

# RG-SNC implementation cookbook

V1.0

For SNC En 2.30

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# 1 Preface

RG-SNC-Pro smart network commander is Ruijie networks designed for accurate network management system. RG-SNC-Pro focused on the Web, device failure and performance monitoring, device configuration change monitoring and configuration management with friendly Web browser interface, remote maintenance and management together. It can be used non-proxy mode to avoid the traditional "Agent" of tedious and repetitive work. It is easy to implement and maintain, and time saving. Administrative tasks can be defined, actively collecting network status and timely backups, so timely response from the state change or failure to recover; provides network topology diagram showing the effect of the tidy overlooking the network status when an exception occurs in the topology map. SNC is mainly used with Ruijie equipment. It supports the standard MIB based manufacturer device monitoring and management. Meanwhile RG-SNC-Pro system has modular management of various network environments, including: Wireless Wlan egress component, EG equipment central management, MPLS VPN components, 3G network management components to include various devices, simple management of complex networks. Thereby greatly reduce administrator maintenance strength and lower degree of difficulty

**This cookbook is applicable for RG-SNC version 2.30(p4)\_EN\_Build20160302 and later version**

## Audience

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- Network Engineers
- Network Administrator

## Obtain Technical Assistance

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- Ruijie Networks Websites : <http://www.ruijienetworks.com>
- Ruijie Service Portal : <http://case.ruijienetworks.com>

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

## Related Documents

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- RG-SNC Release Note
- RG-SNC Installation Guide
- RG-SNC Database Installation and Maintenance Guide
- RG-SNC Operation Guide

## Revision History

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Date	Change contents	Reviser
2016.6.17	Initial publication V1.0	TAC Oversea

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## 3 Daily Maintenance

Before getting started, verify that you install MySQL and RG-SNC, then start SNC Service correctly.

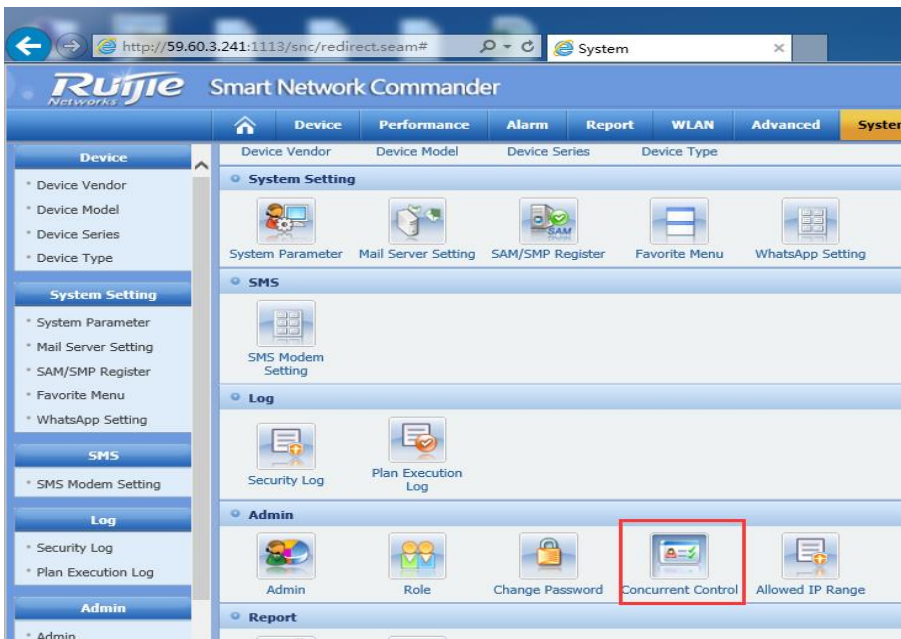
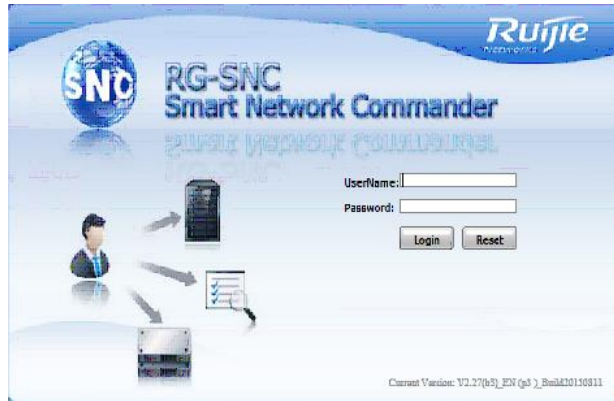
For Database and SNC installation, see *RG-SNC Installation Guide* and *RG-SNC Database Installation and Maintenance Guide*

### 3.1 Login Web UI

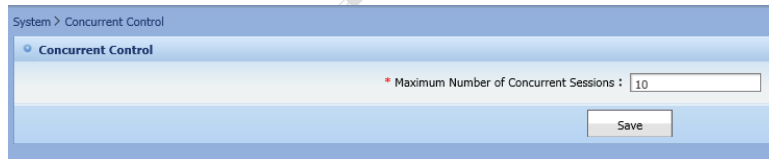
When you complete SNC installation and start SNC service successfully, visit SNC web UI at <http://Server IP:8088/snc> , the default Username is “**admin**” and password is “**admin**”

**Note:** Use IE 8.0 and above version in compatibility mode. Firefox and chrome may have compatible issues.

It is recommended to change log sessions when login. Click **System**→**Current Control** to change maximum number of concurrent sessions



In the middle of the window, it is **Current Control**



## 3.2 Check SNC Version

Click **Help-->About** in the up right corner, you can view **version information**.

Pop up information as shown.

### RG-SNC Smart Network Commander

Version Info: RG-SNC\_2.30(p5)\_en\_vMotion\_Build20160523

Dongle Type: Trial Version

**Installed Components:**

QoS COMPONENTS(1.11), WLAN COMPONENTS(1.35), ACL COMPONENTS(1.15)  
TOPOLOGY COMPONENTS(1.06\_en), FOUNDATION COMPONENTS(1.2(p1)\_en),  
CONFIGURATION COMPONENTS(1.14)

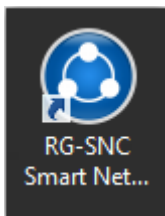
Trial days:90

Trial days passed:76

## 3.3 Service Manager

In this section, you will learn how to manage service.

Remote access to the SNC server and click the shortcut or you can access from URL : <http://SNC IP: 8989/ssm> as well. Both username and password are "admin".



View database status, web service status and server information as shown.




Node 2 (Active) IP: 172.29.2.5

Basics

<b>Database Service</b> <span style="color: green;">✔ Running</span>	<b>Web Service</b> <span style="color: green;">✔ Running</span>
⚙️ Restart ■ Stop    📄 Log Collect	⚙️ Restart ■ Stop    📄 Log Collect

About Server

Name : RJ-SNC OS  
SN : 085F0F219BFB02997E2491B24B93BC7D  
CPU : 2-core IntelXeon @ 3.19GHz , 3.19GHz  
Memory : RAM6.0G SWAP7.0G

 **Tips:** Database backup succeeded. If your browser does not perform auto-download, click [here](#) to download.

View Server disk usage ( Need install flash plugin )



View Server NIC ( Need install flash plug-in )

**NIC (eth0)**  
Name : Ethernet0  
Bandwidth : 1000Mbps  
IP : 172.29.2.5  
MAC : 00-0C-29-E6-BA-25

Click "**Web Service Settings**" to view web service configuration of HTTP, HTTPS access port. Not recommend to change.

Server Type : TOMCAT

\* Server IP : 172.29.2.5

Protocol Settings

HTTP \* Port : 8088

HTTPS \* Port : 8443 \* SSL : TLS

\* Certificate  Default  Custom  Browse... Key : \*\*\*\*\*

JVM Settings

\* Initial Memory Pool : 2048 m \* Initial PermSize : 128 m

\* Max Memory Pool : 2560 m \* Max PermSize : 256 m

\* Thread Stack Size : 256 Kbytes (Restore the default value if 0 is entered).

The new configuration comes into effect after restart.

Save

### 3.4 Database Management

Click “**Integrated tool**” to set databases.

#### 1) Database configuration restore

Instant backup, means backup manually

Parameter Settings ^ Max Backups: 20 Scheduled Backup: Close

<input type="checkbox"/>	File Name	File Size	Backup Time	Status	Operate
<input type="checkbox"/>	<a href="#">emp_20151202134006-</a>				
<input type="checkbox"/>	<a href="#">526_custom.zip</a>	17.479M	2015-12-02 13:41:44	Normal	<a href="#">Data Recovery</a> <a href="#">Download</a> <a href="#">Delete</a>

Backup success

#### 2) You can download or delete the database.

<input type="checkbox"/>	File Name	File Size	Backup Time	Status	Operate
<input type="checkbox"/>	<a href="#">emp_20151202134006-</a>				
<input type="checkbox"/>	<a href="#">526_custom.zip</a>	17.479M	2015-12-02 13:41:44	Normal	<a href="#">Data Recovery</a> <a href="#">Download</a> <a href="#">Delete</a>

#### 3) You can upload the database, which is backed up by service manager.

Backup File List (4)

4) You can restore the database. Please note the SNC service will be stopped during the restore process.

<input type="checkbox"/>	File Name	File Size	Backup Time	Status	Operate
<input type="checkbox"/>	<a href="#">emp_20151202134006-</a> <a href="#">526_custom.zip</a>	17.479M	2015-12-02 13:41:44	<input checked="" type="checkbox"/> Normal	<a href="#">Data Recovery</a> <a href="#">Download</a> <a href="#">Delete</a>

5) Setting parameters. Maximum backup times

Parameter Settings ▾

Backup Settings

\* Max Backups :

Scheduled Backup

Off  Every day   Every Week    Every Month

Backup Mode:  Custom  Full

Setting scheduled backup

Parameter Settings ▾

Backup Settings

\* Max Backups :

**Scheduled Backup**

Off  Every day   Every Week    Every Month

Backup Mode:  Custom  Full

6) Collect log for trouble shooting. Zip file will be created after you click "Search" Button.

Database Recovery **Log Collection** JVM Tool

Name :  Type :

7) As to authorization, please refer to the authorization guide for details.

8) Backup database with the following operation steps:

1. Log on the SNC server, stop the SNC application service and WEB service;
2. Lon on the SNC server, click "start - run - services.msc" to open the service management interface, then stop the MySQL-SNC service;
3. After stop service, wait for about 5 minutes for the starting of database backup operation;
4. Backup the "database" directory under SNC installation directory.

---

**Database recovery with the following operation steps:**

1. Make sure SNC service is stopped.
2. Replace the current “database” directory with the whole previous backed up “database” directory.

**Supplement:**

Regular backups of the database so that you can avoid the problem when the system is unable to recover due to the cause of damage. Database should not be backed up at the SNC server itself. It is recommended to back up the SNC server every two weeks. If there are changes on SNC, it is recommended to backup immediately.

### **3.5 SNC License Authorization**

1. RG-SNC software relies on USB encryption dog to activate license authorization. When software startup, the system will check whether there is a USB dongle on the server, if the dongle does not exist, the software will automatically stop. As to file authorization scenario, if the license file not registered successfully, the WEB service will be stopped.
2. RG-SNC features need different license authorizations to activate. Or, the corresponding feature will not be visible.
3. During RG-SNC dongle grace period, there is no limit on the quantity and features.
4. After version 2.28b1p5, the rest of pro license can be shared with AP. But the PC will not be displayed when the total of terminals and AP exceed 1000.
5. As to file authorization, please refer to file authorization guide for details.

Click **Help-→About**, in the top right on SNC WEB UI to display version and license information.

## RG-SNC Smart Network Commander

Version Info: V2.27(b3)\_EN (p3 )\_Build20150811

Dongle Type: Trial Version

Installed Components:

QoS COMPONENTS(1.11),WLAN COMPONENTS(1.35),ACL

COMPONENTS(1.15),TOPOLOGY COMPONENTS

(1.06\_en),FOUNDATION COMPONENTS(1.2(p1)

\_en),CONFIGURATION COMPONENTS(1.14)

Trial days: 365

Trial days passed: 179

**Ruijie**  
Networks

## 3.6 Administrator and Role Management

Login SNC with admin ID. Click **System-->Change password**.

The screenshot displays the Ruijie Smart Network Commander web interface. The browser address bar shows the URL <http://59.60.3.241:1113/snc/redirect.seam#>. The interface features a navigation menu with tabs for Device, Performance, Alarm, Report, WLAN, Advanced, and System. The 'System' tab is selected, and the 'System Setting' section is expanded. Within 'System Setting', the 'Admin' sub-section is visible, and the 'Change Password' icon is highlighted with a red box. Other icons in the 'Admin' section include Admin, Role, Concurrent Control, and Allowed IP Range. The 'Log' section contains Security Log and Plan Execution Log. The 'Report' section contains Software Summary and VLAN Summary Report. The footer of the page includes the URL [http://59.60.3.241:1113/snc/system/systemIndex.seam?\\_r=162938\\_l=frameContent#](http://59.60.3.241:1113/snc/system/systemIndex.seam?_r=162938_l=frameContent#) and a note: "res: 4008-111-000(IE7, IE8, IE9 are supported. The default resolution is 1024\*768, but 1280\*1024 is highly recommended)".

You can restore Admin password if forget it. Details as below.

```
Microsoft Windows [Version 6.0.6001]
Copyright (c) 2006 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>cd C:\Program Files\MySQL\MySQL Server 5.1\bin

C:\Program Files\MySQL\MySQL Server 5.1\bin>mysql -uroot -padmin -P 3307
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 52
Server version: 5.1.30-community MySQL Community Server (GPL)

Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

mysql> use emp;
Database changed
mysql> update t_security_app_user set password = '21232f297a57a5a743894a0e4a801f
:3' where id = 1;
Query OK, 0 rows affected (0.00 sec)
Rows matched: 1  Changed: 0  Warnings: 0

mysql> _
```

---

## 4 Basic Configuration

In this section, you will learn how to make initial configuration for the networking devices monitoring and management. SNC can read and sync with the devices to realize topology map, performance monitoring and notification after you finish the basic configuration.

### 4.1 Device Configuration

Configure devices with the following two kinds of function so that they can be managed by SNC:

- Devices SNMP configuration
- Device Telnet configuration

#### 4.1.1 Configure SNMP on Devices

SNMP configuration on devices allows SNC can read and sync with the devices to realize topology map, performance monitoring and notification after you finish the basic configuration. There are three key points in devices SNMP configuration

- Set up public community and permission (read or write)
- community string of device must be the same as SNC server's
- Currently, most of devices use SNMP v2 by default.

##### 4.1.1.1 Step 1, set up community and permission

Enable SNMP on devices, set the read & write community string to "ruijie".

```
Ruijie>enable
Ruijie#configure terminal
Ruijie(config)#snmp community ruijie rw
```

##### 4.1.1.2 Step 2, Save configuration

```
Ruijie#write
```

##### 4.1.1.3 Step 3 , Verify configuration

```
Ruijie#show run | begin snmp
```

display SNMP configuration is done.

```
snmp-server enable traps
snmp-server community ruijie rw
line con 0
line vty 0 4
  password ruijie
#
#
```

## 4.1.2 Configure Telnet on Devices

Devices telnet configuration allows SNC can read and sync with the devices to realize topology map, performance monitoring and notification after you finish the basic configuration. There are three key points in devices telnet configuration:

- Telnet setting can be 4 options.
- You can choose any option you want, but we recommend use "only password" or "username and password"
- Please configure management IP address if it is not be configured before

### 4.1.2.1 Step 1, set up login way in Line configuration mode.

```
Ruijie(config)#line vty 0 4
Ruijie(config-line)#login
Ruijie(config-line)#password ruijie
Ruijie(config-line)#exit
Ruijie(config)# enable secret ruijie
Ruijie#write
```

### 4.1.2.2 Verification

Make sure the connectivity between PC and device. Go to **Start>Run**, input cmd to open command prompt.

Input telnet 192.168.51.241 ( telnet to device management IP )

```
C:\Users>telnet 192.168.33.233
```



---

## 4.2 Configure Template on Device

SNC network management system is used to discover and manage network devices, you need to make the appropriate SNMP and telnet configuration template.

In this section, you will learn two kinds of template configuration for devices:

- SNMP template configuration
- Telnet template configuration

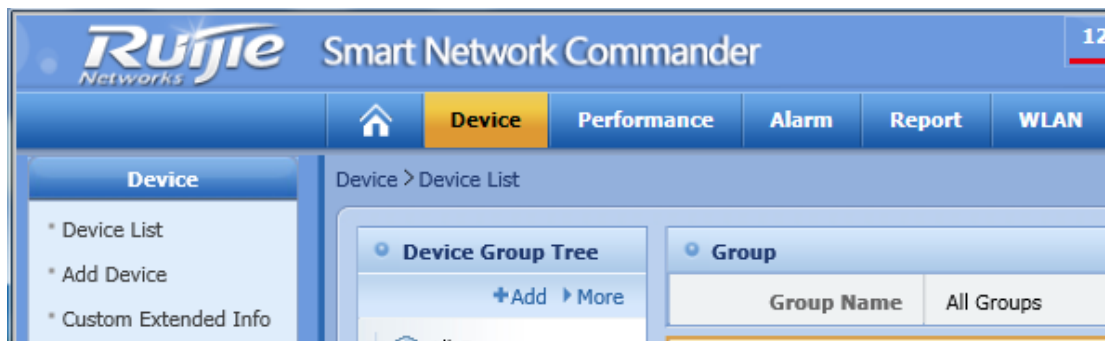
### 4.2.1 Configure SNMP Template

There are five components in this template configuration.

- Template name
- Port / retries
- Version
- Timeout
- Read / write community string

**Note: This part is the realization of the public technology, please refer to SNMP protocol principal.**

#### 4.2.1.1 Step 1, Log on SNC, click "Device" module.



#### 4.2.1.2 Step 2, Configure parameters of SNMP template.

Edit SNMP device template first, go to **Device template > SNMP template > Add**, set the parameters as below,

SNMP Template List							<a href="#">+Add</a> <a href="#">X Delete</a>
<input type="checkbox"/>	Template Name	Port	Version	Retry Count	Timeout (ms)	Default or Not	Operation
<input type="checkbox"/>	SNMPV2c	161	SNMPV2c	2	3000	Yes	<a href="#">Update</a> <a href="#">Associate Device</a>
<input type="checkbox"/>	public/private	161	SNMPV2c	2	3000	No	<a href="#">Update</a> <a href="#">Associate Device</a>
<input type="checkbox"/>	RnD_Center	161	SNMPV2c	2	3000	No	<a href="#">Update</a> <a href="#">Associate Device</a>
<input type="checkbox"/>	test_template	161	SNMPV2c	2	3000	No	<a href="#">Update</a> <a href="#">Associate Device</a>

1 Go 10 Item Per Page Total Pages: 1/1 Total 4 Records

### Add SNMP Template

\* Template Name :

\* Port :

Version :

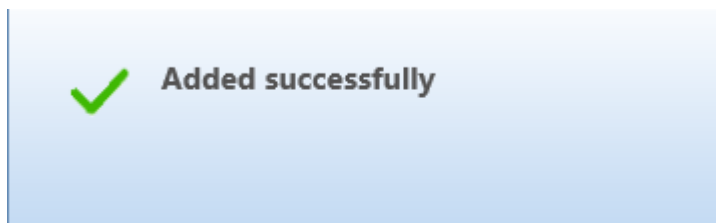
\* Retry Count :

\* Timeout (ms) :

\* Read Community :

\* Write Community :

Click OK in the pop up menu.



## 4.2.2 Configure Telnet Template

There are seven components in this template configuration.

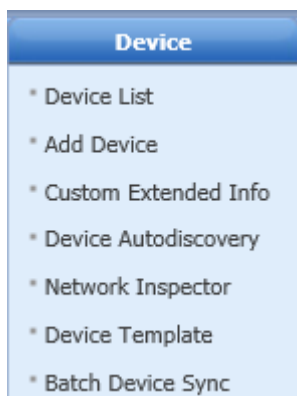
- Profile Name
- Whether to support SSH
- Port / timeout
- Prompt
- Authentication Mode

- The need for super password
- The super user prompt

**Note:** This part is the realization of the public technology, please refer to telnet protocol principal.

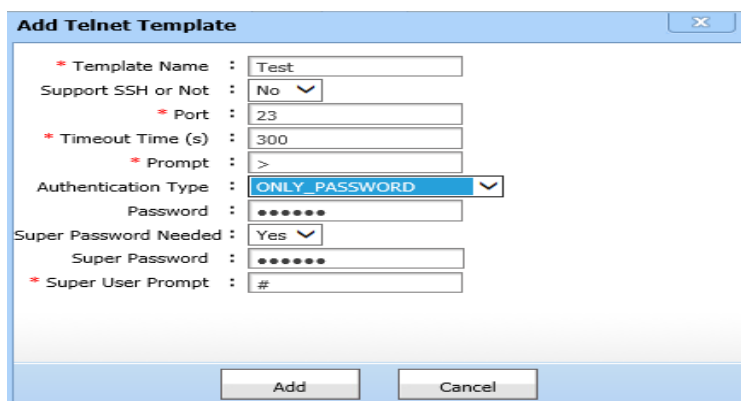
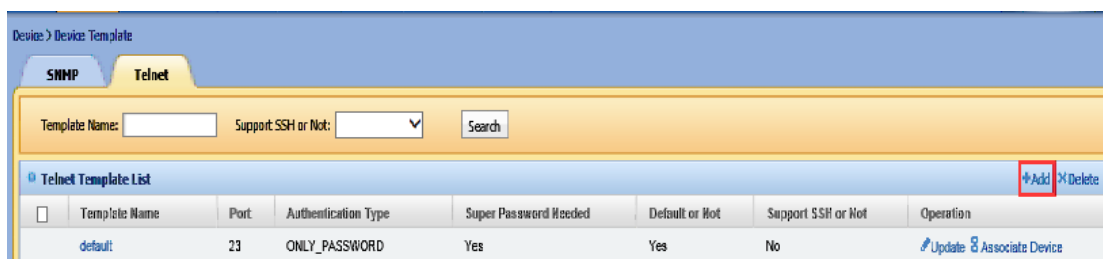
#### 4.2.2.1 Step 1, Log on SNC, click Device template.

Go to *Device > Device Template*



#### 4.2.2.2 Step 2, Configure Telnet template parameters.

Go to *Device Template > Telnet > Add*, set the parameters as below,



---

### 4.2.2.3 Verification

In this interface you can try to modify, delete, and associated equipment and do other operations.

## 4.3 Add Device

The network device must be properly added to the SNC server, it can be managed by the system.

In this section, you will learn:

- Automatic discovery
- Added manually

### 4.3.1 Discover Device Automatically

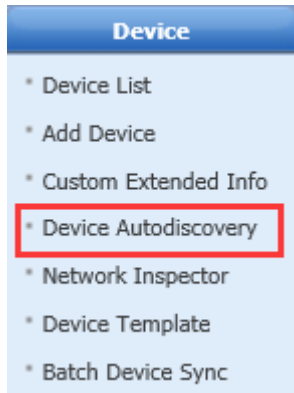
Automatic discovery of equipment in three ways: ARP mode, routing, network segment. Three methods are required to detect the reachability of SNMP over IP.

There are seven key points in automatic discovery,

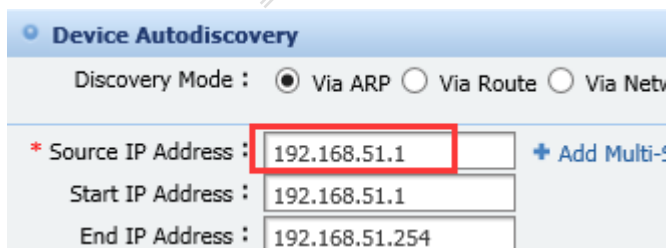
- The template of SNC must has consistent information with the device
- Complete ip address and routing table information of network device
- An automatic discovery might not discover all device at a time
- Manually add the device if you are unable to find the device
- If there is a requirement to find a network of selected seeds IP , the start IP and end IP must be included.
- Select only the required SNMP template
- Add the device by importing previous backup

#### 4.3.1.1 Step 1, Configure Automatic Discovery

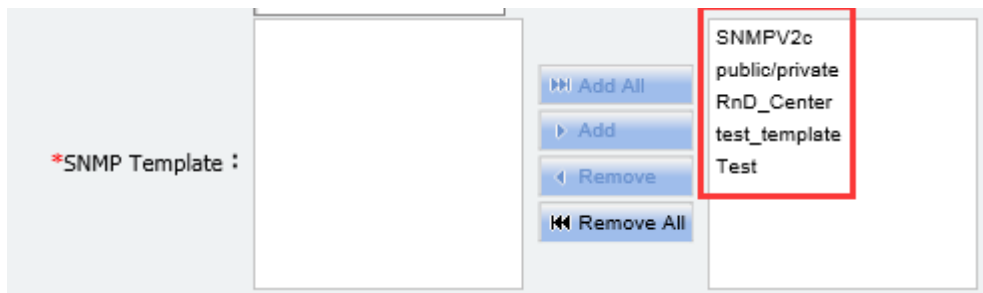
Enter the device management page first , go to Device Auto discovery, modify Device Auto discovery , set the parameters as below ,



Fill in the required topology discovery seed IP address, the start IP address and end IP addresses.



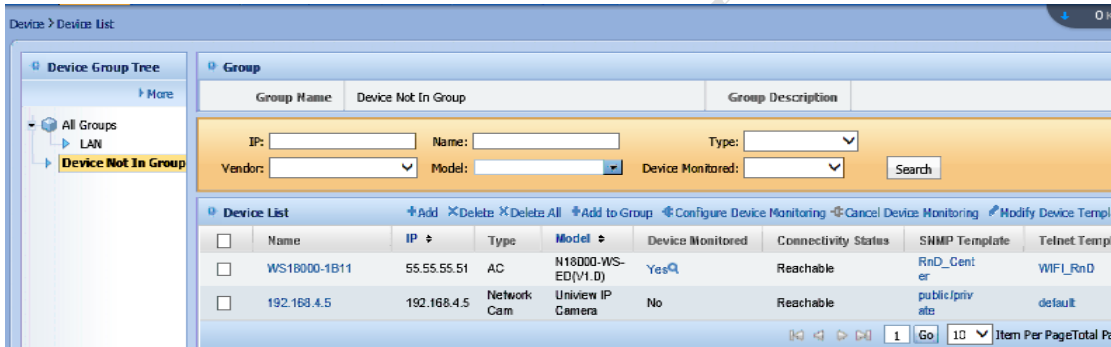
Selected for one or more SNMP template to use automatic



Click "**Auto discovery**" when complete setting.

#### 4.3.1.2 Verification

Automatic discovery is completed, Go to **Device > Device List**, we can see the list of devices by automatically discover network



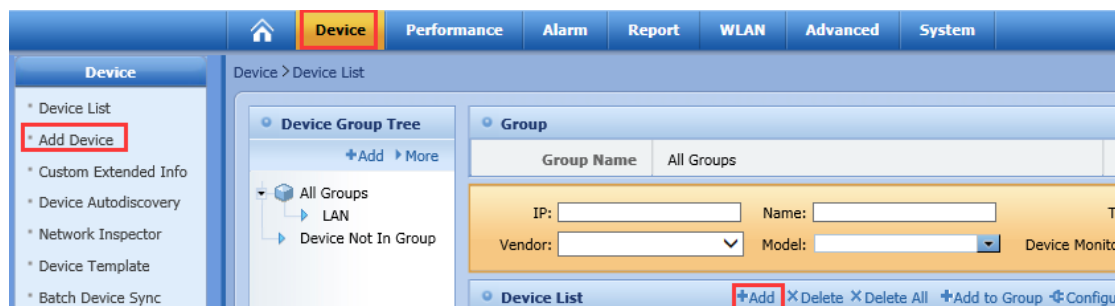
## 4.3.2 Discover Device Manually

There are five key points in discovering device manually

- The device IP cannot be empty
- The template of SNC must be consistent with the device
- The actual parameters of device match SNMP parameters contained in the template
- You cannot add the device which cannot be ping
- The device can be added by importing the backed-up device information

### 4.3.2.1 Step 1, Add Devices Manually.

Enter the device management page, go to **Add Device > Add**, create a new device.



**Add Device**

\* IP : 192.168.51.194

SNMP Template : SNMPV2c

Telnet Template : default

Device Group :

Unreachable Device Is Also Added :

Remarks :

Click "**Add**" when complete setting.

### 4.3.3 Unknown Device Identification

If there is SNC unsupported devices in the network, it will be identified as an unknown model after adding devices, you need to identify this device properly.

There are three key points in identifying Unknown device,

- The information in device and SNMP template of SNC must be consistent
- By adding custom device models to manage the unknown type of device
- It is recommended to name the device referring to certain norms, such as the name on device panel.

The following configuration do not include basic wireless settings, so ensure your wireless network works properly first before starting. Suggest to create a dedicate wlan-ssid for **Exemption Authentication (BYOD)**.

#### 4.3.3.1 Step 1, Find and Copy sysOID in The Device Basic Info.

Go to **Device > Device List > unknown device model name**, confirm snmp Connected and telnet Connected. Then find and copy sysOID in the device basic info.

Basic Info		CPU	Memory	Temperature	Alarm
Name	RG-WALL			IP	172.29.1.1
Type	Router			Model	UNKNOWN
Device Vendor	UNKNOWN			SysOID	1.3.6.1.4.1.4881.101.1.2006
Mask	255.255.255.252			MAC Address	58:69:6c:0f:73:43
Contact Person				Device Location	RG-WALL
Runtime	57 days, 7:10:39.26			Last Synchronization Time	2016-05-31 15:30:32 Synchronizing device information...
Connectivity Status	Reachable			Network Management Status	SNMPConnected TelnetConnected
Hardware Version				Software Version	
SystemFan Status				Power Source Info	
Disk Utilization				Device Temperature	
Assets Code	172.29.1.1			Device Group	FuzhouLab
Serial Number				Remarks	

#### 4.3.3.2 Step 2, Device model management.

Go to **Device > Device Model>Add**, create a new custom device models.

Device Model List									
<input type="checkbox"/>	Device Model Name	Vendor	Device Type	System OID	OS	Port Count	SCP Support	Type	Operation
<input type="checkbox"/>	S8620	Ruijie Networks	Switch	1.3.6.1.4.1.4881.1.10.1.46	rgnos		No	Predefined	<a href="#">Update</a>

**Add Device Model**

\* Device Model Name :

\* System OID :

Vendor :

\* Device Series :

Device Type : Security

OS :

Product ID :

Stack Support :

Module Support :

SCP Support :

Port Count :

HTTP Protocol :  HTTP  HTTPS

HTTP Port :

Default Homepage :

Remarks :

Click **“Save”** when complete setting.

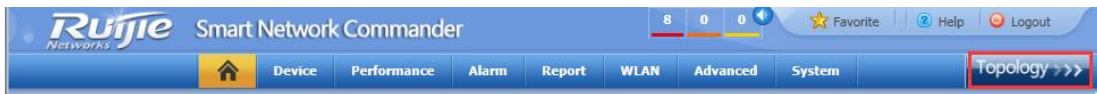


## 4.4 Network Topology Configuration

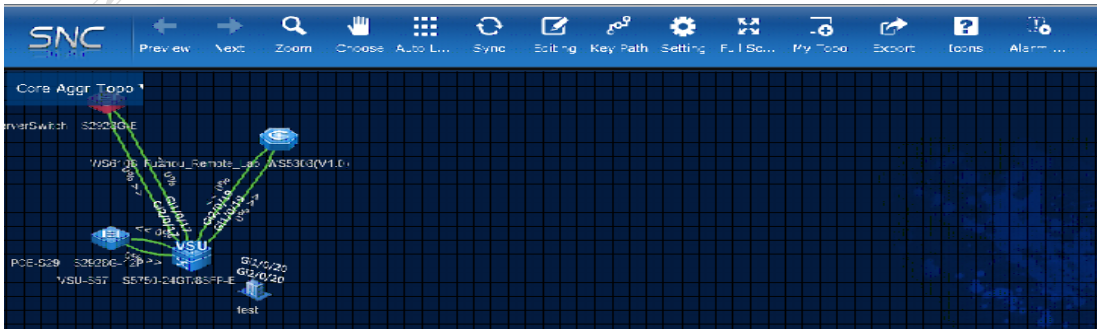
Automatically detect topology after the device is added. Network devices will be showed in the topology diagram. Automatically generated topology should be consistent with the actual topology and lay

### 4.4.1.1 Step 1, Load data

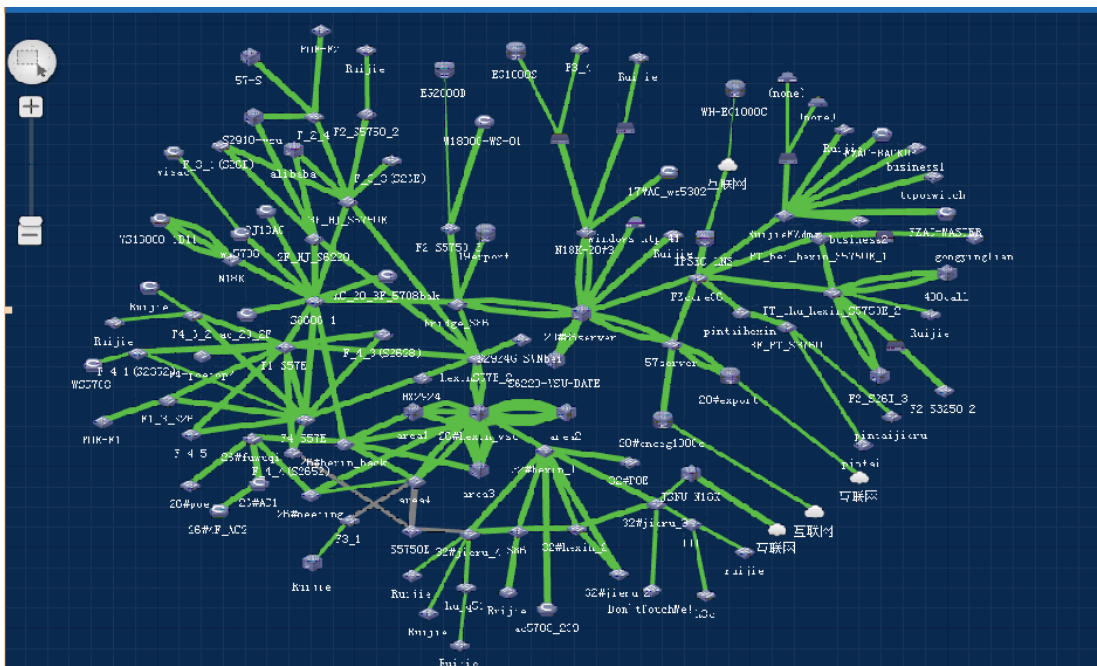
On SNC configuration page , click icon to enter network topology page.



It may take a while to load data into the topology depending on the topology size.



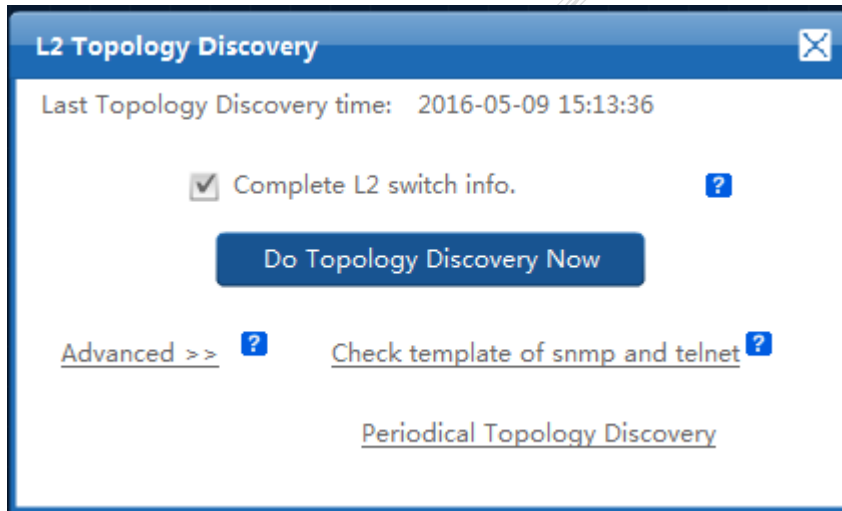
After auto-discovery, SNC will perform topology automatic layout.



---

#### 4.4.1.2 Step 2, Discover topology manually

Go to **Fully layer 2 switching information before topology discovery> Start Now topology discovery**, discover topology manually.



If the device or link does not appear, you need to add them manually.

## 4.5 Monitoring Device Performance

By monitoring these indicators, you can realize the equipment's status information. Monitoring these indicators can be presented at the last page or device details page, if some indicators have reached a certain threshold, it will produce the corresponding alarm.

Monitoring parameters as below :

- Monitoring equipment indicators: CPU utilization, memory utilization, temperature, disk space utilization.
- Monitoring Interface indicators: the interface rate, interface bandwidth utilization, packet loss rate interfaces, interface data error rate table, the interface Unicast packet rate, the interface broadcast packet rate, the interface CRC error rate.

#### 4.5.1.1 Step 1, Enable device monitoring

Go to **Performance > Add> Select Device> Add> Next** , use default threshold setting as below ,

Performance > Monitored Device > Add Monitored Device

IP:  Name:  Vendor:  Model:  Search

**Selected Device List** [+Select Device](#) [Deselect](#) [Deselect All](#)

<input checked="" type="checkbox"/>	Name	IP	Model	Mask	SNMP Template	Telnet Template
<input checked="" type="checkbox"/>	192.168.4.5	192.168.4.5	Uniview IP Camera	255.255.255.0	public/private	default
<input checked="" type="checkbox"/>	WS6108	192.168.2.2	WS5308(V1.0)	255.255.255.0	SNMPV2c	default
<input checked="" type="checkbox"/>	192.168.4.6	192.168.4.6	Uniview IP Camera	255.255.255.0	test_template	GWRouter
<input checked="" type="checkbox"/>	ServerSwitch	192.168.2.18	S2928G-E	255.255.255.0	SNMPV2c	user/pass

1 Go 10 Item Per Page Total Pages: 1/1 Total 4 Records

**Next** Cancel

<input checked="" type="checkbox"/>	Indicator Name	Description	L1 upper limit	L2 upper limit	L3 upper limit	Global Threshold
<input checked="" type="checkbox"/>	CPU Utilization (%)	CPU Utilization	85	90	95	Yes
<input checked="" type="checkbox"/>	Memory Utilization(%)	Memory Utilization	85	90	95	Yes
<input checked="" type="checkbox"/>	Temperature(degrees Celsius)	Temperature	55	65	75	Yes
<input checked="" type="checkbox"/>	Disk Utilization(%)	Disk Utilization	85	90	95	Yes

Click "Save" when complete setting.

### 4.5.1.2 Step 2, Enable real-time monitoring

Go to **Device > Device List > Configure Device Monitor**, Then you can see the devices already in the real time monitoring list. And the status is enabled.

Device > Device List

**Device Group Tree** [+Add](#) [More](#)

- All Groups
  - LAN
  - Device Not In Group

**Group**

Group Name	All Groups	Group Description

IP:  Name:  Type:

Vendor:  Model:  Device Monitored:  Search

**Device List** [+Add](#) [Delete](#) [Delete All](#) [+Add to Group](#) [Configure Device Monitoring](#) [Cancel Device Monitoring](#) [Modify Device Template](#)

<input type="checkbox"/>	Name	IP	Type	Model	Device Monitored	Connectivity Status	SNMP Template	Telnet Template
<input type="checkbox"/>	WS18000-1B11	55.55.55.51	AC	N18000-WS-ED(V1.0)	Yes	Reachable	RnD_Center	WiFi_RnD
<input type="checkbox"/>	RSR2014E	192.168.1.1	Router	RSR20-14E	Yes	Reachable	SNMPV2c	GWRouter
<input type="checkbox"/>	VSU-S57	192.168.4.1	Switch	S5750-24GT18SFP-E	Yes	Reachable	SNMPV2c	default
<input type="checkbox"/>	POE-S29	192.168.2.17	Switch	S2928G-12P	Yes	Reachable	SNMPV2c	default
<input type="checkbox"/>	192.168.4.5	192.168.4.5	Network Cam	Uniview IP Camera	Yes	Reachable	public/private	default
<input type="checkbox"/>	WS6108	192.168.2.2	AC	WS5308(V1.0)	Yes	Reachable	SNMPV2c	default
<input checked="" type="checkbox"/>	192.168.4.6	192.168.4.6	Network Cam	Uniview IP Camera	No	Reachable	test_template	GWRouter

### 4.5.1.3 Verification

In this interface you try to modify, delete, and associated equipment and do other operations.

If there is traffic passing through, the SNC homepage will display the top N devices of CPU utilization in 5 minutes.

Name	IP Address	Line Card/Device	CPU Utilization
RSR2014E	192.168.1.1	Host	84.00%
POE-S20	192.168.2.17	Host	4.00%
VSU-S57	192.168.4.1	Device 2	2.00%
VSU-S57	192.168.4.1	Device 1	1.00%

Go to **Device>specific device > drop down the scroll bar**, you can view the device CPU, memory, temperature performance curve.

Basic Info		Other Info	CPU	Memory	Temperature	Alarm
Name	RSR2014E	IP	192.168.1.1			
Type	Router	Model	RSR20-14E			
Device Vendor	Huawei Networks	System	1.3.6.1.4.1.4881.1.2.1.1.54			
Mask	255.255.255.0	MAC Address	14-14-4b-31-91-3e			
Contact Person		Device Location				
Runtime	2 days, 23:56:47.68	Last Synchronization Time	2015-09-21 14:55:05			
Connectivity Status	Reachable	Network Management Status	SNMPConnected			
Hardware Version	1.01	Software Version	RGOS 10.4(3b34)p1 Release(185577)			
Systemfan Status		Power Source Info				
Disk Utilization	53%	Device Temperature	NumberHotTemperature:42			
Assets Code		Device Group	LAN			
Serial Number	G1FC08002608	Remarks	GW Router			
Device Description	Huawei Router (RSR20-14E) by Huawei Networks					

## 4.6 Enable Trap and Syslog Notification

When equipment fails or change, the device can take the initiative to send an error message or a log to SNC. Instead of waiting snc timing synchronization detection. SNC needs to immediately response uploaded snmp trap and syslog message information, and form the alarm message on the SNC.

There are three key points in setting trap and syslog notification.

- Enable device trap and syslog notification on SNC is relied on telnet function
- Enable trap and syslog notification feature on SNC is only for huawei equipment
- Commands to enable trap notifications and syslog notifications

**This part of the realization of the principle is public technology, please refer to the SNMP and syslog protocol whitepaper.**

### 4.6.1.1 Step 1, the bulk trap and syslog notifications enable

Go to **Alarm> Trap, Syslog Notification**, Then select all devices needed to start trap and syslog notifications.

Alarm > Trap,Syslog Notification

**Select Device**

Device :  All Devices  Select Manually

**Trap, SysLog Notification Settings**

Trap Settings : Enable Trap on Device

Syslog Settings : Enable

Click "**Start**" when complete setting.

Here you can also not choose all devices, select "**Select manually**", added device which need to start the notification, and then click on the "**Start**".

Alarm > Trap,Syslog Notification

**Select Device**

Device :  All Devices  **Select Manually**

IP:  Name:  Vendor:  Model:

**Selected Device List**

<input type="checkbox"/>	Name	IP	Model	Mask	SNMP Template	Telnet Template	CWMP Temp

The device automatically jump to bulk set device log page, where you can see the batch setting details.

Alarm > Device batch configuration log

**Device batch configuration log**

Device batch configuration [ACCOMPLISHED]

**100%**

Total:4 Number of successes:2 Number of failures:2

Test Time	Message
2016-05-09 21:59:17	Device name [N18007] and IP [172.29.1.6] setting Syslog failed, cause: Connecting device failed. The system error connecting to 172.29.3.254:23 failed.]

#### 4.6.1.2 Step 2, Start trap and syslog notifications on a single device

Go to **Device> Device List> Configure Device> Enable Trap**, previous enable button change to disable button. That means notification is already enabled.

Device > Device List

**Device Group Tree**

- +Import Asset
- All Groups
  - FuzhouLab
  - Unclassified Group

**Group**

Group Name: All Groups

IP:  Name:  Type:

Vendor:  Model:  Device Monitored:

**Device List** +Add XDelete XDelete All +Add to Group <Configure

<input type="checkbox"/>	Name	IP	Type	Model	Device Monitored	Connectivity Sta
<input type="checkbox"/>	N18007	172.29.1.6	Switch	S8607E	Yes	Reachable

Navigation Bar: Home, Asset, **Device**, Performance, Alarm, WLAN, Report

**Navigation Bar**

Regular Operation

- Telnet
- Ping
- Route Trace
- Web

Device Information

Configure Device

- Int Batch Setting
- STP Config
- STP Part Priority Confa
- Enable Trap**
- Enable Syslog**
- Device Restart

Green=Administration status UP + working status UP  
Red=Administration status DOWN + working status DOWN

Name

Type

Device Vendor

Mask

Contact Person

Runtime

Connectivity Status

### 4.6.1.3 Verification

Test by unplug one cable, there will be immediate warning notification if the device and link enable trap and syslog monitoring function.

Display: Latest 20 alar Refresh Interval: 10 seconds

**Realtime Alarm View** ✓Acknowledged

<input type="checkbox"/>	Level	Name	Device IP	Event	Description	ACK Status	First Alarm Time	Last Alarm Time	Repe
<input type="checkbox"/>	Warning	N18007	172.29.1.6	Link Down	The interface Gi1/15 of device (N18007 (172.29.1.6)) is down.	UnAcked	2016-05-09 21:41:15	2016-05-09 21:41:15	1

---

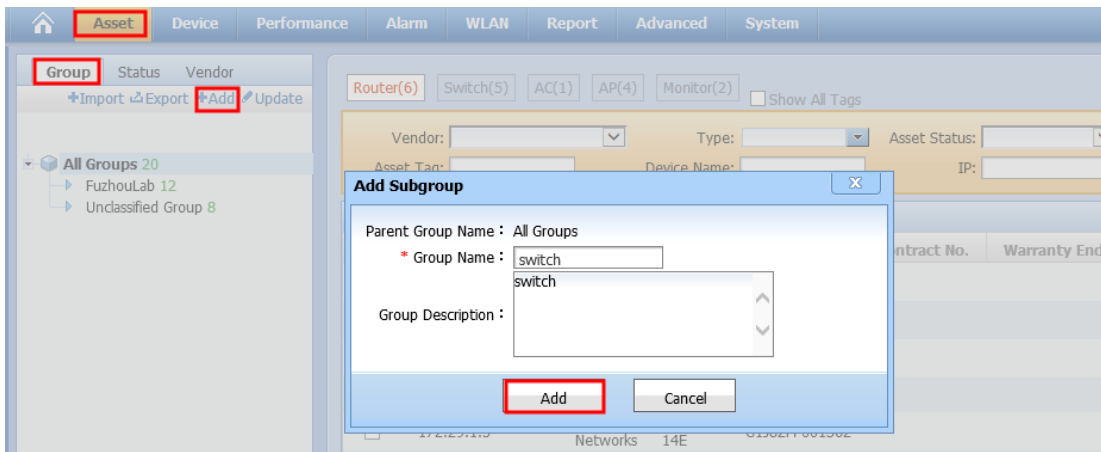
## 5 Extension Configuration

### 5.1 Assets

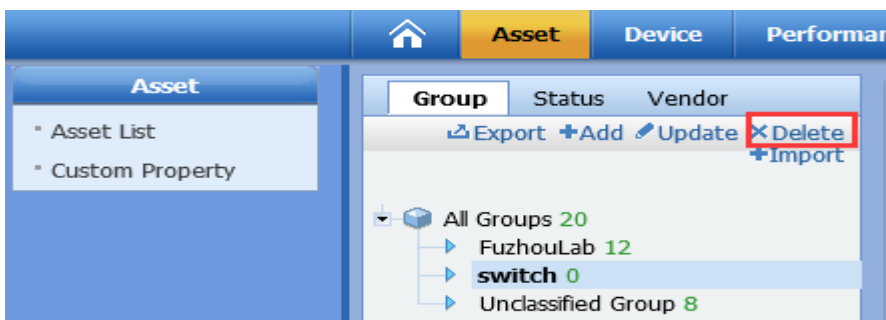
In this section, we will learn how to manage asset.

#### 5.1.1 Assets category

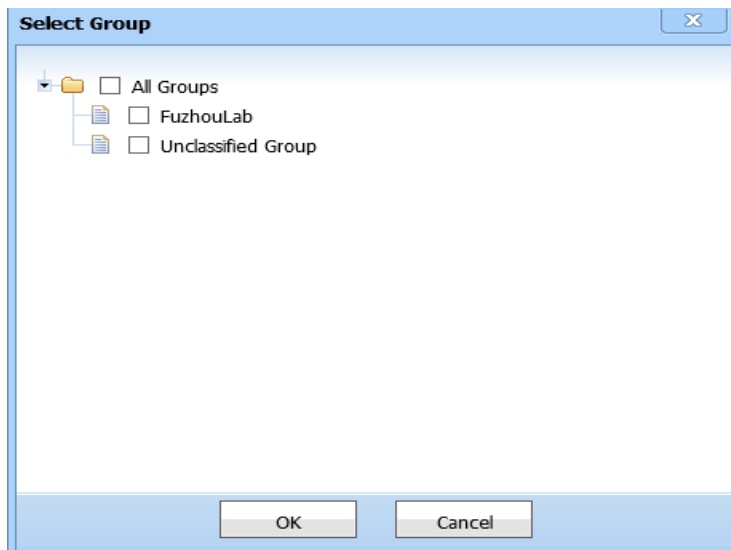
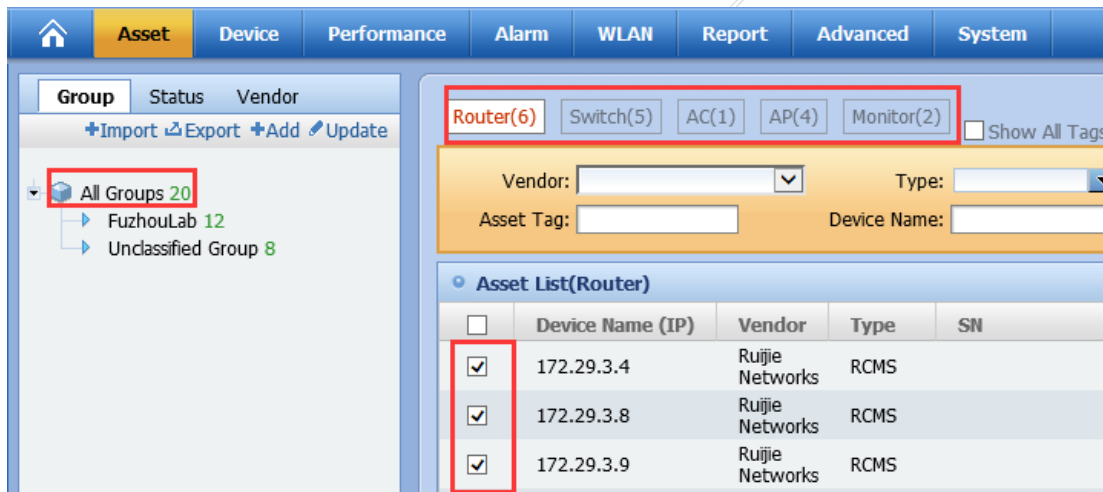
When you want to add an asset, go to **Asset>Group >Add**, Input category information and, click **Add**,



When you want to delete a new asset, go to **Asset>Group >Delete**, if you had confirmed, click **yes**,



When you want to add asset into category group, go to **all groups**, **select** device and device type, click **Add to group** and then check the group you want the device to join and click **OK**.



After finish adding, you can view the device in the group.



## 5.1.2 Assets import and export

Add a device by importing device information files. Export device grouping files can be imported into the device grouping tree operations back into the system.

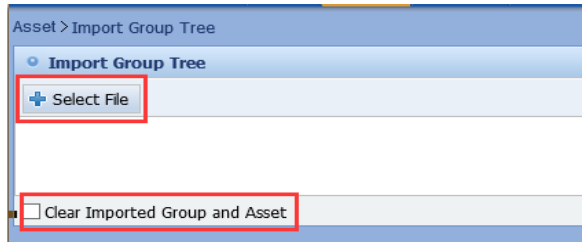


There are two key points in assets import and export

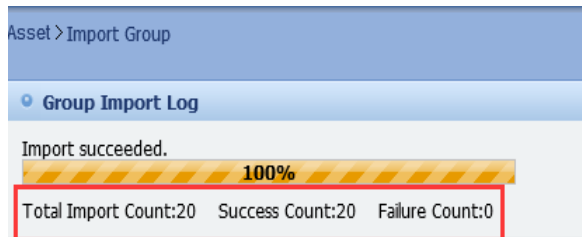
- Group import will delete all existing system grouping and devices configuration.
- Can only import XLS (ie Excel) file format

Note: If you check the "Clear Imported group and Assert", the device group will be deleted. When incremental import check is not required.

When you want to import asserts, go to **Assert >Import** or go to **Device >Import Assert >Select File**



After finishing importing, you can view the result.

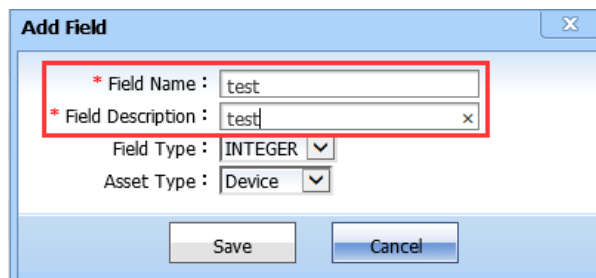


When you want to export asserts, go to **Assert >Export**

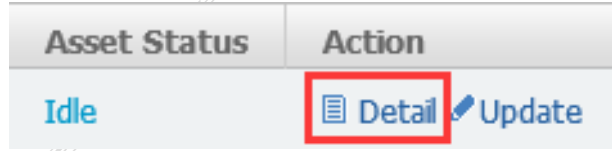


### 5.1.3 Customize extension information

To define extension information for assets, go to **Assert >Custom Property >Add Field**, Add the field Name and description.



Configuration verification, go to **Assert >Details**, then you can see the new added "Test" field.

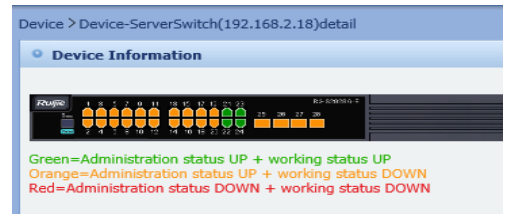


## 5.2 Device Management

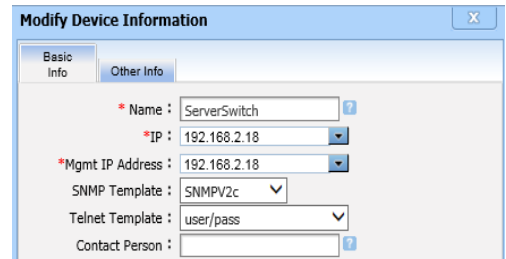
### 5.2.1 Modify Device Information

By viewing device details, we can know the running status of devices so as to achieve the purpose of the managing device.

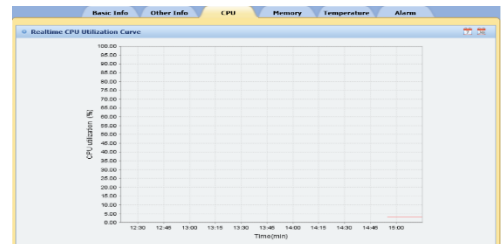
Go to **Device**, and click **relative device** to view the detailed information.



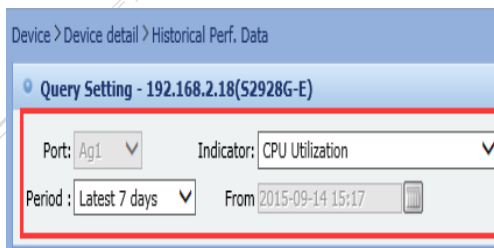
Click **"Update"** button to modify the basic information.



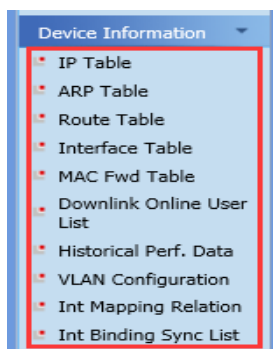
Device CPU, memory and real-time curve chart.



Click on the top right corner of the "7" and "30" to see the CPU utilization curves for the last week or month, and you can export data to Excel and PDF..



Check the routing table, interface table, MAC address table, ARP table, IP table, etc.. In the navigation bar, in the device information bar, you can view other information about the device, as shown in the following diagram.



## 5.2.2 Sync up Device Information

Sync can help to get real-time information of the device, so that the information displayed on the SNC is the latest.

Sync up on single device, go to **Device >Device List**, When entering the device details page, you can see the device information automatically synchronized. And you can click “sync” to manually synchronize information.

Basic Info		Other Info	CPU	Memory	Temperature	Alarm
Name	RSR2014E	IP	192.168.1.1			
Type	Router	Model	RSR20-14E			
Device Vendor	Huawei Networks	SysOID	1.3.6.1.4.1.4881.1.2.1.1.54			
Mask	255.255.255.0	MAC Address	14:14:4b:31:91:3a			
Contact Person		Device Location				
Runtime	3 days, 0:27:00.04	Last Synchronization Time	2015-09-21 15:25:17 <a href="#">Sync</a>			
Connectivity Status	Reachable	Network Management Status	SNMPConnected TelnetConnected			

Bulk devices sync up, go to **Device >Batch device sync >Real-time Device Sync >select Device >Start sync**, When entering the device details page, you can see the device information automatically synchronized. And you can click “sync” to manually synchronize information.

Schedule sync up, go to **Device >Batch device sync >Create Plan >select Device >Finish**, the next step is to start plan to activate the program.

Device > Batch Device Sync > Realtime Device Sync

**Select Device**

Device :  All Devices  Select Manually

**Select non-primary version alarm type**

Alarm Version Check :  Software Version  Hardware Version

**Start Sync**

Device > Batch Device Sync > Create Plan

IP:  Name:  Vendor:  Model:  Search

**Selected Device List** +Select Device -Deselect -Deselect All

<input type="checkbox"/>	Name	IP	Model	Mask	SNMP Template	Telnet Template	CWMP Template
<input type="checkbox"/>	N18007	172.29.1.6	S8607E	255.255.255.252	SNMPV2c	no_pass	test
<input type="checkbox"/>	POEswitch	172.29.3.2	S2928G-12P	255.255.255.0	SNMPV2c	default	default
<input type="checkbox"/>	WS6008	172.29.3.1	WS6008	255.255.255.0	SNMPV2c	default	default

1 Go 10 Item Per Page Total Pages: 1/1 Total Records

Previous **Finish** Cancel

**Plan List** +Realtime Device Sync +

Plan Name	Plan Status	Task Status	Last Run Time	Next Due Time	Operation
planC	<b>valid</b>	not running		2016-05-11 00:00:28	<a href="#">Modify</a> <a href="#">Start Plan</a> <a href="#">Disabled</a>
PlanB	expired	not running	2015-12-31 00:00:12		<a href="#">Modify</a> <a href="#">Delete Plan</a> <a href="#">Start Plan</a> <a href="#">Activate</a>

1 Go 10 Item Per Page Total Pages:

Go to **System >Plan Execution Log >Create Plan** to see if the schedule is executed properly

System > Plan Execution Log

Plan Name:  Start Time:  End Time:  Search Reset

**Log List**

Plan Name	Agreed Start Time	Actual Start Time	Execution End Time
planC	2016-05-10 15:30:48	2016-05-10 15:30:55	2016-05-10 15:31:08
Topo-LinkTest	2016-05-10 15:30:00	2016-05-10 15:30:04	2016-05-10 15:30:04

Go to **Device >Plan List > Plan Name** to see if the schedule is executed properly

Plan Name : planC  
 Plan Status : valid  
 Task Status : not running  
 Last Run Time : 2016-05-10 15:30:55  
 Description :

**Run Log**

Start Time	End Time	Status	Exit Code	Total	Success Number
2016-05-10 15:30:55	2016-05-10 15:31:08	COMPLETED	COMPLETED	6	6

Return

### 5.2.3 Log in Setting

Telnet to device for configuration from SNC. Go to **Device > Device List** enter the device details, click "**Telnet**" button on the left navigation bar.

Navigation Bar: Regular Operation, **Telnet**, Ping, Route Trace, Web, Device Information, Configure Device, Configure Service

Device > Device-**RSR2014E(192.168.1.1)** detail

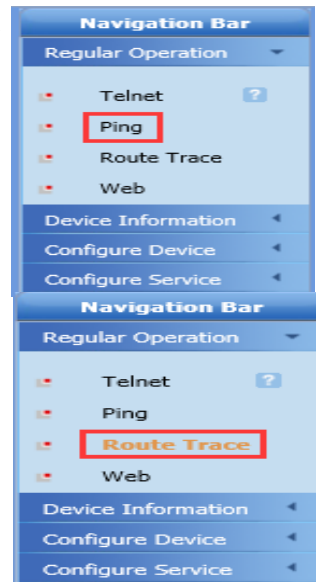
**Device Information**

Green=Administration status UP + working status UP  
 Orange=Administration status UP + working status DOWN  
 Red=Administration status DOWN + working status DOWN

Basic Info	
Name	RSR2014E
Type	Router
Device Vendor	Ruijie Networks
Mask	255.255.255.0
Contact Person	
Runtime	3 days, 1:07:44.25

## 5.2.4 Test the Connectivity of Device

Ping test, go to **Device >Device List** on the device details page, click "**Ping**" on the left navigation bar.



Traceroute test, go to **Device >Device on the device details page**, click "**route tracking**" on the left navigation bar.

Network inspector, go to **Device >Device List >Network Inspector >Real-time Test >Select Device >Start Test**

The image shows two screenshots of the Network Inspector interface. The top screenshot displays a 'Connectivity Test Report List' table with columns for Test Type, Plan Name, Start Time, End Time, Total, Count Of Failure, Count Of Success, and Operation. The 'Realtime Test' button is highlighted with a red box. The bottom screenshot shows the 'Select Device' configuration page with radio buttons for 'All Devices' and 'Select Manually', and checkboxes for 'PING', 'SNMP', and 'Telnet' under the 'Test Mode' section. A 'Start Test' button is visible at the bottom.

Test Type	Plan Name	Start Time	End Time	Total	Count Of Failure	Count Of Success	Operation
Realtime test		2015-06-16 08:36:27	2015-06-16 08:36:49	11	2	9	
Realtime test		2014-11-07 13:47:01	2014-11-07 13:50:15	11	1	10	

Go to **Device >Network Inspector >Periodic Test** and then select the device and test method that needs to be tested, and then click "**start testing**" to create plan.

Device > Periodic Connectivity Test Plan > Create Plan

**Step 1 Basic information**

\* Plan Name :

\* Start Time :

\* End Time :

Set Plan Schedule: every interval

\* Every n minutes:

Description :

Device > Periodic Connectivity Test Plan > Create Plan

IP:  Name:  Vendor:  Model:

**Selected Device List**

<input type="checkbox"/>	Name	IP	Model	Mask	SNMP Template	Telnet Template

Click **"finish"** when complete setting. click on **"active"**, the plan will take effect.

Device > Network Inspector > Periodic Connectivity Test Plan

Plan Name:

**Plan List**

Plan Name	Plan Status	Task Status	Last Run Time	Next Due Time	Operation
PeriodicA	invalid	not running			<input type="button" value="Modify"/> <input type="button" value="Delete Plan"/> <input type="button" value="Start Plan"/> <input checked="" type="button" value="Activate"/>
periodic	expired	not running	2014-11-08 09:12:04		<input type="button" value="Modify"/> <input type="button" value="Delete Plan"/> <input type="button" value="Start Plan"/> <input checked="" type="button" value="Activate"/>

1 Go 10 Item Per Page Total Pages: 1/1 Total 2 Records

After a period of time to see the running time of the program has been changed, that means the plan has already been executed.

**Plan List**

Plan Name	Plan Status	Task Status	Last Run Time	Next Due Time	Operation
PeriodicA	valid	not running		2015-09-21 17:32:20	<input type="button" value="Modify"/> <input type="button" value="Start Plan"/> <input type="button" value="Disabled"/>

## 5.2.5 Management of Device Interface

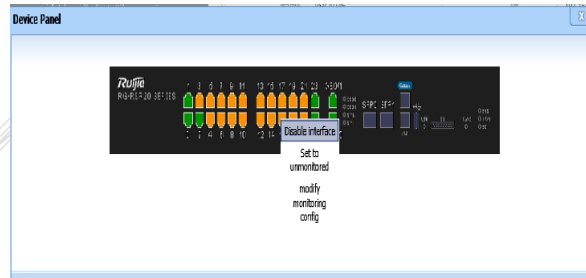
Checking device interface, Go to **Device > Device List**, on device details page, the system will automatically display the device's interface panel on the page, and the color to represent the current status of the device interface.

Device > Device-RSR2014E(192.168.1.1)detail

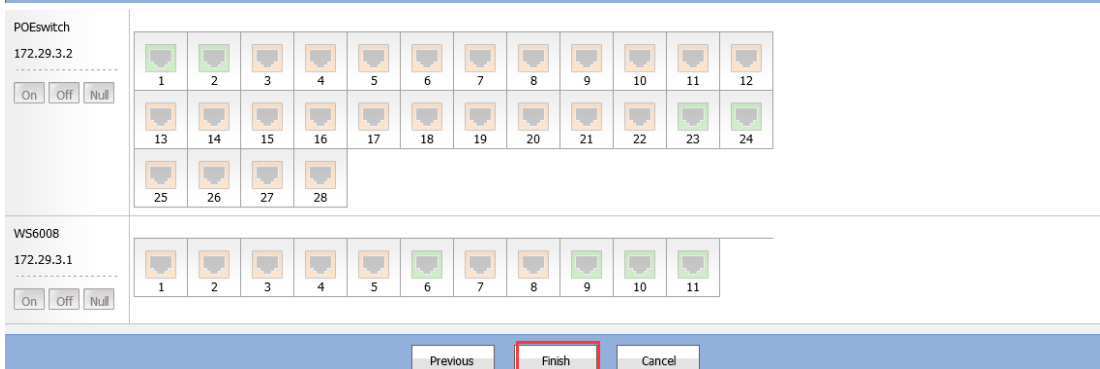
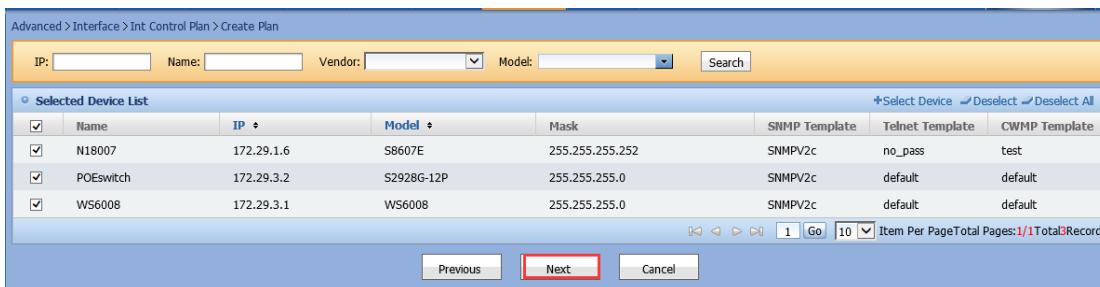
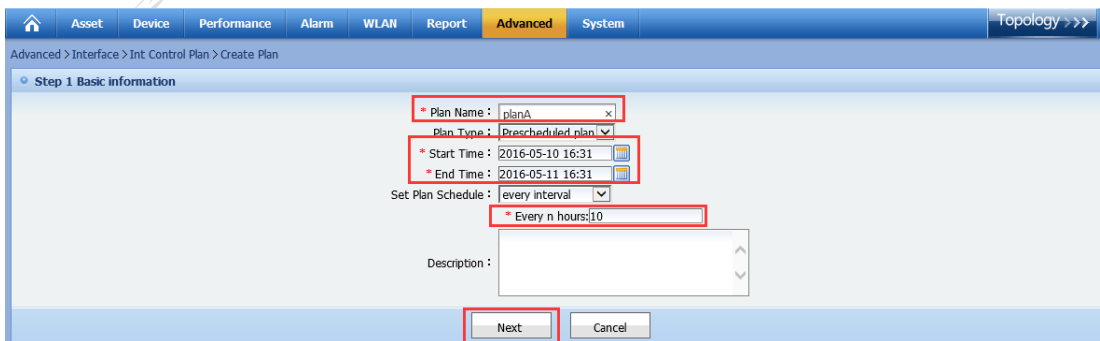
**Device Information**

Int Name	Fa1/18
Int Description	FastEthernet 1/18
Int Type	ethernetCsmacd
Rate	100Mb

Enable and disable Interface, go to **Device > Device List** enter the device details page, right click on the interface of the device panel, select **"disable interface"/or "enable the interface"**

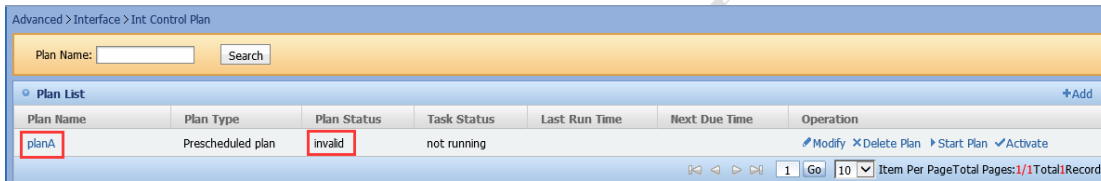


Create interface switching plan, go to **Advanced > Interface > Int Control Plan > Create Plan > Select Device** then select the interface need to enable or disable

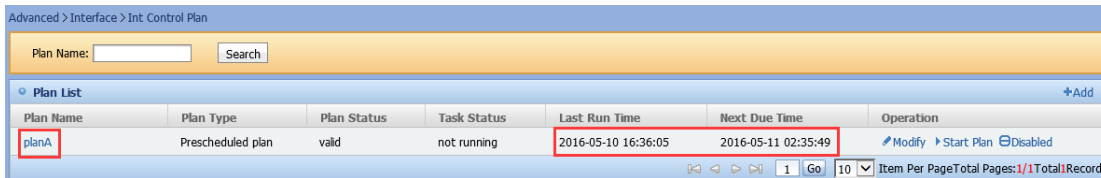


Automatically back to the port switch program page, at this time you need to click on the **"active"**, then the plan will take effect.

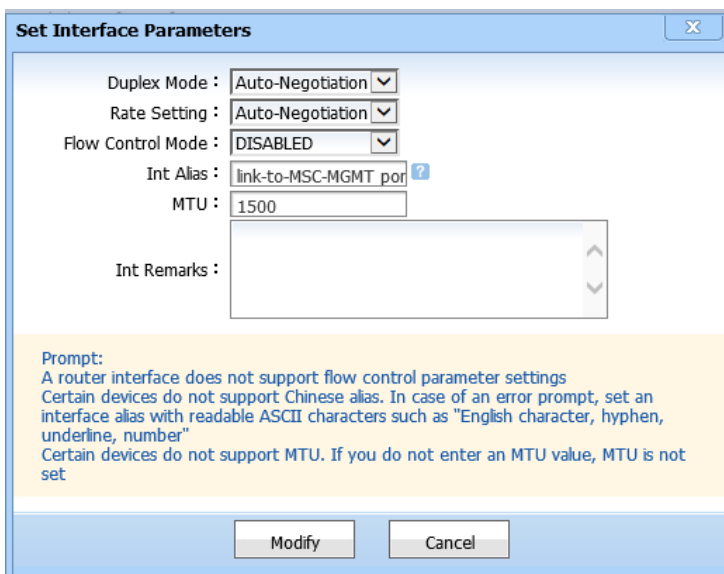
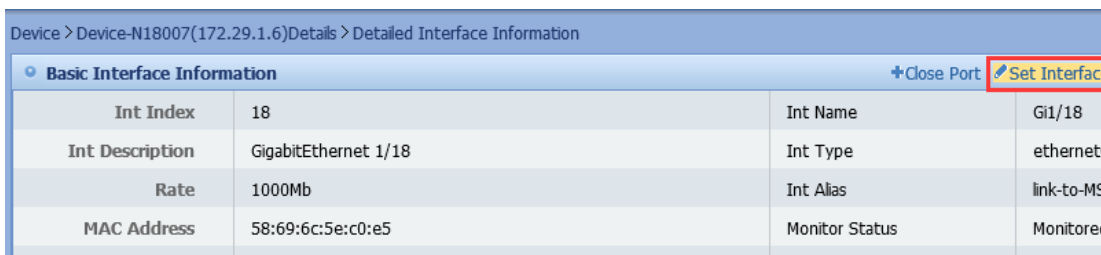




After a period of time, back to the port switch plan page, you can see the running time of the program has changed, there is an executed plan. Click the project name to view the details of the plan.

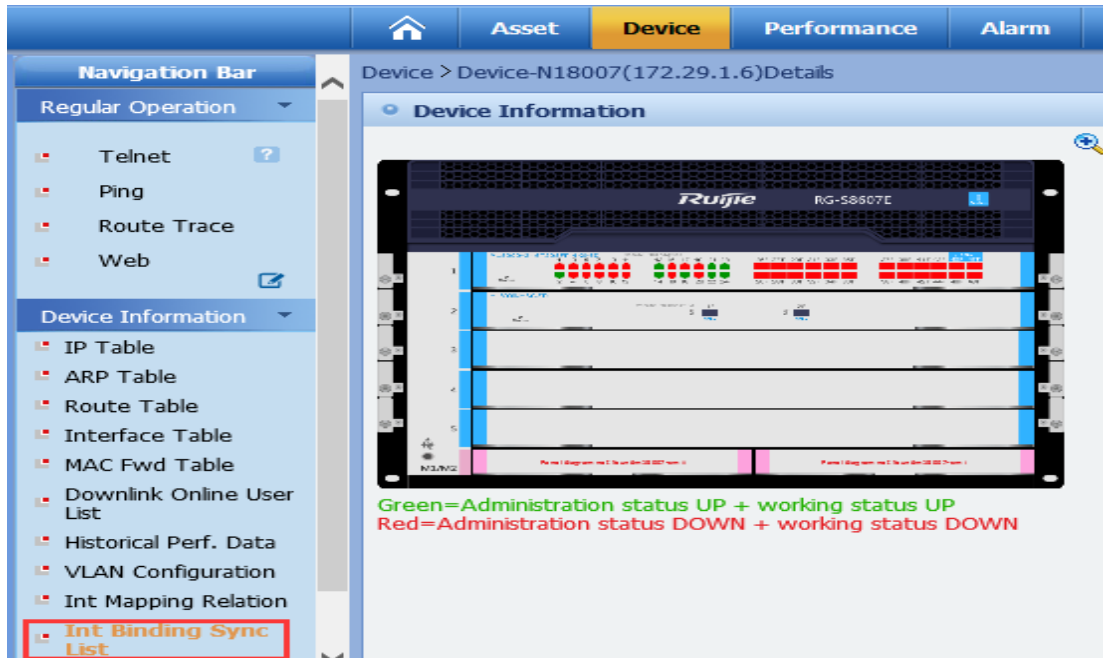


**Interface parameter setting**, go to **Device > Device List** enter the device details page, then click the interface icon, enter the detailed interface information page, then click on the upper right corner of the device **"Set Interface Parameters"**

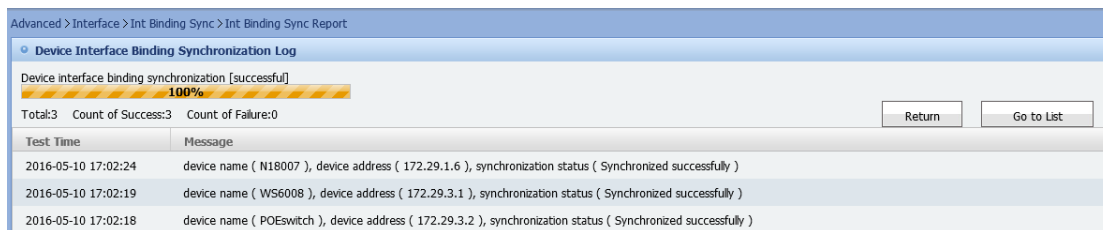
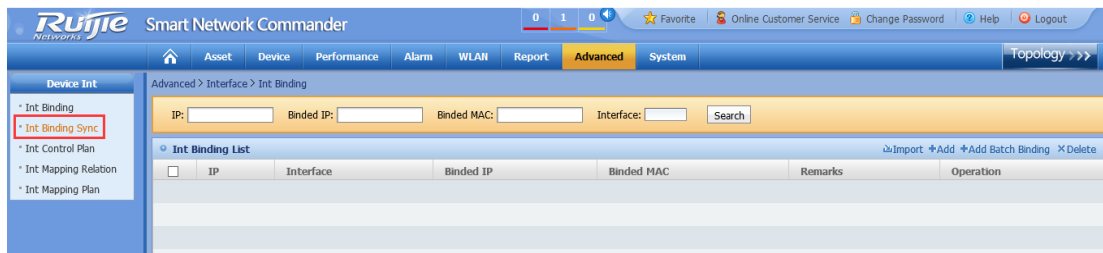


Click **"Modify"** when complete setting.

**Interface binding management**, go to *Device >Device List >Int Binding Sync*, on this page you can see the interface binding on the device that is the port security entry, while the interface binding information can be managed and synchronized.



**Device interface binding synchronization**, go to *Advanced >Interface >Int Binding Sync >Select Device*, then start synchronization.



**Device interface binding**, go to *Advanced >Interface >Int Binding Sync >Add*, then fill in the appropriate information, or click the wizard to select the device to bind the device, and then click "add".

Advanced > Interface > Int Binding > Add Int Binding

**Add Int Binding**

\* IP :  Wizard Setting

\* Interface :

Binded IP :

Binded MAC :  Wizard Setting

Remarks :

**Prompt :**

"Wizard setting" at device IP address field can be used to set a stacked device or high-end device  
 If binded IP is NULL, layer 2 MAC, PORT binding will be used as default.  
 The binded MAC address can be located using "Wizard Setting".  
 You can separate MAC addresses with : or -, for example: 00-1E-4F-C6-8C-25 or 00:1E:4F:C6:8C:25

## 5.3 Device Configuration and Software Version

### 5.3.1 Management of the Device Configuration

When you want to backup device configuration, go to **Device > Device List** and click the appropriate device name to enter the device details page, then click on "**Device Config**", In the device details the left navigation bar, scroll down, and then click on the "**device configuration management**".

Asset > Import Group Tree

**Import Group Tree**

Clear Imported Group and Asset

Device > Device-ServerSwitch(192.168.2.18)detail

**Device Information**

Green=Administration status UP + working status UP  
 Orange=Administration status UP + working status DOWN  
 Red=Administration status DOWN + working status DOWN

**Navigation Bar**

- Regular Operation
  - Telnet
  - Ping
  - Route Trace
  - Web
- Device Information
- Configure Device
- Configure Service
  - Software Backup
  - Software Download
  - Device Config**
  - Business Config
  - Set Monitor Indicator

Advanced > Device&SW > Device Config > Device Configuration

**Device Information**

Device Name : ServerSwitch  
 Device IP : 192.168.2.18

**Device Configuration Setting** [Modify Backup Setting](#) **Backup Device Configuration immediately**

Auto-backup : No

**Single Device Configuration List** [Compare](#) [Import Configuration File](#)

Type	Backup Time	Backup Type	Baseline	File Name	Operation
------	-------------	-------------	----------	-----------	-----------

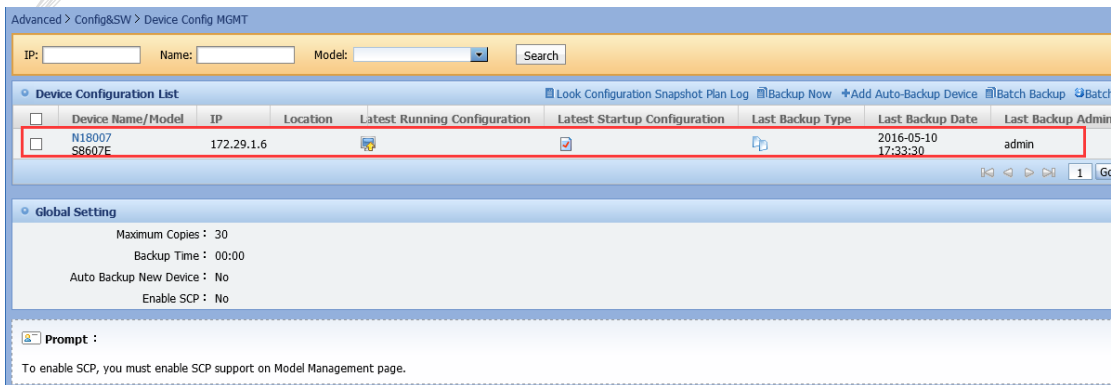
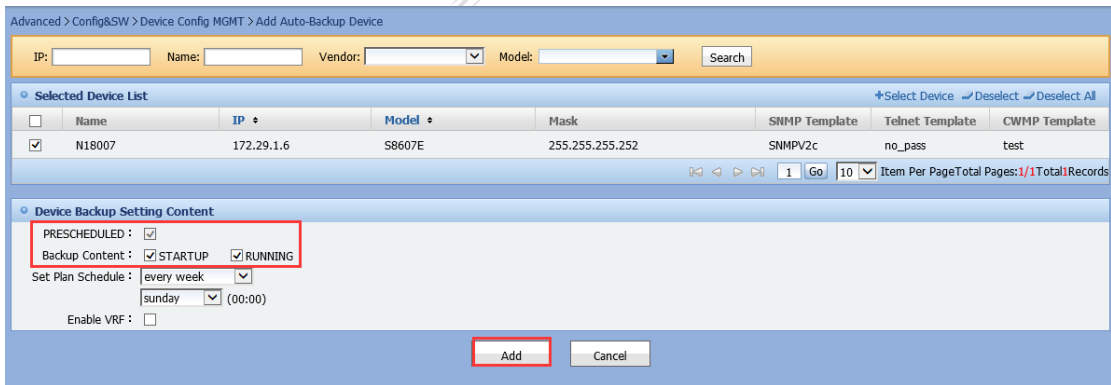
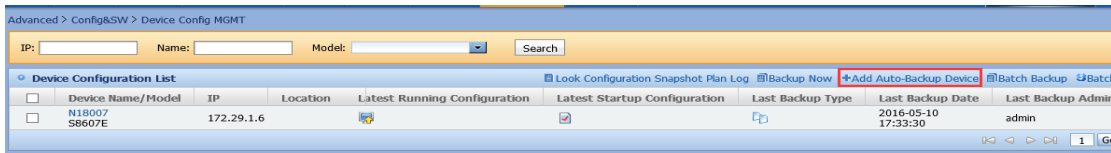
Select the backup option on the below page, click "**Backup**".

**Backup Device Configuration immediately**

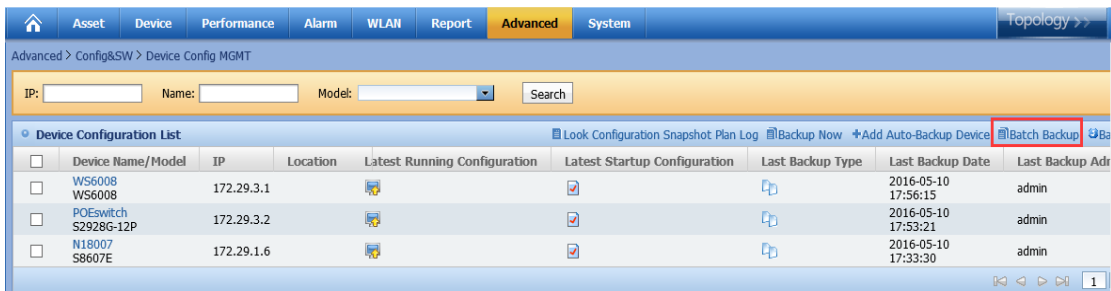
Backup Content :  Startup Config  Running Config  
 Enable VRF :

**Backup** **Cancel**

**Automatic configuration backup**, go to **Advanced >Config & SW >Add Auto-Backup Device >Select Device** and add success will automatically jump to the page of device configuration management.



**bulk configuration backup**, go to **Advanced >Config &SW >Batch Backup** then select the backup content and whether you enable VRF, and then click **backup** in the backup device configuration box in the pop-up".

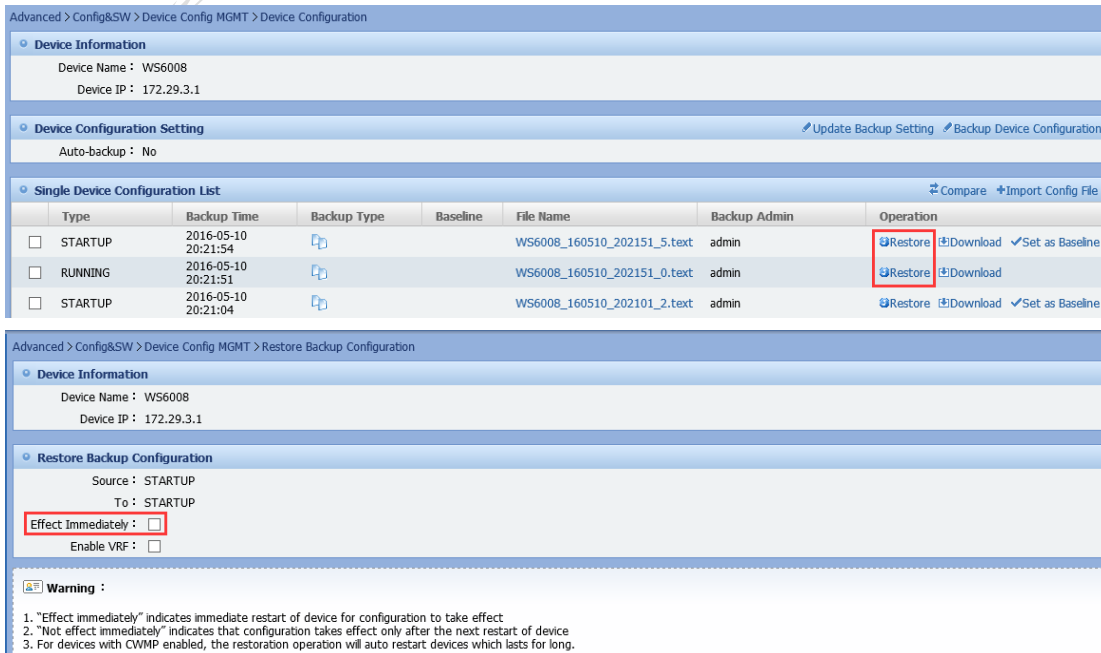




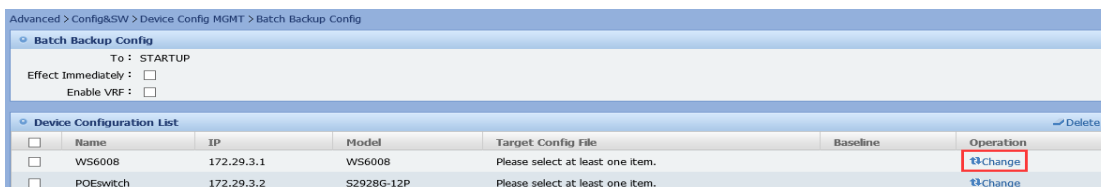
### 5.3.2 Restore Device Configuration

Restore configuration of single device, go to **Advanced > Config & SW** then click the device name to enter the device detailed interface, then go to **Device config > Restore**,

According to the actual situation and needs, determine whether the check "**immediately**".



Batch restore equipment configuration, go to **Advanced > Config & SW > Batch Restore > Change** then select the correct configuration file to restore the current device



Type	Backup Time	Backup Type	Baseline	File Name	Operation
STARTUP	2016-05-10 20:21:54			WS6008_160510_202151_5.text	✓Select
RUNNING	2016-05-10 20:21:51			WS6008_160510_202151_0.text	✓Select
STARTUP	2016-05-10 20:21:04			WS6008_160510_202101_2.text	✓Select
RUNNING	2016-05-10 20:21:01			WS6008_160510_202101_5.text	✓Select
STARTUP	2016-05-10 17:56:18			WS6008_160510_175615_8.text	✓Select
RUNNING	2016-05-10 17:56:15			WS6008_160510_175615_4.text	✓Select

After all the target configuration file is replaced, check the device and click "**restore**"

Advanced > Config8SW > Device Config MGMT > Batch Backup Config

**Batch Backup Config**

To : STARTUP

Effect Immediately :

Enable VRF :

**Device Configuration List** Delete

	Name	IP	Model	Target Config File	Baseline	Operation
<input checked="" type="checkbox"/>	WS6008	172.29.3.1	WS6008	WS6008_160510_202151_5.text		Change  Show Diff Info
<input checked="" type="checkbox"/>	POEswitch	172.29.3.2	S2928G-12P	POEswitch_160510_202150_6.text		Change  Show Diff Info

**Warning :**

1. "Effect immediately" indicates immediate restart of device for configuration to take effect
2. "Not effect immediately" indicates that configuration takes effect only after the next restart of device
3. For devices with CWMIP enabled, the restoration operation will auto restart devices which lasts for long.
4. Only the selected target configuration files will be applied.
5. A target configuration file should be selected, or the restore operation will fail.

The target configuration files are set as baselines by default.

Restore    Return

### 5.3.3 Device software version management

**Restore software version of device**, go to **Device > Device List** then click the appropriate device name to enter the device details page and then go to **Add Software from Device > Update Device Software > Backup**.

Smart Network Commander

Device > Device-POEswitch(172.29.3.2)Details

Device Information

Basic Info

Name	POEswitch	IP
Type	Switch	Model
Device Vendor	Ruijie Networks	SysOID
Mask	255.255.255.0	MAC Address
Contact Person		Device Location
Runtime	36 days, 12:36:04.36	Last Synchronization Time
Connectivity Status	Reachable	Network Management Status
Hardware Version	1.01	Software Version

Green=Administration status UP + working status UP  
Red=Administration status DOWN + working status DOWN

Device > Device detail > Add Software From Device

Basic Info

Name	POEswitch	SysOID	1.3.6.1.4.1.4881.1.1.10.1.156
Type	Switch	Model	S2928G-12P
Device Description	Ruijie Full Gigabit Security & Intelligence Access Switch (S2928G-12P) By Ruijie Networks		
Telnet Template	default	Software Version	RGOS 10.4(2b12)p2 Release(180357)

Additional Information

\*Software List: rgos.bin

Enable SCP: No

Enable VRF:

Update Device Software | Backup | Return

After the completion of the backup, it will automatically jump to the device software management page, you can see the list of software files have been copied to the SNC server.

Advanced > Config&SW > Software MGMT

Name:  Model:  Search

Software List

<input type="checkbox"/>	Name	Software Version	Model	Name In Device	Creation Time	Memo	Operation
<input type="checkbox"/>	1605102109053846.bin	10.4.180357		rgos.bin	2016-05-10 21:09:42	from 172.29.3.2	Update

1 | Go | 10 | Item Per Page Total Pages: 1/1 Total Records

You can log in the device to confirm the software version of the backup.

```

POEswitch#sh version
System description      : Ruijie Full Gigabit Security & Intelligence Access Switch (S2928G-12P) By Ruijie Networks
System start time      : 2016-04-04 8:17:46
System uptime          : 36:12:55:7
System hardware version : 1.01
System software version : RGOS 10.4(2b12)p2 Release(180357)
System BOOT version    : 10.4(2b12)p2 Release(180357)
System CTRL version    : 10.4(2b12)p2 Release(180357)
System serial number   : G1HDC82003208
Device information:
  Device-1
    Hardware version    : 1.01
    Software version    : RGOS 10.4(2b12)p2 Release(180357)
    BOOT version        : 10.4(2b12)p2 Release(180357)
    CTRL version        : 10.4(2b12)p2 Release(180357)
    Serial Number       : G1HDC82003208
  
```

Import Device software version to SNC, go to **Advanced > Config & SW > Software MGMT > From Local > Create**



Advanced > Config&SW > Software MGMT

Name:  Model:  Search

**Software List** [Software Creation Plan](#) [From Local](#) [Delete](#)

Name	Software Version	Model	Name In Device	Creation Time	Memo	Operation
<input type="checkbox"/> 16051021090538 46.bin	10.4.180357		rgos.bin	2016-05-10 21:09:42	from 172.29.3.2	<a href="#">Update</a>

Global Setting: Enable SCP: No [Update Global Setting](#)

---

**From Local**

\* Name:

\* Name In Device:

[Add File](#)

File: rgos.bin  
**Uploading file successful** [Delete](#)

\* Version:

\* Model:

[Add Model](#)

Memo:

**Prompt:**

1. Empty file not saved

[Create](#) [Cancel](#)

Will go back to device software management page, then you can see the imported file already list here.

Advanced > Config&SW > Software MGMT

Name:  Model:  Search

**Software List** [Software Creation Plan](#) [From Local](#) [Delete](#)

Name	Software Version	Model	Name In Device	Creation Time	Memo	Operation
<input type="checkbox"/> 16051021090538 46.bin	10.4.180357		rgos.bin	2016-05-10 21:09:42	from 172.29.3.2	<a href="#">Update</a>
<input type="checkbox"/> 10.4(3)	10.4.161753	S5750-24GT/12SFP S5750P-24GT/12SFP S5750-24SFP/12GT S5750-48GT/4SFP S5750P-48GT/4SFP S5750E-24SFP/12GT	rgos.bin	2016-05-11 14:15:08		<a href="#">Update</a>

Distribute configuration command of device, go to **Advanced > Service > Config Template Library > Add**, on template definition page, input template name, then click the associated command in the command list.

Advanced > Service > Config Template Library > Template Info

**Template Info**

\* Template Name:

Description:

Compatibility: Ruijie Networks;

**Compatibility Info** [Add Template](#)

Vendor	Type	Series	Model	Template Protocol	Operation
Ruijie Networks				TELNET	<a href="#">Update</a> <a href="#">Delete</a>

Business configuration schedule, go to **Advanced >Service >Service Plan >Add >Select Template >Select Device >Finish**, then click start plan

Advanced > Service > Service Plan > Create Plan

Select Template → Select Device → Set Parameter → Configure Task

Select Template +Select Template

Template Name	Compatible Info	Built-in	Description	Operation

Select Device X

IP:  Name:  Vendor:  Model:  Search

+Add +Add All

<input type="checkbox"/>	Name	IP	Model	Mask	SNMP Template	Telnet Template	CWMP Template
<input type="checkbox"/>	N18007	172.29.1.6	S8607E	255.255.255.252	SNMPV2c	no_pass	test
<input checked="" type="checkbox"/>	POEswitch	172.29.3.2	S2928G-12P	255.255.255.0	SNMPV2c	default	default
<input type="checkbox"/>	WS6008	172.29.3.1	WS6008	255.255.255.0	SNMPV2c	default	default

1 Go 10 Item Per Page Total Pages: 1/1 Total Records

Plan Setting

\* Plan Name :  X

Plan Type :

Description :

Previous Finish Cancel

Plan Name :  Search

Plan List +Add

Plan Name	Plan Type	Plan Status	Task Status	Last Run Time	Next Due Time	Operation
planA	Manual plan	valid	not running			Modify Delete Plan Start Plan

1 Go 10 Item Per Page Total Pages: 1/1 Total Records

## 5.4 Terminal management

Modify terminal, go to **Device >Terminal List > Add /Update /Delete**, then set the terminal.

Smart Network Commander

Device Performance Alarm Report WLAN Advanced System

Device

- Device List
- Add Device
- Custom Extended Info
- Device Autodiscovery
- Network Inspector
- Device Template
- Batch Device Sync

IP Camera

- IP Camera

Terminal

- Terminal List**
- Subnet Statistic

Device > Terminal List

Name: IP: MAC: Uplink IP: Online User: Show online users only: Terminal Type: Creation Time: Search

**Terminal List** +Add X Delete

Name	Terminal Type	Terminal Source	IP	MAC	Uplink IP	Binded	Online Status
172.18.84.221	PC	WLAN	172.18.84.221	b0:9f:ba:3b:63:2b	55.55.55.51	No	Online
172.18.83.240	PC	WLAN	172.18.83.240	50:2e:5c:c6:aa:6e	55.55.55.51	No	Offline
172.18.84.83	PC	WLAN	172.18.84.83	54:9f:13:42:20:f8	55.55.55.51	No	Offline
172.18.84.67	PC	WLAN	172.18.84.67	7c:1d:d9:3f:35:57	55.55.55.51	No	Offline
172.18.83.153	PC	WLAN	172.18.83.153	98:6c:f5:1f:20:dc	55.55.55.51	No	Online

### Add Terminal

\* Name : Banana

\* Terminal Type : PC

\* IP : 192.168.1.123

\* MAC : C4-8E-8F-A8-4A-75

\* Uplink IP : 192.168.1.254

\* Uplink Port : 24

\* Subnet Mask : 255.255.255.0

Contact Person : Apple

Telephone :

Address :

Remarks :

Add Cancel

View terminal information, go to **Device > Terminal List** then select a row of terminal information, can view information terminal.

Copyright of Ruijie Networks Technical Service Hotline: 4008-111-000(IE7, IE8, IE9 are supported. The default resolution is 1024\*768, but 1280\*1024 is highly recommended)

Click the terminal name link to see the terminal details. As shown below:

Copyright of Ruijie Networks Technical Service Hotline: 4008-111-000(IE7, IE8, IE9 are supported. The default resolution is 1024\*768, but 1280\*1024 is highly recommended)

Import and export terminal information, go to **Device >Terminal List >Import >Select Import File** ,

Device > Terminal List

Name:  IP:  MAC:   
Uplink IP:  Online User:  Show online users only:   
Terminal Type:  Creation Time:

Prompt: If a terminal in the list does not have an uplink device IP or port, the system searches for uplink uplink device IP and port and identifies them with \* at the beginning

Terminal List +Add ✕Delete +Bind ✕Unbind ⌂Sync ↗IP,MAC Collision Detection ↗More

<input type="checkbox"/>	Name	Terminal Type	Terminal Source	IP	MAC	Uplink IP	Binded	Online Status	Online User	User Name	Online Time	<input type="button" value="Import"/>
<input type="checkbox"/>	172.18.84.221			172.18.84.221	b09fba:3b63:2b	55.55.55.51	No		Online			<input type="button" value="Export All"/>

Device > Terminal > Terminal Import

**Terminal Import**

**Prompt :**

Only CSV files can be imported.  
Click to Download [Template file](#)

IP/MAC binding, go to **Device >Terminal List >Select terminal >Bind\Unbind**,

Device > Terminal List

Name:  IP:  MAC:   
Uplink IP:  Online User:  Show online users only:   
Terminal Type:  Creation Time:

Prompt: If a terminal in the list does not have an uplink device IP or port, the system searches for uplink uplink device IP and port and identifies them with \* at the beginning

Terminal List +Add ✕Delete **Bind** ✕Unbind ⌂Sync ↗IP,MAC Collision Detection

<input type="checkbox"/>	Name	Terminal Type	Terminal Source	IP	MAC	Uplink IP	Binded	Online Status	Online User	User Name	Online Time	Op
--------------------------	------	---------------	-----------------	----	-----	-----------	--------	---------------	-------------	-----------	-------------	----

IP/MAC exception detection, go to **Device >Terminal List >MAC-to-IPS /IP-to-MACs**,

Device > Terminal List

Name:  IP:  MAC:   
 Uplink IP:  Online User:  Show online users only:   
 Terminal Type:  Creation Time:  Search

**Prompt:** If a terminal in the list does not have an uplink device IP or port, the system searches for uplink uplink device IP and port and identifies them with \* at the beginning

**Terminal List** ⊕ Add ⊖ Delete ⊕ Bind ⊖ Unbind ⊕ Sync IP, MAC Collision Detection More

<input type="checkbox"/>	Name	Terminal Type	Terminal Source	IP	MAC	Uplink IP	Binded	Online Status	Online User	User Name	MAC-to-IPs	Operation
<input type="checkbox"/>	172.18.84.221			172.18.84.221	b0:9f:ba:3c:63:2b	55.55.55.51	No	OFFLINE			IP-to-MACs	Update
<input type="checkbox"/>	172.18.83.240			172.18.83.240	50:2e:5c:c6:aa:6e	55.55.55.51	No	OFFLINE				Update

Subnet statistics, go to **Device > Subnet statistics > Sync**.

Device > Subnet Statistics

**Prompt :**  
 The IP addresses used by a device include the device IP address, device management IP address, and IP address in the IP address table. Terminal utilization includes all terminals within the subnet IP segment. It is possible that a terminal is shown in multiple subnets. Class-B subnets or subnet with non-subnet will not be shown in the list. Based on the actual network environment, the "Sync Device Subnet" operation might consume longer time, please be patient.

**Subnet Statistics** ⊕ Sync ⊕ Update

Subnet IP	Subnet Mask	Total Available IP	Used IP	Idle IP	IP Utilization(%)	Terminal Utilization(%)	Device Utilization(%)
172.29.3.0	255.255.255.0	254	3	251	1.18	0.0	1.18
172.29.6.0	255.255.255.0	254	5	249	1.97	1.18	0.79
10.10.10.0	255.255.255.0	254	2	252	0.79	0.0	0.79
172.29.7.0	255.255.255.0	254	4	250	1.57	0.79	0.79
192.168.110.0	255.255.255.0	254	2	252	0.79	0.0	0.79
10.20.12.0	255.255.255.0	254	0	254	0.0	0.0	0.0
172.29.5.0	255.255.255.0	254	1	253	0.39	0.0	0.39
172.29.2.0	255.255.255.0	254	1	253	0.39	0.0	0.39

In the sub network usage statistics list page, select the remaining available IP number of this column, click the available IP number of 251, you can enter the available IP list :

Device > Subnet Statistics

**Prompt :**  
 The IP addresses used by a device include the device IP address, device management IP address, and IP address in the IP address table. Terminal utilization includes all terminals within the subnet IP segment. It is possible that a terminal is shown in multiple subnets. Class-B subnets or subnet with non-subnet will not be shown in the list. Based on the actual network environment, the "Sync Device Subnet" operation might consume longer time, please be patient.

**Subnet Statistics** ⊕ Sync ⊕ Update

Subnet IP	Subnet Mask	Total Available IP	Used IP	Idle IP	IP Utilization(%)	Terminal Utilization(%)	Device Utilization(%)
172.29.3.0	255.255.255.0	254	3	251	1.18	0.0	1.18
172.29.6.0	255.255.255.0	254	5	249	1.97	1.18	0.79
10.10.10.0	255.255.255.0	254	2	252	0.79	0.0	0.79
172.29.7.0	255.255.255.0	254	4	250	1.57	0.79	0.79
192.168.110.0	255.255.255.0	254	2	252	0.79	0.0	0.79
10.20.12.0	255.255.255.0	254	0	254	0.0	0.0	0.0
172.29.5.0	255.255.255.0	254	1	253	0.39	0.0	0.39
172.29.2.0	255.255.255.0	254	1	253	0.39	0.0	0.39
172.29.4.0	255.255.255.0	254	1	253	0.39	0.0	0.39

In the sub network usage statistics list page, select the PC usage, click the usage rate, you can enter the PC list :

**Subnet Statistics** ⊕ Sync ⊕ Update

Subnet IP	Subnet Mask	Total Available IP	Used IP	Idle IP	IP Utilization(%)	Terminal Utilization(%)	Device Utilization(%)
172.29.3.0	255.255.255.0	254	3	251	1.18	0.0	1.18
172.29.6.0	255.255.255.0	254	5	249	1.97	1.18	0.79

In the sub network usage statistics list page, select the device usage rate column, click on the use of the rate, you can enter the device

115.58.0.0	522.522.522.0	524	2	540	1'18	1'18	0'30
115.58.3.0	522.522.522.0	524	3	521	1'18	0'0	1'18
Subnet IP	Subnet Mask	Total Available IP	Used IP	Idle IP	IP Utilization (%)	Terminal Utilization (%)	Device Utilization (%)

## 5.5 Management of The Device model, series

Query manufacturer, go to **System > Device Vendor**, then click the Add button to add a page, as shown in the following diagram:

**Add Vendor**

\* Name :

\* Short Name :

Contact :

Vendor Logo :

Upload vendor logo :

Description :

**Prompt:**  
Note: the width and height of uploaded vendor logo image should be no more than 18 pixels, the file size should be less than or equal to 10KB and the valid file type is jpg, gif or png.

Select a device vendor record, click the "operation" column of the "modify" link to modify the device vendor page, as shown below :

**Update Vendor**

\* Name :

\* Short Name :

Contact :

Vendor Logo :

Upload vendor logo :

Description :

**Prompt:**  
Note: the width and height of uploaded vendor logo image should be no more than 18 pixels, the file size should be less than or equal to 10KB and the valid file type is jpg, gif or png.

Enter the equipment vendor management page, select to delete the record of equipment manufacturers, click the "**delete**" button, as shown :

System > Device Vendor

Name:  Search

Device Vendor List						+Add	X Delete
<input type="checkbox"/>	Name	Short Name	Contact	Description	Operation		
<input checked="" type="checkbox"/>	Uniview	Uniview			Update		
<input type="checkbox"/>	Zyxel	Zyxel			Update		
<input type="checkbox"/>	Yamaha	Yamaha			Update		
<input type="checkbox"/>	Xyplex	Xyplex			Update		
<input type="checkbox"/>	Xylogics	Xylogics			Update		
<input type="checkbox"/>	Xedia	Xedia			Update		
<input type="checkbox"/>	Wyse Technology	Wyse Technology			Update		
<input type="checkbox"/>	Wiesemann & Theis	Wiesemann & Theis			Update		
<input type="checkbox"/>	Western Multiplex	Western Multiplex			Update		
<input type="checkbox"/>	Vnetek Communications	Vnetek Communications			Update		

**Model management**, go to **System >Device Model**, then Select at least one device type record, click the delete button, the system will perform the delete operation.

Device Model List										+Add	X Delete
<input type="checkbox"/>	Device Model Name	Vendor	Device Type	System OID	OS	Port Count	SCP Support	Type	Operation		
<input type="checkbox"/>	S9620	Ruijie Networks	Switch	1.3.6.1.4.1.4881.1.1.10.1.4 6	rgnos		No	Predefined	Update		
<input type="checkbox"/>	S8606	Ruijie Networks	Switch	1.3.6.1.4.1.4881.1.1.10.1.4 3	rgnos		No	Predefined	Update		
<input type="checkbox"/>	S8610	Ruijie Networks	Switch	1.3.6.1.4.1.4881.1.1.10.1.4 4	rgnos		No	Predefined	Update		

In the list, click the name of the model, and can view the information of the device type.

**Device Model Detail** X

Device Model Name : S9620  
 System OID : 1.3.6.1.4.1.4881.1.1.10.1.46  
 Device Type : Switch  
 Vendor : Ruijie Networks  
 Device Series : S96  
 Product ID : 20060022  
 SCP Support : No  
 HTTP Protocol : http  
 HTTP Port : 80  
 Default Homepage :  
 Type : Predefined  
 Remarks :

Click the "**Add**" button to add the page and then fill in the device Model information.



**Add Device Model**

\* Device Model Name :

\* System OID :

Vendor : UNKNOWN

\* Device Series : UNKNOWN

Device Type : Unknown

Add ID

Product ID :

SCP Support :

HTTP Protocol :  HTTP  HTTPS

HTTP Port : 80

Default Homepage :

Remarks :

Save Cancel

Click the "**Update**" button to update device model.

', 'HTTP Protocol :  HTTP  HTTPS', 'HTTP Port : 80', 'Default Homepage : ', and 'Remarks : '. At the bottom, there are 'Add ID', 'Save', and 'Cancel' buttons. The 'Save' button is highlighted with a red rectangle."/>

**Update Device Model**

Device Model Name : S9620

System OID : 1.3.6.1.4.1.4881.1.1.10.1.46

Vendor : Ruijie Networks

Device Series : S96

Device Type : Switch

Add ID

Product ID : 20060022

SCP Support :

HTTP Protocol :  HTTP  HTTPS

HTTP Port : 80

Default Homepage :

Remarks :

Save Cancel

**Device category list**, go to **System >Device Type**, then select at least one device type record, click the delete button, the system will perform the delete operation.

System > Device Type

Device Type Code:  Type:  Search

Device Type List						+Add	X Delete
<input type="checkbox"/>	Device Type Code	Device Type Name	Type	Description	Operation		
	ROUTER	Router	Predefined				
	SWITCH	Switch	Predefined				
	UNKNOWN	Unknown	Predefined				

In the list, click the name of the model, and can view the information of the device type.

**Device Type Detail** [X]

Device Type Name : Router  
 Device Type Code : ROUTER  
 Type : Predefined  
 Description :

Cancel

Click the "Add" button to add device category, and then fill in the type of device information. As shown below:

**Add Device Type** [X]

\* Device Type Name :   
 \* Device Type Code :   
 Description :

Save Cancel

Query equipment series, go to **System >Device Series** ,then click the Add button to add the device series.

**Add Device Series**

\* Device Series Name :

\* Vendor : Ruijie Networks

\* Device Type : Router

Description :

Save Cancel

Select the device to delete records, click the "**delete**" button, as shown below:

System > Device Series

Device Series Name:  Vendor:  Search Reset

Device Series List						+Add X Delete
<input type="checkbox"/>	Device Series Name	Vendor	Device Type	Type	Description	Operation
<input type="checkbox"/>	DES-7200	Ruijie Networks	Switch	Predefined		
<input type="checkbox"/>	DGS-3610	Ruijie Networks	Switch	Predefined		
<input type="checkbox"/>	OSM8500	Ruijie Networks	Switch	Predefined		

Click the browse detailed information recording equipment series link, enter the details page, shown in the following diagram:

**Device Series Detail**

Device Series Name : DES-7200

Vendor : Ruijie Networks

Device Type : Switch

Type : Predefined

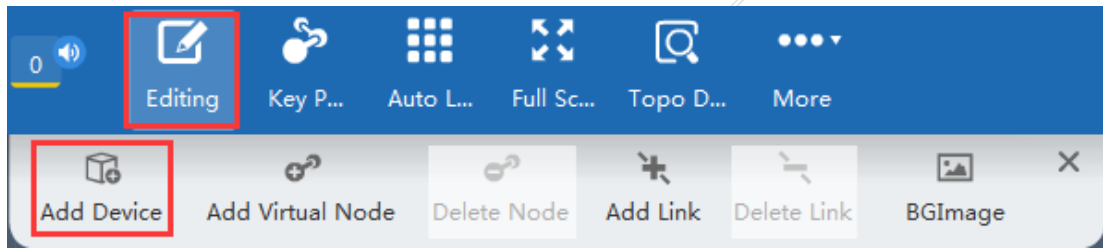
Description :

Cancel

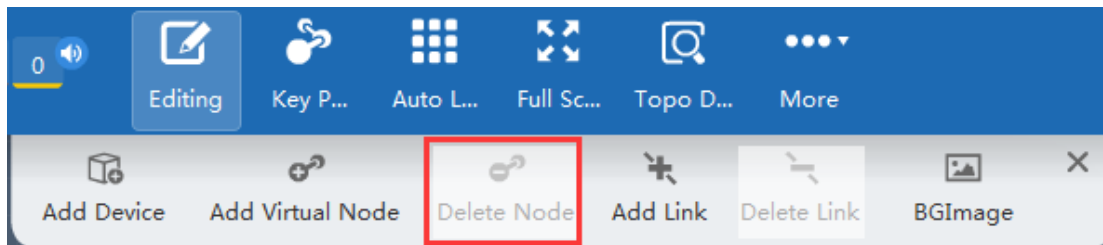
## 5.6 Topology Management

### 5.6.1 Topology Edit

Add Device: click **Edit, add device button**

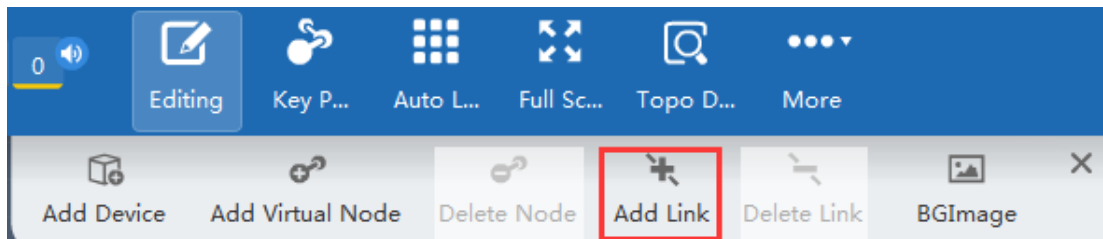


Delete node: select a node, click Edit, delete node button

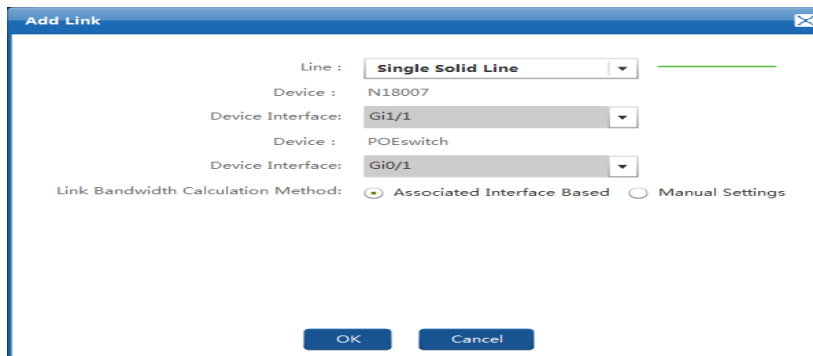


Add link

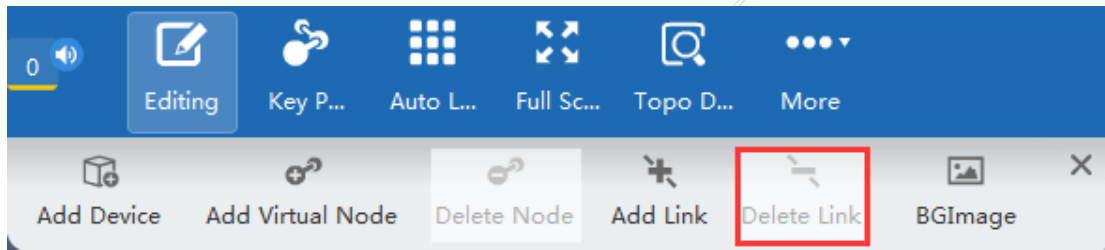
- a) Select a node, click **Edit**, and **add the link button**.



- b) Drag the cursor, click the target node, in the pop-up dialog box input line, node link interface, etc.

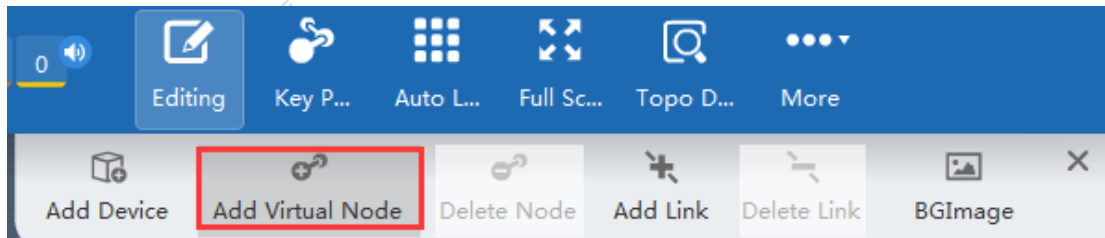


Delete link: select a link, click **Edit**, **delete link** button.

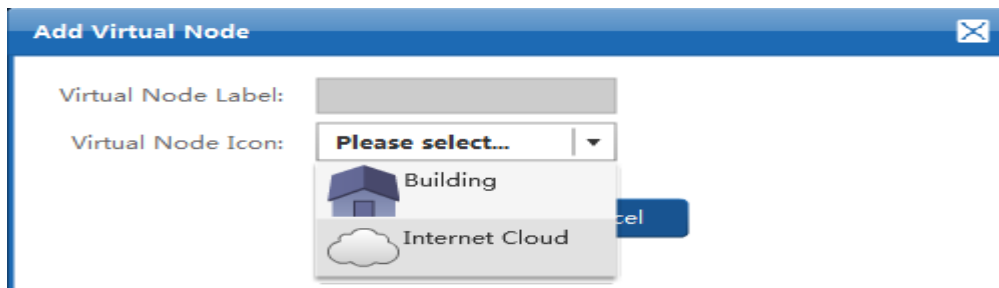


Add virtual node

- 1) Click **Edit**, **add virtual node**



- 2) In the pop-up dialog box, enter the virtual node tab, select the node icon

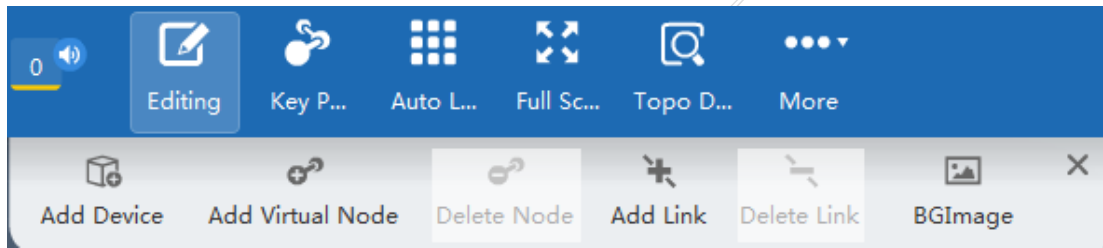


- 3) Add virtual nodes as shown in Figure



Custom background map

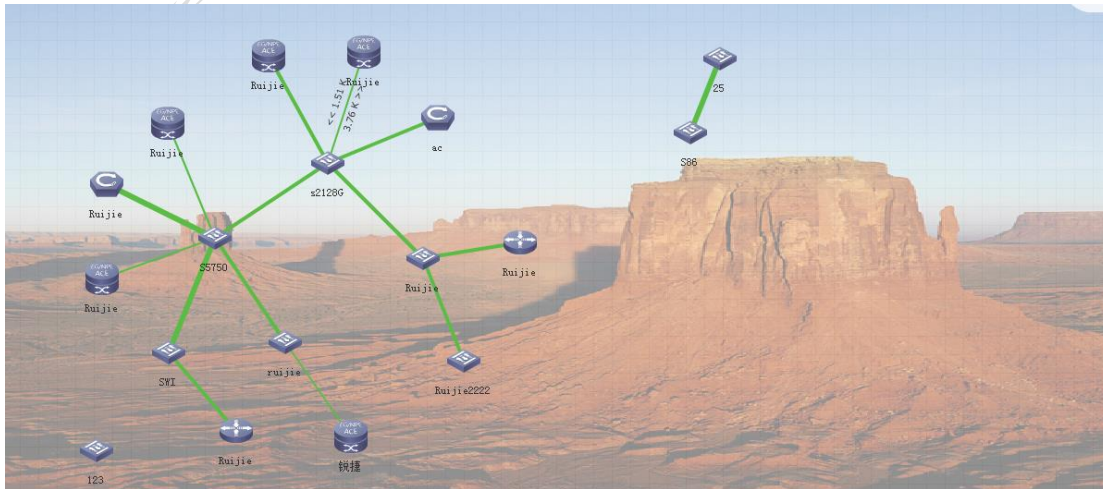
- 1) Click **Edit**, custom background map



2) Click **browse**, upload pictures, save

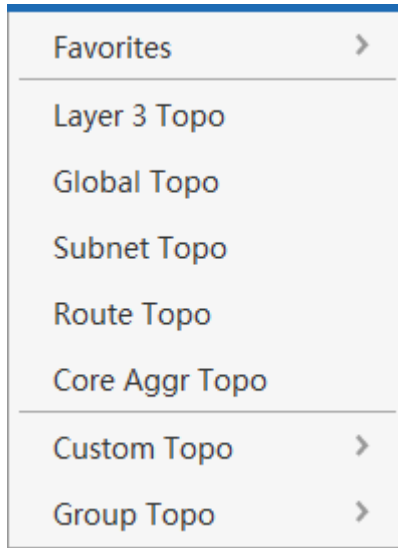


3) topology after background picture uploaded



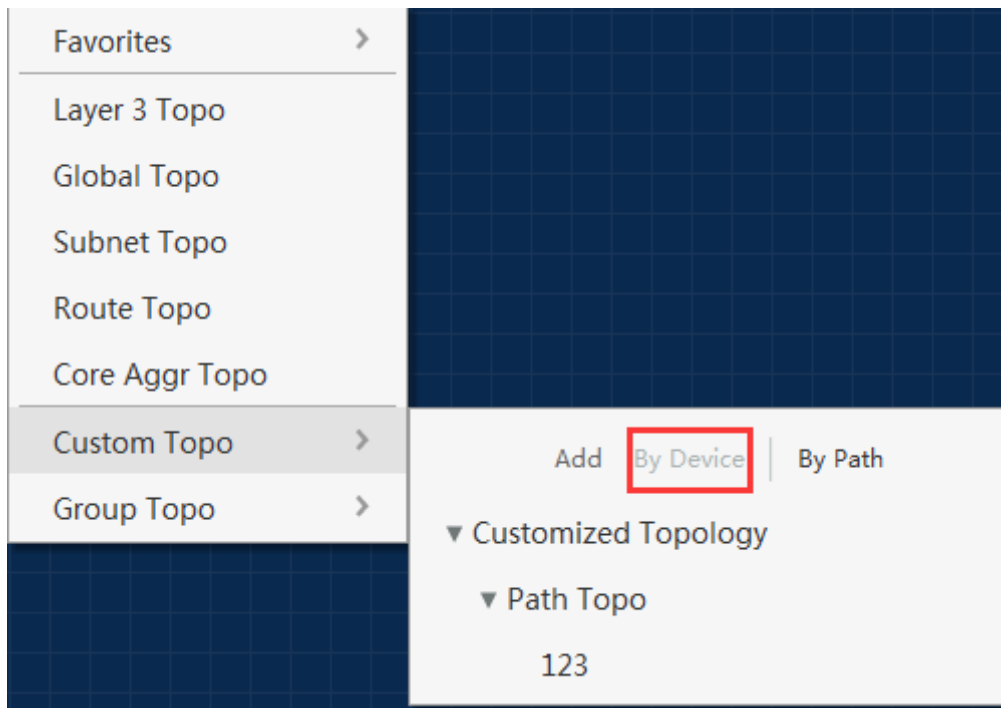
## 5.6.2 Topology Management

The system has the following topological views by default. the layer 3 topology, the whole network topology, network topology, routing topology, core aggregation topology



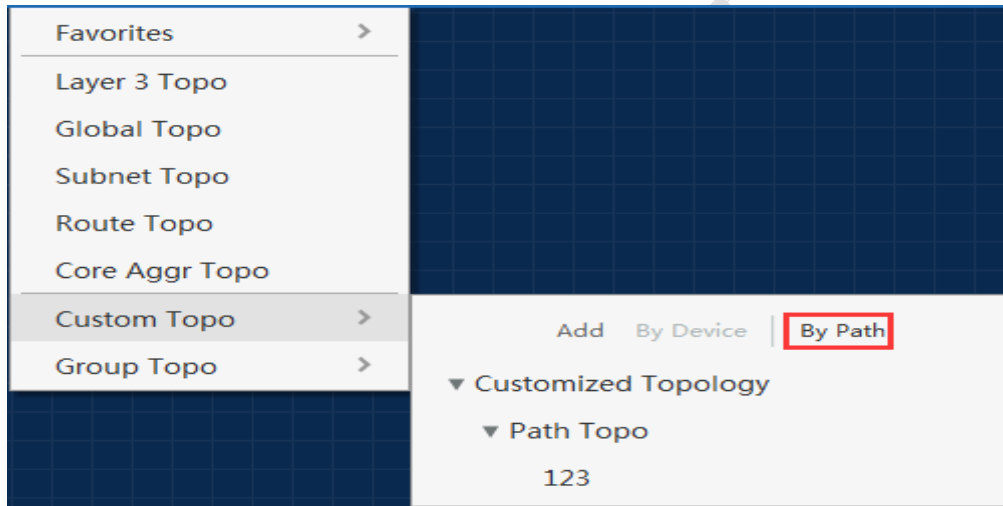
1. Custom topology

1) Custom topology, click on the corresponding tree node, according to the device to create

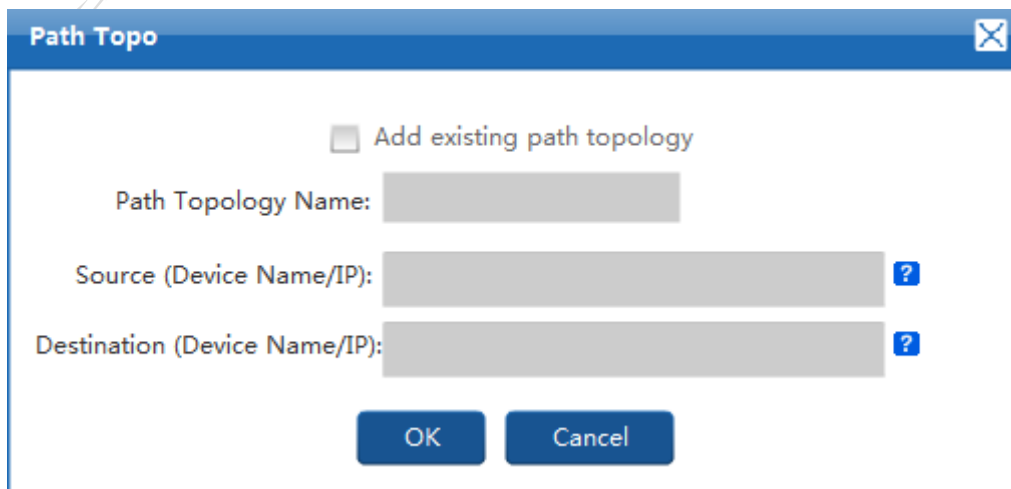


2) Enter the view name, select the device, and click Add.

3) Custom topology, by path creation



4) Enter the topological name, source IP, destination IP, determine



Create success



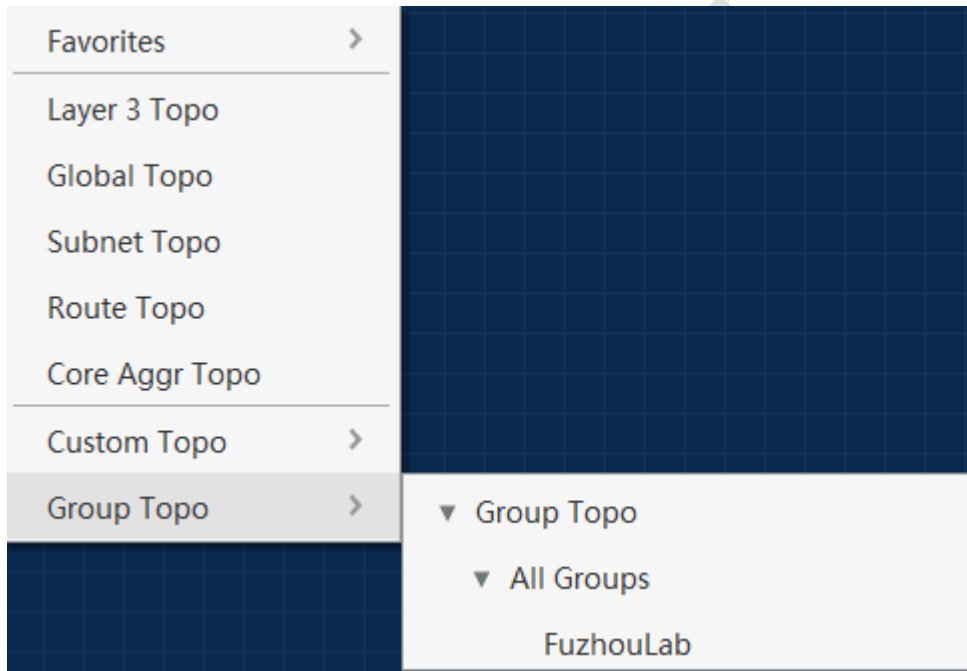


## 2. Grouped topology

1) Assets in the group for revision



2) Grouping structure, and the device will be synchronized to the grouping topology



### 3. Set home topology view

- 1) In the corresponding view, check the icon of the house, then set the home view to take effect



Default access to the home page after entering the topology

### 4. Save view

- 1) In the corresponding view, check the star standard, the save view into effect



## 5.6.3 Other Topology Operation

### 1. Critical path detection

- 1) On the menu bar, click on the critical path, enter the source IP, IP, which is divided into immediate and periodic detection.



**Key Path Detection**

Source(IP or name):  ?

Enable VRF

Dest.(Device/terminal IP or name):  ?

**Detect Now** **Add to Periodical Detection**

Period: 5 Min **Set** Run Plan Last Execution Next Execution

SN	Source(Name or IP)	Dest.(Name or IP)	VRF Name	Last Execution Result	Operation
1	VSU-S57[172.29.3.254]	218.85.157.99		ping unreachable	⬆️ ⬆️ ⬆️
2	POE-Switch[172.29.3.17]	218.85.157.99		ping unreachable	⬆️ ⬆️ ⬆️

Ping and traceroute are required for key path detection. Please wait.

2) This is the result of detection.

**Detection Result**

Ping:Connectable **Add to Periodical Detection**

TraceRoute Result:

```

traceroute 172.29.3.2
%< press Ctrl+C to break >
Tracing the route to 172.29.3.2
 0  172.29.3.1  218.85.157.99  218.85.157.99
 1  172.29.3.2  <1 msec  <1 msec  <1 msec
N18007#
  
```

**OK**

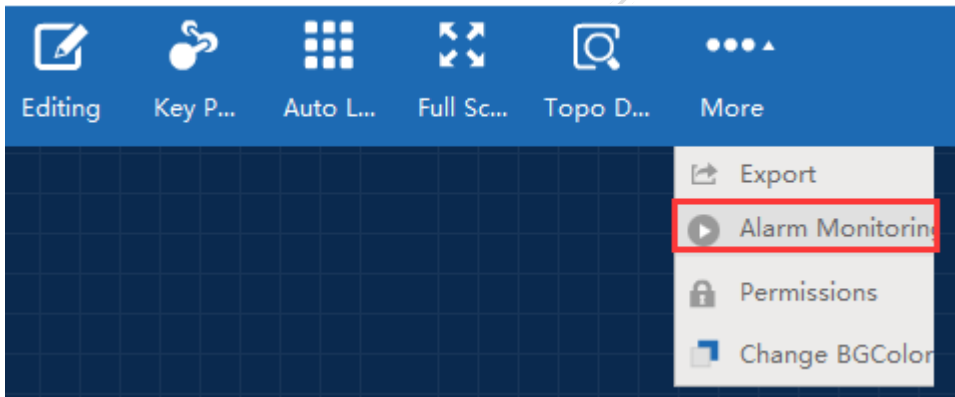
3) Add cycle detection, we can set the detection cycle

Period: 5 Min **Set** Run Plan Last Execution Next Execution

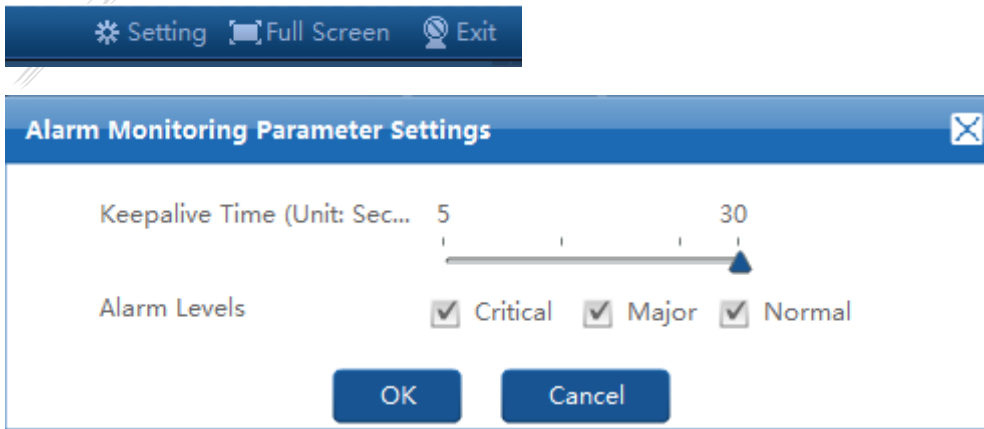
SN	Source(Name or IP)	Dest.(Name or IP)	VRF Name	Last Execution Result	Operation
1	VSU-S57[172.29.3.254]	218.85.157.99		ping unreachable	⬆️ ⬆️ ⬆️

## 2. Alarm carousel

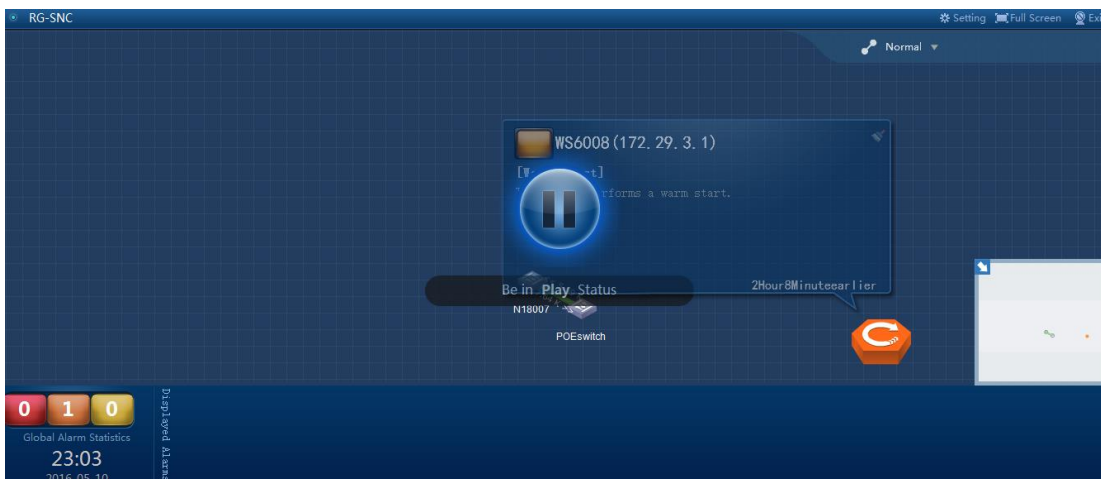
1) On the menu bar click alarm carousel, enter the carousel pattern



2) Click the right upper corner of the setting, can set the keep alive time, the display of the alarm level

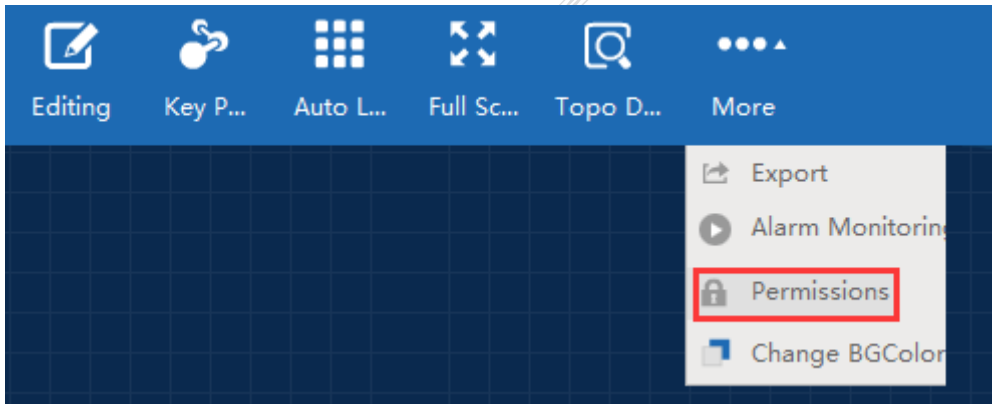


3) Carousel effect as below

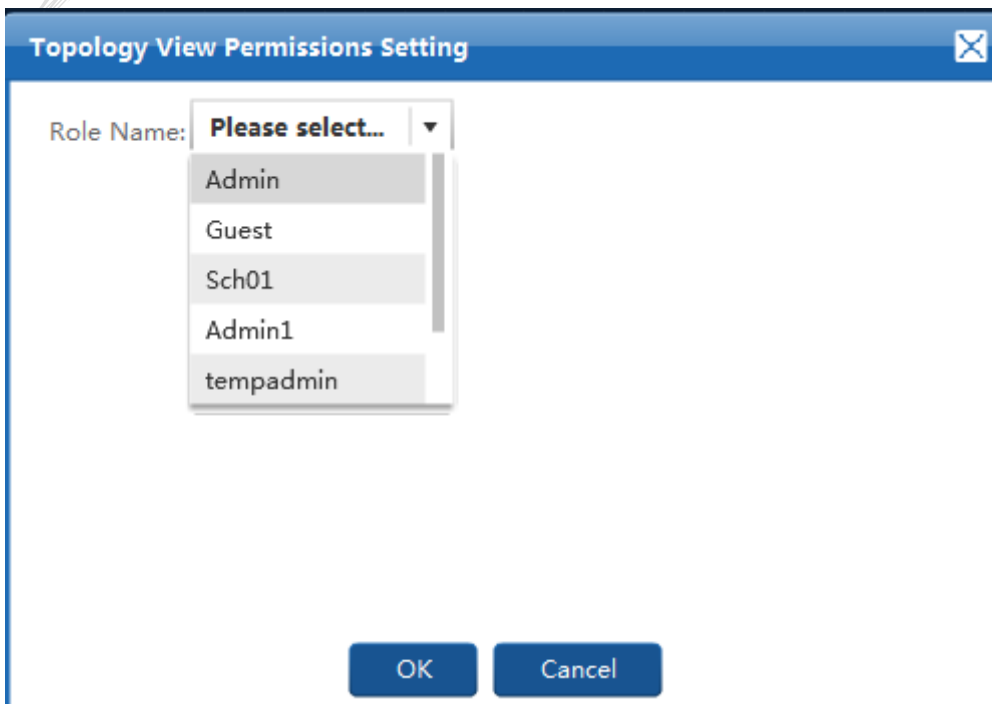


### 3. Permission settings

1) Click on the permissions settings, permissions can be set corresponding to the role of topology



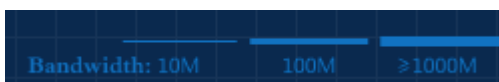
2) Select the role to whom the topology view is visible.



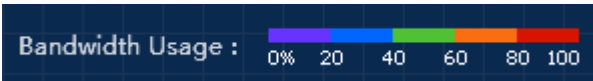
### 4. The administrator login can only see the topology view which he has the permission

### 5. Normal and traffic mode

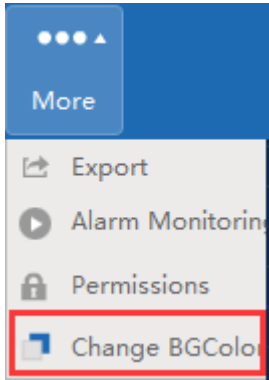
1) Normal mode, with the line of the thickness of the representative bandwidth



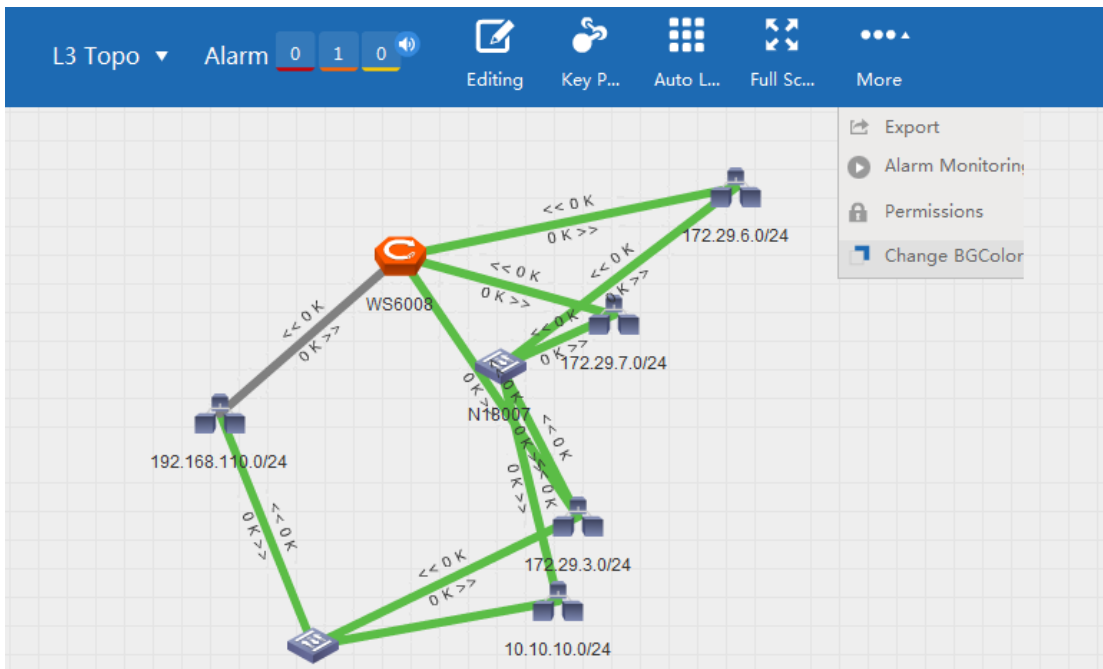
2) Traffic mode, color of the line on behalf of bandwidth utilization



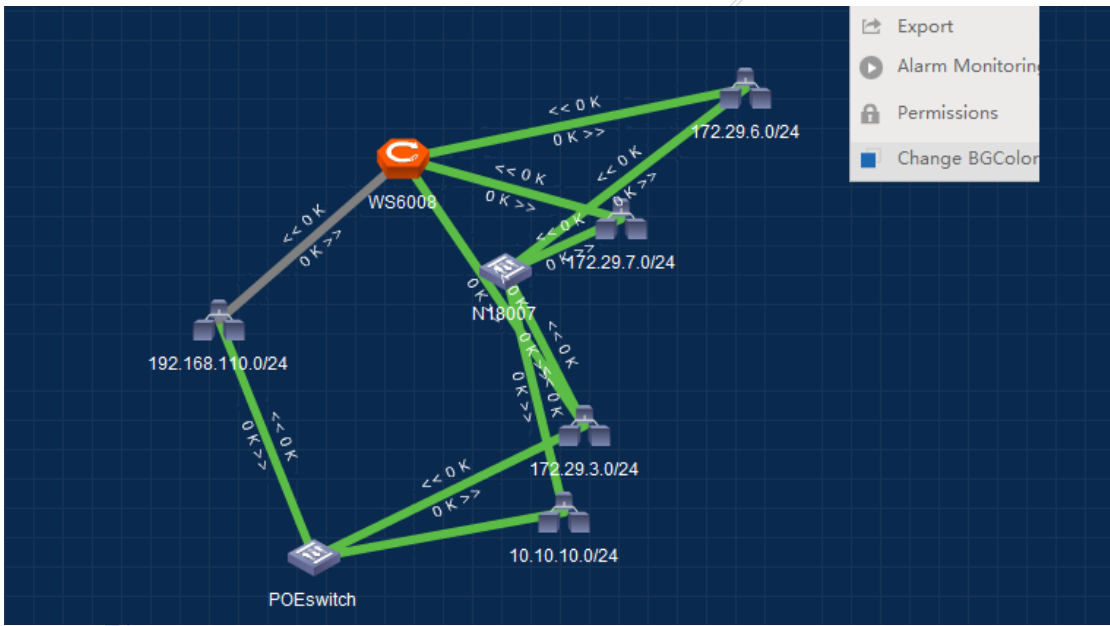
3) Switching background, on the menu bar, click "Change BGColor"



White

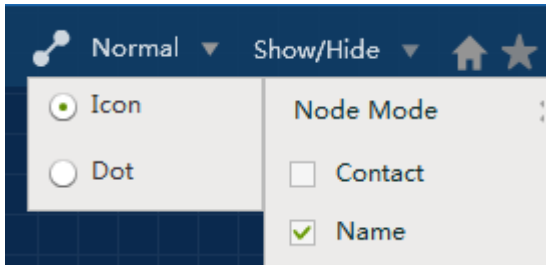


Dark blue

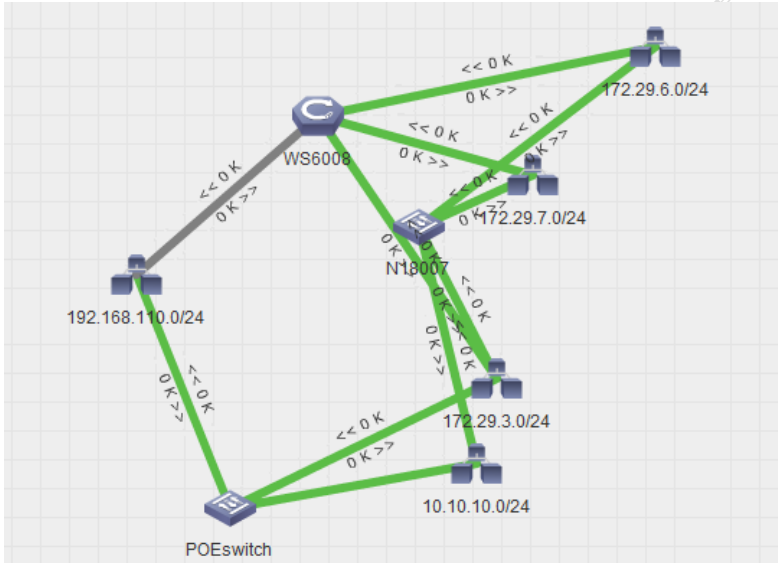


## 6. Show / hide

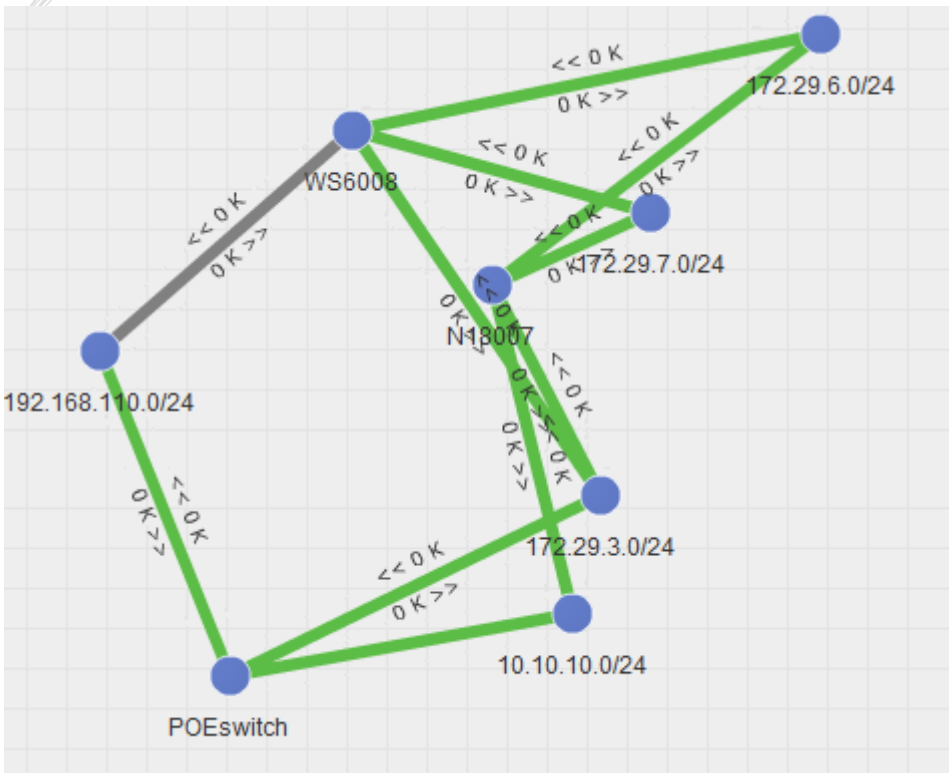
- 1) Dot / icon display mode switch



Icon pattern



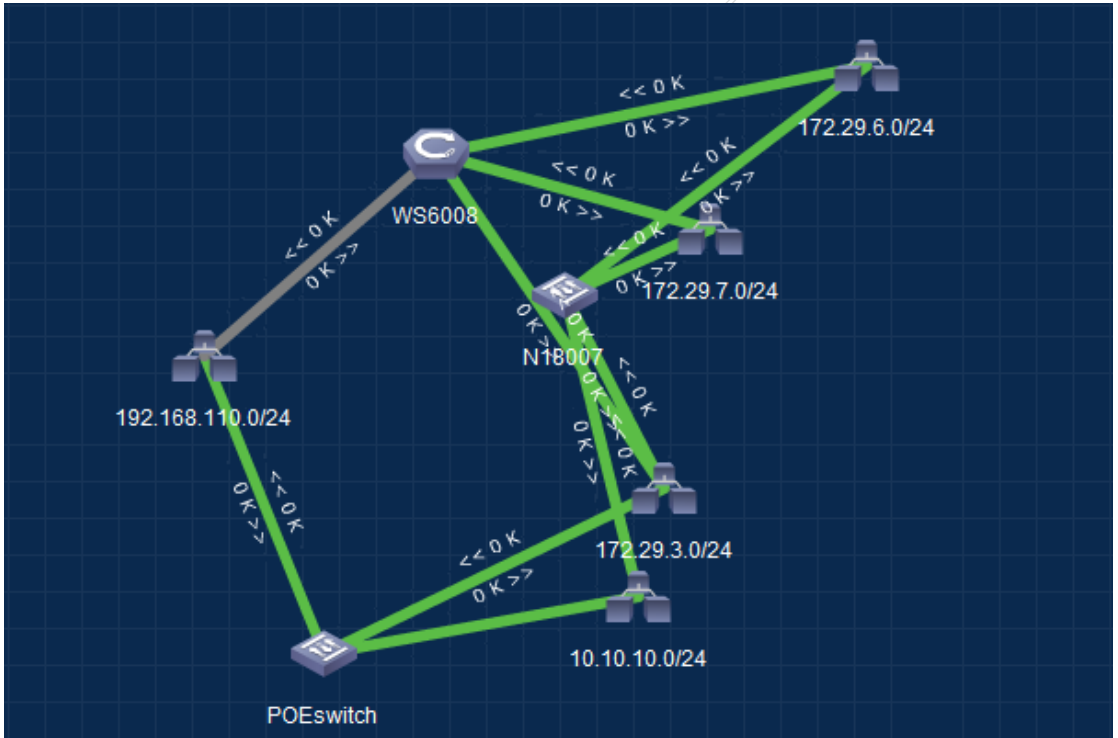
Dot pattern, display required less space



2) Show / hide related items, and can be customized to display / hide the information in the topology

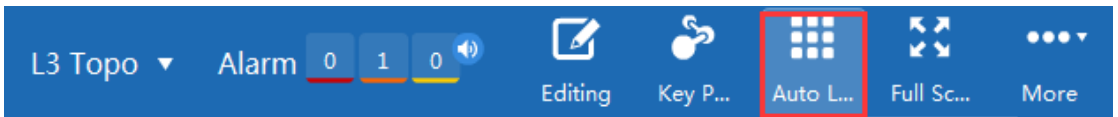
Note: the number of +AP in the terminal list exceeds 1K, in order to ensure the display effect, the topology will not show PC and AP





### 7. Automatic layout

Spread out the nodes and links according to the principle that the linked nodes attract each other, and non-linked nodes repel each other. It gets fine effect if the nodes is less than 200.



### 8. Other common operations

- 1) Double click the icon to enter the device details page, we can view the device related information, and customize the icon

**Detailed Device Info and Operation**

**Change Icon**

**Basic Info**

**Alarm Info**

**Ping**

**TraceRoute**

**Int List**

**IP Address Table**

**Path Detection**

**Detailed info**

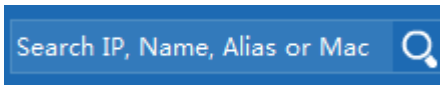
**Web Mgmt**

**Telnet**

**Name:** WS6008  
**sysOID:** 1.3.6.1.4.1.4881.1.3.1.1.115  
**Device type:** AC  
**Device model:** WS6008  
**Connectivity Status:** Reachable  
**IP:** 172.29.3.1  
**Mask:** 255.255.255.0  
**MAC:** 58:69:6c:20:ba:84  
**Description:** Ruijie Gigabit Wireless Switch(WS6008) By Ruijie Networks.  
**Remarks:**  
**Runtime:** 0:02:18.39  
**PoE Support :** No

**Synchronize Device**

2) You can input keyword on the upper right corner to search when there are too many devices.



After locating the device, double click the device information in the search area to highlight the topology.

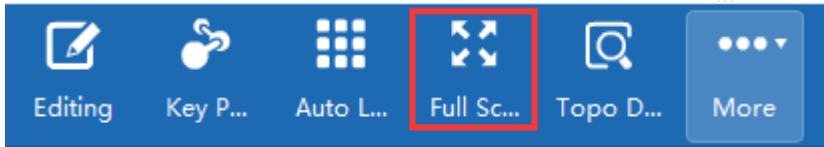
**Search Result**

Type	Name	IP	MAC	Int Name	Int Alias	Int Note
AC	WS6008	172.29.3.1	58:69:6c:20:ba:84			

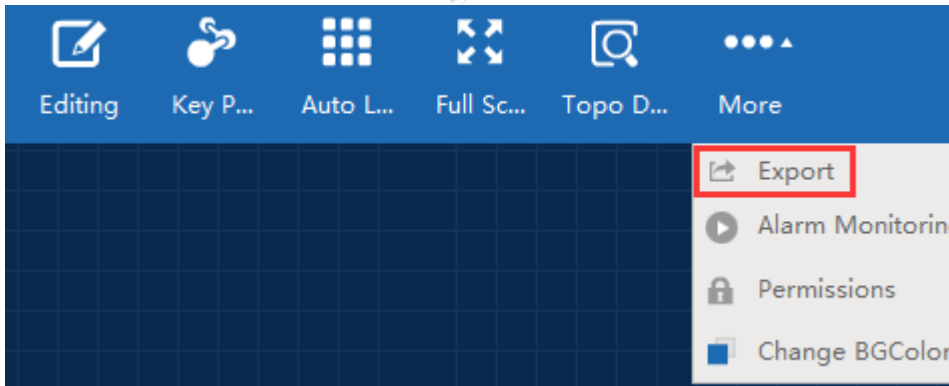
3) Zoom in/out



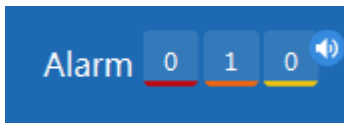
4) Supports full screen display: full screen display of the browser, which is prompted by the full screen mode will not be able to enter and edit keyboard input, do you want to continue? "We choose yes to enter. To exit the full screen mode, press the ESC key to exit the full screen mode.



5) export topology file format can be PNG



6) In the topology view, the general information of the alarm



Red means a serious warning, orange is an important warning, yellow said the general alarm, click on the number can be viewed at the corresponding level of alarm information.

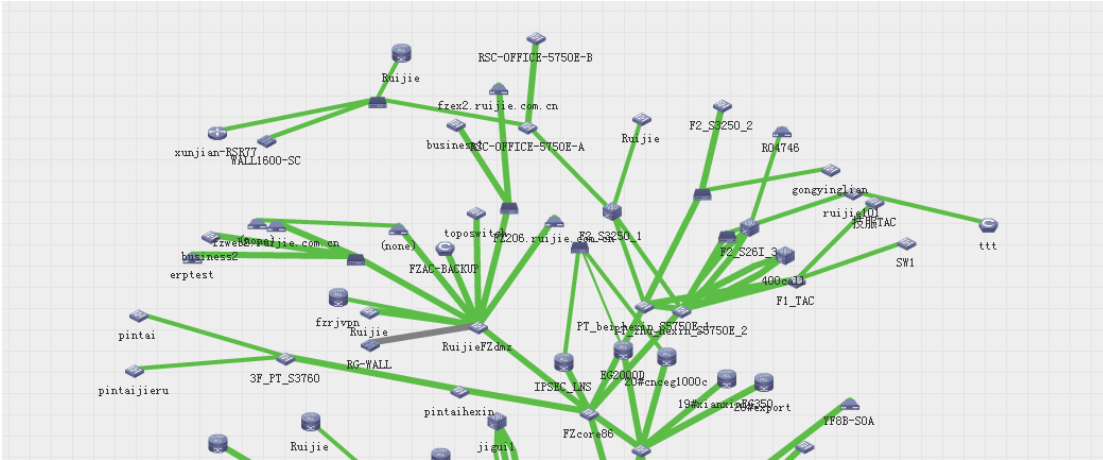
MAJORAlarm Info						
Alarm Level	Alarm Descriptio	Device Name	IP	Alarm Time	Operation	
🚨	The device pe...	WS6008	172.29.3.1	2016-05-10 20:54:46	🗑️ 📄	

Clear Alarm

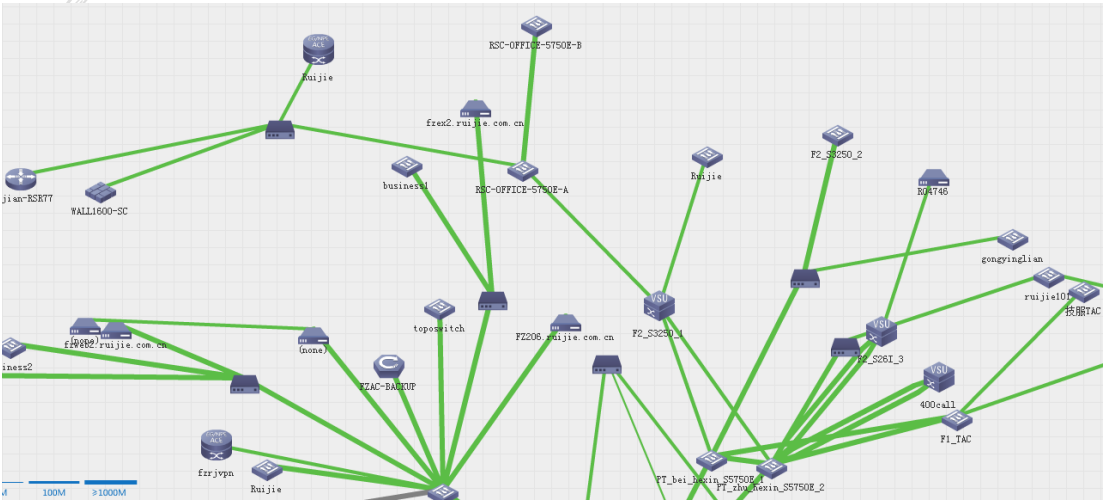
7) Topology can zoom in/out



Zoom out

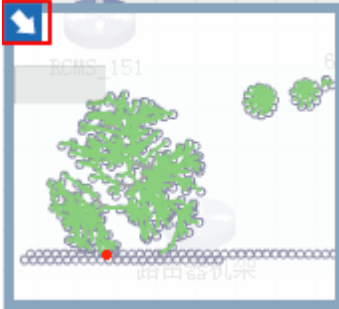



Zoom in



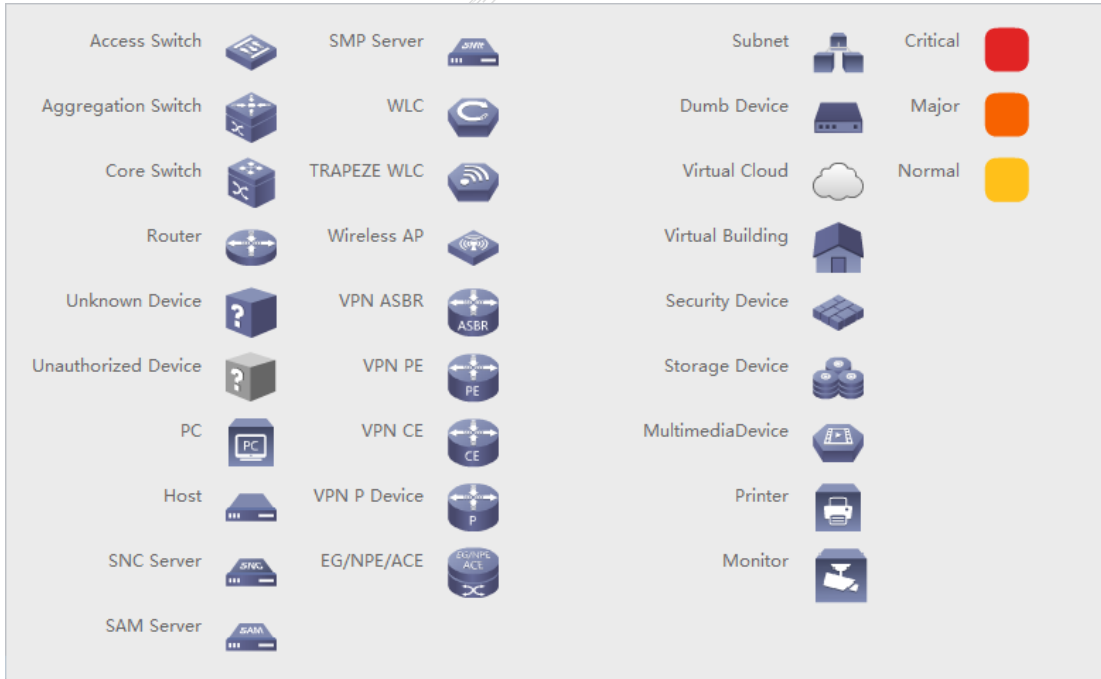
8) Show / hide view: display a miniature version of topology display, can choose a region to show.

Click the image below to hide.



Click  to display

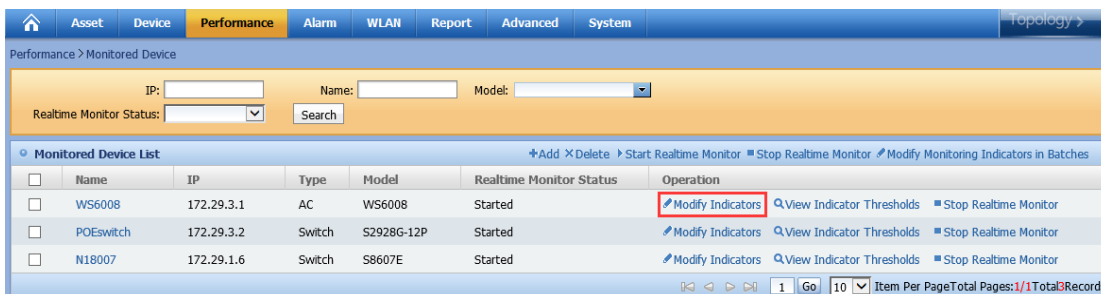
- 9) Shows the specific meaning of device icon, such as what the shape of the device shows what device, while the alarm level of different display color icon is not the same.



## 5.7 Performance Monitoring

### 5.7.1 Setting of Performance Parameter

Go to **Performance > Modify Indicators**, then click the **Add** button to add a page, as shown in the following diagram:



Go to **Performance > Global Perf Threshold**, then select the threshold needed adjust, click “**Modify**”.

Performance > View Global Performance Indicator Thresholds

Device Monitoring Indicators			
Indicator Name	Description	Level 1 Upper Threshold	Level 2 Upper Threshold
CPU Utilization (%)	CPU Utilization	85	90
Memory Utilization(%)	Memory Utilization	85	90
Temperature(degrees Celsius)	Temperature	55	65
Disk Utilization(%)	Disk Utilization	85	90

**Details On Global Performance Indicator Thresholds** X

**Details On Global Performance Indicator Thresholds**

Name : CPU Utilization (%)  
Description : CPU Utilization

Alarm will be triggered if the value is greater than threshold.

Level 1 Upper Threshold	<input type="text" value="85.0"/> (%)	Normal alarm if monitored value is greater than this.
Level 2 Upper Threshold	<input type="text" value="90.0"/> (%)	Major alarm if monitored value is greater than this.
Level 3 Upper Threshold	<input type="text" value="95.0"/> (%)	Critical alarm if monitored value is greater than this.

## 5.7.2 Device Management

Go to **Performance > Monitored Device > Add > Select Device > Save**, You can enter the device IP, device name, device type or real-time monitoring status, click the search button to query, as shown below :

Performance > Monitored Device

IP: <input type="text"/>	Name: <input type="text"/>	Model: <input type="text"/>
Realtime Monitor Status: <input type="text"/>	<input type="button" value="Search"/>	

Go to Performance , Click "**Add**" to add a monitor device, then select device, and then click the **Add and Save** button to complete the adding operation of the monitoring device,

## 5.8 Monitor Real-time Performance

### 5.8.1 Monitor Real-time Device

Go to **Performance > Monitored Device > Start/Stop Real-time Monitor**.

Performance > Monitored Device

IP:  Name:  Model:

Realtime Monitor Status:  Search

Name	IP	Type	Model	Realtime Monitor Status	Operation
<input type="checkbox"/> N18007	172.29.1.6	Switch	S8607E	Stopped	<a href="#">Modify Indicators</a> <a href="#">View Indicator Thresholds</a> <a href="#">Start Realtime Monitor</a>
<input type="checkbox"/> WS6008	172.29.3.1	AC	WS6008	Stopped	<a href="#">Modify Indicators</a> <a href="#">View Indicator Thresholds</a> <a href="#">Start Realtime Monitor</a>
<input type="checkbox"/> POEswitch	172.29.3.2	Switch	S2928G-12P	Stopped	<a href="#">Modify Indicators</a> <a href="#">View Indicator Thresholds</a> <a href="#">Start Realtime Monitor</a>

Realtime Performance Collection Interval Setting

Realtime Performance Collection Interval:

Save

Enter the monitor device management page. You can see the "real time performance sample frequency settings" column.

Realtime Performance Collection Interval Setting

Realtime Performance Collection Interval:

Save

### 5.8.2 Viewing Single Device

Go to **Performance > Single-device View** and then select the device name, and then select the system to refresh the view.

Choose Monitor Device:

- N18007(172.29.1.6)
- WS6008(172.29.3.1)
- POEswitch(172.29.3.2)

A minute later, the system information collection is completed, you can see the device performance in the upper left corner view:

Choose Monitor Device:

— CPU Utilization  
— Memory Utilization

Choose Performance Indicator:

- Rate
- Speed Utilization
- Rate of Discard Packets
- Rate of Broadcast Packets
- Rate of Unicast Packets
- Rate of Error Packets

Choose Interface:

Select time range.

10 Minutes | 30 Minutes | 1 Hour | 2 Hours | 3 Hours

Choose Performance Indicator:

- Rate
- Speed Utilization
- Rate of Discard Packets
- Rate of Broadcast Packets
- Rate of Unicast Packets
- Rate of Error Packets

Choose Interface:

Gi1/1	Gi1/2
Gi1/3	Gi1/4
Gi1/5	Gi1/6

Select monitoring indicators and monitoring interfaces.

Choose Monitor Device: N18007(172.29.1.6)

Choose Performance Indicator:

- Rate
- Speed Utilization
- Rate of Discard Packets
- Rate of Broadcast Packets
- Rate of Unicast Packets
- Rate of Error Packets

Choose Interface:

Gi1/1	Gi1/2
Gi1/3	Gi1/4
Gi1/5	Gi1/6

Graph: CPU Utilization (orange line), Memory Utilization (green line). X-axis: 00:00 to 00:10. Y-axis: 0 to 50.

### 5.8.3 Comprehensive View

Go to **Performance > All View** then select monitoring device

Performance Collect Interval: 30 Second

N18007(172.29.1.6)

- N18007(172.29.1.6)
- WS6008(172.29.3.1)
- POEswitch(172.29.3.2)

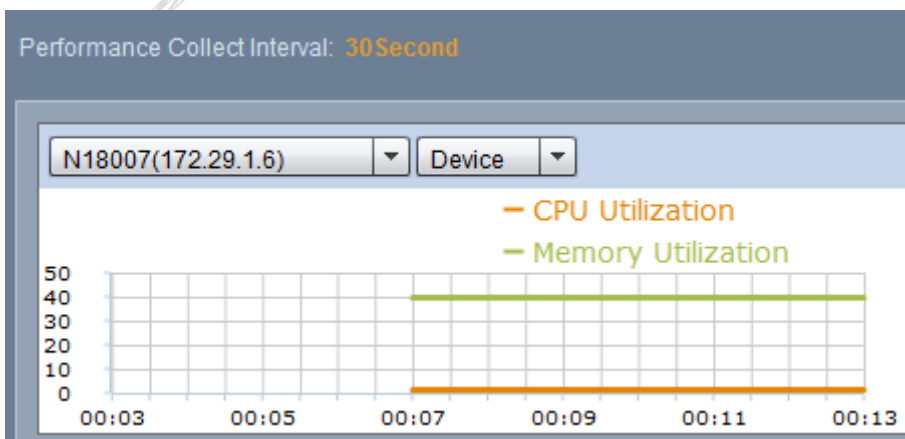
Select the performance indicator, "**device**" or "**interface**":



Performance Collect Interval: 30Second

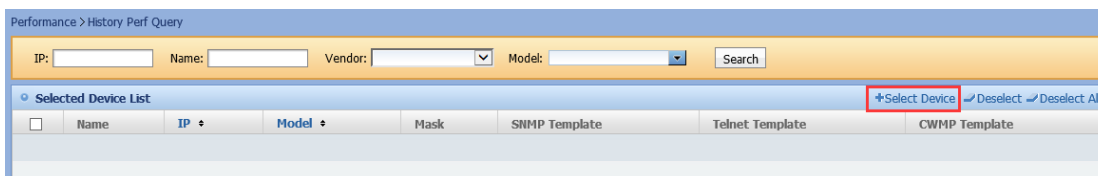


Select monitoring device indicator:



## 5.8.4 Viewing History Performance

Go to **Performance > History Per Query** then select device and indicator.



Performance > History Perf Query

IP:  Name:  Vendor:  Model:  Search

**Selected Device List** +Select Device Deselect Deselect All

<input type="checkbox"/>	Name	IP	Model	Mask	SNMP Template	Telnet Template	CWMP Template
<input type="checkbox"/>	N18007	172.29.1.6	S8607E	255.255.255.252	SNMPV2c	no_pass	test
<input type="checkbox"/>	POEswitch	172.29.3.2	S2928G-12P	255.255.255.0	SNMPV2c	default	default
<input type="checkbox"/>	WS6008	172.29.3.1	WS6008	255.255.255.0	SNMPV2c	default	default

Batch Query Set

Indicator: CPU Utilization Query Time: 2016-05-11 Query Export

**Batch Device Performance List** << May, 2016 >> Close

Device Name	Device IP	Mon	Tue	Wed	Thu	Fri	Sat	Line card/Device	MAX	AVG	MIN
		19	1	2	3	4	5	6	7		
		20	8	9	10	11	12	13	14		
		21	15	16	17	18	19	20	21		

## 5.9 Alarm Setting

### 5.9.1 Alarm Parameter

Go to **Alarm > Alarm parameter** to set alarm parameter.

Alarm > Alarm Parameter

**Alarm Parameter**

- \* Alarm History : Alarms within 30 days are saved by the system.
- \* PING Delay Threshold : During a connection test, if the ping response delay exceeds 1000 milliseconds, the system generates a ping delay alarm.
- \* Alarm Expired : All alarms will expire in 3 days. They will be set to Solved and remark "Alarm expired" will be added automatically.

**Alarm Sound Settings**

Critical :

Major :

Normal :

Inform :

Update Default

### 5.9.2 Alarm Event Management

Go to **Alarm > Alarm Event > Add** or **Modify alarm events**.

Alarm > Alarm Event > Add trap

**Add trap**

\* Event :

\* Trap ID :

Level : Critical ▾

\* Category : Device ▾

\* Status : Enabled ▾

Event Reason :

Repair Suggestion :

Event Message :

**Add** **Return**

**Update Trap Settings**

Event : Cold Start

Trap ID : 1.3.6.1.6.3.1.1.5.1

Level : Inform ▾

Category : Device ▾

Status : Enabled ▾

Event Reason : The device is powered on.

Repair Suggestion :

Event Message : The device performs a cold start.

Effect : The device is restarted . The network performance is restored.

### 5.9.3 Alarm Generation Rule

Go to **Alarm > Alarm Rule > Add** and then fill in the rule information.

Alarm > Alarm Rule > Add Alarm Rule

**Add Alarm Rule--**

\* Name :

Rule Description :

Event Source Setting

Match Type : Yes

Select Device :

Event Type Setting

Match Type : Yes

Select Event Type :

## 5.10 Viewing Alarm Message

### 5.10.1 Real Time Alarm

Go to **Alarm > Real time Alarm Monitor** then check the alarm information in the alarm list.

Alarm > Realtime Alarm View

Display: Latest 20 alar  Refresh Interval: 10 seconds

**Realtime Alarm View**  Acknowledge  Clear  Delete  Export

<input checked="" type="checkbox"/>	Level	Name	Device IP	Event	Description	ACK Status	First Alarm Time	Last Alarm Time	Repeated Times	Operation
<input checked="" type="checkbox"/>		WS6008	172.29.3.1	Warm Start	The device performs a warm start.	UnAcked	2016-05-09 23:36:46	2016-05-10 20:54:46	4	<input type="button" value="Detail"/> <input type="button" value="Adjust Threshold"/>
<input checked="" type="checkbox"/>		N18007	172.29.1.6	Link Up	The interface Gi1/14(link-to-S2910C 14 TEMP) of device (N18007(172.29.1.6)) is up.	UnAcked	2016-05-10 15:13:13	2016-05-10 15:13:13	1	<input type="button" value="Detail"/> <input type="button" value="Adjust Threshold"/>

Click "**Acknowledge**" to change the alarm status.

Alarm > Realtime Alarm View

Display: Latest 20 alar  Refresh Interval: 10 seconds

**Realtime Alarm View**  Acknowledge  Clear  Delete  Export

<input checked="" type="checkbox"/>	Level	Name	Device IP	Event	Description	ACK Status	First Alarm Time	Last Alarm Time	Repeated Times	Operation
<input checked="" type="checkbox"/>		WS6008	172.29.3.1	Warm Start	The device performs a warm start.	UnAcked	2016-05-09 23:36:46	2016-05-10 20:54:46	4	<input type="button" value="Detail"/> <input type="button" value="Adjust Threshold"/>
<input checked="" type="checkbox"/>		N18007	172.29.1.6	Link Up	The interface Gi1/14(link-to-S2910C 14 TEMP) of device (N18007(172.29.1.6)) is up.	UnAcked	2016-05-10 15:13:13	2016-05-10 15:13:13	1	<input type="button" value="Detail"/> <input type="button" value="Adjust Threshold"/>

Click on the "**clear**", to change the alarm level of alert.

Alarm > Realtime Alarm View

Display: Latest 20 alarm Refresh Interval: 10 seconds

Realtime Alarm View										
Level	Name	Device IP	Event	Description	ACK Status	First Alarm Time	Last Alarm Time	Repeated Times	Operation	
Warning	WS6008	172.29.3.1	Warm Start	The device performs a warm start.	UnAcked	2016-05-09 23:36:46	2016-05-10 20:54:46	4	Detail	Adjust Threshold
Info	N18007	172.29.1.6	Link Up	The interface Gi1/14(link-to-S2910C 14 TEMP) of device (N18007(172.29.1.6)) is up.	UnAcked	2016-05-10 15:13:13	2016-05-10 15:13:13	1	Detail	Adjust Threshold

Click on the alarm list Details icon

Alarm > Alarm Details

Alarm Details			
Level	Warning	Event Name	Warm Start
First Alarm Time	2016-05-09 23:36:46	Last Alarm Time	2016-05-10 20:54:46
Device IP	172.29.3.1	Alarm Category	Device
ACK Status	UnAcked	Clear Status	Not Cleared
Repeated Times	4	Alarm Description	The device performs a warm start.
Effect	The device is restarted. The network performance is restored.	Alarm Reason	The administrator configures scheduled auto-restart due to CPU auto-protection, temperature or other error.
Repair Suggestion			

Add warning annotation, Add Alarm Note, and click Confirm. And then see the new addition of comments in the "alarm notes list".

**Add Alarm Note**

Device IP : 172.29.3.1  
 Description : The device performs a warm start.

\* Note :

Confirm Cancel

Alarm Note List

Note Maker	Note Time	Note
	2014-12-23 02:00:00	Alarm expired
admin	2016-05-11 00:57:56	temperature too high

Go to **Alarm > Realtime Alarm View** then click on the top right corner of the "Export" button.

Alarm > Realtime Alarm View

Display: Latest 20 alar Refresh Interval: 10 seconds

Realtime Alarm View										
Level	Name	Device IP	Event	Description	ACK Status	First Alarm Time	Last Alarm Time	Repeated Times	Operation	
<input type="checkbox"/>	WS6008	172.29.3.1	Warm Start	The device performs a warm start.	UnAked	2016-05-09 23:36:46	2016-05-10 20:54:46	4	<a href="#">Detail</a>	<a href="#">Adjust Threshold</a>
<input type="checkbox"/>	N18007	172.29.1.6	Link Up	The interface Gi1/14(link-to-S2910C 14 TEMP) of device (N18007(172.29.1.6)) is up.	UnAked	2016-05-10 15:13:13	2016-05-10 15:13:13	1	<a href="#">Detail</a>	<a href="#">Adjust Threshold</a>

If want to delete alarm, go to **Alarm > Realtime Alarm View** then select the check box and click "delete".

Alarm > Realtime Alarm View

Display: Latest 20 alar Refresh Interval: 10 seconds

Realtime Alarm View										
Level	Name	Device IP	Event	Description	ACK Status	First Alarm Time	Last Alarm Time	Repeated Times	Operation	
<input checked="" type="checkbox"/>	WS6008	172.29.3.1	Warm Start	The device performs a warm start.	UnAked	2016-05-09 23:36:46	2016-05-10 20:54:46	4	<a href="#">Detail</a>	<a href="#">Adjust Threshold</a>
<input type="checkbox"/>	N18007	172.29.1.6	Link Up	The interface Gi1/14(link-to-S2910C 14 TEMP) of device (N18007(172.29.1.6)) is up.	UnAked	2016-05-10 15:13:13	2016-05-10 15:13:13	1	<a href="#">Detail</a>	<a href="#">Adjust Threshold</a>

## 5.10.2 History Alarm

Go to **Alarm > Historical Alarm** then Select the check box to confirm the alarm information, click "Acknowledge" / "Cancel Acknowledgement" / "Clear" / "delete" Search Result.

Historical Alarm List

Level	Name	Device IP	Event	Description	Alarm Category	ACK Status	Clear Status	First Alarm Time	Last Alarm Time	Repeated Times
<input type="checkbox"/>	WS6008	172.29.3.1	Warm Start	The device performs a warm start.	Device	UnAked	Not Cleared	2016-05-09 23:36:46	2016-05-10 20:54:46	4
<input type="checkbox"/>	N18007	172.29.1.6	Link Down	The interface Gi1/23(link-to-WS6008-Gi0/6) of device (N18007 (172.29.1.6)) is down.	Device	Aked	Cleared	2016-05-10 20:53:00	2016-05-10 20:53:00	1
<input type="checkbox"/>	N18007	172.29.1.6	Link Down	The interface Gi1/23(link-to-WS6008-Gi0/6) of device (N18007 (172.29.1.6)) is down.	Device	Aked	Cleared	2016-05-10 20:44:27	2016-05-10 20:44:27	1

Click on the "Device Name" link to view the device information pages, view device details.

Device > Device-WS6008(172.29.3.1)Details

Device Information

Green=Administration status UP + working status UP  
Red=Administration status DOWN + working status DOWN

Basic Info		CPU	Memory	Temperature	Alarm
Name	WS6008			IP	172.29.3.1
Type	AC			Model	WS6008
Device Vendor	Ruijie Networks			SysOID	1.3.6.1.4.1.4881.1.3.1.1.115
Mask	255.255.255.0			MAC Address	58:69:6c:20:ba:84
Contact Person				Device Location	
Runtime	3:07:27.29			Last Synchronization Time	2016-05-11 00:00:37 Synchronizing device information...
Connectivity Status	Reachable			Network Management Status	<input checked="" type="checkbox"/> SNMPConnected <input checked="" type="checkbox"/> TelnetConnected <input checked="" type="checkbox"/> CWMP Disconnected. Reason:The CWMP template related to device has a parameter error or CWMP protocol access to device failed. <a href="#">Update</a>
Hardware Version	1.00			Software Version	AC_RGOS 11.1(5)B8, Release (2016-04-11)

### 5.10.3 Invalid Alarm Message

Go to **Alarm > Undefined Alarm Event** then click "**Disable Unspecified Alarm Generation**" to disable the function.

Alarm > Undefined Alarm Event

Device IP:  Level:  Last Event Time:  To:  Search

Undefined Alarm Event List ▼ Disable Unspecified Alarm Generation X Delete

<input type="checkbox"/>	Level	Name	Device IP	Event	Description	Category	First Event Time	Last Event Time	Repetition Count

## 5.11 Alarm Notification

### 5.11.1 Mail Notification

Go to **System > Mail server Setting > Update** to set the information of mail server.

System > Mail Server Setting

Primary Mail Server Setting

\* Mail Server Address :

\* Port Number :

Authentication Required :

\* Mail User Name :

\* Password :

\* Confirm Password :

\* Mail Destination Address :

Secondary Mail Server Setting

Mail Server Address :

Port Number :

Authentication Required :

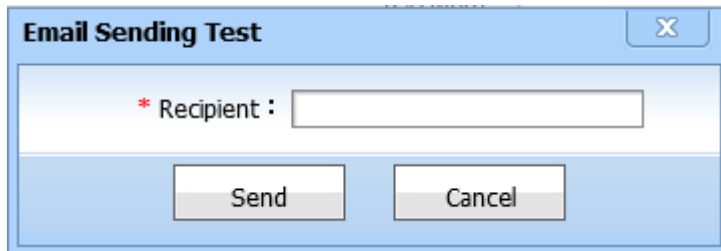
Mail User Name :

Password :

Confirm Password :

Mail Destination Address :

Click the "**Email Test**" to check whether the mail server is configured successfully.



The dialog box titled "Email Sending Test" has a close button (X) in the top right corner. It contains a text input field labeled "\* Recipient :". Below the input field are two buttons: "Send" and "Cancel".

### 5.11.2 Setting Mail Warning Notification

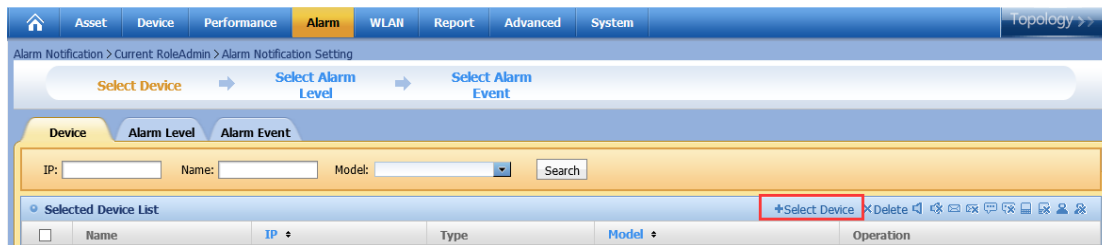
Go to **Alarm > Alarm Notification > Select Role > Add > Select Device > Select Alarm Level > Select Alarm Event**.



The screenshot shows the "Alarm > Alarm Notification" page. At the top right, there are buttons for "+Select Role" and "X Delete". Below is a table with columns: "Select Role", "Role Description", "Status", and "Operation".

Select Role	Role Description	Status	Operation
<input type="checkbox"/>	Admin	Configuration Uncompleted	Alarm Notification Setting

At the bottom right, there is a pagination control showing "1" of "10" items per page, with a total of "1/1 Total Records".

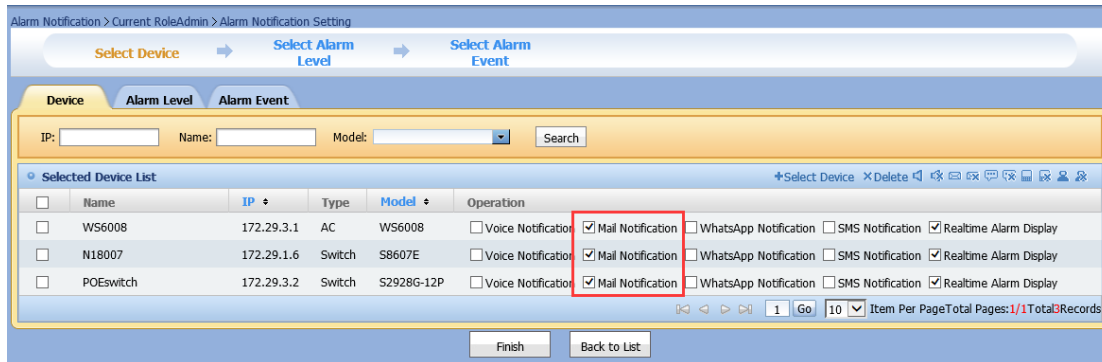


The screenshot shows the "Alarm Notification > Current Role Admin > Alarm Notification Setting" page. It has a breadcrumb trail: "Select Device" → "Select Alarm Level" → "Select Alarm Event". There are three tabs: "Device", "Alarm Level", and "Alarm Event".

Under the "Device" tab, there are input fields for "IP:", "Name:", and "Model:" with a "Search" button. Below this is a "Selected Device List" table with a "+Select Device" button and "X Delete" button.

Select Device	Name	IP	Type	Model	Operation
<input type="checkbox"/>					

After adding device, check the message alarm to the device.



The screenshot shows the "Alarm Notification > Current Role Admin > Alarm Notification Setting" page, now on the "Select Alarm Event" step. The breadcrumb trail is "Select Device" → "Select Alarm Level" → "Select Alarm Event".

Under the "Device" tab, there are input fields for "IP:", "Name:", and "Model:" with a "Search" button. Below this is a "Selected Device List" table with a "+Select Device" button and "X Delete" button.

Select Device	Name	IP	Type	Model	Operation
<input type="checkbox"/>	WS6008	172.29.3.1	AC	WS6008	<input type="checkbox"/> Voice Notification <input checked="" type="checkbox"/> Mail Notification <input type="checkbox"/> WhatsApp Notification <input type="checkbox"/> SMS Notification <input checked="" type="checkbox"/> Realtime Alarm Display
<input type="checkbox"/>	N18007	172.29.1.6	Switch	S8607E	<input type="checkbox"/> Voice Notification <input checked="" type="checkbox"/> Mail Notification <input type="checkbox"/> WhatsApp Notification <input type="checkbox"/> SMS Notification <input checked="" type="checkbox"/> Realtime Alarm Display
<input type="checkbox"/>	POEswitch	172.29.3.2	Switch	S2928G-12P	<input type="checkbox"/> Voice Notification <input checked="" type="checkbox"/> Mail Notification <input type="checkbox"/> WhatsApp Notification <input type="checkbox"/> SMS Notification <input checked="" type="checkbox"/> Realtime Alarm Display

At the bottom, there are "Finish" and "Back to List" buttons.

Select according to alarm level:



**Select Alarm Level** [X]

Alarm Level : Critical  Major  Normal  Inform

Confirm Cancel

Select alarm event according to the actual need

**Alarm Event** [X]

Event:  Trap ID:  Search

+Add (+)Add All

<input type="checkbox"/>	Event Name	Trap ID	Level

When the configuration is finished, return to the alarm alert notification: view state change from incomplete to complete.

Alarm > Alarm Notification

Role List [Select Role] [Delete]

<input type="checkbox"/>	Select Role	Role Description	Status	Operation
<input type="checkbox"/>	Admin		Configuration Completed	Alarm Notification Setting
<input type="checkbox"/>	test		Configuration Completed	Alarm Notification Setting

1 Go 10 Item Per Page Total Pages: 1/1 Total Records

### 5.11.3 Faulty Device Navigation

Go to **Alarm > Devices with Alarm** then Click on the "Device Name" link to view the device information pages.

Alarm > Devices with Alarm

Device IP:  Model:  Search

Devices with Alarm

Name	Device IP	Alarm Level	Unacknowledged Alarm	Model	Type
WS6008	172.29.3.1		1	WS6008	AC

1 Go 10 Item Per Page Total Pages: 1/1 Total Records

## 5.12 Report Setting

### 5.12.1 Report List

Go to **Report > Report List > Create Report**.

Report > Report List > Create Report

Report Info

Report Name:

Report Template: **Global Alarm Report Template**

Report Parameter:
 

- Asset Report
- WLAN Asset Management Report Template
- WLAN AP Load Report Template
- WLAN AC Load Report Template
- WLAN Out-of-Service Rate Statistics Report Template
- WLAN Traffic Statistics Report Template
- WLAN STA Statistics Report Template
- WLAN Idle AP Statistics Report Template

Select Device:  All  By Group  Select Device

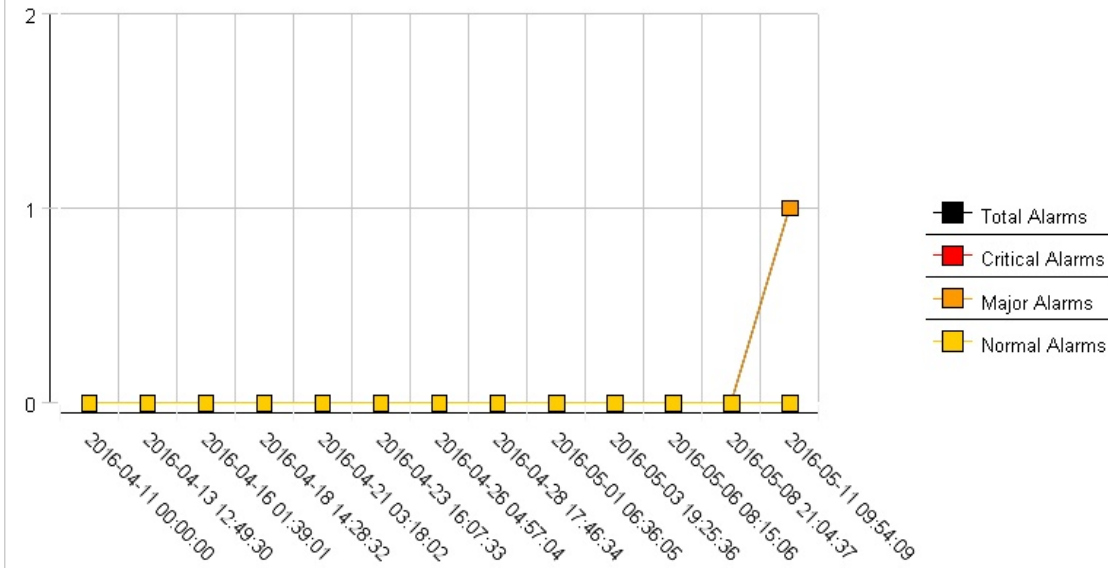
Show Device Alarm Summary(grouped)

Save Save and Preview Cancel

1. View global alarm reports, there are unresolved warning trend statistics (including the total number of alarms, the number of serious alarms, the number of major alarm, general alarm number)

### Global Alarm Statistics

#### Unresolved Alarm Statistics



2. Asset management reports (including summary vendors' equipment, model summary, asset management summary, device model summary, etc.)

## Manufacturer Model Summary



## Device Model Summary



### Device Summary

Device Name	Device IP	Manufacturer	Device Model	SN	Software Version	Hardware Version
POEswitch	172.29.3.2	Ruijie Networks	S2928G-12P	G1HDC82003208	RGOS 10.4(2b12)p2 Release(180357)	1.01
N18007	172.29.1.6	Ruijie Networks	S8607E	G1J90K8000027	N18000_RGOS 11.5(1)E2, Release(02210901)	1.01
WS6008	172.29.3.1	Ruijie Networks	WS6008	G1JL32R000482	AC_RGOS 11.1(5)E8, Release(03162911)	1.00

### Software Version Summary

Device Model	AC_RGOS 11.1(5)E8, Release(03162911)	N18000_RGOS 11.5(1)E2, Release(02210901)	RGOS 10.4(2b12)p2 Release(180357)
Device Model	Device NO	Device NO	Device NO
S2928G-12P			1
S8607E		1	
WS6008	1		

### Hardware Version Summary

Device Model	1.00	1.01
Device Model	Device NO	Device NO
S2928G-12P		1
S8607E		1
WS6008	1	

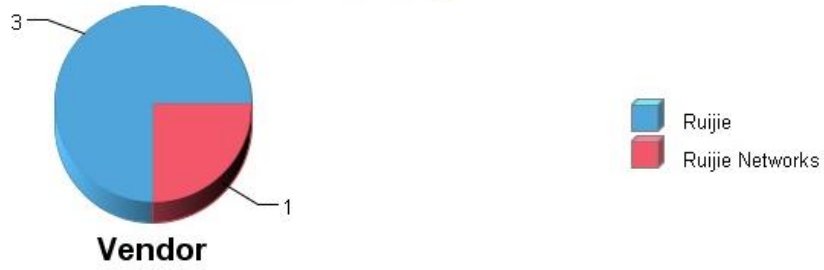
- WLAN asset reports (including equipment manufacturers, models, etc.)

---

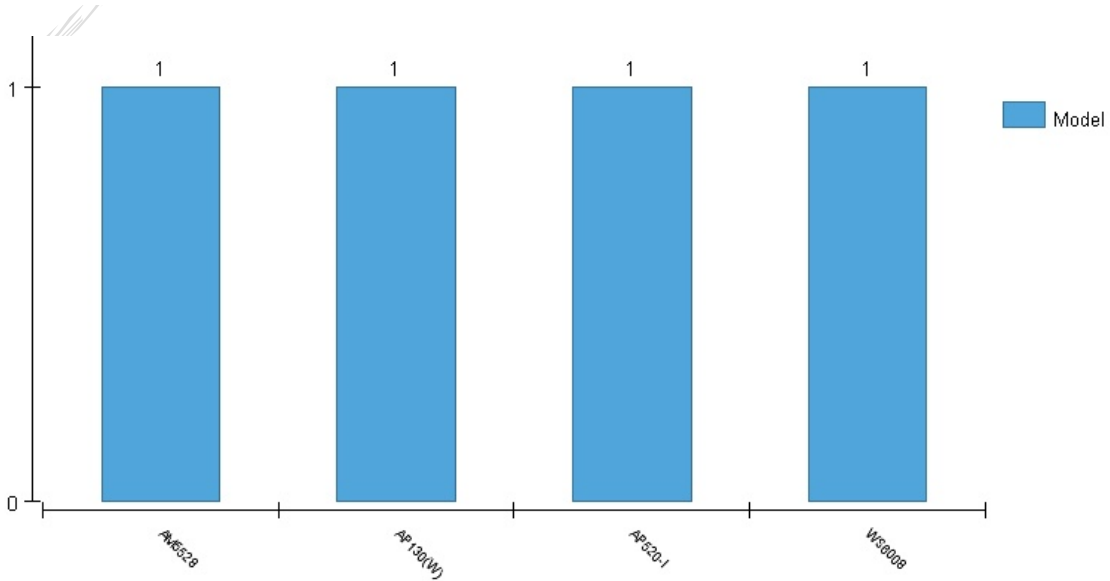
# WLAN Asset Report

## Vendor Model Summary

### Device Vendor Summary



### Device Model Summary



### WLAN Device Asset List

Device Name	Device IP	Vendor	Device Model	Software Version	Hardware Version	Location	Hotspot Name	Remarks
WS6008	172.29.3.1	Ruijie Networks	WS6008	AC_RGOS 11.1(5)B8, Release(03162911)	1.00			
ap520	10.10.10.100	Ruijie	AP520-I	AP_RGOS 11.1(5)B6	1.01			
ap130	10.10.10.101	Ruijie	AP130(W)	AP_RGOS 11.1(5)B6	2.00			
5869.6e60.a511	172.29.3.5	Ruijie	AM5528	AM_RGOS 11.1(5)B8	1.01			

### Software Version Summary

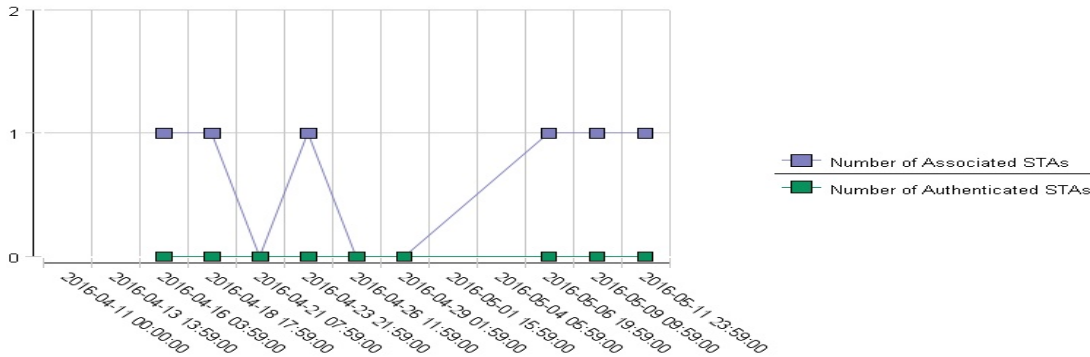
Device Model	AC_RGOS 11.1(5)B8, Release(03162911)	AM_RGOS 11.1(5)B8	AP_RGOS 11.1(5)B6	AP_RGOS 11.1(5)B8
	Number of Devices	Number of Devices	Number of Devices	Number of Devices
AM5528		1		
AP130(W)			1	
AP520-I				1
WS6008	1			

### Hardware Version Summary

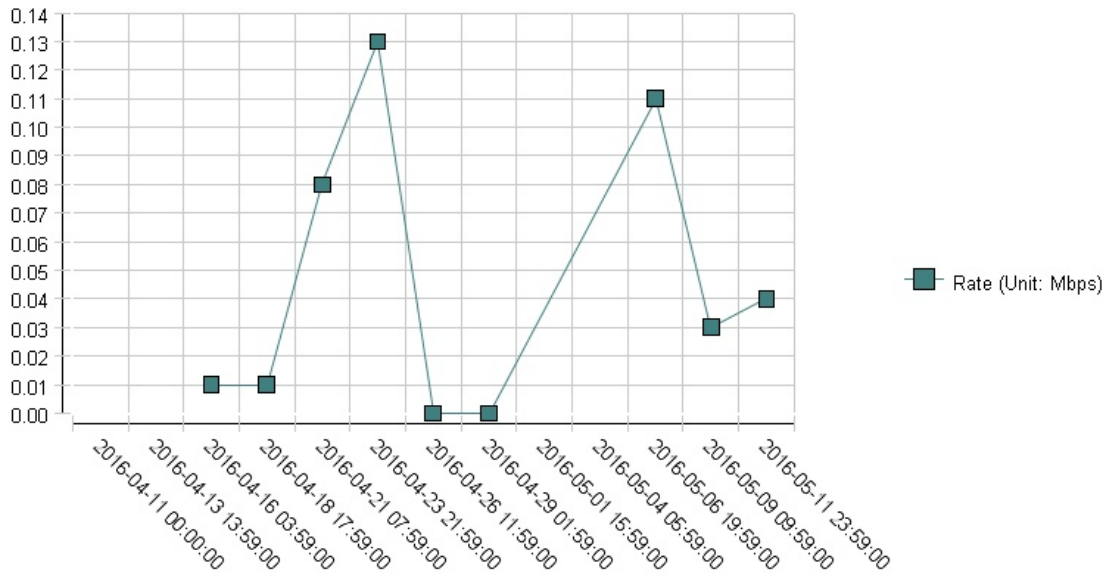
Device Model	1.00	1.01	2.00
	Number of Devices	Number of Devices	Number of Devices
AM5528		1	
AP130(W)			1
AP520-I		1	
WS6008	1		

#### 4. AP load report:

Number of AP STAs



## AP Rate

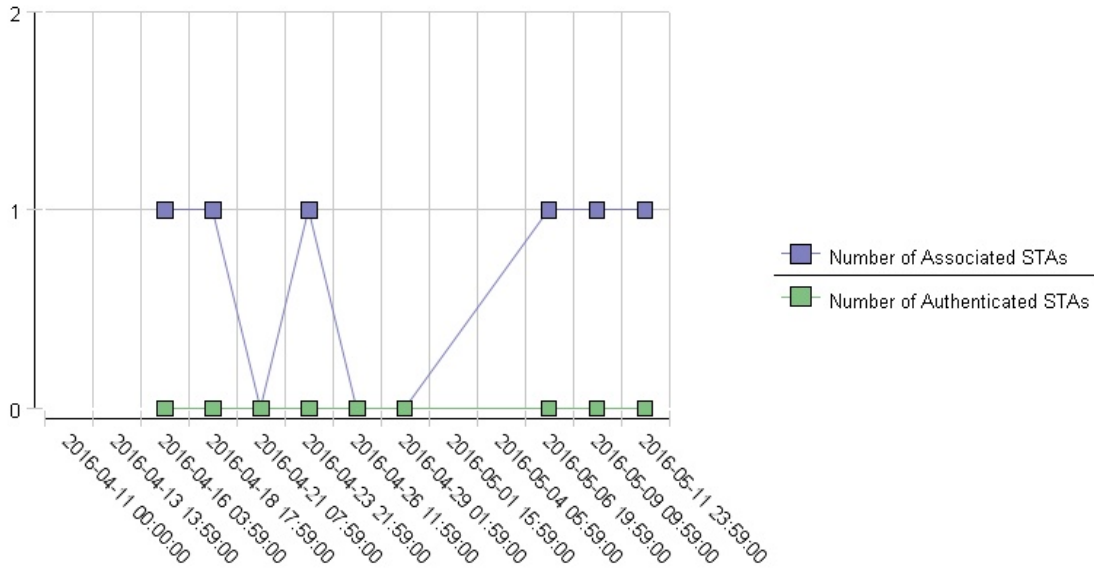


## AP Loading List

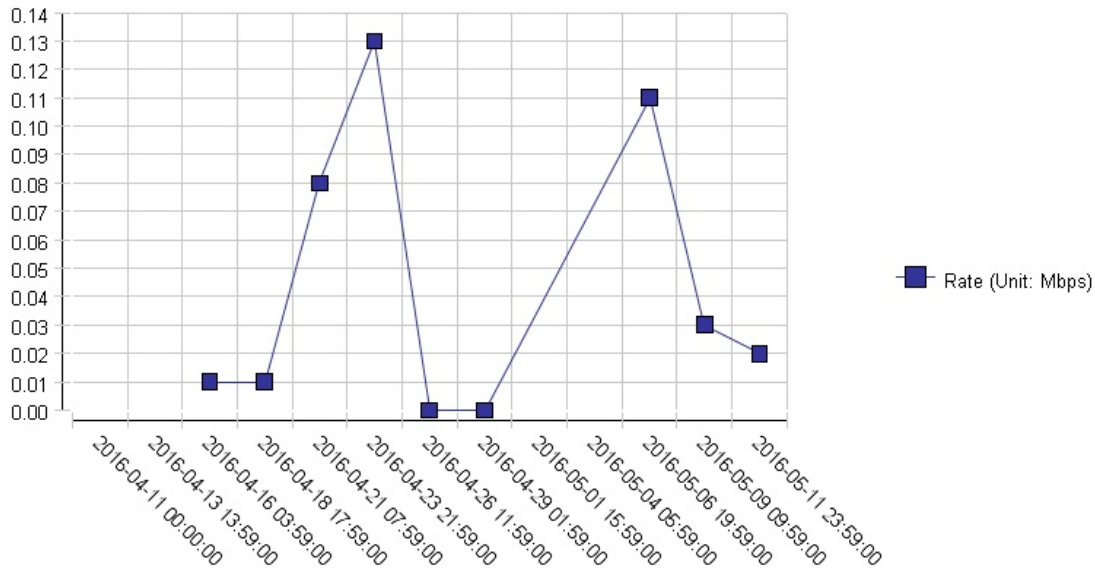
AP Name	IP Address	Vendor	Model	Associate AC	Belonged Hotspot	Number of Associated STAs			Number of Authenticated STAs			Average Rate (Mbps)
						Peak Value	Average Value	Peak Time	Peak Value	Average Value	Peak Time	
ap520	10.10.10.100	Ruijie	AP520-I	WS6008		1	0	2016-05-07 00:00:00	0	0	2016-05-11 00:00:00	0.01
ap130	10.10.10.101	Ruijie	AP130(W)	WS6008		1	1	2016-05-11 00:00:00	0	0	2016-05-11 00:00:00	0.03
5869.6c60.s511	172.29.3.5	Ruijie	AM5528	WS6008		0	0	2016-04-11 00:00:00	0	0	2016-04-11 00:00:00	0.00

### 5. AC load report:

### Number of AC STAs



### AC Rate

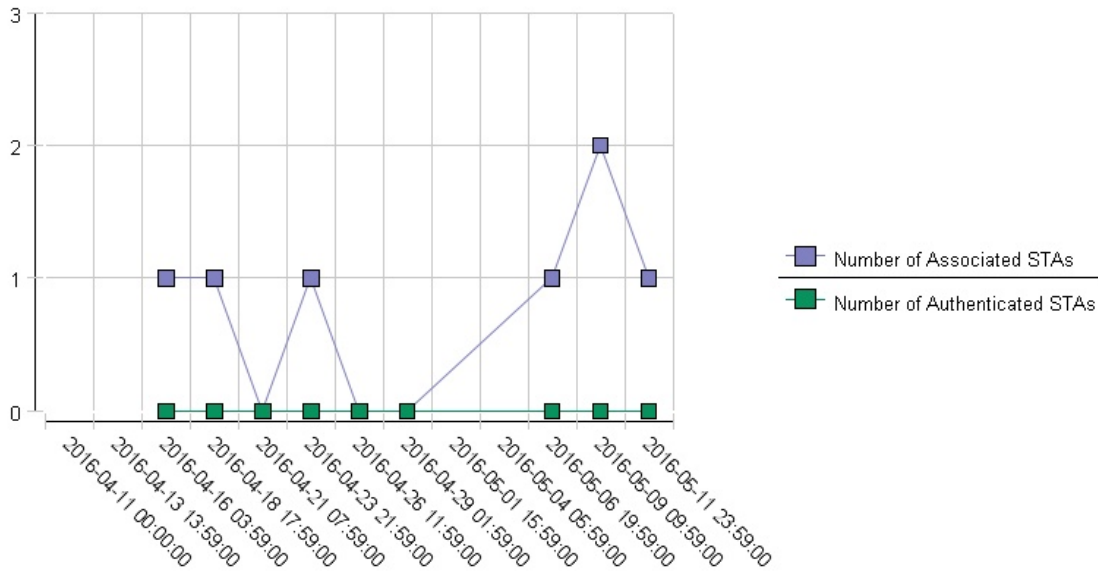


### AC Loading List

AC Name	IP Address	Vendor	Model	Number of Associated STAs			Number of Authenticated STAs			Average Rate (Mbps)
				Peak Value	Average Value	Peak Time	Peak Value	Average Value	Peak Time	
WS6008	172.29.3.1	Ruijie Networks	WS6008	2	0	2016-05-07 00:00:00	0	0	2016-05-11 00:00:00	0.02

6. User amount statistical report

### STA Peak Statistics



Hotspot Name	Hotspot Location	Number of APs	Number of Associated STAs		Number of Authenticated STAs	
			Peak Value	Peak Time	Peak Value	Peak Time
Office		0	0	2016-04-11 00:00:00	0	2016-04-11 00:00:00
Lab		0	0	2016-04-11 00:00:00	0	2016-04-11 00:00:00

7. Rate of AP retreat statistics

### Out-of-Service Rate Statistics Report

#### Global Out-of-Service Rate

Global Out-of-Service Rate: 14.42%

#### AP Out-of-Service Rate

AP Name	IP Address	Vendor	Model	Hotspot Name	Out-of-Service Rate (%)
5869.6c60.a511	172.29.3.5	RUIJIE	AM5528		38.59%
ap520	10.10.10.100	RUIJIE	AP520-I		4.66%

#### Hot Spot Out-of-Service Rate

Hotspot Name	Path	Hotspot Location	Out-of-Service Rate (%)
--------------	------	------------------	-------------------------



# Idle AP Statistics Report

## Daily Idle AP Statistics

AP Name	Location	Vendor	Model	Hotspot Name	Hotspot Location	Daily Traffic (Kb)	Statistic Time
---------	----------	--------	-------	--------------	------------------	--------------------	----------------

## Monthly Idle AP Statistics

AP Name	Location	Vendor	Model	Hotspot Name	Hotspot Location	Monthly Traffic (Mb)	Statistic Time
---------	----------	--------	-------	--------------	------------------	----------------------	----------------

## 5.12.2 History Report

Go to **Report > History report > View**

Report > Historical Report

Report Name:  Report Template:  Report Type:

Start Time:  End Time:  Search

<input type="checkbox"/>	Report Name	Report Template	Report Type	Creation Time	Operation
<input type="checkbox"/>	AC Load	WLAN AC Load Report Template	Daily Report	2016-05-11 00:30:05	<input type="button" value="View"/> <input type="button" value="Download"/> <input type="button" value="Publish Report"/>
<input type="checkbox"/>	Idle AP	WLAN Idle AP Statistics Report Template	Daily Report	2016-05-11 00:30:04	<input type="button" value="View"/> <input type="button" value="Download"/> <input type="button" value="Publish Report"/>

Click the **download** button to save the report

Report > Historical Report

Report Name:  Report Template:  Report Type:

Start Time:  End Time:  Search

<input type="checkbox"/>	Report Name	Report Template	Report Type	Creation Time	Operation
<input type="checkbox"/>	AC Load	WLAN AC Load Report Template	Daily Report	2016-05-11 00:30:05	<input type="button" value="View"/> <input type="button" value="Download"/> <input type="button" value="Publish Report"/>
<input type="checkbox"/>	Idle AP	WLAN Idle AP Statistics Report Template	Daily Report	2016-05-11 00:30:04	<input type="button" value="View"/> <input type="button" value="Download"/> <input type="button" value="Publish Report"/>

Publish Report.

Report Publishing

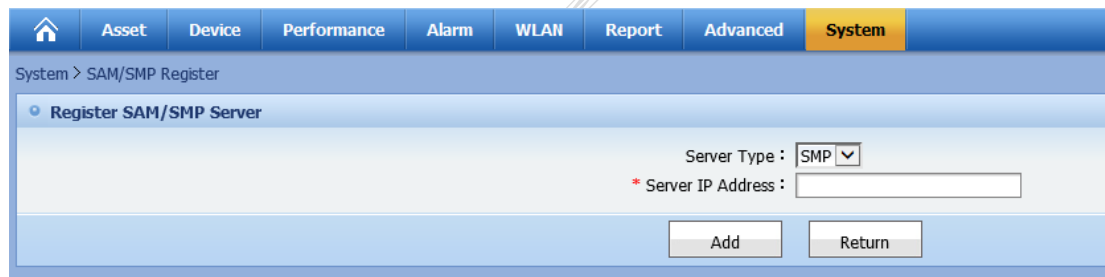
Publish to Admin:

\*Publish to Email:

Prompt:  
Before publishing report, please go to mail server configuration module in system admin page for setting proper mail server info

## 5.13 Association Configuration

Go to **System > Mail server SAM/SMP Register** to set the information of mail server.



System > SAM/SMP Register

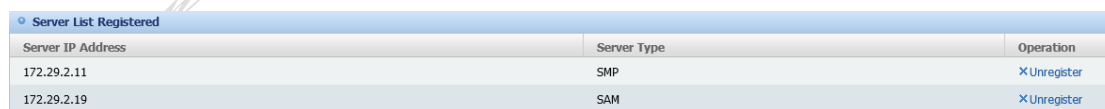
Register SAM/SMP Server

Server Type : SMP

\* Server IP Address :

Add Return

Depending on the type to make a selection, the SNC configuration needs to add the IP address of the server.



Server IP Address	Server Type	Operation
172.29.2.11	SMP	<a href="#">Unregister</a>
172.29.2.19	SAM	<a href="#">Unregister</a>

---

## 6 WLAN Module Configuration Guide

### 6.1 Basic Configuration

In order to manage the wireless network by SNC, there are some basic configuration.

Configure the SNMP and telnet protocols, refer to the basic configuration.

To add wireless devices AC, go to **WLAN > AC > Add**, Add the IP address of AC, select the relevant SNMP template and TELNET template.

IP: \* 172.29.3.1

SNMP Template: SNMPV2c + Add SNMP..

Add Telnet Template: default + Telnet Te...

Only ACs can be added

OK Cancel

Click "**OK**" when complete setting.

To add hotspot information, go to **WLAN > Hotspot > Add Child Hotspot**, Add a hot spot information, click **save**.

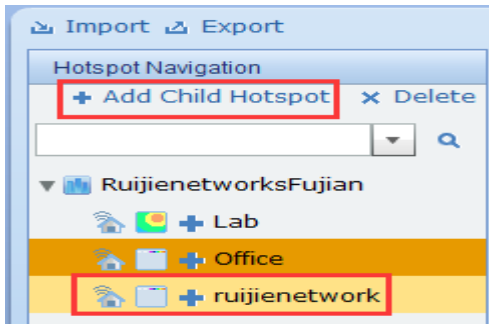
Name: \* ruijienetwork

Address: fz

Description: fz\_ruijienetwork

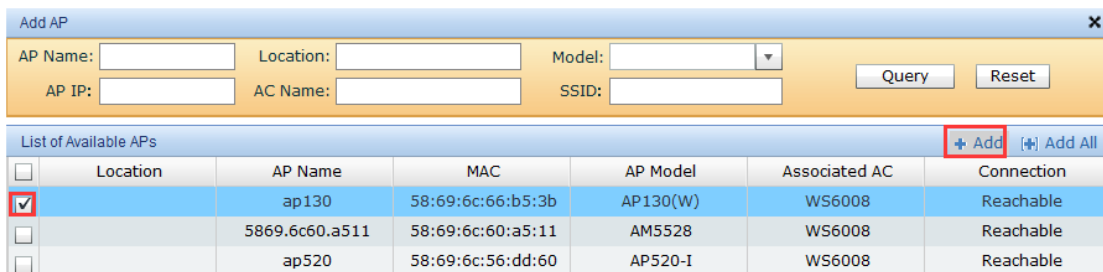
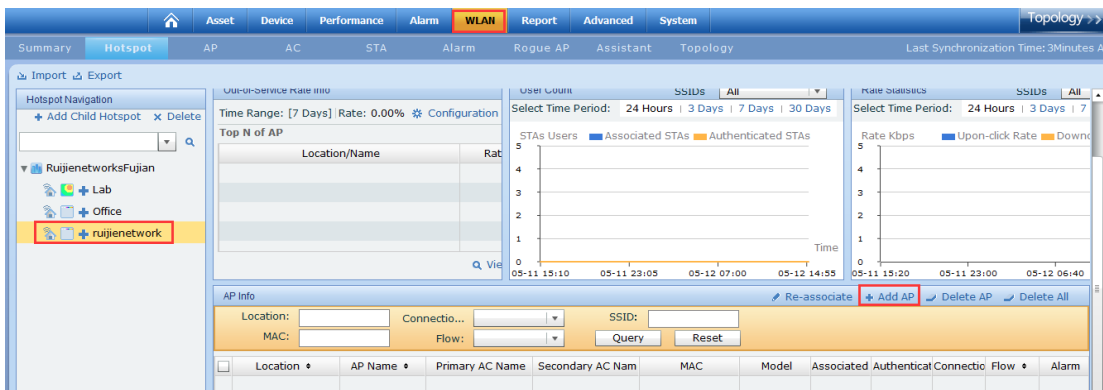
Save Cancel

And then on the basis level 1 hot spot, click "**Add Child Hotspot**" to add a lower level of hot.

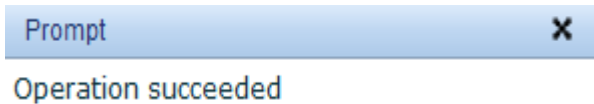


**Note: if you need to add much hot information, you can directly import hot information template in the web interface, please refer to the WLAN module configuration guide.**

Wireless device AP associated hotspot, go to **WLAN > Hotspot**, select the hotspot, click "add AP"



Added successfully, you can find "AP hotspots associated information,"



## 6.2 Comprehensive

### 6.2.1 Custom Settings Page

The function is used to customize the comprehensive page statistics. Go to **WLAN > Summary**, according to the actual needs of custom to add the function list.

WLAN Homepage Custom Settings

Custom List

- AC Asset Info
- AP Asset Info
- Global Rate Statistics
- Global STA Statistics
- Top N Global Idle flow Statistics
- Global Rate Statistics(Top N)
- Global Out-of-Service Rate Statistics
- Global Out-of-Service Rate Statistics

Function List

- Rogue AP Statistics
- Global Idle Traffic Statistics

<<Add

Delete>>

Move Up

Move Down

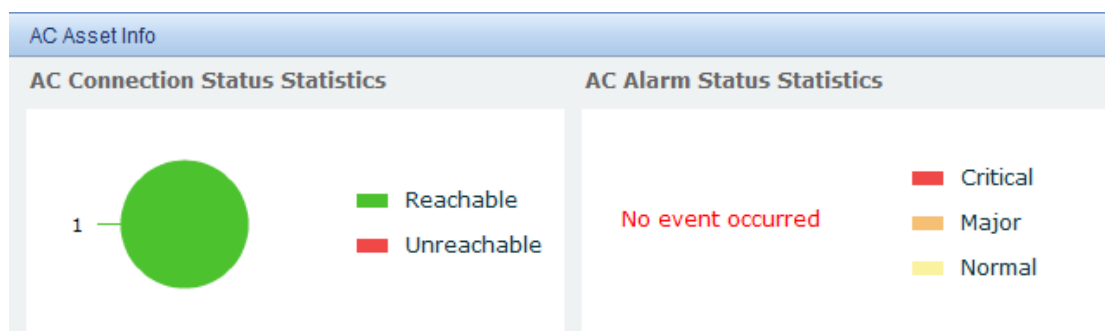
Reset

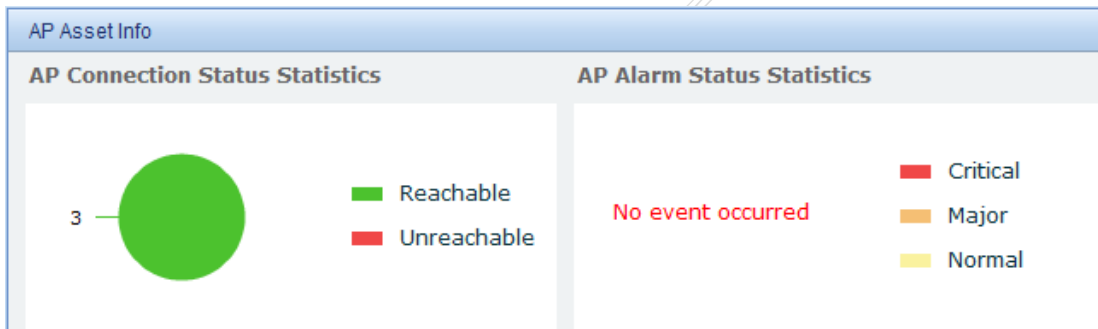
Save

Click “**Save**” when complete setting.

### 6.2.2 AC, AP Assets Information

The function is used to check the results of the reachability of AC in the system and the results of the AC alarm statistics.. go to **WLAN > Summary** , to see the AC and AP asset information, as shown in the following figure:





### 6.2.3 Total Network Availability Rate Statistics(TopN)

The function is used to view the statistics of the hot spot availability rate TopN and AP availability rate TopN..

Go to **WLAN > Summary > Global Out-of-Service Rate > Configuration Time** .

The dialog box is titled "Configure Calculation Time Range" and contains a "Time Range:" label followed by a dropdown menu. The dropdown menu is open, showing the following options:

- 7 Days (selected)
- Last 24 Hours
- 3 Days
- 7 Days
- One Month
- Please select the time

There are "OK" and "Cancel" buttons at the bottom of the dialog.

Click "OK" when complete setting.

### 6.2.4 Total Network Idle Traffic Statistics (TopN)

The function is used to view the entire network AP idle traffic TopN. go to **WLAN > Summary > Top N Global Idle flow Statistic > Idle AP**, According to the actual need to configure the flow and time of the super idle AP

The table is titled "Top N Global Idle flow Statistics" and has a red box around the "Idle AP" button in the top right corner. It is divided into two columns: "Monthly (Less Than 10Mb, Calculation 1Months)" and "Daily (Less Than 1Kb, Calculation 7Day(s))".

Monthly (Less Than 10Mb, Calculation 1Months)		Daily (Less Than 1Kb, Calculation 7Day(s))	
Location/Name	Monthly(Mbps)	Location/Name	Daily(kbps)

At the bottom of each column, there is a summary: "[0] idle APs".


Configure Idleness Flow Status Statistics

Enable Statistic on Monthly Traffic

Monthly Average flow less than:  Mbps, Time Range:  Month(s)

Enable Statistics on Daily Traffic

Daily Average flow less than:  Kbps, Time Range:  Day(s)





 At least one should be enabled, monthly is taken as default

Click “**Save**” when complete setting.

## 6.2.5 Total Network Rate Statistics (TopN)

The function is used to view the statistics of the hot spot rate TopN and AP rate TopN. Go to **WLAN > Summary > Global Rate Statistics**.

Global Rate Statistics

Hotspot Rates		AP Rates	
Uplink	Downlink	Uplink	Downlink
< 10M  3	< 10M  3	< 10M  3	< 10M  3
10-50M <input type="text" value="0"/>	10-50M <input type="text" value="0"/>	10-50M <input type="text" value="0"/>	10-50M <input type="text" value="0"/>
50-100M <input type="text" value="0"/>	50-100M <input type="text" value="0"/>	50-100M <input type="text" value="0"/>	50-100M <input type="text" value="0"/>
> 100M <input type="text" value="0"/>	> 100M <input type="text" value="0"/>	> 100M <input type="text" value="0"/>	> 100M <input type="text" value="0"/>

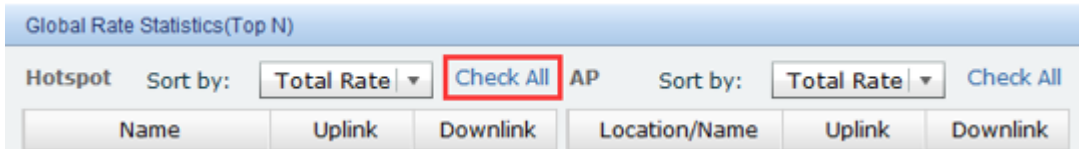
  

Global Rate Statistics(Top N)

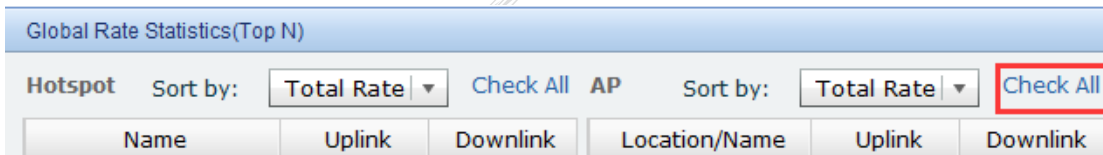
Hotspot Sort by:   AP Sort by:

Name	Uplink	Downlink	Location/Name	Uplink	Downlink
ruijienetwork	0.00Kbps	0.00Kbps	ap130	0.00Kbps	0.00Kbps
Office	0.00Kbps	0.00Kbps	ap520	0.00Kbps	0.00Kbps
Lab	0.00Kbps	0.00Kbps	5869.6c60.a511	0.00Kbps	0.00Kbps

Go to **WLAN > Summary > Global Rate Statistics (TopN) > Hotspot Check All** to show all the hot rate statistics



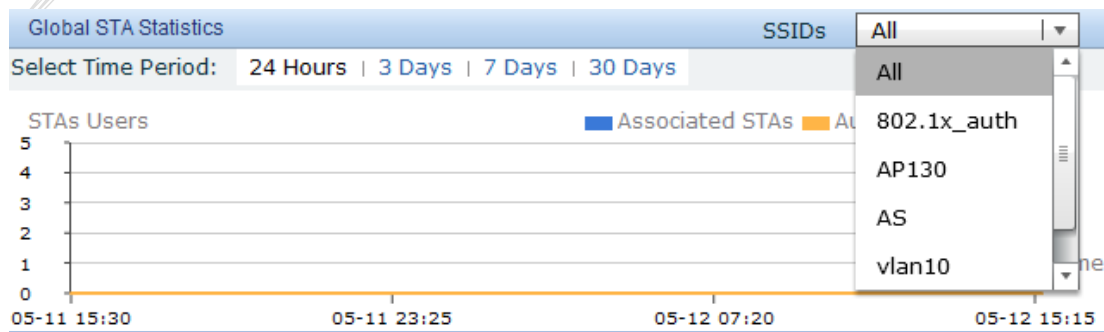
Go to **WLAN > Summary > Global Rate Statistics (Top N) > AP Check All** to show all the AP rate statistics



## 6.2.6 Full Network Users Statistics

The function is used to view the statistical time of the total network AP the number of related users and the number of authentication users.

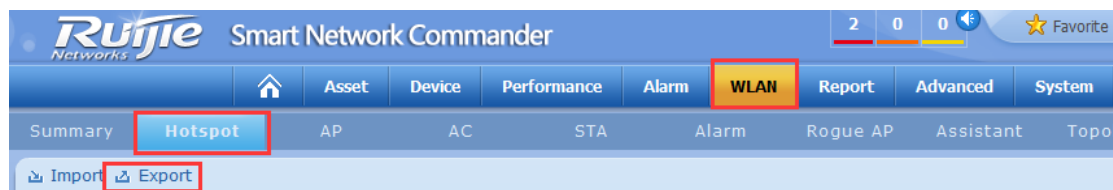
Go to **WLAN > Summary > Global STA Statistics**. Then Click on the drop-down menu statistical SSID.



## 6.3 Hot Spot

### 6.3.1 Import and Export Hot Spot

The function is used to import and export hotspot information. Go to **WLAN > Hotspot > Export**, to export the hotspot relative files.





Field	Hotspot Name	Parent Hotspot Name	Hotspot Location	Remarks
<b>Mandatory or Optional</b>	Mandatory (The length can be between 1 to 30 characters)	Mandatory (The length can be between 1 to 255 characters)	Mandatory (The length can be between 1 to 255 characters)	(The length can be between 1 to 255 characters)
<b>Description</b>	Hotspot name, for example, building 19 or 19#.	A parent hotspot refers to the hotspot that the current hotspot belongs to (the top hotspot does not belong to any hotspot and the <b>Parent Hotspot Name</b> filed is NULL).	A hotspot location must be exact to the building number or floor number.	The remark serves as additional description.
	RuijienetworksFujian			
	Office	RuijienetworksFujian		
	ruijienetwork	RuijienetworksFujian	fz	fz_ruijienetwork
	Lab	RuijienetworksFujian		

Click on the "import" after the hot information excel form is completed.

The screenshot shows the Ruijie Smart Network Commander interface. The top navigation bar includes 'WLAN', 'Report', 'Advanced', and 'System'. The 'WLAN' section is active, and the 'Hotspot' tab is selected. The 'Import' button is highlighted with a red box. The interface displays details for a hotspot named 'RuijienetworksFujian', including associated SSIDs, out-of-service rate info, and user count statistics.

### 6.3.2 Hot spot information modification

The function is used to modify the hot information, including hot names, hot spots address, and hot description. Go to **WLAN >**

**Hotspot**, in the upper right corner click the icon , to add Hotspot information.

The 'Add Hotspot Info' dialog box is shown with the following fields:

- Name:** \* Lab
- Address:** (empty field)
- Description:** (empty field)

Buttons for 'Save' and 'Cancel' are located at the bottom of the dialog.

Click "Save" when complete setting.

### 6.3.3 How to view the hot spot related AP information

This feature is used to check the hot spot information. Go to **WLAN > Hotspot**, in the upper right corner click the icon



, then click “**AP Info**” to check the hotspot information.

The screenshot shows the Ruijie Smart Network Commander interface. The top navigation bar includes 'WLAN', 'Report', 'Advanced', and 'System'. The 'Hotspot' sub-menu is selected. The main content area displays the 'Hotspot Info' for a hotspot named 'Lab'. The 'AP Info' tab is highlighted with a red box. Below the 'AP Info' tab, there are input fields for 'Location', 'Connection', and 'SSID'. The interface also shows a table for 'Top N of AP' and two line graphs: 'User Count' and 'Rate Statistics'.

### 6.3.4 How to view hot spot information statistics

The function is used to check the hot statistical information. Go to **WLAN > Hotspot**, in the upper right corner click the icon



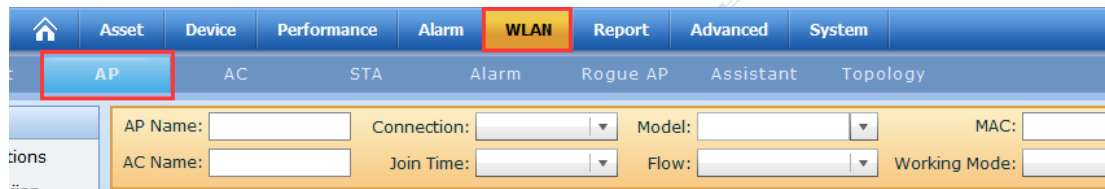
, then click “**Out-of-Service Rate Info**” and “**User Count**” to check the hotspot statistical information.

The screenshot shows the Ruijie Smart Network Commander interface. The top navigation bar includes 'WLAN', 'Report', 'Advanced', and 'System'. The 'Hotspot' sub-menu is selected. The main content area displays the 'Hotspot Info' for a hotspot named 'Lab'. The 'Out-of-Service Rate Info' and 'User Count' tabs are highlighted with red boxes. The 'Out-of-Service Rate Info' tab shows a 'Time Range' of [7 Days] and a 'Rate' of 0.00%. The 'User Count' tab shows a 'Select Time Period' of 24 Hours. The interface also shows a table for 'Top N of AP' and a line graph for 'Rate Statistics'.

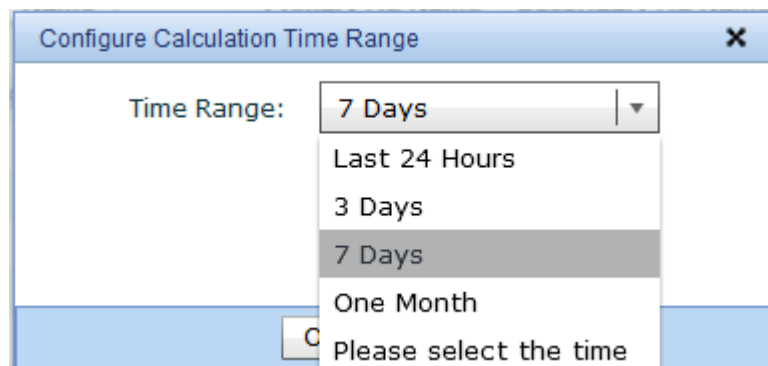
## 6.4 AP

### 6.4.1 AP Query Page Configuration

The function is based on query AP conditions, query related AP information. Go to **WLAN > AP**, according to the actual needs, you can query terms such as AP, AC, MAC, and SSID.

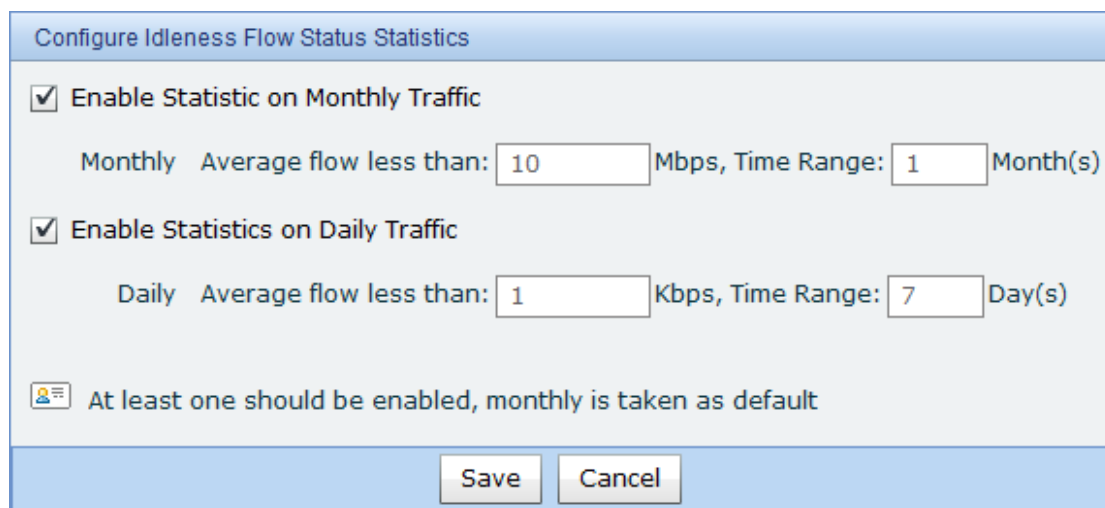


Click “**Out-of-Service Rate**” to set the calculation time range.



Click “**OK**” when complete setting.

Click “**Idle AP**” and then set configuration parameters about idleness flow status statistics.



Click “**Alarm Thresholds**” to set the alarm threshold.

AP Name:  Connection:  Model:  MAC:  SSID:   
 AC Name:  Join Time:  Flow:  Working Mode:  Spectrum Analysis:

AP List    Spectrum Analysis:  Enable     Disable    Associate    \* Out-of-Service Rate    \* Idle AP    \* Alarm Thresholds    \* Rogue AP Configuration Wizard

<input type="checkbox"/>	Location	AP Name	Primary AC Name	Secondary AC Name	Working Mod	Associated Hotspot	Associated	Authenticat	Flow
<input type="checkbox"/>	[No Location Info]	ap130	WS6008		Access	ruijienetwork	0	0	Normal
<input type="checkbox"/>	[No Location Info]	5869.6c60.a511	WS6008		Access		0	0	Normal
<input type="checkbox"/>	[No Location Info]	ap520	WS6008		Access		0	0	Normal

Click **“Export”** to export query results.

Connection:  Model:  MAC:  SSID:  Location:   
 Join Time:  Flow:  Working Mode:  Spectrum Analysis:  Query    Reset

Analysis:  Enable     Disable    Associate    \* Out-of-Service Rate    \* Idle AP    \* Alarm Thresholds    \* Rogue AP Configuration Wizard     Export     Delete

AP Name	Primary AC Name	Secondary AC Name	Working Mod	Associated Hotspot	Associated	Authenticat	Flow	Alarm	Rate	Conn
ap130	WS6008		Access	ruijienetwork	0	0	Normal	1	0.00%	Unre
5869.6c60.a511	WS6008		Access		0	0	Normal		0.00%	React
ap520	WS6008		Access		0	0	Normal		0.00%	React

Click **“Delete”** to delete Aps.

Connection:  Model:  MAC:  SSID:  Location:   
 Join Time:  Flow:  Working Mode:  Spectrum Analysis:  Query    Reset

Analysis:  Enable     Disable    Associate    \* Out-of-Service Rate    \* Idle AP    \* Alarm Thresholds    \* Rogue AP Configuration Wizard     Export     Delete

AP Name	Primary AC Name	Secondary AC Name	Working Mod	Associated Hotspot	Associated	Authenticat	Flow	Alarm	Rate	Conn
ap130	WS6008		Access	ruijienetwork	0	0	Normal	1	0.00%	Unre
5869.6c60.a511	WS6008		Access		0	0	Normal		0.00%	React
ap520	WS6008		Access		0	0	Normal		0.00%	React

Click **“Modify”** to modify the physical location of the AP

AP List    Spectrum Analysis:  Enable     Disable    Associate    \* Out-of-Service R

<input type="checkbox"/>	Location	AP Name	Primary AC Name	Secondary AC Name
<input checked="" type="checkbox"/>	[No Location Info]	ap130	WS6008	
<input type="checkbox"/>	[No Location Info]	5869.6c60.a511	WS6008	
<input type="checkbox"/>	[No Location Info]	ap520	WS6008	

✕
Modify AP Deployment

issue data to device:

Location:

If it isn't issued to device, they are saved in the system

Save
Cancel

Click "Save" when complete setting.

## 6.4.2 Operation AP Detailed Page

Go to **WLAN > AP > AP name > Synchronize AP** to synchronous AP information.

AP Details
Synchronize AP ✕ Radio List \* Alarm Threshold \* Rogue AP Configuration Wizard \* Rogue APs Statistics Spectrum Analysis: Closed

Device Info			
Location:	AP Name: ap130	MAC: 58:69:6c:66:b5:3b	Model: AP130(W)
Connection: Unreachable	IP: 10.10.10.101	Subnet Mask: 255.255.255.0	Gateway Ad... 10.10.10.254
Software Na... rgos.bin	Software Ve... AP_RGOS 11.1(5)B6	Software Ve... RUIJIE	Vendor: RUIJIE
Flow: Normal	Device SN: G1JDCV02008C	Running Per...	Online Period:
Working Mo... Access	Containment...	Not Configured	

Time Range: [7 Days] | Rate: 0.00%

Associated AC ( W56008 )
 Associated Hotspot( ruijienetwork )
 Number of SSIDs(1)
 Critical Alarm(1)
 Major Alarm(0)
 Normal Alarm(0)

AP STA Number <span style="float: right;">SSIDs <span style="border-bottom: 1px solid #ccc;">All</span></span>	AP Association Times	Association Failure Proportion
Select Time Period: 24 Hours   3 Days   7 Days   30 Days	Associated STAs: 0	STA identification or transferred Failure
STAs Users <span style="float: right;">Associated STAs <span style="color: #f00;">■</span> Authenticated STAs <span style="color: #ffc000;">■</span></span>	Association Times: 17	Access Reject <span style="color: #00a0e3;">■</span>

Go to **WLAN > AP > AP name > Alarm Threshold** then click Edit to set the alarm threshold.

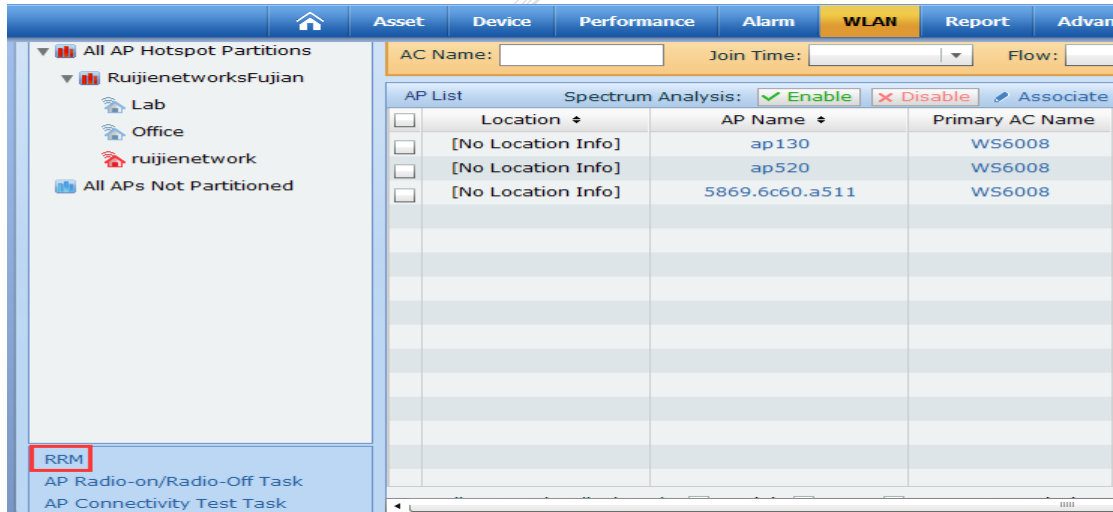
AP Details
Synchronize AP ✕ Radio List \* Alarm Threshold \* Rogue AP Configuration Wizard \* Rogue APs Statistics Spectrum Analysis: Closed

Alarm Threshold	
CPU Threshold(%): 100 802.11a	Memory Threshol... 100 802.11b
Interference T... 60 (Global ... Global Value(60)	Interference T... 60 (Global ... Global Value(60)
Noise Threshol... -70 (Global ... Global Value(-70)	Noise Threshol... -70 (Global ... Global Value(-70)
Maximum Num... 32 (Global ... Global Value(32)	Maximum Num... 32 (Global ... Global Value(32)
RF Utilization(... 80 (Global ... Global Value(80)	RF Utilization(... 80 (Global ... Global Value(80)
Throughput(b... 150000000(Global Mode)   Global Value(150000000)	Throughput(b... 150000000(Global Mode)   Global Value(150000000)

Click “Save” when after completing.

### 6.4.3 How to view RRM's AP statistics

Go to **WLAN > AP > RRM** to view the RRM AP statistics.

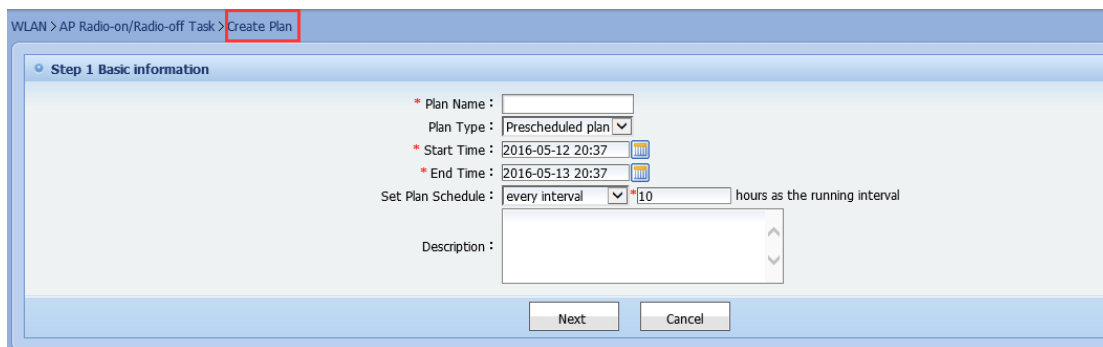


The screenshot shows the RRM (Radio Resource Management) interface. The top navigation bar includes 'Asset', 'Device', 'Performance', 'Alarm', 'WLAN', 'Report', and 'Advanced'. The left sidebar shows a tree view with 'All AP Hotspot Partitions' expanded to 'RuijienetworksFujian', which includes 'Lab', 'Office', and 'ruijienetwork'. Below this is 'All APs Not Partitioned'. At the bottom of the sidebar, 'RRM' is highlighted in a red box, with sub-items 'AP Radio-on/Radio-Off Task' and 'AP Connectivity Test Task'. The main content area has search filters for 'AC Name', 'Join Time', and 'Flow'. Below these is a table titled 'AP List' with columns for 'Location', 'AP Name', and 'Primary AC Name'. The table contains three rows: one with '[No Location Info]', 'ap130', and 'WS6008'; another with '[No Location Info]', 'ap520', and 'WS6008'; and a third with '[No Location Info]', '5869.6c60.a511', and 'WS6008'. Above the table, 'Spectrum Analysis' is set to 'Enable'.

Location	AP Name	Primary AC Name
[No Location Info]	ap130	WS6008
[No Location Info]	ap520	WS6008
[No Location Info]	5869.6c60.a511	WS6008

### 6.4.4 How to configure the AP timer switch

Go to **WLAN > AP > AP Radio-on/Radio-Off Task > Add** to add a timer switch AP task., then select device and configure Aps Switch, Click finish, return the AP timer switch task list.



The screenshot shows the 'Create Plan' dialog box for configuring an AP timer switch. The title bar reads 'WLAN > AP Radio-on/Radio-off Task > Create Plan'. The dialog is titled 'Step 1 Basic information' and contains the following fields: 'Plan Name' (text input), 'Plan Type' (dropdown menu set to 'Prescheduled plan'), 'Start Time' (calendar icon, value: 2016-05-12 20:37), 'End Time' (calendar icon, value: 2016-05-13 20:37), 'Set Plan Schedule' (dropdown menu set to 'every interval', followed by a text input '10' and the text 'hours as the running interval'), and 'Description' (text area). At the bottom are 'Next' and 'Cancel' buttons.

address:  AP Name:  Search

Selected Device List +Select Device from Plan **+Select Device** × De

**Select Device** ×

IP:  AP Name:  Search


**+Add** **+Add All**

<input type="checkbox"/>	AP Name	AP IP address	MAC	Primary Backup AC	Location
<input type="checkbox"/>	ap130	10.10.10.101	58:69:6c:66:b5:3b		
<input type="checkbox"/>	5869.6c60.a511	172.29.3.5	58:69:6c:60:a5:11		
<input type="checkbox"/>	ap520	10.10.10.100	58:69:6c:56:dd:60		


1 Go 10 Item Per Page Total Pages: 1/1 Total 3 Records

WLAN > AP Radio-on/Radio-off Task > Create Plan


**FIT APs Switch Configuration**



IP:10.10.10.101  
AP Name:ap130



IP:172.29.3.5  
AP Name:5869.6c60.a511



IP:10.10.10.100  
AP Name:ap520

Click "Activate" then start Plan.

Plan Name	Plan Type	Plan Status	Task Status	Last Run Time	Next Due Time	Operation
a	Prescheduled plan	valid	not running		2016-05-12 20:41:58	<input type="button" value="Update"/> <input type="button" value="Start Plan"/> <input type="button" value="Disabled"/>
Radio Off at night	Prescheduled plan	expired	not running			<input type="button" value="Update"/> <input type="button" value="Delete"/> <input type="button" value="Start Plan"/> <input type="button" value="Activate"/>

1 Go 10 Item Per Page Total Pages: 1/1 Total 2 Records

After the implementation of the task plan, click on the name of the project to see the results of the plan, as shown below:

WLAN > AP Radio-on/Radio-off Task > **Plan Detail**

**Basic Information**

Plan Name	a
Plan Type	Prescheduled plan
Plan Status	valid
Task Status	wait to run
Last Run Time	2016-05-12 20:42:16
Description	

**Run Log**

Start Time	End Time	Status	Exit Code	Total	Succes
2016-05-12 20:42:27	2016-05-12 20:42:27	COMPLETED	COMPLETED	3	2
2016-05-12 20:42:16	2016-05-12 20:42:18	COMPLETED	COMPLETED	3	2

### 6.4.5 How to configure AP connectivity test tasks

Go to **WLAN > AP > AP Connectivity Test Task > Add** to add a connected test task. Then select device.

WLAN > AP Connectivity Test > **Create Plan**

**Step 1 Basic information**

\* Plan Name :

Plan Type : Prescheduled plan

\* Start Time : 2016-05-12 20:46

\* End Time : 2016-05-13 20:46

Set Plan Schedule : every interval

Period : \* Every n hours:10

Description :

Next Cancel

Click "**finish**", and the system returns the AP connectivity test task list, Click "**Activate**" then start plan.

Plan Name:  Search

**AP Connectivity Test** +Add

Plan Name	Plan Type	Plan Status	Task Status	Last Run Time	Next Due Time	Operation
a	Prescheduled plan	valid	not running		2016-05-12 20:48:02	Update <b>Start Plan</b> Disabled

1 Go 10 Item Per Page Total Pages: 1/1 Total Records

After the implementation of the task plan, click on the name of the project to see the results of the plan, as shown below:



**Basic Information**

Plan Name	a
Plan Type	Prescheduled plan
Plan Status	valid
Task Status	running
Task Status	running
Last Run Time	2016-05-12 20:48:14
Description	

**Run Log**

Start Time	End Time	Status	Exit Code	Total	Reachable Count	Unreachable Count	Operation
2016-05-12 20:48:14	2016-05-12 20:48:27	COMPLETED	COMPLETED	3	2	1	Detail

Batch Plan Run Log :

BACK DATE SKIPPED: The plan starts five minutes after the preschedule and is skipped  
 FAST EXCEPTION EXIT: Operation on a device fails and the plan is exit

## 6.4.6 Batch Setting Spectrum Analyzer

Go to **WLAN > AP** select APs then click “**Enable**” to enable the spectrum analysis.

AP Name:  Connection:  Model:  MAC:  SSID:   
 AC Name:  Join Time:  Flow:  Working Mode:  Spectrum Analysis:

AP List Spectrum Analysis:  Enable  Disable Associate Out-of-Service Rate Idle AP Alarm Thresholds Rogue AP

Location	AP Name	Primary AC Name	Secondary AC Name	Working Mod	Associated Hotspot	Associated Aut
<input type="checkbox"/> [No Location Info]	ap130	WS6008		Access	ruijienetwork	0
<input checked="" type="checkbox"/> [No Location Info]	ap520	WS6008		Access		0
<input type="checkbox"/> [No Location Info]	5869.6c60.a511	WS6008		Access		0

**Confirm** ✕

Are you sure to enable spectrum analysis?

Click “**OK**” to return to AP List.

## 6.4.7 How to bulk associate AP to hot spots

Go to **WLAN > AP > Associate** to link the hot spot

WLAN Management Interface - AP Configuration

Navigation: Summary | Hotspot | **AP** | AC | STA | Alarm | Alarm | Rogue AP | Assistant | Topolog

AP Navigation: All AP Hotspot Partitions > RuijienetworksFujian > Lab > Office

Form Fields:
 

- AP Name: [ ] Connection: [ ] Model: [ ]
- AC Name: [ ] Join Time: [ ] Flow: [ ]

AP List: Spectrum Analysis:  Enable  Disable

<input type="checkbox"/>	Location	AP Name	Primary AC Name	Secondary AC Name
<input type="checkbox"/>	[ ]	[ ]	[ ]	[ ]

Re-associate dialog box

Associate Hotspot: [ ]

- Lab
- Office
- ruijienetwork

Buttons:

Click "OK" when complete setting.

### 6.4.8 Customize AP List

The AP page can choose whether to show more AP fields, as shown in the following figure:

AP List: Spectrum Analysis:  Enable  Disable

<input type="checkbox"/>	Location	AP Name	Primary AC Name	Secondary AC Name	World
<input checked="" type="checkbox"/>	[No Location Info]	ap130	WS6008		Ac
<input checked="" type="checkbox"/>	[No Location Info]	ap520	WS6008		Ac
<input type="checkbox"/>	[No Location Info]	5869.6c60.a511	WS6008		Ac

Attributes to be displayed:  Model  MAC  Spectrum Analysis

## 6.5 AC

### 6.5.1 Add, Query and Delete AC

This feature is used to add, query and delete the AC device. Go to **WLAN > AC > Add**, add the IP AC address, select the relevant SNMP template and TELNET template

Add AC ✕

IP: \* 172.29.3.1

SNMP Template: SNMPV2c + Add SNMP..

Add Telnet Template: default + Telnet Te...

Only ACs can be added

OK Cancel

After completion, it will automatically synchronize the associated AP AC

Prompt ✕

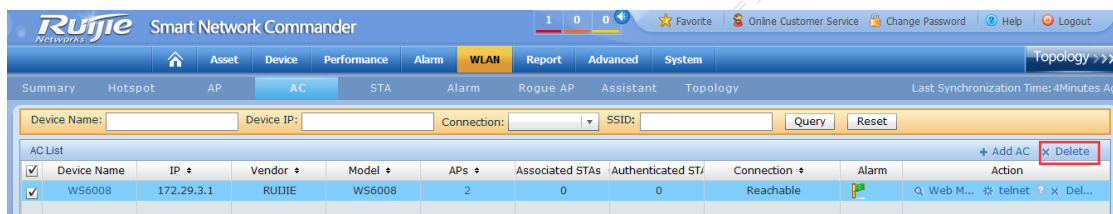
Operation succeeded

Enter the query terms, click the **query**.

The screenshot shows the Ruijie Smart Network Commander interface. The 'WLAN' tab is selected, and the 'AC' sub-tab is active. The 'Query' button is highlighted in red. Below the query fields, the 'AC List' table is displayed with the following data:

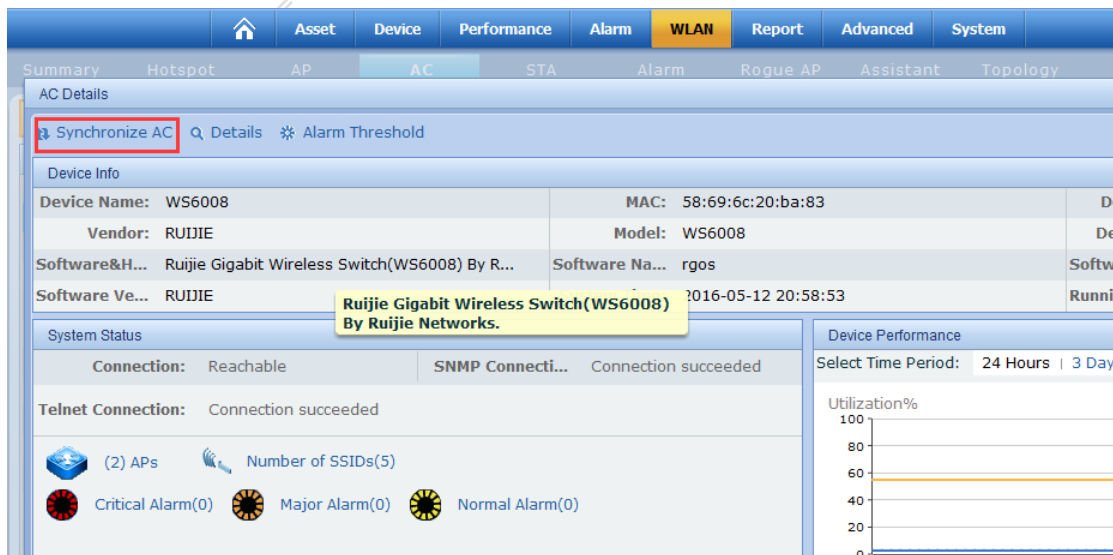
Device Name	IP	Vendor	Model	APs	Associated STAs	Authenticated STAs	Connection	Alarm
WS6008	172.29.3.1	RUIJIE	WS6008	2	0	0	Reachable	

Click "**delete**" to delete AC



## 6.5.2 How to synchronize AC information

This feature is used to add, query and delete the AC device. Go to **WLAN > AC > AC name > Synchronize AC**, to synchronize AC.



## 6.5.3 How to set up AC alarm threshold

This feature is used to add, query and delete the AC device. Go to **WLAN > AC > AC name > Alarm Threshold**, according to the actual needs, set AC alarm threshold parameters.

Alarm Threshold		802.11a		802.11b	
Interference Thre...	<input type="text" value="60"/>	Interference Thre...	<input type="text" value="60"/>		
Noise Threshold(...	<input type="text" value="-70"/>	Noise Threshold(...	<input type="text" value="-70"/>		
Maximum Number...	<input type="text" value="32"/>	Maximum Number...	<input type="text" value="32"/>		
RF Utilization(%) :	<input type="text" value="80"/>	RF Utilization(%) :	<input type="text" value="80"/>		
Throughput(bps) :	<input type="text" value="150000000"/>	Throughput(bps) :	<input type="text" value="150000000"/>		

#### 6.5.4 AC device information detailed configuration

Go to **WLAN > AC > AC name > Details > Basic Information** and then modify the general properties of the wireless controller configuration information.

The screenshot shows the WLAN configuration interface. The top navigation bar includes 'WLAN' (highlighted in yellow). Below it, the 'AC' tab is selected. The 'AC Details' section has a 'Details' link highlighted with a red box. The 'Basic Information' section is expanded, showing fields like IP, Name, Model, AC Name, RF Group Name, AP Failover Priority, Runtime, Contact Person, Device Location, and Connectivity Status. A 'Modify' button in the top right of this section is also highlighted with a red box.

Go to **WLAN > AC > AC name > Details > Trap Receivers** and then click "Add" to add the message server which needs to receive traps.

AC Details

[Synchronize AC](#)
[Details](#)
[Alarm Threshold](#)

Device Info

[Home](#)
[Asset](#)
[Device](#)
[Performance](#)

Controller

WLAN > 172.29.3.1 > Trap Receivers

Basic Information  
 System  
 WLAN  
 Security  
 Interfaces  
 Device Configuration

Trap Receivers  
 Trap Control  
 Syslog Receiver

IP Address  
 172.29.4.1  
 172.29.2.5  
 172.29.2.4

Trap Receivers

<input type="checkbox"/>	IP Address	Remarks
<input type="checkbox"/>	172.29.4.1	
<input type="checkbox"/>	172.29.2.5	
<input type="checkbox"/>	172.29.2.4	

Go to **WLAN > AC > AC name > Details > Trap Control** and then click "Update" to modify the Trap parameters.

Controller

WLAN > 172.29.3.1 > Trap Control

Basic Information  
 System  
 WLAN  
 Security  
 Interfaces  
 Device Configuration

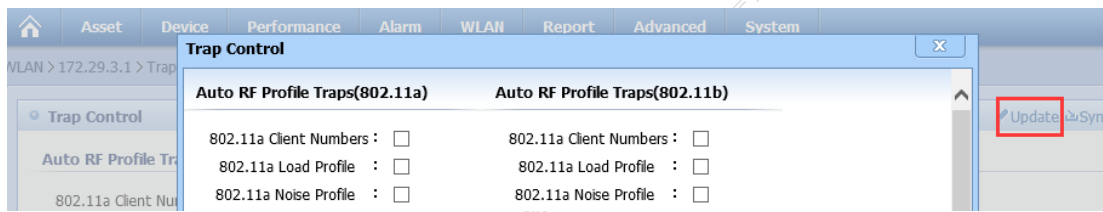
Trap Receivers  
 Trap Control  
 Syslog Receiver  
 IGMP Snooping Configuration

Trap Control

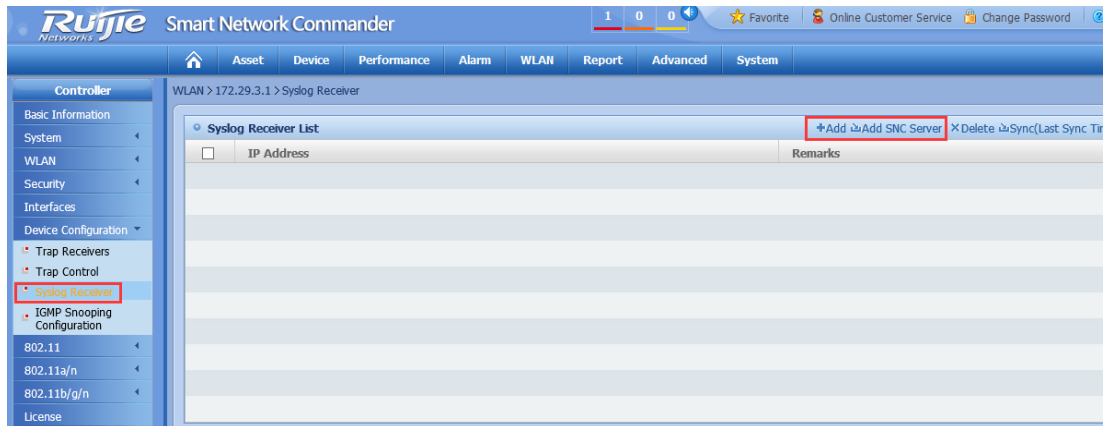
**Auto RF Profile Traps(802.11a)**

802.11a Client Numbers : Disabled  
 802.11a Load Profile : Disabled  
 802.11a Noise Profile : Disabled  
 802.11a Interference Profile : Disabled  
 802.11a Performance Profile : Disabled

**Auto RF Update Traps(802.11a)**



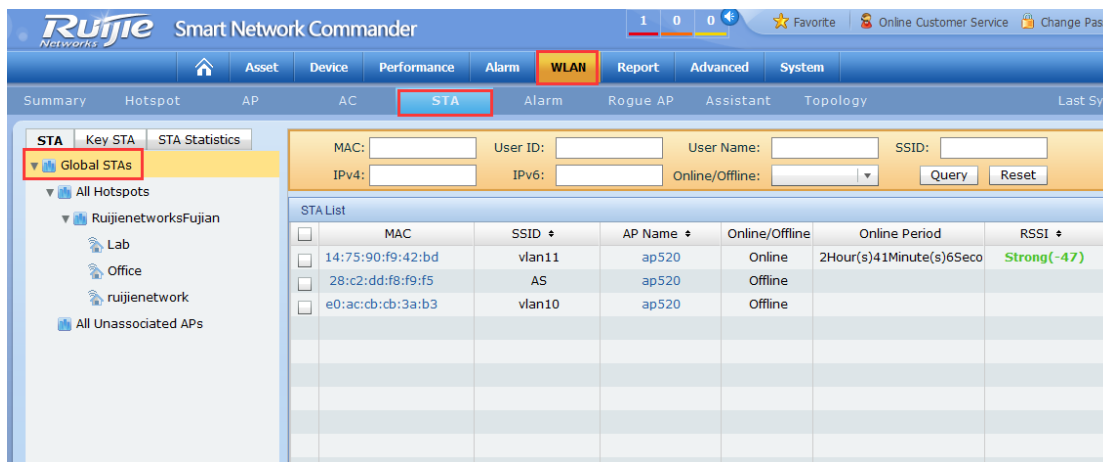
Go to **WLAN > AC > AC name > Details > Syslog Receiver** and then Syslog reception can be added, deleted, synchronous operation.



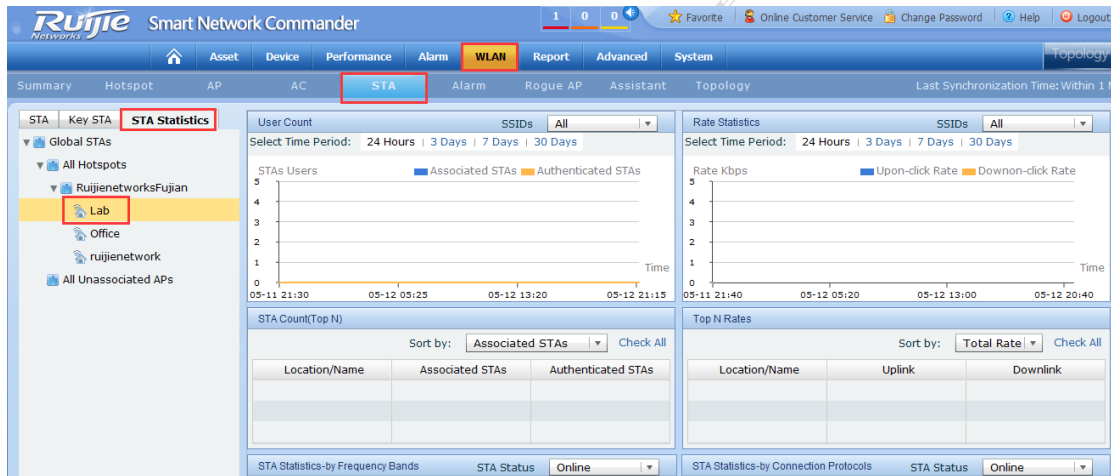
## 6.6 Users

### 6.6.1 How to view the entire network of wireless user statistics

Go to **WLAN > STA > Global STAs**, add the view the entire network of wireless user statistics.



Click **"STA Statistics"** then select a hot spot to view the STA information.



## 6.6.2 Full Network Users List

Go to **WLAN > STA > a single hot spot > Key STA Settings**, to set the threshold for the received packet retransmission rate

	SSID	AP Name	Online/Offline	Online Period	RSSI	Uplink	Downlink
2:bd	vlan11	ap520	Online	2Hour(s)45Minute(s)23Sec	Strong(-47)	4.60 (Kbps)	600.00 (bps)
9:f5	AS	ap520	Offline				
a:b3	vlan10	ap520	Offline				

**Key STA Settings** ✕

Retransmit Rate T...

Customize more terminal fields, as shown in the following figure:



STA List

<input type="checkbox"/>	MAC	SSID	AP Name	Online/Offline	Online Period
<input checked="" type="checkbox"/>	14:75:90:f9:42:bd	vlan11	ap520	Online	2Hour(s)45Minute(s)23S
<input type="checkbox"/>	28:c2:dd:f8:f9:f5	AS	ap520	Offline	
<input type="checkbox"/>	e0:ac:cb:cb:3a:b3	vlan10	ap520	Offline	

User ID  
 User Name  
 IP  
 Hardware Type  
 OS  
 Product Type

Go to **WLAN > STA > Key STA**, then select a single hot port, click **"Add Key STA"** and set the parameters of STA.

- ▼ Global STAs
  - ▼ All Hotspots
    - ▼ RuijienetworksFujian
      - Lab
      - Office
      - ruijienetwork

---

User ID:    MAC:    Online/...    STA Type:      

<input type="checkbox"/>	MAC	User ID	Online/Offline	Retransmit Rate Threshold	RSSI	AP Name	Alarm	STA Ty

**Add Key STA** [X]

MAC:

Retransmit Rate T...

[OK] [Cancel]

Click "**Batch Set Retransmit Rate Threshold**" to set the threshold for the received packet retransmission rate.

User ID:  MAC:  Online/...  STA Type:  [Query] [Reset]

Key STA List								
	MAC	User ID	Online/Offline	Retransmit Rate Threshold	RSSI	AP Name	Alarm	STA Type
<input checked="" type="checkbox"/>	14:75:90:f9:42:bd		Online	1	Strong(-47)	ap520		Comput...

[Batch Set Retransmit Rate Threshold] [Add Key STA] [Remove Key STA]

**Batch Set Retransmit Rate Threshold** [X]

Retransmit Rate Thres...

[OK] [Cancel]

Click "**Remove Key STA**" to delete the Key STA.

User ID:  MAC:  Online/...  STA Type:  [Query] [Reset]

Key STA List								
	MAC	User ID	Online/Offline	Retransmit Rate Threshold	RSSI	AP Name	Alarm	STA Type
<input checked="" type="checkbox"/>	14:75:90:f9:42:bd		Online	1	Strong(-47)	ap520		Comput...

[Batch Set Retransmit Rate Threshold] [Add Key STA] [Remove Key STA]

**Confirm** [X]

Are you sure you want to delete the key STA?

[OK] [Cancel]

## 6.7 Alarm

### 6.7.1 Alarm Source Navigation

Go to **WLAN > Alarm**, then click "▼", you can render the associated subordinate navigation. Then click the current alarm source, and the alarm list is presented with the alarm information generated by the device.

Alarm Source Navigation

Device Name:  Alarm Level:  Critical  Major  Normal  Inform Ack Status:  Acked  UnAcked  
Description:  Alarm Time:  to

Alarm Source	Level	Event	Description	Ack Stat.	Resolving	First Alarm Time	Last Alarm Time
ap130	Warning	Warning	AP (Device (WS6008(172.29.3.1)...	UnAcked	Unresol	2016-05-12 15:20	2016-05-12 15:20
ruijienetwork	Warning	Warning	Mas Massive APs under hotspot (...	UnAcked	Unresol	2016-05-12 15:20	2016-05-12 15:20

### 6.7.2 Export Alarm Procedure

Go to **WLAN > Alarm**, then click "Export" to export the alarm list.

Device Name:  Alarm Level:  Critical  Major  Normal  Inform Ack Status:  Acked  UnAcked Resolving:  Resolved  Unresolved  
Description:  Alarm Time:  to  Query Reset

Alarm Source	Level	Event	Description	Ack Stat.	Resolving	First Alarm Time	Last Alarm Time	Times	Action
ap130	Warning	Warning	AP (Device (WS6008(172.29.3.1)...	UnAcked	Unresol	2016-05-12 15:20	2016-05-12 15:20	1	Details More
ruijienetwork	Warning	Warning	Mas Massive APs under hotspot (...	UnAcked	Unresol	2016-05-12 15:20	2016-05-12 15:20	1	Details More

### 6.7.3 How to deal with alarm information

Go to **WLAN > Alarm**, then Select the check box before the alarm information in the alarm list. Click "Acknowledge" then alarm status change to confirmation.

Device Name:  Alarm Level:  Critical  Major  Normal  Inform Ack Status:  Acked  UnAcked  
Description:  Alarm Time:  to

Alarm Source	Level	Event	Description	Ack Stat.	Resolving	First Alarm Time	Last Alarm Time
<input checked="" type="checkbox"/> ap130	Warning	Warning	AP (Device (WS6008(172.29.3.1)...	UnAcked	Unresol	2016-05-12 15:20	2016-05-12 15:20
<input type="checkbox"/> ruijienetwork	Warning	Warning	Mas Massive APs under hotspot (...	UnAcked	Unresol	2016-05-12 15:20	2016-05-12 15:20

Click "Resolved" then alarm state to solve has been solved.

Device Name:  Alarm Level:  Critical  Major  Normal  Inform Ack Status:  Acked  UnAck

Description:  Alarm Time:  to

Alarm List ✓ Acknowledge ✓ Resolved ✕ Delete ⚙ Alarm Configuration 📄 Export

<input type="checkbox"/>	Alarm Source	Level	Event	Description	Ack Status	Resolving	First Alarm Time	Last Alarm Time
<input checked="" type="checkbox"/>	ap130	🚩		AP ( Device (WS6008(172.29.3.1)...	UnAcked	Unresolv	2016-05-12 15:20	2016-05-12 15:20
<input type="checkbox"/>	ruijienetwork	🚩		Mas Massive APs under hotspot (...	UnAcked	Unresolv	2016-05-12 15:20	2016-05-12 15:20

Click the **"Delete"** will delete the selected alarm.

Device Name:  Alarm Level:  Critical  Major  Normal  Inform Ack Status:  Acked  UnAck

Description:  Alarm Time:  to

Alarm List ✓ Acknowledge ✓ Resolved ✕ Delete ⚙ Alarm Configuration 📄 Export

<input type="checkbox"/>	Alarm Source	Level	Event	Description	Ack Status	Resolving	First Alarm Time	Last Alarm Time
<input checked="" type="checkbox"/>	ap130	🚩		AP ( Device (WS6008(172.29.3.1)...	UnAcked	Unresolv	2016-05-12 15:20	2016-05-12 15:20
<input type="checkbox"/>	ruijienetwork	🚩		Mas Massive APs under hotspot (...	UnAcked	Unresolv	2016-05-12 15:20	2016-05-12 15:20

Go to **WLAN > Alarm > Alarm Configuration**, then set alarm information.

Device Name:  Alarm Level:  Critical  Major  Normal  Inform Ack Status:  Acked  UnAck

Description:  Alarm Time:  to

Alarm List ✓ Acknowledge ✓ Resolved ✕ Delete ⚙ Alarm Configuration 📄 Export

**AP Down Alarm Under Hotspot**

APs Down Alarm Under Hotspot

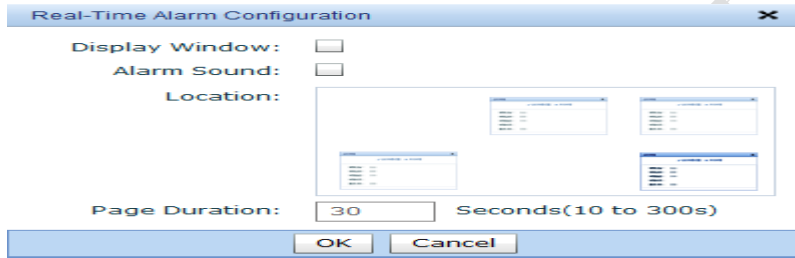
Alarm Threshold of APs Down Under Hotspot:  %

Go to **WLAN > Alarm**, click a single hot port, then click **"Alarm Window Configuration"** to define whether to enable the pop-up window warning prompt.

Summary Hotspot AP AC STA Alarm Rogue AP Assistant Topology Last Synchronization Time: Within 1 Minute

Device Name:  Alarm Level:  Critical  Major  Normal  Inform Ack Status:  Acked  UnAcked Resolving:  Resolved  Unreso

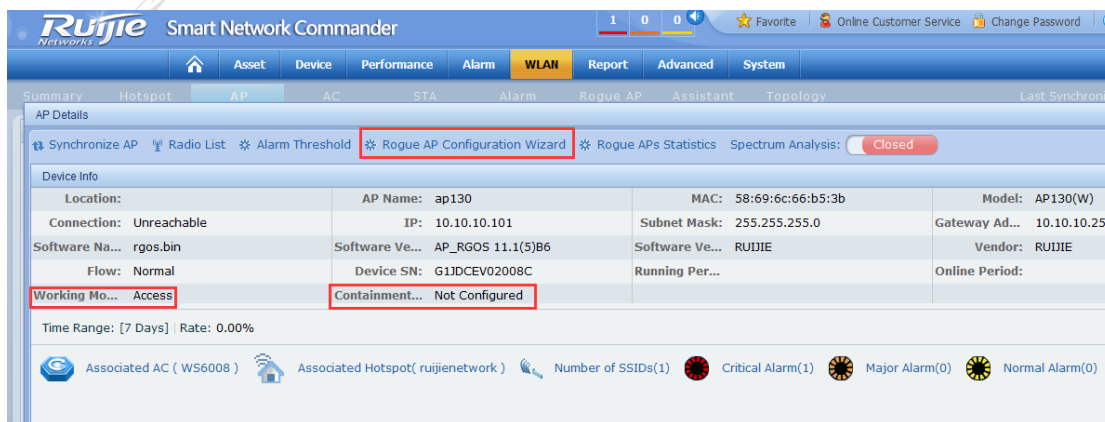
Description:  Alarm Time:  to   |  | Alarm Source | Level | Event | Description | Ack Status | Resolving | First Alarm Time | Last Alarm Time | Times | Action |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | WS5302 | 🚩 |  | Dev: The device is unreachable | UnAcked | Unresolv | 2016-06-01 13:50 | 2016-06-06 09:41 | 1040 | Details |



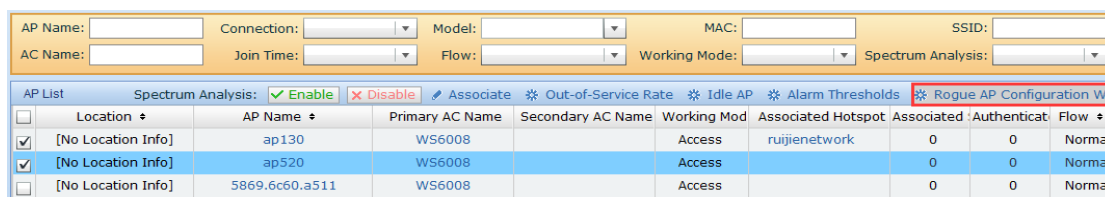
## 6.8 Illegal AP

### 6.8.1 Illegal AP Configuration Wizard

Go to **WLAN > AP > Rogue AP Configuration Wizard**, then view the information of illegal AP.



Go to **WLAN > AP** select multiple AP, and then click on the "**Rogue AP Configuration Wizard**", then set the illegal AP.



Enter the illegal AP configuration wizard page, you need to select the configuration mode, there are 2 kinds of configuration mode: simple configuration mode and user configuration mode, select the "**simple configuration mode**", the AP work mode will be configured as a mixed mode, the system is configured to config mode; click **OK** that is configured to equipment.

Configuration Wizard

Simple Configuration Mode

AP Working Mode: Hybrid Mode, Containment Mode: Config Mode

Enabled
  Contained Area
  Permitted Area

Hybrid Mode: The AP monitors rogue APs and offers wireless services
  Config Mode: Contain the rogue APs in the blacklist

User Configuration Mode  
 AP You can specify working and containment modes

OK Cancel

Select "user configuration mode", "OK" button will become "next" button, click "next", enter the configuration AP work mode page.

User Configuration Mode

AP You can specify working and containment modes

Next Cancel

Configuration Wizard - Select AP Working Mode

Legend:  Enabled  Disabled

Hybrid

STA Rogue AP

Monitor rogue APs and offers wireless services

Monitoring

STA Rogue AP

Only monitor rogue APs

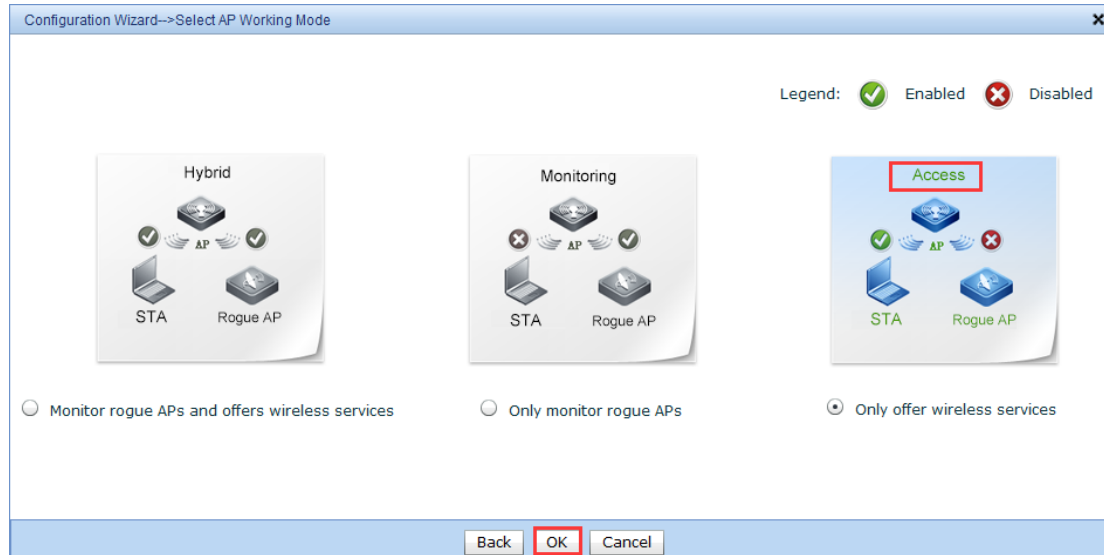
Access

STA Rogue AP

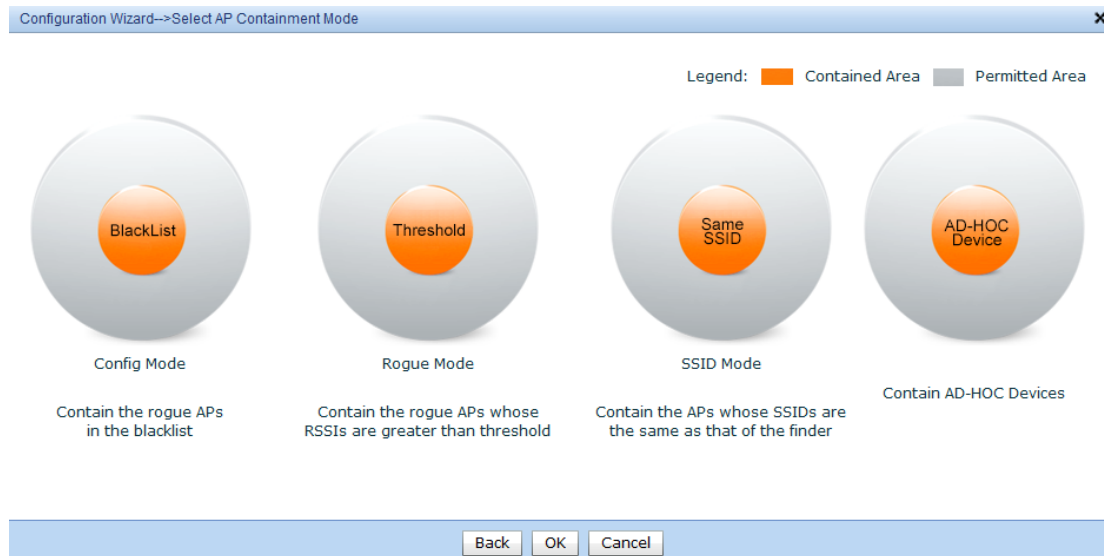
Only offer wireless services

Back Next Cancel

AP can be configured in 3 kinds of work modes: mixed mode, listening mode, access mode; select "access mode", then click "OK button".

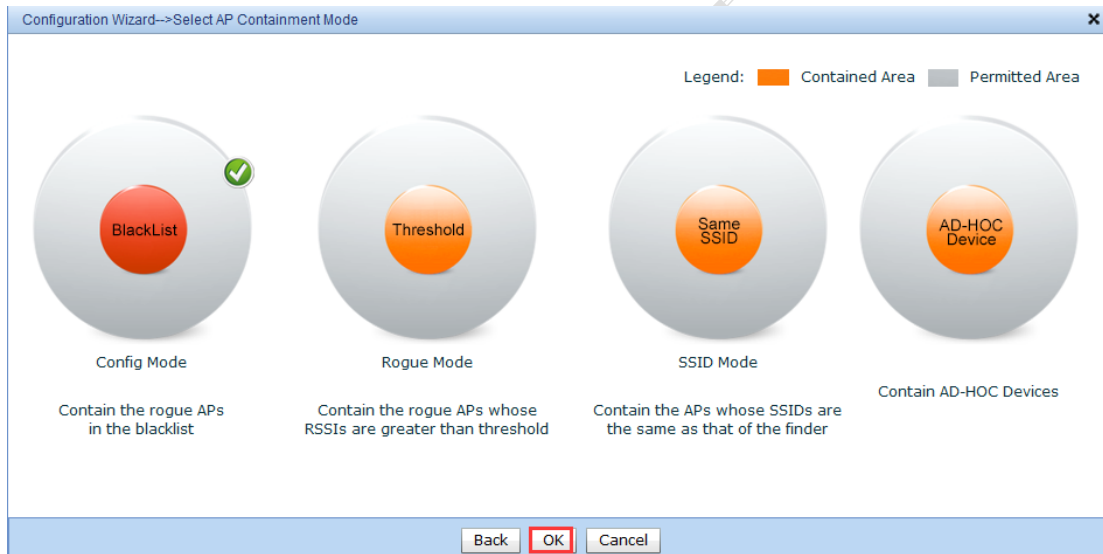


Select the mixed mode or monitor mode, click next, and then enter the AP counter mode page:



After entering the AP counter system mode configuration page, click "OK", meaning that only the AP configuration of the work mode, not to configure the counter model.

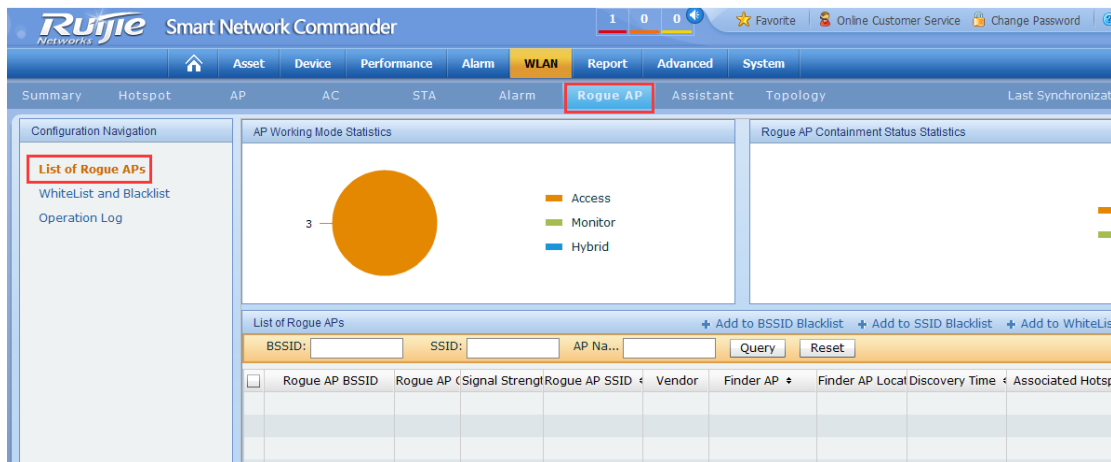
Four optional configure AP counter mode, including: config mode, rogue, SSID, ad-hoc mode; when a certain mode is selected, figure in the upper right corner will tick effect appears, as shown in Figure:



Click "OK" when complete setting.

## 6.8.2 Illegal AP List

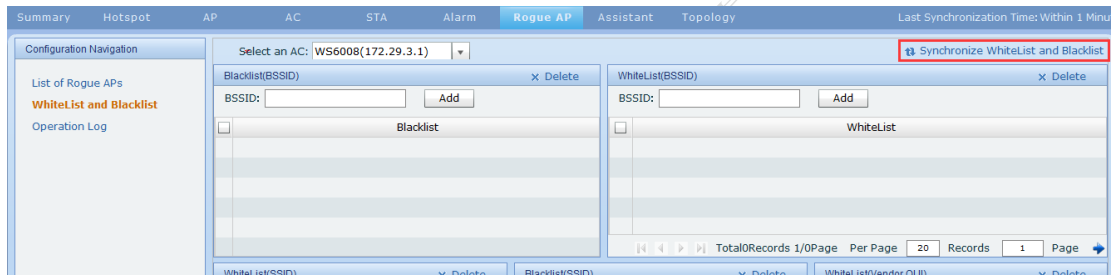
Go to **WLAN > Rogue AP > List of Rogue APs**, then view the information of illegal AP.



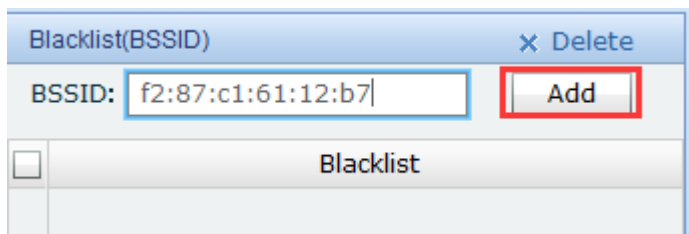
## 6.8.3 Black and White Lists

Go to **WLAN > Rogue AP > WhiteList and Blacklist > Select an AC**, then you can see the black and white list information on the current AC.

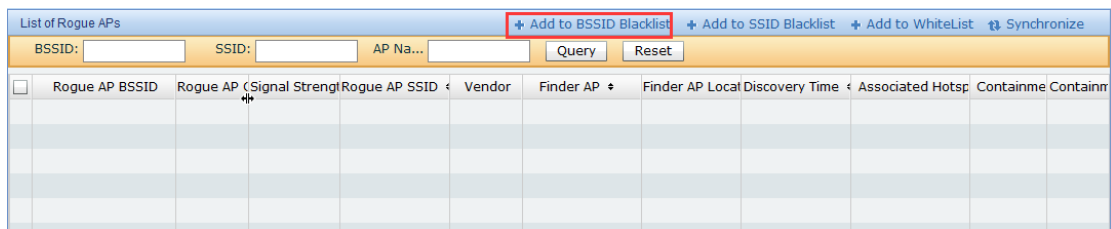




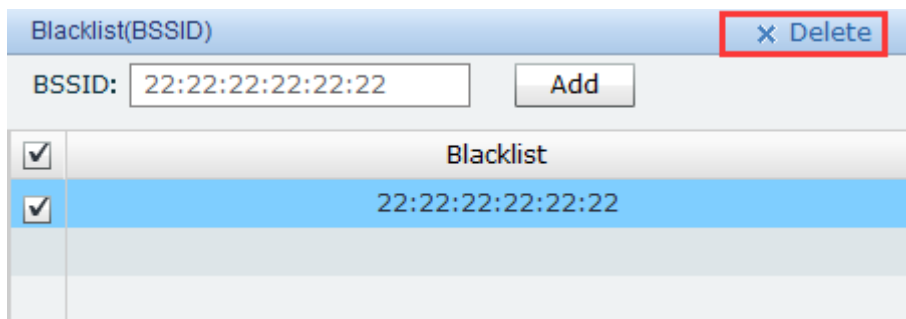
You can manually enter BSSID, click "**add**", as shown below:



Can also be in the last chapter of the illegal AP list in the AP to add the black list,

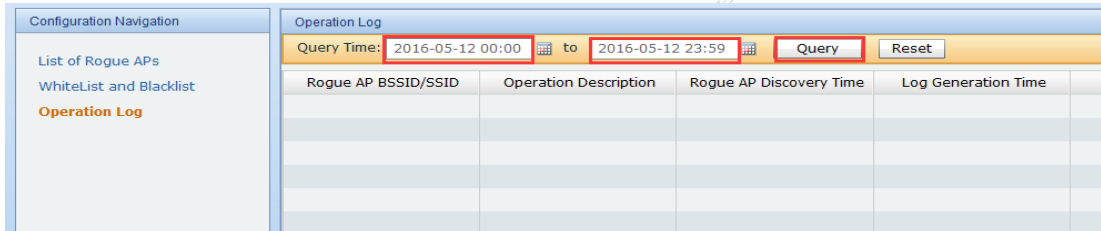


Check the black list and click "**delete**".



## 6.8.4 Running Log

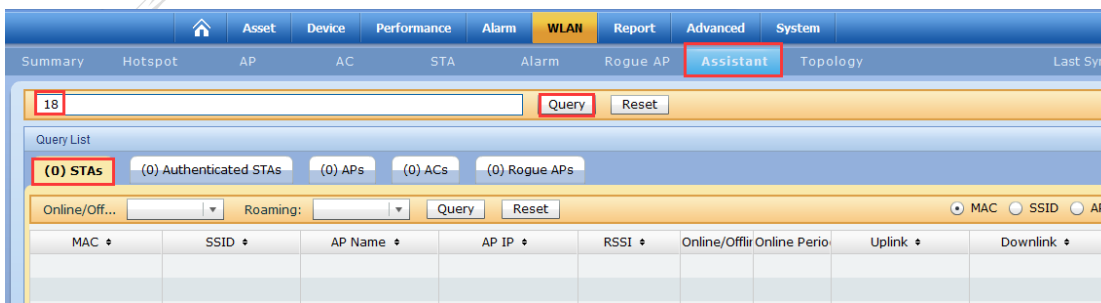
Go to **WLAN > Rogue AP > Operation Log**, then Select Query beginning and ending time, click on "**Query**",



## 6.9 Troubleshooting Assistant

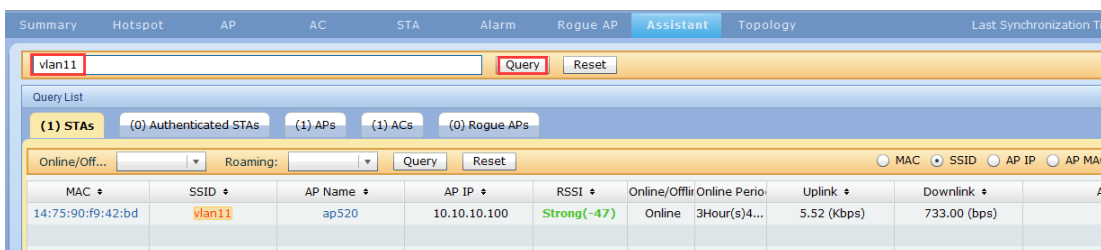
### 6.9.1 How to search for equipment

Go to **WLAN > Assistant**, then enter search terms, such as "18", click on "**Query**", you can search for the following five aspects with "18".



### 6.9.2 How to instantly search network

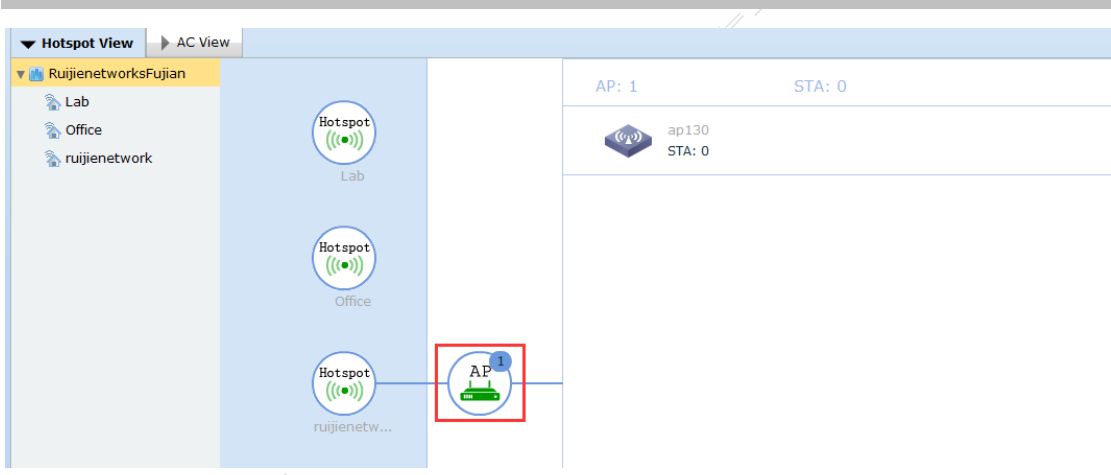
Go to **WLAN > Assistant**, then enter search terms, such as SSID for the "Vlan11", click on "Query", then see the details of the STA



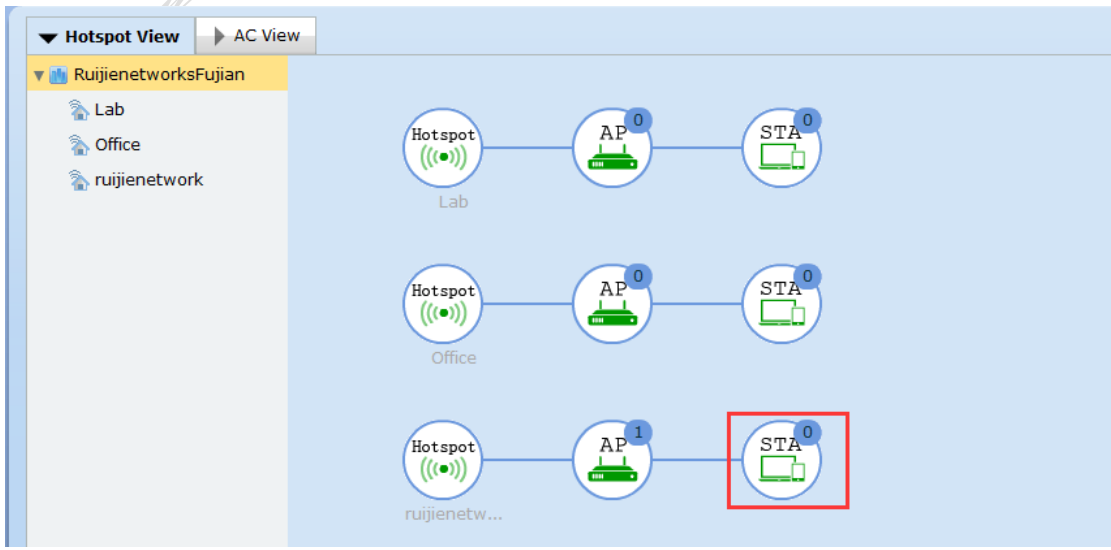
Other real-time query methods, such as user MAC, the input query terms "00:08:ca:54:86:23"

## 6.10 View Hot Spot

The function is used to view the logical relationship between the wireless network hotspot, AC, AP, and STA. Go to **WLAN > Topology > Hotspot View**, click the AP icon to show the hot AP



Click the terminal icon, terminal information may be presented under the hotspot.



Click "AC View" to see the logical relationships between AC, AP, and STA,

