

FIBERROAD

Web-Based Network Management System

User Manual



About This Manual

Introduction

This document chapter includes an introduction to the Fiberroad Managed WebGUI Network Management System, which also contains Fiberroad Industrial Grade Ethernet Switch and Commercial Grade Ethernet Switch Series.

Conventions

This document contains notices, figures, screen captures, and certain text conventions.

Figures and Screen Captures

This document provides figures and screen captures as examples. These examples contain sample data. This data may vary from the actual data on an installed system.

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Units of Measurement

Units of measurement in this publication conform to SI standards and practices.

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Revision History

Version	Date	Author	Reasons of Change	Section(s) Affected
1.0	2019/07/12		Initial Release	All

1. About Fiberroad Network Management System

Web-based Operation

You will need to install the Fiberroad NMS software on a Windows computer connected to the network(s) that are to be managed. After installing Fiberroad NMS Software, the network can be managed using Chrome, Firefox, or Microsoft Edge (version 79+), without installing additional software.

Note: We recommend to use Chrome.

Auto Discovery and Topology Visualization

Within the Device Discovery, Fiberroad NMS locates networking devices with SNMP enabled. Fiberroad NMS can collect topology information from devices with LLDP capability and draw the topology of the network, which shows wired connections. If any managed PoE switches are in your network, the PoE power output information will also be visualized automatically.

Alarm Management

For troubleshooting purposes, Fiberroad NMS Alarm Info that match predefined conditions, such as link up/down, device unreachable, or traffic overloading. The most recent events will be displayed to inform users of the networking status. Devices and links that generate events will be highlighted with different colors.

System Requirements

The Computer that Fiberroad NMS is installed on must satisfy the following system requirements:

OS: Windows7 or above, Windows Server

CPU: 3.2GHz or faster dual core cpu;

RAM: 4G or Higher;

Hard Disk Space: 50G or higher;

2. Installation and Start-Up

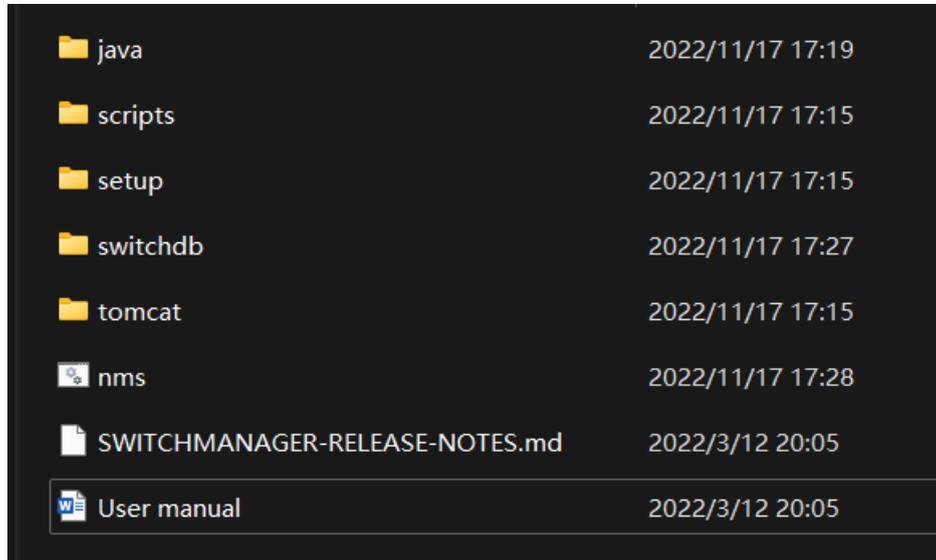
2.1 Install software on Windows

Decompress the installation package to the installation directory. The decompression contains five subdirectories: java, script, setup, switchdb, and tomcat

- 1) The installation must be in an English path
- 2) You are advised to decompress the file to a non-system disk to avoid problems caused by windows write permission.
- 3) Open the installation directory and execute ch_setup.bat and en_setup.bat in the setup subdirectory. This script only needs to be executed during the first installation.
 - Install the Chinese version of the software and run ch_setup.bat
 - Install the English version of the software and run en_setup.bat

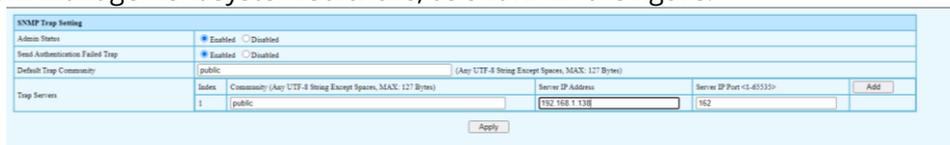
2.2 Software startup and use

- 1) To start the service, double-click nms.bat in the installation directory.
- 2) To Stop the service: close the console window opened by starting the service.



3, SNMP Trap and LLDP Configuration

3.1 Enter the web management interface of Fiberroad ethernet switch, click **Management ->SNMP->Trap Settings**, change the management state and send SNMP authentication failure TRAP to **enable**, and set the server IP address of the computer that installed the network management system software, as shown in the figure:



3.2 Click **Management ->LLDP-> Global Setting** to **enable** LLDP, as shown in the figure



3.3 Click **Management ->LLDP-> Port Configuration** to change the port admin status to **Transmit and Receive**, as shown in the figure

Port	Destination address	Admin Status	Transmit Interval(s)	Hold multiplier	Retry delay(s)	Trap Interval(s)	Transmit credit num	Fast transmit Interval(s)	Fast transmit num	Trap enable	TELNET transmit enable
GE1	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	
GE2	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	
GE3	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	
GE4	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	
GE5	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	
GE6	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	
GE7	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	
GE8	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	
GE9	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	
GE10	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	
GE11	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	
GE12	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	
GE13	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	
GE14	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	
GE15	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	
GE16	0180C3-0000E	Transmit And Receive	0	0	0	0	0	0	0	Disabled	
GE17	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	
GE18	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	
GE19	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	
GE20	0180C3-0000E	Disabled	0	0	0	0	0	0	0	Disabled	

3.4 Click **Alarm ->Trap Setting** to enable the admin status of online and offline ports, as shown in the figure

Alarm Event	Port	Admin Status	Link Status	Alarm Status
LinkUp	GE1	Disabled	No	No
LinkUp	GE2	Disabled	No	No
LinkUp	GE3	Disabled	No	No
LinkUp	GE4	Disabled	No	No
LinkUp	GE5	Disabled	No	No
LinkUp	GE6	Disabled	No	No
LinkUp	GE7	Disabled	No	No
LinkUp	GE8	Disabled	No	No
LinkUp	GE9	Disabled	No	No
LinkUp	GE10	Disabled	No	No
LinkUp	GE11	Disabled	No	No
LinkUp	GE12	Disabled	No	No
LinkUp	GE13	Disabled	No	No
LinkUp	GE14	Disabled	No	No
LinkUp	GE15	Disabled	No	No
LinkUp	GE16	Enabled	Yes	Yes
LinkUp	GE17	Disabled	No	No
LinkUp	GE18	Disabled	No	No
LinkUp	GE19	Disabled	No	No
LinkUp	GE20	Disabled	No	No
LinkUp	GE21	Disabled	No	No
LinkUp	GE22	Disabled	No	No
LinkUp	GE23	Disabled	No	No
LinkUp	GE24	Disabled	No	No
LinkUp	GE25	Disabled	No	No
LinkUp	GE26	Disabled	No	No
LinkUp	GE27	Disabled	No	No
LinkUp	GE28	Disabled	No	No

After the configuration is complete, go to the network management software to access other configurations, and view the network management software description.

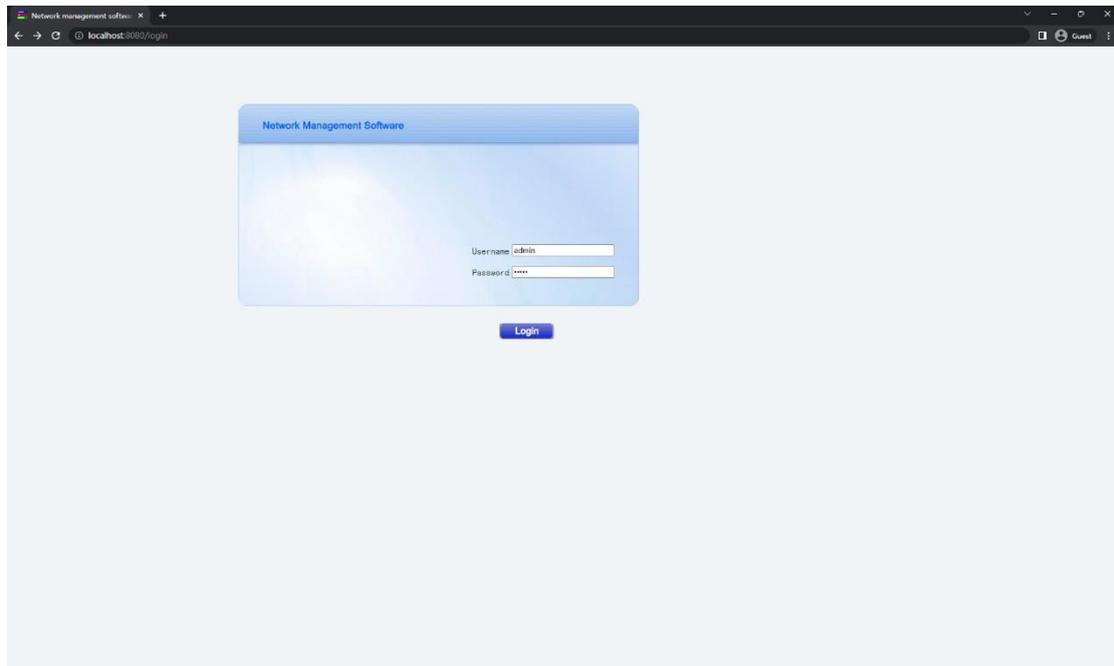
4. Network Management System Interface

4.1 Login

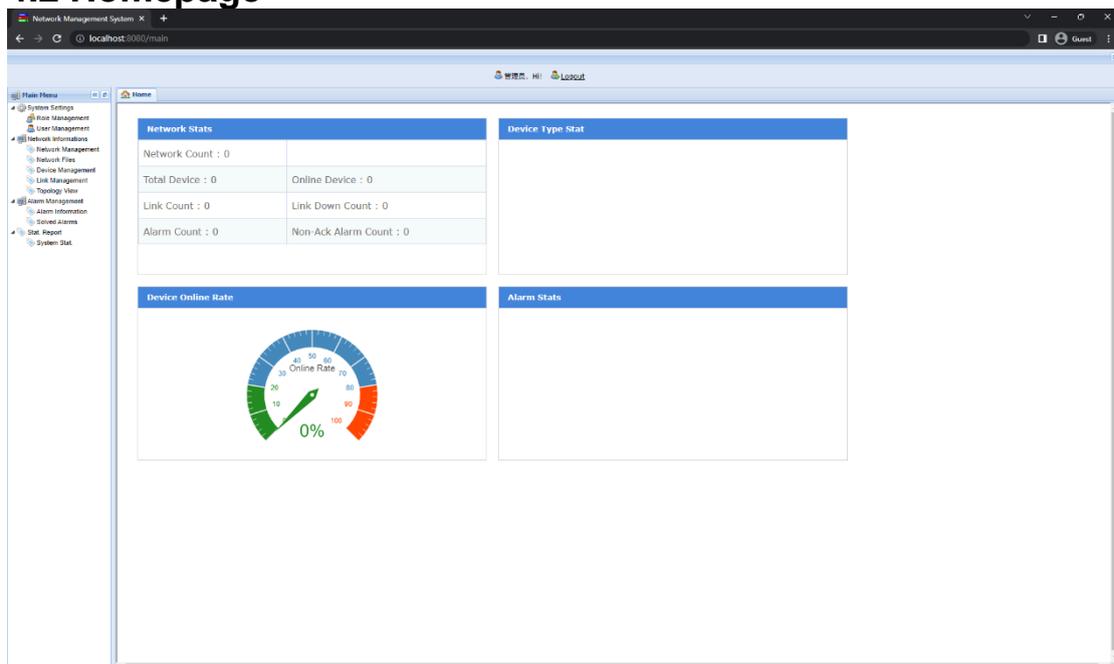
After the software is installed and started, open the Chrome browser ,type <http://localhost:8080/login> in the address bar that can enter the login interface of the software.

Username: admin

Password:admin



4.2 Homepage



The main interface can be divided into four areas: main menu, function navigation bar, opened page and user setting

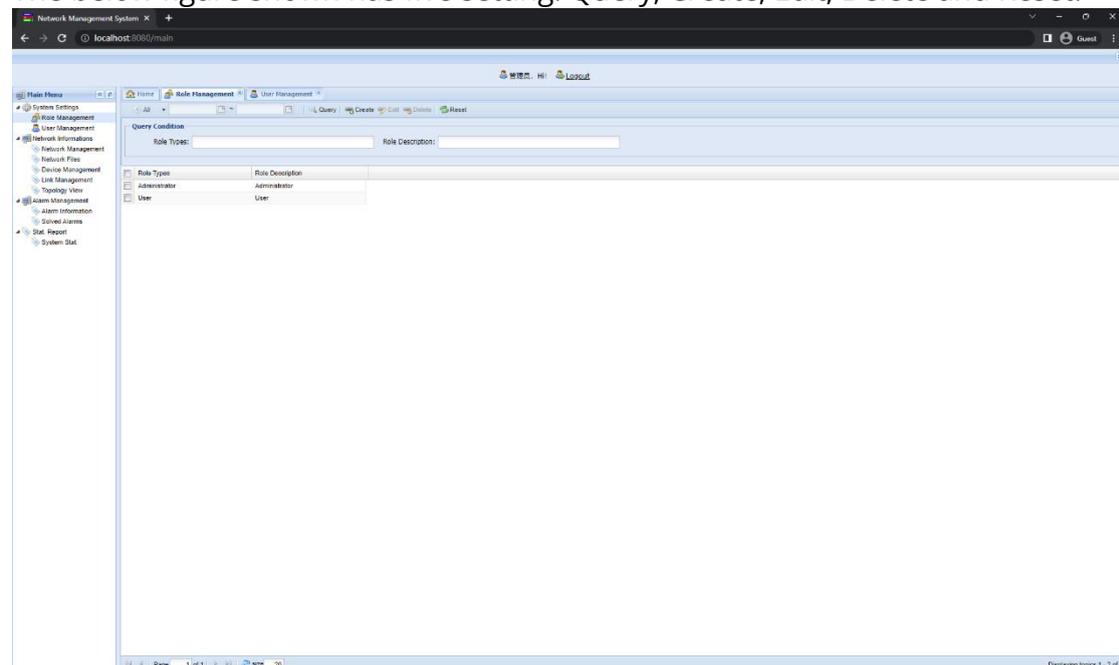
1. The main menu mainly displays several large functional categories of the software. After a function category is selected, the functions provided by this function category are displayed on the right.
2. The function of the function navigation bar is to display the functions under the selected function category. If you select a function, the operation interface of the function opens.
3. The opened page area shows the functional operation interface that has been opened but not closed. You can switch different operation interfaces in this area.
4. System Settings are used to manage users and roles, network management information is used to display devices, pipes and topologies of links, alarm management is used to process device alarms, and Report statistics display statistical data on a page.

4.3 System Settings

4.3.1 Role Management

Click **System Settings** -> **Role Management**

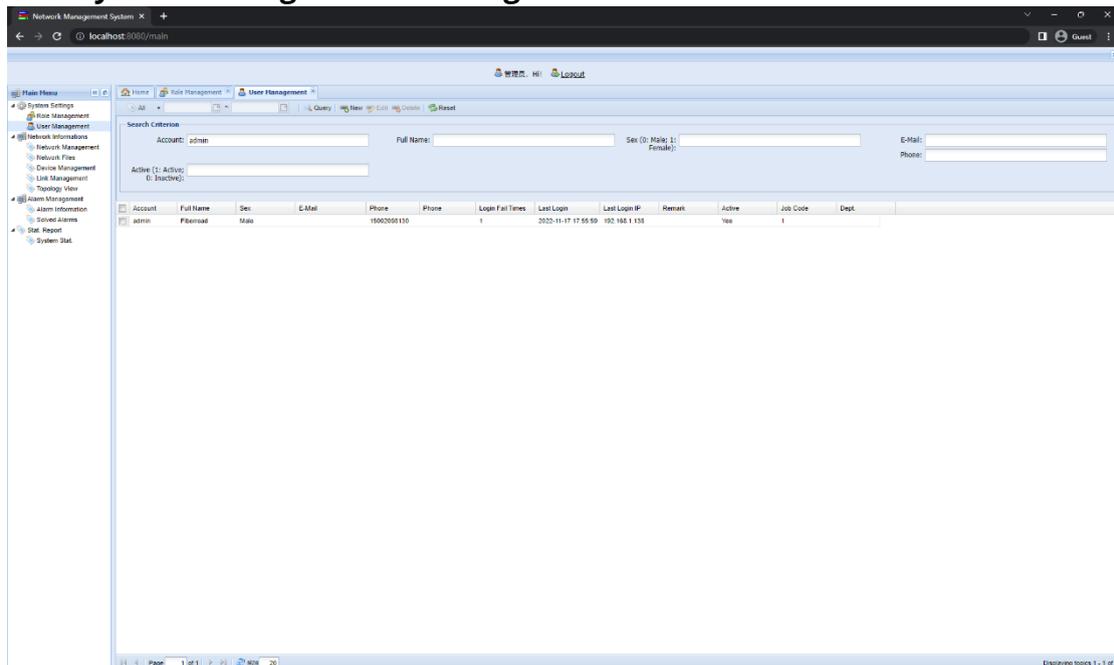
The below figure shown has five setting: Query, Create, Edit, Delete and Reset.



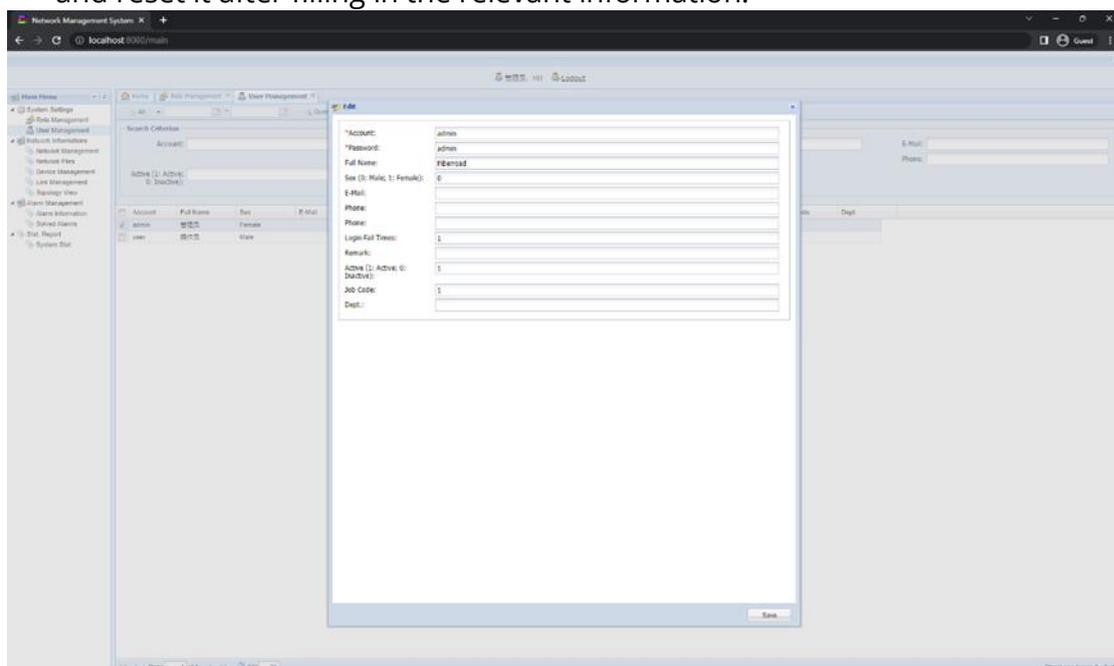
- 1) Click the "**Create**" button to pop up the "edit" window. After filling in relevant information, click the "**Save**" button to add a new user.
- 2) **Query**, Query conditions by id, role type, and role description
- 3) Select an account, you can edit, delete this account.

4.3.2 User Management

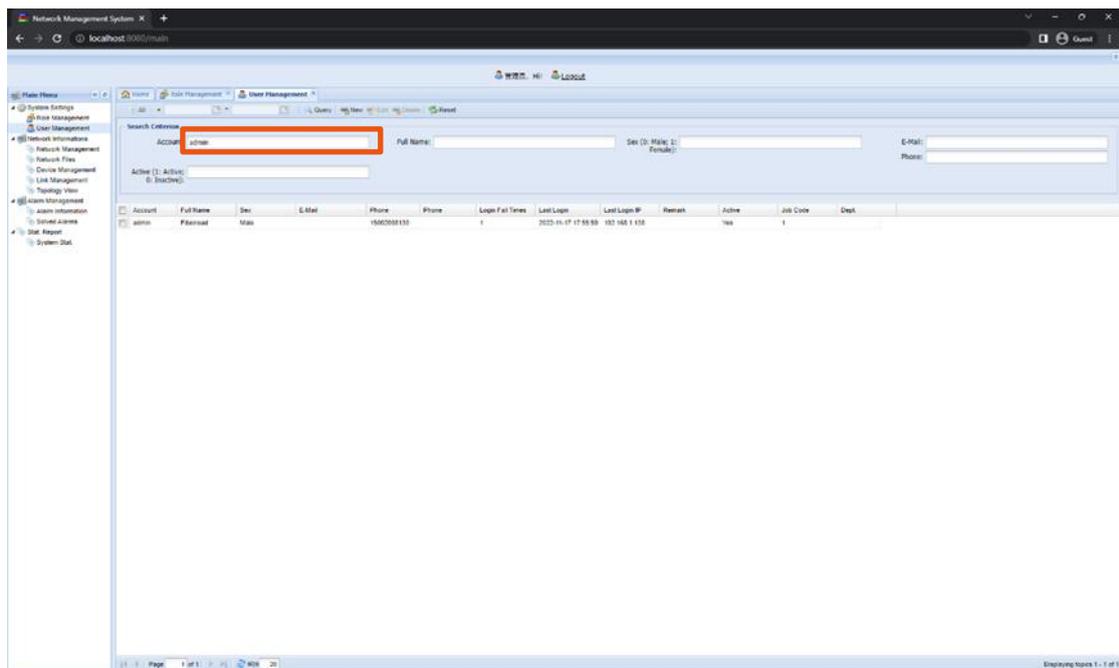
Click **System Settings -> User Management**



- 1) Click the **"New"** button and a webpage dialog box will pop up. You can save and reset it after filling in the relevant information.



- 2) Select an account, click the Edit button, and the dialog box for modifying the web page will pop up. You can save the modified information and cancel the modified operation.
- 3) Enter related conditions in the criteria bar to query criteria.



- 4) Select the user to be deleted and click the Delete button to delete the user.
- 5) Click the reset button, and the page return to initial states

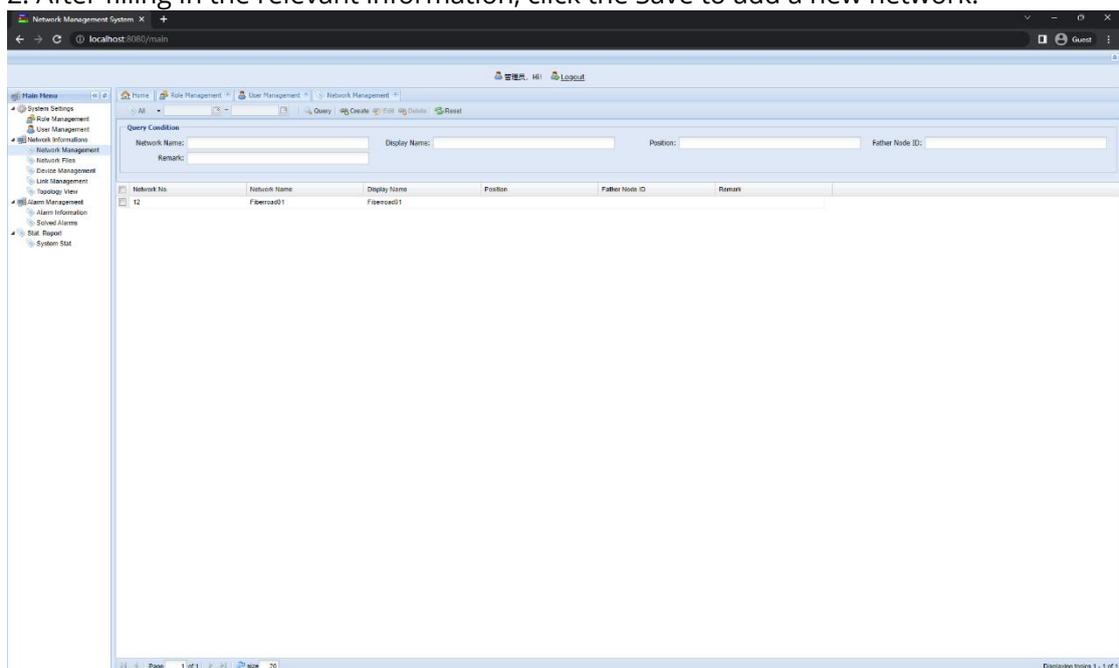
4.4 Network Information

4.4.1 Network Management

Click **Network Information->Network Management**

The below figure shown has five setting: Query, Create, Edit, Delete and Reset.

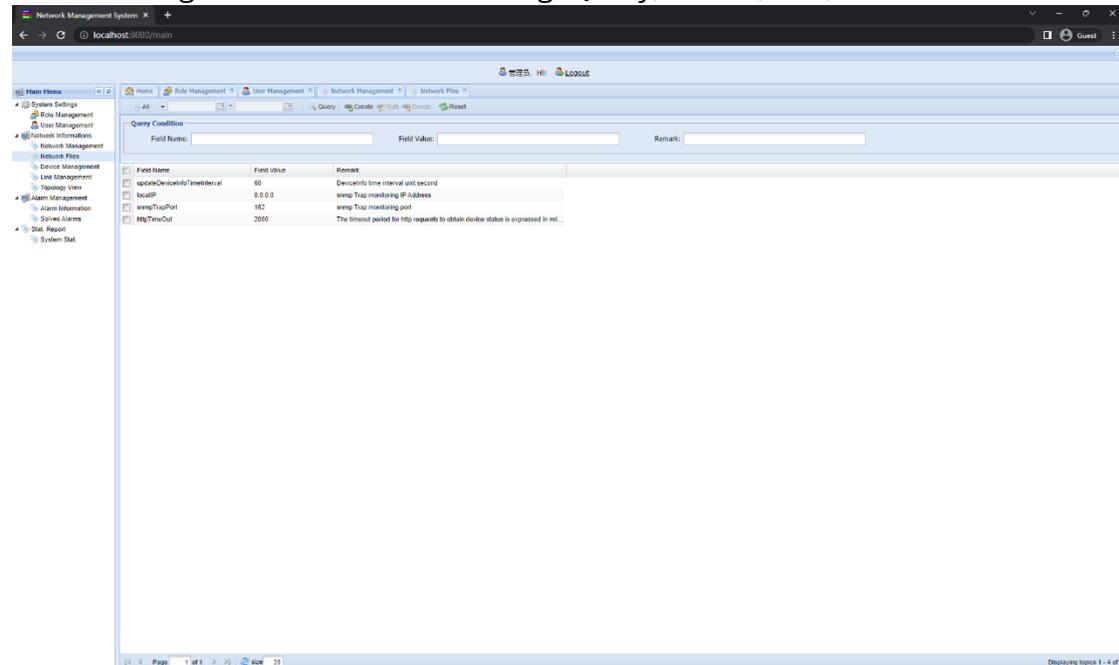
1. Click the "Create" to pop up the new page.
2. After filling in the relevant information, click the Save to add a new network.



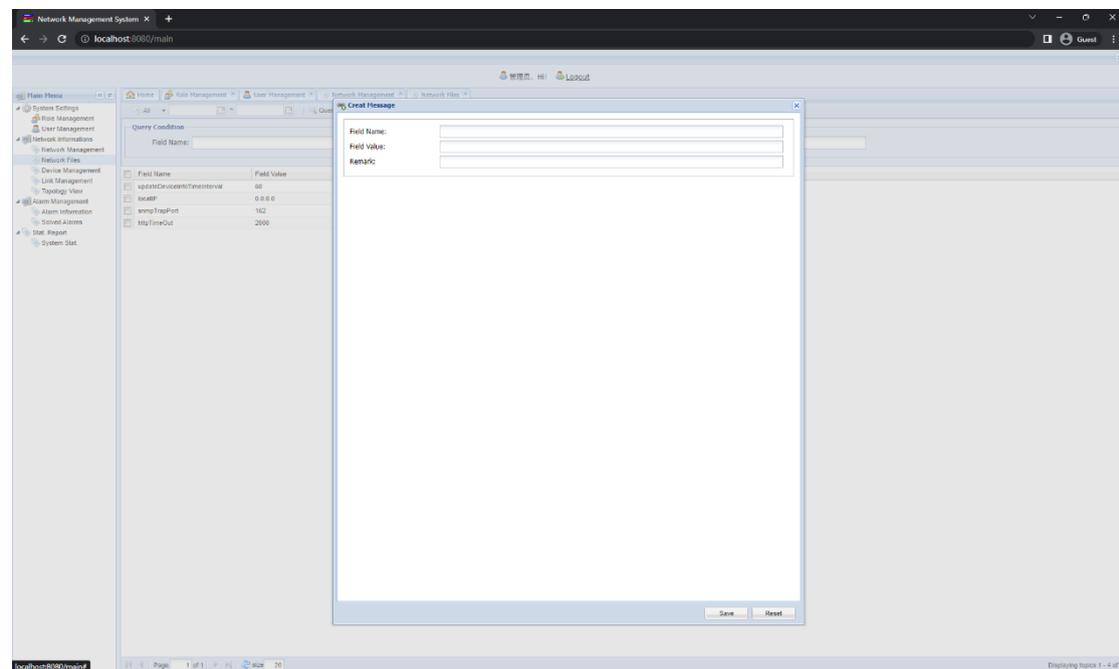
4.4.2 Network Files

Click **Network Information->Network Files**

The below figure shown has five setting: Query, Create, Edit, Delete and Reset.



1). Click the "**Create**" and a dialog box will pop up to add the Field Name. You can save and reset the page after filling in the field information.



2) Select a Field Name, click the Edit button, the create message dialog box will pop up, you can view the information of this field

3) Enter related conditions in the criteria bar to query criteria.

4) Select the Field Name to be deleted and click the Delete button to delete the Field Name.

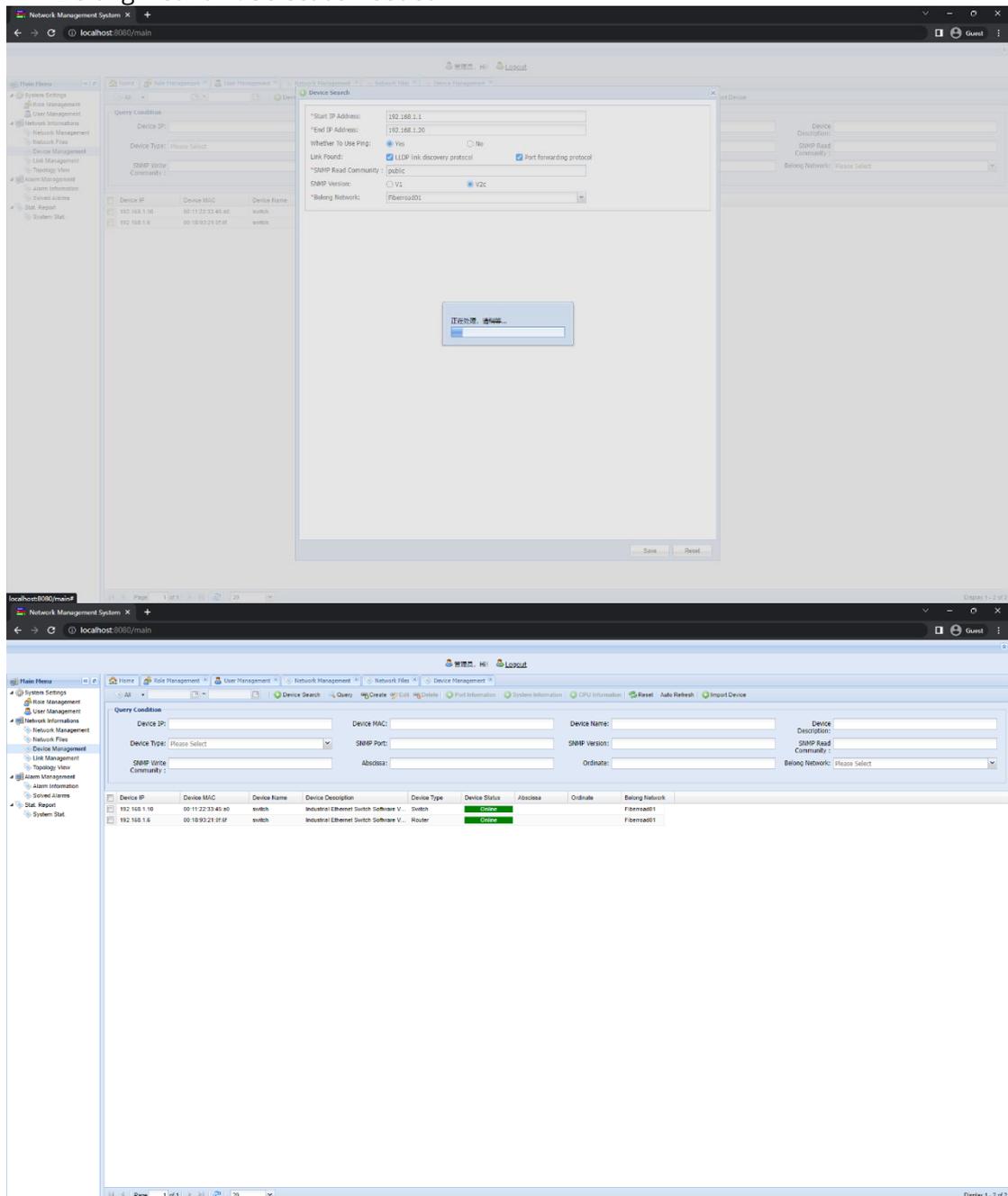
5) Click the reset button, and the page return to initial states

4.4.3 Device Management

Click **Network Information->Device Management**

1) In the device search dialog box,

- enter the **Start IP address** and **End IP address**.
- Select "Yes" for "Whether To Use Ping".
- Link Found: Select both **LLDP link Discovery Protocol** and **Port forwarding Protocol**
- Enter "**public**" in the SNMP Read Community
- SNMP Version" V2c
- Belong Network: Select as needed

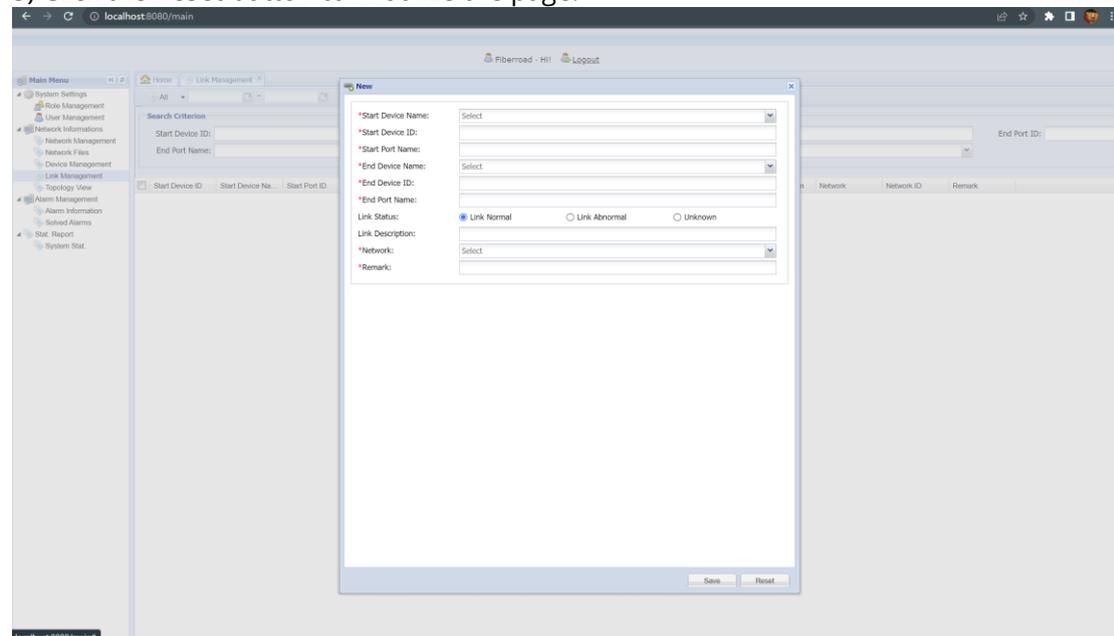


- 2) Input the relevant query conditions and click the query button to display the relevant query information.
- 3) Click the Create button to display the new device text box. Enter related information and click Save to add the device.
- 4) Select a record and click Edit to modify the device information.
- 5) Select a record and click Delete to delete it.
- 6) Select a record and click to view the port information. The port information window is displayed, showing related information.
- 7) Select a record and click to view the device system information. A related window is displayed, showing the related information.
- 8) Select a record and click the CPU memory information. The related information is displayed.
- 9) Click the Reset button to initialize the page.

4.4.4 Link Management

Click **Network Information->Link Management**

- 1) Enter the relevant query conditions and click the query button to display the relevant query information.
- 2) Click the New button. A new window is displayed to record the alarm information of a device. Click Save.
- 3) Select a certain log and click the Delete button to delete the log.
- 4) Select a certain log and click Edit. The edit window pops up to edit the relevant information.
- 5) Click the Reset button to initialize the page.



4.4.5 Topology View

Click **Network Information->Topology View**

- 1) After selecting the belong network, click Show Topology to display the topology view.
Note that the topology can be displayed only when device management and link management are configured.
- 2) The device displayed in the topology can be moved, dragged, adjusted, or enlarged or shrunk. Right-click the specified device to view basic information, alarm information, delete the device, start point of the device, and set the end point of the device, as shown in the following figure:

The top screenshot shows the Network Management System interface with the 'Topology View' selected. The network is named 'Fiberroad01'. Two switches are visible in the topology. The right-hand side of the interface contains several empty data tables for device details.

The bottom screenshot shows the same interface after a switch is selected. The right-hand side displays detailed information for the selected device:

Name	Value
Device IP	192.168.1.11
snmpVersion	1
Read Community	public
Device Type	switch
Device Name	switch
MAC Address	00:11:22:33:45:a0

Name	Value
System Description	Industrial Ethernet Switch Software Version V1.0
System OID	1.3.6.1.4.1.49999.1.1
System Up Time	53 days, 9:14:52.57
System Contact	contact
System Name	switch

Port Index	Port Description	Operation Status	MAC Address	Speed (E/s)	Admin Status
1	GE/1	down	00:11:22:33:45:a1	1000000000	up
2	GE/2	down	00:11:22:33:45:a2	1000000000	up
3	GE/3	down	00:11:22:33:45:a3	1000000000	up
4	GE/4	down	00:11:22:33:45:a4	1000000000	up
5	GE/5	down	00:11:22:33:45:a5	1000000000	up
6	GE/6	up	00:11:22:33:45:a6	1000000000	up
7	GE/7	up	00:11:22:33:45:a7	1000000000	up
8	GE/8	down	00:11:22:33:45:a8	1000000000	up

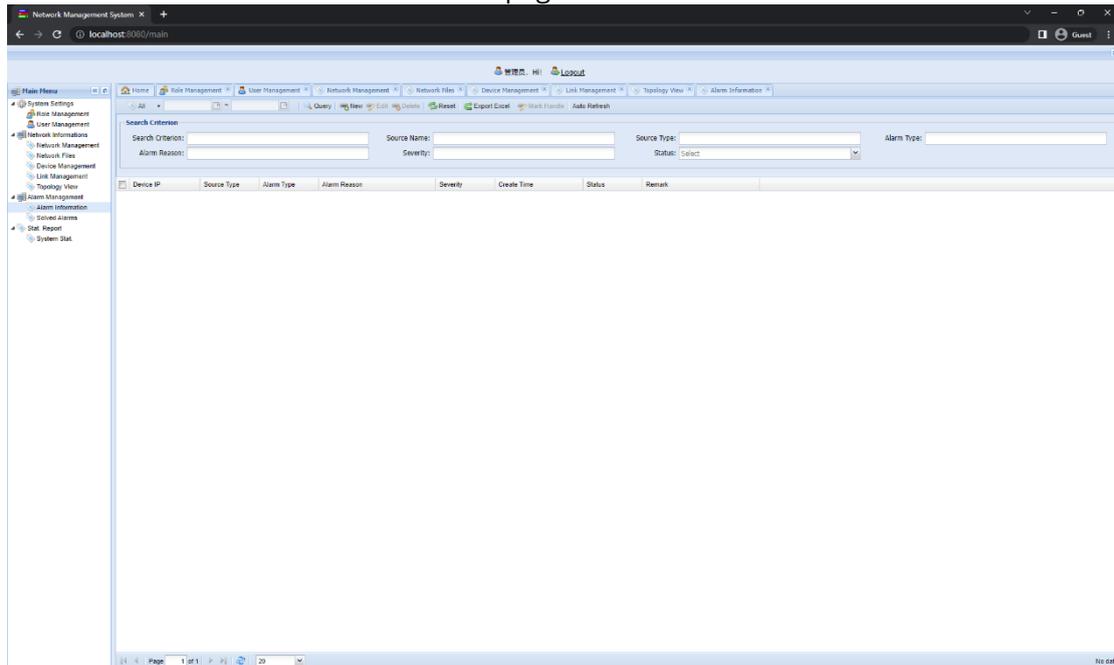
CPU Utilization(%)	Memory Size	Memory Utilization	Memory Used
3	128 M	25 %	32 M

4.5 Alarm Management

4.5.1 Alarm Information

Click **Alarm Management** -> **Alarm Information**

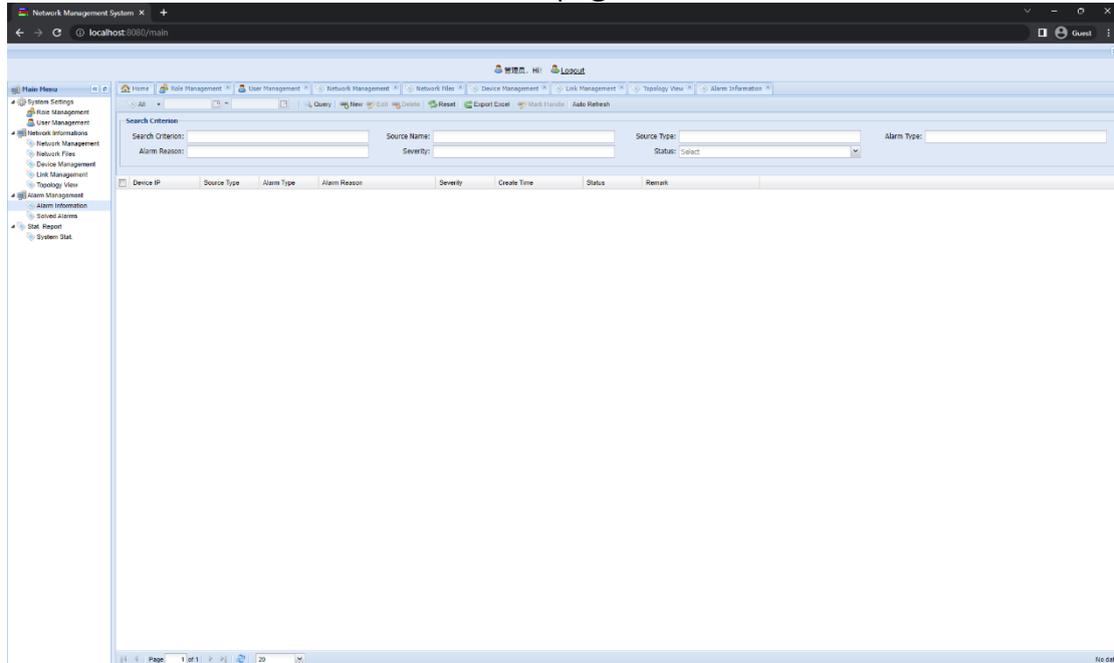
1. Enter the relevant query conditions and click the query button to display the relevant query information.
2. Click the New button. A new window is displayed to record the alarm information of a device. Click Save.
3. Select a certain log and click the Delete button to delete the log.
4. Select a certain log and click Edit. The edit window pops up to edit the relevant information.
5. Click the Reset button to initialize the page.



4.5.2 Solved Alarm

Click **Alarm Management** ->**Solved Alarm**

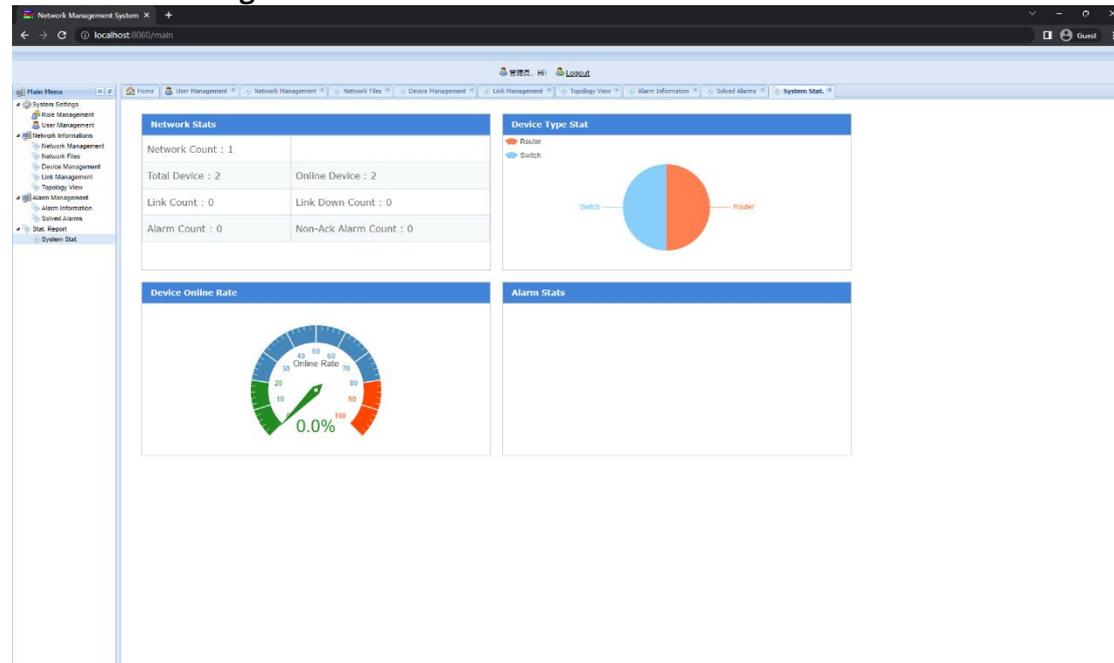
- 1) Select the user and click Delete to clear the alarm scheme.
- 2) Enter the search criteria and click the search button to query the alarm scheme information.
- 3) Select a record and click the "Edit" button to modify the relevant scheme. Click "Save".
- 4) Click the Reset button to initialize the page



4.6 Stat. Report

4.6.1 System Sta.

Click **Alarm Management** -> **Solved Alarm**



- 1) **Network States** indicates the statistics on various types of information on the entire network.
- 2) **Device Type Stat** indicates the statistics on device types in a fan chart formed by percentage.
- 3) **Device Online Rate** indicates the fan chart formed by the percentage of online devices.
- 4) **Alarm Stats** indicates the fan chart showing the percentage of each level of device alarms.

You can click Refresh data in the upper left corner to refresh the information on the interface.

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