Reyee Series Implementation Cookbook (V1.2)

Exemption Statement

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1 Preface

Audience

Network Engineers

Network Administrator

Obtain Technical Assistance

Ruijie Networks Websites: https://www.ruijienetworks.com

Ruijie Service Portal: https://caseportal.ruijienetworks.com

Welcome to report error and give advice in any Ruijie manual to Ruijie Service Portal

Revision History

Date	Change contents	Reviser
2020.8	V1.0 Initial publication	Nick Chen
2020.11	V1.1 Fix a typo.	Nick Chen
2020.11	V1.2 Add EST310	Henry Huang

Contents

2 Product Introduction

2.1 Cloud-managed Access Points

Reyee cloud-managed access point is a high performance for indoor/outdoor/wall scenarios. Compliant with 802.11ac wave2 Wi-Fi protocol, cloud-managed series access points support MU-MIMO dual stream technology.
The industrial product design makes the product is simple to install and maintenance.

Cloud-managed access points support self-organizing network.

Provide better performance based on Dual-band Wi-Fi

Supports 2.4GHz and 5GHz dual-band communication, providing access rate of 400Mbps at 2.4GHz, 867Mbps at 5GHz and up to 1267Mbps per AP. It can provide 5GHz frequency band with less interference, wider channel, and faster speed for the terminals, allowing the users to enjoy excellent wireless experience.

Seamless Layer 3 Roaming

The device supports Layer 3 roaming for the complex Layer 3 network. When users move across the Layer 3 networks, seamless roaming can be achieved without service interruption.

Support Self-organizing networking feature

Self-organizing networking feature, which breaks through the product limitations and realizes auto-discovery, auto-networking and auto-configuration between routers, switches, and wireless APs without the need for controllers or Internet access. With the mobile app, users can quickly complete the device deployment and configuration, remote management, operation and maintenance of the entire network, which greatly reduces the investment of equipment cost, labor cost and time cost in the process of wireless network construction.

2.2 Reyee Switch

Reyee switches are designed to offer reliable and professional choices to businesses of all sizes. Unmanaged switches are well suited for businesses requiring no management or monitoring of their LAN, smart/L2 switches provide a cost-effective solution for small and medium-sized businesses, and L3 managed switches provide a scalable and stable solution for large organizations, campus networks and ISP networks.

Ruijie Cloud App/ Ruijie Cloud Platform Remote Management

The Reyee managed switches not only support web interface management, but also support life time free Ruijie Cloud App and Ruijie Cloud platform remote management. Users can view the network status, modify the configuration, and troubleshooting at home. In addition, the PoE port can be restarted remotely to restart the faulty PoE camera. With the mobile

app, users can quickly complete the device deployment and configuration, remote management, operation and maintenance of the entire network, such as NVR/ Camera recognition, configure VLAN, real time monitoring, real time alarm, and reboot remotely , which greatly reduces the investment of equipment cost, labor cost and time cost in the process of wireless network construction.

Self-Organizing Networking Feature

Self-organizing networking feature, which breaks through the product limitations and realizes auto-discovery, auto-networking and auto-configuration between routers, switches, and wireless APs without the need for controllers or Internet access.

Full-Power PoE Supporting PoE Cameras at Maximum Capacity

Ruijie Reyee smart surveillance switches support full-power PoE output, powering PoE network cameras for all PoE ports simultaneously. Whether it is day or night, the infrared light of the camera is on or off, it can ensure that all PoE network cameras are powered.

2.3 EasyGate Series Router

Ruijie Reyee RG-EG series Router is a cloud managed router designed for villas and smart home, restaurant, small offices, homestay hotel. it is affordable, small and easy to use, but at the same time comes with 500M-600M bandwidth and supporting up to 200 terminals.

RG-EG series can perform per-port VLAN configuration to achieve port isolation, and integrate with smart flow control to achieve comprehensive network planning and perform local and remote network diagnosis.

2.4 EST310 Bridge

5GHz wireless bridge, including 2 devices for the recorder-end and camera-end, paired by default without requiring any configuration, 1 100M LAN port, up to 867Mbps throughput, built-in directional antenna, support one-to-many bridging, EWeb/ Ruijie Cloud app management, 12VDC and 24VDC non-standard PoE, wall-mounted/ pole-mounted installation

3 Daily Maintenance

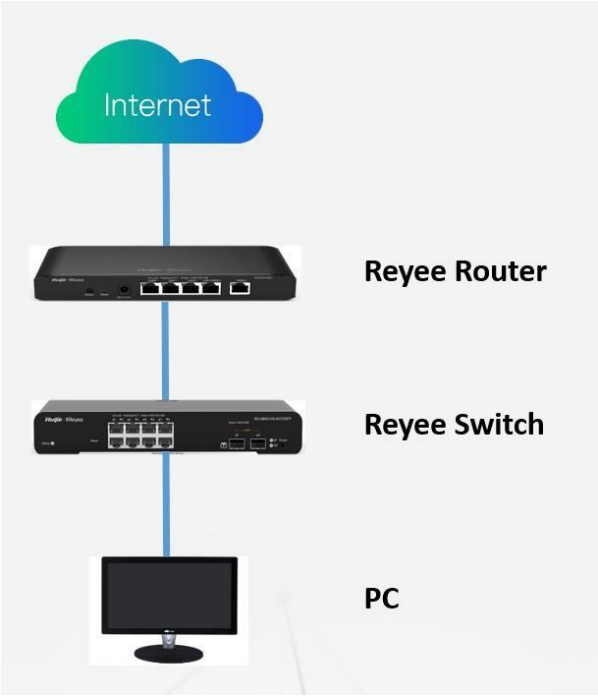
3.1 Device Login

eWeb is a Web-based network management system that manages or configures devices. You can access eWeb via browsers such as Google Chrome.

Web-based management involves a Web server and a Web client. The Web server is integrated in a device, and is used to receive and process requests from the client, and return processing results to the client. The Web client usually refers to a browser, such as Google Chrome IE, or Firefox.

Network Topology

As shown in the figure below, you can access the eWeb management system of an access or aggregation switch via a PC browser to manage and configure the device.

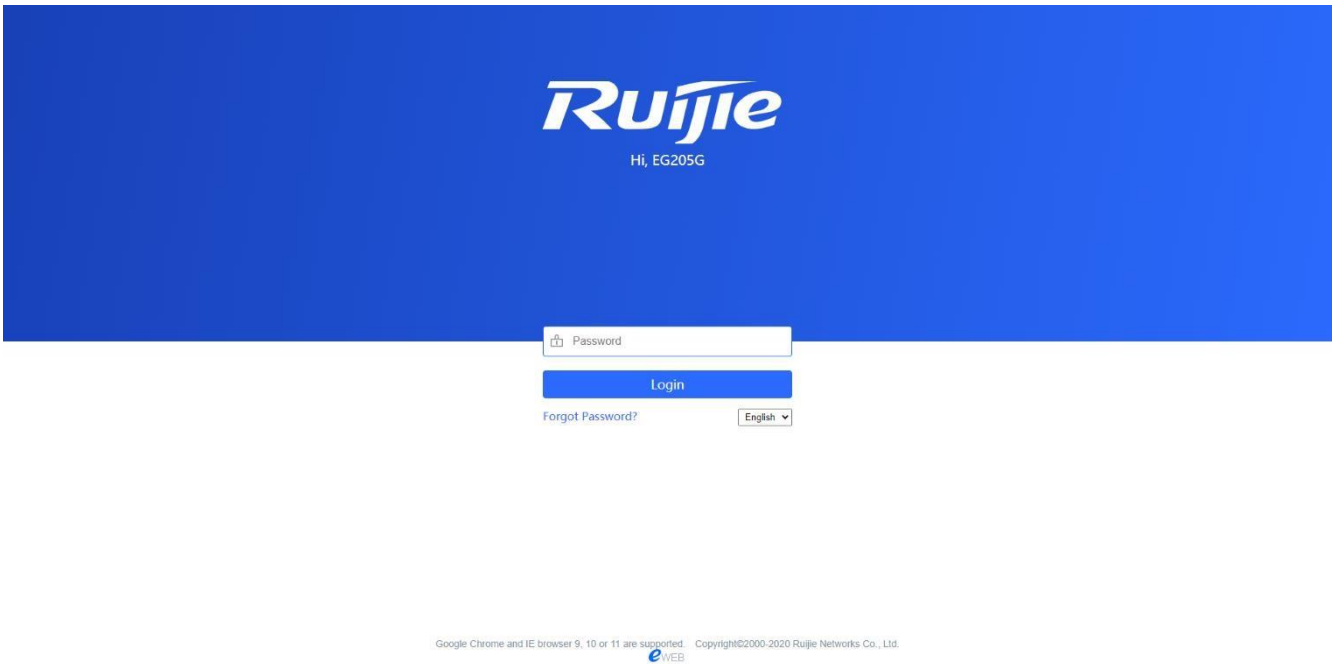


1) Set PC's IP assignment mode to **Obtain an IP address automatically**.

2) Visit http://192.168.110.1 by Chrome browser.

3) Enter the password on the login page and click "Login".

Default Password: **admin**



For the Reyee EG device, you may use either **192.168.110.1** or **10.44.77.254** to access the device.

For the Reyee switches, you may use **10.44.77.200 to** access the device.

For the Reyee AP, you may use either **192.168.120.1** or **10.44.77.254** to access the device.

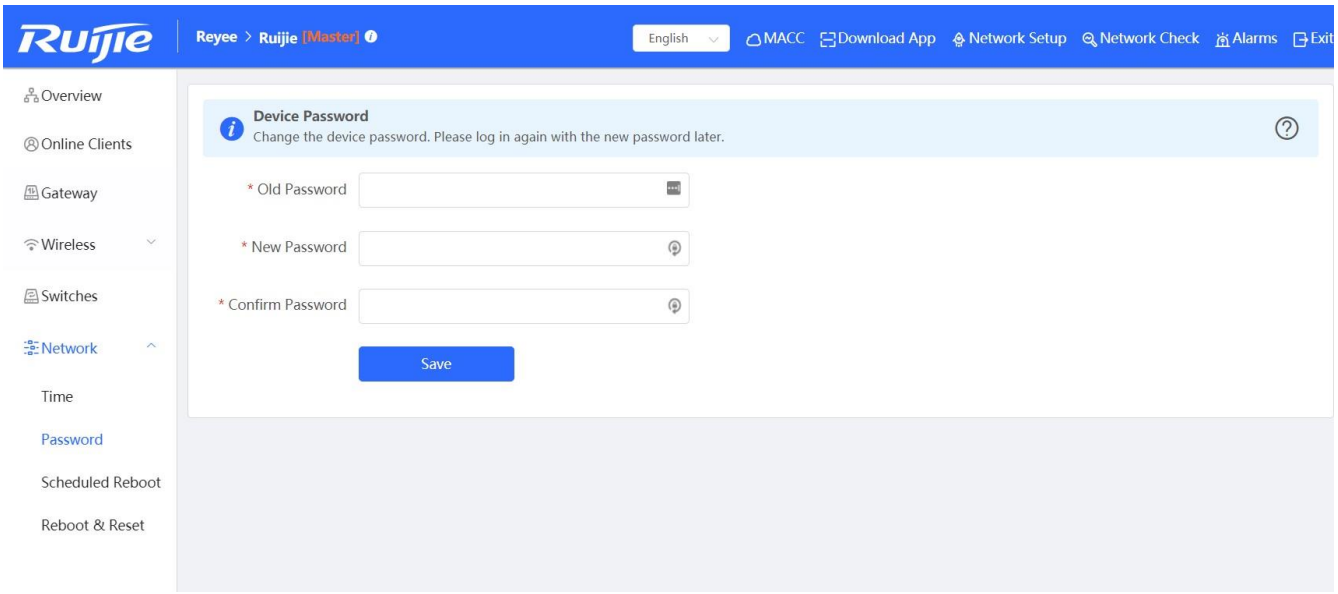
For the EST, you may use 10.44.77.254 to access the device.

The default login password for all Reyee devices is **admin.**

You may visit https://10.44.77.253 to login to the master device of Reyee network.

3.2 Change Password

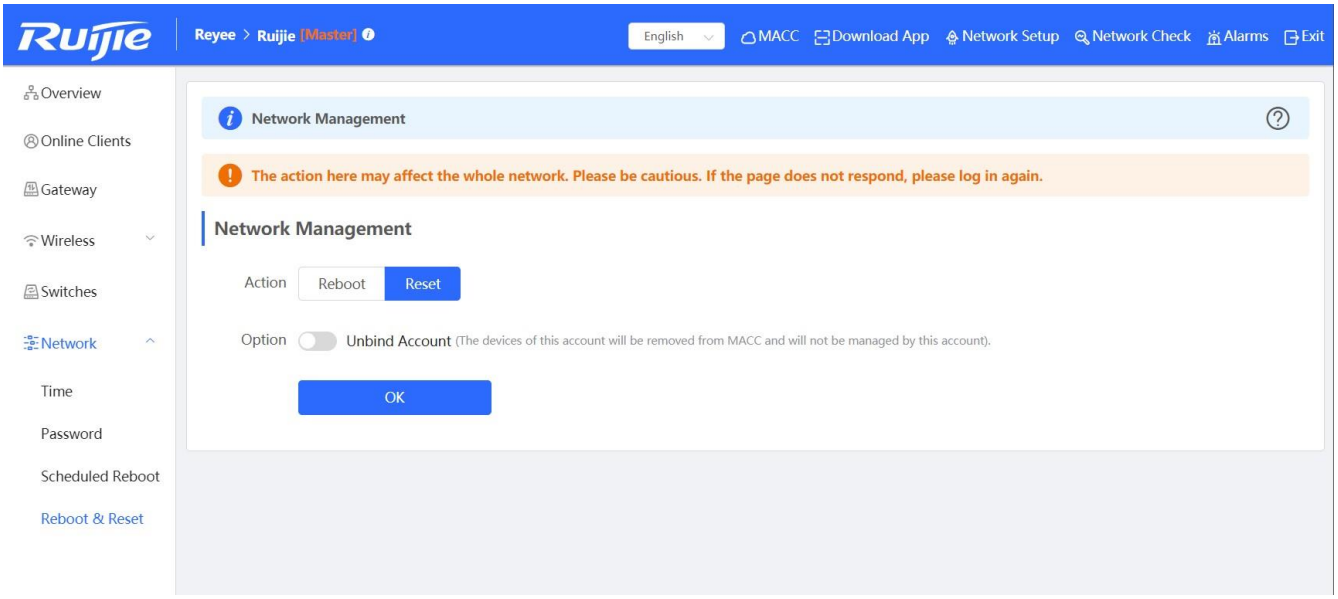
Login to the master device and choose **Network → Password** to change the device password.


Ruijie
Reyee > Ruijie [Master]
English
MACC
Download App
Network Setup
Network Check
Alarms
Exit
Overview
Online Clients
Gateway
Wireless
Switches
Network
Time
Password
Scheduled Reboot
Reboot & Reset
Device Password
Change the device password. Please log in again with the new password later.
* Old Password
* New Password
* Confirm Password
Save

3.3 Factory Reset

Option 1: Press the “Reset” button on the device for more than 5 seconds to factory reset the device.

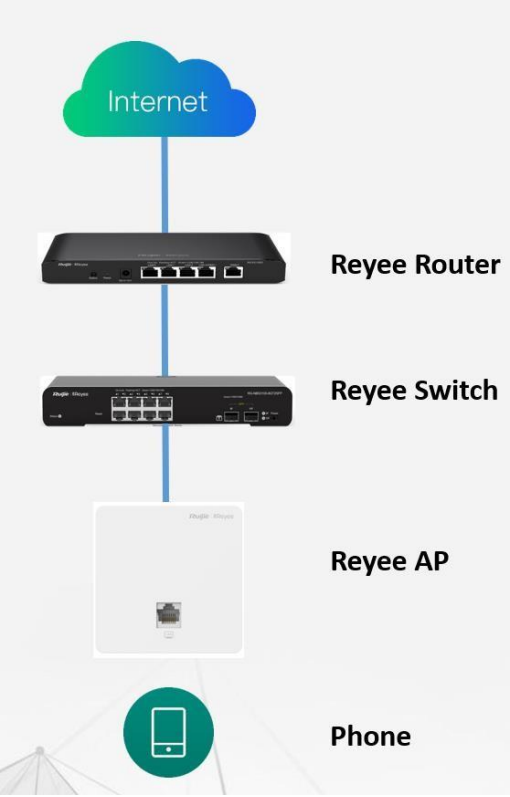
Option 2: Login to the eWeb of the device reset all device in the network.



4 Quick Provisioning

4.1 Quick provisioning via Ruijie Cloud APP

Network Topology



1) If your mobile phone does not have the Ruijie Cloud App installed, please search “Ruijie Cloud” on App Store and install it on your mobile phone. Below is an example of searching “Ruijie Cloud” on Google Play Store. Tap INSTALL to install the App directly.

2) Ruijie Cloud App provides a quick start to Create Network and Add Device. You can follow the steps below to finish provisioning.

Step1: Connect to the Wi-Fi with Reyee AP.

Step2: Choose the SSID of “@Ruijie_mXXXX”.

Step3: Check all the devices are detected.

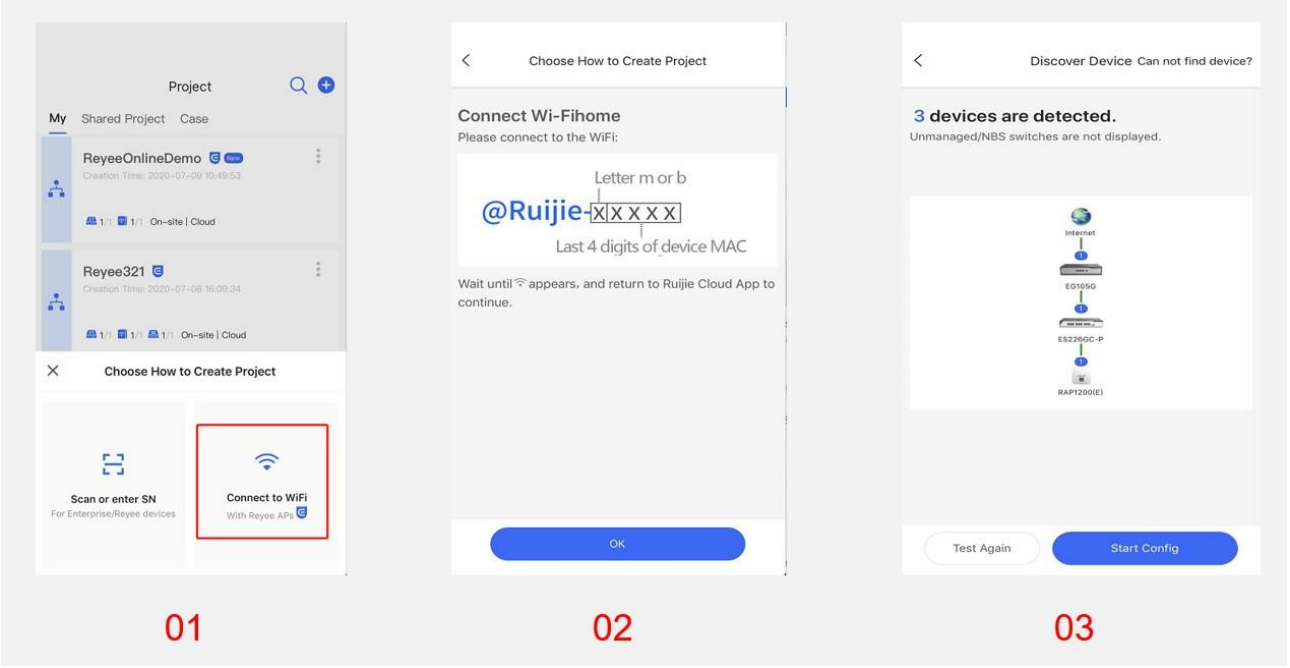
Step4: Add the project name and password.

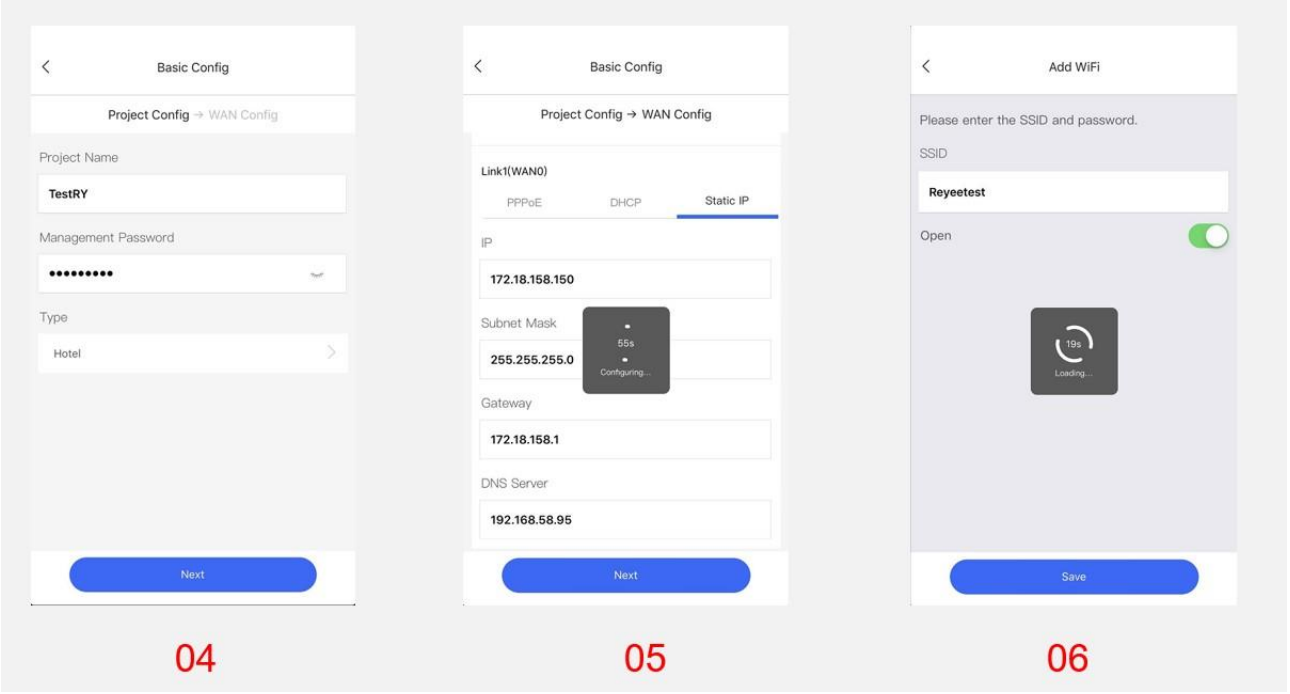
Step5: Finish the WAN configuration.

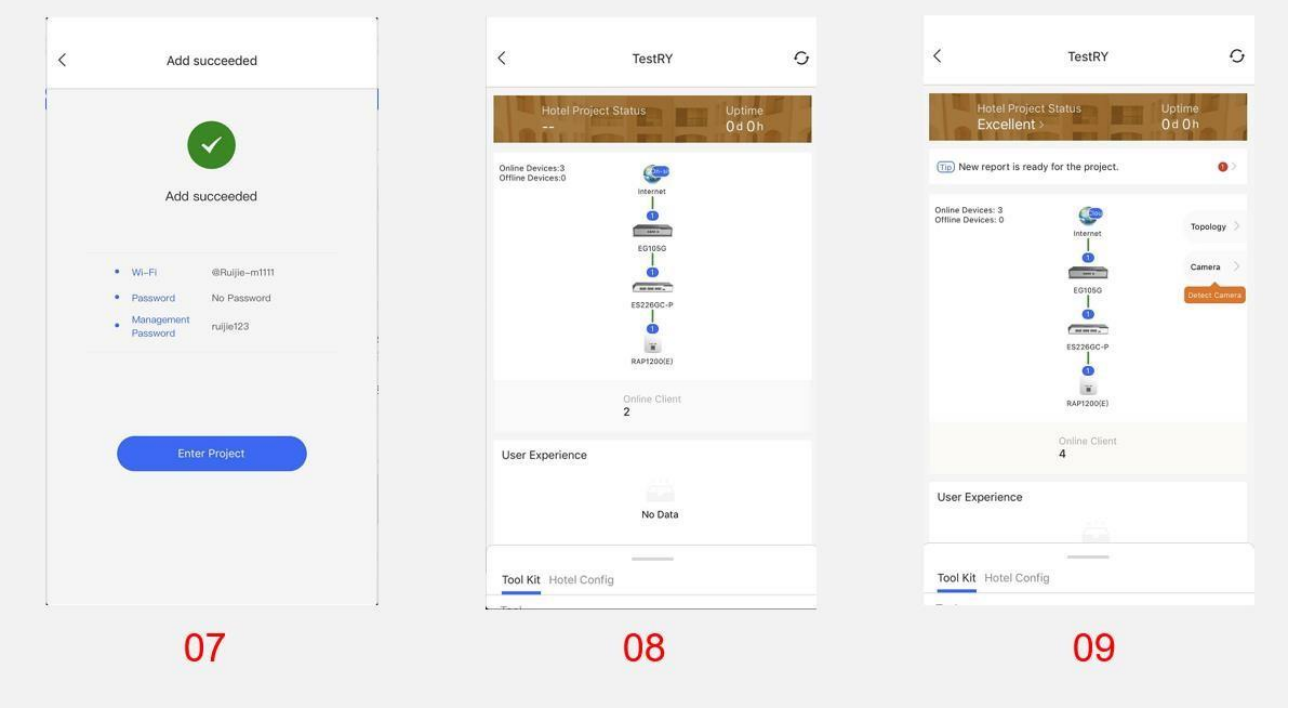
Step6: Add the wireless configuration.

Step7: Finish all the configuration.

Step8: Devices all online in Ruijie Cloud.

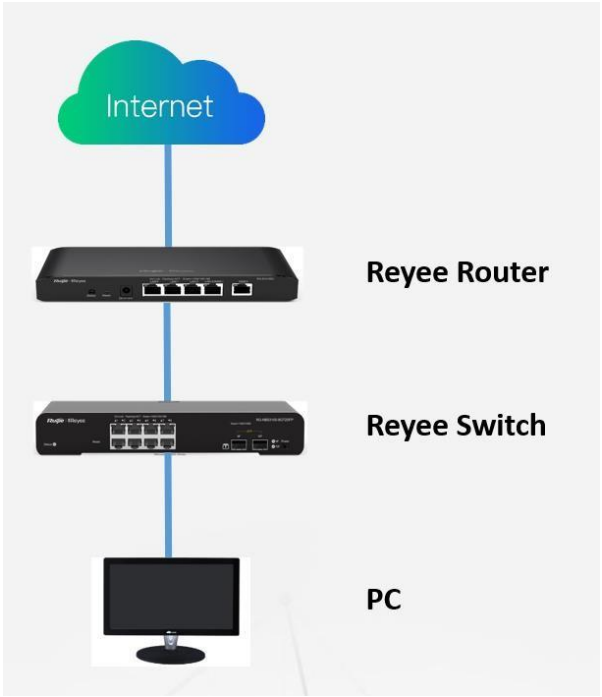




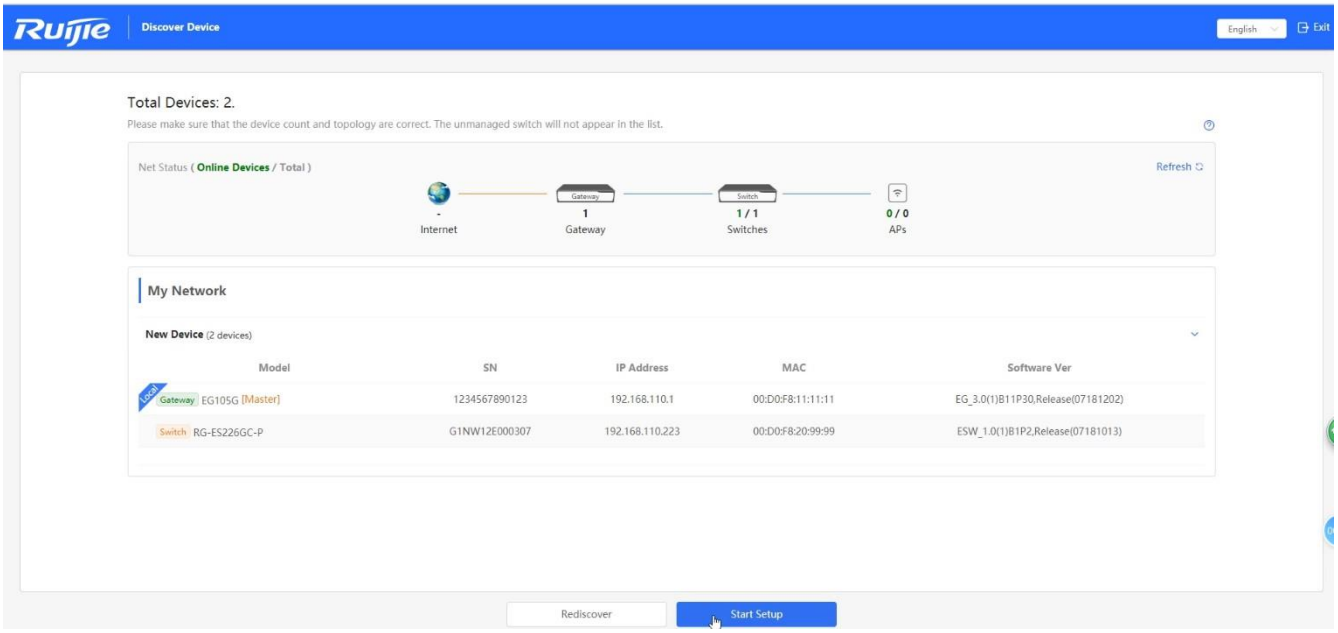


4.2 Quick provisioning via Reyee EWeb

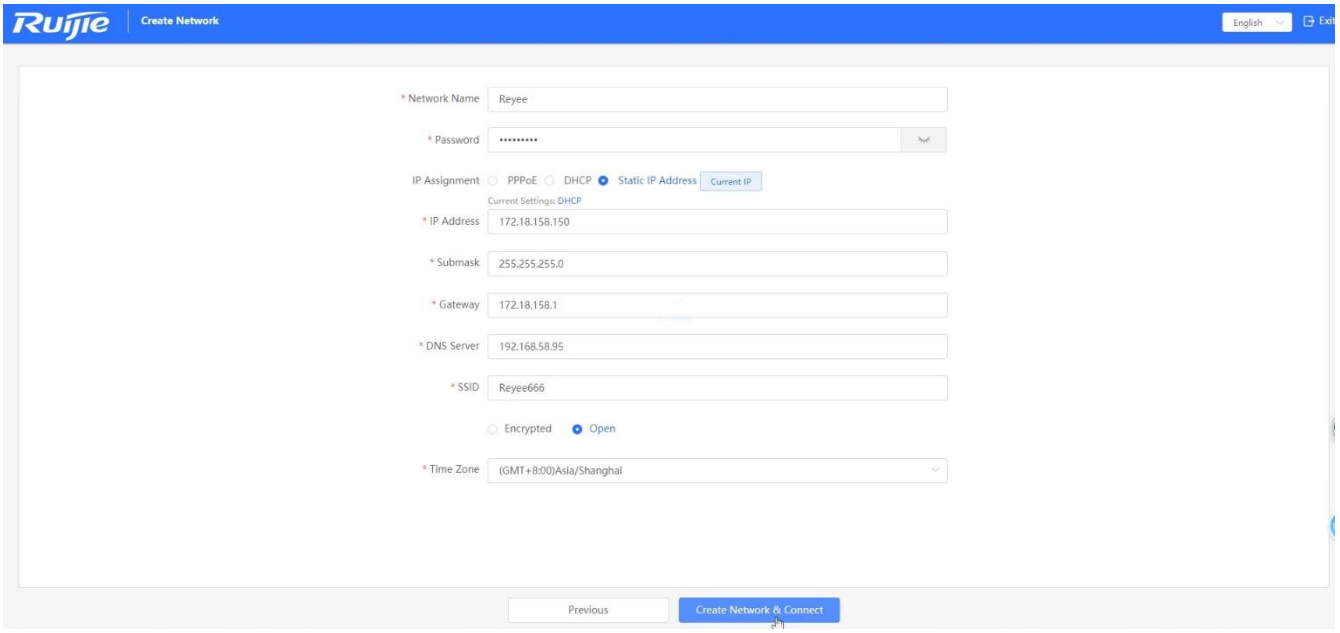
Network Topology

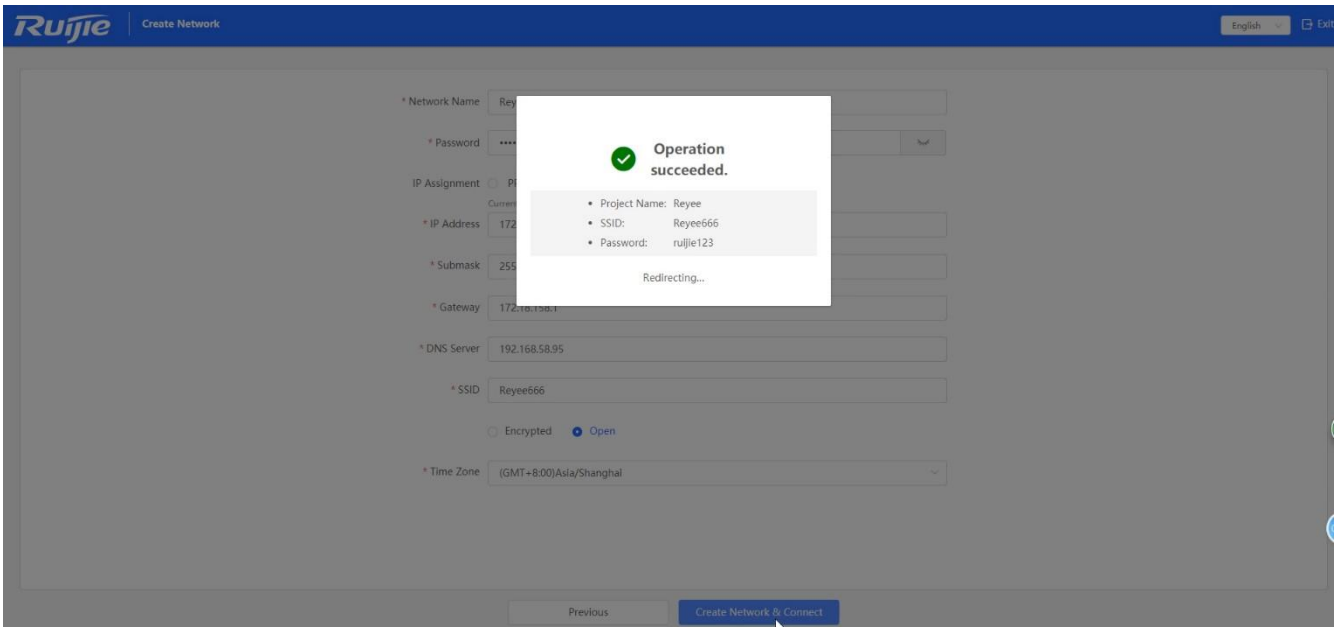


Step 1: Login to Reyee EWeb (http://192.168.110.1), the local devices will be discovered automatically.

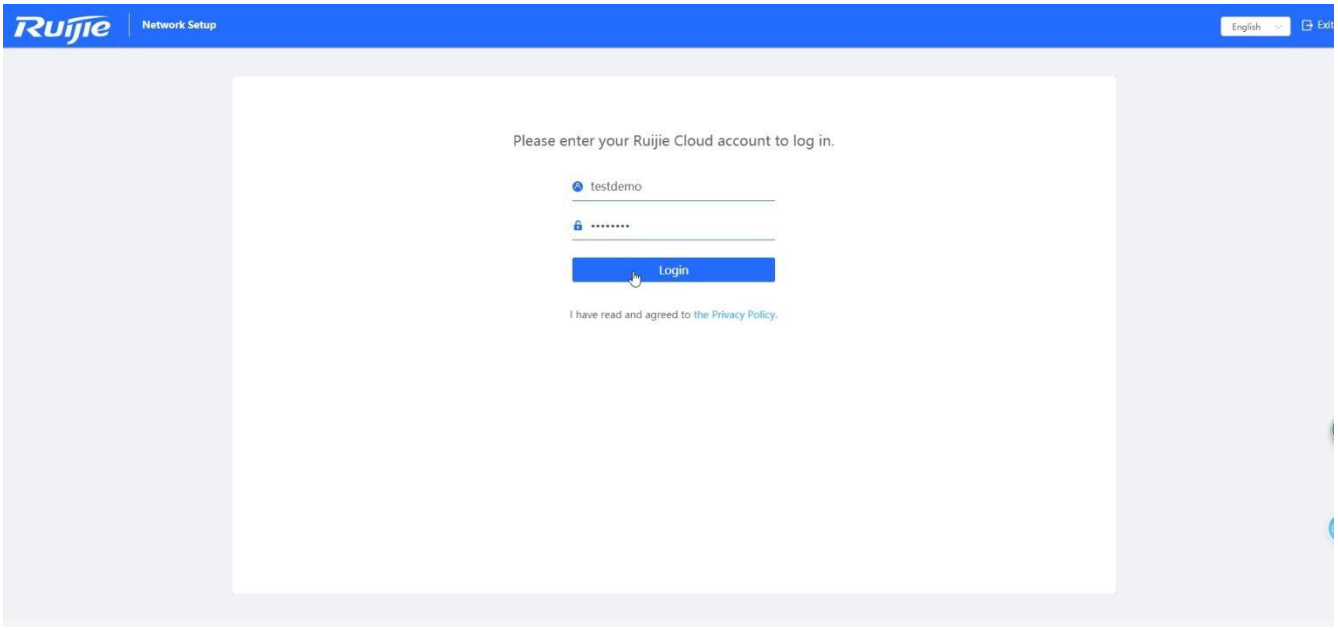


Step 2: Create a network based on the actually scenario (PPPoE/DHCP/Static IP Address).

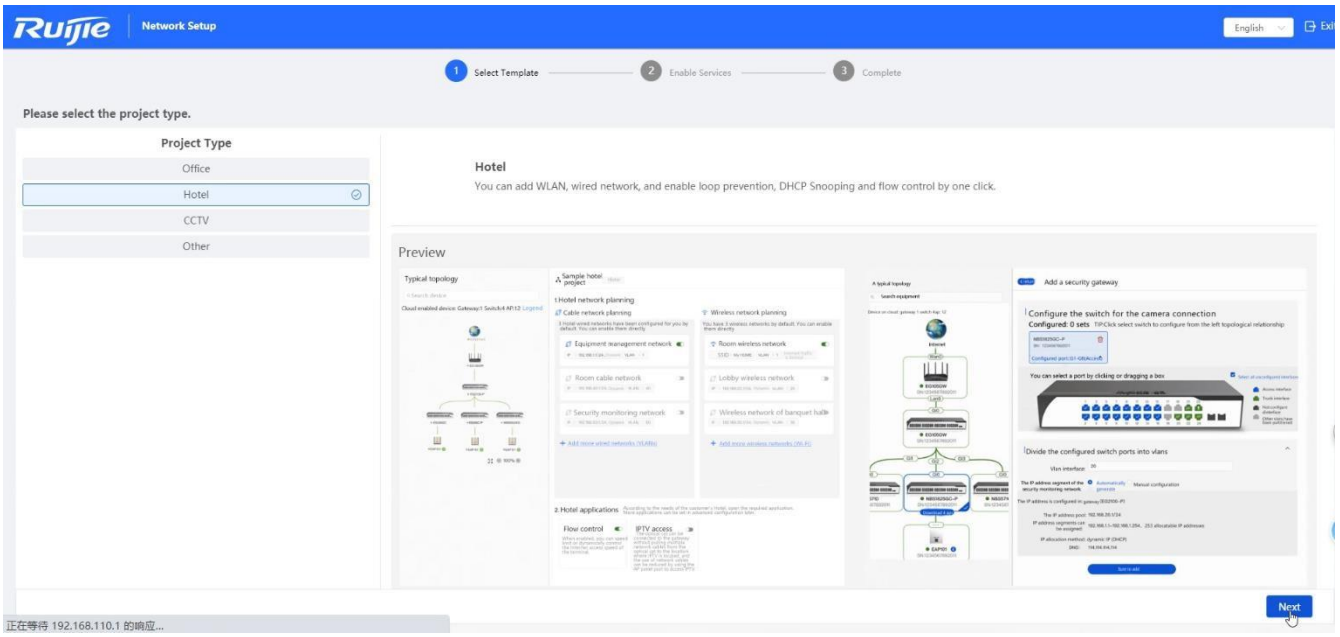




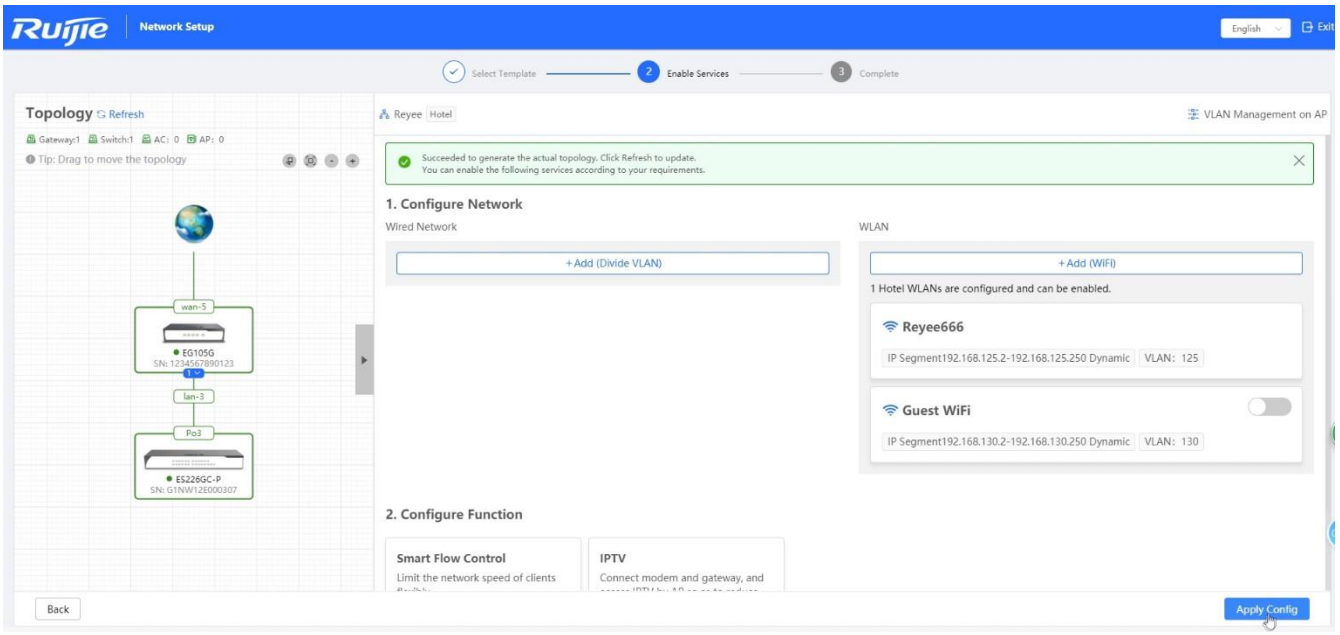
Step 3: Login to your Ruijie Cloud Account.

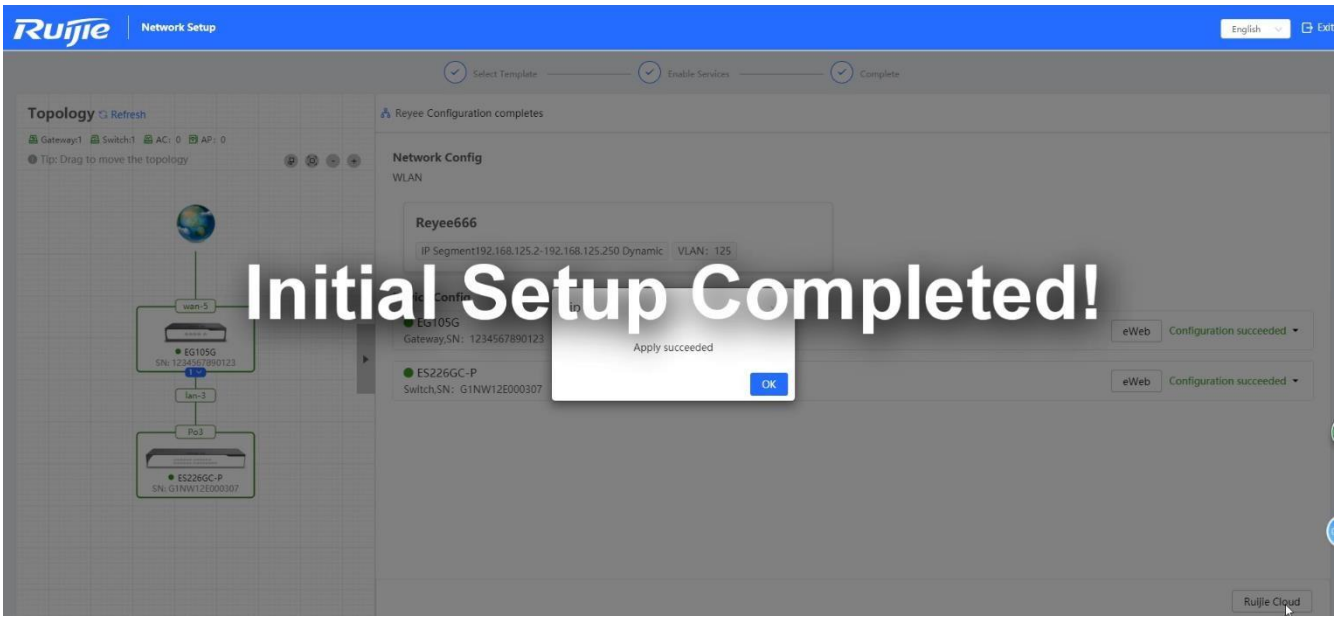


Step 4: Select the project type.



Step 5: Enable the services as you need and apply the config.



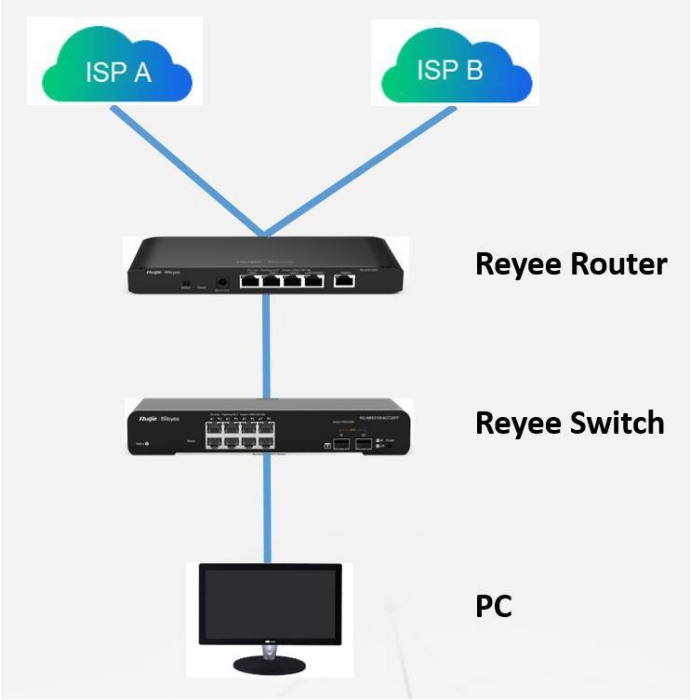

Ruijie
Network Setup
English
Select Template
Enable Services
Complete
Topology
Refresh
Gateway:1 Switch:1 AC: 0 AP: 0
Tip: Drag to move the topology
wan-5
EG105G
SN: 1234567890123
lan-3
Po3
ES226GC-P
SN: G1NW12E000307
Reyee Configuration completes
Network Config
WLAN
Reyee666
IP Segment192.168.125.2-192.168.125.250 Dynamic
VLAN: 125
Initial Setup Completed!
EG105G
Gateway,SN: 1234567890123
Apply succeeded
OK
ES226GC-P
Switch,SN: G1NW12E000307
eWeb
Configuration succeeded
eWeb
Configuration succeeded
Ruijie Cloud

5 Reyee EG Series Router Configuration

5.1 WAN Load balance

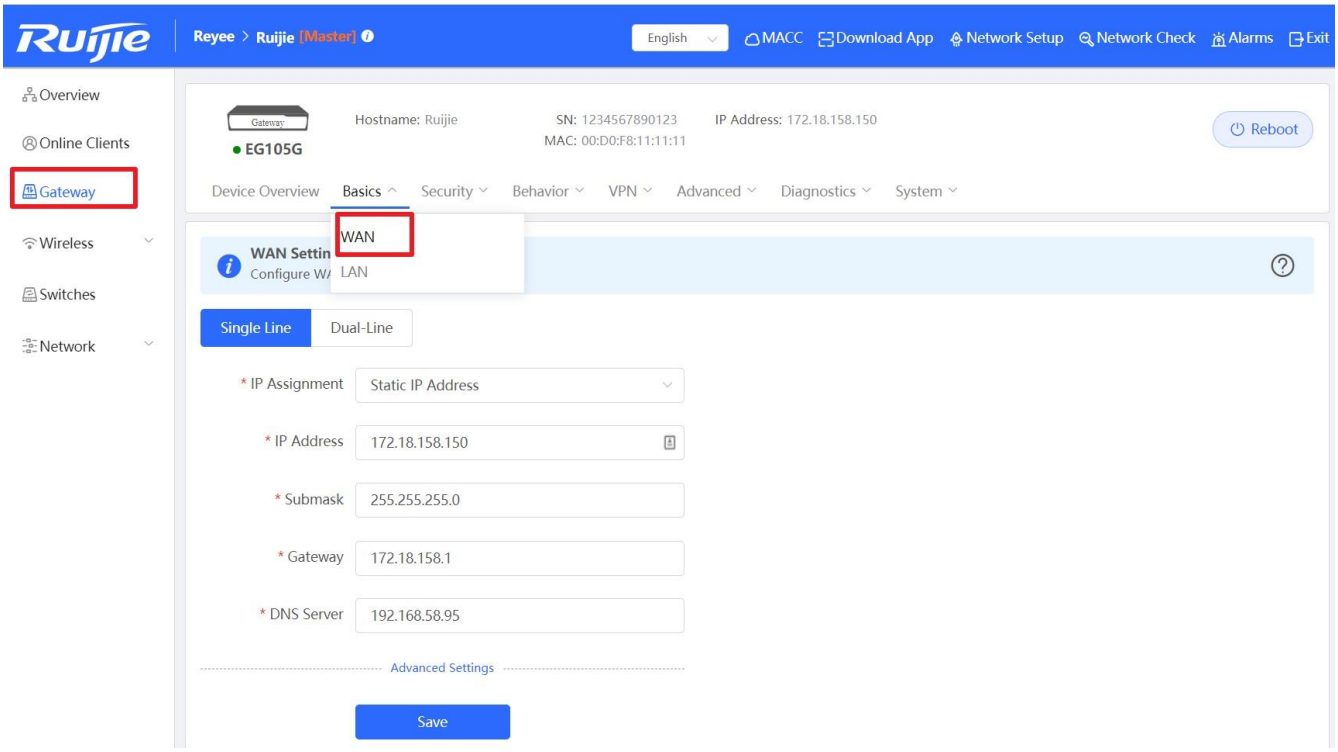
The load balancing function distributes the data to multiple WAN interfaces to avoid the traffic congestion and provide redundancy.

Network Topology

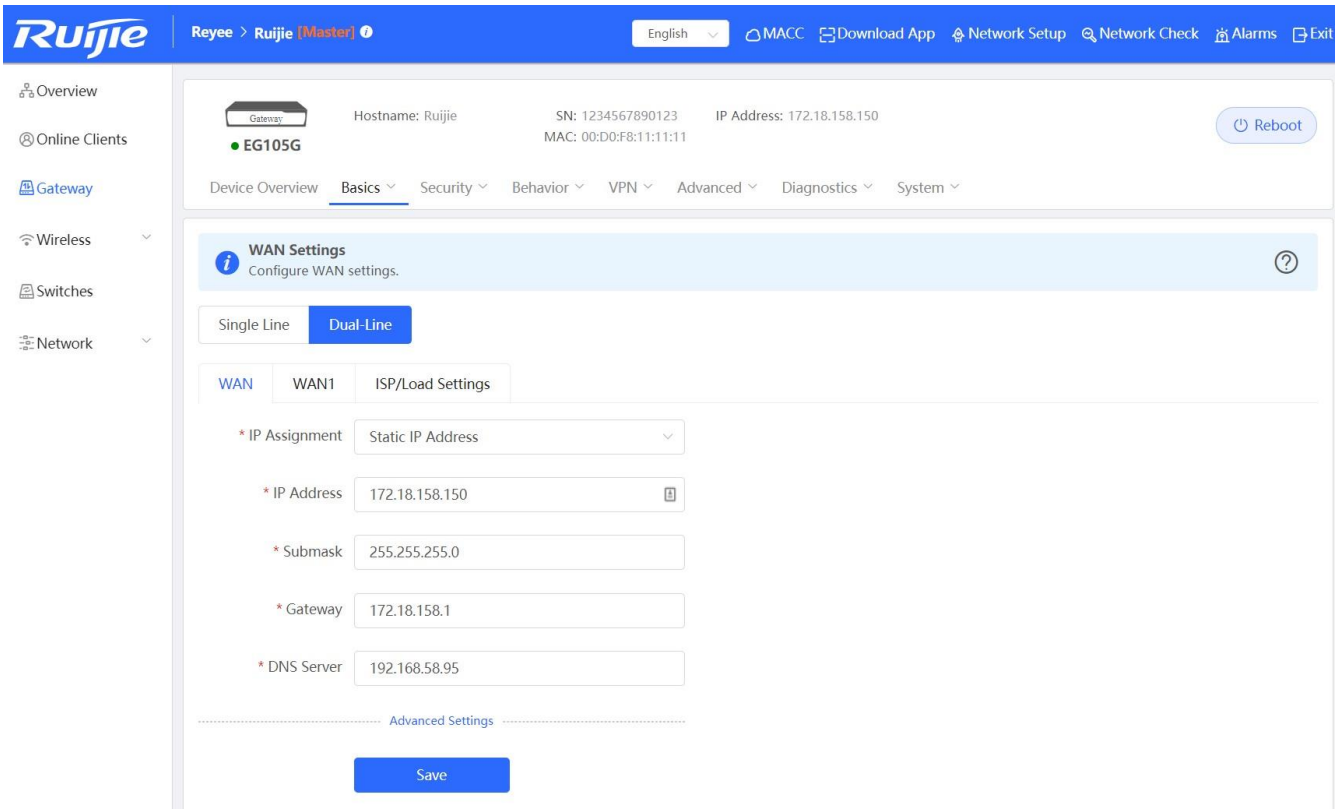


Configuration Steps

Step 1: Choose **Gateway → Basics → WAN**



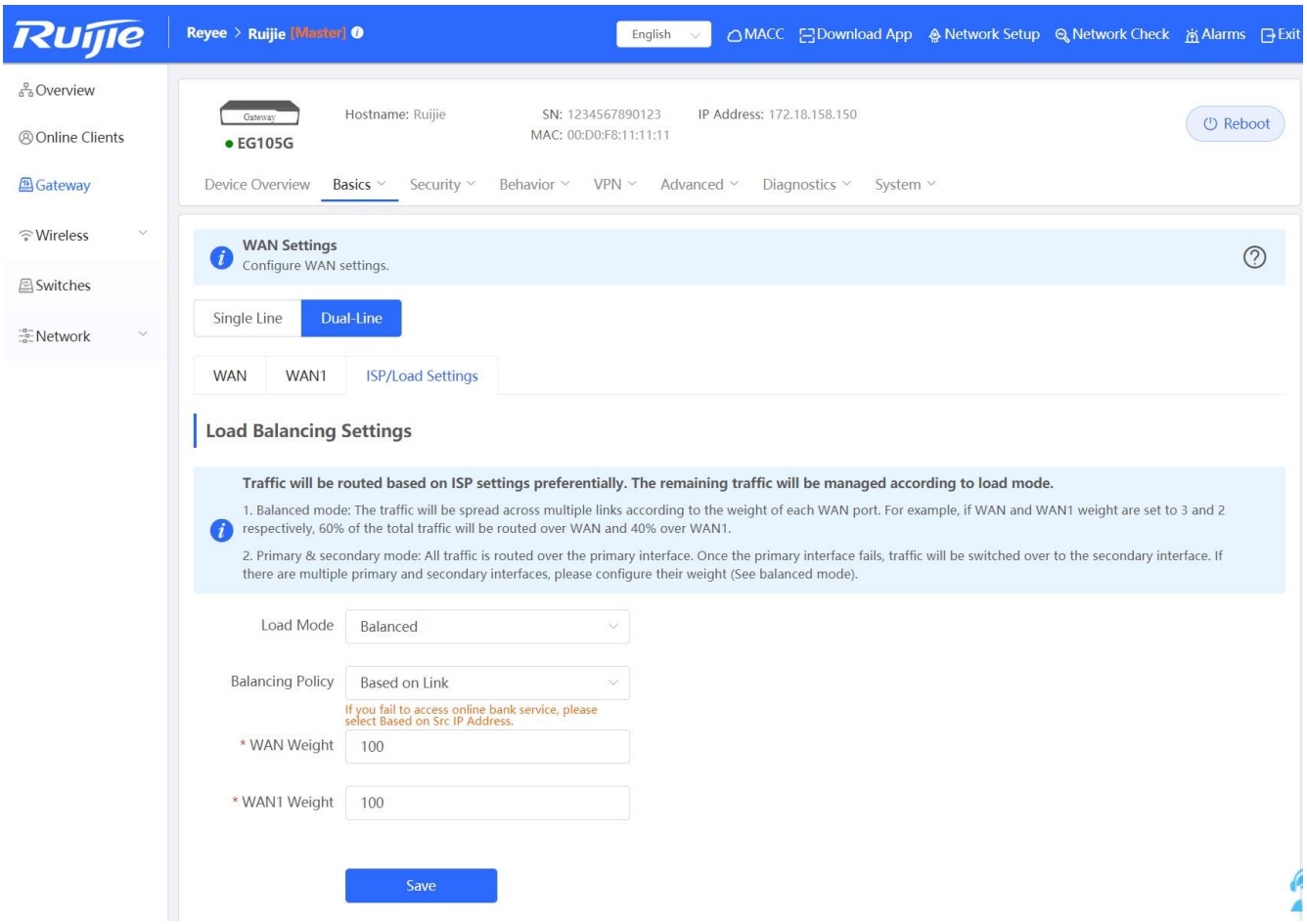
Step 2: Configure the WAN interface accordingly



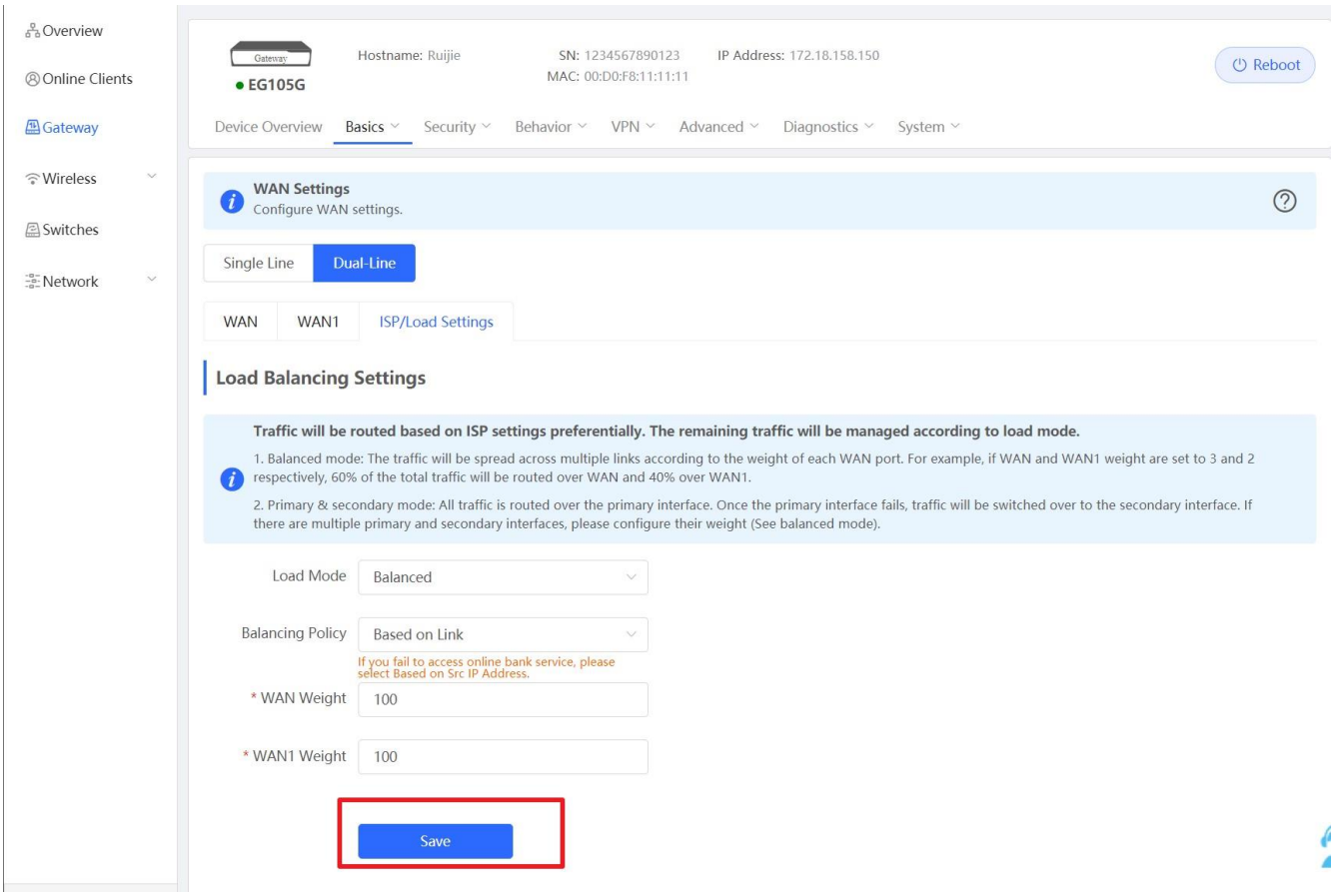
Step 3: Choose **ISP/Load Settings**, and configure the load mode and interface weight

1. Balanced mode: The traffic will be spread across multiple links according to the weight of each WAN port. For example, if WAN and WAN1 weight are set to 3 and 2 respectively, 60% of the total traffic will be routed over WAN and 40% over WAN1.

2. Primary & secondary mode: All traffic is routed over the primary interface. Once the primary interface fails, traffic will be switched over to the secondary interface. If there are multiple primary and secondary interfaces, please configure their weight (See balanced mode).



Step 4: Save the configuration

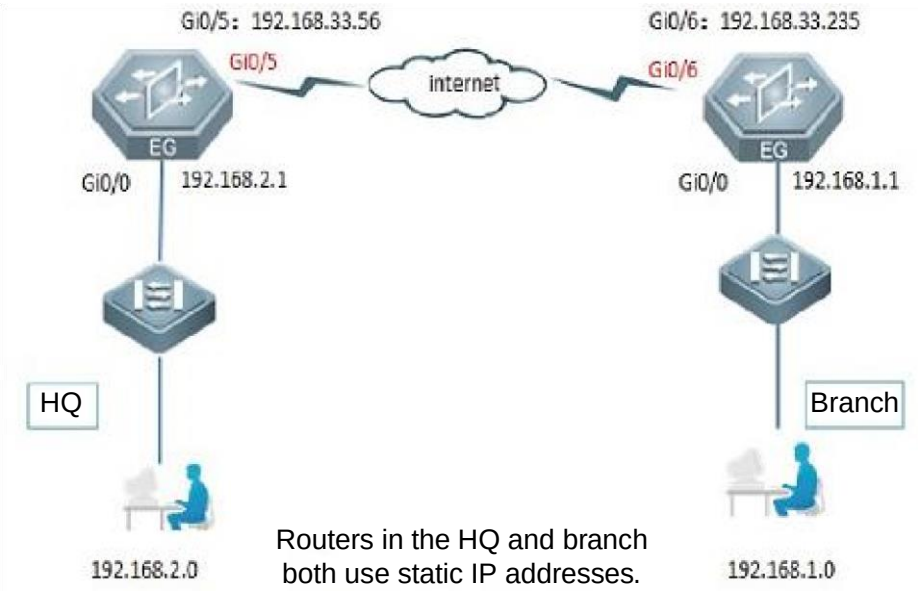


5.2 IPsec VPN

Networking Requirements

The HQ and branch routers use static IP addresses. The HQ router needs to verify the IP address of the branch router.

Network Topology



Routers in the HQ and branch both use static IP addresses.

Configuration Key Points

1. Configure router A in the HQ as the IPsec server.
2. Configure router B in the branch as the IPsec client.
3. Keep parameter settings at both ends consistent. The parameter settings in this case are as follows:

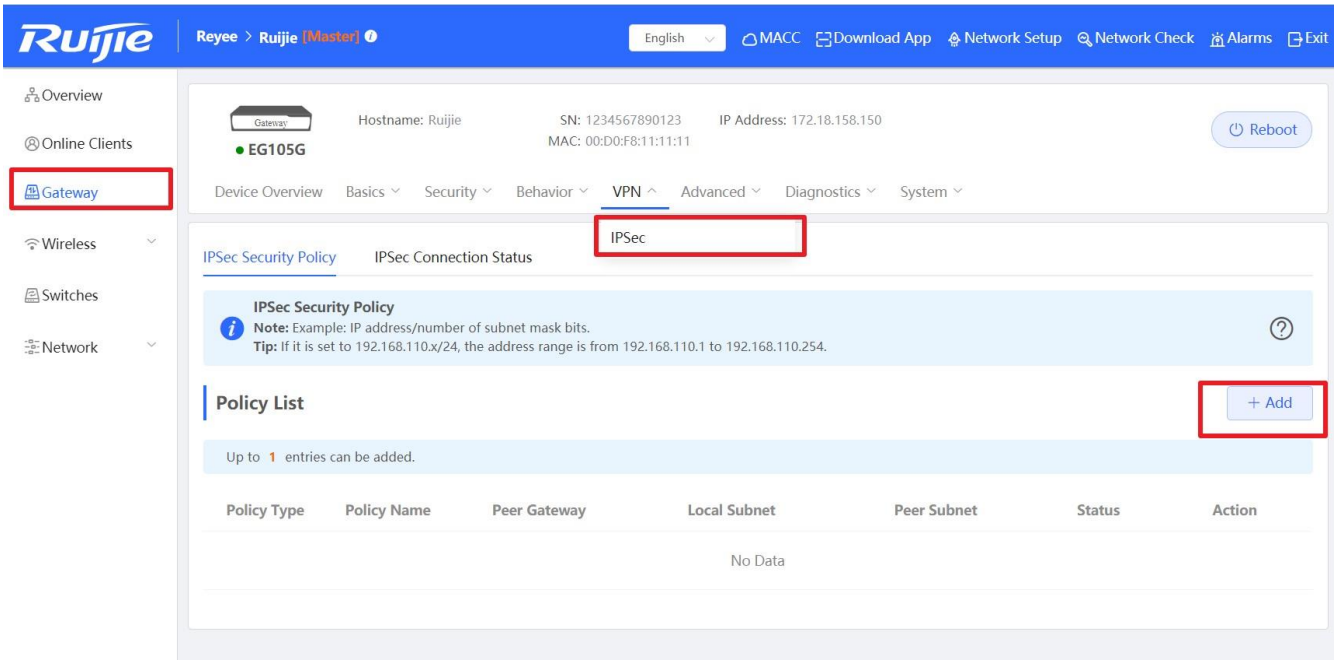
Authentication mode: pre-shared key, with the key set to ***ruijie***.

IKE algorithm: 3DES-MD5, DH2

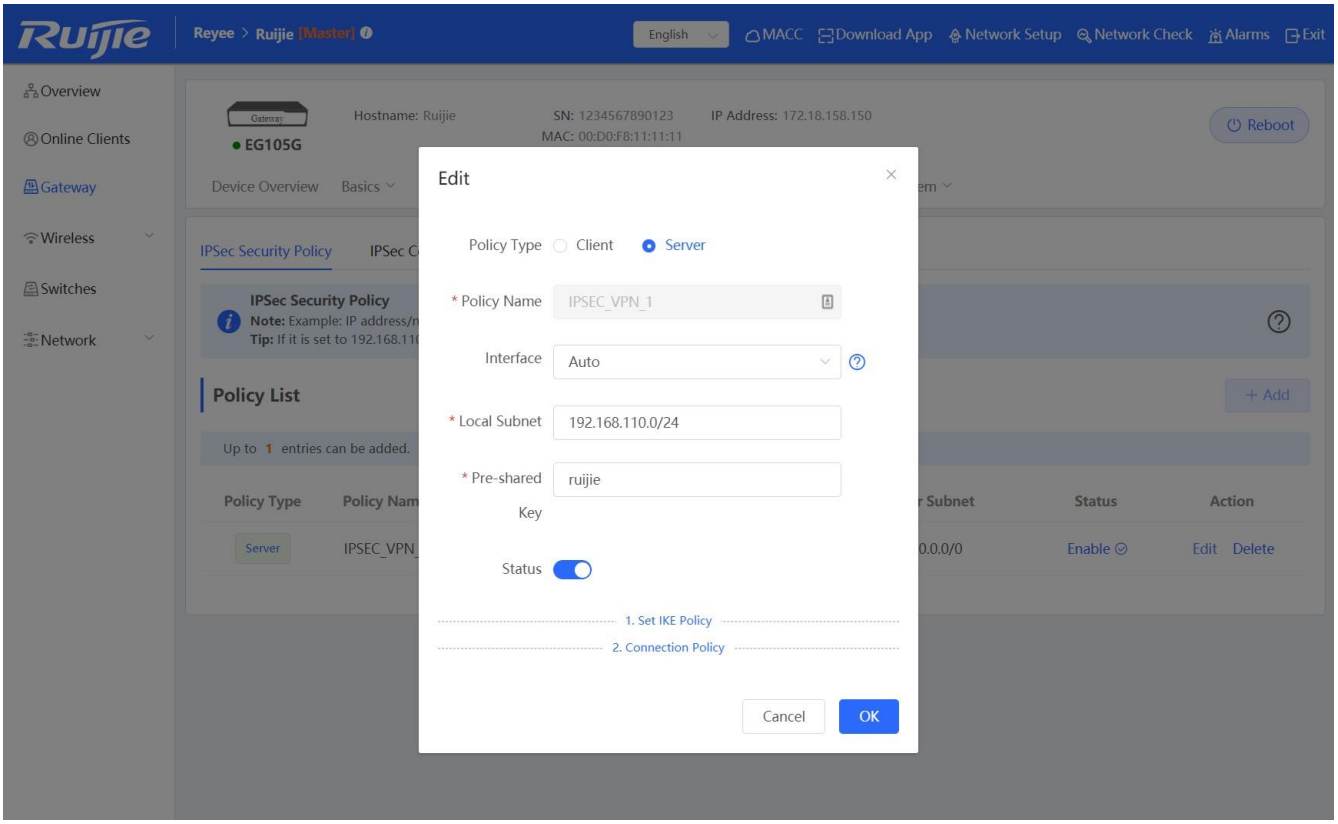
IPsec negotiation scheme: ESP(3DES-MD5)

Configuration Steps

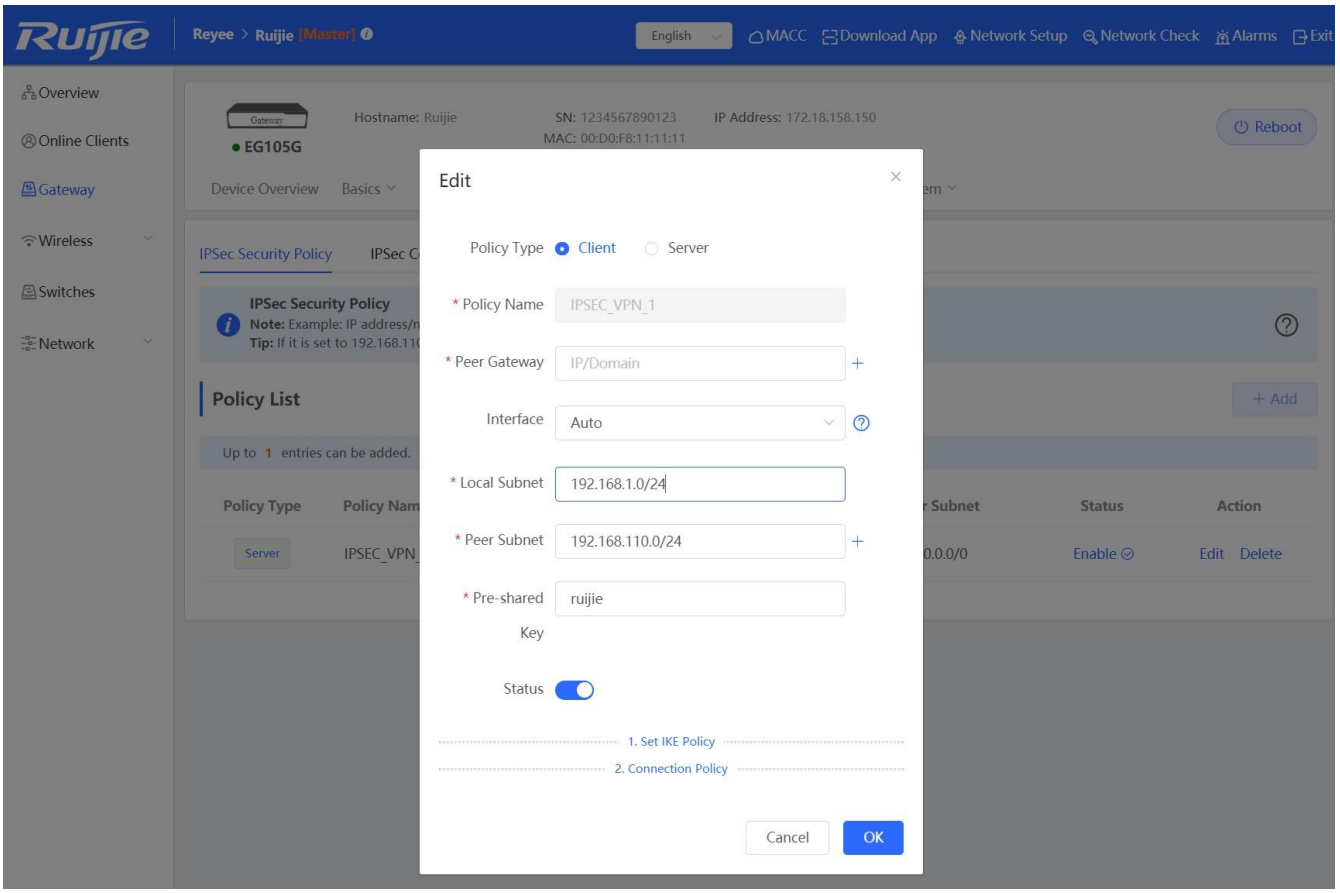
Step 1: Configure the HQ router. Choose **Gateway** → **VPN** → **IPSec** → **Add** to add a policy.



Step 2: Configure the server site's subnet and pre-shared key. For building VPN with other Reyee EG series routers, you may keep the default setting of "Set IKE Policy" and "Connection Policy"; For other devices, the parameters need to be configured accordingly.



Step 3: Configure the branch router. Fill in the **Peer Gateway** (HQ's public IP address or domain), **Local Subnet**, **Peer Subnet** and **Pre-shared Key (need to be the same as HQ's key)**

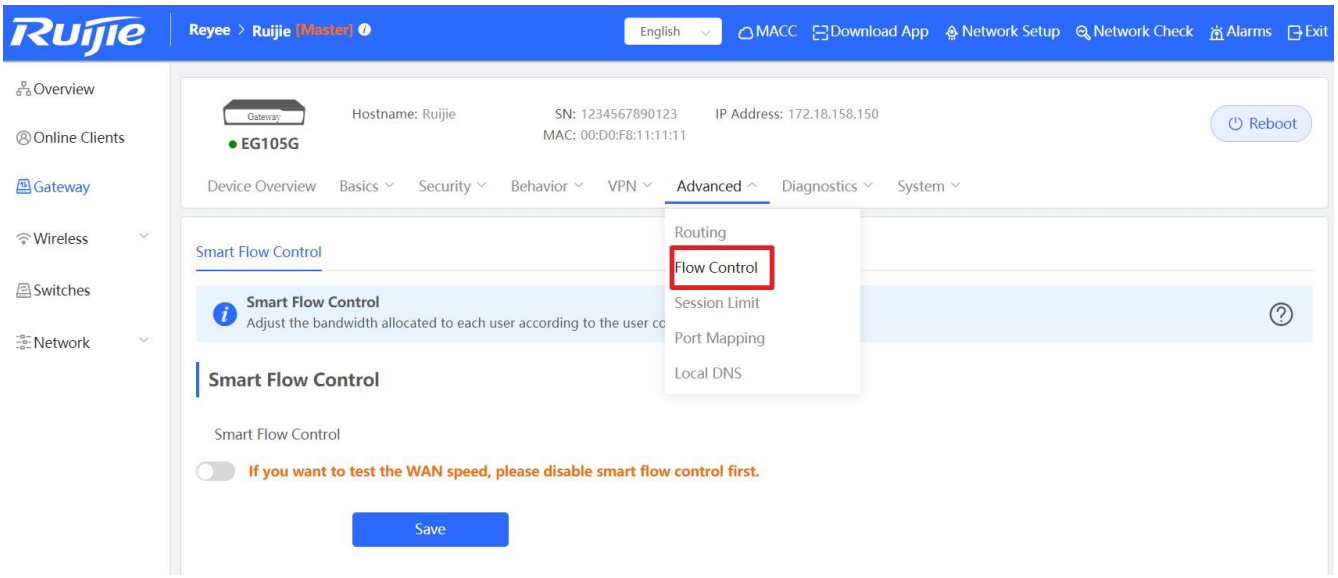


5.3 Smart Flow Control

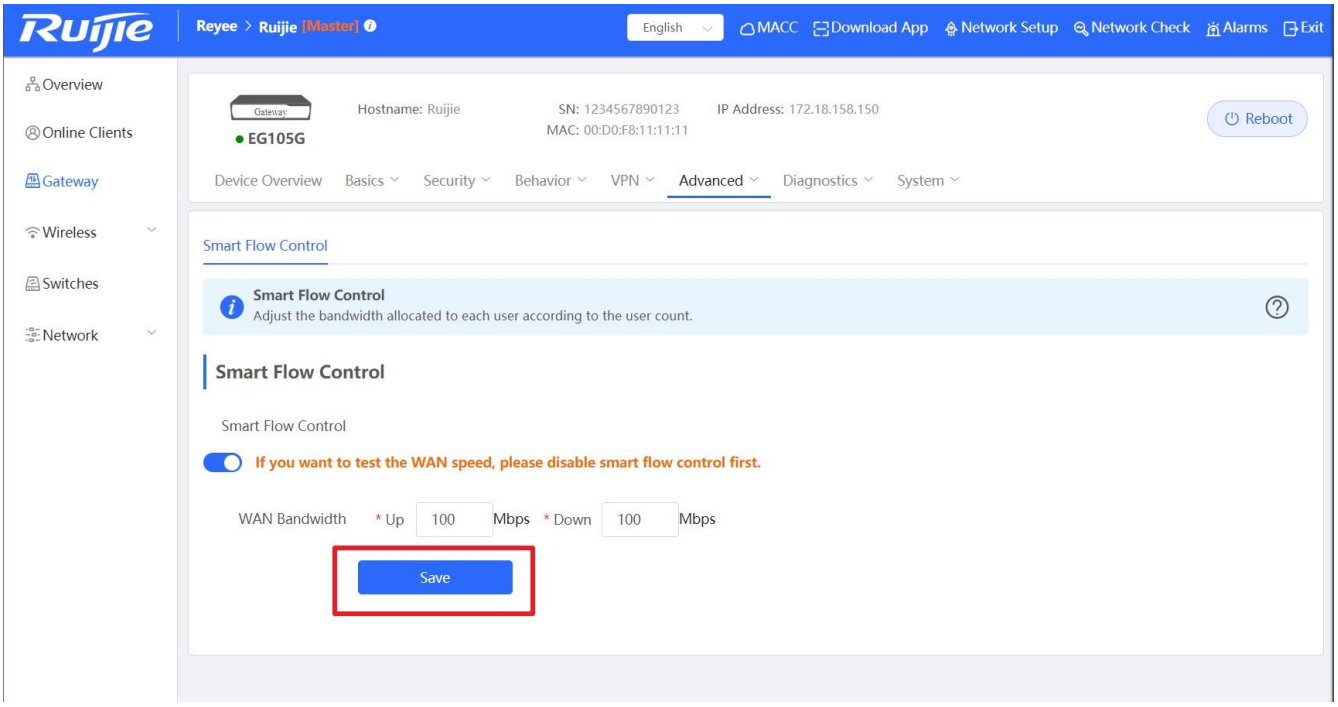
Reyee Smart Flow Control is a feature used to avoid congestion by optimizing user traffic. The working principle is shown as below: when the total user traffic is low than the maximum WAN bandwidth, the rate limit policy will not be applied, every user will get the required bandwidth; However, when the total user traffic exceeds the maximum WAN bandwidth, the user-based rate limit will take effect. The total WAN bandwidth will be equally allocated to every user. For example, If there are 10 users in the network, the total user traffic is 200Mbps and WAN bandwidth is 100Mbps, every user will get 10Mbps bandwidth after enabling the smart flow control feature.

Configuration Steps

Step 1: Choose **Gateway** → **Advanced** → **Flow Control** and enable the feature.



Step 2: Fill in the WAN bandwidth and Save the configuration.



5.4 Port Mapping

Application Scenario

A customer deploys a server on the LAN and enables the HTTP or other services. The server address is a private address. WAN users can neither access this address directly nor use services provided by the server. In this case, you can enable the port mapping function to allow WAN users to access the LAN server.

For example, the server address is 192.168.1.20 and HTTP is enabled. As the server address is a private address, WAN users cannot directly access the HTTP service provided by the server. In this case, you can map the server address and server ports to a public network address on the EG device so that WAN users can access the HTTP service provided by the server.

Networking Requirements

1. The WAN line is a single 10 Mbps fixed line. The address is 122.133.2.22, subnet mask is 255.255.255.0, and DNS address is 218.85.157.99.
2. There is a remote desktop server on the LAN. The IP address of the server is 192.168.1.20. If the LAN server needs to be accessed from the WAN, port mapping is required to map the interfaces of the LAN server to the public network. **Network Topology**

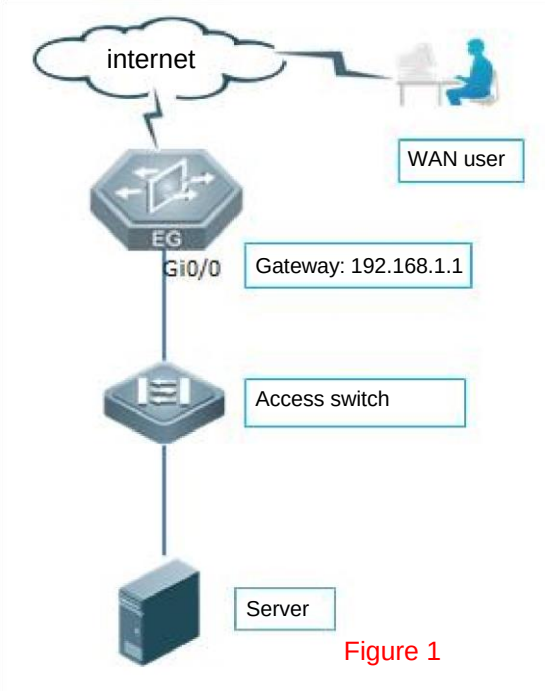
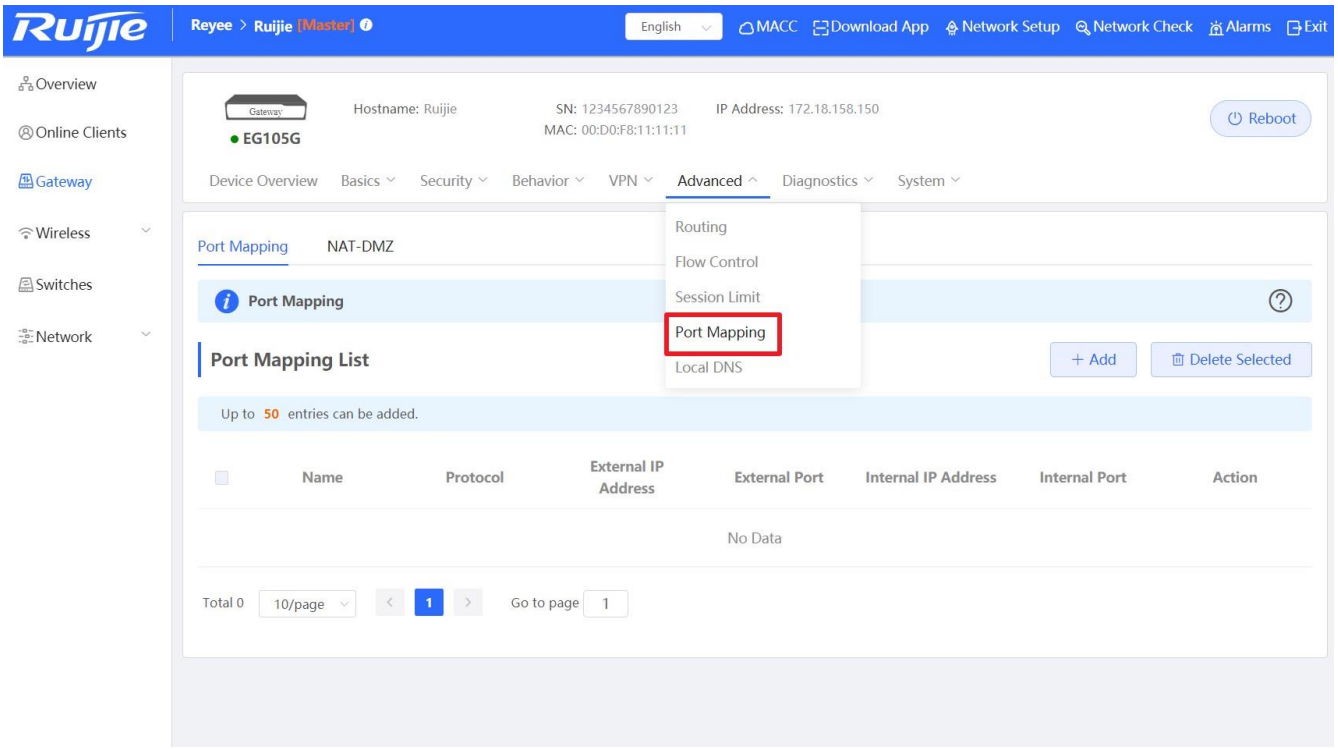


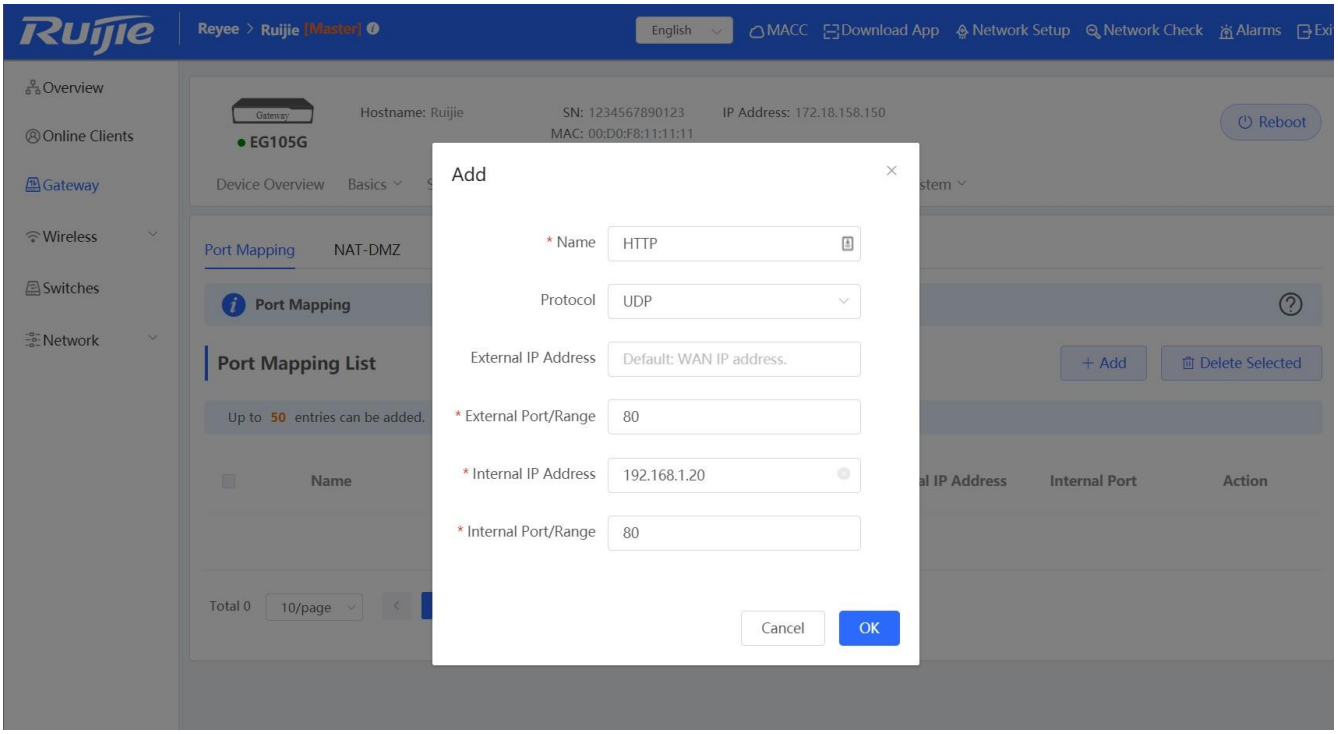
Figure 1

Configuration Steps

Step 1: Choose **Gateway** → **Advanced** → **Port Mapping**



Step 2: Add a new Policy



Internal IP Address: Indicates the IP address of the server.

Internal Port/Range: Indicates the port for the server that is to provide external services.

External IP: Indicates the IP address of a WAN port.

External Port/Range: Indicates the target WAN service port of port mapping.

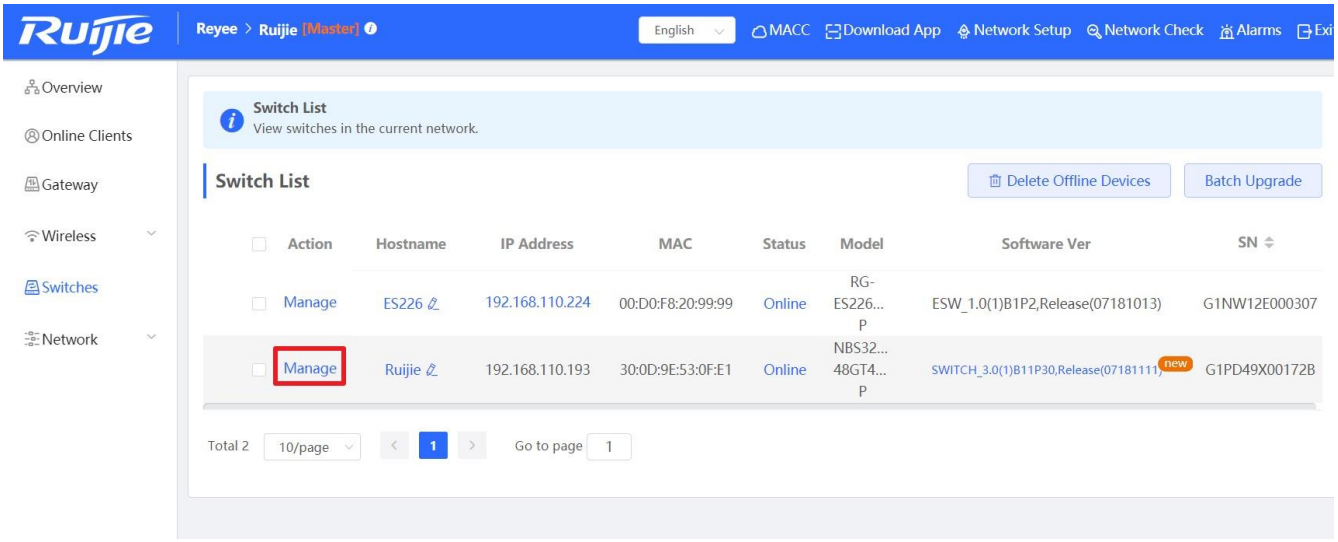
6 Reyee NBS Series Switch Configuration

6.1 VLAN Setting

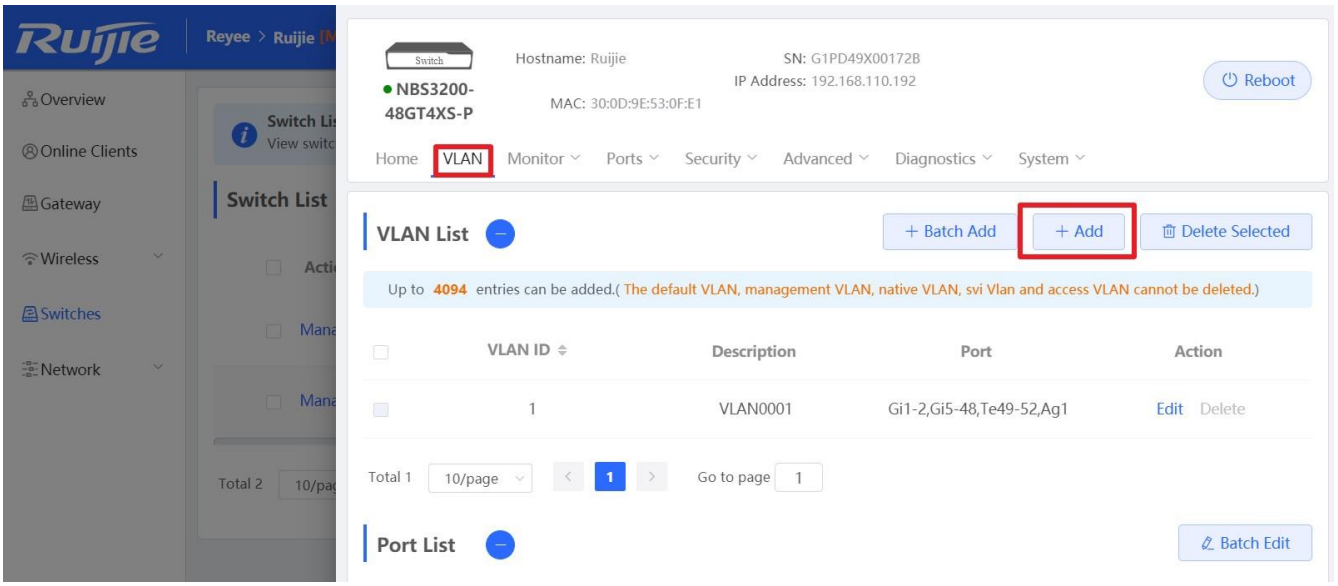
A virtual LAN (VLAN) is any broadcast domain that is partitioned and isolated in a computer network at the data link layer. VLANs work by applying tags to network frames and handling these tags in networking systems – creating the appearance and functionality of network traffic that is physically on a single network but acts as if it is split between separate networks. In this way, VLANs can keep network applications separate despite being connected to the same physical network, and without requiring multiple sets of cabling and networking devices to be deployed.

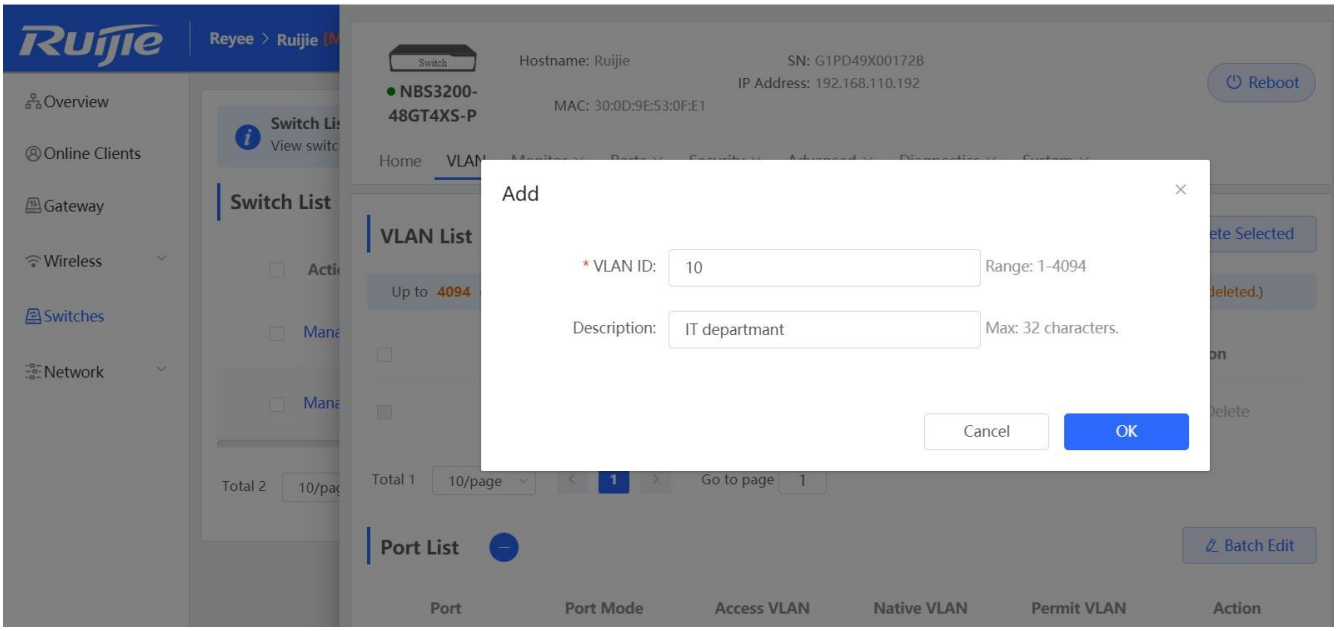
Configuration Steps:

Step 1: Choose **Switches** → **Manage** to configure the switch

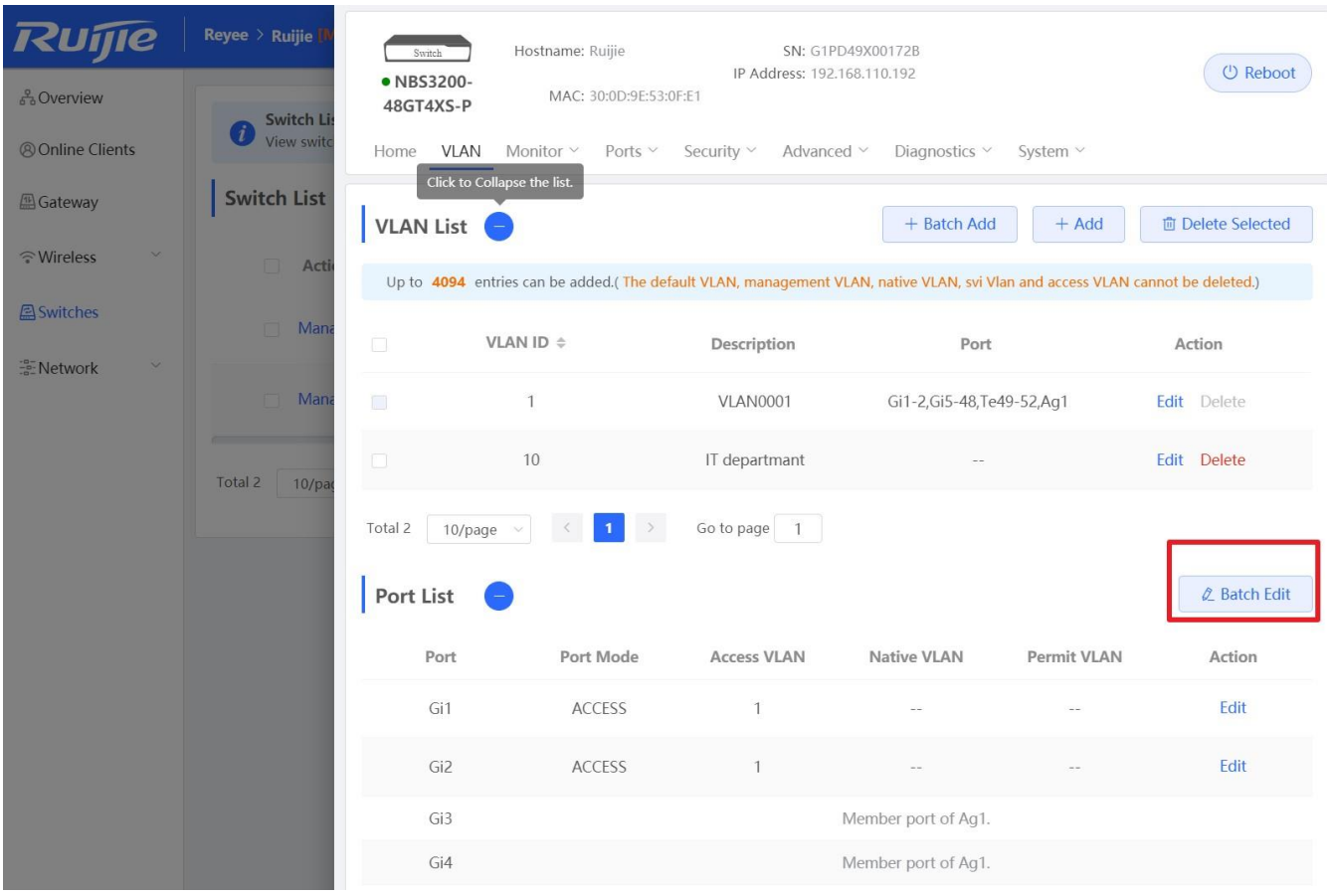


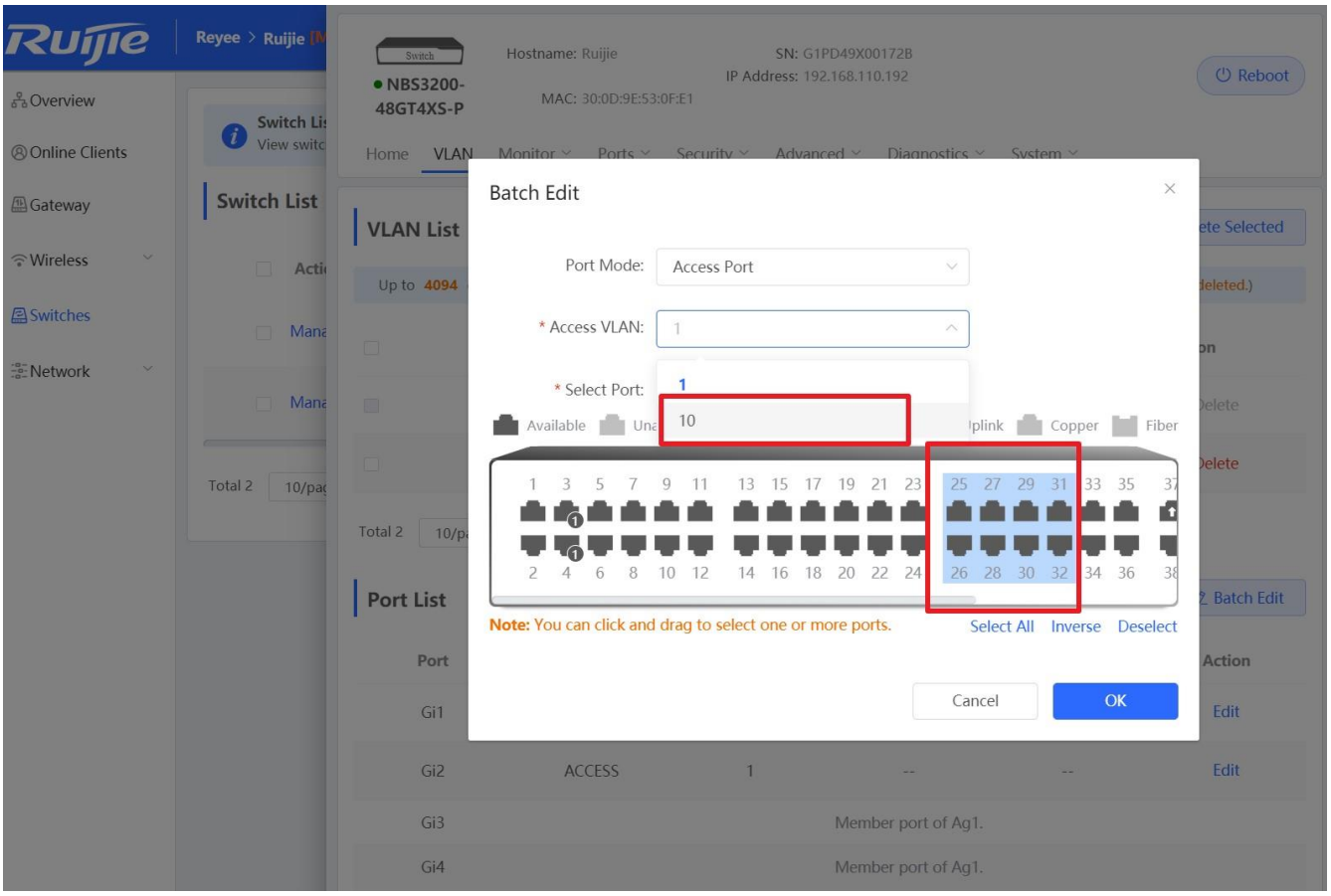
Step 2: Choose **VLAN** and Add a new VLAN





Step 3: Assign the new VLAN to ports.


Reyee > Ruijie
Overview
Online Clients
Gateway
Wireless
Switches
Network
Switch List
Switch
NBS3200-48GT4XS-P
Hostname: Ruijie
MAC: 30:0D:9E:53:0F:E1
SN: G1PD49X00172B
IP Address: 192.168.110.192
Reboot
Home
VLAN
Monitor
Ports
Security
Advanced
Diagnostics
System
Click to Collapse the list.
VLAN List
+ Batch Add
+ Add
Delete Selected
Up to 4094 entries can be added.(The default VLAN, management VLAN, native VLAN, svi Vlan and access VLAN cannot be deleted.)
VLAN ID
Description
Port
Action
1
VLAN0001
Gi1-2,Gi5-48,Te49-52,Ag1
Edit
Delete
10
IT departmant
--
Edit
Delete
Total 2
10/page
1
Go to page
1
Port List
Batch Edit
Port
Port Mode
Access VLAN
Native VLAN
Permit VLAN
Action
Gi1
ACCESS
1
--
--
Edit
Gi2
ACCESS
1
--
--
Edit
Gi3
Member port of Ag1.
Gi4
Member port of Ag1.

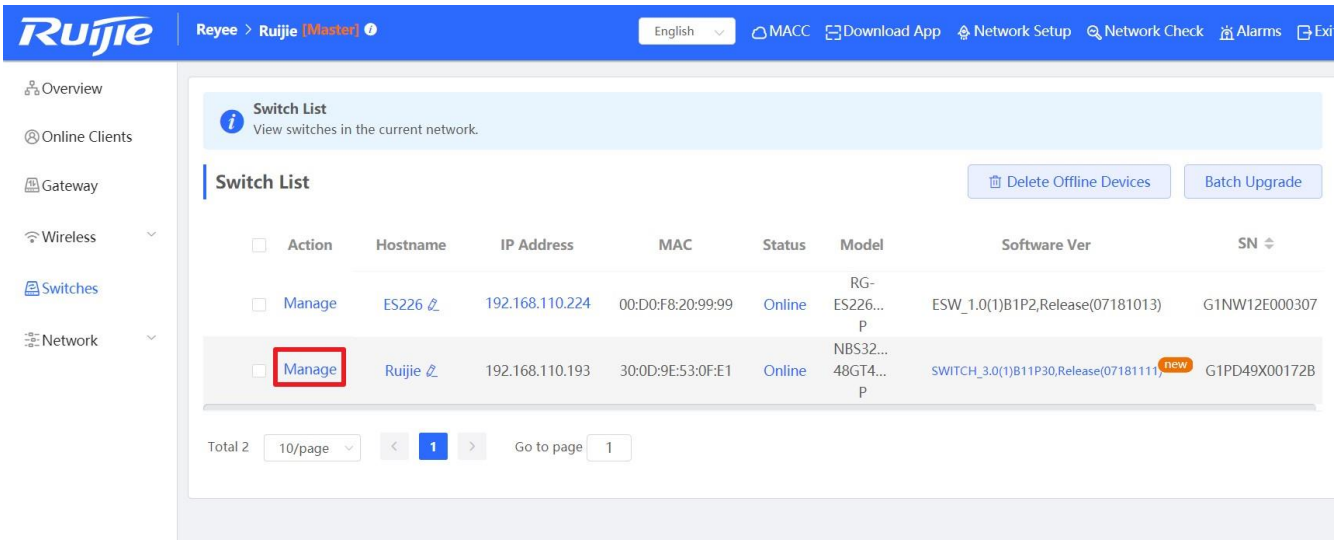


6.2 Access Control List (ACL)

An access control list (ACL) is also referred to as firewall or packet filter in some documents. The ACL controls (permits or discards) data packets on a network device interface by defining ACEs (Access Control Entries).

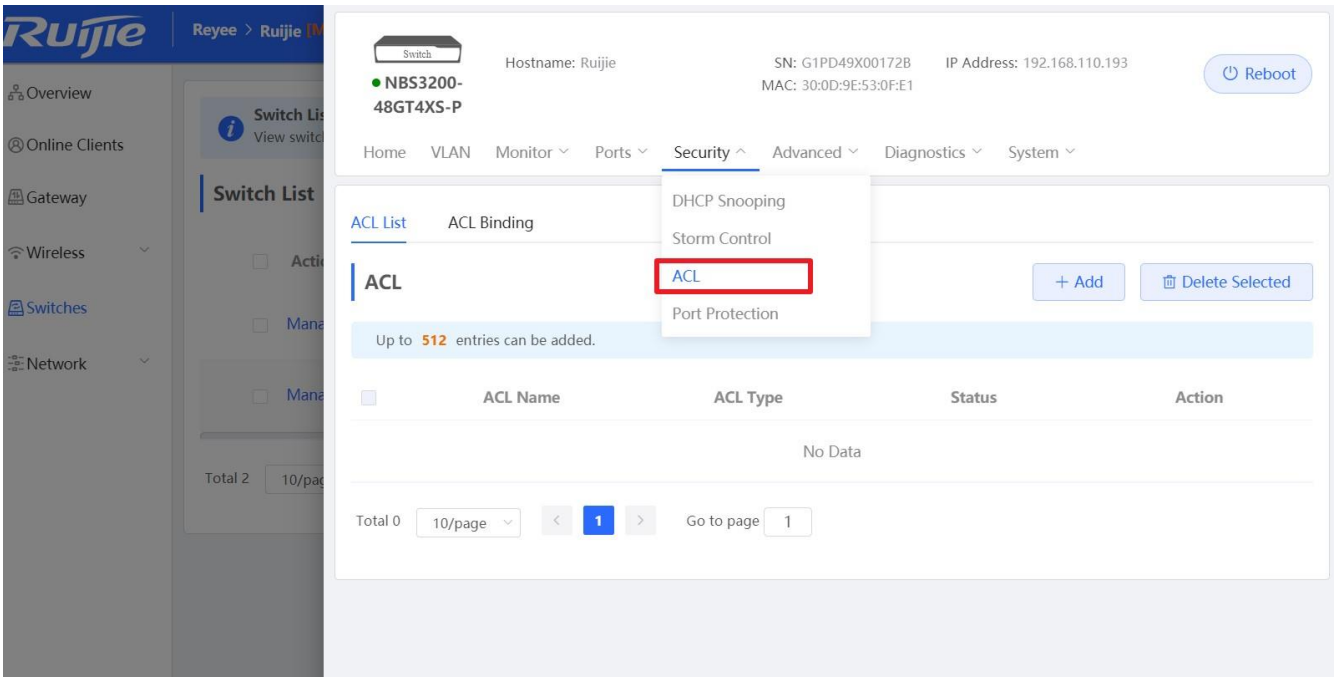
Configuration Steps:

Step 1: Choose **Switches** → **Manage** to configure the switch

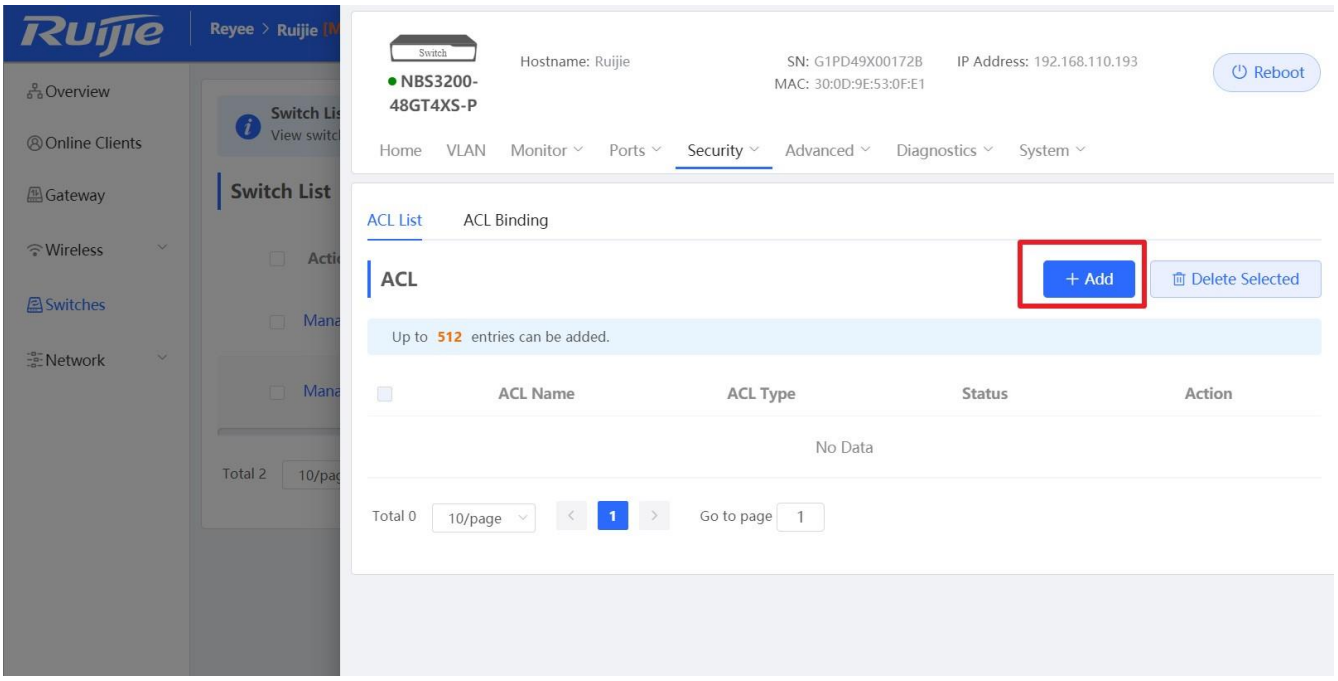


●

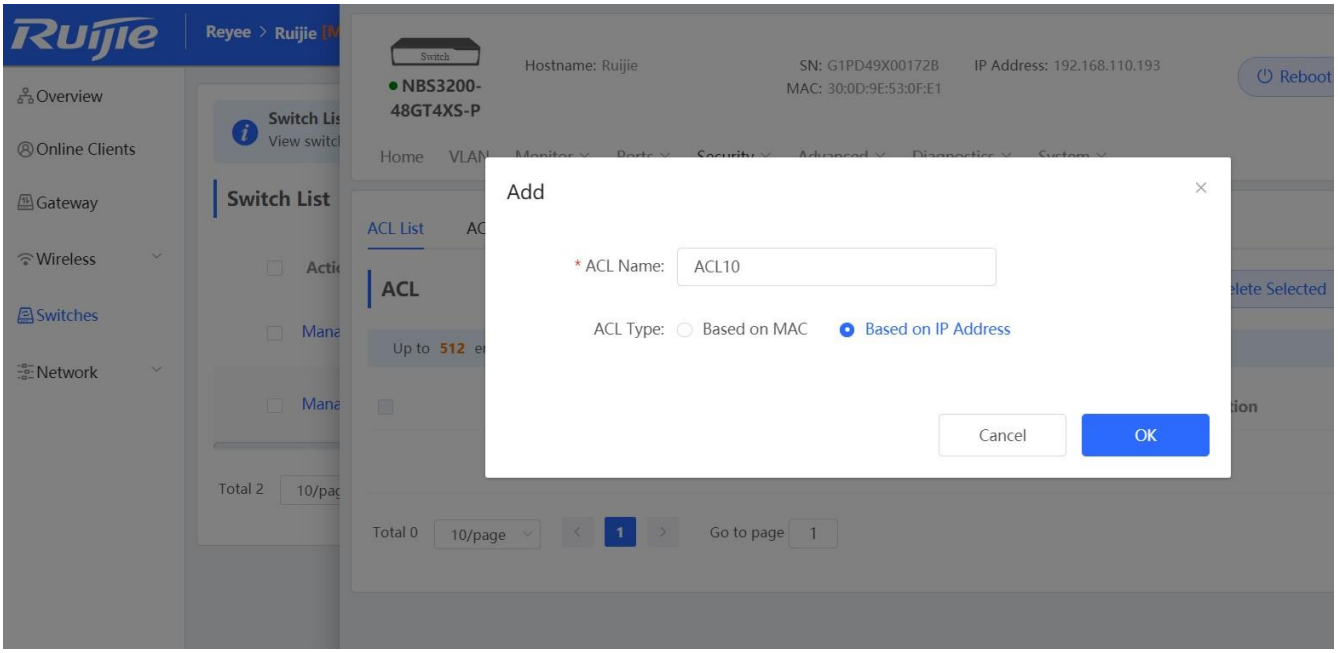
Step 2: Choose **Security** → **ACL** to enter the ACL management page



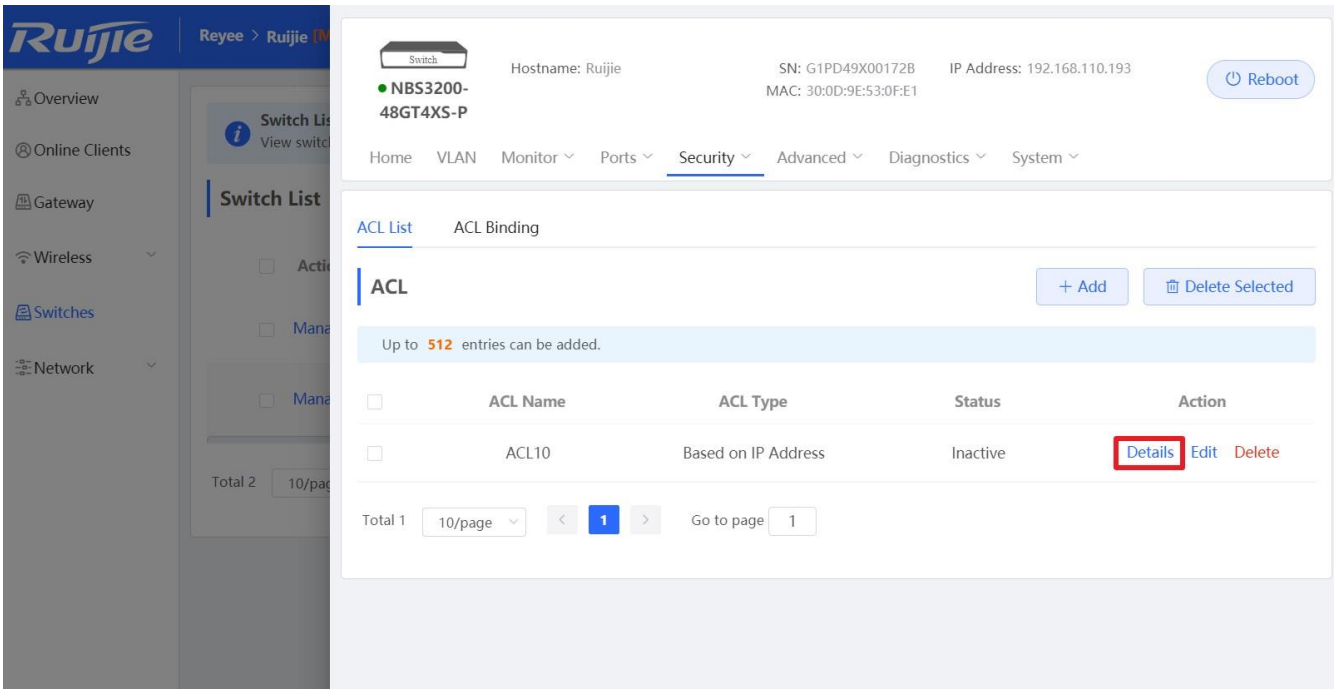
Step 3: Click the "**Add**" button to add an ACL

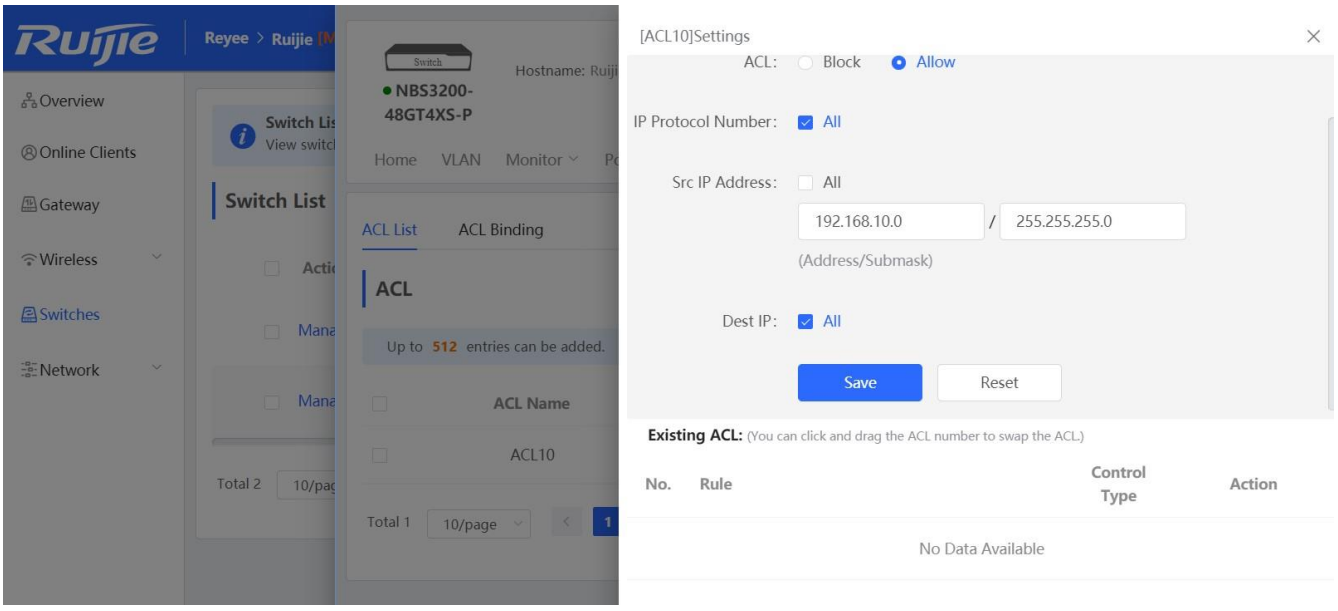


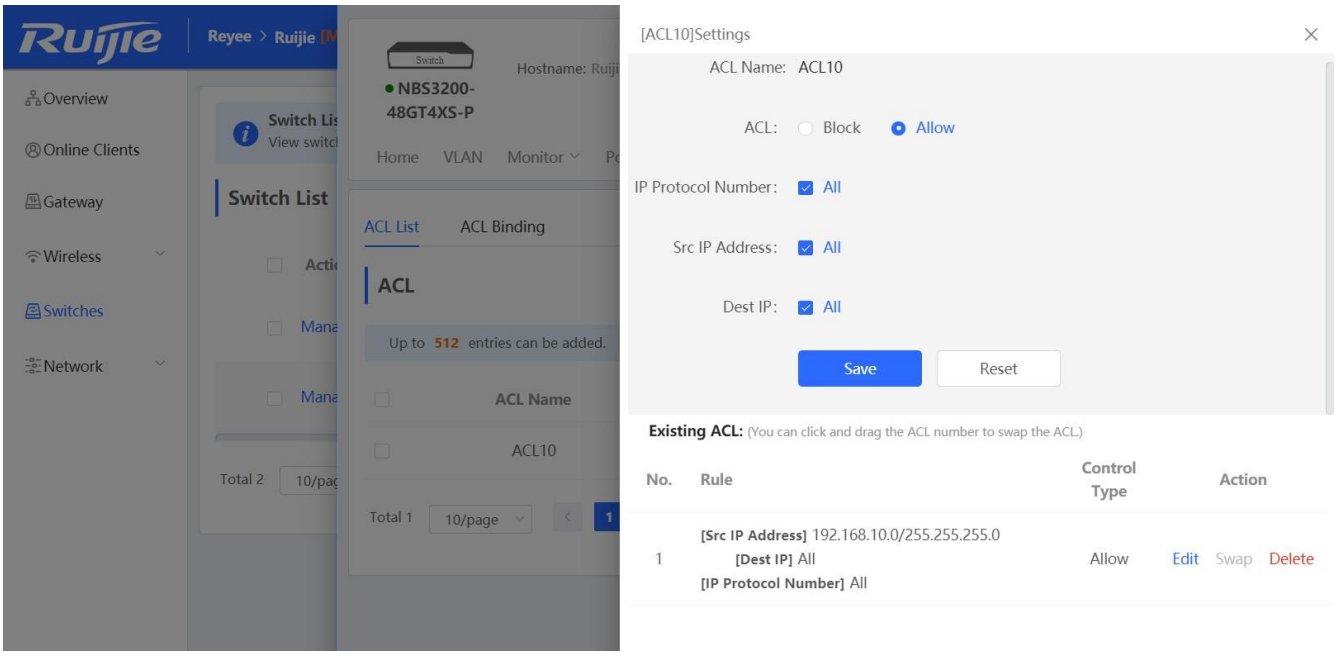
Step 4: Fill in the ACL name and type to create an ACL



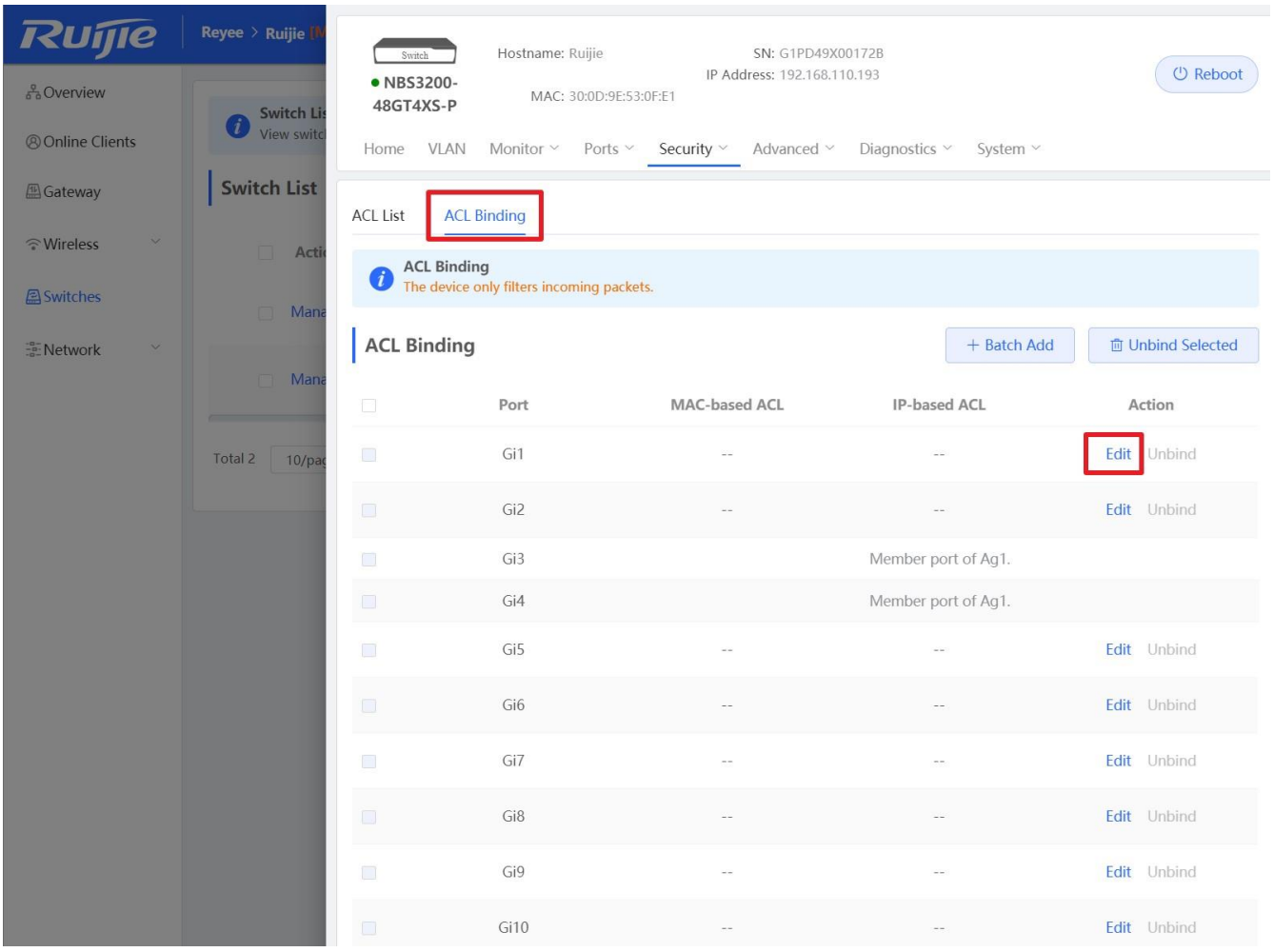
Step 4: Click “Details” to configure the ACL rule.

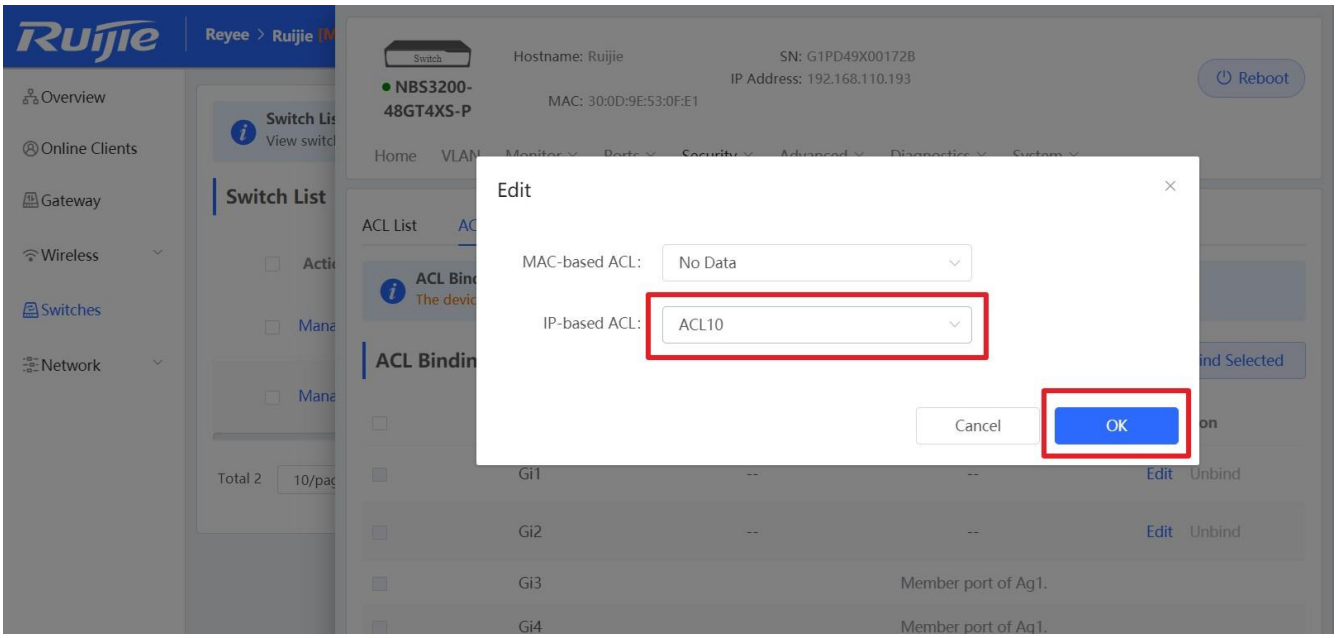

Reyee > Ruijie
Overview
Online Clients
Gateway
Wireless
Switches
Network
Switch List
NBS3200-48GT4XS-P
Hostname: Ruijie
SN: G1PD49X00172B
MAC: 30:0D:9E:53:0F:E1
IP Address: 192.168.110.193
Reboot
Home
VLAN
Monitor
Ports
Security
Advanced
Diagnostics
System
ACL List
ACL Binding
ACL
+ Add
Delete Selected
Up to 512 entries can be added.
ACL Name
ACL Type
Status
Action
ACL10
Based on IP Address
Inactive
Details
Edit
Delete
Total 1
10/page
Go to page
1


[ACL10]Settings
ACL:
Block
Allow
IP Protocol Number:
All
Src IP Address:
All
192.168.10.0
/
255.255.255.0
(Address/Submask)
Dest IP:
All
Save
Reset
Existing ACL: (You can click and drag the ACL number to swap the ACL)
No.
Rule
Control Type
Action
No Data Available



Step 5: Bind the ACL to the interface.


Reyee > Ruijie
Overview
Online Clients
Gateway
Wireless
Switches
Network
Switch List
Total 2
Switch
NBS3200-48GT4XS-P
Hostname: Ruijie
MAC: 30:0D:9E:53:0F:E1
SN: G1PD49X00172B
IP Address: 192.168.110.193
Reboot
Home
VLAN
Monitor
Ports
Security
Advanced
Diagnostics
System
ACL List
ACL Binding
ACL Binding
The device only filters incoming packets.
ACL Binding
+ Batch Add
Unbind Selected
Port
MAC-based ACL
IP-based ACL
Action
Gi1 -- -- Edit Unbind
Gi2 -- -- Edit Unbind
Gi3 Member port of Ag1.
Gi4 Member port of Ag1.
Gi5 -- -- Edit Unbind
Gi6 -- -- Edit Unbind
Gi7 -- -- Edit Unbind
Gi8 -- -- Edit Unbind
Gi9 -- -- Edit Unbind
Gi10 -- -- Edit Unbind

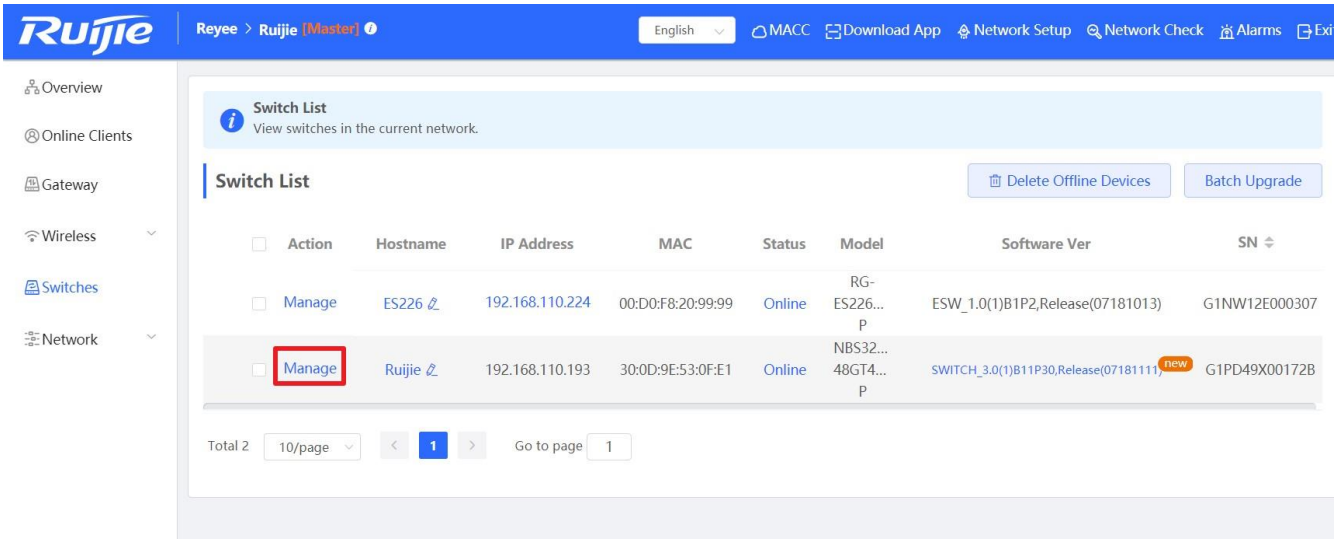

Edit
MAC-based ACL:
No Data
IP-based ACL:
ACL10
Cancel
OK

6.3 Port Isolation

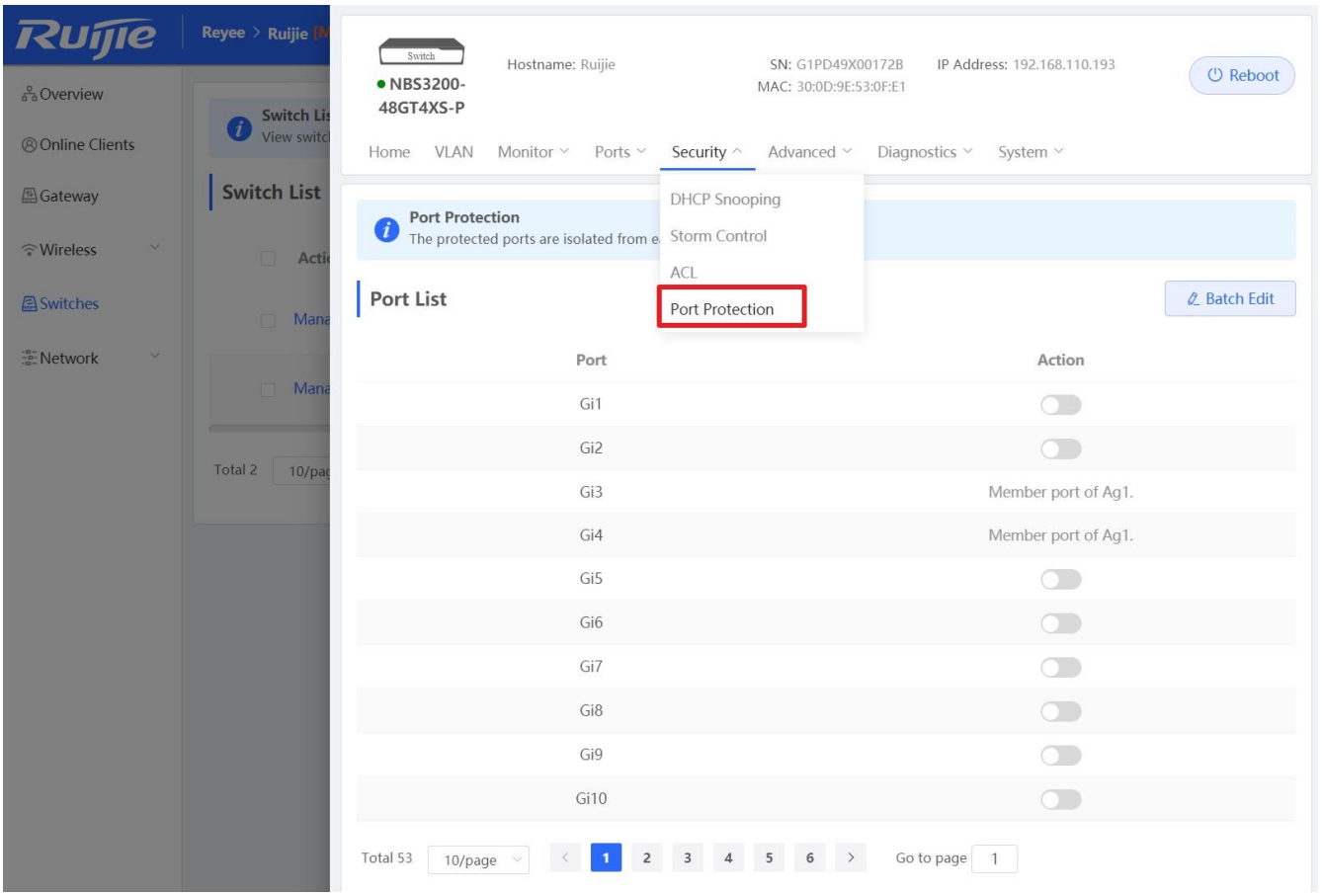
Port isolation implements layer-2 isolation of packets. After port isolation is enabled (which is disabled by default), data cannot be forwarded between isolated ports.

Configuration Step:

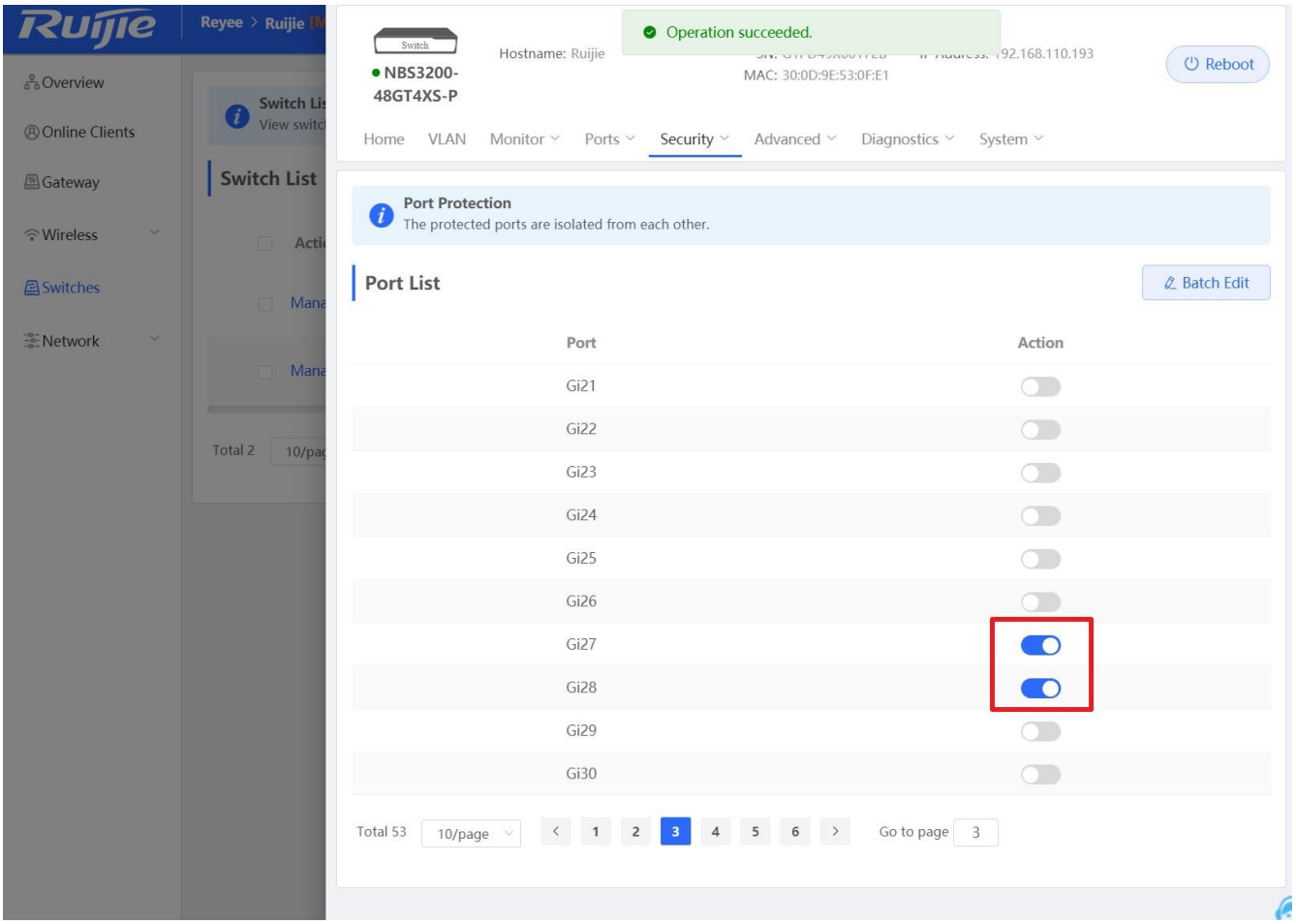
Step 1: Choose **Switches** → **Manage** to configure the switch



Step 2: Choose **Security** → **Port Protection** to configure the port isolation



Step 3: Enable the Port Isolation on Ports.



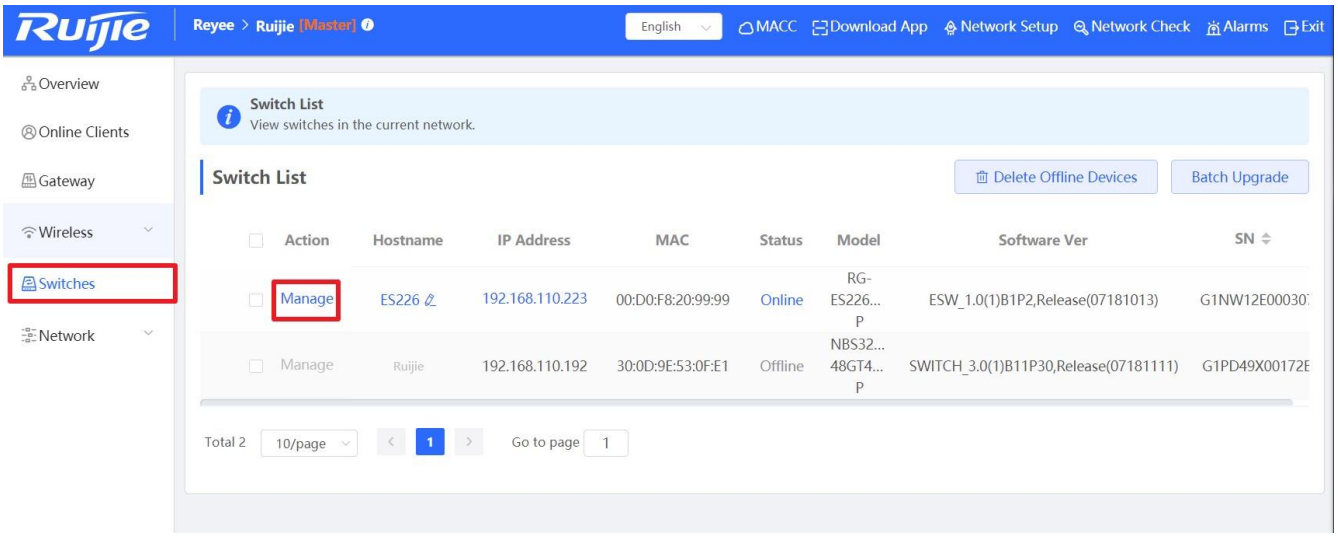
6.4 DHCP Snooping

In the DHCP-enabled network, the general problem facing administrator is that some users use private IP addresses rather than dynamically obtaining IP addresses. As a result, some users using dynamic IP addresses cannot access the network, making network application more complex. In dynamic DHCP binding mode, the device records how legal users obtain IP addresses during the course of DHCP Snooping for security purpose.

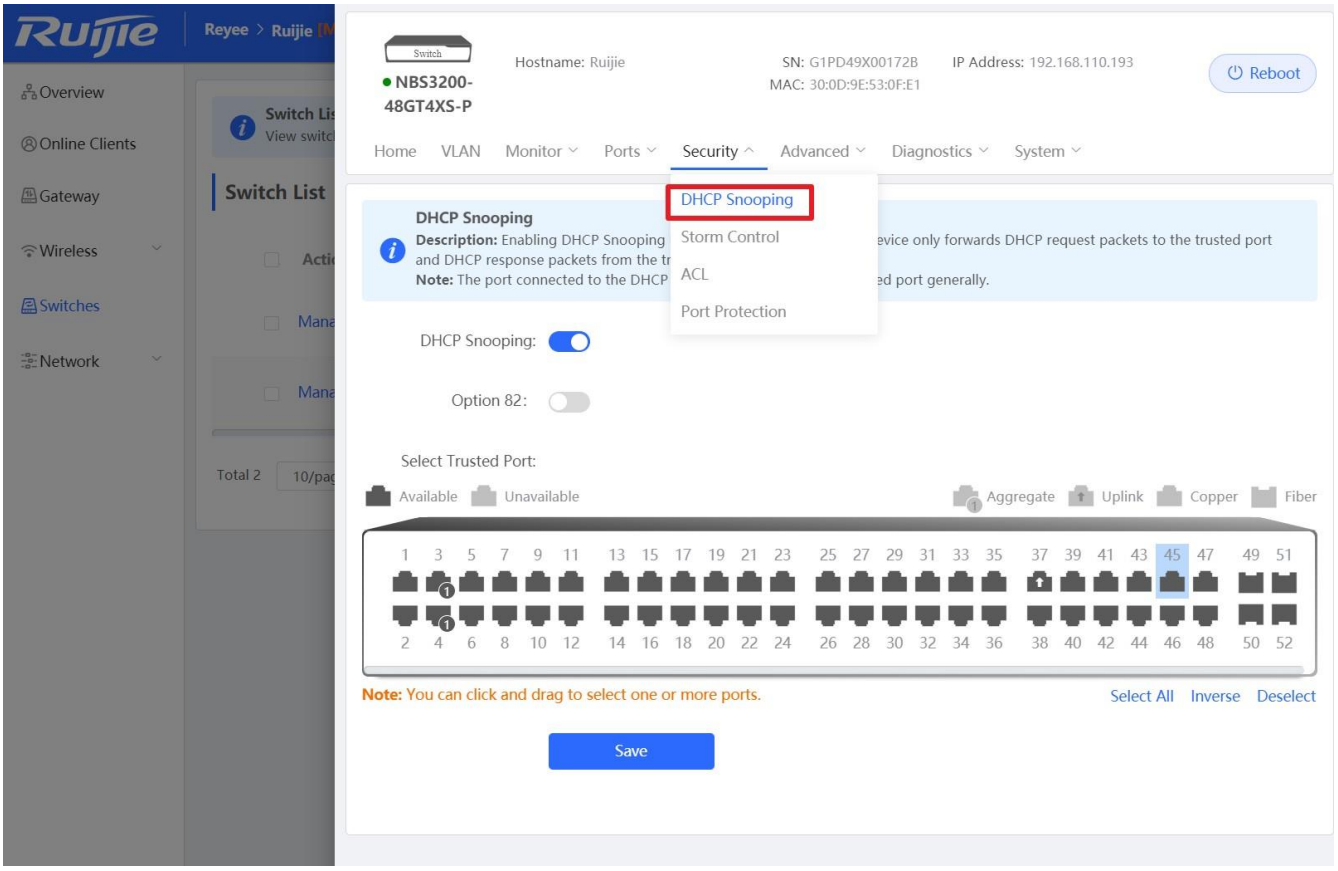
Enabling DHCP Snooping helps filter DHCP packets. Only forwards DHCP request packets to the trusted port and DHCP response packets from the trusted port. The port connected to the DHCP server is configured as the trusted port generally

Configuration Steps

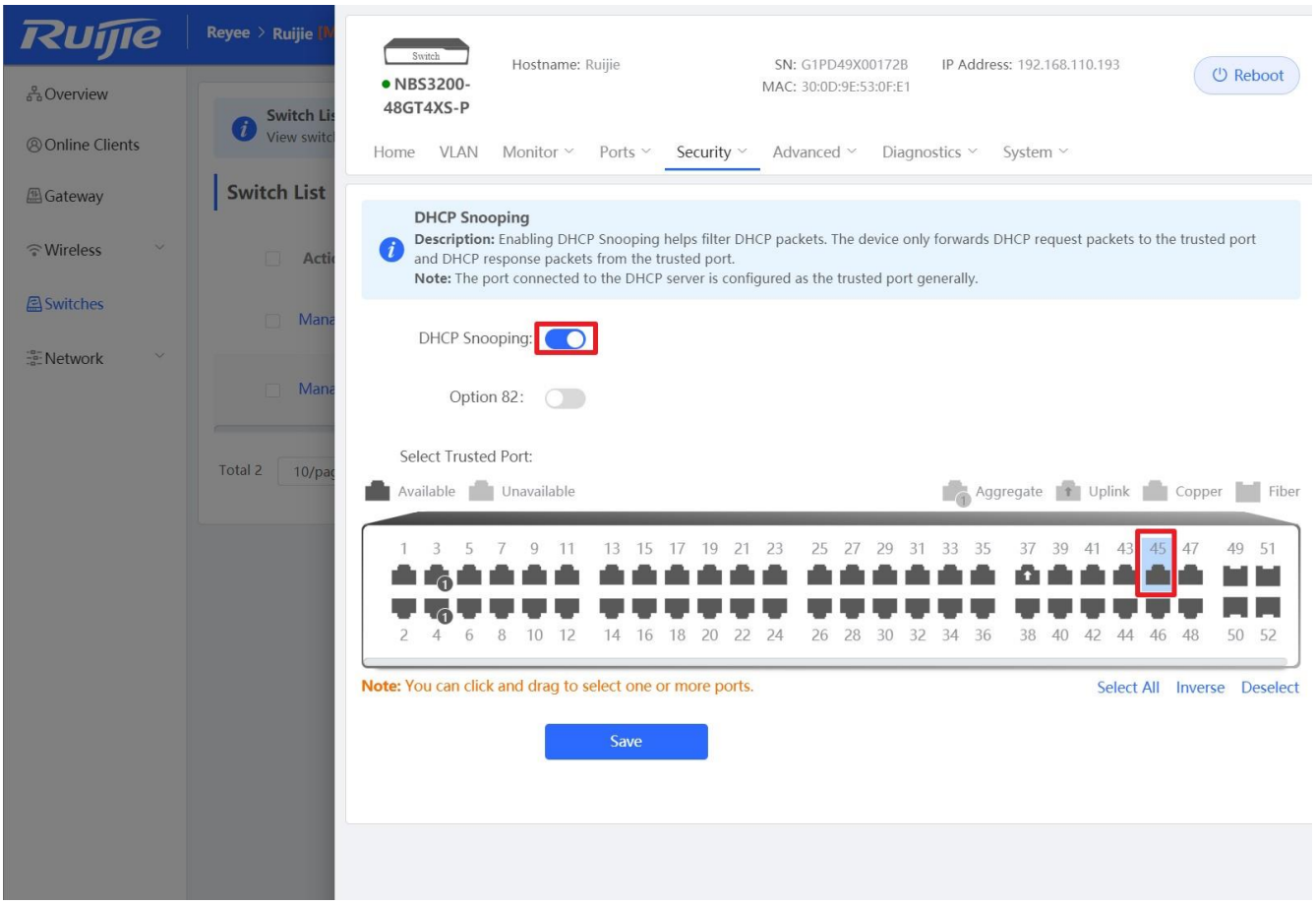
Step 1: Choose **Switches** → **Manage** to configure the switch



Step 2: Choose **Security** → **DHCP Snooping** to configure the DHCP snooping

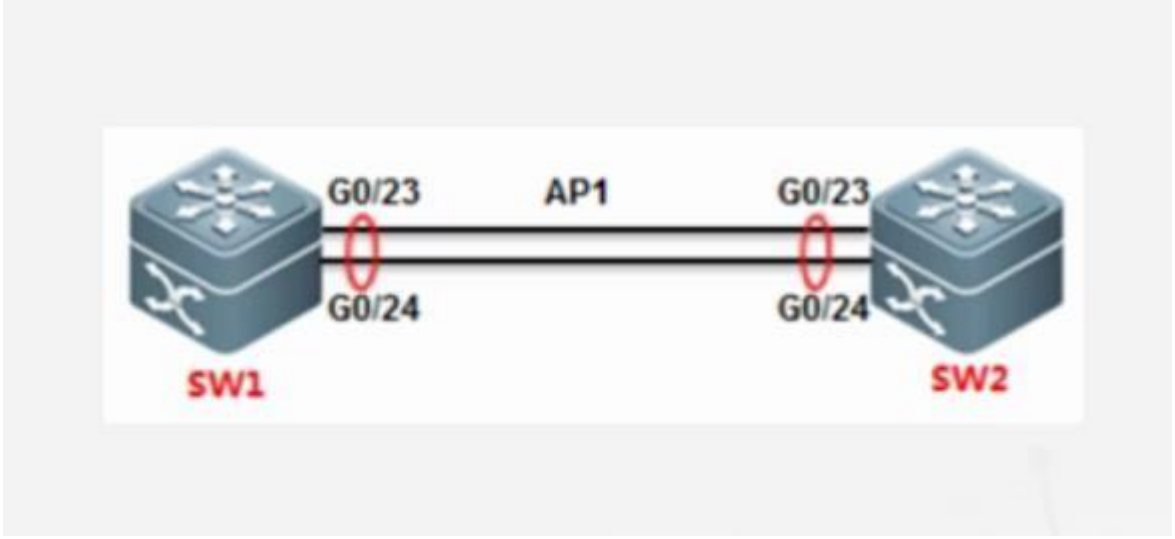


Step 3: Enable the DHCP and select the trusted port (the port connect to a DHCP server)



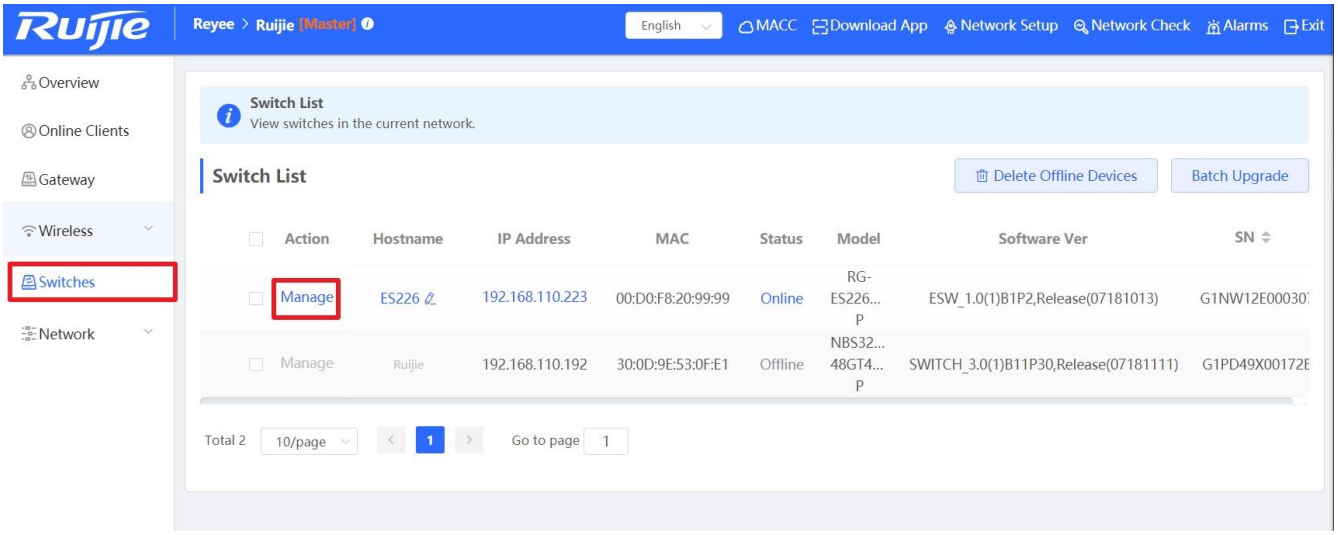
6.5 Link Aggregation

Link aggregation is a technology to combine multiple network connections in parallel in order to increase throughput and provide redundancy in case one of the links should fail.

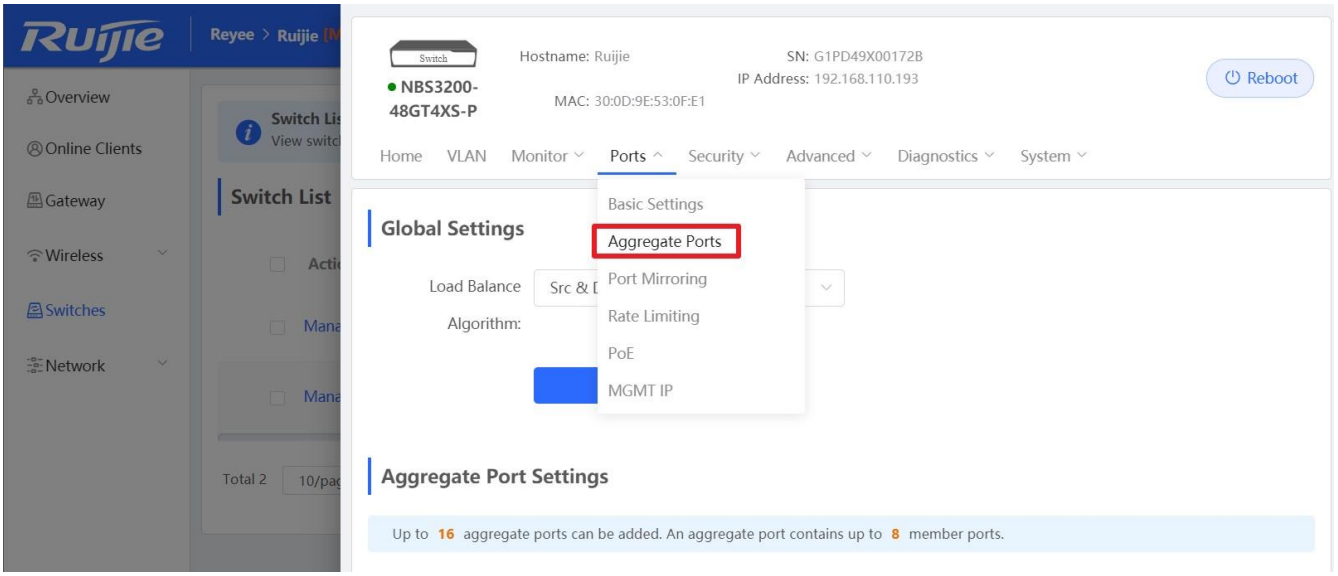


Configuration Steps

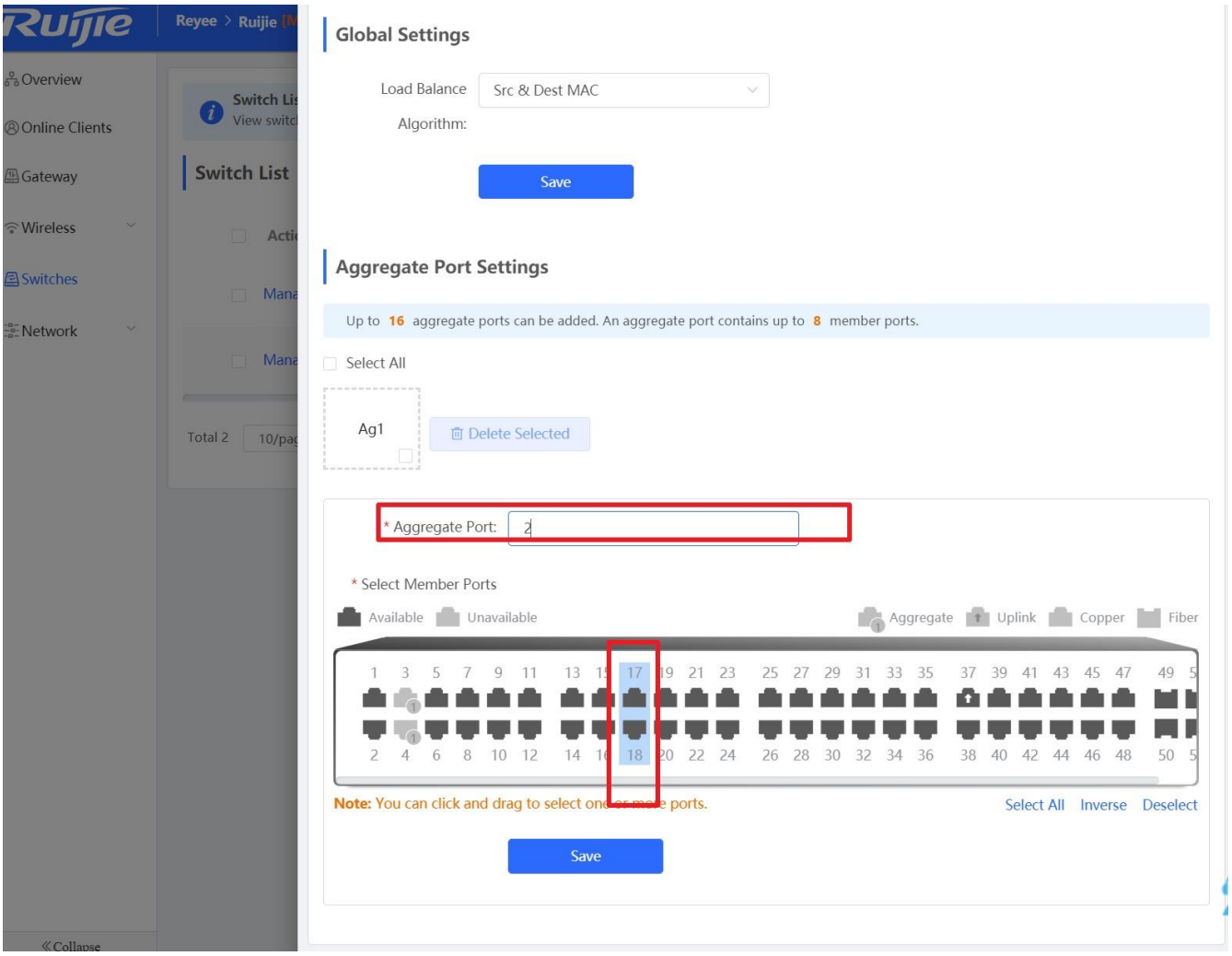
Step 1: Choose **Switches** → **Manage** to configure the switch



Step 2: Choose **Ports** → **Aggregate Ports** to configure the link aggregation



Step 3: Fill in the aggregate port number and select the port member.



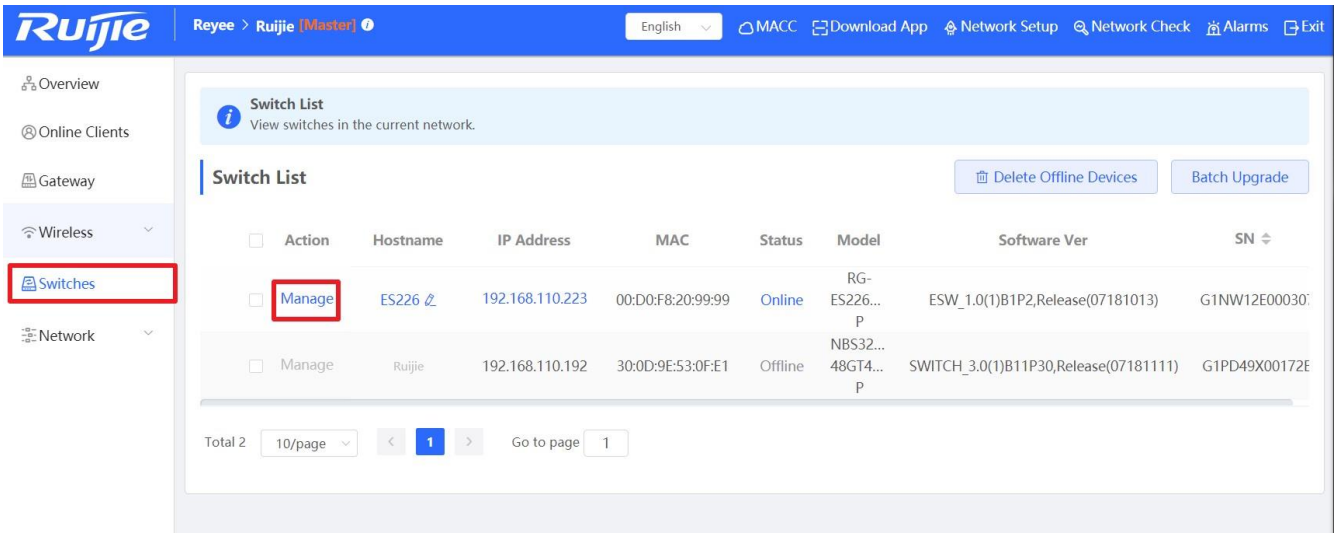
6.6 Storm Control

When there are excessive broadcast, multicast or unknown unicast data flows in the LANs, the network speed decreases and packet transmission timeout greatly increases. This is called LAN storm, which may be caused by topology protocol execution errors or incorrect network configuration.

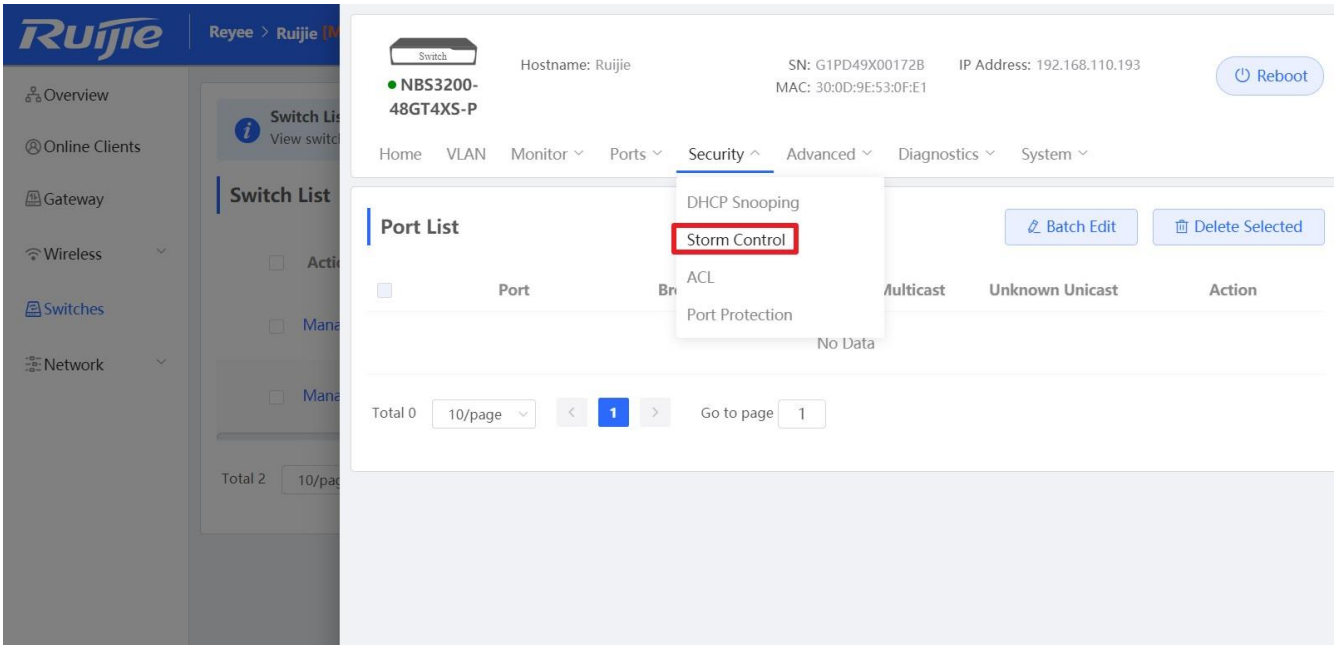
Users can perform storm control separately for the broadcast, multicast, and unknown unicast data flows. When the rate of broadcast, multicast, or unknown unicast packets received by the device port exceeds the specified rate, the number of packets allowed per second, or the number of kilobits allowed per second, the device transmits packets only at the specified rate, the number of packets allowed per second, or the number of kilobits allowed per second, and discards packets beyond the rate range, until the packet rate becomes normal, thereby avoiding flooded data from entering the LAN and causing a storm.

Configuration Steps

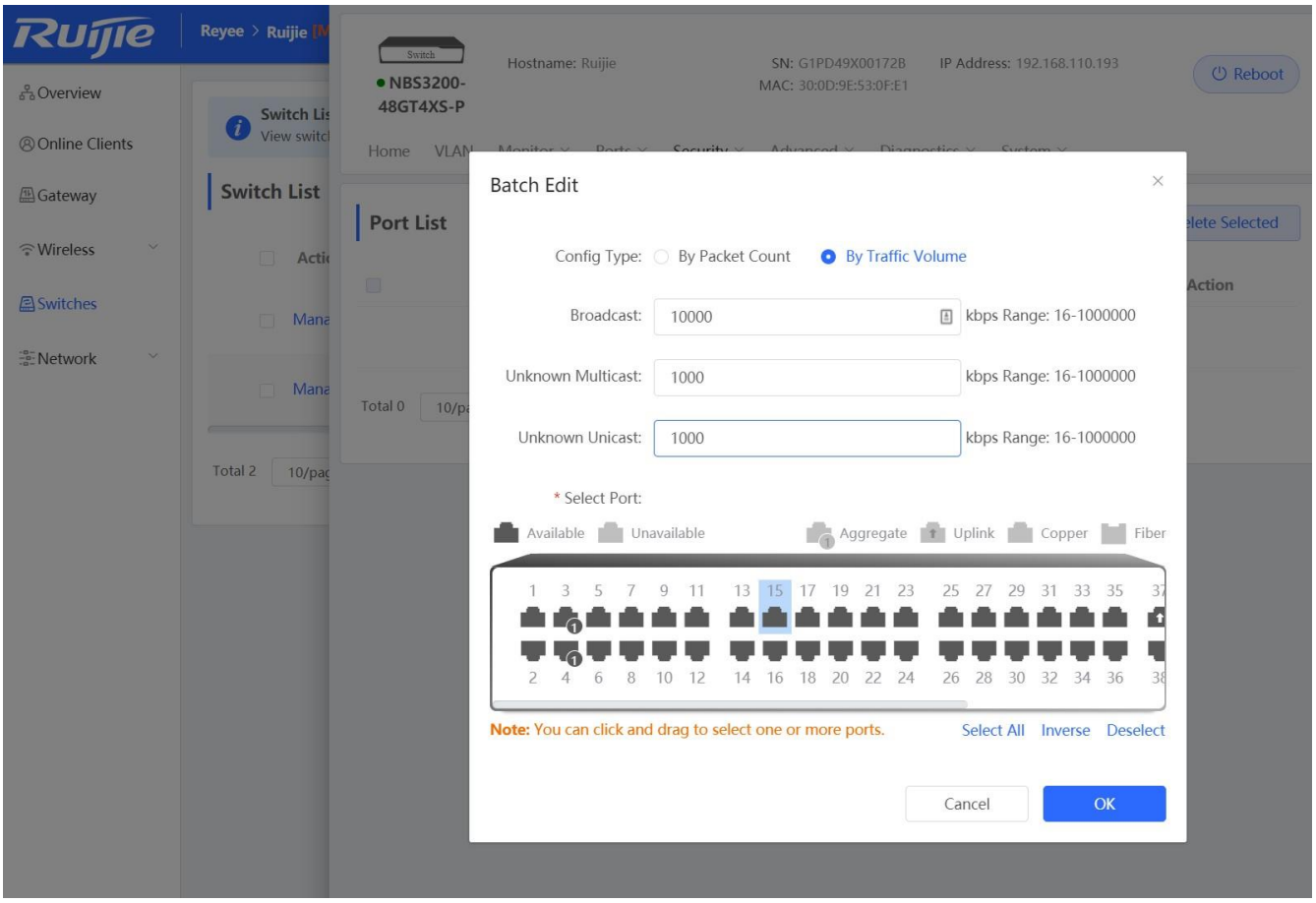
Step 1: Choose **Switches** → **Manage** to configure the switch



Step 2: Choose **Security** → **Storm Control**, and click **Batch Edit**



Step 3: Fill in the threshold value and select the port


Reyee > Ruijie
Overview
Online Clients
Gateway
Wireless
Switches
Network
Switch List
NBS3200-48GT4XS-P
Hostname: Ruijie
SN: G1PD49X00172B
MAC: 30:0D:9E:53:0F:E1
IP Address: 192.168.110.193
Reboot
Home
VLAN
Port List
Total 0
Total 2
Batch Edit
Config Type: By Packet Count By Traffic Volume
Broadcast: 10000 kbps Range: 16-1000000
Unknown Multicast: 1000 kbps Range: 16-1000000
Unknown Unicast: 1000 kbps Range: 16-1000000
* Select Port:
Available Unavailable Aggregate Uplink Copper Fiber
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35
2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36
Note: You can click and drag to select one or more ports.
Select All Inverse Deselect
Cancel
OK

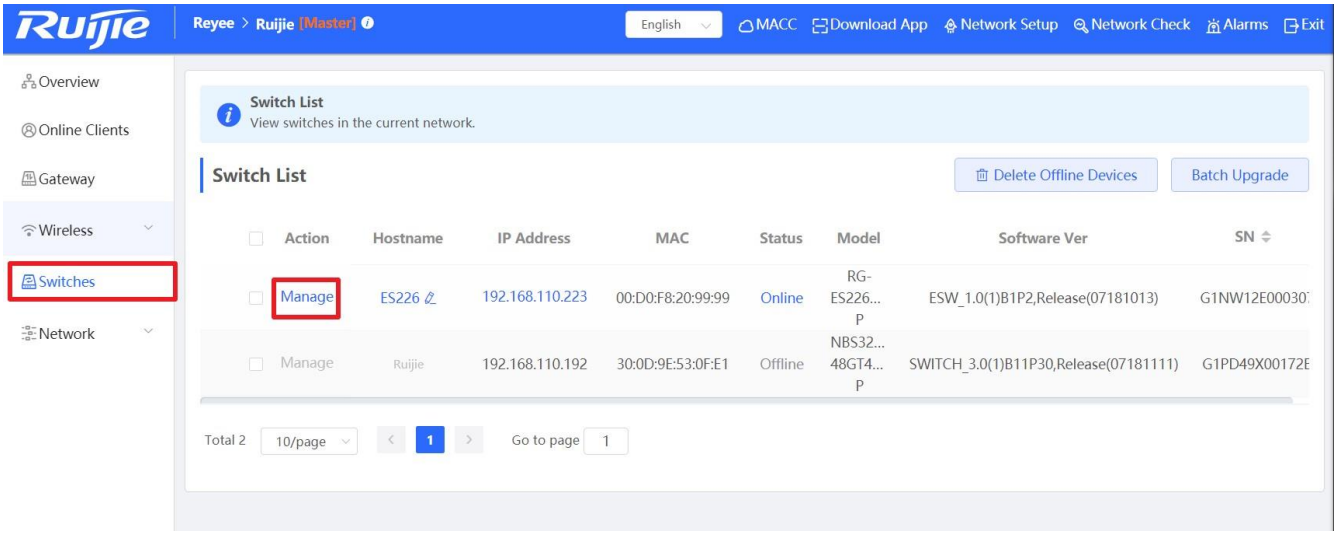
7 Reyee ES Series Switch Configuration

7.1 VLAN Setting

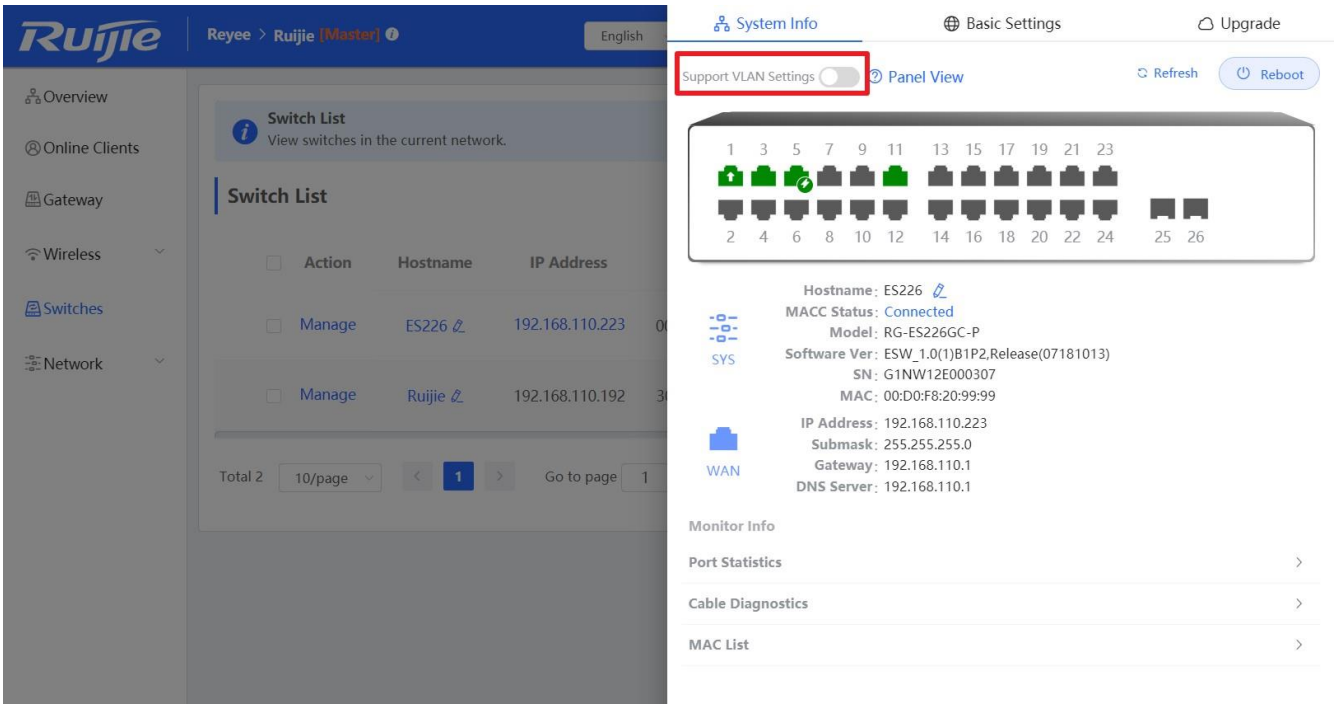
A virtual LAN (VLAN) is any broadcast domain that is partitioned and isolated in a computer network at the data link layer. VLANs work by applying tags to network frames and handling these tags in networking systems – creating the appearance and functionality of network traffic that is physically on a single network but acts as if it is split between separate networks. In this way, VLANs can keep network applications separate despite being connected to the same physical network, and without requiring multiple sets of cabling and networking devices to be deployed.

Configuration Steps:

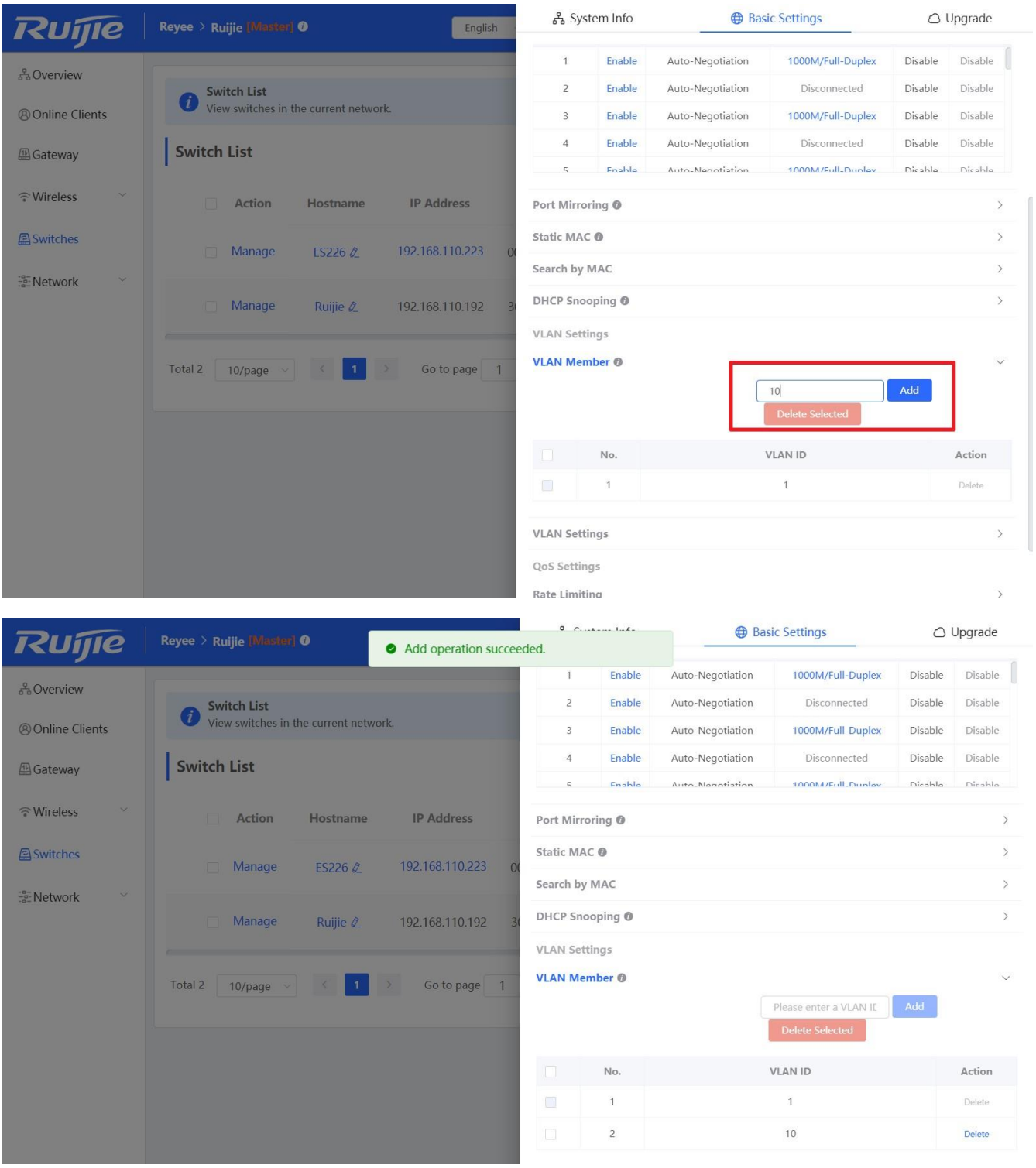
Step 1: Choose **Switches** → **Manage** to configure the switch



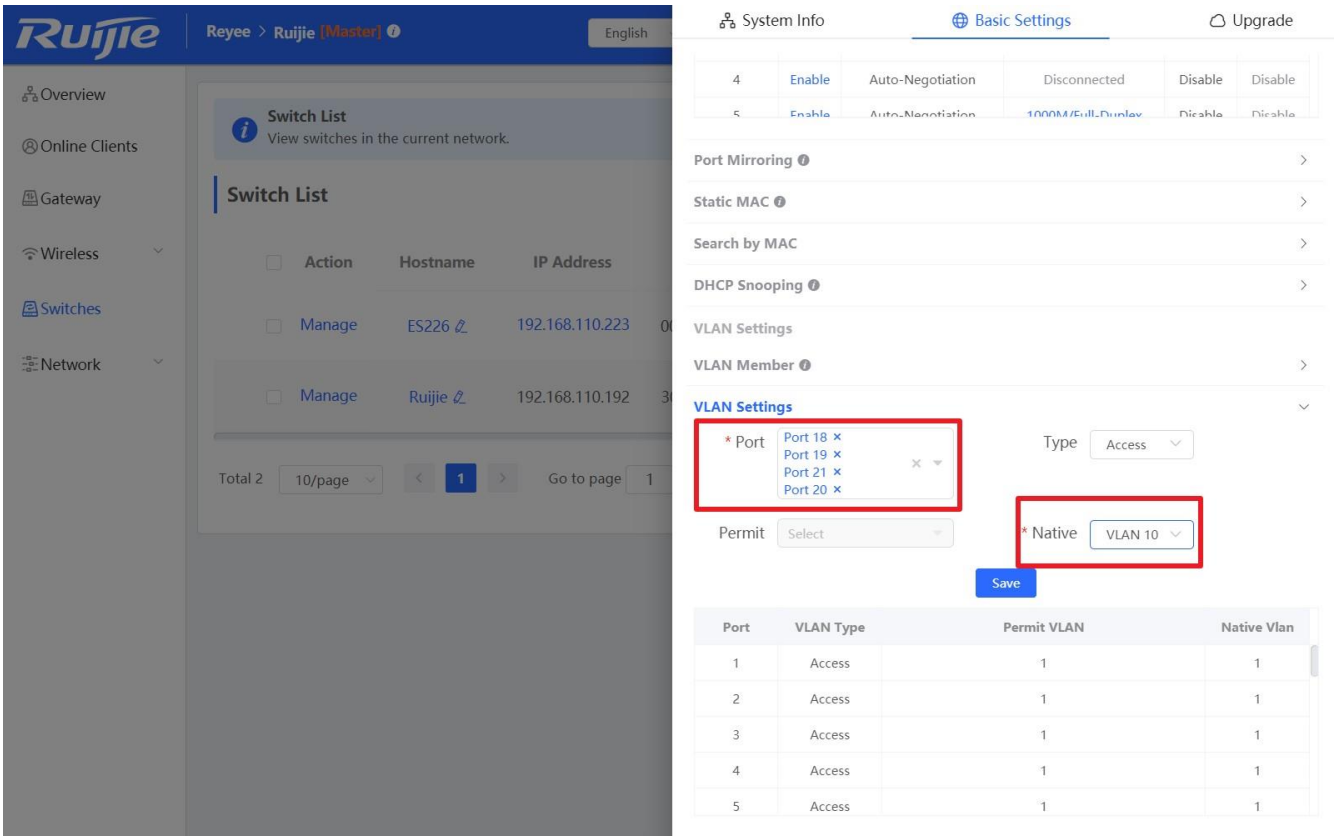
Step 2: Enable the VLAN settings (disabled by default)



Step 3: Add a VLAN member



Step 3: Assign the new VLAN member to ports.

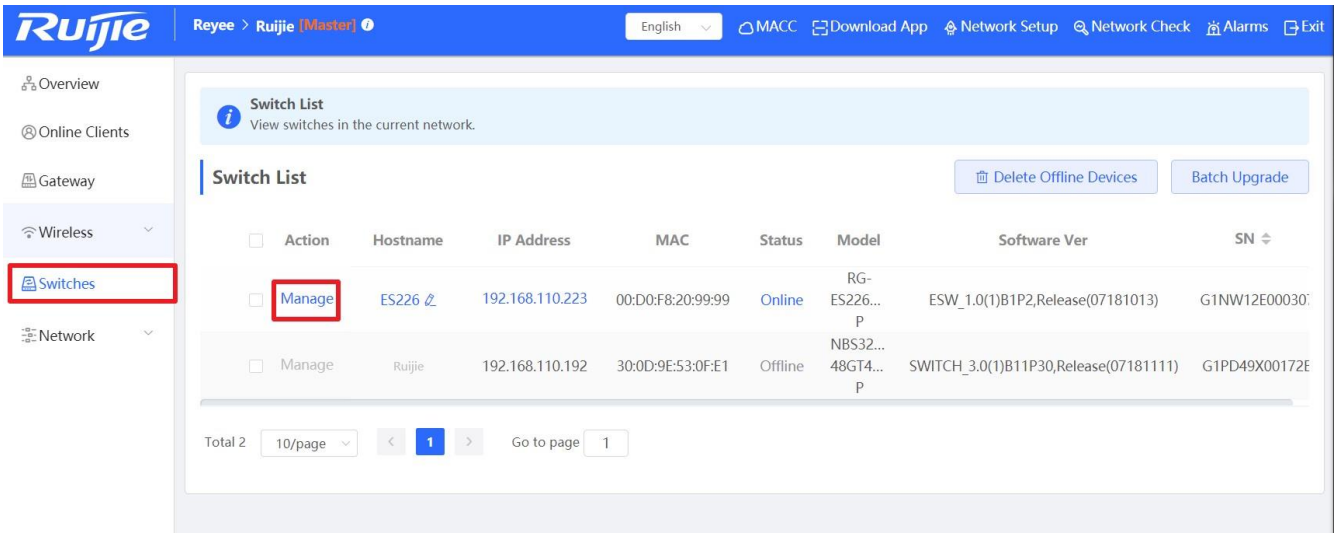


7.2 Port Isolation

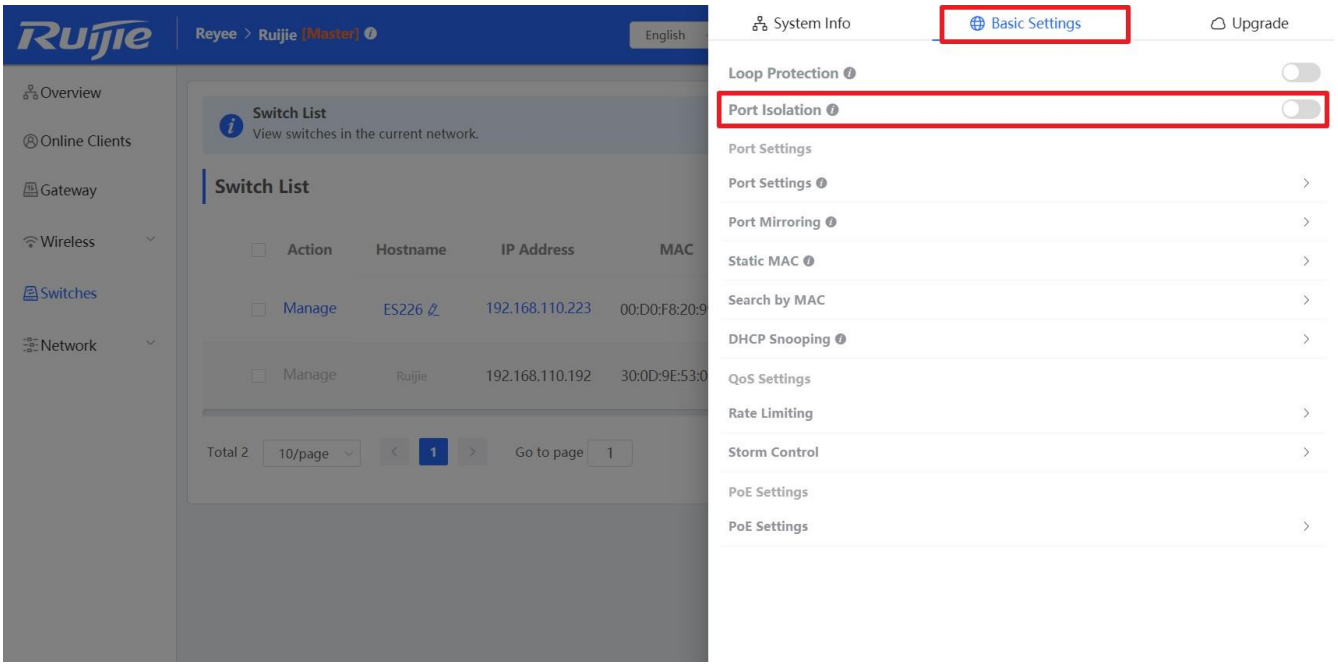
Port isolation implements layer-2 isolation of packets. After port isolation is enabled (which is disabled by default), data can be forwarded only between uplink ports and downlink ports, and downlink ports cannot forward packets to each other.

Configuration Steps

Step 1: Choose **Switches** → **Manage** to configure the switch



Step 2: Choose **Basic Settings** → **Port Isolation** to enable the Port Isolation



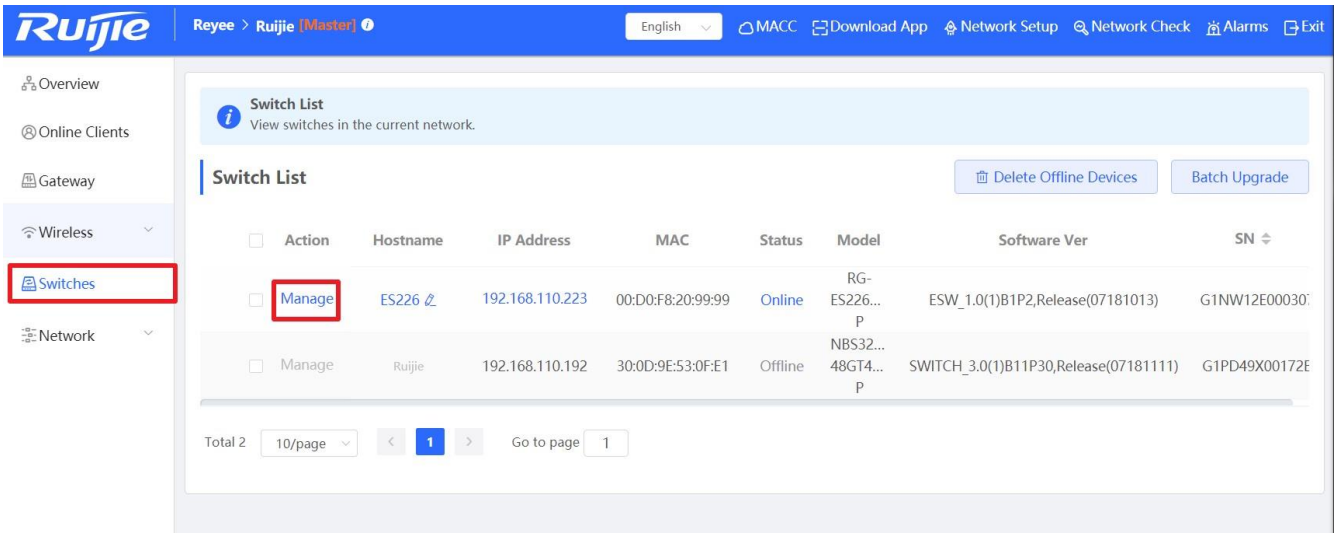
7.3 DHCP Snooping

In the DHCP-enabled network, the general problem facing administrator is that some users use private IP addresses rather than dynamically obtaining IP addresses. As a result, some users using dynamic IP addresses cannot access the network, making network application more complex. In dynamic DHCP binding mode, the device records how legal users obtain IP addresses during the course of DHCP Snooping for security purpose.

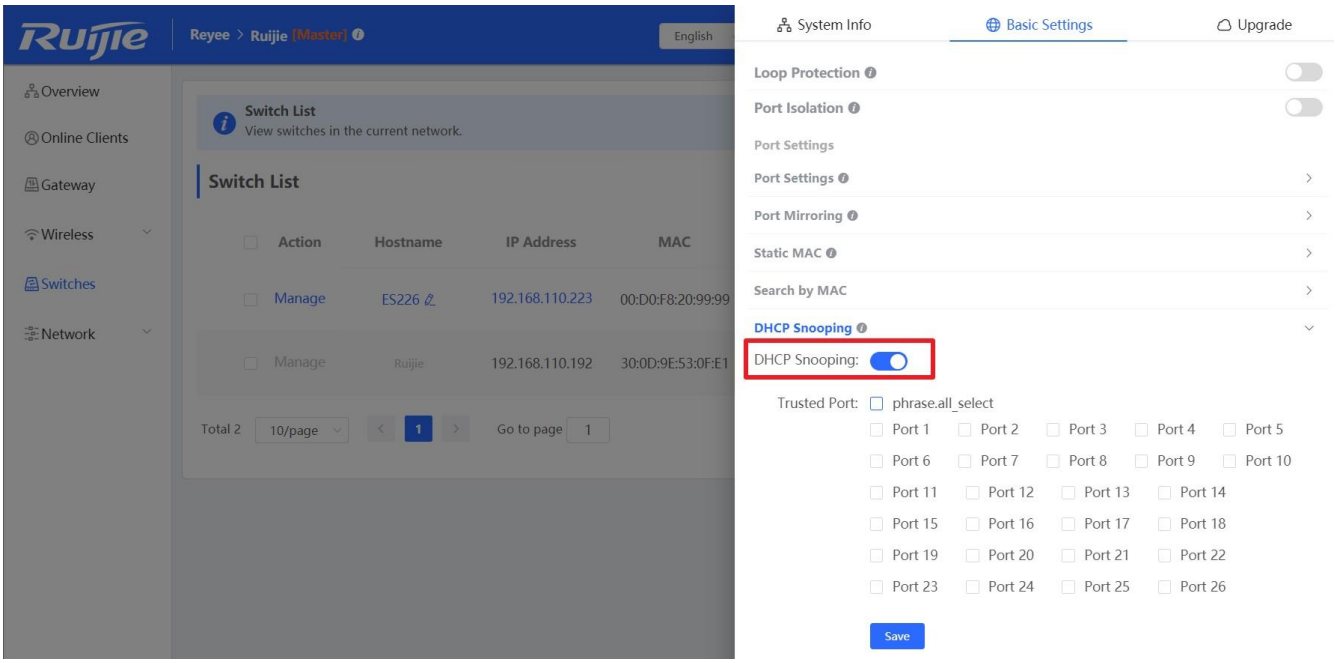
Enabling DHCP Snooping helps filter DHCP packets. Only forwards DHCP request packets to the trusted port and DHCP response packets from the trusted port. The port connected to the DHCP server is configured as the trusted port generally

Configuration Steps

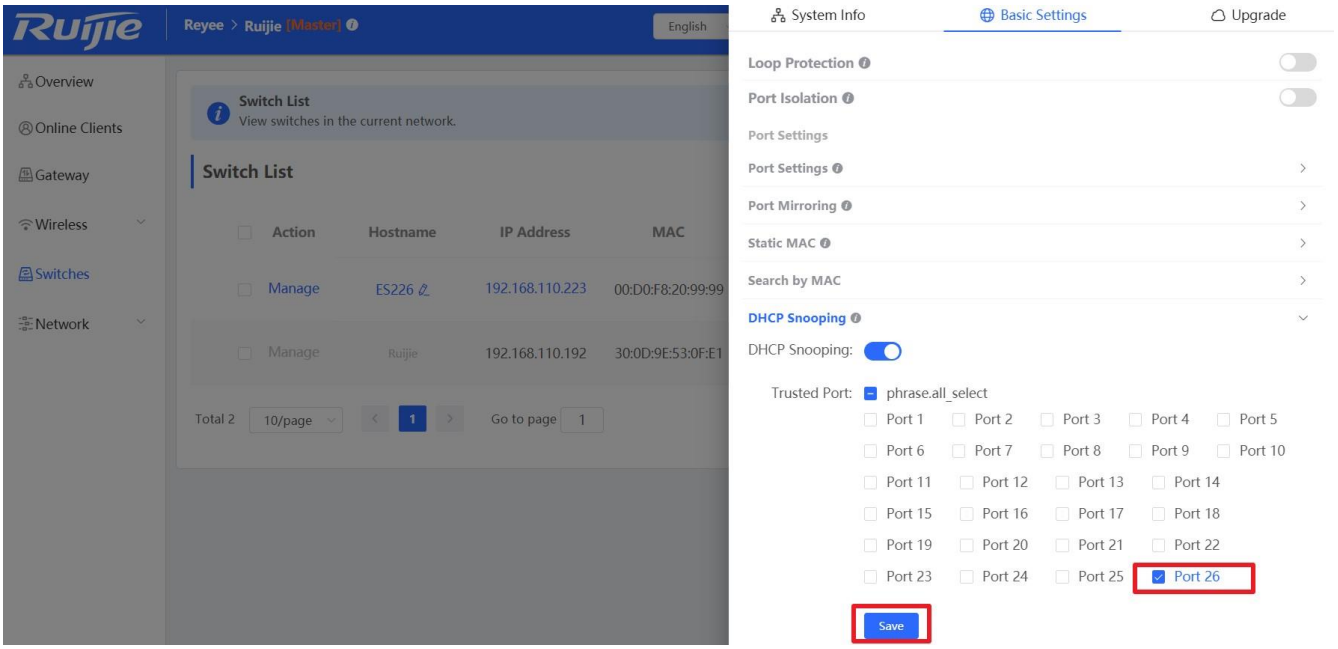
Step 1: Choose **Switches** → **Manage** to configure the switch



Step 2: Choose **Basic Settings** → **DHCP Snooping**, and enable the setting.



Step 3: Select the trusted port and save the configuration

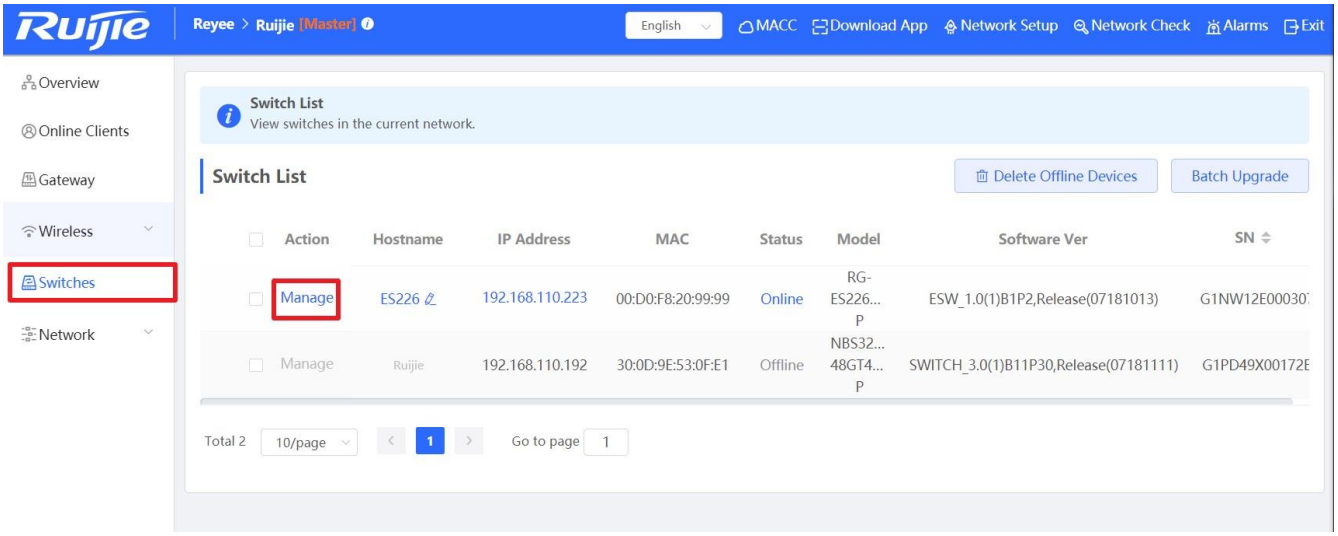


7.4 Speed Rate Limit

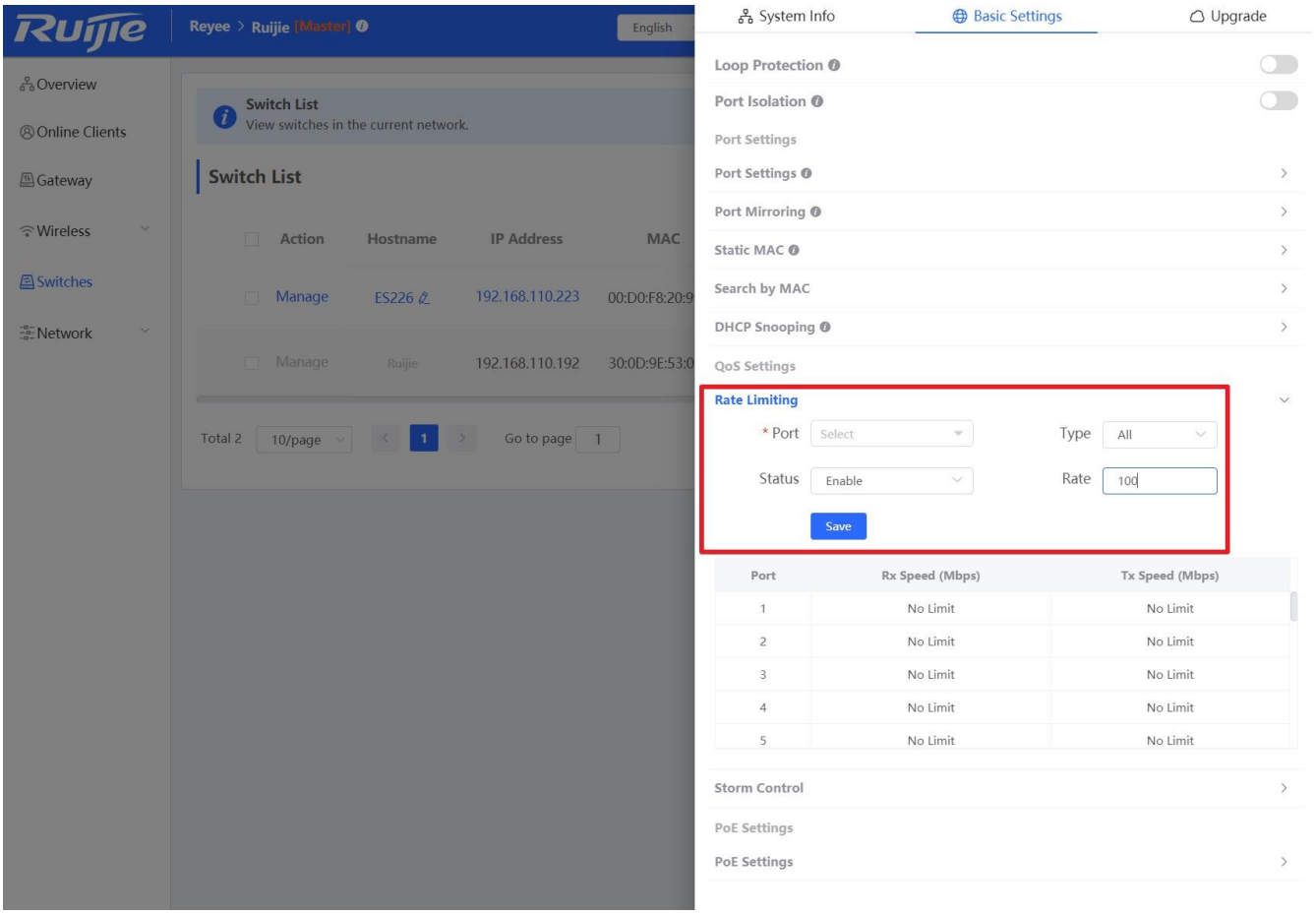
Rate limiting feature is used to limit the transmit speed rate on a specific port.

Configuration Steps:

Step 1: Choose **Switches** → **Manage** to configure the switch



Step 2: Choose **Basic Settings** → **Rate Limiting**, and fill in the Port, Type, Status and Rate information.



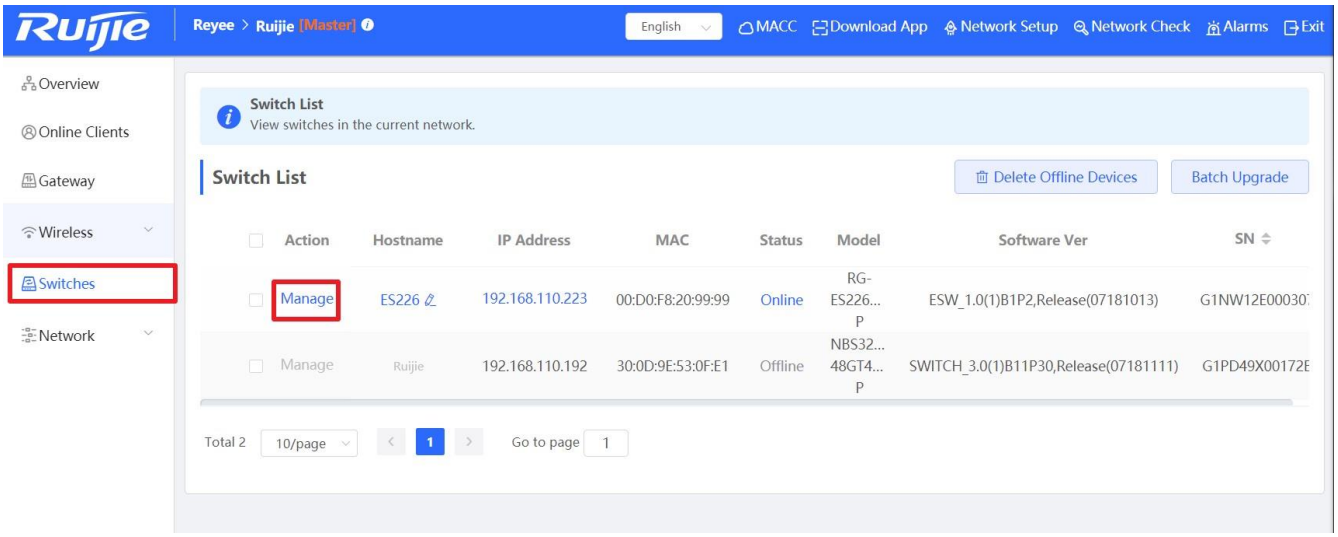
7.5 Storm Control

When there are excessive broadcast, multicast or unknown unicast data flows in the LANs, the network speed decreases and packet transmission timeout greatly increases. This is called LAN storm, which may be caused by topology protocol execution errors or incorrect network configuration.

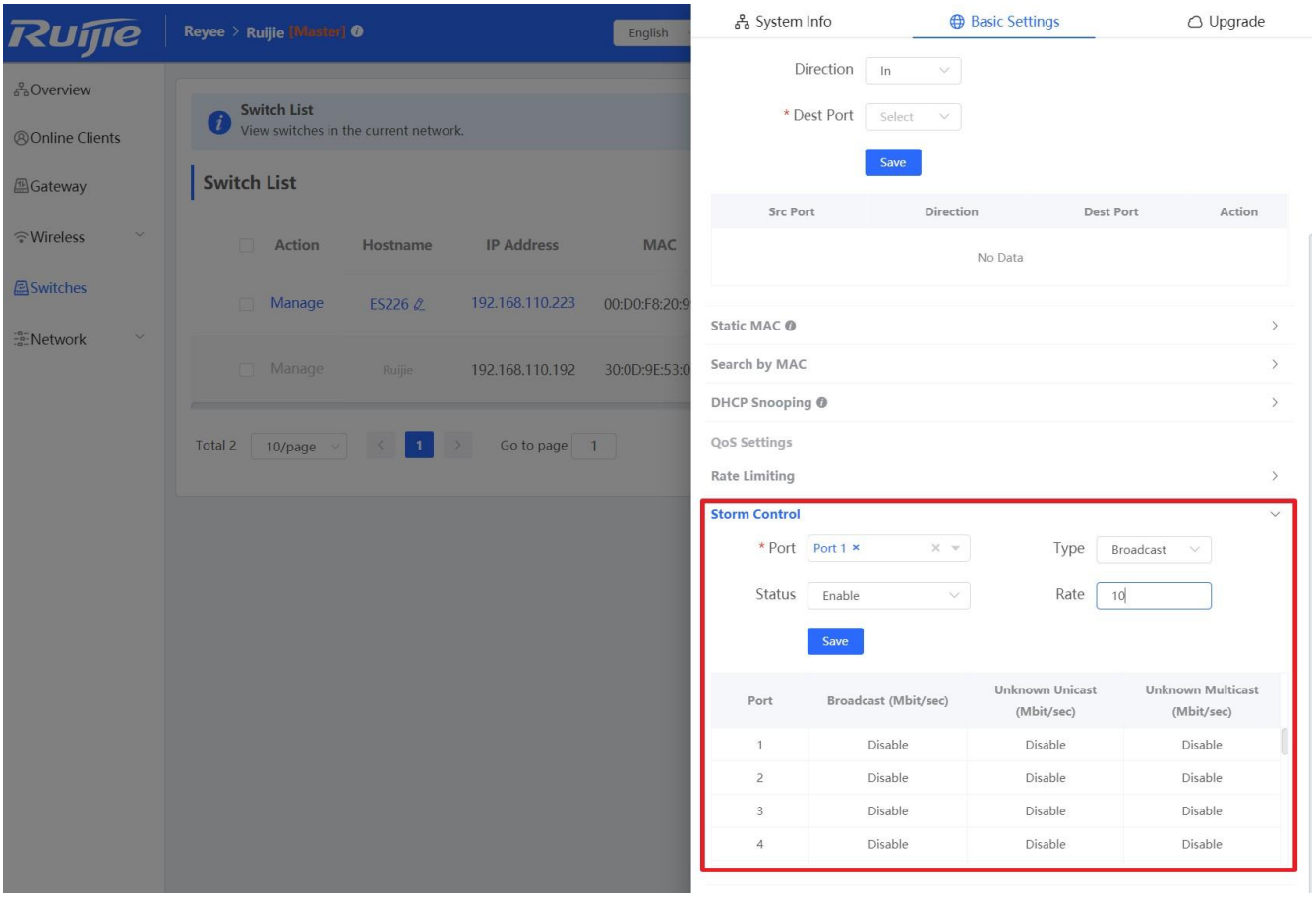
Users can perform storm control separately for the broadcast, multicast, and unknown unicast data flows. When the rate of broadcast, multicast, or unknown unicast packets received by the device port exceeds the specified rate, the number of packets allowed per second, or the number of kilobits allowed per second, the device transmits packets only at the specified rate, the number of packets allowed per second, or the number of kilobits allowed per second, and discards packets beyond the rate range, until the packet rate becomes normal, thereby avoiding flooded data from entering the LAN and causing a storm.

Configuration Steps:

Step 1: Choose **Switches** → **Manage** to configure the switch



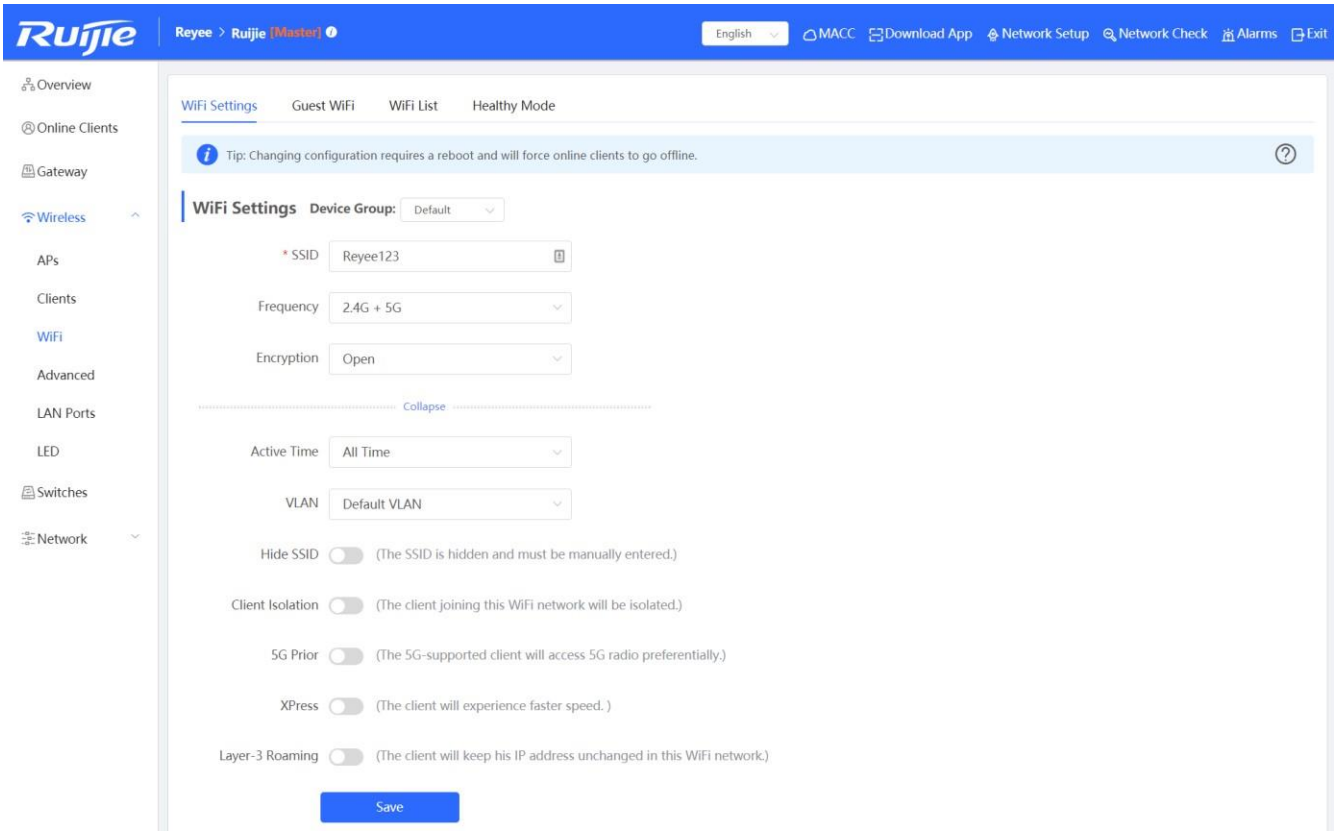
Step 2: Choose **Basic Settings** → **Rate Limiting**, and fill in the Port, Type, Status and Rate information.



8 Reyee AP Configuration

8.1 Wi-Fi Setting

The Wi-Fi Settings module allows you to configure the Wi-Fi pomewaters.



Device Group: Choose the AP group, the following setting will only be applied to the chosen group.

SSID: The Wi-Fi name which the APs broadcasted.

Frequency: Choose the radio which the following setting will be applied to. Both2.4GHz and 5GHz radio will be applied by default.

Encryption: Choose the encryption mode.

Active Time: Choose the time period that the Wi-Fi signal will be broadcasted.

VLAN: The VLAN number that the WIFI will be associated with.

Hide SSID: The SSID is hidden and must be manually entered.

Client Isolation: The client joining this Wi-Fi network will be isolated, which means the clients cannot be accessed by each other.

5G Prior: The 5G-supported client will access 5G radio preferentially.

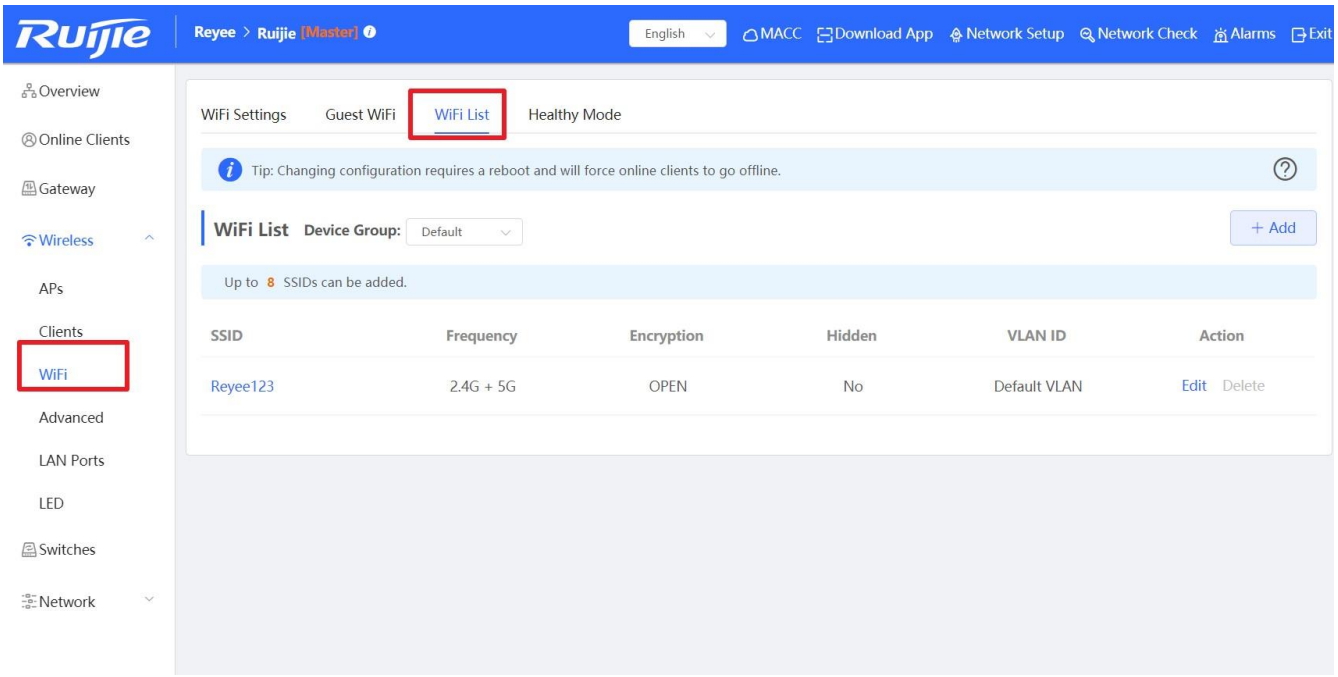
Xpress: The QoS setting will be automatically applied to optimize the game experience.

8.2 Multiple SSID setting

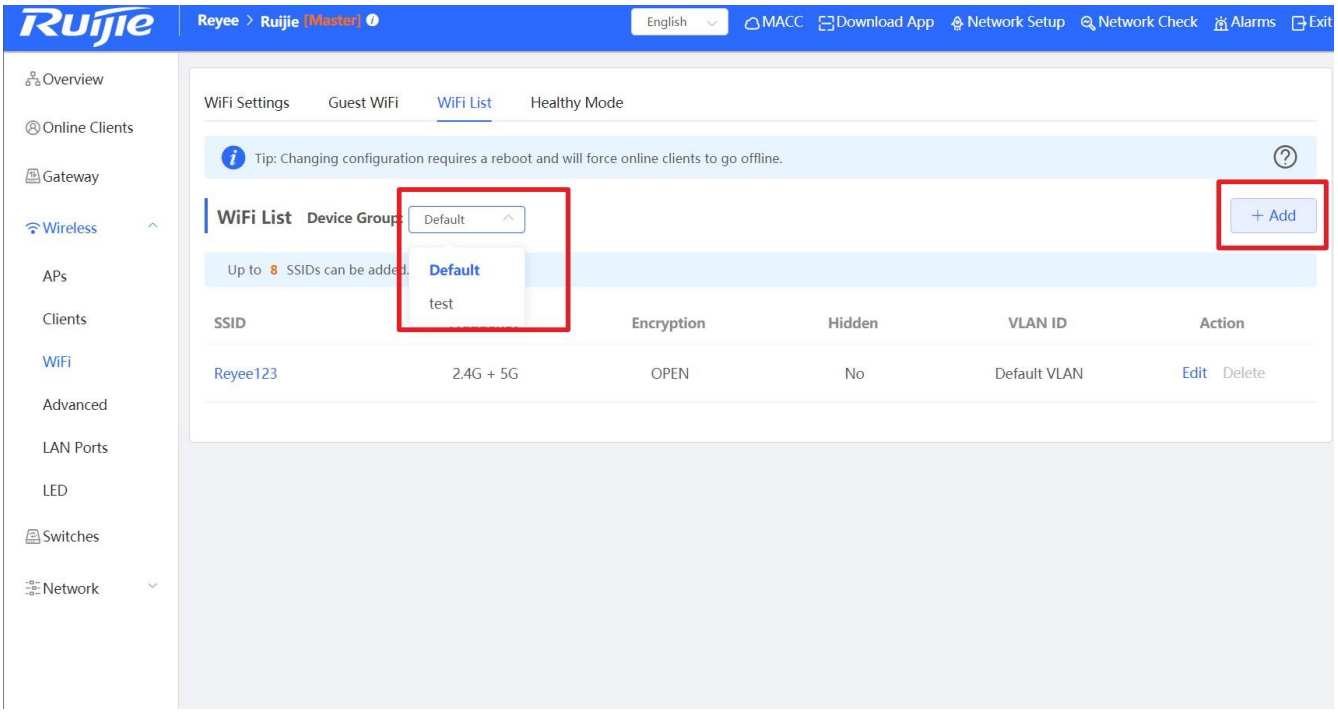
In some scenario, multiple SSIDs are needed in the network.

Configuration Steps:

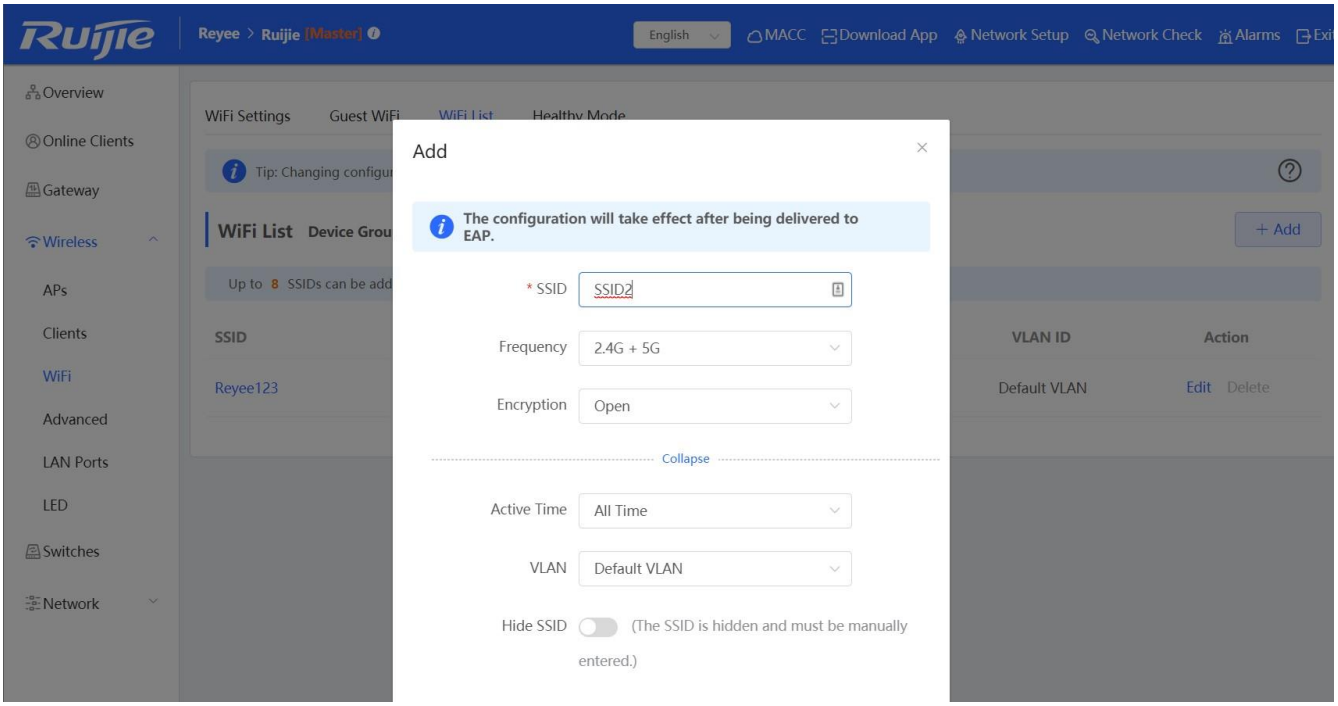
Step1: Choose **Wireless → WiFi → WiFi List**



Step 2: Choose a **Device Group** and click the "**Add**" button



Step 3: Fill in the SSID name WiFi related settings

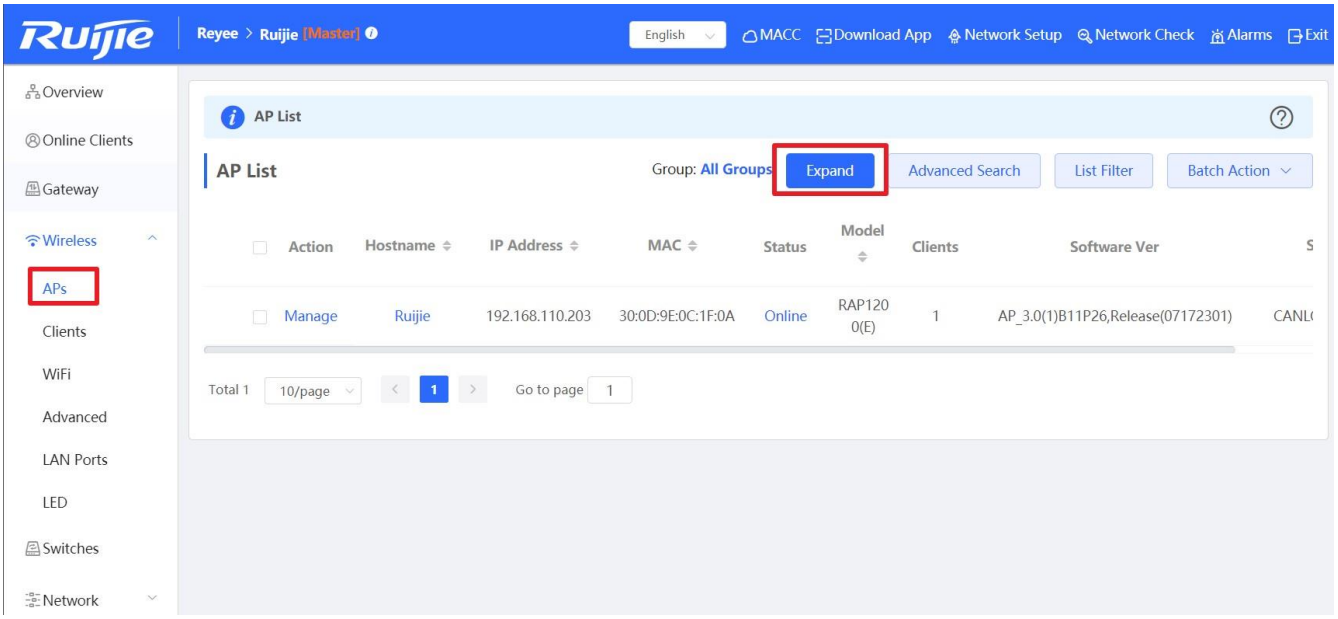


8.3 AP Group

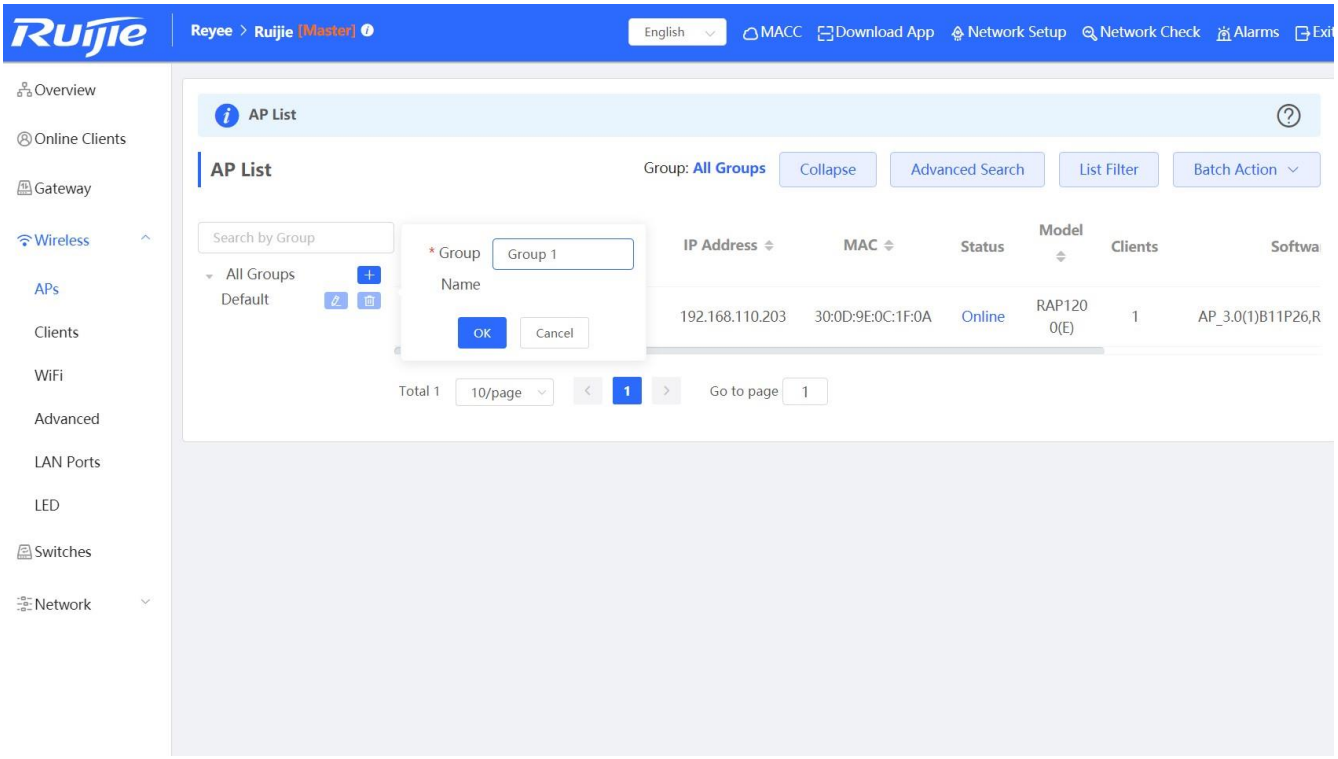
Reyee APs can be divided into different AP groups with different WiFi settings

Configuration Steps

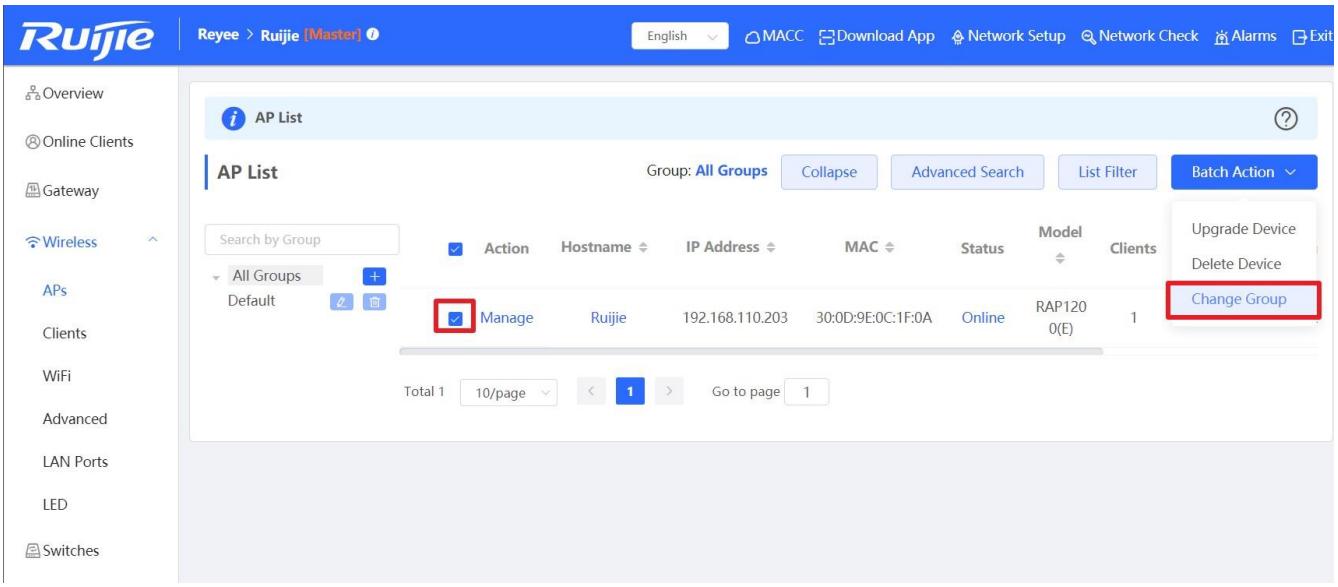
Step 1: Choose **Wireless** → **AP** and click the "**Expand**" button

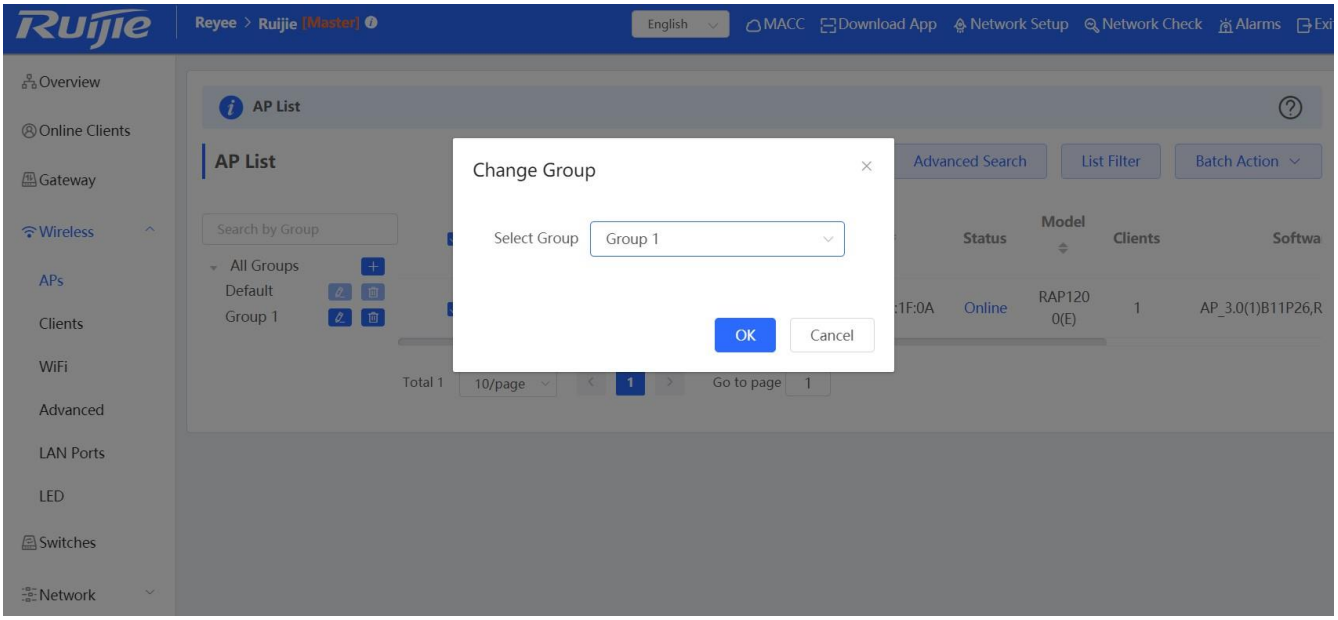


Step 2: Click the "+" button to add an AP group



Step 3: Move the AP to the new group





8.4 Blacklist/Whitelist

The Blacklist/Whitelist module allows you to configure client blacklist and whitelist.

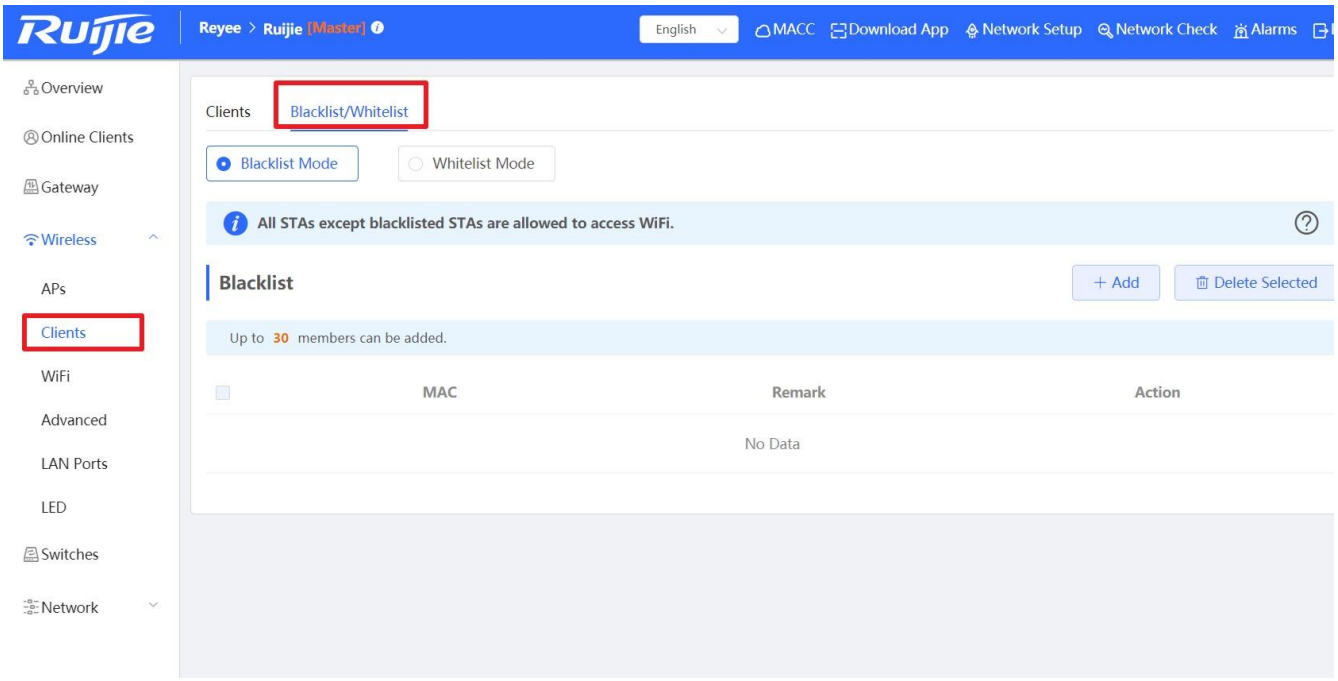
Blacklist: the devices are added into blacklist will not be able to access the network

Whitelist: only the devices in the whitelist are allowed to access the network

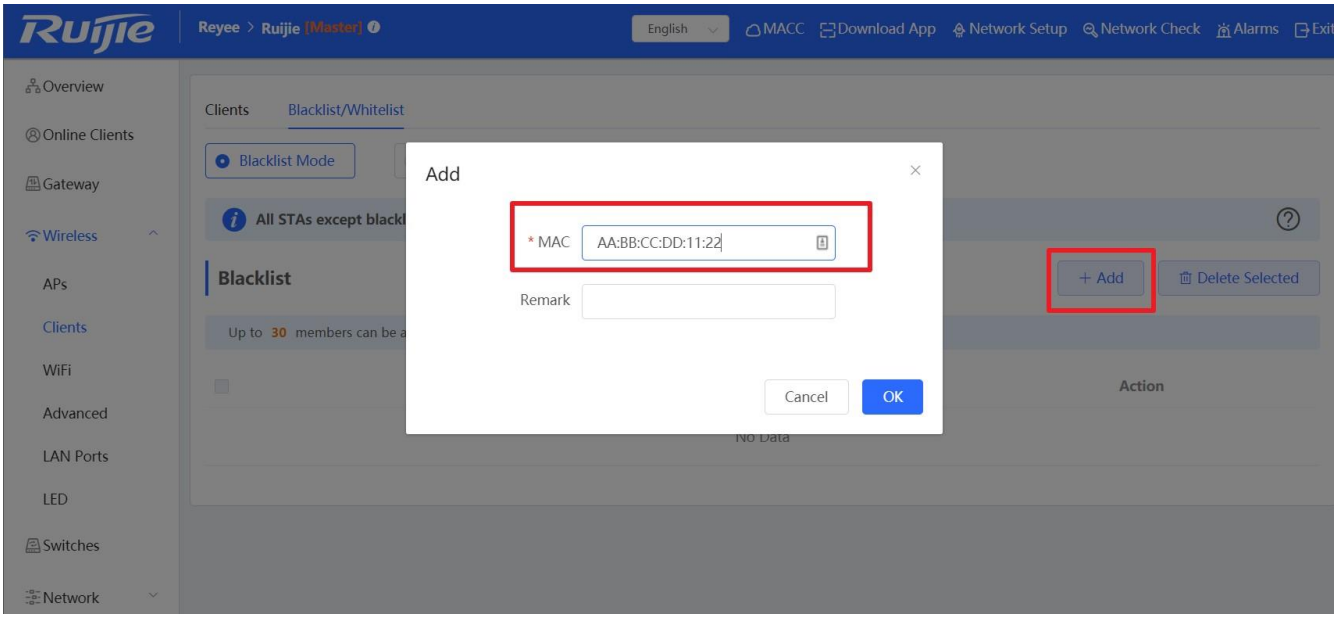
The blacklist and whitelist take effect based on the whole network based or SSID based blacklist/whitelist are not supported.

Configuration Steps

Step 1: Choose **Wireless → Clients → Blacklist/Whitelist**



Step 2: Click the "**Add**" button to add the client's MAC address

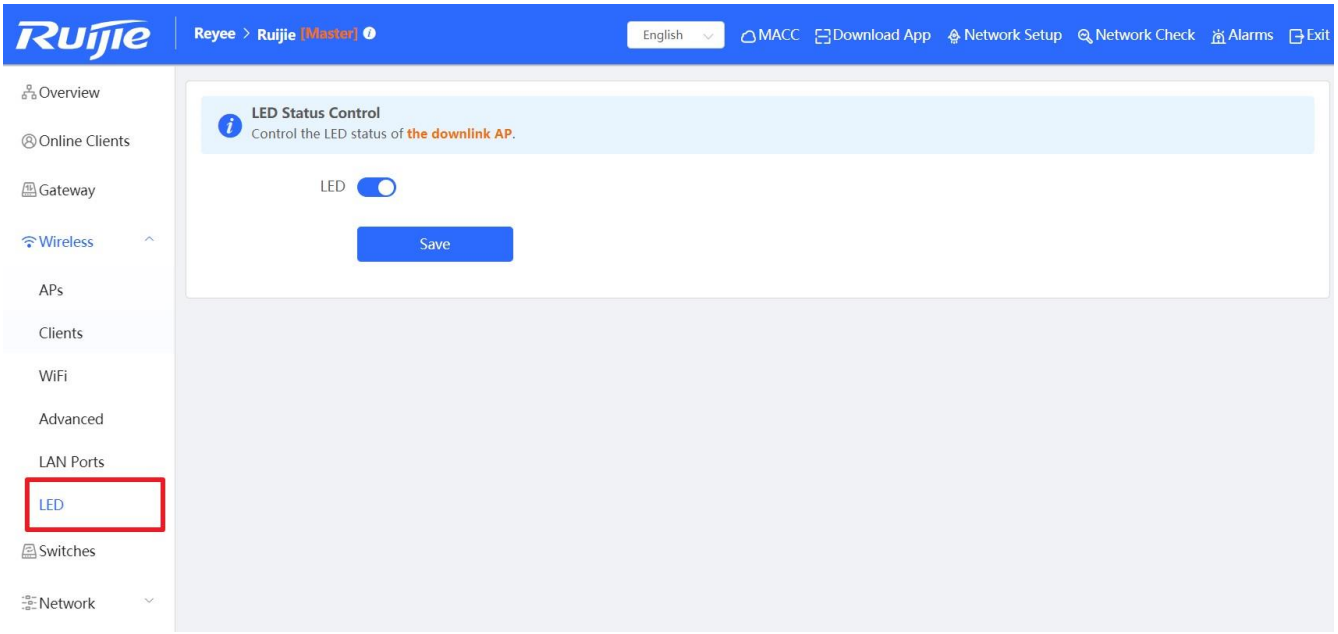


8.5 Turn on/off LED indicator

The LED indicators on APs could be turned on/off according to the actual requirement.

Configuration Steps:

Choose **Wireless** → **LED**, and turn on/off the **LED** setting.

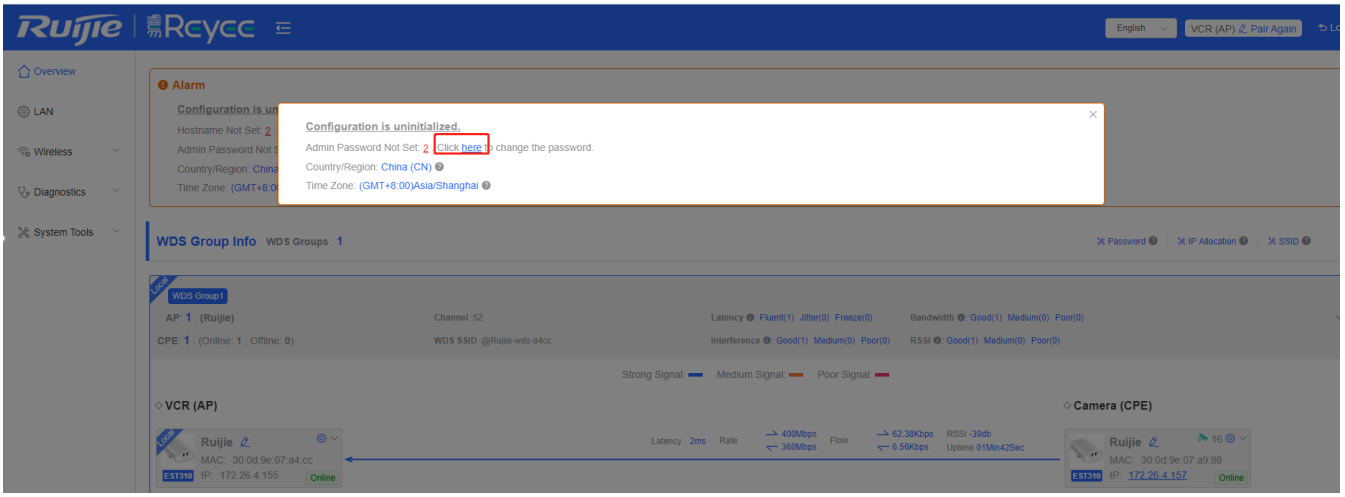


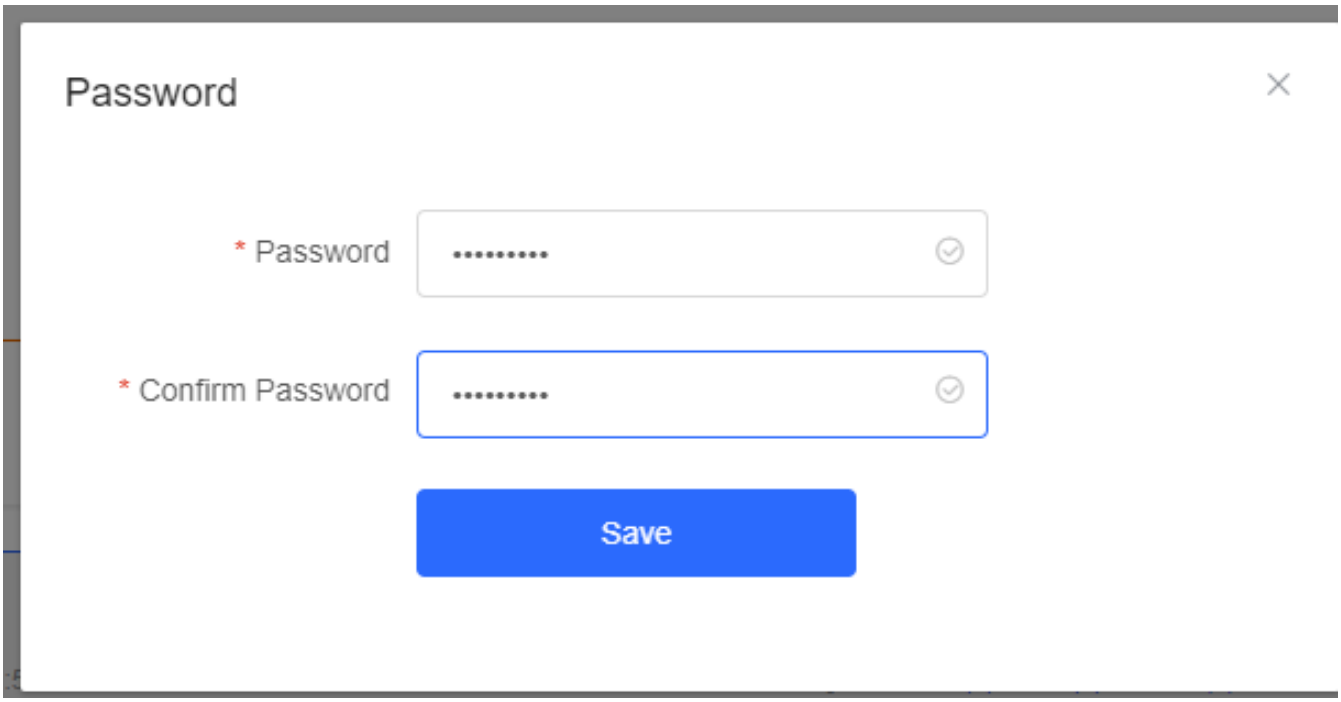
9 EST Series Configuration

9.1 Basic Setting

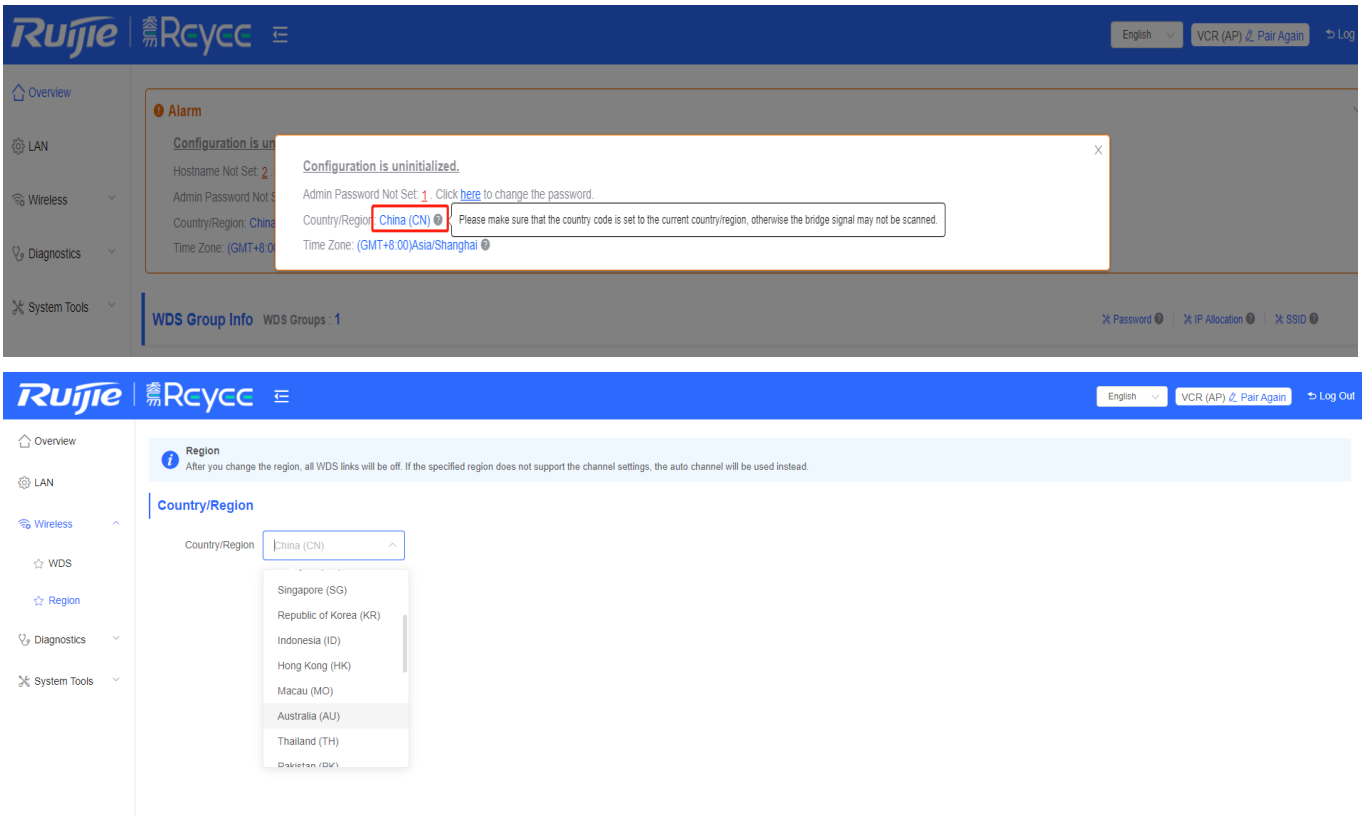
The devices are paired by default and can be used without requiring any configurations.

Change the Admin password

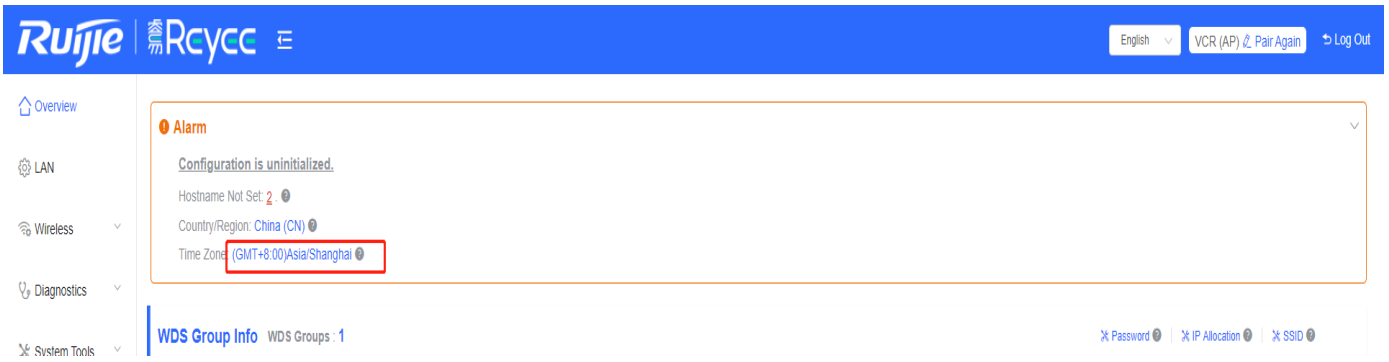


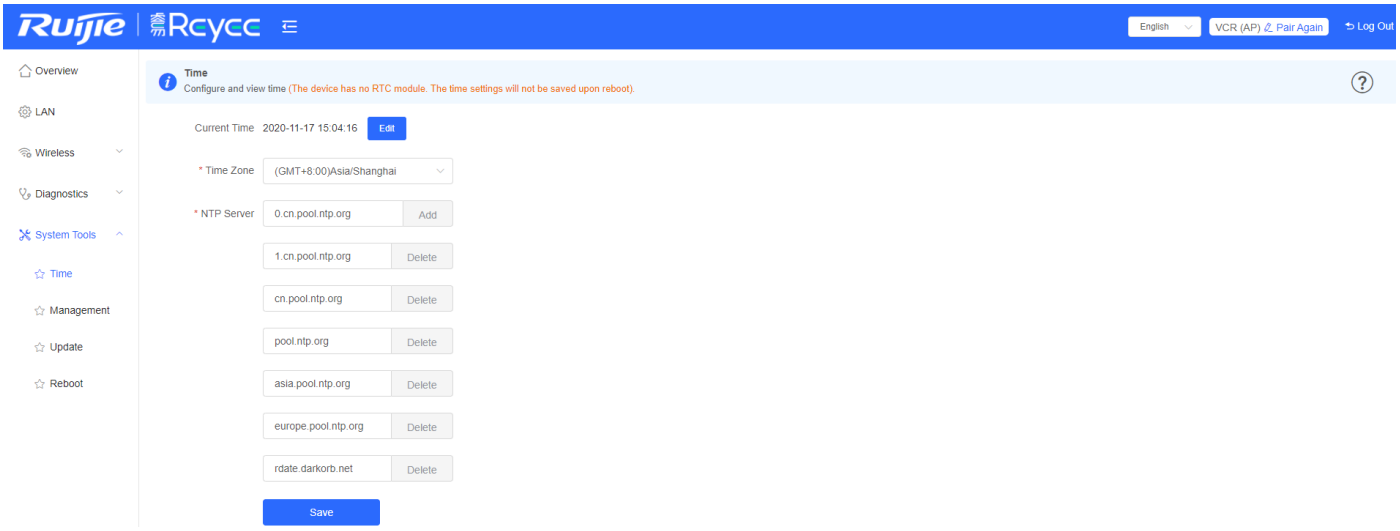


Change the country code. Note: After you change the region, all WDS links will be off. If the specified region does not support the channel settings, the auto channel will be used instead.



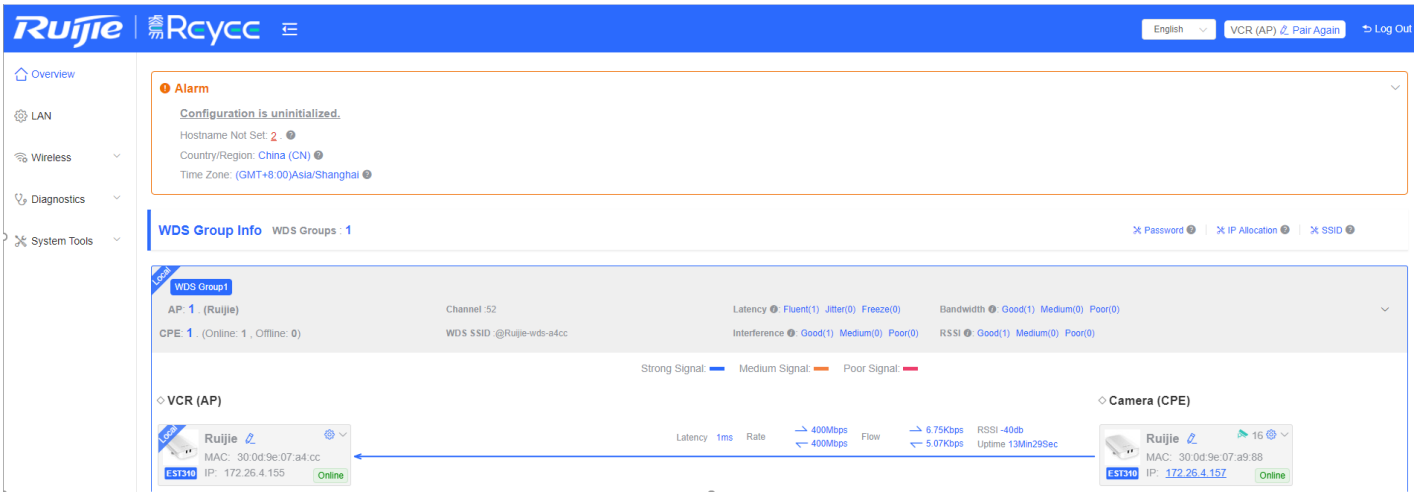
Change the Time Zone and NTP server



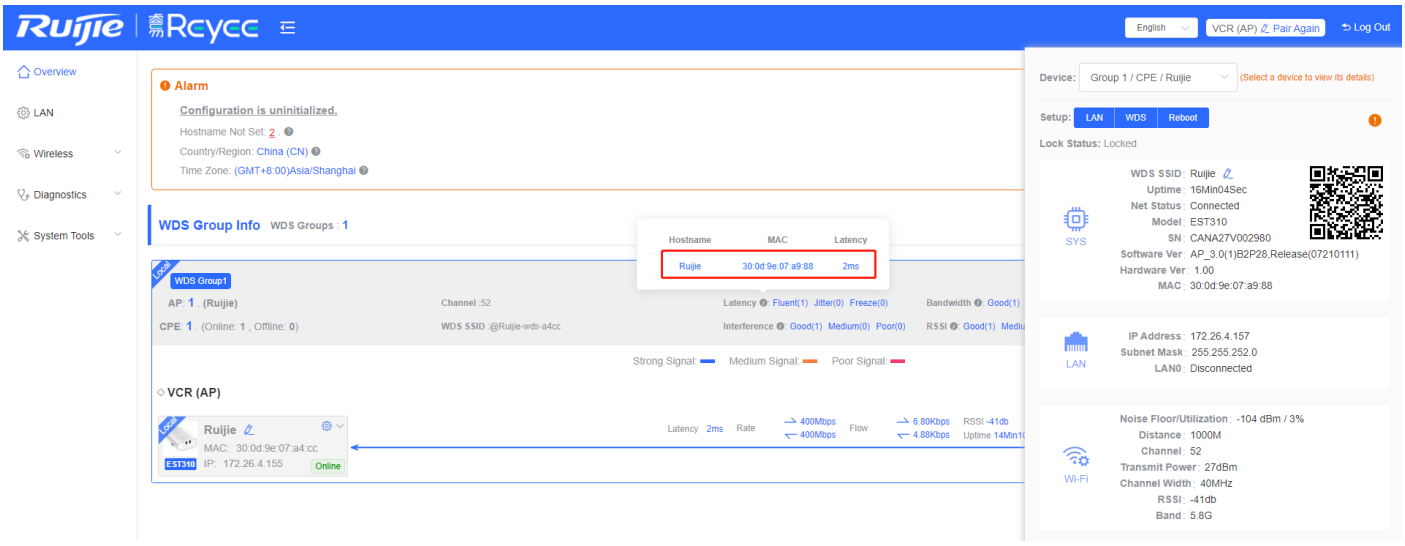


9.2 Devices status monitor

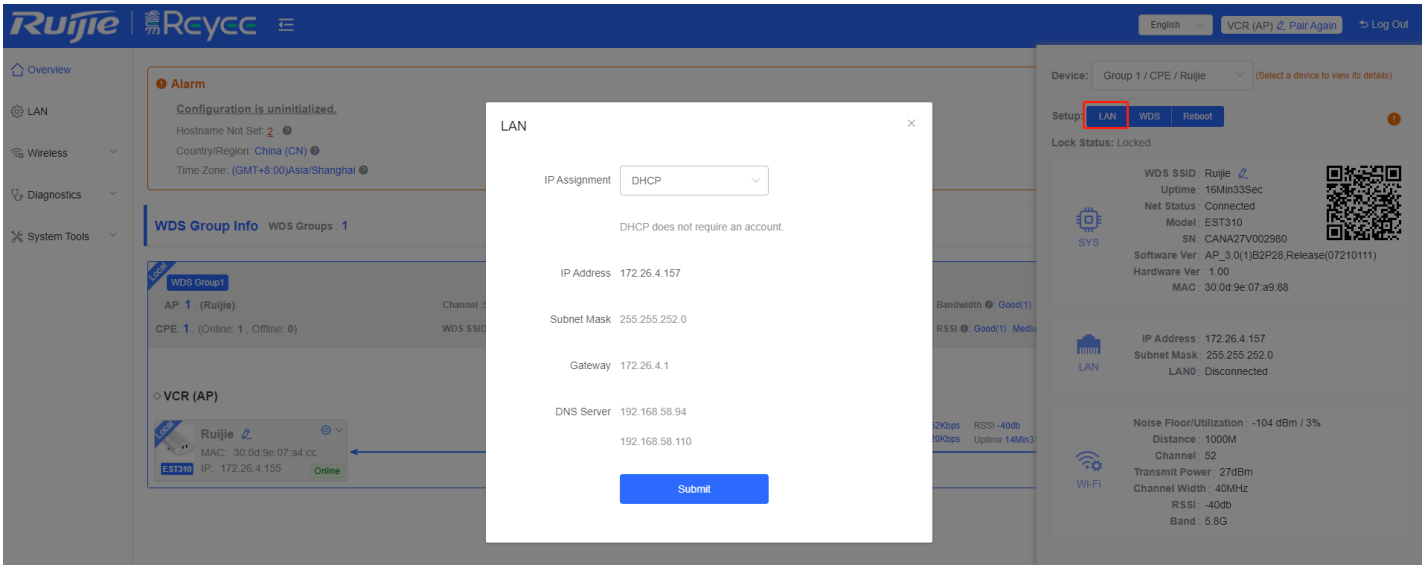
The status of EST310 is shown on overwiew, including channel, WDS SSID, latency, bandwidth, interference, RSSI, link signal, Rate, Flow and online status.



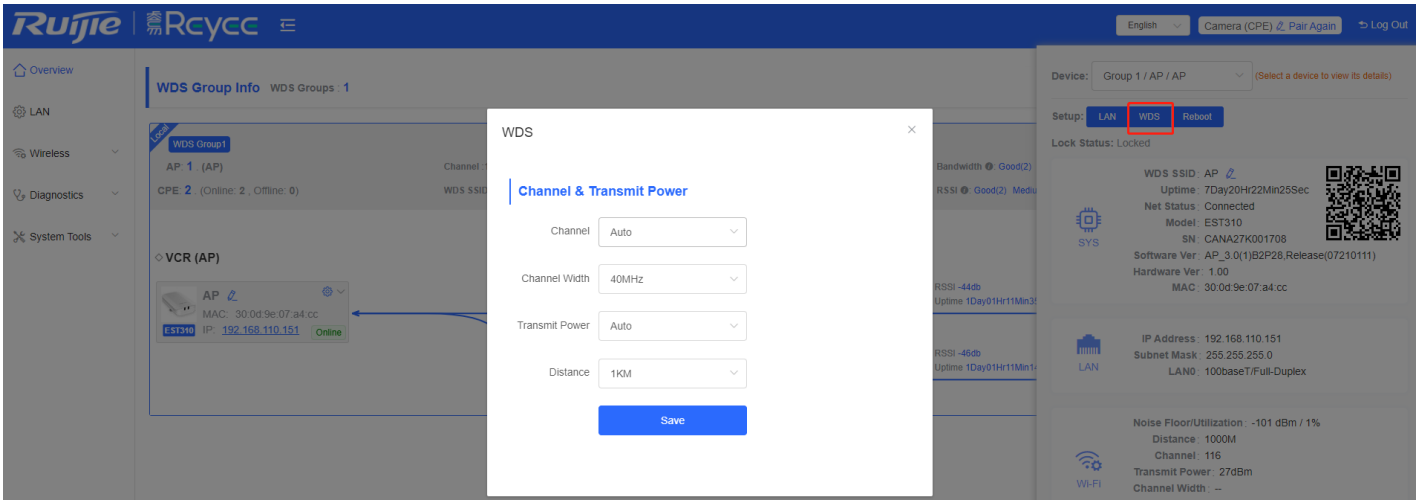
Show more details for the EST310



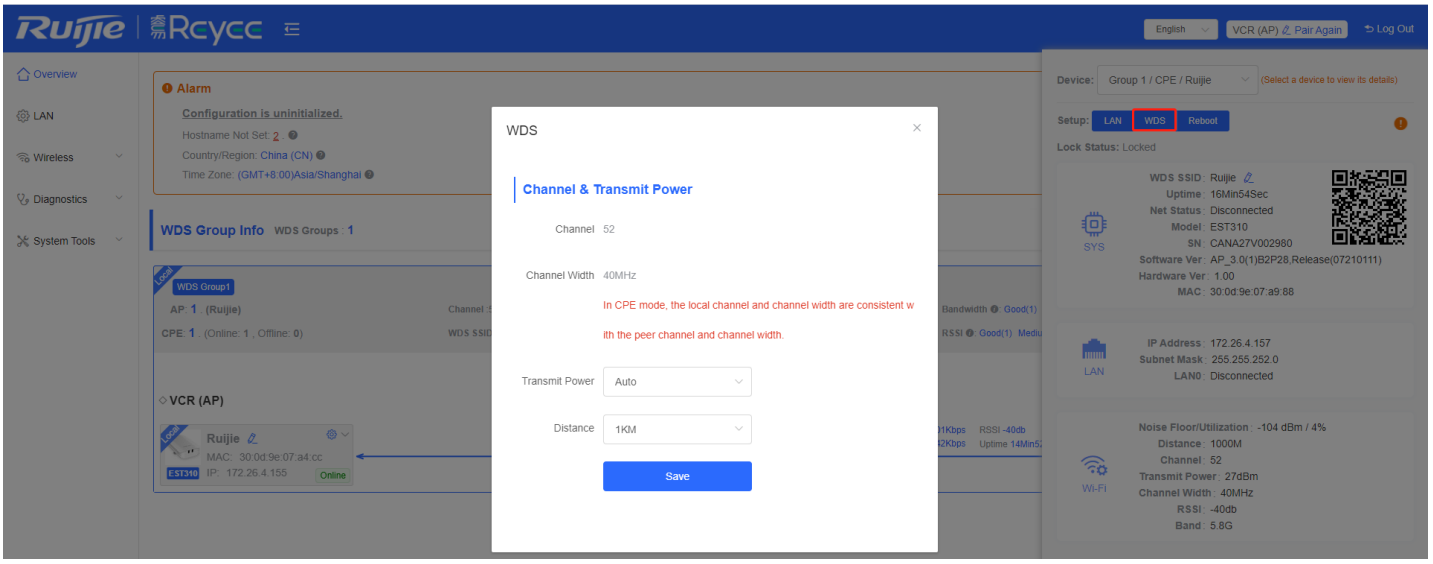
Click the **LAN t**o edit the LAN configuration

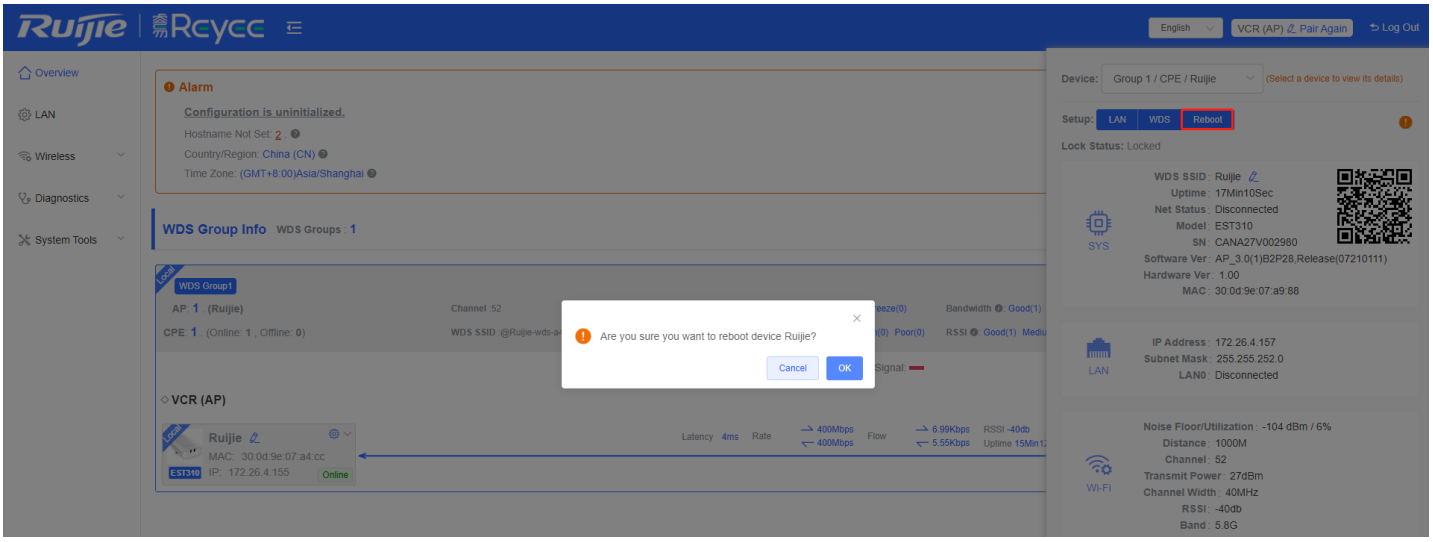


Click the AP's WDS to edit the WDS configuration



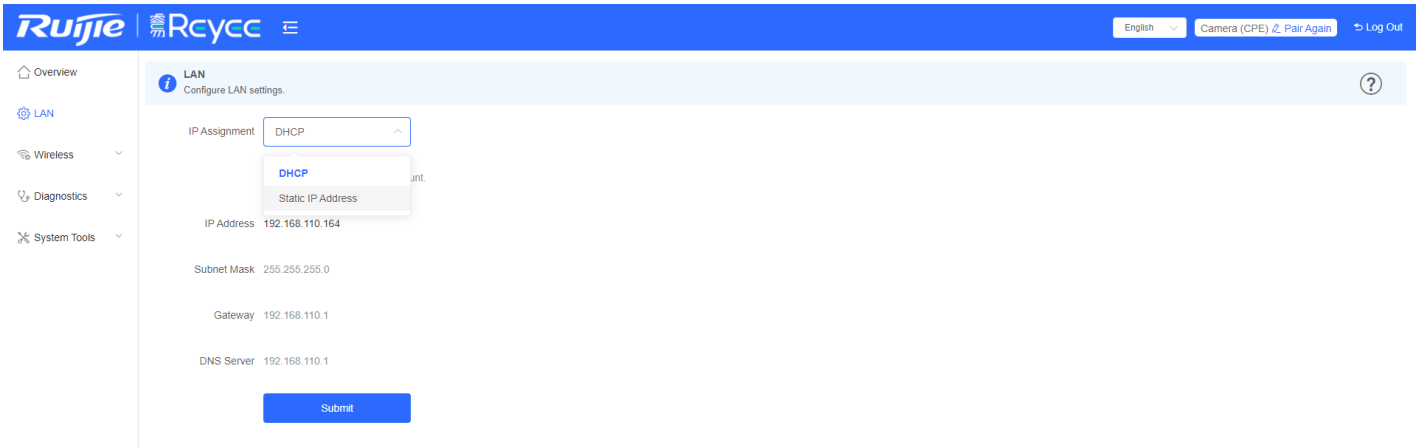
For the CPE, only show the WDS configuration and can't edit





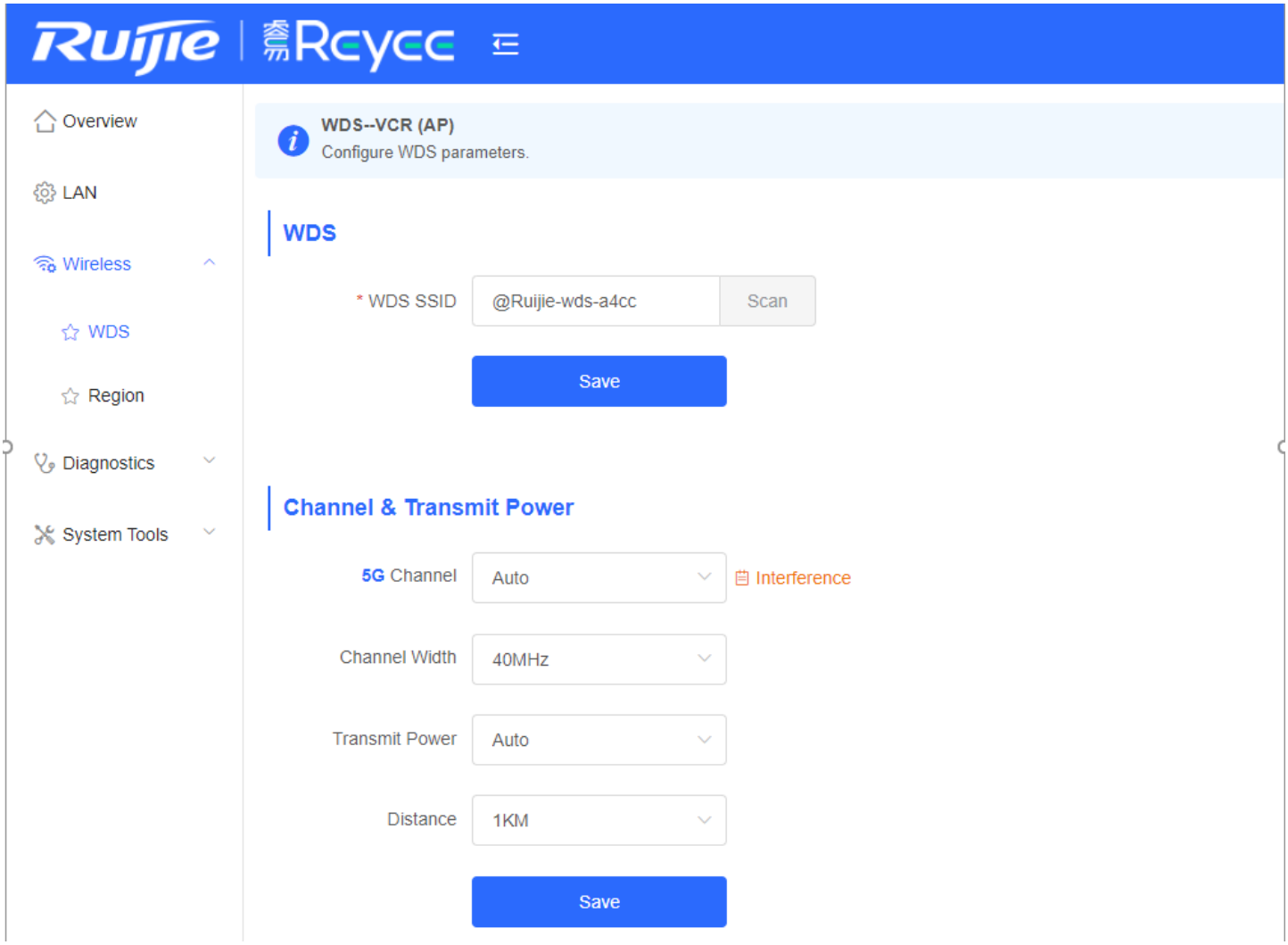
9.3 LAN setting

Change LAN settings, support DHCP and Static IP Address, default is DHCP



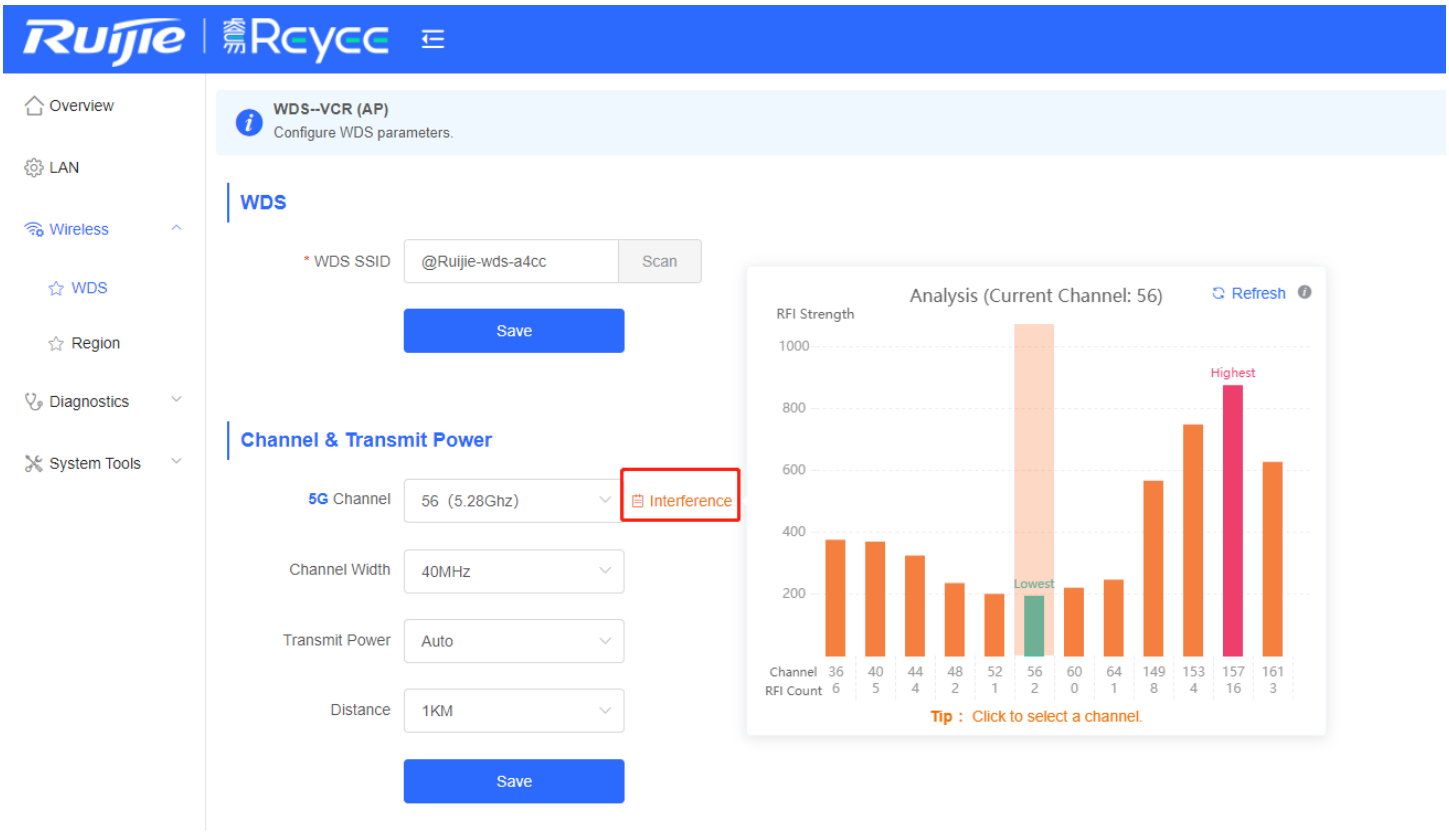
9.4 Wireless Setting

WDS SSID configuration, only support change the SSID and the default encryption mode is WPA/WPA2-PSK



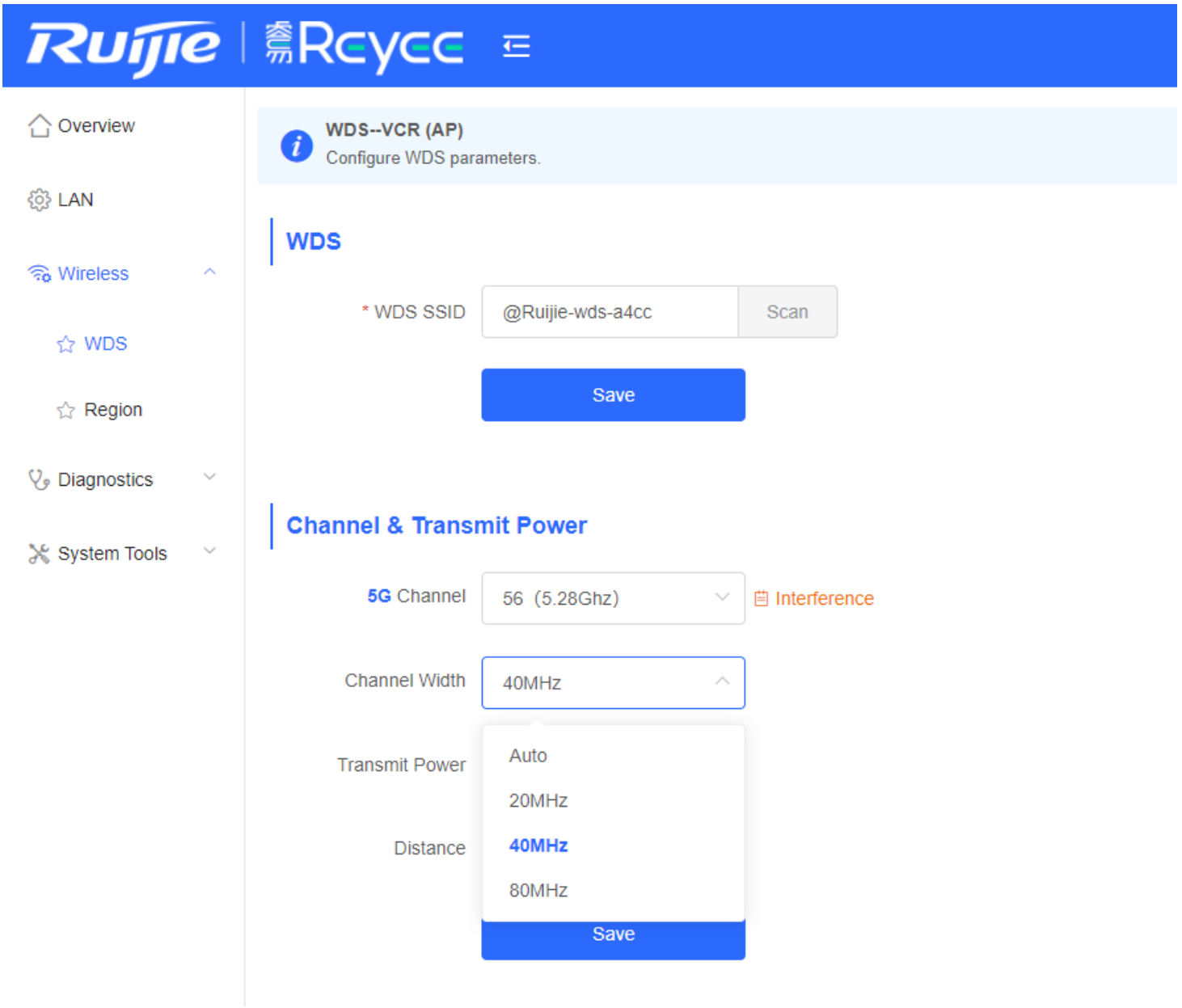
Choose **Channel & Transmit Power → 5G Channel**, change the channel

Click the interference, will show the analysis of 5G channel and click to select a channel you want

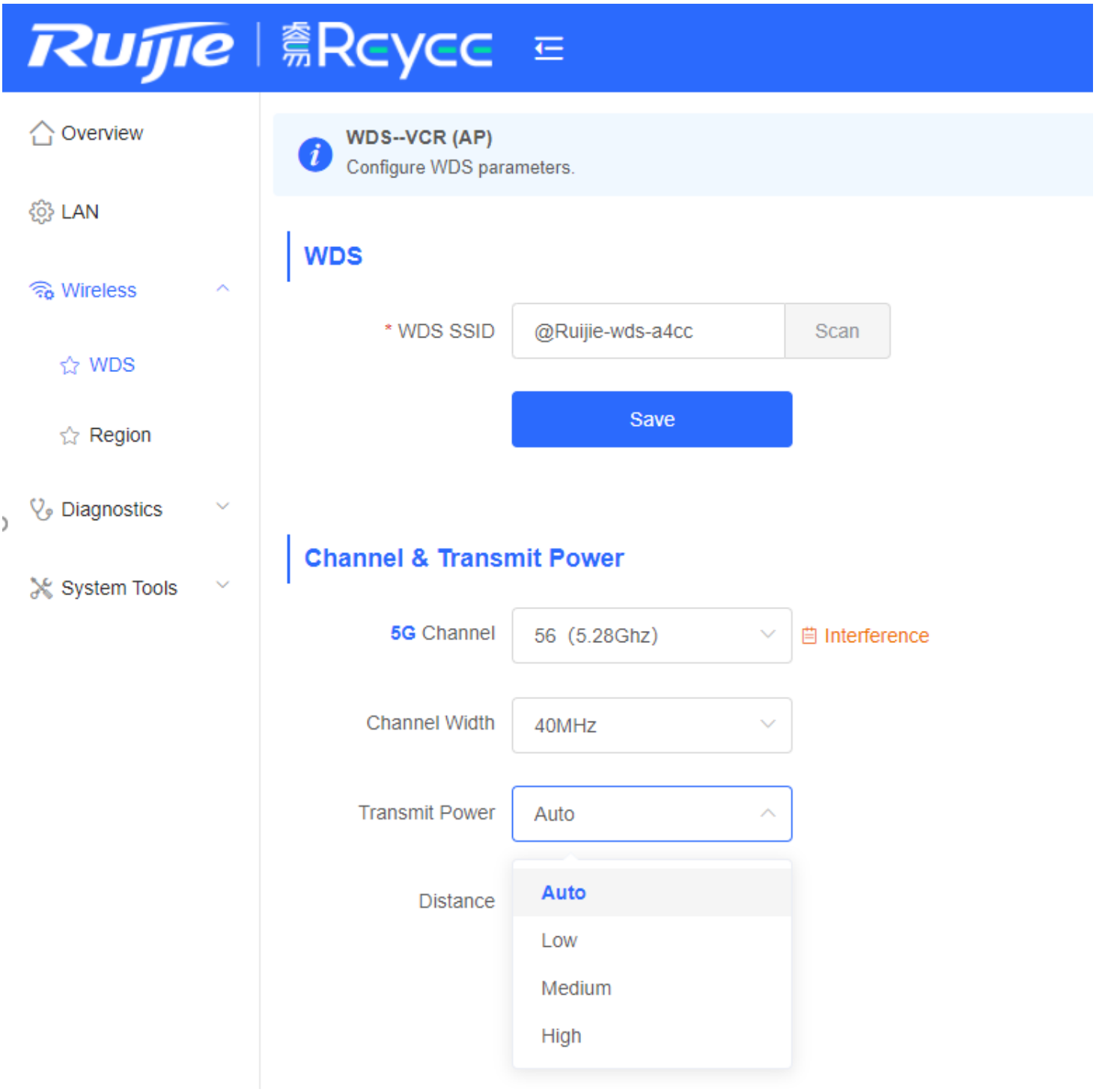


Choose **Channel & Transmit Power** → **Channel Width**, change the band width

Default is 40MHz， EST310 LAN only support 100M, so 40MHz is enough

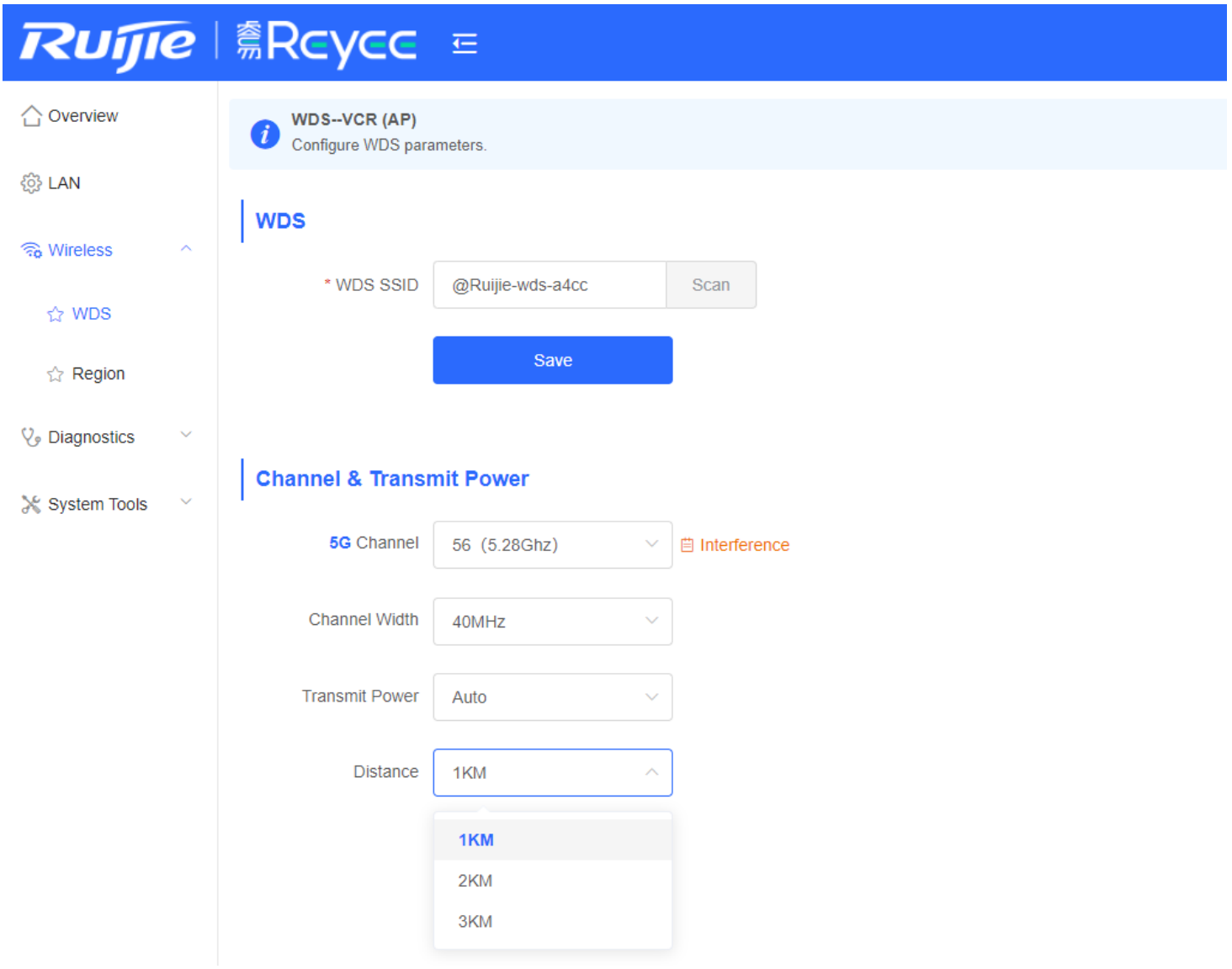


Choose **Channel & Transmit Power** → **Transmit Power**, change the power



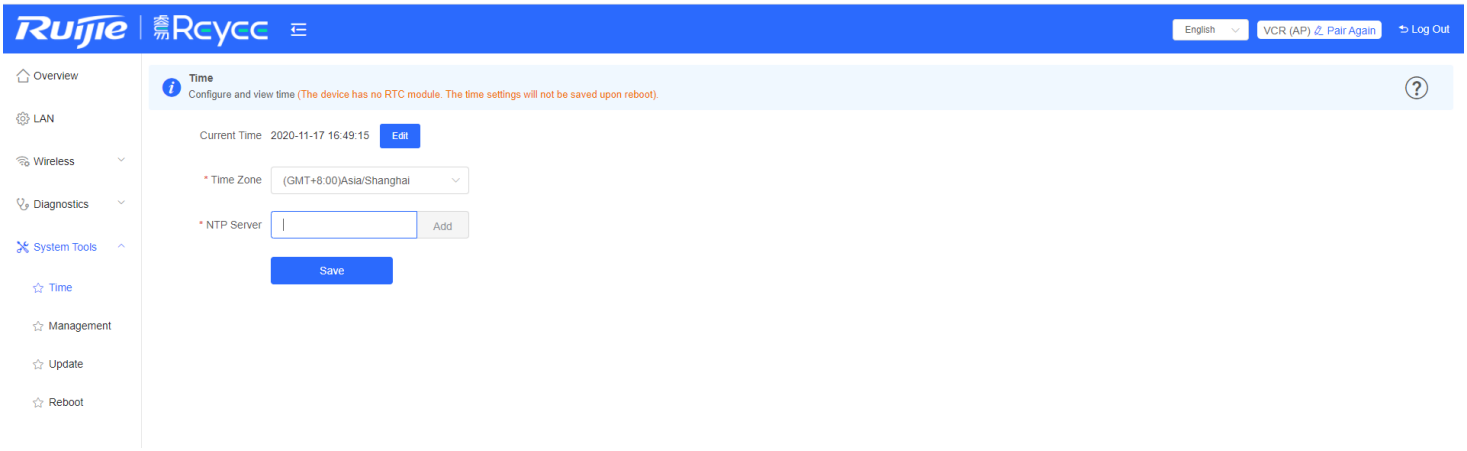
Choose **Channel & Transmit Power** → **Distance**, change the distance

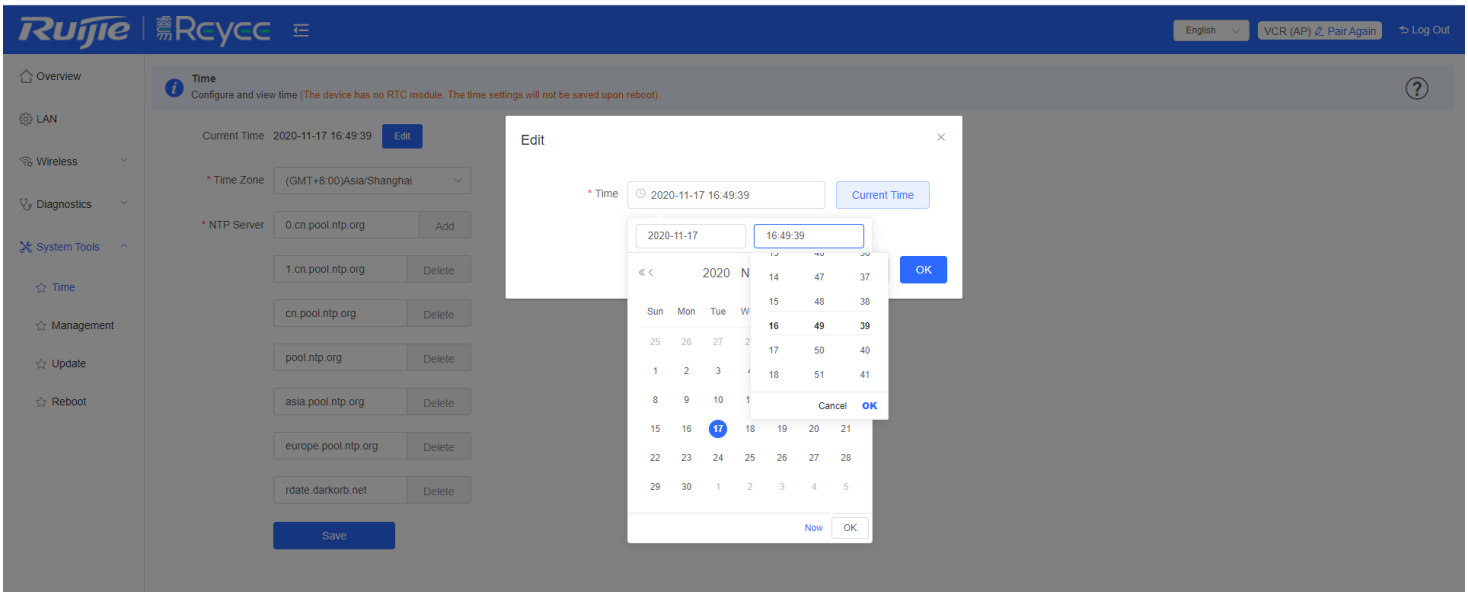
Note: The distance does not refer to the actual physical distance. For example, if there are obstructions at a distance of 1KM, the performance requirements can be met by increasing the distance to 2KM



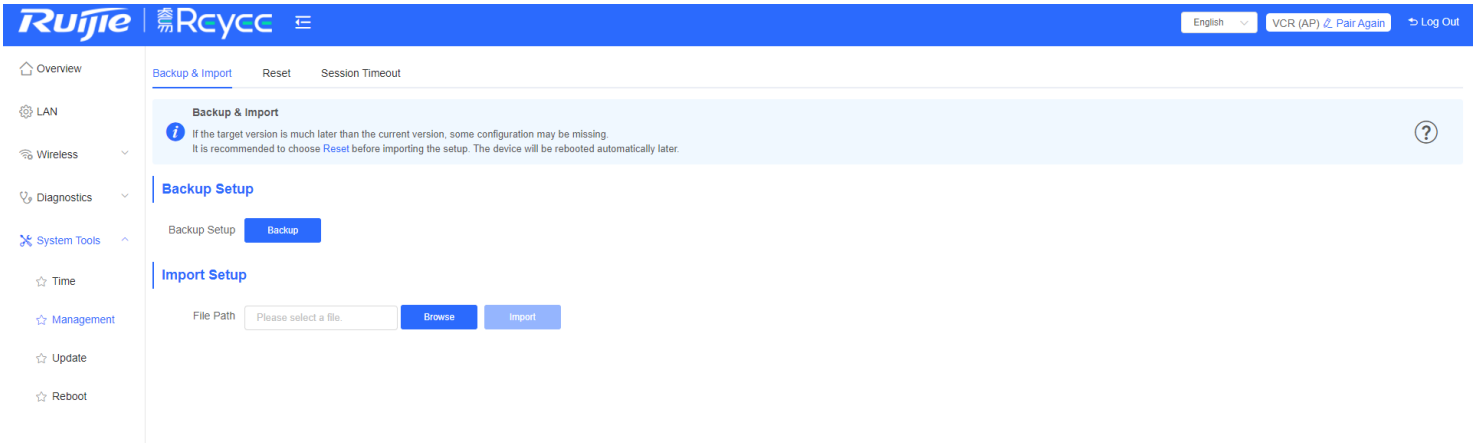
9.5 System Setting

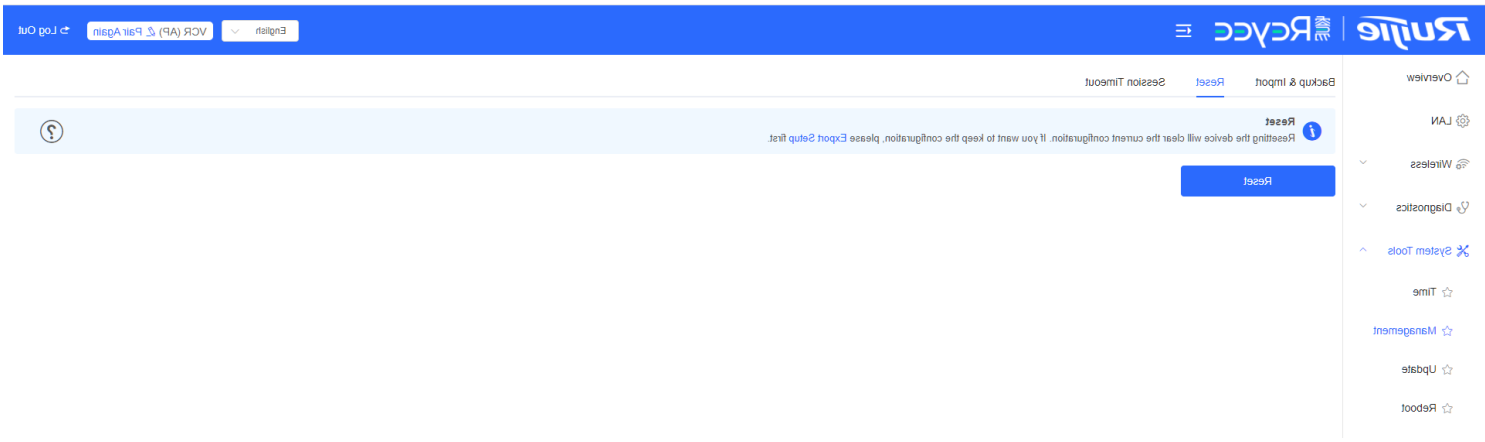
Choose **System Tools →Time**, change the time and NTP server

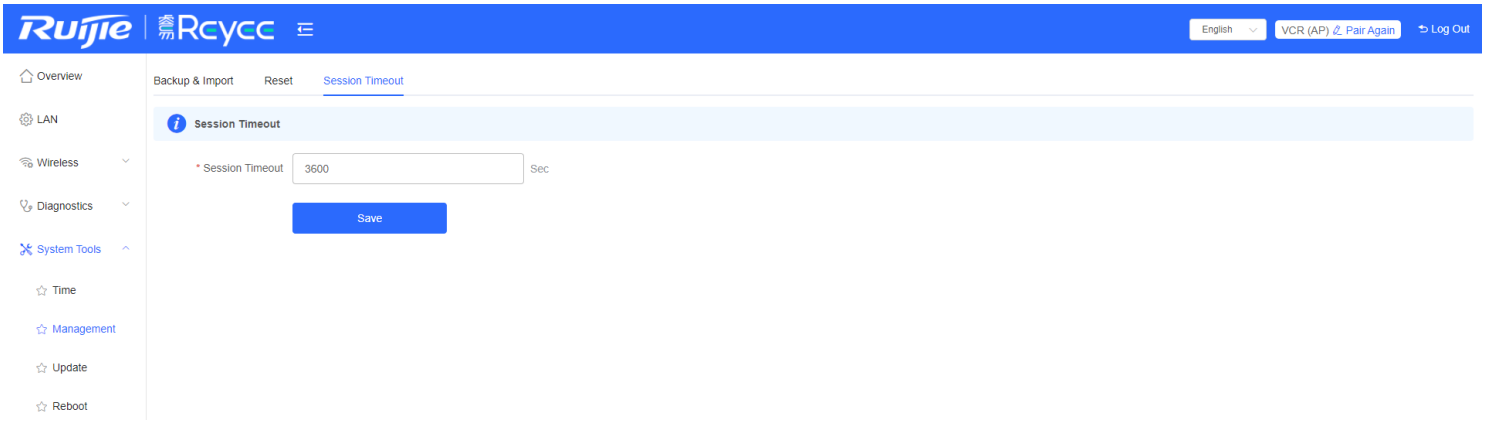




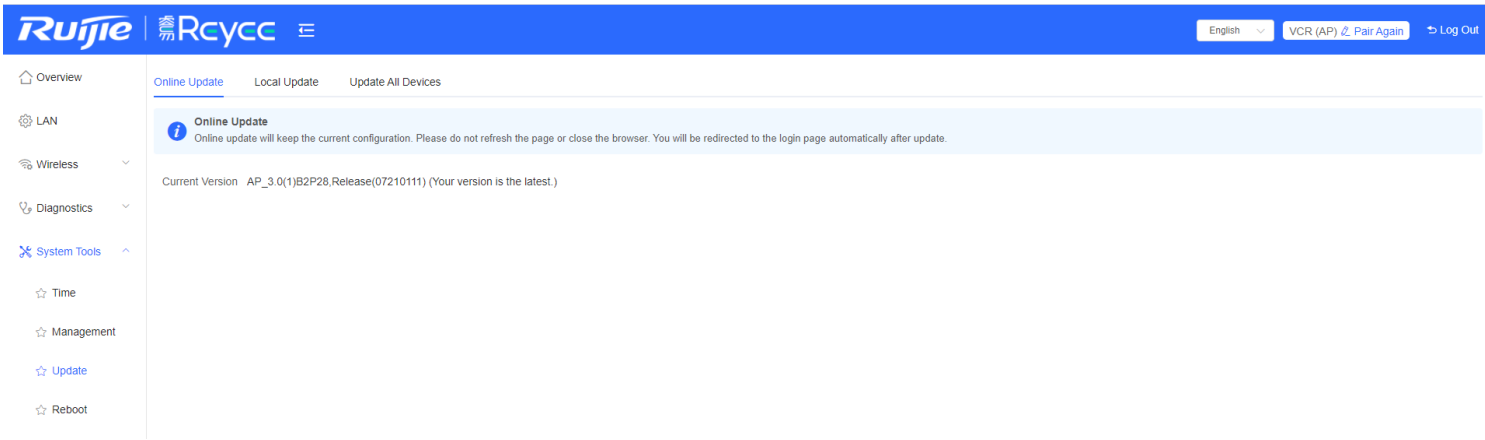
Choose **System Tools →Management**, support backup and import setup, reset the device and set the session timeout

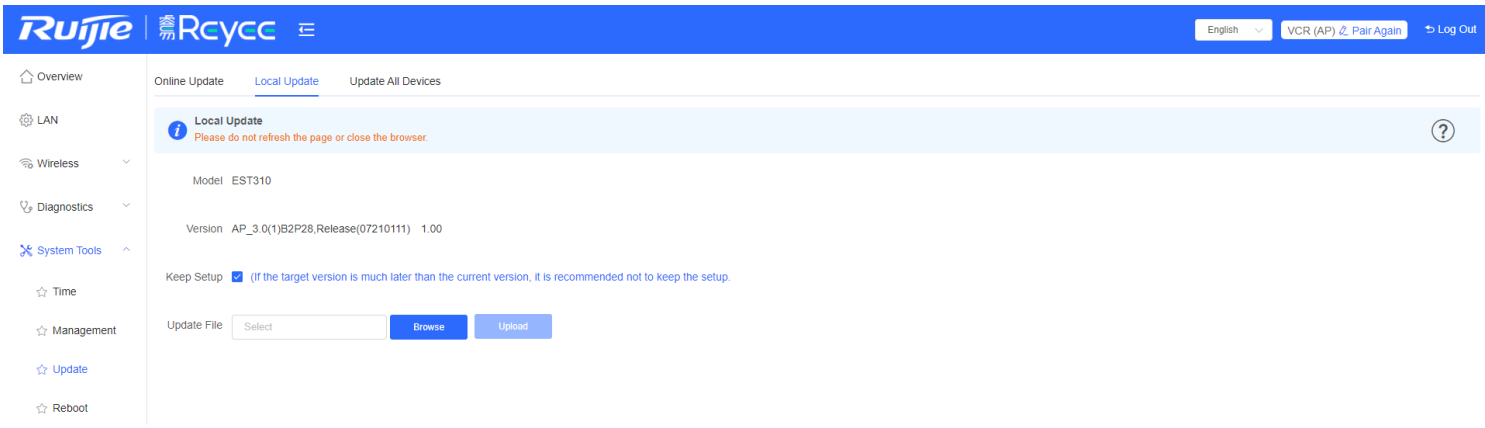


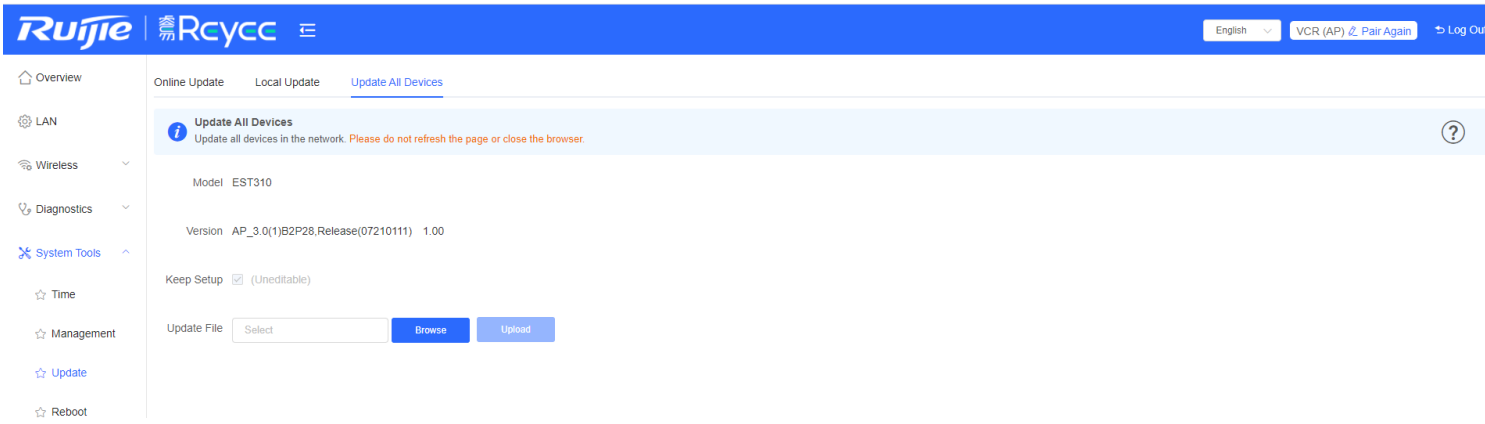




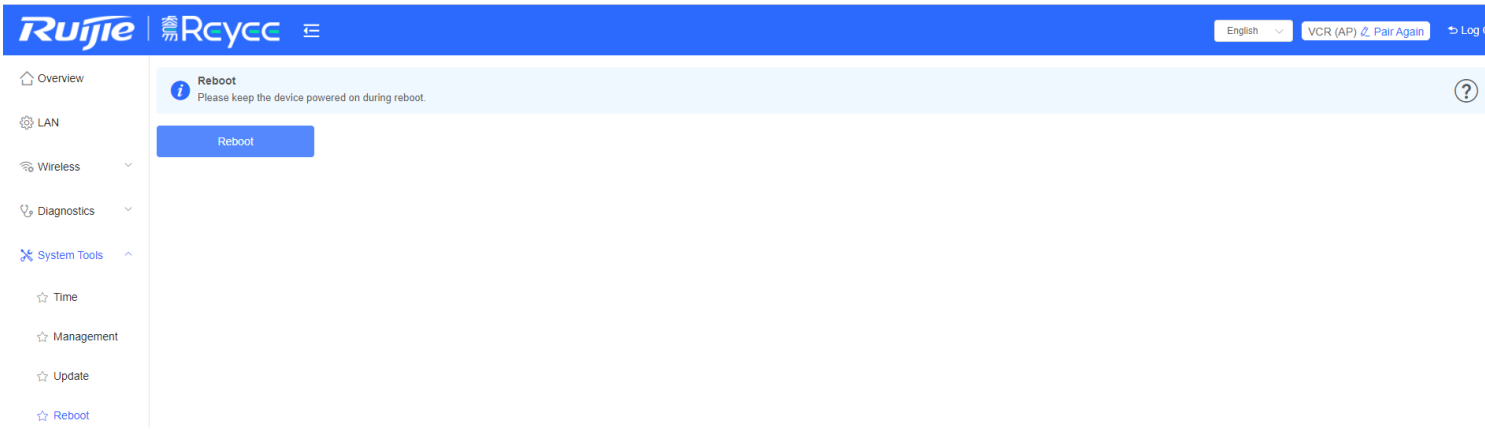
Choose **System Tools** →**Upgrade**, support online upgrade, local upgrade and update all the devices in the network





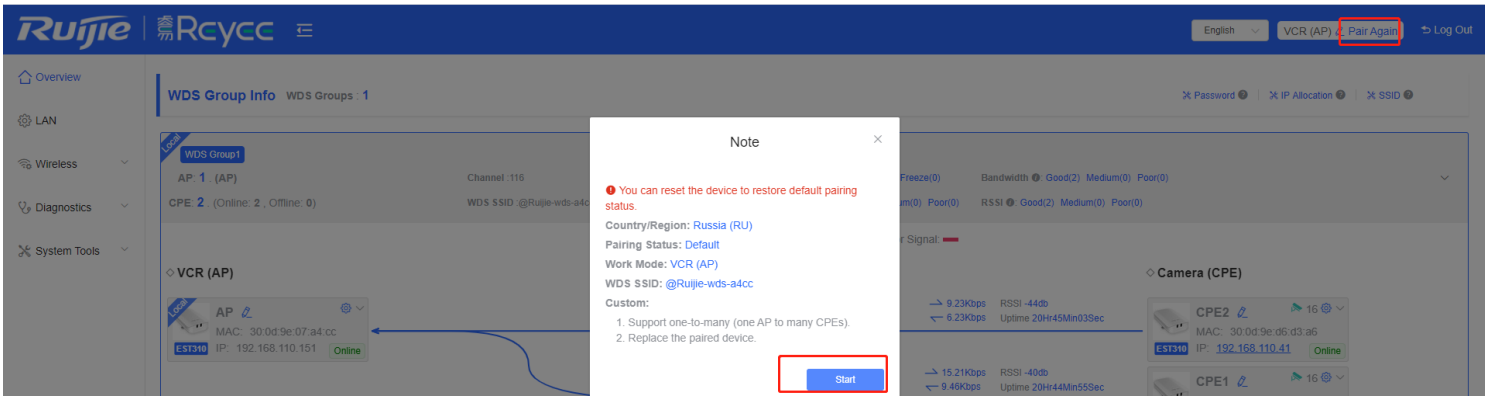


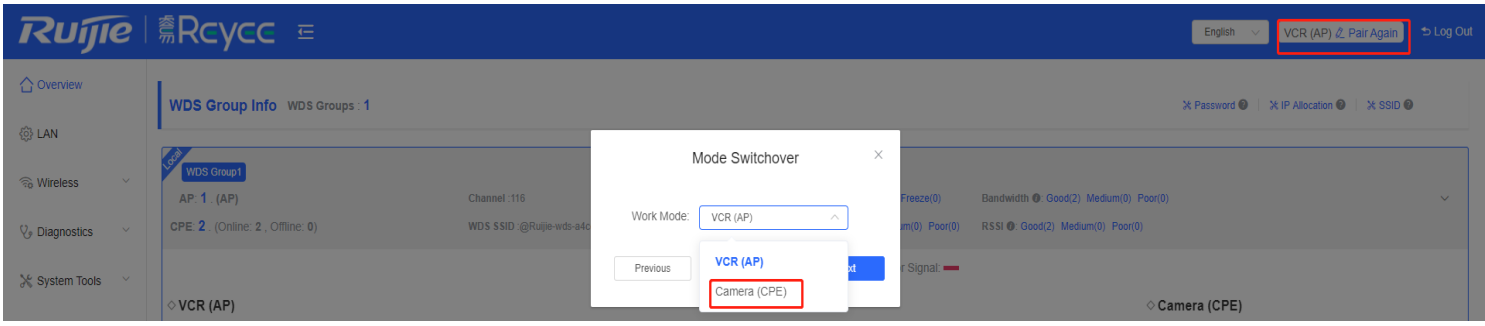
Choose **System Tools** →**Reboot** to reboot the device

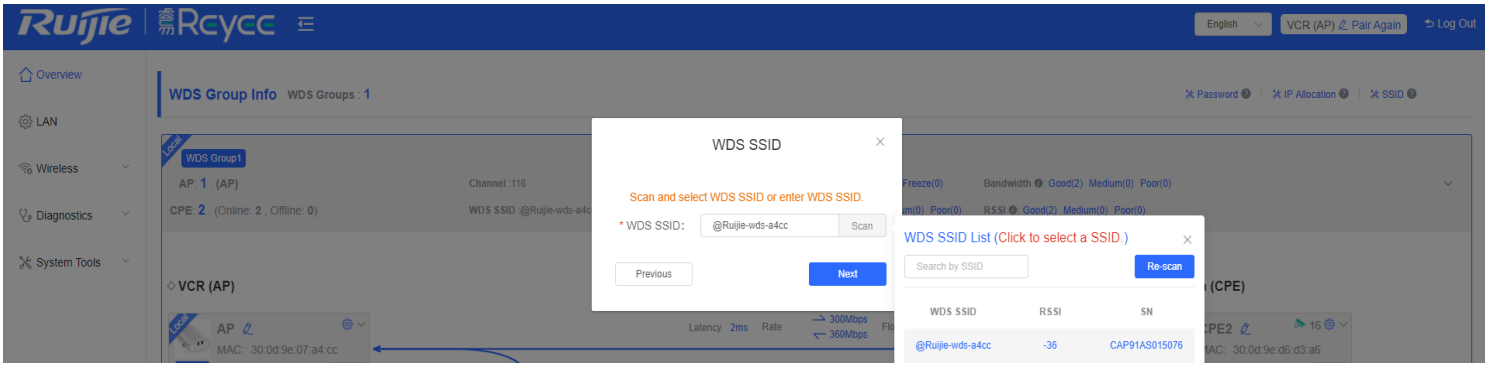


9.6 PTMP setting

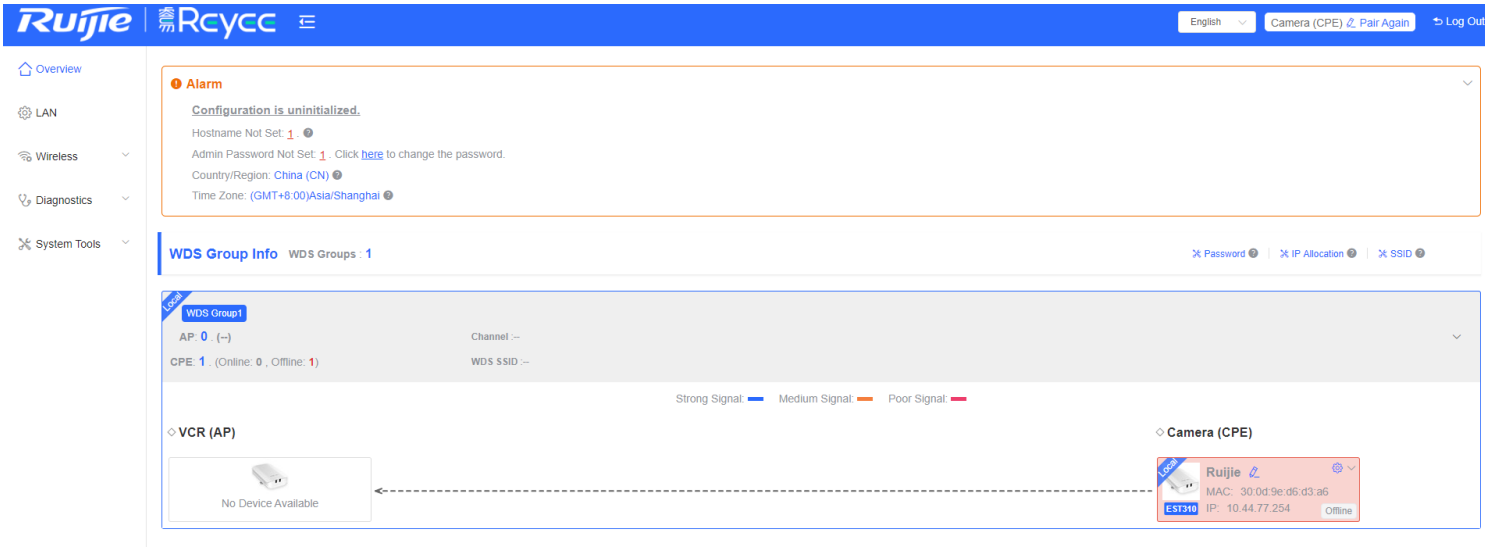
Access to the device, if the device mode is AP, need to switch to CPE mode



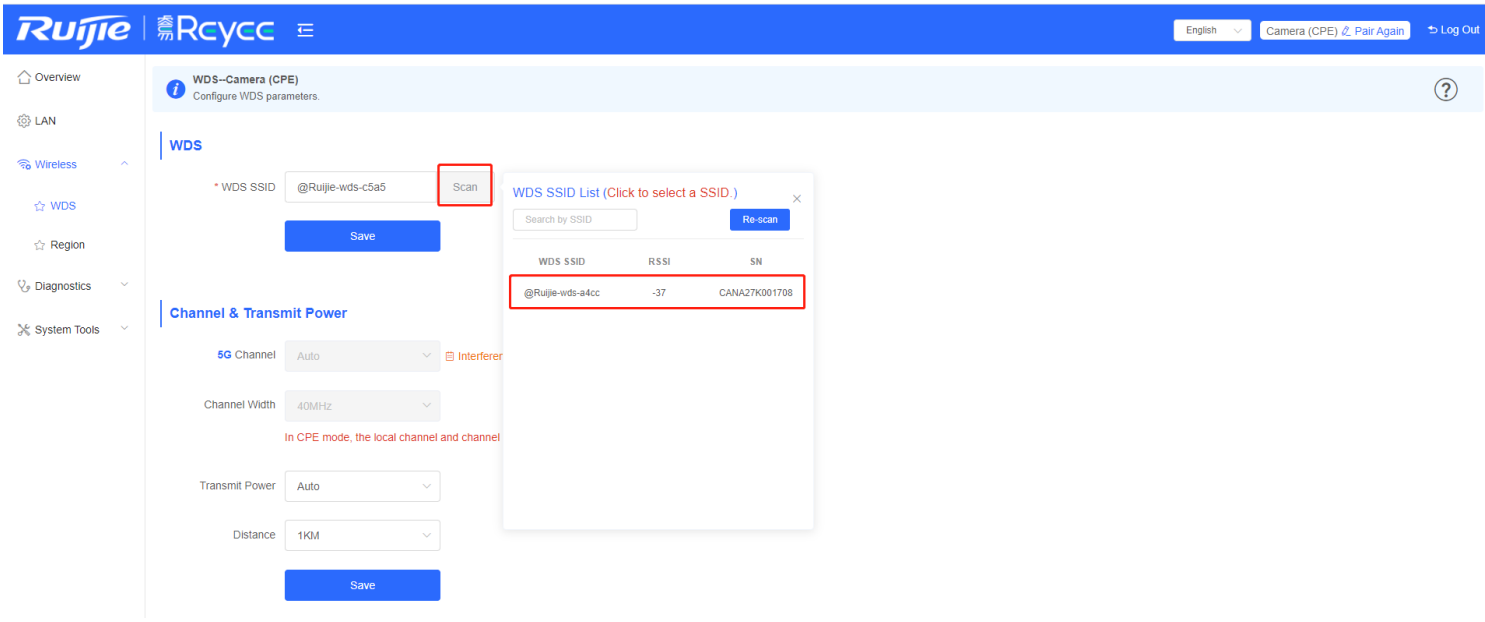


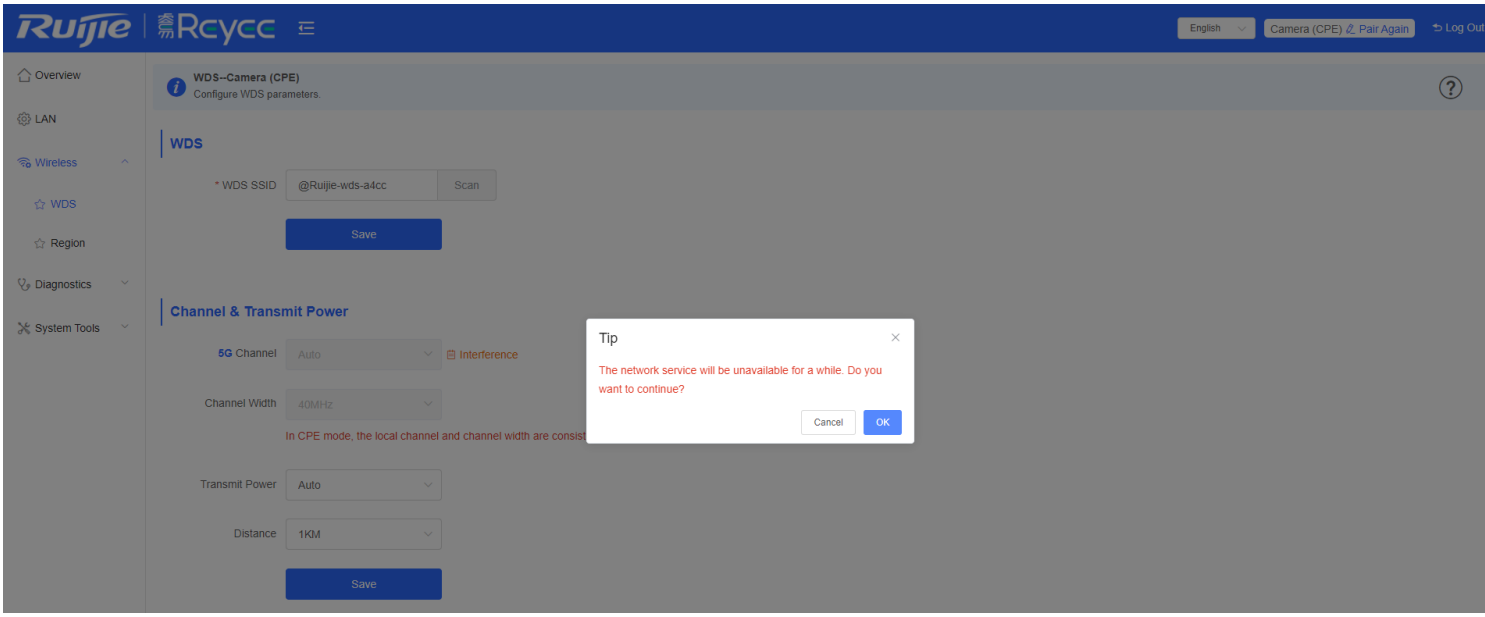


Access to the device, if the mode is CPE, no need to switch mode

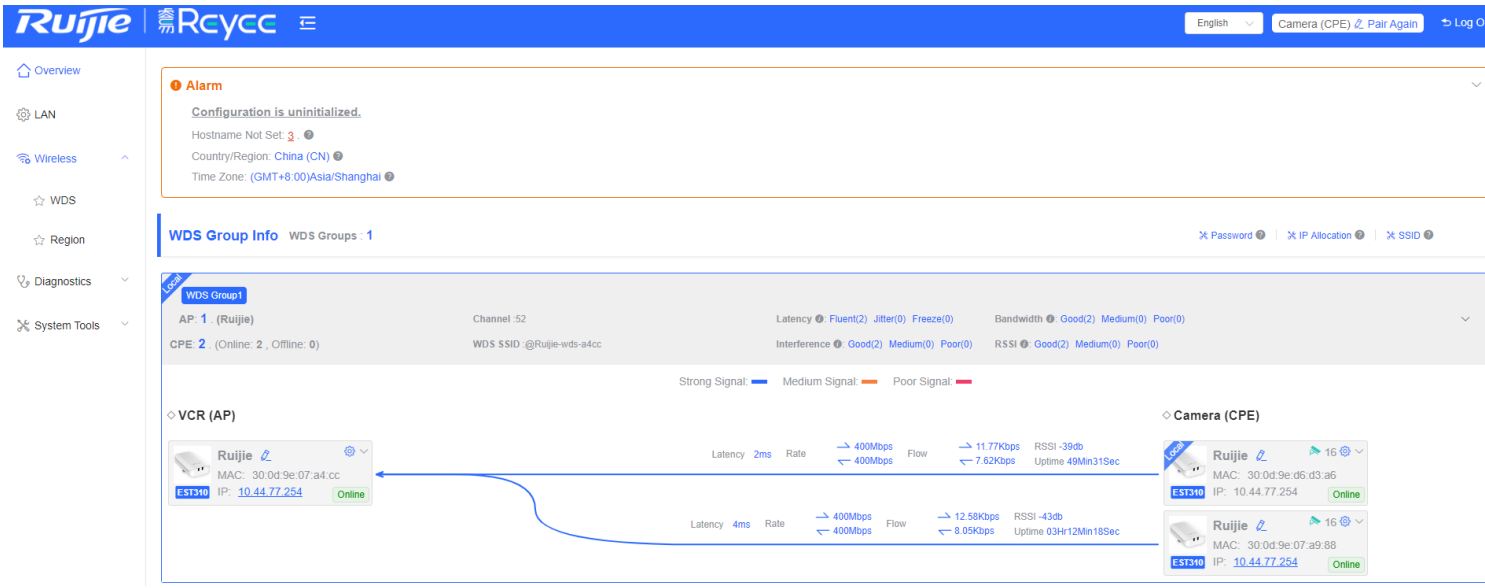


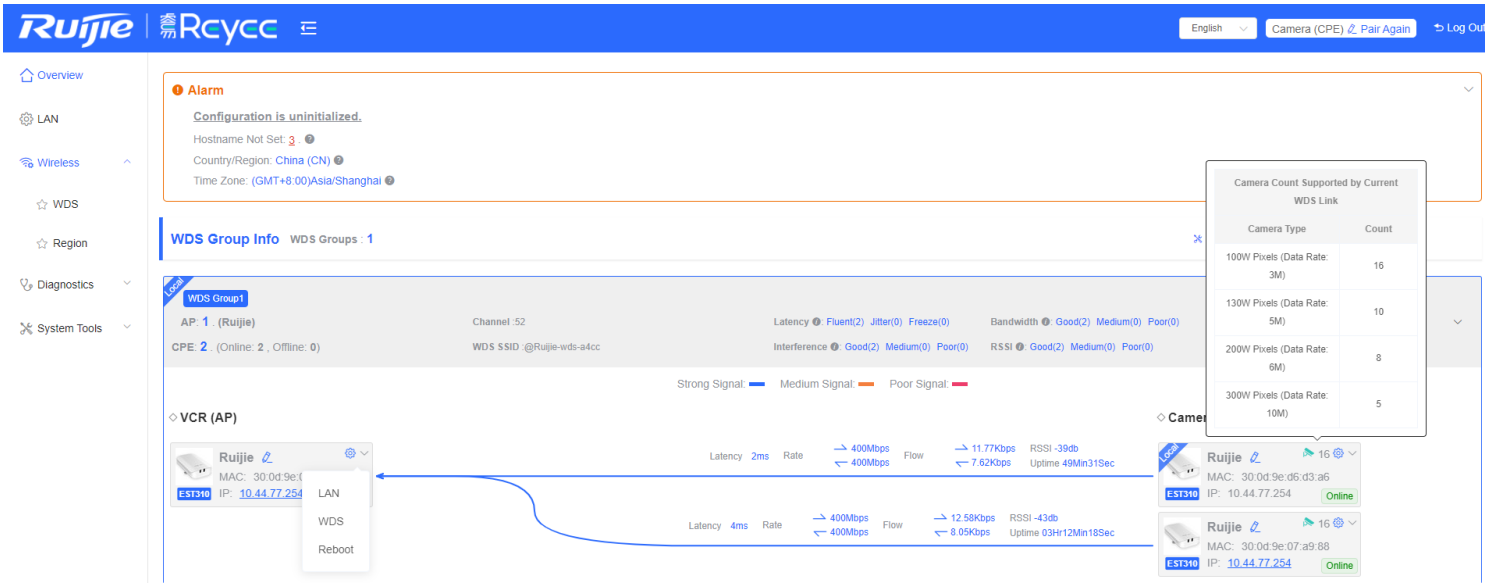
Choose **Wireless → WDS,** scan the SSID list and select a SSID**,** click **Save**





PTMP success and show the actual topo on the overview





10 FAQ

1. **Does Reyee Device support Telnet or SSH login?**

   No. Reyee device only support web management.

2. **What is the default IP address of the Reyee switch?**

   10.44.77.200.

3. **What is the IP address of the master device on the self-organizing network?**

   10.44.77.253

4. **What is the device priority of the self-organizing network master selection?** EG > AP > Switch

5. **What is the difference between the default SSID @Ruijie-s and @Ruijie-m?**

   @Ruijie-m is generated after successful network self-organization, while @Ruijie-s is generated on a standalone device.

6. **Does the self-organizing network support to be formed between Reyee series devices and other Ruijie devices (Running RGOS)?**

   No. Self-organizing network can only be formed between Reyee Series devices.

7. **I failed to log into the eWeb management system. What can I do?**

   Perform the following steps:

   (1) Check that the network cable is properly connected to the LAN port of the device and the corresponding LED indicator blinks or is steady on.

   (2) Before accessing the configuration GUI, set the IP assignment mode to Obtain an IP address automatically (recommended), so that the server with DHCP enabled can automatically assign an IP address to the PC. To designate a static IP address to the PC, set the IP address of the PC in the same network segment as the IP address of the management interface. For example, if the default IP address of the management interface is 192.168.110.1 and the

   subnet mask is 255.255.255.0, set the IP address of the PC to 192.168.110.X (X is any integer ranging from 2 to 254), and the subnet mask is 255.255.255.0.

   (3) Run the ping command to test the connectivity between the PC and the device.

   (4) If the login failure persists, restore the device to factory settings.

8. **What can I do if I forget my username and password? How to restore the factory settings?**

   To restore the factory settings, power on the device, and press and hold the Reset button for 5s or more, and release the Reset button after the system LED indicator blinks. The device automatically restores the factory settings and restarts. The original configuration will be lost after the factory settings are restored. After the restoration, the default management address is http://10.44.77.254. You can set the username and password upon first login.