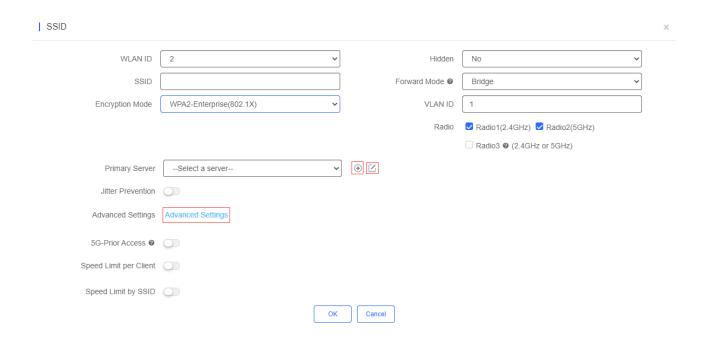
Click + in the upper left corner to add an SSID. In addition, the **SSID** page further enables you to configure the rate limit and the authentication function. Parameters on the **SSID** page are defined as follows.

WLAN ID: Select a WLAN ID. An SSID matches a WLAN ID one-to-one. The WLAN ID can be specified only when an SSID is added and can not be changed subsequently. The maximum value of **WLAN ID** is 32.

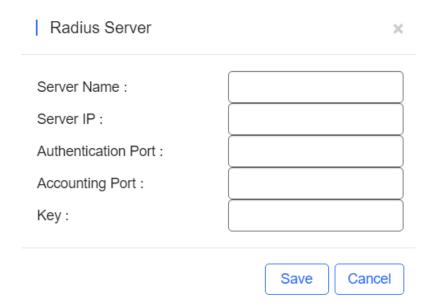
SSID: Enter an SSID name.

Encryption Mode: Open, WPA-PSK, WPA2-PSK, WPA/WPA2-PSK, WPA2-ENTERPRISE (802.1X) and PPSK. Open indicates that no password needs to be configured; WPA-PSK or WPA2-PSK indicates that a password needs to be configured. WPA2-Enterprise(802.1x) indicates that the 802.1x authentication mode is adopted for the SSID. PPSK indicates that each terminal device is bound with a unique WiFi account and key. After the PPSK mode is selected, you need to configure your account in CONFIGURATION>AUTHENTICATION>PPSK.

If you select the WPA2-Enterprise(802.1x) mode, the following page is displayed.



Click to add an authentication server. A dialog box for a Radius server configuration is displayed, as shown in the following figure.



Server IP, Authentication Port, Accounting Port, and Key can be configured for a RADIUS server. Authentication Port and Accounting Port are optional, and respectively set to the default values 1812 and 1813 if no values are entered. The jitter prevention function can be configured in 802.1x authentication mode, as shown in the SSID configuration page with Encryption Mode set to WPA2-Enterprise(802.1x). In case of jitters: after the jitter prevention function is enabled (the jitter prevention duration range is 0–600), clients will not go offline within the duration of jitter prevention. The default jitter prevention duration of an AP is 2 seconds. Note that the jitter prevention function may not be supported in earlier AP versions. In addition, the Advanced Settings function is provided for 802.1x authentication. In Advanced Settings, the NAS IP address (available in the NAT environment) and accounting update period can be configured and the added authentication server can be managed.

Hidden: Specify whether to hide the SSID, which can be set to Yes or No.

Forward Mode: Select a forward mode of a wireless AP. **NAT** indicates that an IP address is allocated to a client by an AP; **Bridge** indicates that an IP address is allocated to a client by an AP's upstream device. A VLAN ID must be configured when the **Bridge** mode selected.

NAT Address Pool Configuration: Click the NAT Address Pool Configuration link to display the window.

NAT Address Pool Configuration	×
Note: 1. Only after the SSID has been configured with NAT forwarding mode, the NAT address pool configuration will be delivered to the AP. 2. If the address pool has changed, the original client must re-associate the SSID to get the new address of the address pool.	
Common Address Pool Configuration (Recommended) Use the current address pool or the default address pool (192.168.23.0/24), Click here to configure the address pool.	
NAT Roaming Address Pool Configuration (Cloud will allocate different address pools for different APs. The AP must support L3 roaming. Please select this option when all APs the network are dual-radio APs.)	s in
By default, it is auto allocated by server. (Range: 10.233.0.0/24-10.254.254.0/24), Click here to customize the address pool. V	
Save Ca	ancel

5G-Prior Access: It is enabled when the SSID is associated with Radio 1 and Radio 2 for dual-band APs (2.4 GHz and 5 GHz) to ensure that clients supporting dual bands access the 5 GHz frequency band preferentially. This reduces the load in the 2.4 GHz frequency band and improves user experience.

Speed Limit: Specify whether to enable the rate limit function for a client. When this function is enabled, uplink and downlink rates must be configured.

Auth: Common APs support External Portal and Captive Portal authentication.

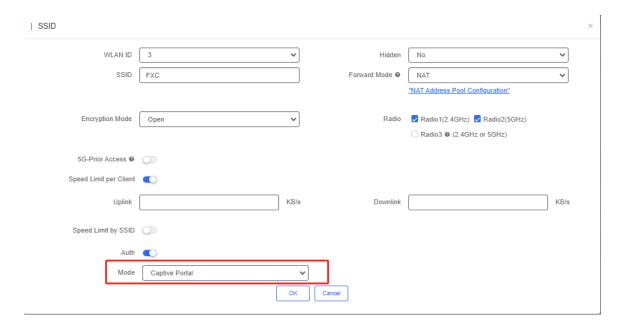
6.2.2.2 External Portal

To edit SSID, enable Auth and select External Portal. Enter the required information and click OK.

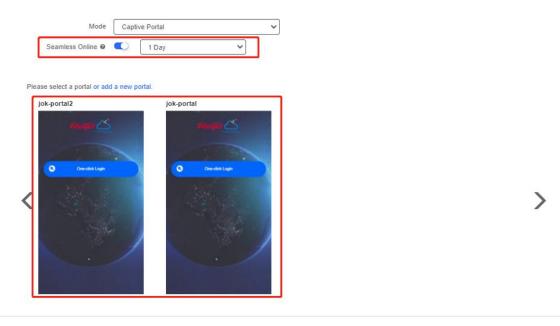
Auth	
Mode	External Portal 🗸
Portal Server URL @	
Portal IP @	
Portal Port(Optional)	
Gateway ID(Optional)	
Seamless Online	☐ Enable(Available only when supported by Auth server)
Idle Client Timeout	✓ Inactive Client Auto Offline (Optional)

6.2.2.3 Captive Portal

1. On the **SSID** page, enable **Auth** and select **Captive Portal**.



2. Enable **Seamless Online** and select the portal.



6.2.2.4 Radio



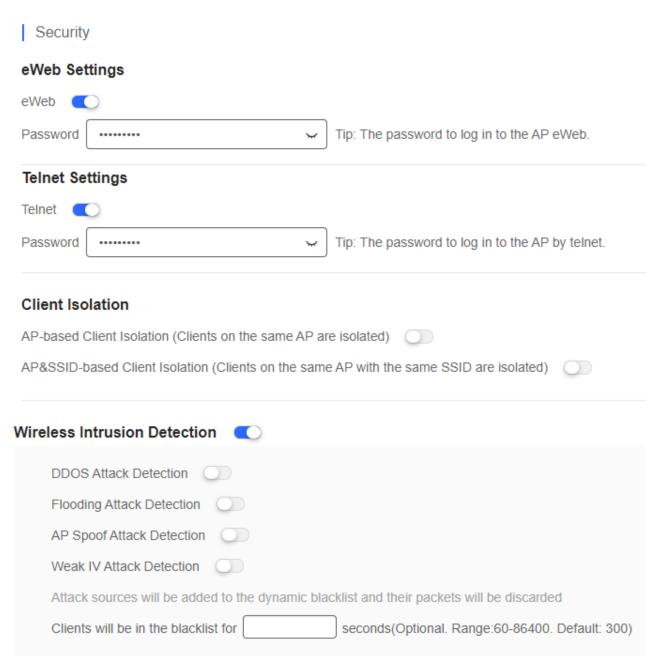
The Radio page enables you to configure the AP radio ports. As shown in Figure 4-4, the **Radio** page provides the **On/Off** and **Max Clients** items. Parameters on the **Radio** page are defined as follows:

On/Off: Specify whether to enable the radio function. When it is set to **Off**, the SSID is invalid; the corresponding SSID can be used properly only when this function is set to **On**.

Max Clients: Enter the upper limit of associated clients in a frequency band.

Deletion of radio configurations indicates that the system preserves the current configurations.

6.2.2.5 Security Configuration



As shown in the preceding figure, **eWeb Settings**, **Telnet Settings**, **Client Isolation**, and **Wireless Intrusion Detection** can be configured.

eWeb Settings: Enter the Web login password of an AP. When the password is empty, the system does not push the password to AP.

Telnet Settings: Enable the Telnet service of AP. When the Telnet service is enabled, the password is required.

Client Isolation: Clients are isolated without affecting their network access to ensure that they cannot communicate with each other, thereby ensuring client service security. AP-based client isolation or AP&SSID-based client isolation can be selected. If AP-based client isolation is enabled, all layer-2 clients associated with the same AP cannot communicate with each other. If AP&SSID-based client isolation is enabled, clients in the same WLAN on the same AP cannot communicate with each other.

Wireless Intrusion Attack Detection: Include DDOS attack detection, flooding attack detection, AP spoof attack detection, and weak IV attack detection. If this function is enabled, at least one of the preceding four detection functions needs to be enabled.

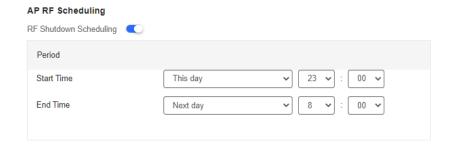
6.2.2.6 Advanced Settings

AP RF Scheduling

If AP RF Scheduling is disabled, AP will broadcast the SSID.

AP RF Scheduling RF Shutdown Scheduling

To specify the time of turning on/off WiFi, enable RF Shutdown Scheduling and configure the period.



Whitelist

Enter whitelisted websites, and websites that can be accessed directly without authentication. For Facebook social login, you need check on Facebook Whitelist so that clients can access Facebook API before authentication.

CLI Command

Enter commands to be pushed to APs. This function allows you to perform some configurations unsupported via CLI commands.

6.2.3 Layout (Non-apartment Scenario)

On the Layout page, you can bind an AP to a specific location after importing it to a network.

Select a network.

The **Unbound Device List** on the right displays APs that have been imported to the network, but are not bound to a location. Click **Config Layout** to display the list.



Click **Add Layout** to add the local layout or map layout. The local layout can be used to bind the location of indoor APs and the map layout can be used to bind the location of outdoor APs.



2. Select an AP from in the unbound AP list and drag it to the target location.



6.2.3.1 Unbind APs

AP unbinding is different from AP deletion. AP unbinding removes the binding relation between an AP and a location, but the AP still exists in the network and can be controlled. AP deletion deletes an AP from a network and the AP cannot be controlled after being deleted.

The unbinding methods are:

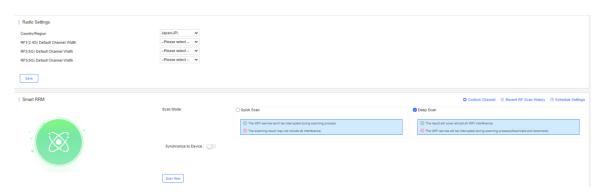
Method 1: Select an AP, and click Remove Device to unbind the AP from a location. An unbound AP will then be moved from a network to its parent network.

Method 2: If a location is already bound to an AP, you can drag another AP to the location to replace the old AP.

6.2.4 Radio Planning (Non-apartment Scenario)

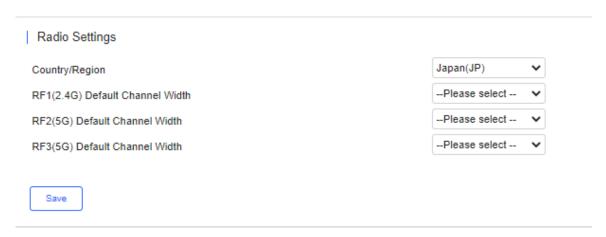
Radio planning can adjust channels and power of APs in a same area network to optimize the channel allocation and power of the APs. Proper RF configuration planning can reduce channel interference, increase channel utilization and improve overall wireless network performance and capacity.

Choose **CONFIGURATION** > **WIRELESS** > **Radio Planning** to open the **Radio planning** page. Both manual and automatic planning are currently supported.



6.2.4.1 Radio Settings

On the Radio Settings page, select the country and bandwidth.



For 2.4G channels, the bandwidth can be 20 or 40 MHz. For 5G channels, the bandwidth can be 20, 40, 80, or 160 MHz.

6.2.4.2 Smart RRM

The automatic RF planning function allows the cloud to calculate the optimal channel configurations and power values for APs by using the radio resource management (RRM) algorithm according to RF information collected by each AP. Optimal recommended configurations can be applied to the APs.

The entire process of the automatic RF planning includes three parts:

1. The cloud triggers APs to scan and upload RF information.

- The cloud calculates the optimal recommended configurations.
- The optimal recommended configurations are applied to the APs. 3.

The automatic RF planning supports network-based planning only.

The AP RF channel optimization algorithm staggers RF channels of neighboring APs respectively based on the 2.4 GHz frequency band and the 5 GHz frequency band while ensuring as much as possible that original configurations are unchanged. To reach optimal power, The AP power optimization algorithm automatically increases or decreases the RF power for an AP according to the co-channel interference.

After a network is selected on the RF planning page, a page for automatic RF scanning and planning of the network is displayed. On this page, the APs of a network can be triggered to scan the RF, display recommended RF configurations configurations calculated scanning, the recommended RF APs. after and save



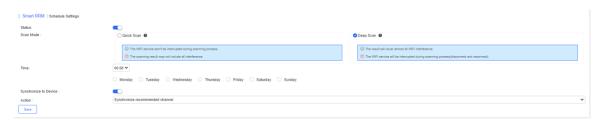
The Recent RF Scan History page displays historical records of automatic RF scanning and planning. Each record shows triggering information got each time, including the automatic RF planning status, the start time, the end time, the status (Initializing/Scanning/RRM analysis/Finish/Failure), whether to apply to the APs, and the running logs.

Smart RRM



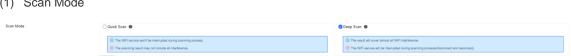
There are two execution modes: immediate and periodic. Click Scan Now, and the cloud triggers RF scanning. Data will be uploaded after scanning.

Schedule Settings



On the Schedule Settings page, Periodic Execution can be enabled.

- When a periodic task is triggered, this periodic task is automatically canceled if the network is already in a scanning triggered state (for example, immediate execution is being triggered).
- Related parameters
- (1) Scan Mode



Quick Scan: This mode enables APs to provide the WiFi service properly during scanning. However, data acquired in this mode is not as accurate as that in the Deep Scan mode. The calculation result based on the data in this mode is less

accurate than that in the **Deep Scan** mode. This mode is applied when it is expected that the current network is not affected.

Deep Scan: This mode is also referred to as the enhanced mode, and causes wireless clients to go offline at the beginning and ending of the scanning. Data acquired in this mode is more accurate than that in the **Quick Scan** mode, and the automatic RF planning based on the data is more accurate. This mode shall be applied at the initial stage of the overall network planning or when disadvantages of this mode are tolerable.

(2) Synchronize to Device



If this function is enabled, the RF scanning result will be automatically pushed to the AP. In this case, skip step 3.

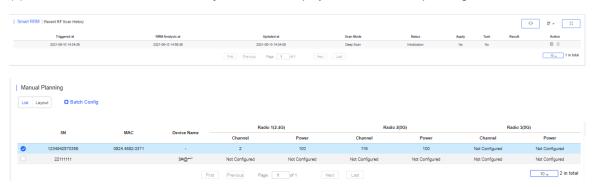
(3) Manually push the RF optimization results (synchronize the RF configurations to the APs).

Skip this step if **Synchronize to Device** is enabled.

After the status in the record of the triggered RF planning displays **Finish**, check the planning results, and synchronize the recommended automatic planning RF configurations to the APs.

It allows you to directly view RF optimization results, and directly push the optimized configurations to APs of a network, without relying on the location planning. It is convenient and suitable for fast deployment, and can be used when the APs have no location planning or are not bound.

(1) Click Recent RF Scan History in the list to display the automatic RF planning result list of the APs.



In the RF optimization result list of the APs, **Recommended Power of Current Channel** indicates a recommended power value for the current channel. **Recommended Power of Recommended Channel** indicates a recommended power value for the recommended channel. It is calculated based on the recommended channel, and is configured together with the recommended channel.

(2) Click Sync Latest Config To AP in the trigger record, and select a mode to push the recommended optimization configurations to the corresponding APs.

Three modes are available: pushing the recommended channel configurations, pushing the recommended power configurations of the current channel, and pushing the recommended power configurations of the recommended channel. Any of the three modes can be selected as required.

If an AP has been bound to a location and has been synchronized with RF configurations of the location. This operation will remove the RF synchronization between the location and the AP, and push the selected recommended optimization configurations to the AP.

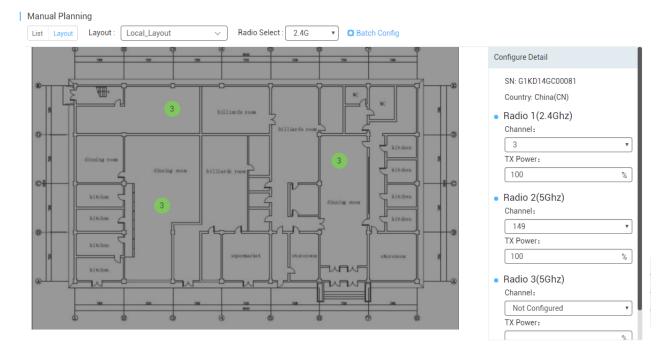
6.2.4.3 Manual Planning

Click a network on the left to open the manual RF planning page. The **Radio Select** drop-down list above the diagram lets you select an RF type (2.4 GHz/5 GHz) to display. The number inside the location icon indicates the current channel, and a range displayed when the cursor stays on the location icon indicates a power percentage.

0

The RF channel or power data is not displayed during configuration.

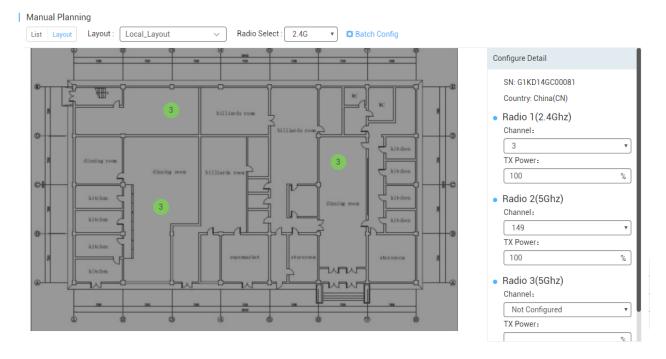
You can click a location icon to display the RF channel and power configurations on the right. If the location is bound to an AP, the SN of the bound AP is also displayed.



To perform manual RF planning:

- 1. Set the RF configurations of a location in one of the following ways:
- Configure one location

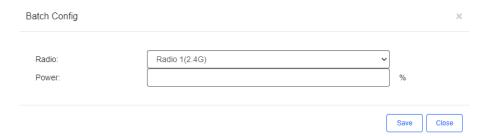
Click a location icon, enter configurations on the right, and click **Apply**.



Configure locations in batches

This function is used to configure the RF channel and power for a large batch of locations, and is suitable for a scenario with many locations on a network.

Click above the location diagram to uniformly configure the power percentage for all locations on a network.



2. Synchronize the RF configurations of the location to a bound AP.

Click Apply above the location diagram to synchronize the RF configurations of the corresponding location to the bound AP.

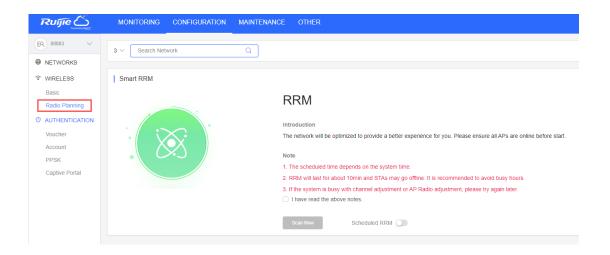
Batch operations for multiple locations can be select before clicking Apply.

After the synchronization is successful, is displayed in the lower right corner. At this point, the configurations of the location are synchronized to the bound AP.

1 If an unbind or bind operation is performed, RF configurations are removed from or synchronized to the AP.

6.2.4.4 AC Smart RRM

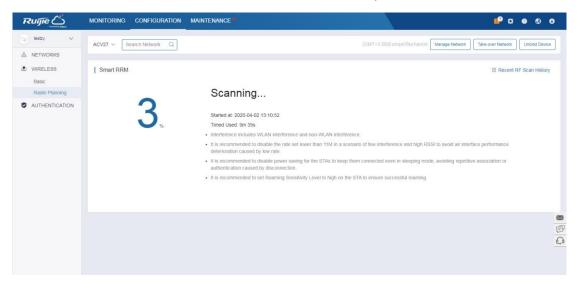
In the AC network, click Radio Planning to open the Smart RRM page.



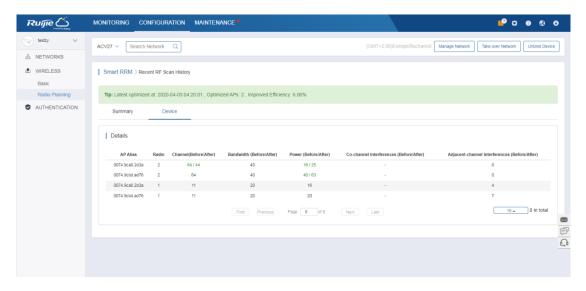
Check the note, click

Scan Now

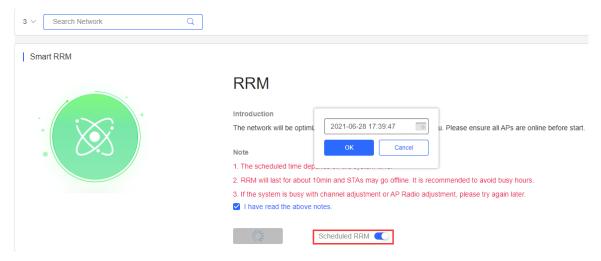
to start RRM. The whole process takes about 10 to 15 minutes.







Enable **Scheduled RRM** to configure the time, and RRM will start at the set time.

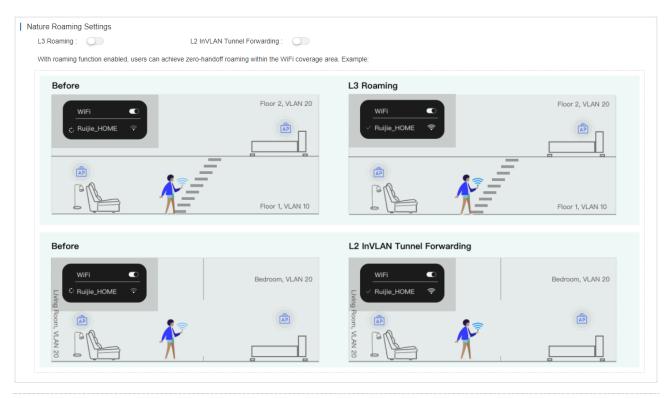


6.2.5 Roaming (Non-apartment Scenario)

Roaming planning refers to enabling network-based roaming.

L3 Roaming: Specify whether to enable Layer3 Roaming. It is enabled by default.

L2 InVLAN Tunnel Forwarding: Specify whether to enable Layer2 Roaming. It is enabled by default.



for wireless roaming, SSID signals must be consistent; otherwise, roaming may fail.

6.2.6 Bluetooth (Non-apartment Scenario)

You can batch import, add, change and delete the Bluetooth configuration.



Bluetooth configuration import

Click **Import**. The **Import** dialog box is displayed. For initial use, you can click **Download Template** in the lower right corner to download an EXCEL file corresponding to APs in the current network and set corresponding parameters in the file. Requirements for the **UUID**, **Major**, and **Minor** parameters are:

UUID: Enter a string of 32 characters in hexadecimal format.

Major: Enter a string of 4 characters in hexadecimal format.

Minor: Enter a string of 4 characters in hexadecimal format.

Import ×

Please download the template and enter the Bluetooth configuration before uploading the template. Up to 200 records can be imported



After the parameters in the EXCEL file are configured, click '.xls' File to import the file. A prompt will be displayed if an exception occurs during the import.

Bluetooth configuration adding for a single AP



Click **Add**. The **Bluetooth** dialog box is displayed, as shown in the preceding figure. Specify the parameters as required to add a Bluetooth configuration for one AP and click **Save**. If a Bluetooth configuration is already configured for the AP, the existing Bluetooth configuration will be updated.

Bluetooth configuration modification for a single AP

Click the icon. The **Bluetooth** dialog box is displayed, as shown in the preceding figure. Modify the required parameters and click **Save**.

6.3 Authentication

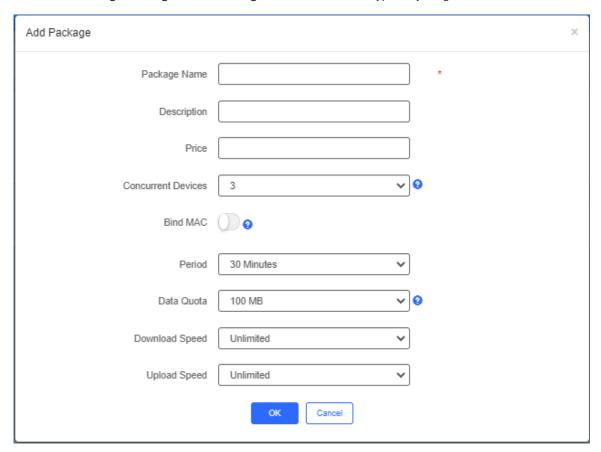
6.3.1 Voucher

6.3.1.1 Voucher Authentication

Voucher authentication on Ruijie Cloud allows you to charge users for wireless network access using access codes. Concurrent users, time period and data quota limit can be customized and offered to your guests.

6.3.1.2 Configuration Steps

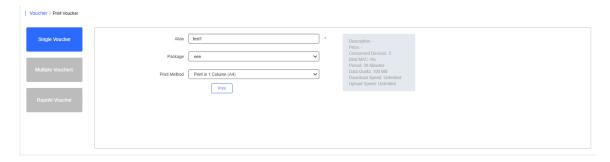
- 1. Enable **Voucher** function in the **Captive Portal** mode of **SSID** under the corresponding network.
- 2. Select CONFIGURATION > AUTHENTICATION > Voucher.
- 3. Select **Manage Package > Add Package** to define a voucher type for your guests.



4. Click **OK** to go back to the **Voucher** page and click **Print Voucher**.



5. Select the way you want to print voucher codes and enter the quantity if you select **Multiple Vouchers**.

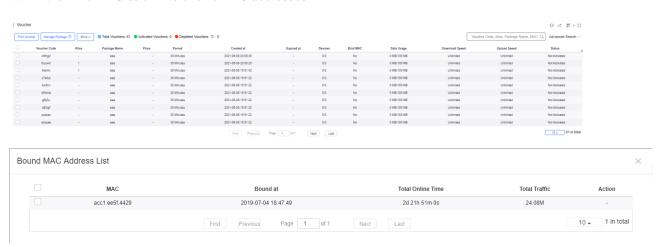


6. Click the Print button.

6.3.1.3 Bind/Unbind MAC

If **Bind MAC** is enabled for the package, the voucher code used by a device will be bound with its MAC address. The number of bound MAC can be set in **Max Concurrent Devices**. When the **Status** is **Activated** or **Depleted**, you can click

in the **Bind MAC** column to unbind MAC addresses.



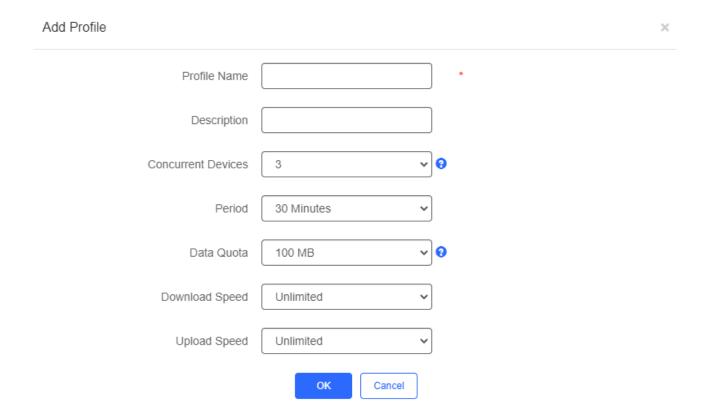
6.3.2 Account

6.3.2.1 Account Authentication

Account authentication requires the valid account and password. Concurrent users, time period and data quota limit can be customized and offered to your guests.

6.3.2.2 Configuration Steps

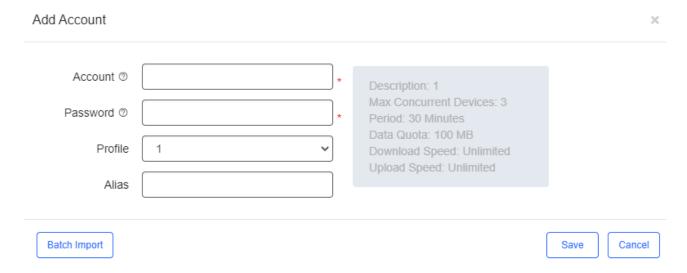
- 1. Enable Captive Portal in the SSID page, and select a template with Account Authentication.
- 2. Select CONFIGURATION > AUTHENTICATION > Account.
- 3. Select Manage Package > Add Profile to define an account type for your guests.



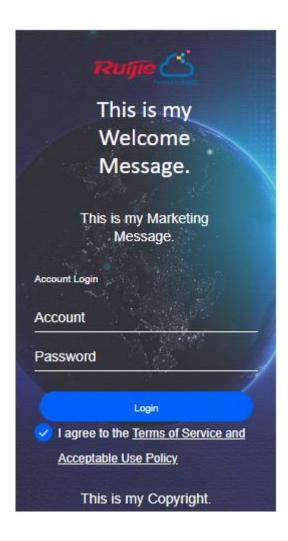
4. Click **OK** to go back to the **Account** page and click **Add Account**.



5. Enter the account and password, select the package, and click **Save**.



6. Connect to the SSID, select **Account Login** in the pop-up page, enter the account and password created in the last step, and click **Login**.



6.3.3 PPSK

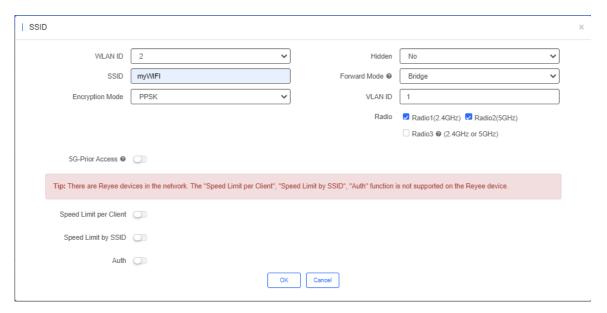
6.3.3.1 PPSK Authentication

PPSK combines the advantages of PSK and 802.1x. It prevents the network from being stolen. Each terminal device is bound with a unique WiFi account and key so that the key will not be shared. This can also be called "One Client, One Password".

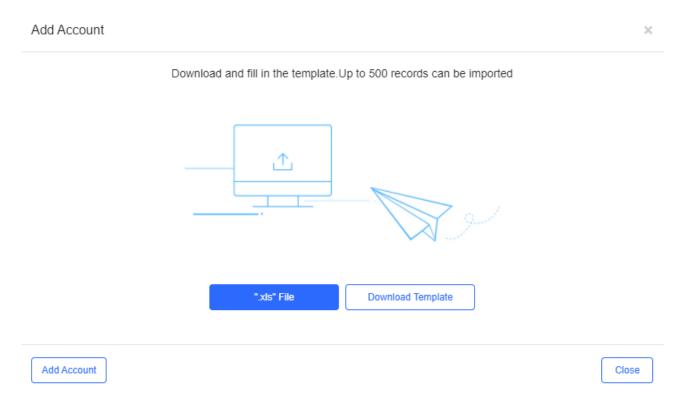
- 1. The main tasks of the PPSK administrator:
 - Log in to Ruijie Cloud and deploy the network, so that APs can access the Ruijie Cloud.
 - Set the authentication mode of SSID to PPSK (the administrator can configure it directly).
 - On the PPSK Configuration page, an enterprise can enable the PPSK function and choose the network.
 - Open account for staffs in batch.
- 2. Staffs can connect to the SSID with a unique WiFi key allocated by the administrator and access the Internet.

6.3.3.2 Configuration Steps

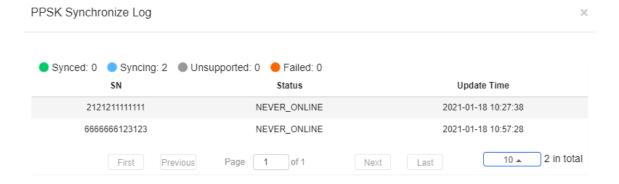
1. Choose CONFIGURATION > WIRELESS > Basic, click beside SSID, and set the Encryption Mode as PPSK.



- 2. Choose CONFIGURATION > AUTHENTICATION > PPSK.
- 3. Click **Add Account** to batch import or manually add new accounts.



4. Click the view button on the **Action** column of the PPSK list to check **PPSK Sync Log**.



5. Bind MAC address for accounts in the PPSK list.



6.3.4 Captive Portal

Select **CONFIGURATION > AUTHENTICATION > Captive Portal** to display the **Captive Portal** page, and select a network on the top to filter captive portals.

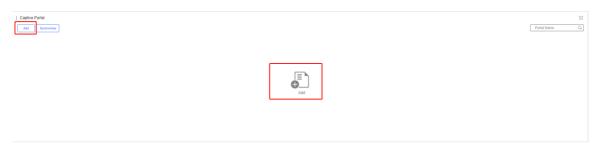
When **Captive Portal** is enabled, SSID can associate with the templates. You can manage templates under a network, but only use or associate templates under a sub-network.

6.3.4.1 Captive Portal List

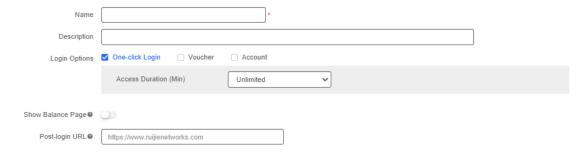


The list displays all captive portal templates, including thumbnails, name, association status, creation time and description.

Add Captive Portal



Click or or to open the **Add Captive Portal** page. Enter name, description and post login URL, and select login options. After **Status Balance Page** is enabled, you can check your balance information after login.

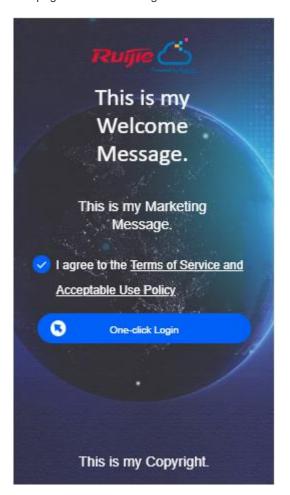


There are four login options: One-click Login, Voucher, and Account.

One-Click Login: You can set Access Duration and Access Times Per Day.



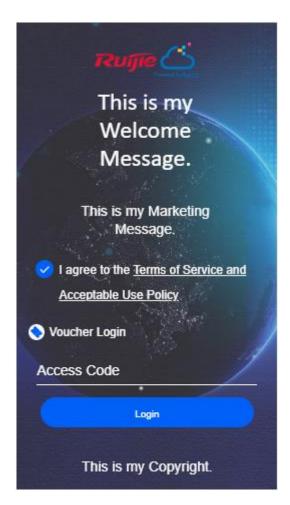
The page for One-click Login:



Voucher: You can log in with the voucher code.



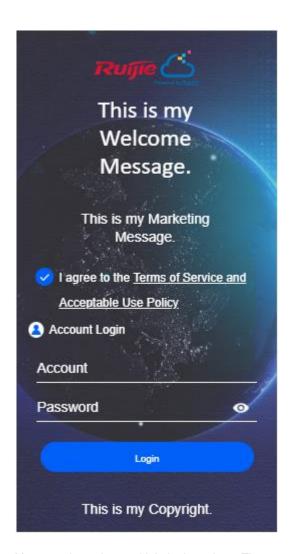
The page for Voucher:



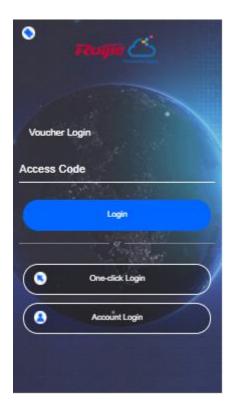
Account: You can log in with the account and password.



The page for Account:



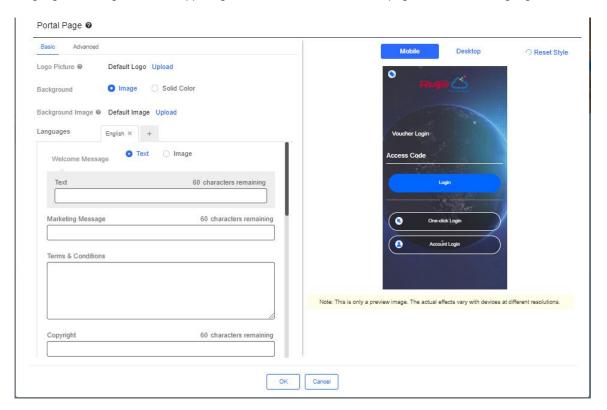
You can also select multiple login options. The page for One-click Login, Voucher, and Account Login:

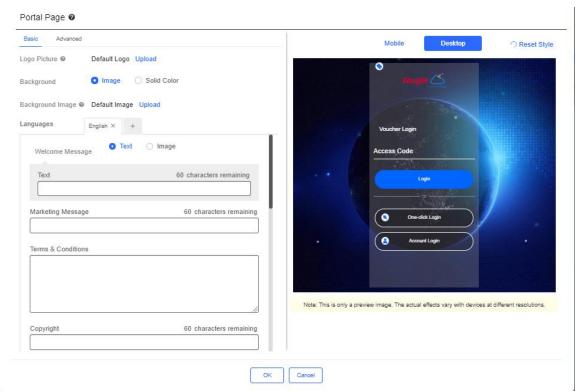


Portal Page

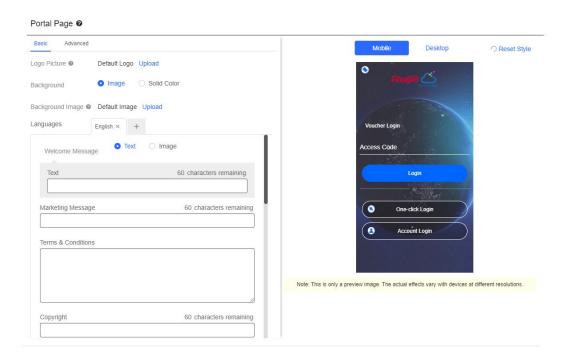
You can customize the content and style of the login page. The previews on the mobile phone and PC are displayed on the right.

Note: Each type of authentication supports a maximum of three languages. During authentication, users can select a language switching icon in the upper right corner of the authentication page to switch the language.

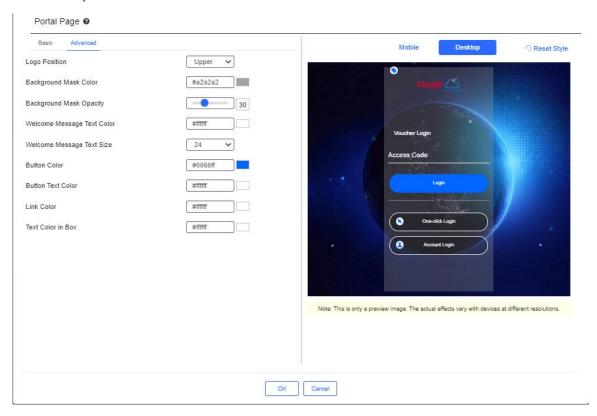




In the **Basic** tab, set the logo picture, background color or image, welcome massage, marketing message, terms & conditions and copyright.

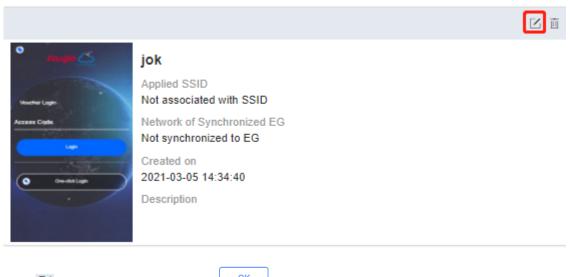


In the **Advanced** tab, set the Logo position, background mask color/opacity, text color/size. Click **Reset Style** to restore the default style.



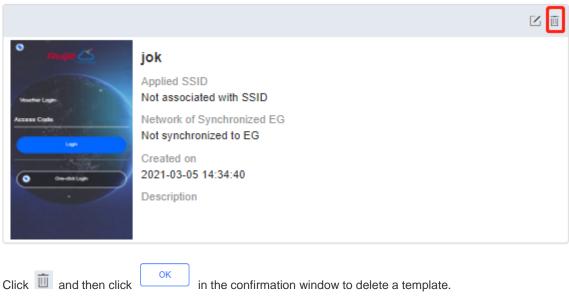
Click on the bottom to save.

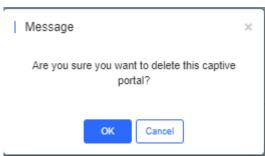
6.3.4.2 Edit Captive Portal



Click to edit a template, and click to save.

6.3.4.3 Delete Captive Portal





If the template is associated to an SSID or applied to the EG, then you need to dissociate it before delete.

User Guide Configuration

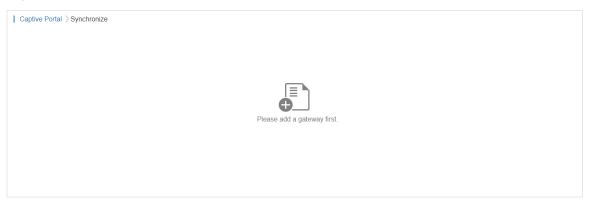


6.3.4.4 Apply to EG

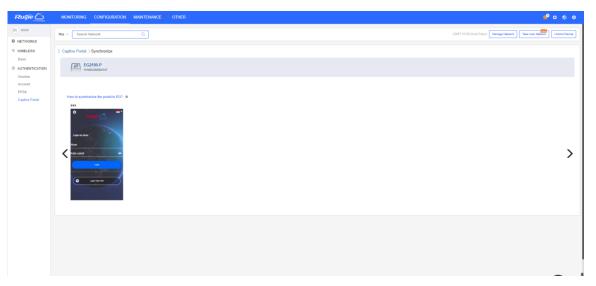
Click Synchronize to synchronize the capting

to synchronize the captive portal template to the EG.

If no EG exists in the current network, you can click page.



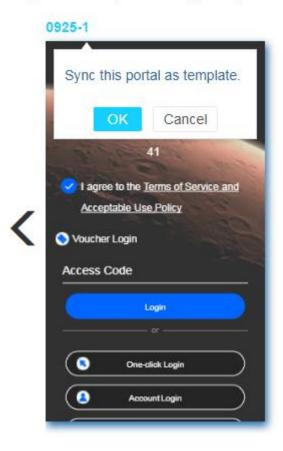
If there is an EG in the current network, the page is displayed as below:



Only one template can be synchronized to an EG. Select a template and click

User Guide Configuration

Synchronize 1 portal to the gateway.



After the template is applied, the date of last synchronization will be displayed above.



7 Maintenance

The **Maintenance** module mainly provides the following functional services:

- LOGS
- UPGRADE

7.1 Logs

7.1.1 Operation Log

This page shows operation logs.



×

Click to check log details.

General operation log details are shown as follows:

Message Details

Time: 2017-10-25 17:52:50

User: hill

Type: Login

Description: Log in successfully

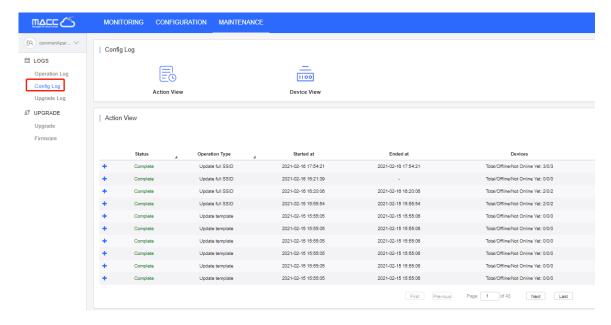
Result: Success

Result Description: OK.

7.1.2 Config Log

7.1.2.1 Action View

When the device configuration is imported, a prompt will pop up. Click the prompt to open the log page and export the SSID result.



On the log page, the latest record will be displayed by default



Status: View the status of the configuration

Complete: Configuration completes

Incomplete: Configuration is in progress

Result: View configuration results

Success: Number of devices configured successfully Failure: Number of devices whose configuration fails

Devices

Total: Total devices in the network Offline: Number of offline devices

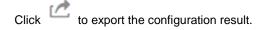
Not Online Yet: Number of devices that never go online

Cloud will give priority to the online devices, and will actively apply the configuration after the offline devices go online.

- Description: View configuration command
- Refresh: As it takes a while to complete the configuration, you can click this button to refresh the configuration progress.

Click to display more configuration information.







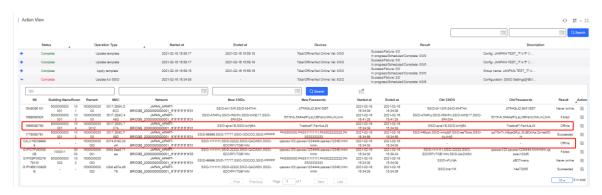
The exported file is shown as the figure below.

Α	В	С	D	E	F	G	Н	1	J	K	L	M
SSID	SSID and Password Change Form (Output)											
ID	DOM: N	_		1110								
שו	Building Name	Room	Remark	MAC	Network	New SSIDs	New Passwords	Started	Ended	Old SSIDs	Old Passwords	Result
1	50000000000001	103		107.00					2021 02/16 18:33	Old SSIDs SSID-fdra5M	Old Passwords ENiqjyiR	Result Succeeded

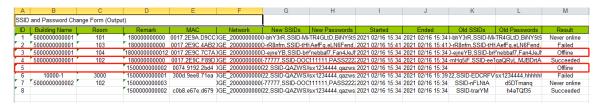
You can check the result in the column Result which may be "Succeeded" or "Failed".

7.1.2.2 End SSID and Password Configuration of Offline Device Immediately (Apartment Scenario)

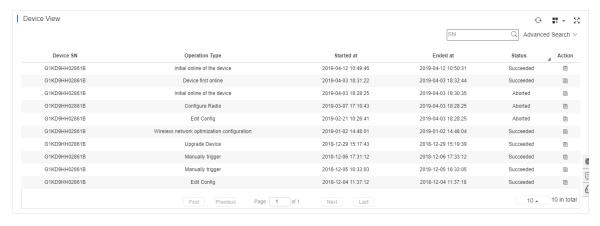
Suppose the operator changes the SSIDs and passwords of two rooms and exports the result.



Although there are offline devices waiting for SSID and password configuration, the overall configuration is completed. The operator can export result and send new SSIDs/passwords to the tenant. When the offline devices go online, the new SSIDs and passwords will be synchronized to the devices automatically.

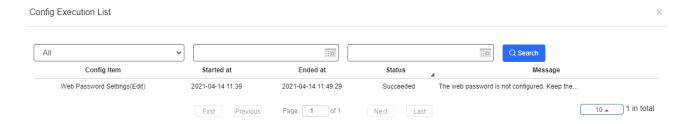


7.1.2.3 Device View



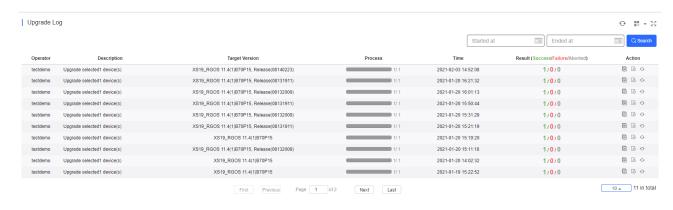
Click in the action column to check the push status of each configuration item.

The following figure shows an example of full configuration, including the configuration execution status of SSID, Radio and so on.



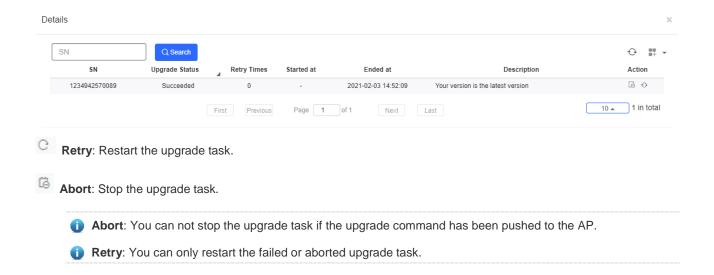
7.1.3 Upgrade Log

This part provides the upgrade tracing function. You can check the upgrade status, and abort or retry the upgrade.



- Retry: Restarts the upgrade task that failed or was aborted.
- Abort: Stops the upgrade task if the upgrade command has not been pushed.

Click to check log details.



7.2 Upgrade

The following tab pages are provided for device firmware management:

- Upgrade
- Firmware

7.2.1 Upgrade

Ruijie Cloud supports the online upgrade of device firmware, and it allows network administrators to utilize the latest features and security enhancement for their Ruijie devices. Online upgrade allows administrators to easily arrange the firmware upgrade on their networks and view firmware releases.

The **Upgrade** page includes two modules:

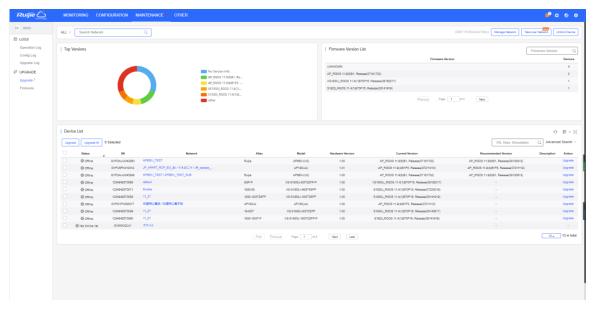
- Version statistics
- Firmware upgrade

Three ways are available to check whether there is a new version for the device:

1) MAINTENANCE Menu (for all devices)



Upgrade in the Navigation Bar (for all devices)

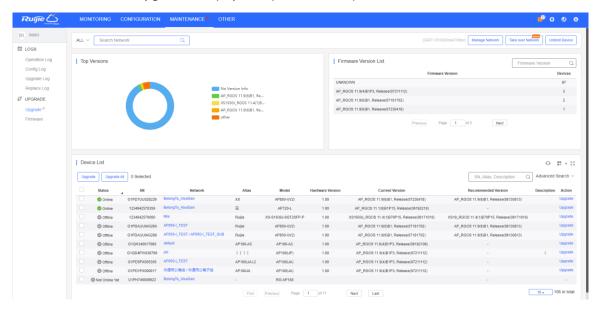


3) AP List, Switch List and Gateway List (for devices in the network)



7.2.1.1 Check Version Information

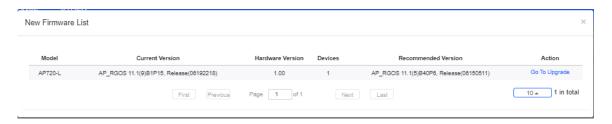
Select Maintenance > Upgrade to display the top 5 versions in pie chart form and a list for each network.

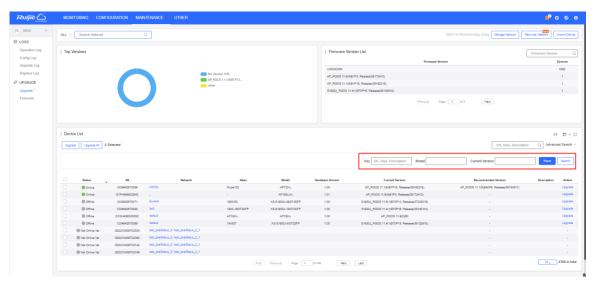


7.2.1.2 Upgrade

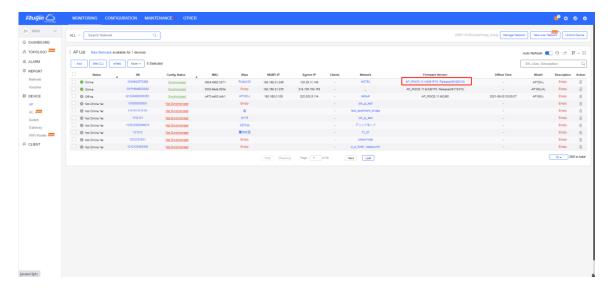
You can enter the **Upgrade** page in either of the following ways.

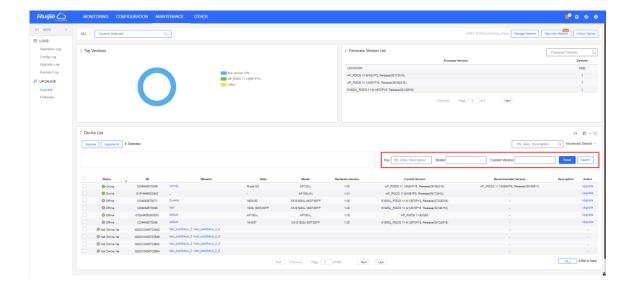
- Hover the mouse over MAINTENANCE, a link will appear. Click the link to enter the Upgrade page. The default network information is AII.
- On the AP List, Switch List or Gateway List, click New firmware to open New Firmware List window. Then click Go to Upgrade to enter the Upgrade page, and select and upgrade devices via Search.





3. Click Go to Upgrade in Firmware List to enter the Upgrade page, and select and upgrade devices via Search.





7.2.1.3 Upgrade Devices

For convenience, two upgrade modes are provided:

Upgrade Selected

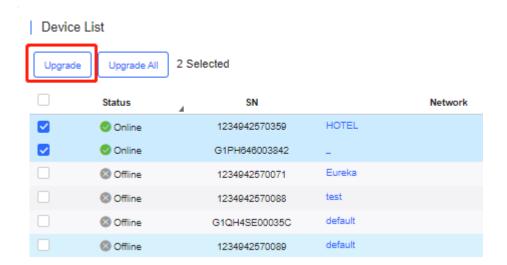
This mode enables you to upgrade a selected AP, and is suitable for a scenario with a few APs to be upgraded.

Upgrade All

Selects all the devices in the list, and applies to the status when multiple devices require upgrading, and implements a quick upgrade with selected **networks** and version numbers. This mode enables upgrading of all APs in the list, and is suitable for a scenario with a large number of APs. A **network** or a firmware version number can be specified to perform fast upgrades.

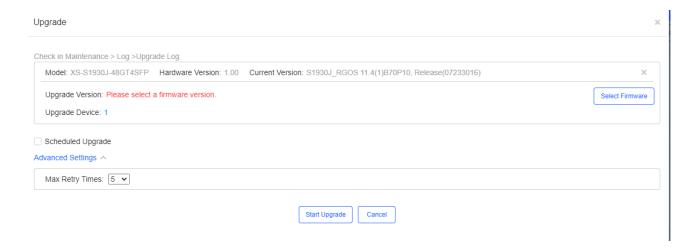
Upgrade Selected

1. Select a network on the left, select a target AP, and click **Upgrade**.

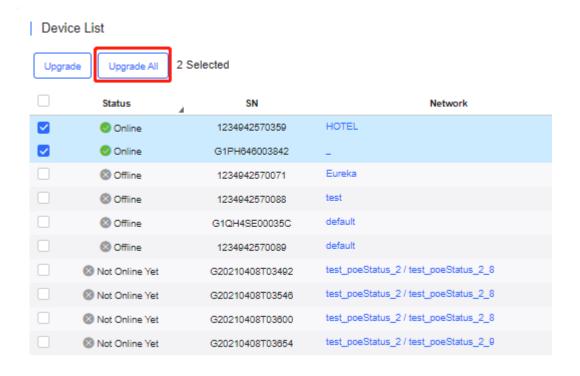


2. Select a firmware version.

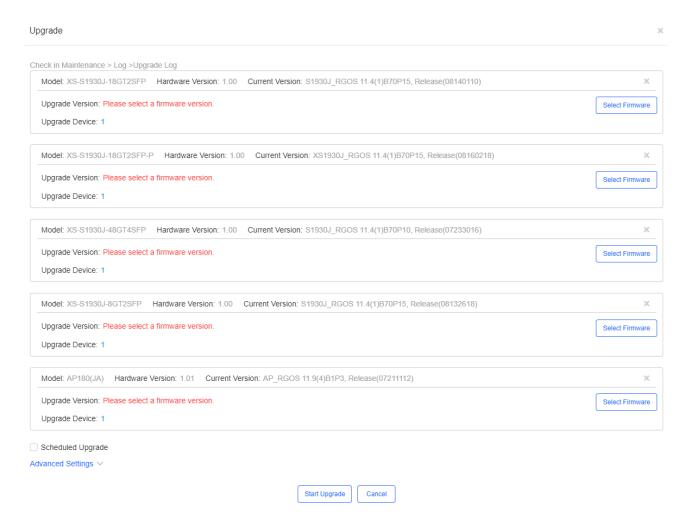
On the **Equipment Upgrade** page, you can check the device information and the details of versions, choose a version (the recommended version is the latest one), enable scheduled upgrade and set retry times if the upgrade fails.



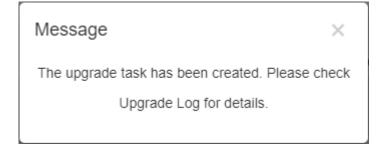
- 3. Upgrade the selected APs
- Upgrade All
- 1. Check the devices list based on a condition, and click Upgrade All.

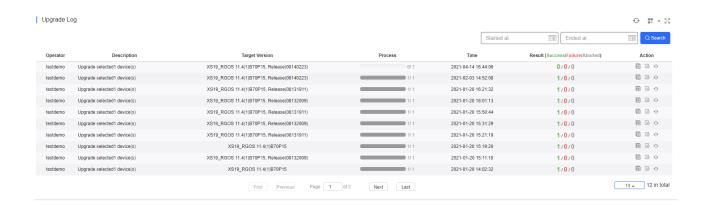


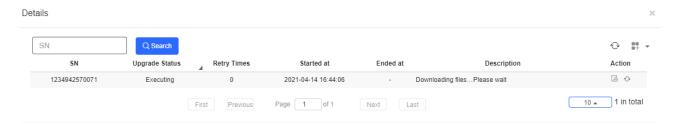
2. Select the version and click Start Upgrade



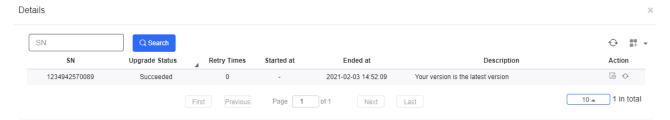
Set the update criteria and click **Start Upgrade**, and a message box will pop up. Users can check details in **LOGS > Upgrade Log**.



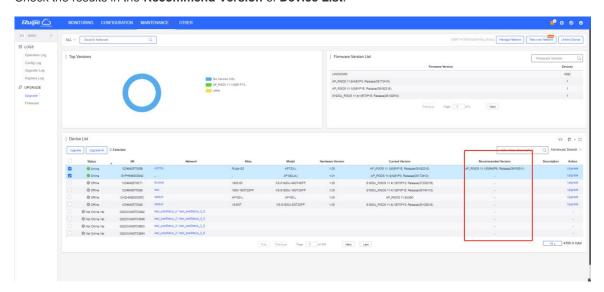




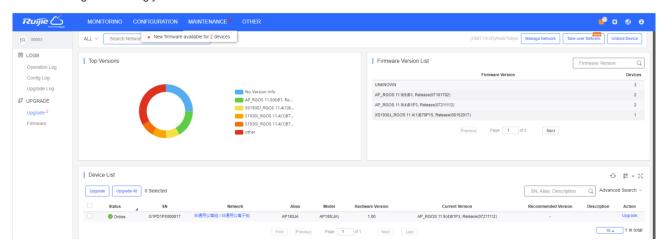
3. If the upgrade is successful, log will show **Upgrade succeeded**.



Check the results in the Recommend Version of Device List.



The numbers of devices which have available firmware for upgrade in **MAINTENANCE** Menu and **Upgrade** in Navigation Bar will change accordingly.



7.2.2 Firmware

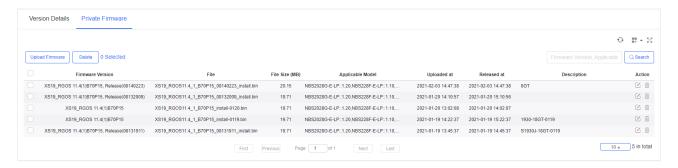
7.2.2.1 Version Details

The **Version Details** list displays the versions of firmware installed on all devices. Click **Go To Upgrade** in the **Action** column to open the **MAINTENANCE** > **Upgrade** page.

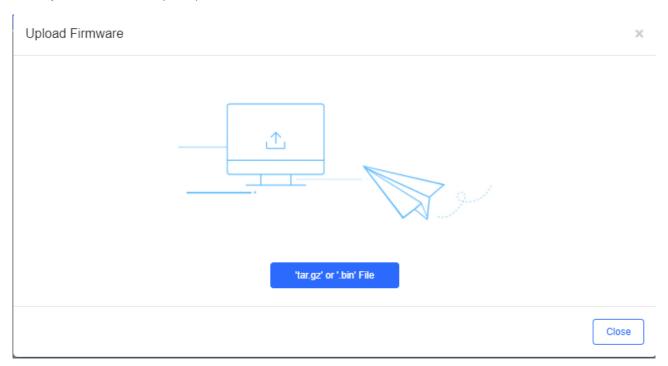


7.2.2.2 Private Firmware

The Private Firmware list displays the private firmware uploaded by all accounts under a tenant.



Click **Upload Firmware** to upload private firmware.

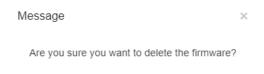




Click $\ ^{\ \square}$ in the **Action** column to edit the **Description** of firmware.



Click **Delete** or $\stackrel{{}_{\stackrel{\frown}{\coprod}}}{=}$ in the **Action** column to delete private firmware.



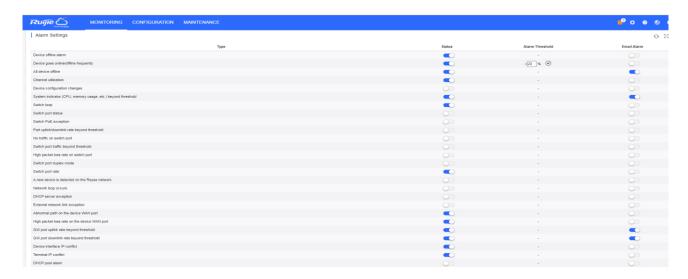


User Guide System Settings

8 System Settings

8.1 Alarm Settings

Click in the upper right corner and select **Alarm Settings**. The **Alarm Settings** page is displayed for alarm parameter configuration.



Alarm settings are configured by network. If no alarm settings are configured, the global settings are adopted.

On the **Alarm Settings** page, you can configure to receive alarms or not and in which way. When the **Status** is enabled, alarm information is displayed on the **Alarm** page. Alarms can be pushed via Email only when the **Status** is enabled. When the **Email Alarm** is enabled, alarms will be pushed via Email to the contacts in the **Contact List** of the network.



Note: To use the **Email Alarm** function, click and select **System Settings** to preset the account and password of the SMTP server for sending Emails on the **Advanced** page via the administrator account. For details about the configuration page, see section 6.2.2.

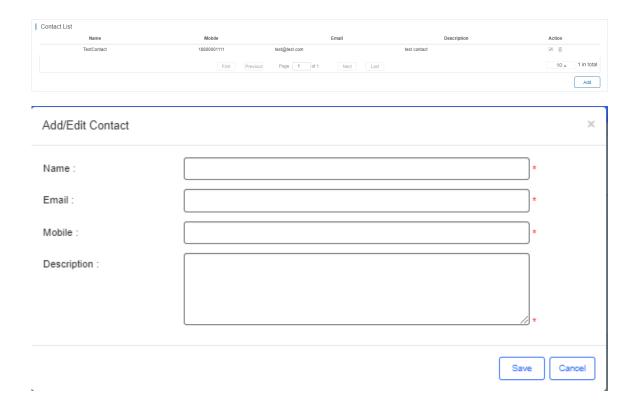
8.2 Contact

On the Contact page, you can create contact groups, and add contacts to contact groups.

8.2.1 Contact List

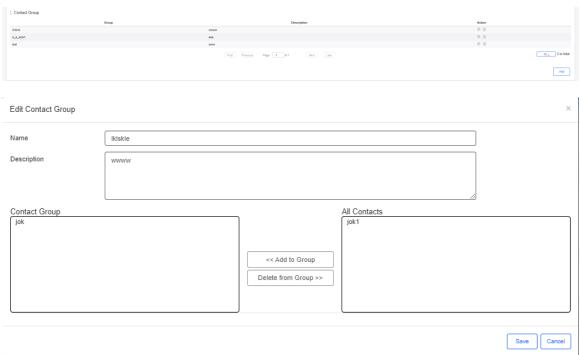
Add a contact as the Email recipient.

User Guide System Settings



8.2.2 Contact Group

Add a group and move the contacts to the group.

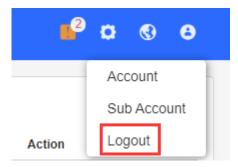


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User Guide Account

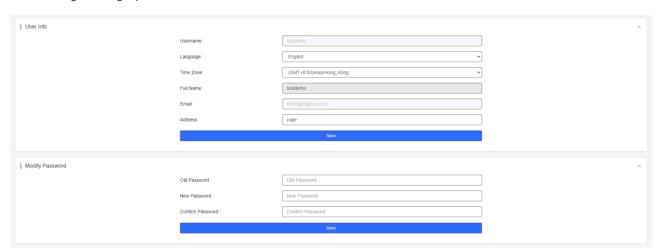
9 Account

Point to on the upper right corner, the **Account** menu is displayed, which includes **Account**, **Sub Account** and **Logout**.



9.1 Account

The **Account** page is divided into the **User Info** area and **Modify Password** area. In the **User Info** area, you can edit the basic information of user (**Username** and **Email** is not allowed to be changed); In the **Modify Password** area, you can change the login password.



9.2 Sub Account

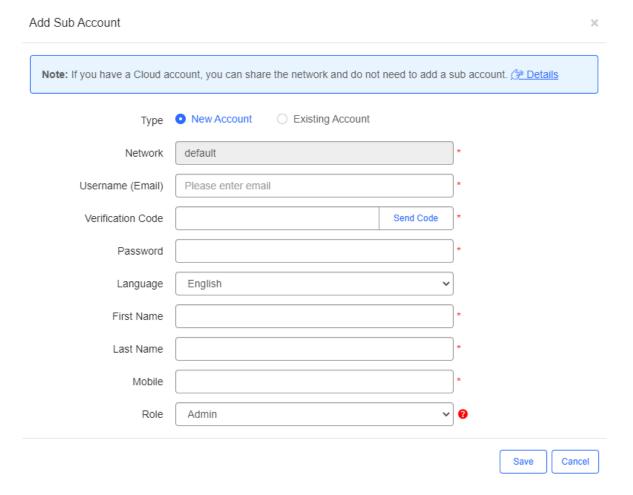
The **Sub Account List** displays the information of sub accounts. Click in the **Action** column to edit the sub account. Click in the **Action** column to delete the sub account.



User Guide Account

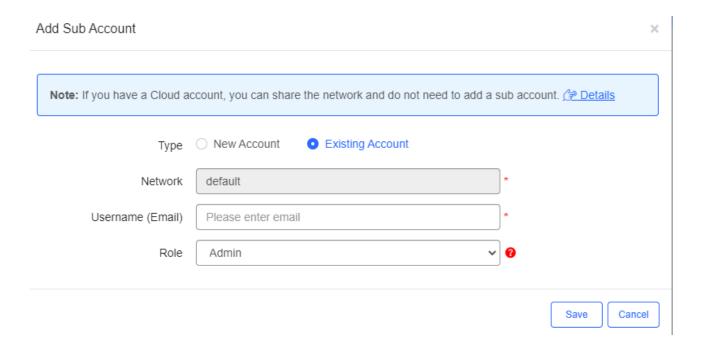
Click **Add Sub Account** to add a new sub account. Select the network, enter the Email in the **Username** box and click **Send Code**. Enter the security code contained in the Email, set the password, language, full name, expiration date, mobile and role, and click **Save**.

Role: **Admin** owns the permissions to create an account. **Employee** owns the permissions to edit data. **Operator** owns the permissions to print voucher and view account data. **Guest** owns the permissions to view data.



The existing sub account can be added to the network so that a sub account can manage multiple networks.

User Guide Account



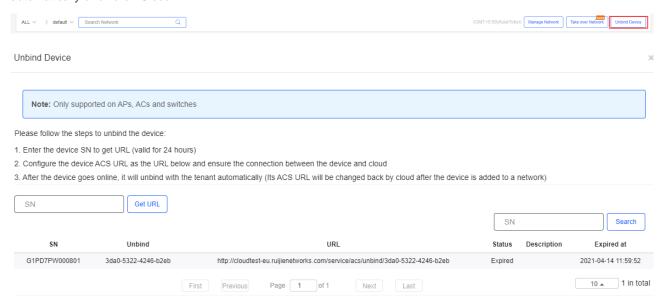
9.3 Logout

Click **Logout** to exit the system and return to the login page.

User Guide Unbind Device

10 Unbind Device

Click **Unbind Device**, enter the device SN to get URL. Configure the URL as the ACS URL on device, and the device will automatically unbind on Cloud.



User Guide Appendix

11 Appendix

11.1 Acronyms and Abbreviations

Acronyms and	Full Name
Abbreviations	
AP	Access Point
AC	Access Controller
BOSS	Business & Operation Support System
DHCP	Dynamic Host Configuration Protocol
DNS	Domain Name Server
EAP	Extensible Authentication Protocol
EAPOL	EAP over LAN
EAP AKA	Extensible Authentication Protocol Method for 3rd Generation Authentication and Key Agreement
ESSID	Extended Service Set Identification
FTP	File Transfer Protocol
HLR/AuC	Home Location Register
HTTP	Hypertext Transfer Protocol
IMSI	International Mobile Subscriber Identification
MSISDN	Mobile Subscriber ISDN
NAT	Network Address Translation
PAT	Port Address Translation
Radius	Remote Authentication Dial In User Service
SNMP	Simple Network Management Protocol
SSID	Service Set Identifier
UDP	User Datagram Protocol
VPN	Virtual Private Network
WEP	Wired Equivalent Privacy
WPA	Wi-Fi Protected Access
WAPI	Wireless LAN Authentication and Privacy Infrastructure
WLAN	Wireless Local Access Network

11.2 Glossary

Term	Definition
Cloud	Specify the cloud center management end, supports private and public clouds, allows separate
	deployment of a system of a private cloud version, and provides cloud services of the public
	cloud version.
Network	Enable the device grouping for easy management of a large quantity of devices. It is
	recommended that networks be added by geographical location or device use.

11.3 Limitations

No.	Module	Description
1	Device	Up to 200 devices can be imported each time. To import more than 200 devices,
1	Device	users need to do it in batches.
2	Configuration	Configurations of up to 200 devices can be imported each time. To import
	Comiguration	configurations of over 200 devices, users need to do it in batches.
3	EXCEL template	For the Excel template, only the XLS format is supported.
4	SSID	SSIDs can be made up of numbers, English letters, and "-".
5	Custom excel template	In an Excel template for customization, A to Z columns and 1 to 15 rows are
5	Custom excertemplate	supported.
		Account-based policies may fail on some models, such as AP680(CD), where they
6	AP	are disabled by default. In this case, users need to batch apply from the Cloud the
		web-auth acct-update-interval 1 command to enable those policies.
	SSID reverse syn	The Cloud does not support SSIDs containing special characters. If such SSIDs ar
7		e set on end devices, the Cloud would fail to deliver them after they are synchroni
		zed to the Cloud.