



**NGBNVIEW Integrated Network  
Management System  
Client Manual**

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# STATEMENT



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# PREFACE

NGBNView NMS (hereafter referred as NGBNView) is Network Management System published by GCOM Technologies, which provides the management from network element to the whole network management level. This product contains network unit management platform, network unit management system and network management system.

The current NGBNView version is used for remote centralized network management of TiNet series Ethernet switches and PON devices. The functions include that configuration management, fault management, ability management, and security management, etc. NGBNView adopts friendly graphical interface to operate simply and more convenient.

This manual is for the integrated network management system platform, performing detailed description of the use of this platform.

Preface part includes the following:

- Ø Audience

- Ø Related Conventions

Ø Feedback

## Audience

Target audience of this manual are as follow:

- Ø project planner
- Ø installation and debugging personnel
- Ø device maintenance personnel

We assume that you master the following related knowledge before you using this manual:

- Ø data communication technologies
- Ø network administrative techniques

## Related Conventions

### Terminology Conventions

Terminology	Implication
NGBNView	GCOM NGBNView Integrated Network Management System
Mysql	Mysql database for NGBNView

### Symbol Conventions

Symbol	Types of Hint	Reminders
	prompt	important features or operation instructions
	caution	might cause bodily harm, device damage, service interruption, data loss, etc.

	warning	might cause bodily harm
→	skip symbol	from current operation skips to the next step
→	cascading menu	connecting with multiple menu items
↔	two-way service	service signal direction for two-way service
→	one-way service	service signal direction for one-way service

## Feedback

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Your comment and suggestion stimulates us to be better.

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# Platform Overview and Installation

## Platform Overview

NGBNView is a platform with highly customized, scalable network management. According to the user's configuration, NGBNView can automatically discover a variety of data devices on the network, and automatically draw out the network topo. Users can easily carry out the entire network equipment monitoring and management with the help of the network topology.

NGBNView mainly includes the following features:

**topology management:** auto discovery network devices, display device panels and update device status.

**configuration management:** service configuration for the device, routine maintenance to provide a friendly user interface.

**fault management:** capture a variety of network events and alerts, and make the corresponding inquiries and management.

**performance management:** Real-time or regular monitor network equipment-related performance data to facilitate user management.

**security management:** add / delete / authenticate the user, assign user permissions and groups to ensure the security of network devices and the corresponding data.

## Install Platform

### Hardware requirement

The performance of NGBNView depends on the CPU and memory of the operation platform. The following is the minimum hardware configuration requirement of NGBNView.

server: Pentium IV 2.8G, 1G RAM

client: Pentium IV 1.6G, 512M RAM

If the server and the client are running on the same machine, it requires a higher hardware configuration.

### Software requirement

Server: Windows Server 2003, Windows XP, Windows7

Client: Windows7, Windows XP, Vista

Database: MySQL database

# NMS

NMS (Network Management System) client provides users with very friendly user interface, so that users can be able to perform operations more conveniently and simply.

## Start-up the NGBNView

Start the server, open NGBNView login interface. As shown below.



The image shows a login window titled "Welcome to NGBNView". On the left is a cartoon icon of a man in a suit. To the right are four input fields: "Host" (a dropdown menu with "localhost" selected), "Port" (a text box with "2030"), "User" (a dropdown menu with "admin" selected), and "Password" (an empty text box). At the bottom are two buttons: "Login" and "Exit".

start-up interface

**Host:** default host name is localhost. If the server and client application are not on the same machine, you should enter the IP address of the NGBNView after the *'host'*.

**Port:** default port is 2030. This setting is related to the server, used to connect with the server port, and it can check which port is connected through the server. Generally, user does not need to change it.

**User:** The default is *admin*. After entering the NGBNView, it can add or delete users through the configuration items of security management.

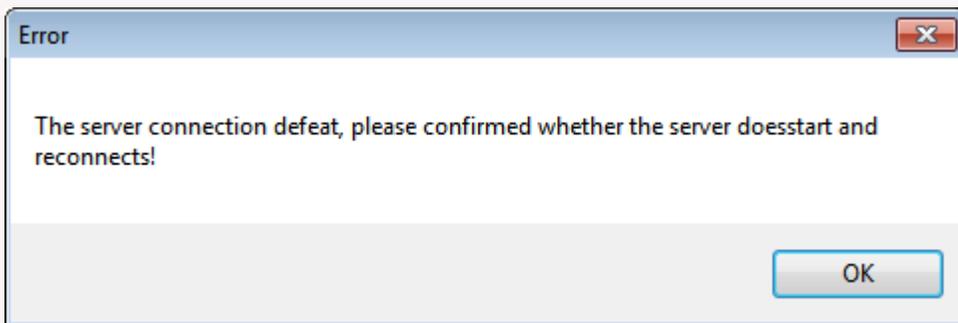
**Password:** Login password.



Note: NGBNView can only be used after the user logs in normally. System installation defaults to install *admin*, and the default password is *123456*. It is strongly recommended that the network administrator modify the password of admin after installing the NMS.

The main reasons for the failure of client connections are as the following:

a. If the server does not start, or user has inputted the error host address, or user has inputted the error port number, it will pop up the below prompt box.



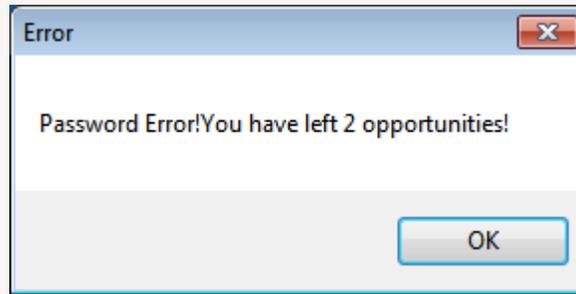
Prompt box

b. If input the wrong username, it will pop up the below prompt box.



Prompt box

c. If input the wrong password, it will pop up the below prompt box.



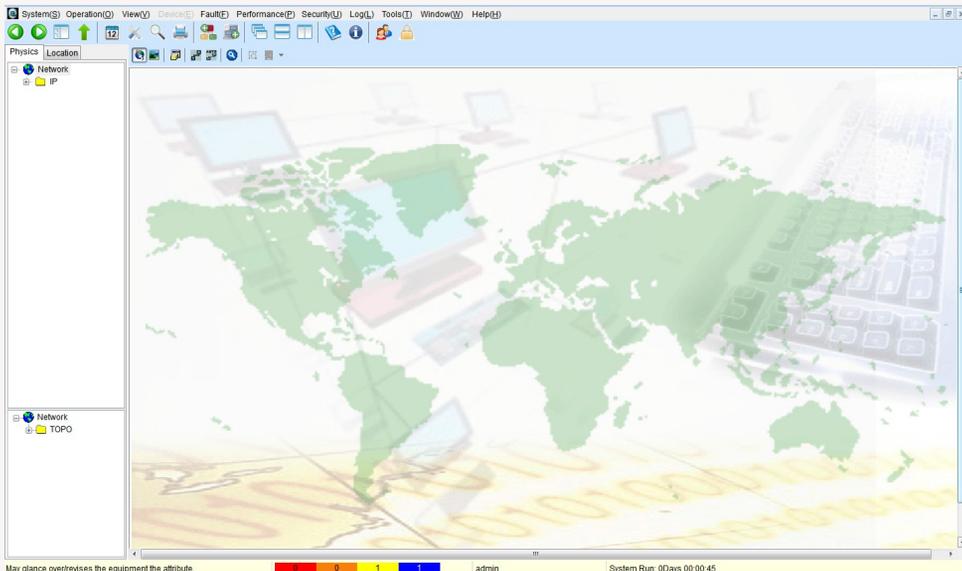
Prompt box



Note: There are three input opportunities by default. If user inputs wrong password up to three times, it will automatically exit.

## NGBNView Main Interface

The main interface is divided into the following sections: the menu bar, toolbar, view navigation window, TOPO navigation window, a small toolbar, view area, information tips and status bar area. As shown below.



NGBNView Main Interface

**Pop-up menu:** It provide common functions for system menu items, and it will be described in subsequent chapters

**Toolbar:** It provides user-friendly operation for common menu items.

Each icon basically has a corresponding menu item. The system toolbar

is shown below.



toolbar

The details of toolbar are as below:



Return to previous image.



Turn to next image.



Hide/show navigation bar.



Move to the upper level of the navigation tree.



Schedule Task



Parameter setting



Searching for machine-tools



Print network image or alert lists



Add node



Add Networking



Window stacked arrangement



Window tile horizontal



Window tile tile vertical



About



Help document



User security management configuration



Lock the client interface

**view area:** It is used to display the view of the device being opened or the TOPO view; if it is not open, the area is empty.

**navigation window:** It is divided into geographic view and physical view. The physical view provides a list of devices that the client obtains from the

server, and the user can open the view of the device by clicking on the list item. Geographic views are lists generated by user-defined geographic locations.

**TOPO navigation window:** It provides TOPO map list, click the list item, you can view the corresponding TOPO map.

**small toolbar:** It provides some operations on the device; as to the details of the view, you can view the menu.

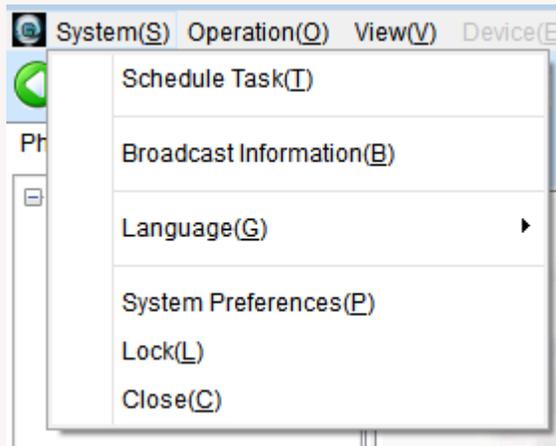
**information tips area:** It is used to display the alert message prompt during the operation; alert level from left to right : Critical, Major, Minor, Warning;

**status bar:** It is used to display the system's operating status, such as running time, user name and so on.

# System

## System Menu

The system menu is shown below. The following sections provide detailed descriptions for these menu functions.



system menu

# Schedule Task

## Overview for Schedule Task

In NMS, the schedule task is to perform a specified task at a specified time. Schedule task can be used to control various operational tasks, such as regularly backing up the database, clearing the statistics table, and deleting the failed nodes. Network administrators can configure the schedule task so that the NMS can automatically complete part of the routine maintenance work to reduce network management work.

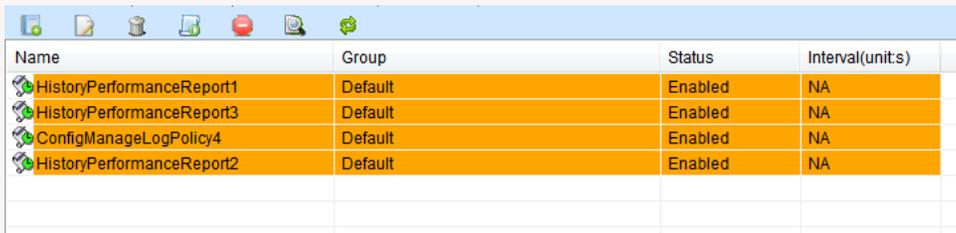
The NMS can provide two kinds of schedule task:

**Periodic schedule task:** The administrator can configure to perform a task periodically. For example, it can configure to perform the database backup task every Sunday 0:00. In this case, NGBNView will start the task of backup database in every Sunday 0:00.

**Non-Periodic schedule task:** The administrator can configure several tasks to be executed one-time at a specified time, and the administrator can specify the day, date, and hour to schedule the schedule task. For example, if administrator configures to delete the failed nodes at 2017-03-20 1:00 AM.

After that, the NGBNView will delete the failure nodes at 2017-03-20 1:00.

In the NMS, click the frame menu "**System**" firstly, and then click "**Schedule Task**" to open the scheduled task configuration interface. As shown below.



Name	Group	Status	Interval(unit:s)
HistoryPerformanceReport1	Default	Enabled	NA
HistoryPerformanceReport3	Default	Enabled	NA
ConfigManageLogPolicy4	Default	Enabled	NA
HistoryPerformanceReport2	Default	Enabled	NA

configuration interface of schedule task

In this interface, user can view / delete / modify / execute / stop / check existing schedule tasks or add a new schedule task. Based on the status of schedule tasks, different programs of task list may have different background colors. For example, when the task is valid and not-executed, background color is orange; when the task is valid and waiting to be executed, background color is green; when the task is invalid, background color is gray.

## Add Schedule Task

In the interface of schedule task, user can add schedule task: "**Schedule Task**"→"**Add Schedule Task**" or right-click in the blank, it will pop-up the

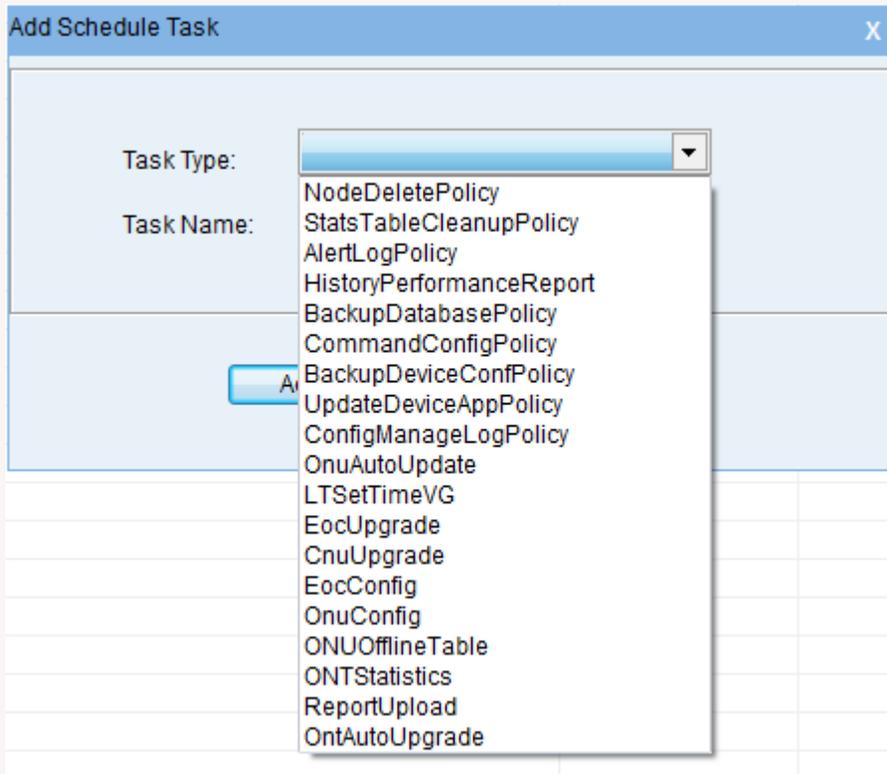
interface as shown below.

Name	Group	Status	Interval(units)
 HistoryPerformanceReport1	Default	Enabled	NA
 HistoryPerformanceReport3	Default	Enabled	NA
 ConfigManageLogPolicy4	Default	Enabled	NA
 HistoryPerformanceReport2	Default	Enabled	NA

Add Schedule Task(A)  
Search(S)  
Refurbish(R)

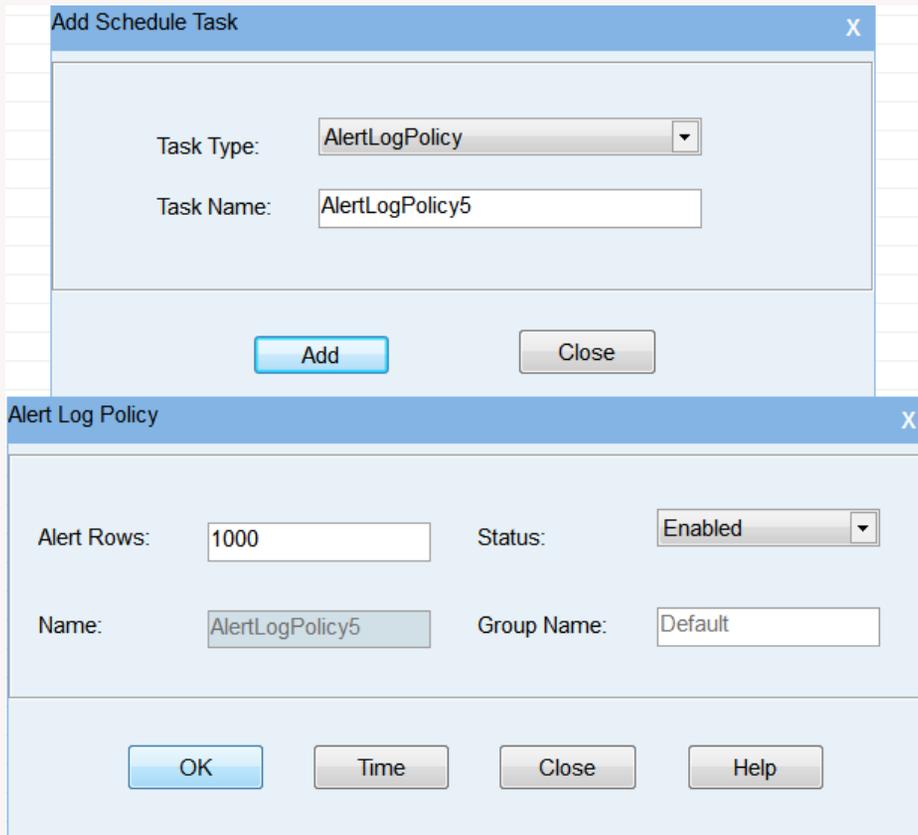
Adding Schedule Task

Click **Add Scheduled Task**, the following interface will pop up



Adding Schedule Task

Choose the right type of schedule task. Such as the Alert Log Policy, etc.; fill in the name of the schedule task. Click the **Add** button, the system will pop up an attributes configuration box of new schedule task according to the task type of user-selected. For example, select '*Alert Log Policy*', it will pop-up dialog box as shown below, click '**OK**' button to add a new scheduled task.



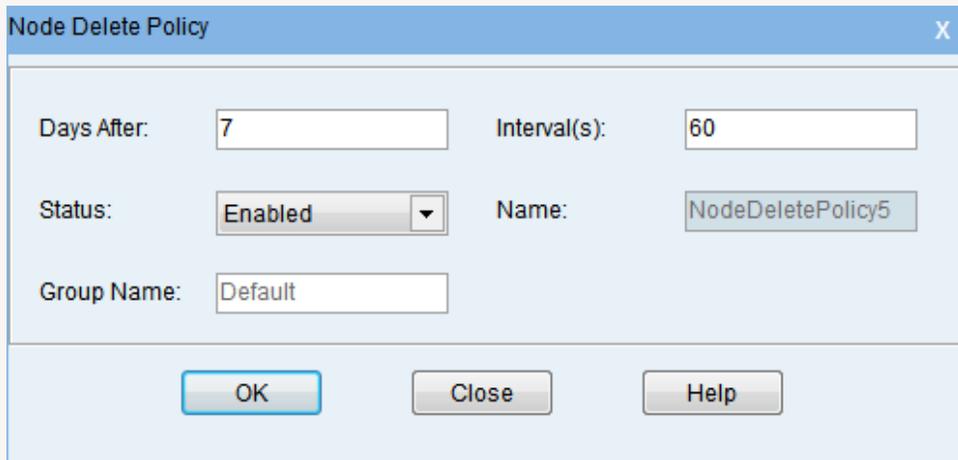
configuration interface of alert log policy

NGBNView provides users with sixteen types of schedule tasks. Detailed functions and configuration instructions are in the following subsections.

### **Node Delete Policy**

Node Delete Policy allows the user to delete nodes that already exist in the database which exceeds the specified number of days and whose status is

"Major" or "Critical". But only those nodes with only one interface will be deleted, and nodes with multiple interfaces will remain in the database. When add the schedule task to delete the invalid nodes or double-click a certain one invalid node to perform the delete operation or select the main menu "Edit" → "Modify" or in the right-click menu of a certain one invalid node to modify the schedule task, the interface of Node Delete Policy will pop up.



Days After:	<input type="text" value="7"/>	Interval(s):	<input type="text" value="60"/>
Status:	<input type="text" value="Enabled"/>	Name:	<input type="text" value="NodeDeletePolicy5"/>
Group Name:	<input type="text" value="Default"/>		

OK Close Help

Node Delete Policy

attribute table of node delete policy

Attribute	Description
Days after	Specifies the save time of the node in the database, defaulting to 7 days. The inputted days are in the range of 7-31.
Interval	It defaults to 60s.
Name	The name of the schedule task instance, which identifies the schedule task in the schedule task list. And it can only be modified when the new scheduled task is creating.
State	whether the selected scheduled task is valid or not
Group name	group name of the schedule task

### **Stats Table Cleanup Policy**

The statistics cleanup policy allows you to clear up the statistics in the database, which makes it impossible for the database to become very large. The administrator can decide to keep how many days of data in the database. The policy task automatically deletes data that exists more than the specified number of days.

StatsTable Cleanup Policy X

Days Inter:  Status:

Name:  Exe time(0-23):

Group Name:

Stats Table Cleanup Policy

Attribute Table of Stats Table Cleanup Policy

Attribute	Description
Data interval (day)	Specifies the days of data saved in the database. It defaults to 7 days, which ranges from 0 to 23.
time(0-23)	Specifies the time to clear up the statistics, it defaults to 0, which means to conduct between 12 pm and 1 am. It cannot determine the specific time in an hour.
state	whether the selected scheduled task is valid or not
name	The name of the schedule task instance. It identifies the schedule task in the schedule task list, and it can only be

	modified when the new scheduled task is creating.
Group name	group name of the schedule task

## Alert Log Policy

The alert cleanup schedule can be used to control the number of alerts in the database. You can specify the number of alerts and the system will delete the old alert once the number of alerts in the database exceeds the specified number. The scheduling of the alert is described in the following section.

Alert Log Policy

Alert Rows:  Status:

Name:  Group Name:

OK Time Close Help

Alert Cleanup Policy

### Attribute Table of Alert Cleanup Policy

Attribute	Description
Alert number	Specifies the maximum number of alerts stored in the database, which ranges from 1000 to 65535.
state	Whether the scheduled task selected is valid or not
name	The name of the scheduled task instance, which is used to identify a scheduled task in the scheduled task list and only modify the name when creating a new one
Group name	group name of the schedule task

### History Performance Report

It is used to save the data needed to create a daily report, weekly report or monthly report. As shown below.

The screenshot shows a dialog box titled "HistoryPerformanceReportForm" with a close button (X) in the top right corner. The dialog contains four input fields: "Report Type" is a dropdown menu set to "Daily"; "Status" is a dropdown menu set to "Enabled"; "Name" is a text box containing "HistoryPerformanceReport1"; and "Group Name" is a text box containing "Default". At the bottom of the dialog, there are four buttons: "OK", "Time", "Close", and "Help".

## Generate History Performance Report Policy

Attribute	Description
Report type	The system defaults to three historical performance report tasks, the type is by month, week, and by day
State	Whether the selection of scheduled tasks is effective
Name	The name of the scheduled task instance, which is used to identify a scheduled task in the scheduled task list and only modify the name when creating a new one
Group name	group name of the schedule task, generally default

Attribute Table of Generate History Performance Report Policy



Note: you should check the “*create daily report*”, “*create weekly report*” and “*create monthly report*” in the configuration of "**Performance Management**" → "**Collect Configuration**" → "**Add Collection Item**" when generating history performance report. In this case, you can see the results of the scheduled tasks in the historical performance report.

## Backup Database Policy

Backup database policy is used to back up the database periodically, and

avoid the database damage caused by network management data loss. The database backup policy is used to back up the contents and structure of the NGBNVIEW database in the specified time. The file name of the database backup is saved in DB + time.sql. When you select compression, the sql file will be compressed into the zip file package and delete the sql file.

The configuration interface of scheduled task is shown below.

The screenshot shows a configuration window titled "Backup Database Policy". It includes the following fields and controls:

- Name:** BackupDatabasePolicy5
- Group Name:** Default
- Status:** Enabled (dropdown menu)
- Compress File:** No (dropdown menu)
- Backup Dir:** ..\dbbackup

A note states: "Note: Backup Dir is the server path. If you do not enter the absolute path (eg: d:\backup\dbbackup), defaults to the server(server\bin ) relative path."

Buttons at the bottom: OK, Time, Close, Help.

backup database policy

Attribute Table of device configuration file backup policy

Attribute	Description
name	The name of the scheduled task instance, which is used

	to identify the scheduled task in the scheduled task list, only to modify the name when creating
Group name	Group name of the scheduled task
State	Whether the selection of scheduled tasks is effective
Whether to compress	If you select <b>Yes</b> , the backup file will be compressed as a zip package, otherwise it will be the sql file
Backup path	Specify the path of the backup file, which must be the path of the back-end server, absolute path or relative path

### **Command Config Policy**

The command config policy is used to configure specific commands for the configured switch at a specified time. The schedule sees the following section.

Command Config Policy

Name:  Group Name:  Status:

IP	User Name	Pass Word
10.4.2.202	admin	*****

IP:  User Name:  PassWord:

Lead in command file:

Remote config command line

en

ct

### Command Config Polic

#### Attribute Table of Command Config Policy

Attribute	Description
name	The name of the scheduled task instance, which is used to identify the scheduled task in the scheduled task list, only to

	modify the name when creating
Group name	Group name of the scheduled task
state	Whether the selection of scheduled tasks is effective
Device IP	Select the device that you want to configure, and then select the IP address of the device from the drop-down box. Login user name and login password are the user name and login password of the selected device when telnet login. <i>Add/Modify /Delete</i> buttons are controlled device properties that require specific command configuration.
Command	Specific command can be imported from file, or by adding a command. The format of the command is the same as that entered when telnet is logged into the device

## Backup Device Config Policy

Device configuration file backup policy backs up the device's configuration file by the TFTP/FTP service and save it in a specific directory. It must ensure that the back-end server has a TFTP/FTP server running.

The file name of the device profile backup is saved in time + (device IP).gbn.

The policy configuration interface is shown below.

**Backup Device Configuration Policy** [X]

Name: BackupDeviceConfPolicy6      Group Name: Default

Server IP: 10.4.2.31      Status: Enabled

Server Type:  TFTP     FTP      FTP Configure

Server Port: 69      User: [ ]  
Password: [ ]

Save configure before backup configuration

Backup Type  
 By Device     By Type

Device Tree

- 10.4.2.0
  - 10.4.2.200
  - 10.4.2.203
  - 10.4.2.205
  - 10.4.2.211
  - 10.4.2.214
  - 10.4.2.215
  - 10.4.2.216
  - 10.4.2.217
  - 10.4.2.221

Show Type  
 SubNet  
 Type

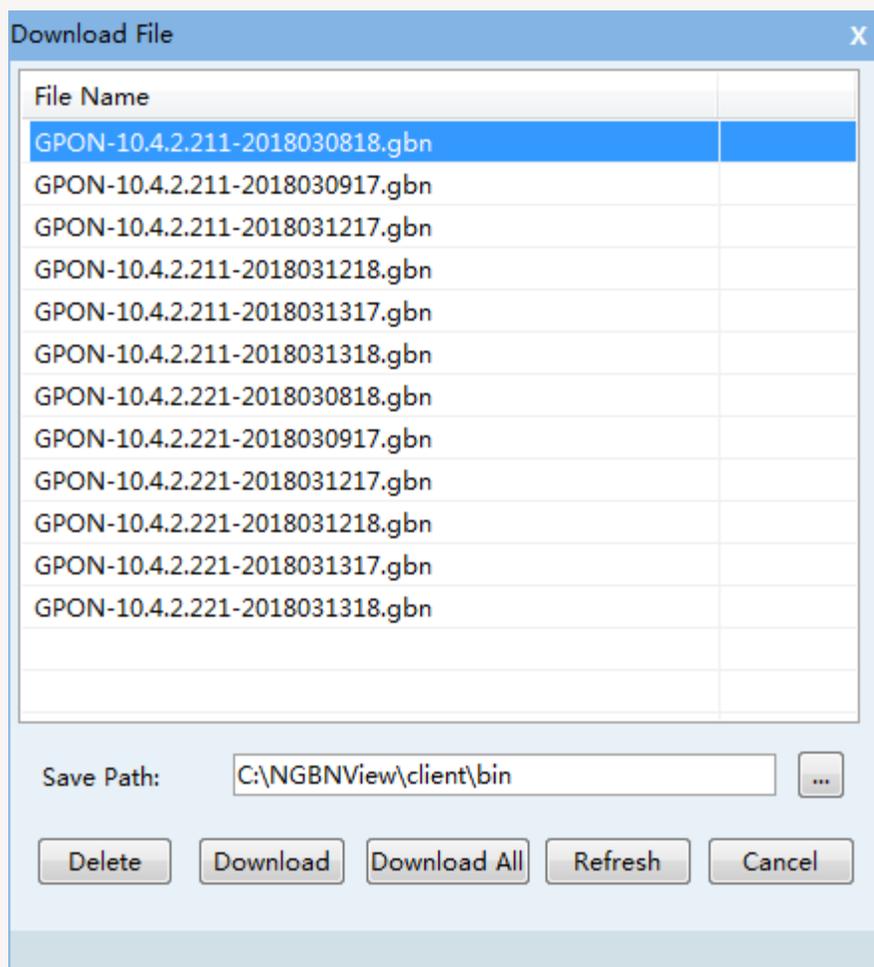
> < <<

Select Device

Download    Time    **OK**    Help    Close

Device Configuration File Backup Policy

Click the “download” button to download the backup files:



Download File

### Attribute Table of Device Configuration File Backup Policy

Attribute	Description
-----------	-------------

Name	The name of the scheduled task instance, which is used to identify the scheduled task in the scheduled task list, only to modify the name when creating
Group name	Group name of the scheduled task
State	Whether the selection of scheduled tasks is effective
Serve type	Include TFTP server or FTP server
FTP parameter configuration	When the FTP server is selected, the FTP parameters are configured, including the user name and password
Server Port	Correspond to the port selected by the server type
save configure before backup configuration	Whether save configure or not
Backup type	Select the backup mode to specify the device or the specified type
Device tree	Device navigation tree is managed by current NGBNVIEW
Display method	Switch the display structure of the device tree, and group by the subnet or device type
Select device	Save the device name selected currently which need to be backed up, no more than 10

## Update Device App Policy

It upgrades the device at the specified time by the specific device and its

corresponding device software to achieve unattended upgrade. Users can set the morning business and other low-peak period for automatic operation to reduce the maintenance staff work intensity.

It must ensure that the back-end server has a TFTP/FTP server running.

The policy configuration interface is shown below.

**Update Device Application** [X]

Name:  Group Name:

Server IP:  Status:

Update App File:  ...

Server Type:  TFTP  FTP

Server Port:

Update Type:   Auto Reboot

FTP Configure  
 User:   
 Password:

Device Tree

- 10.4.2.0
- 10.4.2.200
- 10.4.2.203
- 10.4.2.205
- 10.4.2.211
- 10.4.2.214
- 10.4.2.215
- 10.4.2.216
- 10.4.2.217
- 10.4.2.221

Show Type  
 SubNet  
 Type

Select Device

> < <<

OK Time Close display Help

### Upgrade Device

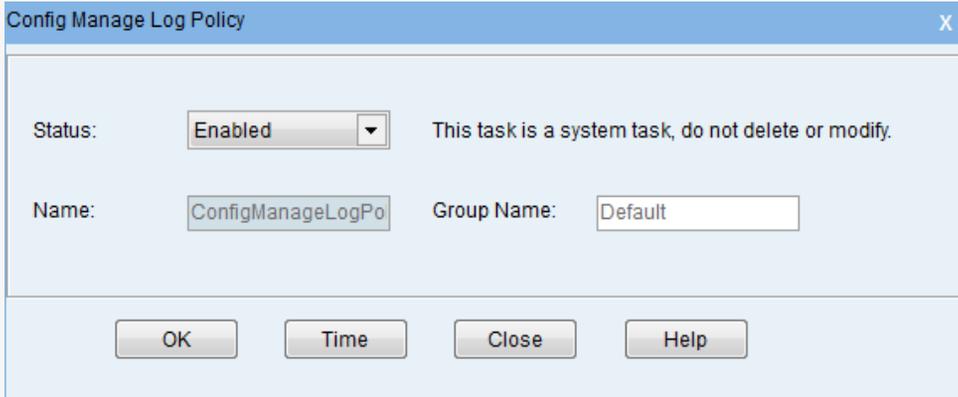
Select the appropriate parameters and click ok to add the project task. When the upgrade is complete, click the “display” button to see the upgrade results.

## Attribute Table of Upgrade the Device Software Policy

Attribute	Description
name	The name of the policy is used to identify the scheduled task in the scheduled task list, and it can only be modified the name when creating
Group name	Group name of the scheduled task
state	Whether the selection of scheduled tasks is effective
Upgrade file	Specify the path where the backup file is placed, and must be a path relative to the backend server bin .
Server type	Include TFTP server or FTP server
FTP parameter configuration	When selecting the FTP server, set the FTP server parameters.
Port	Correspond to the port that selects server type
Update type	Select device upgrade type for device application or Bootrom.
Auto reboot	Select whether the device will restart automatically after the upgrade.
Device tree	Device navigation tree managed by NGBNView currently
Display method	Switch the display structure of the device tree, and group by the subnet or device type
Select device	Save the device name selected currently which need to be backed up, no more than 10

## Config Manage Log Policy

It is a system task that does not need to be modified and deleted.



The screenshot shows a dialog box titled "Config Manage Log Policy" with a close button (X) in the top right corner. The dialog contains the following fields and controls:

- Status:** A dropdown menu currently set to "Enabled".
- Name:** A text box containing "ConfigManageLogPo".
- Group Name:** A text box containing "Default".
- Message:** "This task is a system task, do not delete or modify." located to the right of the Status dropdown.
- Buttons:** Four buttons are located at the bottom: "OK", "Time", "Close", and "Help".

### Config Manage Log Backup

#### Attribute Table of Config Manage Log Backup Policy

Attribute	Description
state	Whether the selection of scheduled tasks is effective
name	The name of the policy is used to identify the scheduled task in the scheduled task list, and it can only be modified the name when creating
Group name	Group name of the scheduled task

## **ONU Auto Update**

It upgrades the device at a specified time by selecting a specific ONU device and its corresponding ONU device software to achieve unattended upgrade. Users can set the morning business and other low-peak period for automatic operation to reduce the maintenance staff work intensity.

Onu Auto Upgrade X

Device choose

Name:  Group Name:

Status:

Searchtype

SearchByOnu  SearchByType

select condition

Device IP:

Device Type:

Soft Version:

- All checked
- 4/1/1
- 4/7/2

ONU Auto Upgrade

Attribute Table of ONU Auto Upgrade

Attribute	Description
Name	The name of the policy, which is used to identify the scheduled task in the scheduled task list, and it can only be modified the name when creating
Group name	Group name of the scheduled task
State	Whether the selection of scheduled tasks is effective
Choose an upgrade method	Two ways, upgrade by the type or the specified ONU
Filter criteria	There are three conditions that can be filtered, such as OLT IP address, ONU type, software version
Choose an upgrade method	Two ways: upgrade by the type or upgrade by the specified ONU
Filter criteria	There are three conditions that can be filtered: OLT IP address, ONU type, software version
Display the upgrade results	Display the related result of the ONU auto-upgrade

## LT Set Time VG

It provides time calibration for the Unicom VG board. It defaults to refresh every 20s.

SetTime VG Policy

Interval(s):  Status:

Name:  Group Name:

Set Time VG Policy

#### Attribute Table of Setting Time VG Policy

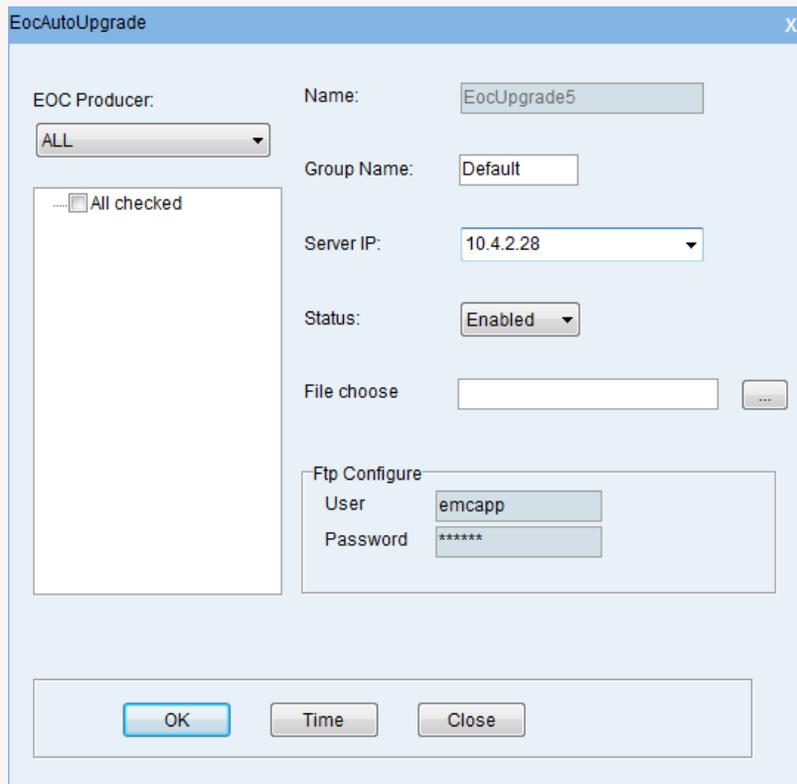
Attribute	Description
interval	Specify the time interval, the default is 20 seconds
state	Whether the selection of scheduled tasks is effective
name	The name of the policy, which is used to identify the scheduled task in the scheduled task list, and it can only be modified the name when creating
Group name	Group name of the scheduled task

#### EOC Upgrade

It performs auto-update on EOC local end equipment at the specified time

to achieve unattended upgrade. Users can set the morning business and other low-peak to operate so as to reduce the work intensity of the maintenance staff.

It must ensure that the back-end server has FTP server running.



The image shows a Windows-style dialog box titled "EocAutoUpgrade". The window contains the following fields and controls:

- EOC Producer:** A dropdown menu currently set to "ALL".
- Name:** A text input field containing "EocUpgrade5".
- Group Name:** A text input field containing "Default".
- Server IP:** A dropdown menu currently set to "10.4.2.28".
- Status:** A dropdown menu currently set to "Enabled".
- File choose:** An empty text input field followed by a browse button (three dots).
- Ftp Configure:** A sub-section containing:
  - User:** A text input field containing "emcapp".
  - Password:** A text input field containing "\*\*\*\*\*".
- Checkboxes:** A checkbox labeled "All checked" is present in a list area on the left side of the dialog.
- Buttons:** At the bottom, there are three buttons: "OK", "Time", and "Close".

EOC automatic upgrade of local end

Attribute Table of the EOC Auto-Upgrade of the Local End

Attribute	Description
Equipment manufacturer	Choose equipment according to different equipment manufacturers
name	The name of the policy is used to identify the scheduled task in the scheduled task list, and it can only be modified the name when creating
Group name	Group name of the scheduled task
Server address	The server address is used to escalate the device
state	Whether the selection of scheduled tasks is effective
File selection	Choose to escalate the file
FTP parameter	Set the FTP server parameter

## **Cnu Upgrade**

It performs auto-update on EOC terminal end equipment at the specified time to achieve unattended upgrade. Users can set the morning business and other low-peak to operate so as to reduce the work intensity of the maintenance staff.

The screenshot shows a configuration window titled "EocAutoUpgrade". It features the following settings:

- EOC Producer:** A dropdown menu currently showing "ALL".
- Name:** A text input field containing "CnuUpgrade5".
- Group Name:** A text input field containing "Default".
- Server IP:** A dropdown menu showing "10.4.2.28".
- Status:** A dropdown menu showing "Enabled".
- File choose:** An empty text input field followed by a browse button ("...").
- Ftp Configure:** A section containing:
  - User:** A text input field containing "emcapp".
  - Password:** A text input field containing "\*\*\*\*\*".

At the bottom of the window, there are three buttons: "OK" (highlighted in blue), "Time", and "Close".

EOC Automatic Upgrade of terminal end

Attribute Table of EOC Auto-Upgrade of terminal end

Attribute	Description
Equipment manufacture	Choose equipment according to different equipment

	manufacturers
name	The name of the policy is used to identify the scheduled task in the scheduled task list, and it can only be modified the name when creating
Group name	Group name of the scheduled task
Server address	The server address is used to escalate the device
state	Whether the selection of scheduled tasks is effective
File selection	Choose to escalate the file
FTP parameter	Set the FTP server parameter

## EOC Config

The task is to auto-distribute the configuration of EOC local end at the specified time, such as whether to enable vlan, whether to perform the loopback detection, whether to perform authentication management, and set the threshold, etc., to achieve unattended upgrade. User can set the morning business and other low-peak operation to reduce the maintenance staff work intensity.

EocAutoConfig X

EOC Producer: Name:

ALL EocConfig5

Config By Network  Config By Type

Network  Netmask

System Name

VLAN Enabled  VLAN ID  (1-4094)

Loop Check

Storm Limit  Storm Limit Value  0-256KBps

Authen Manage

Syslog Setting  Server Ip

Terminal Limit

Warn Check

attenuation largered than	<input type="text" value="0"/>	dB
SNR less than	<input type="text" value="0"/>	dB
CPU rate more than largered than	<input type="text" value="90"/>	%
cpu temperature largered	<input type="text" value="80"/>	°C
uplink band less than	<input type="text" value="100"/>	Mbps
downlink band less than	<input type="text" value="10"/>	Mbps

EocAutoConfig X

EOC Producer: Name:

Lootom EocConfig5

---

Config By Network
  Config By Type

Network 
Netmask

---

Eoc Location

Eoc Connection

System Name

Anto Authen

If the Auto authen Open,Only the Cnu which is in the white list can online

Terminal Limit  (0-254)

Output Level  dBuV

Mac Limit  (0-8)

GroupBox2

Warn Check

temperature higher than  °C

temperature lower than  °C

CPU rate more than largered than  %

Memery rete largered than  %

Terminal Attenuation largered than  Mbps

Terminal Attenuation less than  Mbps

Configuration distribution of EOC local end

### Attribute table

Attribute	Description
EOC manufacturers	Choose EOC manufacturers
Name	The name of the policy, which is used to identify the scheduled task in the scheduled task list, and it can only be modified the name when creating
Base on subnet / device type	Select the device according to the subnet or device type

### ONU Config

It performs the registration on ONU equipment to achieve unattended upgrade. Users can set the morning business or other low-peak operation to reduce the work intensity of the maintenance staff.

OnuAutoConfigForm X

Device choose

Name:

Status:  Group Name:

Option Select

OLT IP  ONU Type

SLOT No:  PON Port:

Default Account

User Name  PassWord

Config File Select

Select File

Auto-distribution of ONU Registration Configuration

### Attribute Table of Auto-distribution of ONU Registration Configuration

Attribute	Description
Name	The name of the policy, which is used to identify the scheduled task in the scheduled task list, and it can only be modified the name when creating
State	Whether the selection of scheduled tasks is effective
Group Name	Group name of the scheduled task
Filter Condition	Select the device according to the different division
Login Information	Fill in the correct login and login password
Configuration File Selection	Select the profile that you want to send

### ONU Offline Table

It performs the ONU idle port statistics to achieve unattended upgrade. In addition, it defaults to perform automatic statistics on Monday 1 am, reducing work intensity of the maintenance staff. Click the "**Display**" to view the corresponding ONU idle port statistics report.



## ONU Idle Port Statistics

### Attribute Table of ONU Idle Port Statistics

Attribute	Description
name	The name of the policy, which is used to identify the scheduled task in the scheduled task list, and it can only be modified the name when creating
Group name	Group name of the scheduled task
state	Whether the selection of scheduled tasks is effective
Statistics Time	ONU idle port statistics time, the default is 1:00 on Monday

### **ONT Statistics**

It performs the ONU traffic statistics to achieve unattended upgrade. In addition, it defaults to perform automatic statistics every 15 minutes, reducing work intensity of the maintenance staff.

The screenshot shows a window titled "Ont Statistics Policy Form". It contains the following fields and values:

- Name: ONTStatistics5
- Group Name: Default
- Status: Enabled (dropdown menu)
- Interval(min): 15

Buttons at the bottom: OK, Close

### ONT Traffic Statistics

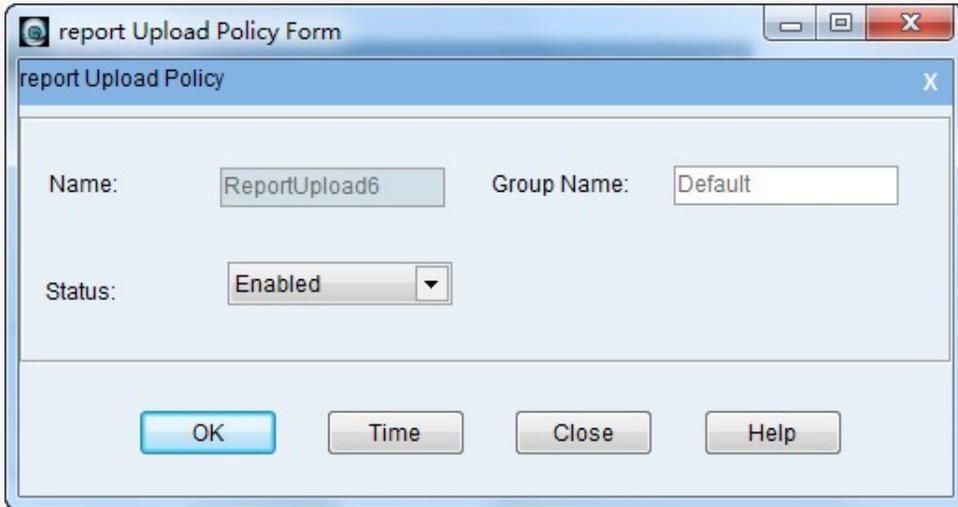
#### Attribute Table of ONT Traffic Statistics

Attribute	Description
Name	The name of the policy, which is used to identify the scheduled task in the scheduled task list, and it can only be modified the name when creating
Group Name	Group name of the scheduled task
State	Whether the selection of scheduled tasks is effective
Interval	ONT traffic data statistics interval, the default is 15 minutes

### Report Upload

You can select whether to enable the device asset report. If this function is

enabled, the device asset table will be automatically generated when the generated time is set.



report Upload Policy Form

report Upload Policy

Name: ReportUpload6 Group Name: Default

Status: Enabled

OK Time Close Help

#### Report upload

You can check the generated table under the reports folder of the server of the installation directory.

 Board_Report_2017_07_19.xls	2017/7/19 12:00	Microsoft Office...	6 KB
 NE_Report_2017_07_19.xls	2017/7/19 12:00	Microsoft Office...	6 KB
 ONU_Report_2017_07_19.xls	2017/7/19 12:00	Microsoft Office...	4 KB

#### Report

Attribute Table of ONT Traffic Statistics

Attribute	Description
Name	The name of the policy, which is used to identify the scheduled task in the scheduled task list, and it can only be modified the name when creating
Group Name	Group name of the scheduled task
State	Whether the selection of scheduled tasks is effective

## ONT Auto Upgrade

Select the relevant parameters to perform the ONT auto-update.  
Moreover, you can view the results after the update.

The screenshot shows the 'ONT Auto Upgrade' dialog box. It has a title bar with 'ONT Auto Upgrade' and a close button 'X'. The dialog contains five tabs: 'Task Info', 'Trans Param', 'ONT Selection', 'Upgrade Mode', and 'Result List'. The 'Task Info' tab is selected and shows the following fields:

- Task Information:**
  - Name:
  - Group Name:
  - Status:  (dropdown arrow)
- Running Time:**
  - Running interval(min:5-60):
  - Start Time:  (dropdown arrow)
  - End Time:  (dropdown arrow)

At the bottom of the dialog are two buttons: 'OK' and 'Cancel'.

## ONT auto upgrade

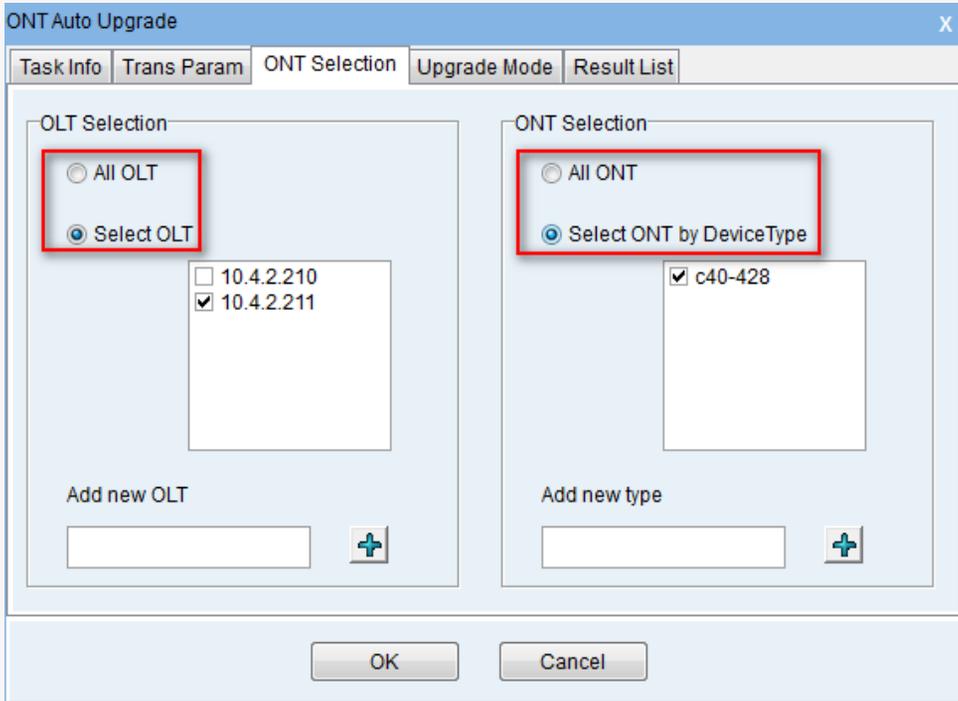
**Running Time:** Select the start time and end time of the ONT polling, and the intervals of polling. During this time period, the system checks whether the ONT needs to be upgraded at intervals.

The screenshot shows the 'ONT Auto Upgrade' dialog box with the 'Trans Param' tab selected. The 'Server Parameters' section includes a 'Server addr' dropdown menu set to '10.4.2.28', a 'Server type' section with radio buttons for 'TFTP' and 'FTP' (the 'FTP' option is selected and highlighted with a red box), a 'User' field with 'emcapp', and a 'Password' field with '\*\*\*\*\*'. The 'File Choose' section shows a 'Name' field with 'C:\Users\Administrator\Desktop\lrlguindspxux', a 'Size' field with '17596420', and a folder icon button (highlighted with a red box). At the bottom are 'OK' and 'Cancel' buttons.

## Trans param

**Server Parameters:** The transport server is set to the local address by default. Select the transport server type(TFTP or FTP).

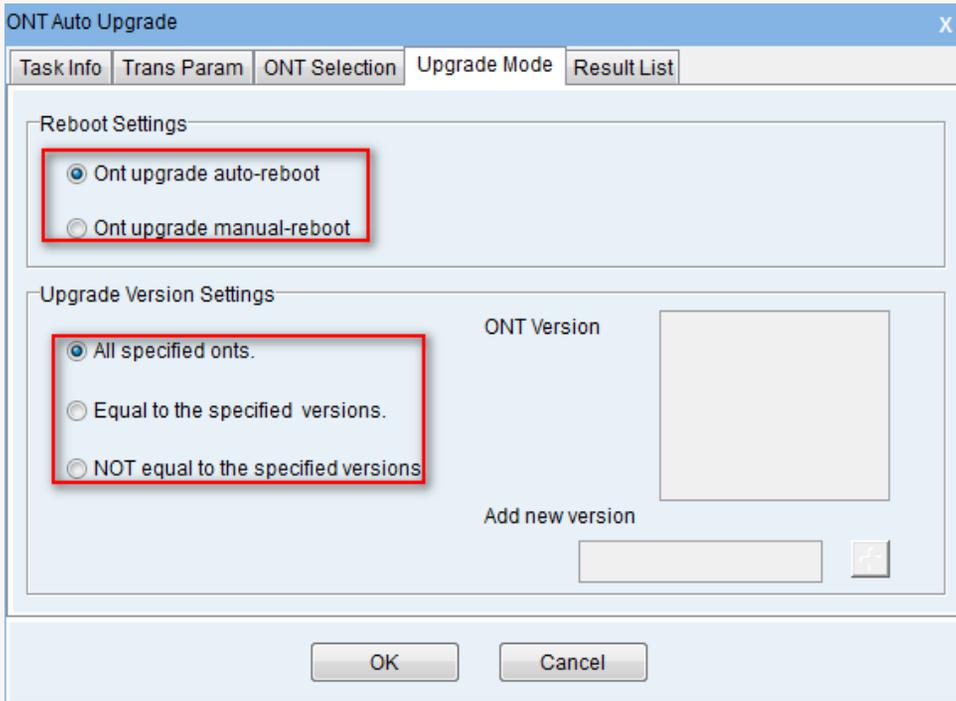
**File Choose:** click “” button to select the ONT upgrade file.



ONT selection

**OLT Select:** Select the ONT under the OLT device. You can select all OLTs or specified OLT.

**ONT Select:** Select the ONT to be upgraded. You can select all ONTs or specified ONT type (you need to manually specify the ONT type.)



Upgrade mode

**Reboot Settings:** Select the reboot mode after the ONT upgrade (auto reboot or manual reboot).

**Upgrade Version Setting:** (1) upgrade all ONTs; (2) upgrade the specified ONT; (3) upgrade the ONTs except for the specified version.

If you specify to upgrade the version of the ONT (or the version other than this ONT version), you need to manually add the selected version number:

ONT Auto Upgrade

Task Info Trans Param ONT Selection Upgrade Mode Result List

Reboot Settings

- Ont upgrade auto-reboot
- Ont upgrade manual-reboot

Upgrade Version Settings

- All specified onts.
- Equal to the specified versions.
- NOT equal to the specified versions.

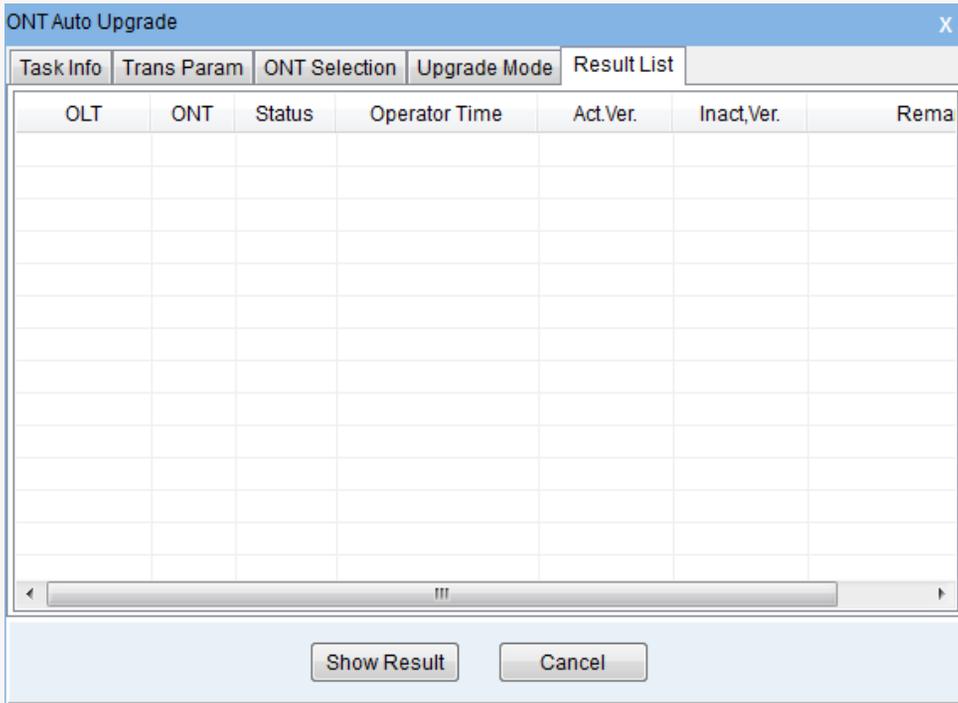
ONT Version  R4.2.56.44b

Add new version

R4.2.56.44b

OK Cancel

Upgrade mode



Show resultshish

**Result List:** Click “Show Result” button to view the details of the ONT upgrade.



**Upload Performance Report Policy** [X]

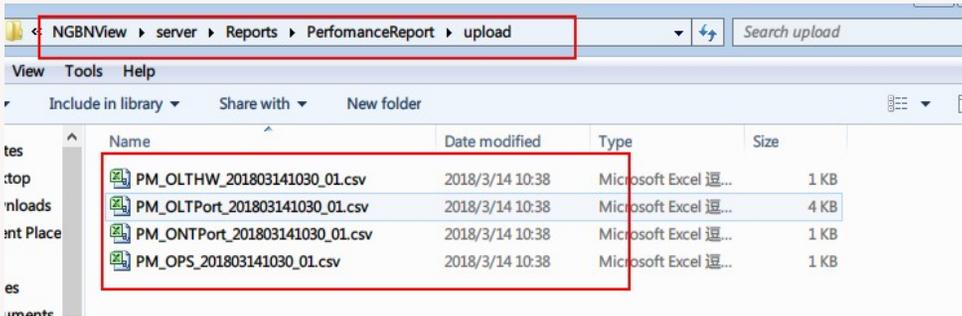
Name:	<input type="text" value="UploadPerformRepor"/>	Group Name:	<input type="text" value="Default"/>
Status:	<input type="button" value="Enabled"/> ▼	Interval(min):	<input type="button" value="15"/> ▼
Last Time:	<input type="text"/>	Retention Days	<input type="text" value="3"/>

Upload perform report

After the task is successfully executed, the reports can be viewed in the installation directory of NMS software *NGBNView\ server \Reports\ PerformanceReport\upload*.

**Upload Performance Report Policy** [X]

Name:	<input type="text" value="UploadPerformRepor"/>	Group Name:	<input type="text" value="Default"/>
Status:	<input type="button" value="Enabled"/> ▼	Interval(min):	<input type="button" value="15"/> ▼
Last Time:	<input type="text" value="2018/3/14 10:45:00"/>	Retention Days	<input type="text" value="3"/>



### Performance report

### Attribute Table

Attribute	Description
name	The name of the policy, which is used to identify the scheduled task in the scheduled task list, and it can only be modified the name when creating
Group name	Group name of the scheduled task
state	Whether the selection of scheduled tasks is effective
interval (points)	Task execution interval time
Last time	The last time the task was run
retention days	The number of days that the generated performance report remains



Search Schedule Task

Search List

Match conditions (for the conditions between "and" Relations)

Group Name: All

Status: Any

Run Status: Any

Name Head Match:

period :(<= s)

period :(>= s)

Search Show All Help

### Search Schedule Task

Fill in the matching condition and select the query button in the search interface to display matching scheduled tasks. The *Show All* button is used to display all scheduled tasks.

## Color Configuration of Scheduled Tasks

Different scheduled task instances uses different color to highlight. These

colors show different scheduled task states. The default congruent relationship of colors and states is as below.

congruent relationship of colors and states

Color	State
Yellow	Staying scheduled task
Green	The scheduled task will be executed
Cyan	The scheduled task is executing
Grey	Invalid scheduled task
Orange	Available scheduled task

## Schedule Policy

Non-periodic schedule task sets the execution time through the program interface. Select "**Modify**" from the right-click menu of the selected scheduled task, or double-click the selected scheduled task, and then click on the "**Schedule**" to call the scheduled task scheduler in the pop-up interface. This program gives the way of scheduling a non-periodic scheduled task. It has two modes, "**Date**" and "**Day**".

## Date Mode

“Date” mode is the default option for the scheduled task mobility program. It will display a “*Time Table Schedule Task Base On*” at the top of the program interface, which shows all the days of the month (from 1 to 31). At the bottom of the program interface, it is the “*Select Time (Hour)*” table, which shows all hours from 0 to 23.

The screenshot shows a dialog box titled "Schedule Task Time" with a close button (X) in the top right corner. The main title is "Time Table Shchedule Task Base On". Below the title, there are two radio buttons: "Date" (selected) and "Day".

Under the "Date" section, there is a "Select Date" label and two radio buttons: "Select All" and "Assign" (selected). Below these are 31 numbered buttons arranged in a grid:

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	

Under the "Select Time(Hour)" section, there are 24 buttons representing hours from 0:00 to 23:00, arranged in a 4x6 grid:

0:00	1:00	2:00	3:00	4:00	5:00
6:00	7:00	8:00	9:00	10:00	11:00
12:00	13:00	14:00	15:00	16:00	17:00
18:00	19:00	20:00	21:00	22:00	23:00

Below the hour buttons are two buttons: "All" and "Reset".

At the bottom of the dialog box are three buttons: "OK", "Cancel", and "Help".

“Date” mode

The scheduled task execution time will set the task to be executed once a month in the “Date” mode. You can select the date and time of scheduled task execution time from two tables. For example, if you want the scheduled task to run at 3:00 and 7:00 on the 2<sup>nd</sup> of each month, click on the button labeled “2” in the date table and click “3:00” and “7:00” in the schedule.



Note: if you choose a date that doesn't exist in every month, the scheduled task will not be executed in the month without the date. For example, if you choose the 31<sup>st</sup>, the scheduled task will be implemented in January, February will not execute, and March will be re-executed.

If you want to modify the date and time of your choice, you only need to click on the date or time button, and then re-select the value you want.

## Day Mode

The screenshot shows a dialog box titled "Schedule Task Time" with a close button (X) in the top right corner. The main title is "Time Table Shchedule Task Base On". Below this, there are two radio buttons: "Date" (unselected) and "Day" (selected). Underneath, there is a section titled "Select Day" containing two radio buttons: "Select All" (unselected) and "Assign" (selected). Below these are seven buttons representing the days of the week: Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday. The next section is titled "Select Time(Hour)" and contains a 4x6 grid of buttons for each hour from 0:00 to 23:00. At the bottom of this grid are two buttons: "All" and "Reset". At the very bottom of the dialog box are three buttons: "OK", "Cancel", and "Help".

### “Day” mode

If the last scheduled task is running in the “day” mode, the “day” mode will be displayed by default when you reopen the scheduled task.

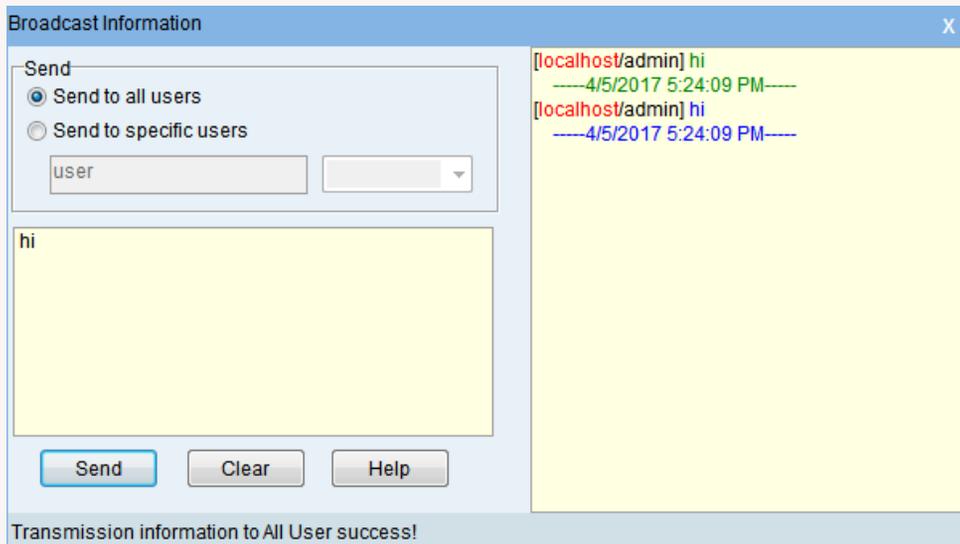
Selecting the “day” mode will display “*Time Table Schedule Task Base On*” on the top of the program table, which contains all weekdays from Sunday to Saturday, and the lower part is “*Select Time (Hour)*” Table.

The scheduled task is executed once a week in the “day” mode. The

operation is the same as the date mode.

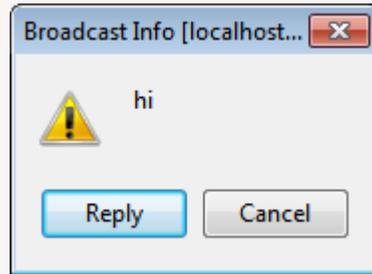
## Broadcast Information

It refers to the broadcast information sent to the user. As shown below.



dialog box of broadcast Information forwarding

Select “**Send to all users**”, and then enter the information to be sent, and then click “**Send**” button, the information will be sent to all client interface, as shown below.



dialog box of broadcast Information receiving

## Language

Select the system language. Temporarily, the system supports Chinese and English versions.



language selection interface

## System Preferences

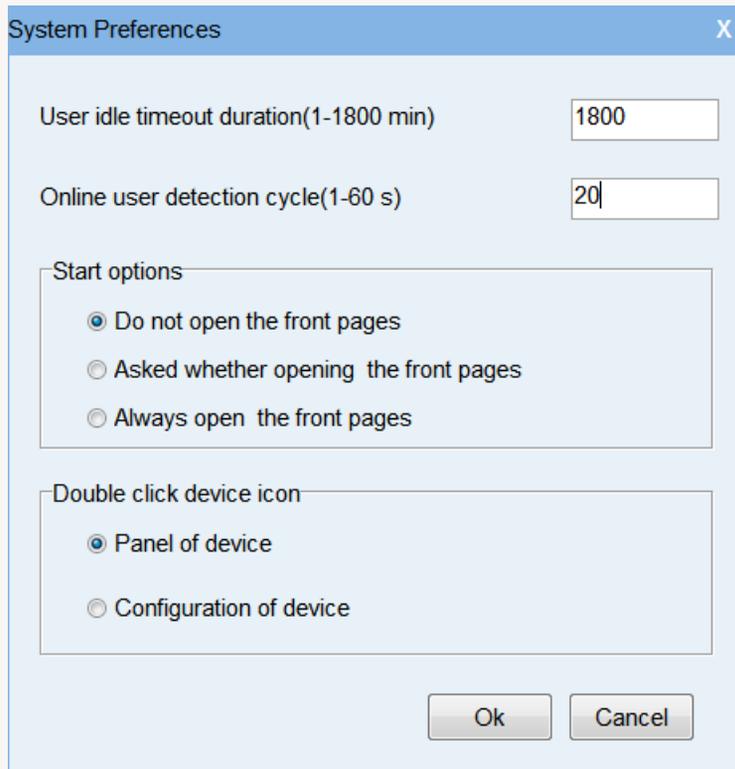
After setting **User idle timeout duration**, the program will be locked immediately if there is no operation for a certain period of time.

After setting **Online user detection cycle**, the program sends a message to

the server to update the user information for each period.

The setting of “*Start options*” takes effect at the next startup. When the option 1 is set, the client does not retain the page that is not closed last time. Option 2 means that each startup program will ask whether we can open the page that was not closed for the last time. Option 3 means that default is not closed the last open page.

“*Double click device icon*”, that is the operation of double-click the device icon in the TOPO map page.



System Preferences Interface

## Lock the Client

The client exits the main interface of the network management, and then enters the following lock interface. Enter the correct password, and click the **OK** button, you can return to the main interface of the network management

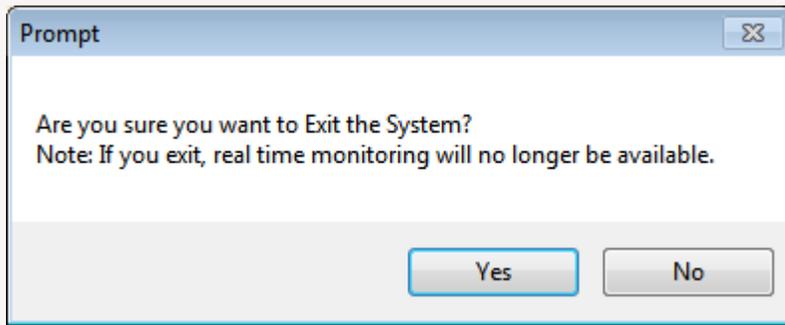
system.



Lock interface

## Close the Client

Click “**Close**”, there will pop up the following dialog box. Click “**Yes**”, you will exit the application client directly; otherwise, you will be in the main interface of the network management system.

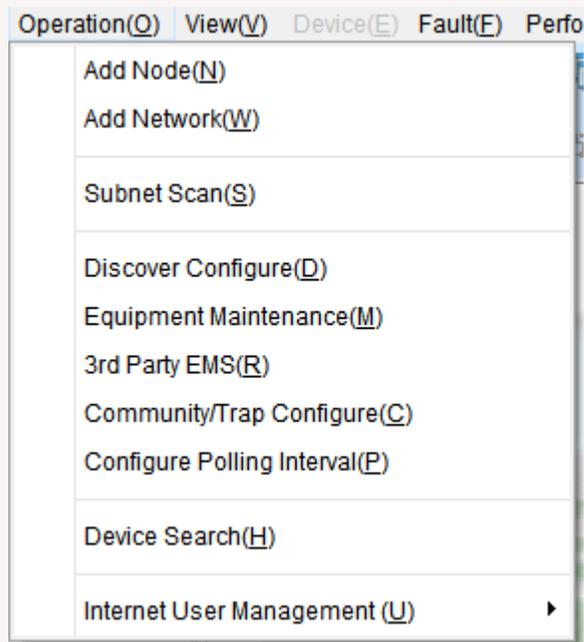


Close the client dialog box

# Operation

## Operation Menu

The operation menu is as shown below, the latter few sections of these menu functions are described in detail.



Operation menu

## Add Node

It is used to add node that already exists but not being discovered in the network. As shown below.

**Add Node** X

**Node Information**

Node Name:

Read Community:

Write Community:

SNMP Port:

Subnet Mask:

Begin to Discover after adding

Ask, return immediately

**SNMP V3 Support**

SNMP V3 Start

User

Context

Add node interface

Each item is described as follows:

**Node name:** specify the node IP address to add

**Read community:** specify the read public string of the managed object

corresponding to the node. If not specify, the system uses the READ\_COMMUNITY field value in the seed file.

**Write community:** specify the write public string of the managed object corresponding to the node.

**SNMP Port:** add the port number of the SNMP on the node

**Begin to discover after adding:** after the specified node is added, the system begins to discover the node device.

**Ask, return immediately:** select the item regardless of whether the device is added to the interface, you will exit; if you do not select the item, you have to wait for process and display the result of process and then exit this interface.

**SNMP V3 Start:** select this item to add the node as an SNMPv3 node to the database, otherwise the node will be added as a non-SNMPV3 node to join the database.

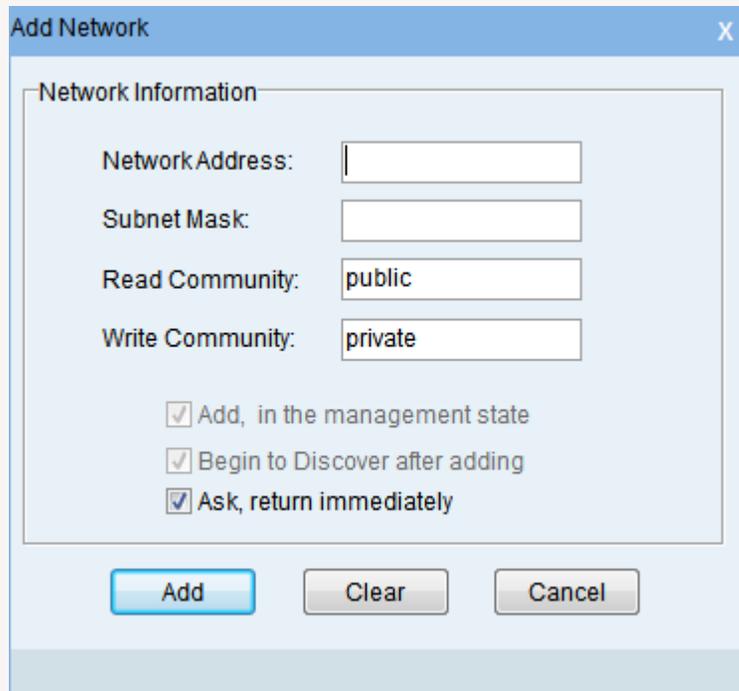
**User:** specify the user name of adding the node

**Context:** the user name of SNMPV3

## Add Network

Users can add the network to the topology database, and the display

interface as shown below.



Add network interface

Each item is described as below:

**Network Address:** Network IP address

**Subnet Mask:** specify the subnet mask for the network.

**Read Community:** specify the read public string of the managed object corresponding to the node. If not specify, the system uses the READ\_COMMUNITY field value in the seed file.

**Write Community:** specify the write public string of the managed object corresponding to the node.

**Add, in the management state:** specify the managed property of the network, which is selected on the default. If you select this item, the network is added to the database and the corresponding network elements are displayed on the network topology. The system also begins to discover the network. If you don't select, the network is added to the database and the corresponding network elements displayed on the network topology are grayed out. The system doesn't discover the network.

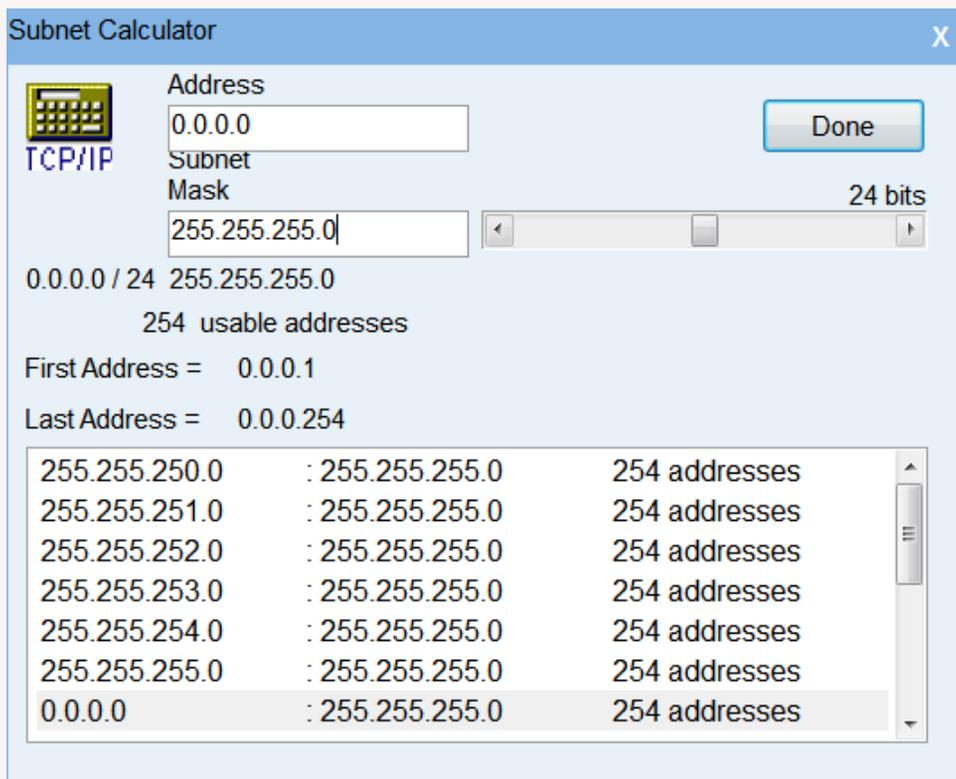
**Begin to Discover after adding:** start to detect the node of the network

**Ask, return immediately:** Select this option to exit this interface after the add operation is complete. If you do not select this item, you cannot exit this interface until the process is finished and the system displays the result.

## Subnet Scan

### Subnet Calculator

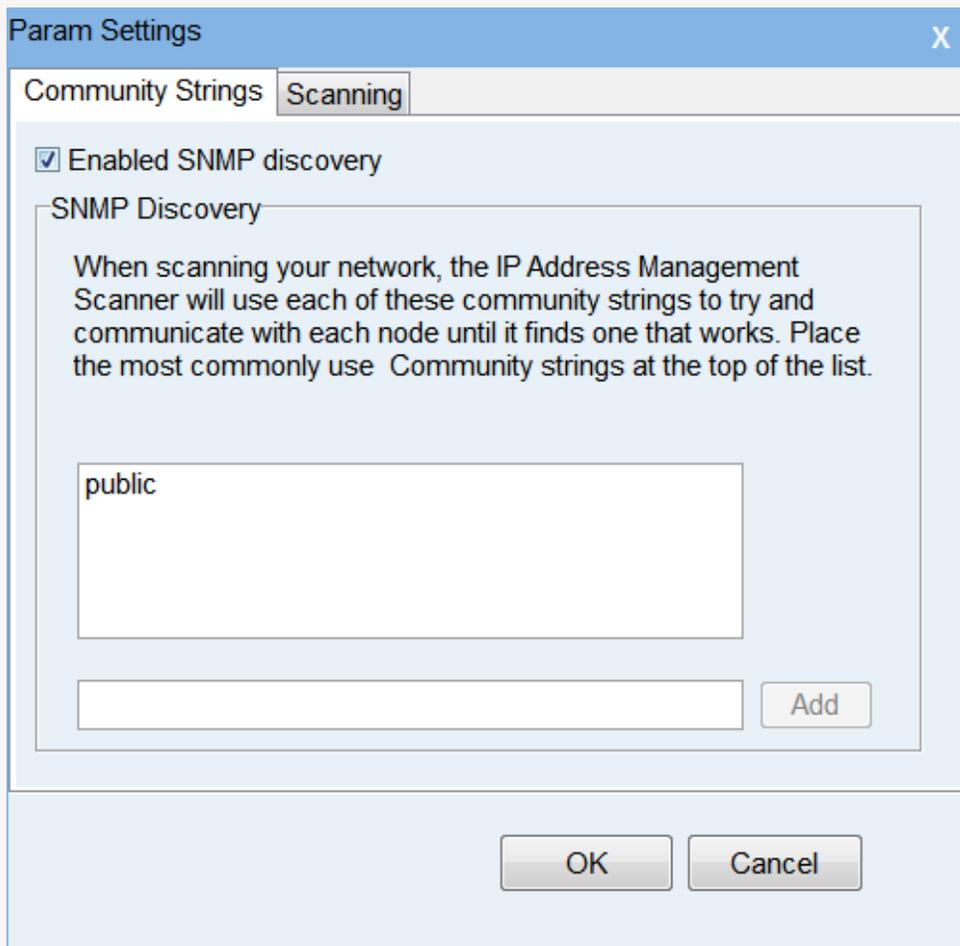
Enter the subnet address (subnet mask does not required to be enter), and click on the “**Subnet Calculator**”, the number of available addresses will be showed. Change the number of available addresses in the subnet by using the scroll bar on the right of the subnet mask, and change the number of network bits in the subnet mask, as shown below.



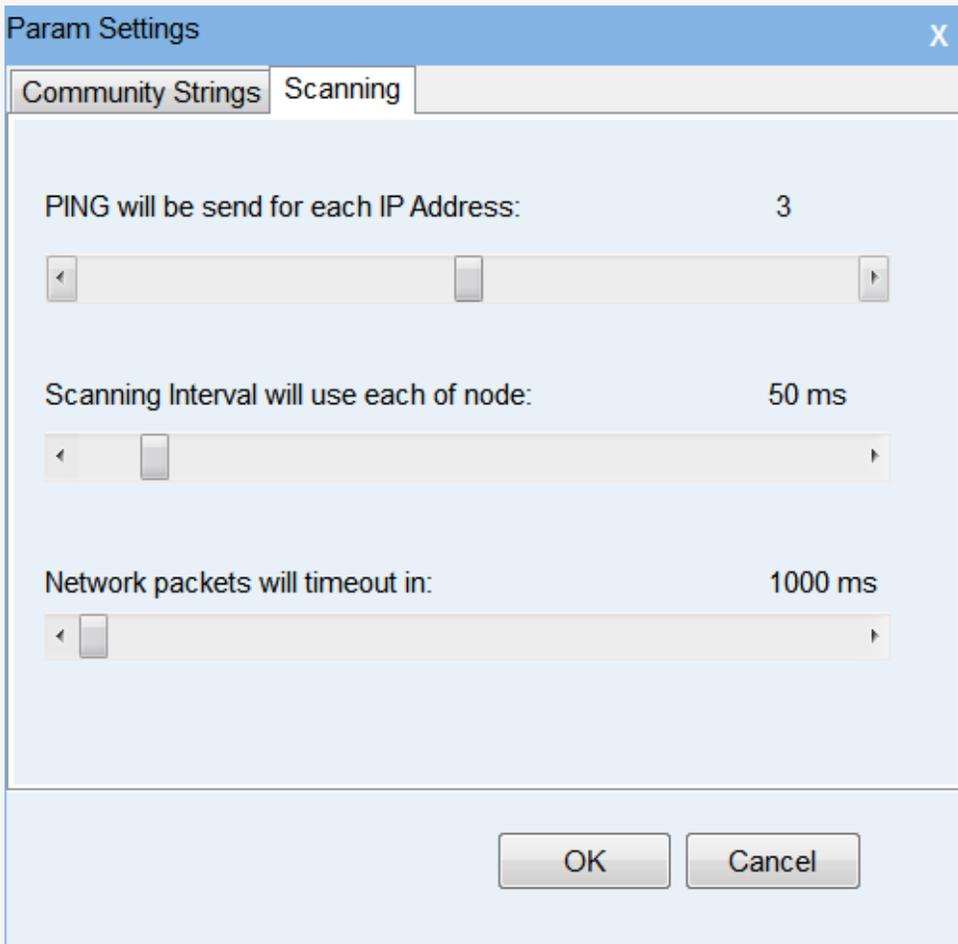
Subnet calculator interface

## Parameter Settings for Scanning

The scanning parameter settings include *"PING will be send for each IP Address"*, *"Scanning Interval will use each of node"*, and *"Network packets will timeout in"*. As shown below.



Parameter setting-community interface



Parameter setting-scanning interface

The results of the subnet scan can be displayed by **“show all subnet IP”**, **“show subnet that is using IP”** and **“display available IP of subnet”**. As shown below.

Address	Status	Machine Type	System Name	Host Name
0.0.0.0	Network			
0.0.0.1	Available			
0.0.0.2	Available			
0.0.0.3	Available			
0.0.0.4	Available			
0.0.0.5	Available			
0.0.0.6	Available			
0.0.0.7	Available			
0.0.0.8	Available			
0.0.0.9	Available			
0.0.0.10	Available			
0.0.0.11	Available			
0.0.0.12	Available			
0.0.0.13	Available			

Add Node

---

Save To File ...

---

Tools

---

Show/Hide Host Name

Ping ...

TraceRoute ...

Telnet ...

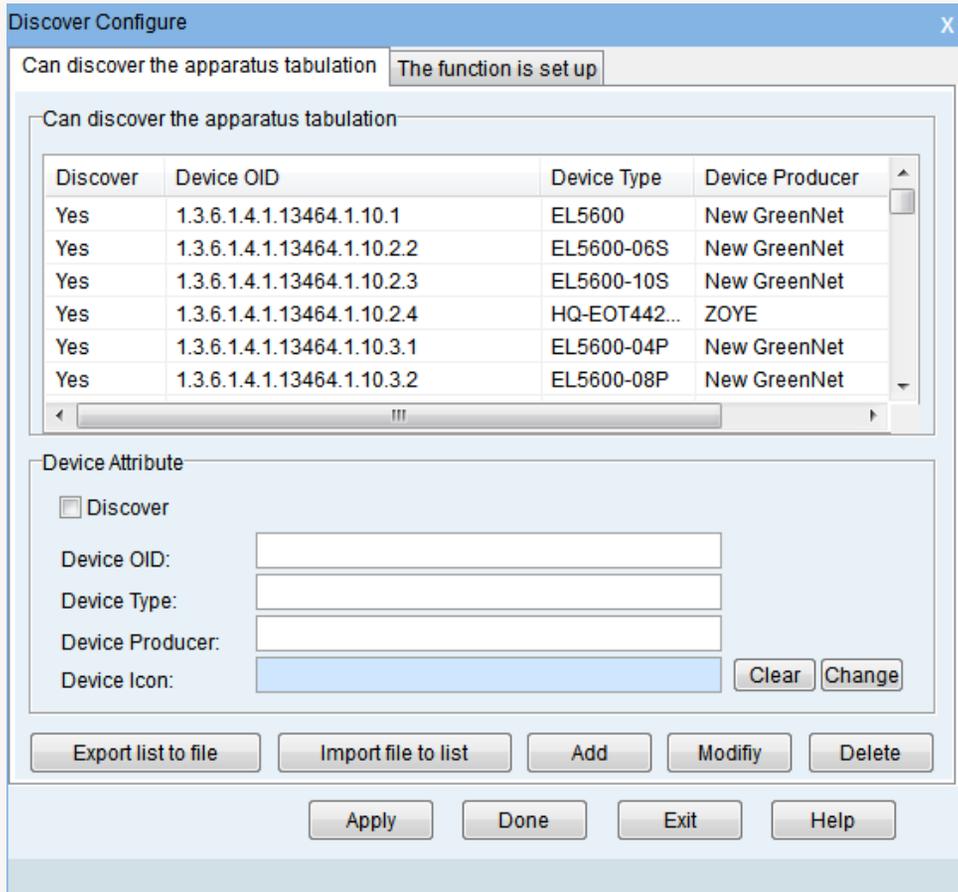
Web Browser ...

Subnet scanning interface

## Discover Configure

### Device OID

The device OID configuration function is mainly used to add real-time management equipment for the platform through **“Operation”** → **“Discover Configure”** to open the discovery configuration interface. It defaults to display the device OID configuration function, as shown below.



Device OID configuration interface

Each item is described as follows:

**Discover:** if you check this item, it will discover the device according to the subsequent OID.

**Device OID:** device's system OID value.

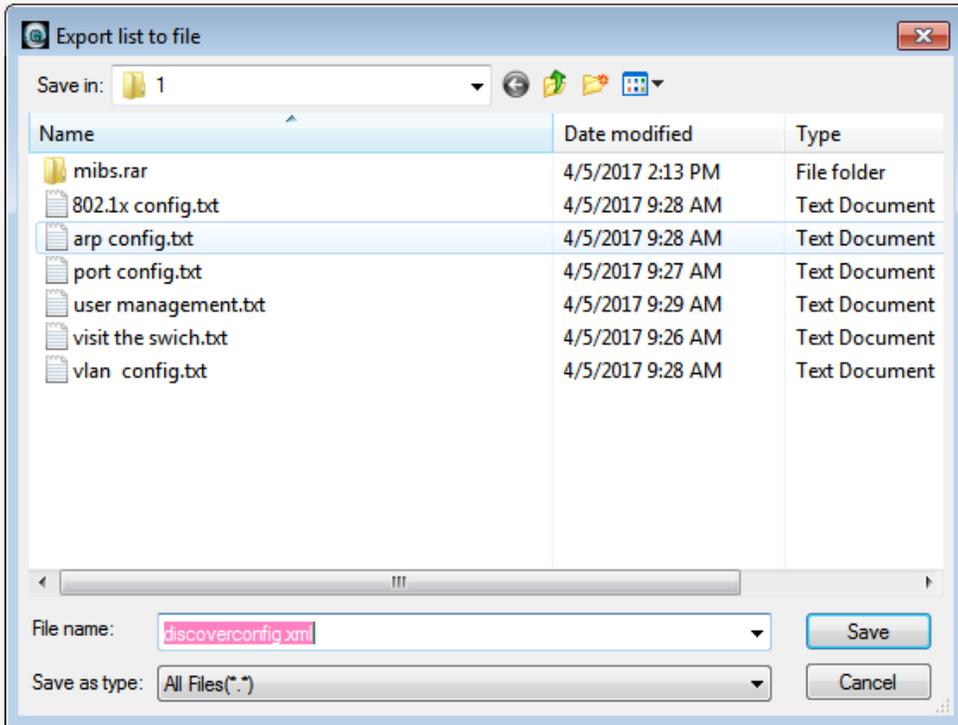
**Device Type:** the type of equipment that needs to be discovered, which can be specified according to the name provided by manufacturers or specified by yourself.

**Device Producer:** Display the name of the device manufacturer.

**Device icon:** the icon used to display the device.

Instructions are as follows

**Export list to file:** when you click the button, the save dialog box is opened, as shown below. Select the save type, enter the file name, and click “save”, you can export the list to the file.



The dialog box of exporting list to file

**Export list to file:** when you click the button, the dialog box is opened. Select the file, and then click “**open**”, you can import the file to the list.

**Add:** enter the device OID and device type directly in the lower part of the interface, and then select whether to discover the device or not. Later, click the **Add** button to add the device and OID to the list.

**Modify:** select a record of the list, modify its contents, and then click **Modify** to

update the information.

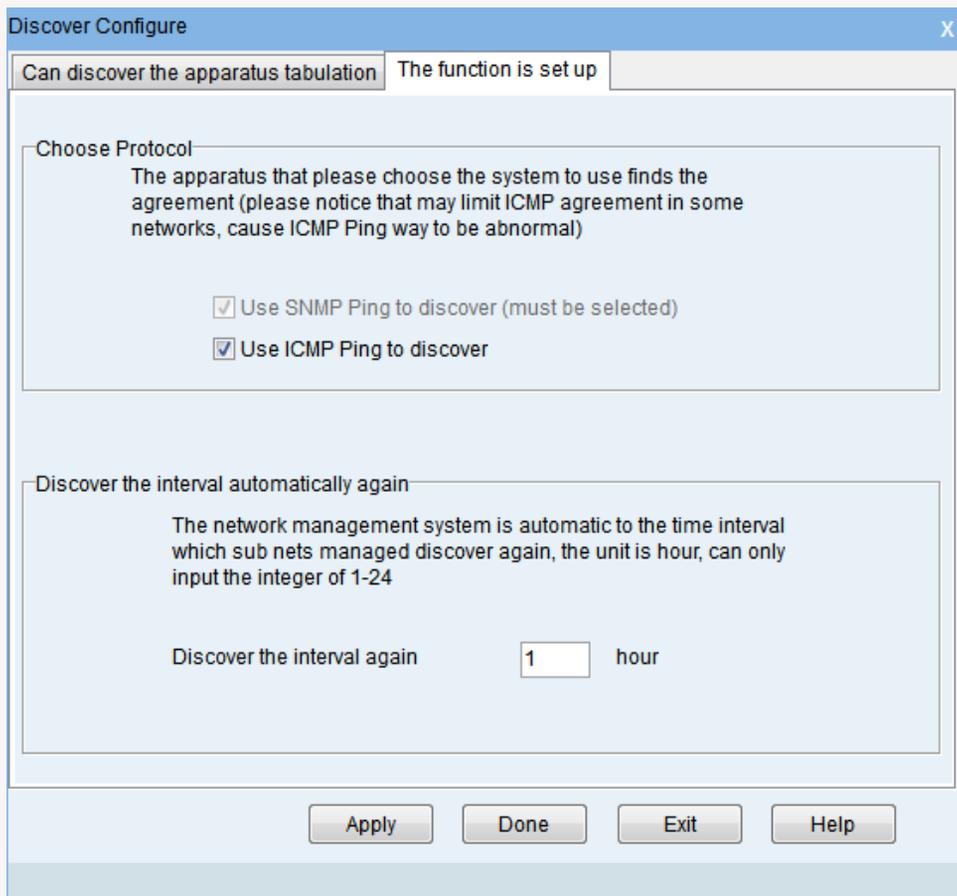
**Delete:** select a record of the list and click **Delete** to remove it from the list.

**Apply:** After the above three operations are completed, you need to click the

**Apply** button to save changes to the server, and real-time impact on the server's discovery.

## Function Setting

Open the discovery configuration function through **“Operation”** → **“Discovery Configure”**, and then select the function settings page. As shown below.



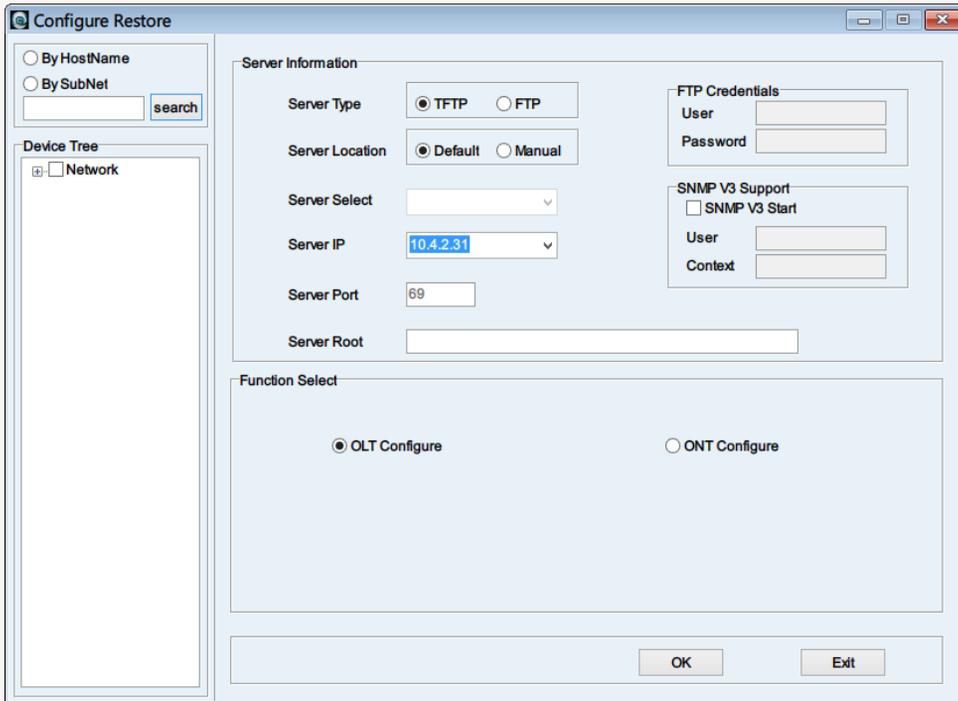
Function settings interface

**Choose protocol:** the platform can use SNMP or ICMP protocol when we poll the device. The ICMP protocol is adopted by default. The ICMP message is shielded out to prevent the virus and ensure the network stability. In this case, if the platform polling fails, you can configure to enable SNMP polling mode.

**Discover the interval automatically again:** the polling interval is discovered again by the managed subnet

## Configure Restore

The configuration restore is mainly used to restore the configurations of the OLT and the ONT, and you can use FTP and TFTP to distribute the configurations. The backup configuration file is generated by "Backup Device Config Policy" in the scheduled task. This function restores the device as the last backup configuration. The main interface is shown in the following figure. The left side of the interface is the device tree, and the right side is the server information and function selection.



Configure restore interface

**By type/ By Subnet:** search devices by different options. The target device is displayed in the device tree.

**Server Type:** select the server type (FTP or TFTP). When you use the FTP server, the FTP needs to be configured.

**Server Location:** It defaults to the self-server. If you choose *manual*, you can continue the following server selection.

**Server Select:** select different servers. See to server menu for the operation

of adding, deleting, modifying of the server.

**Server Type:** the IP type of the selected server.

**Server Port:** FTP is 21 by default and TFTP is 69 by default.

**Server Root:** the storage path of the server file.

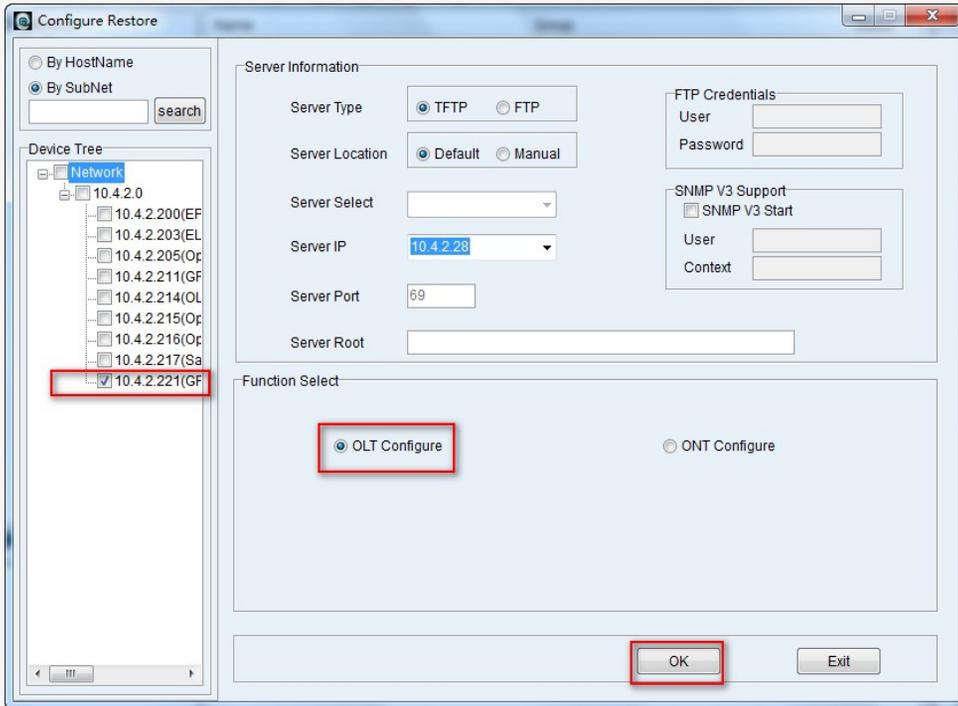
**SNMP V3 Support:** whether to use SNMP V3 or not.

**Function select:** select the configuration restore OLT or ONT

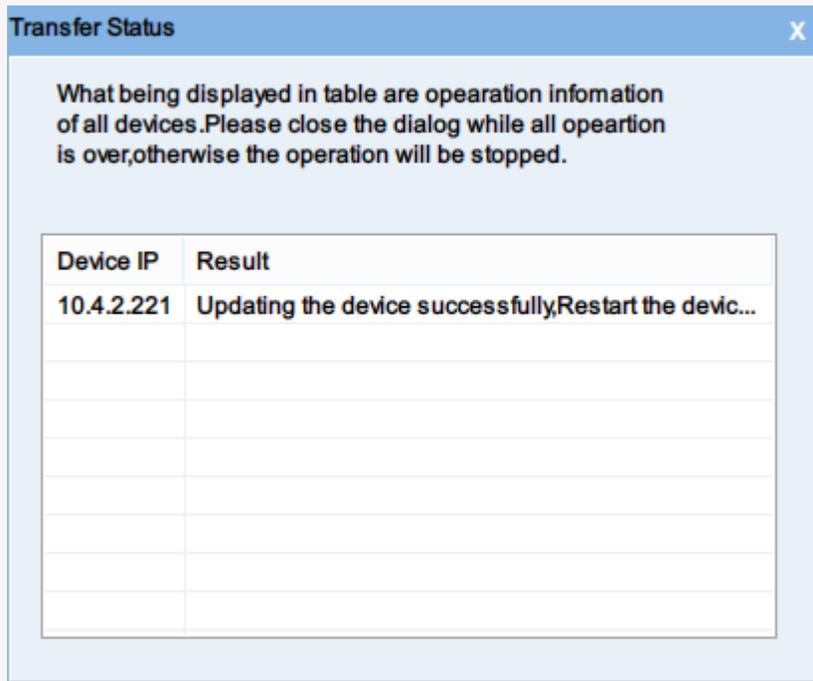
The following describes how to restore OLT and ONT.

(1) OLT configure

Select the OLT and related server information to be restored, confirm that you have backup this OLT configurations, and then click the OK button to start the restoration.



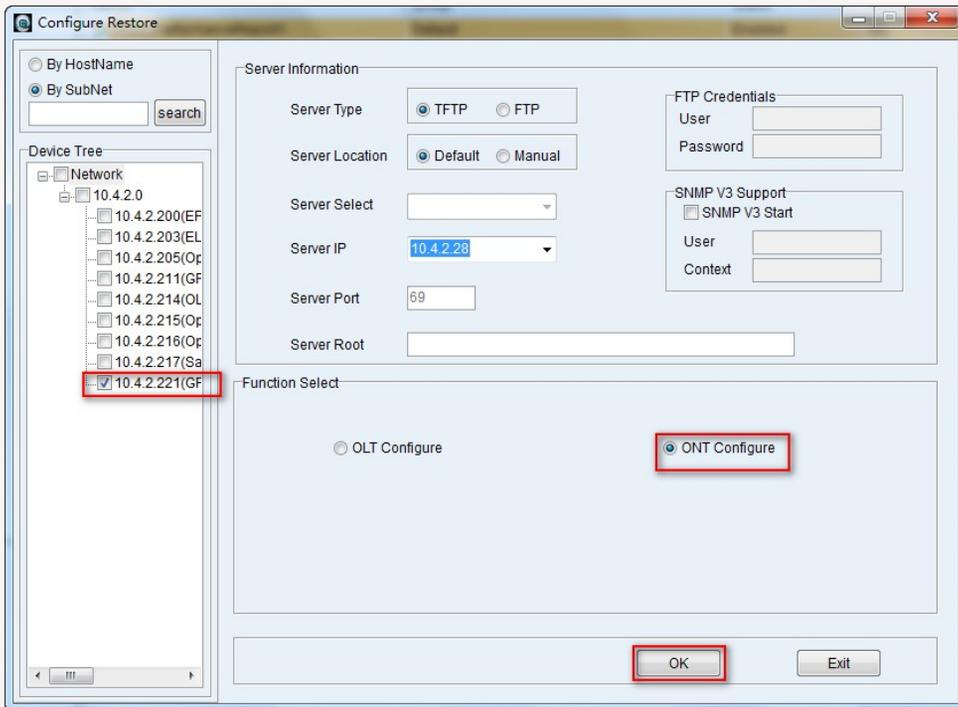
OLT Configure

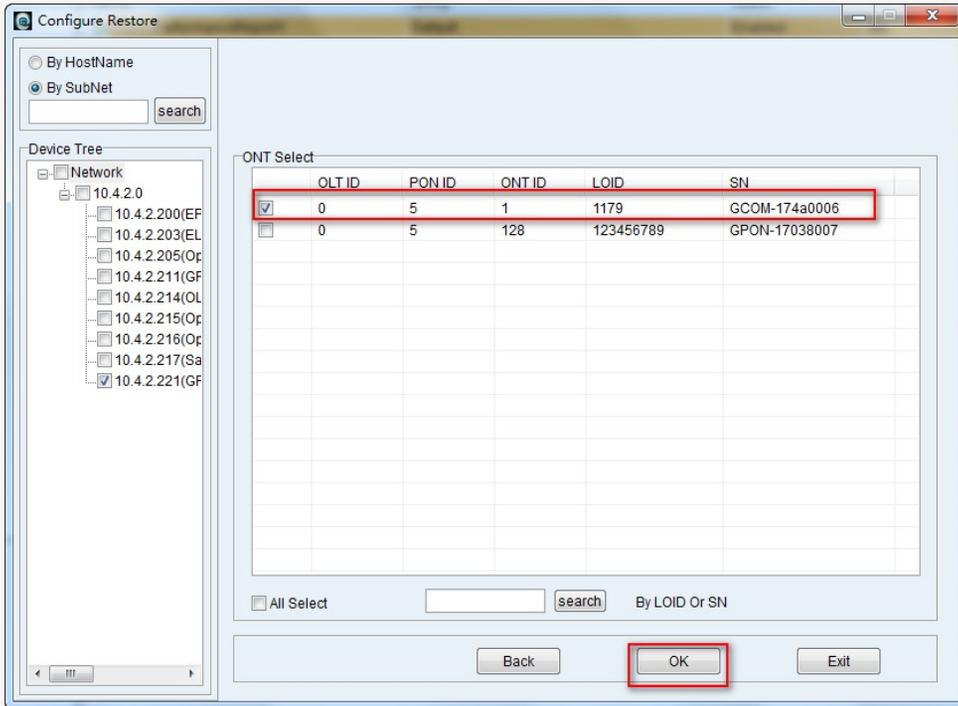


Transfer Status

## (2) ONT configure

Select the OLT and related server information where the ONT located to be restored, and the related server information (it supports configuration delivery through the TFTP server only). Click OK, and then select the ONT to be restored. Click OK to start the restoration.





ONT Configure

## Equipment Maintenance

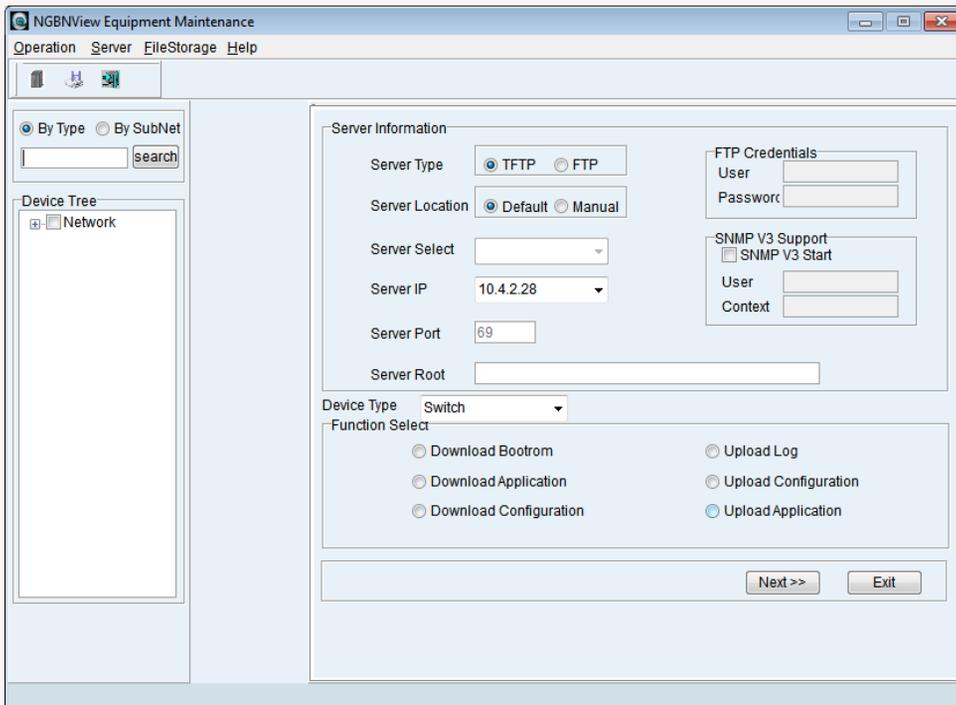
It is used to download Firmware from the server to the device (update the embedded software of the device), download the configuration file from the server to the device, upload the log file from the device to the server, save the configuration file from the device to the server.

The device maintenance module transfers the various files needed for maintenance between the client and the server through the TFTP protocol or the FTP protocol.

## **Overview for Equipment Maintenance**

### **Management**

The main interface of the equipment maintenance is shown below. The top of the interface is the main menu and the action bar. The lower part is the device tree and the right side is the maintenance operation interface.



Device maintenance interface

**By type/ By Subnet:** search devices by different options. The target device is displayed in the device tree.

**Server Type:** select the server type (FTP or TFTP). When you use the FTP server, the FTP needs to be configured.

**Server Location:** It defaults to the self-server. If you choose *manual*, you can continue the following server selection.

**Server Select:** select different servers. See to server menu for the operation

of adding, deleting, modifying of the server.

**Server Type:** the IP type of the selected server.

**Server Port:** FTP is 21 by default and TFTP is 69 by default.

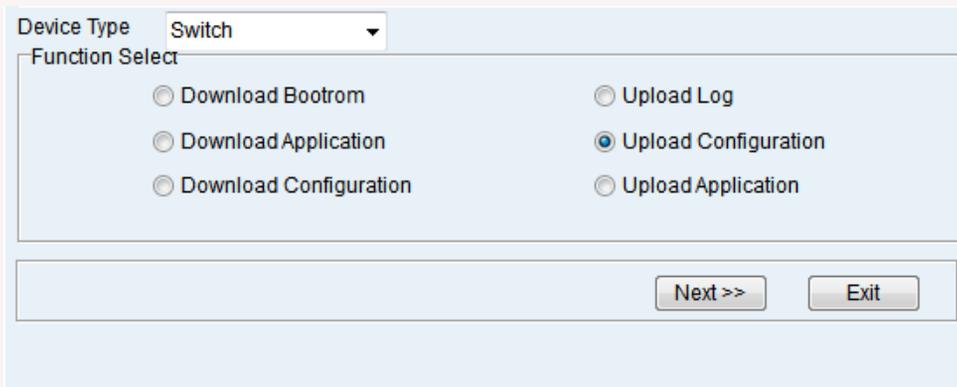
**Server Root:** the storage path of the server file.

**SNMP V3 Support:** whether to use SNMP V3 or not.

Here's the explanation on how to upload a device configuration file.

Firstly, you should select the device type, and select the upload configuration.

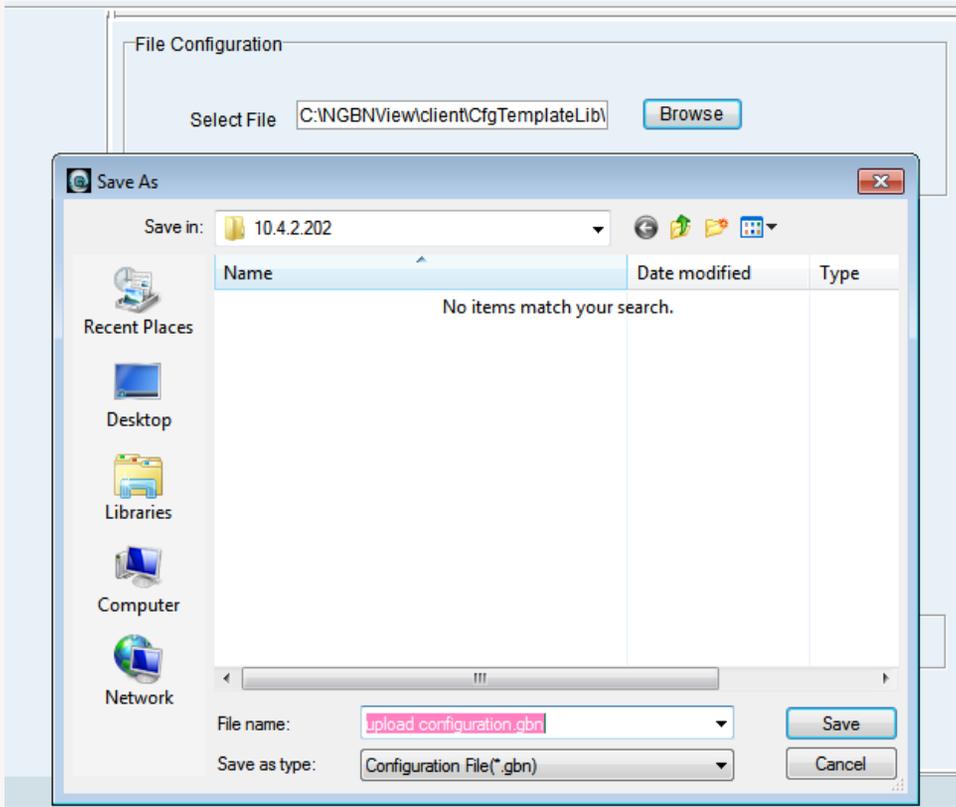
Click **Next**, as shown below.



The screenshot shows a configuration window with a light blue background. At the top left, there is a dropdown menu labeled "Device Type" with "Switch" selected. Below it is a section titled "Function Select" containing six radio button options arranged in two columns. The options are: "Download Bootrom", "Download Application", "Download Configuration", "Upload Log", "Upload Configuration" (which is selected), and "Upload Application". At the bottom right of the window, there are two buttons: "Next >>" and "Exit".

Upload device configuration (1)

2、 It will pop up the following interface, click **Browse**, and then select the path where the file is stored and names the file.



Upload device configuration (2)

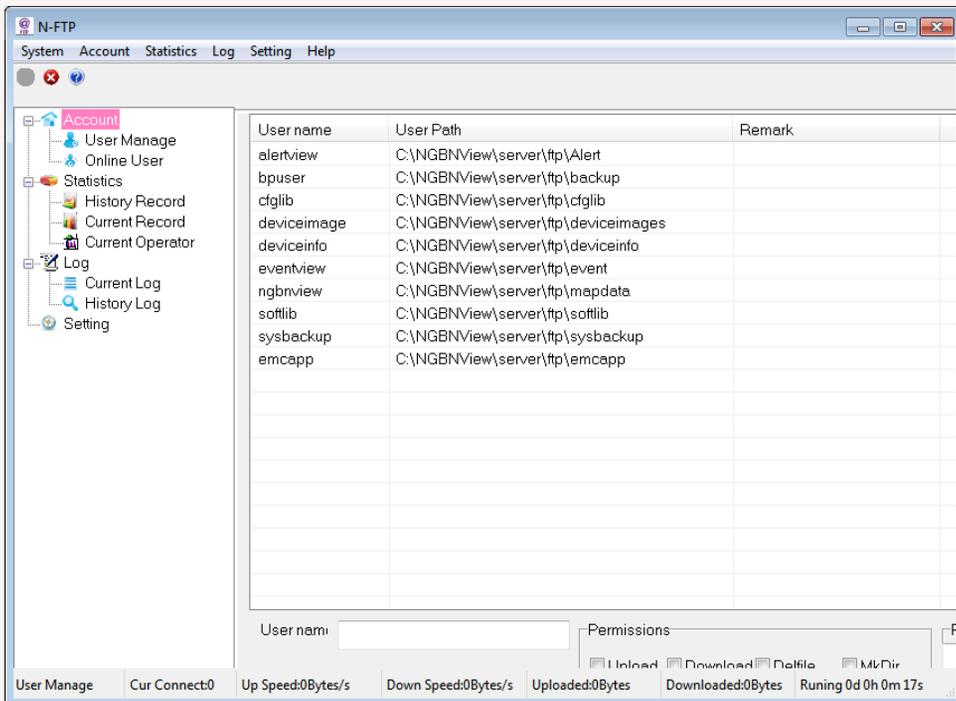


## Start the Default File Server

The device maintenance system is based on the TFTP or FTP protocol to achieve the maintenance. You must start the relevant agreement of the server (opens the appropriate service on the server end) before using.

This section mainly describes how to start the default FTP server.

Start the FTP server on the server, as shown in the following figure.



FTP server interface



Note: it is required to keep the FTP server running while the device maintenance operation is in progress.

## Device Maintenance Menu

### Device Maintenance Operation Menu

#### *Exit*

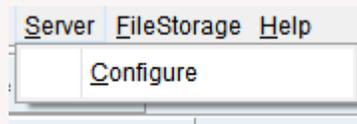
Click the menu item to exit the device maintenance interface.



In addition, the button  on the bar is also for the exit operation.

### Server Menu

The server menu contains a menu item, which is mainly used to set the file server information of the device maintenance module, as shown below.



Server menu



In addition, the button  on the bar is also for the **server**

**configuration** operation.

Click the menu item, and open the server configuration interface, as shown below.

The screenshot shows a window titled "TFTP/FTP Server Configuration". At the top, there is a "Server Type" section with two radio buttons: "TFTP Server" (which is selected) and "FTP Server". Below this is a "Server Information List" section containing a table with the following columns: ID, Name, Address, Root, User, and Password. The table is currently empty. At the bottom of the window is a "Server Information" section with input fields for Name, Address, User, Root, and Password. There are also buttons for "Add", "Modify", "Delete", "Refresh", "Save", and "Cancel".

Server configuration interface

You can choose the server protocol type on the upper part of the interface, TFTP or FTP. the middle of the interface shows different server list according

to the different choice.

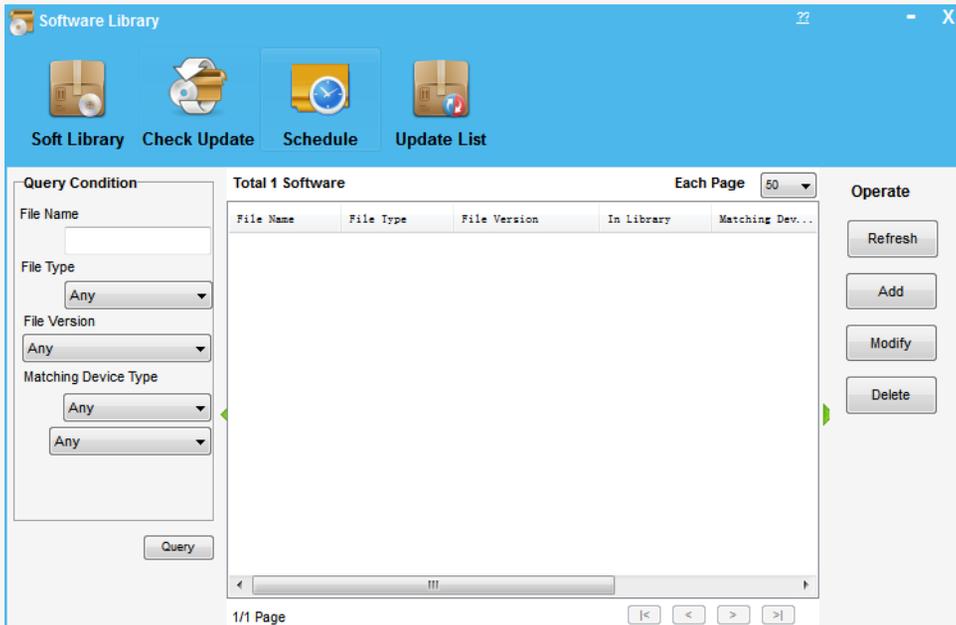
The middle of the interface shows the server list, including the server ID, server name, server address and server root directory. For the FTP server, it includes the user name and password, and the password is displayed as an encrypted code.

The bottom of the interface is the server information display and operation part. When a server record is selected in the server list, its information record will be displayed in this area. The information can be modified and the **Modify** button is used to update the original record. You can add the modified result as a new record to the server list by **Add** button. Click the **Delete** button to remove the selected server information from the list.



## File Library Menu

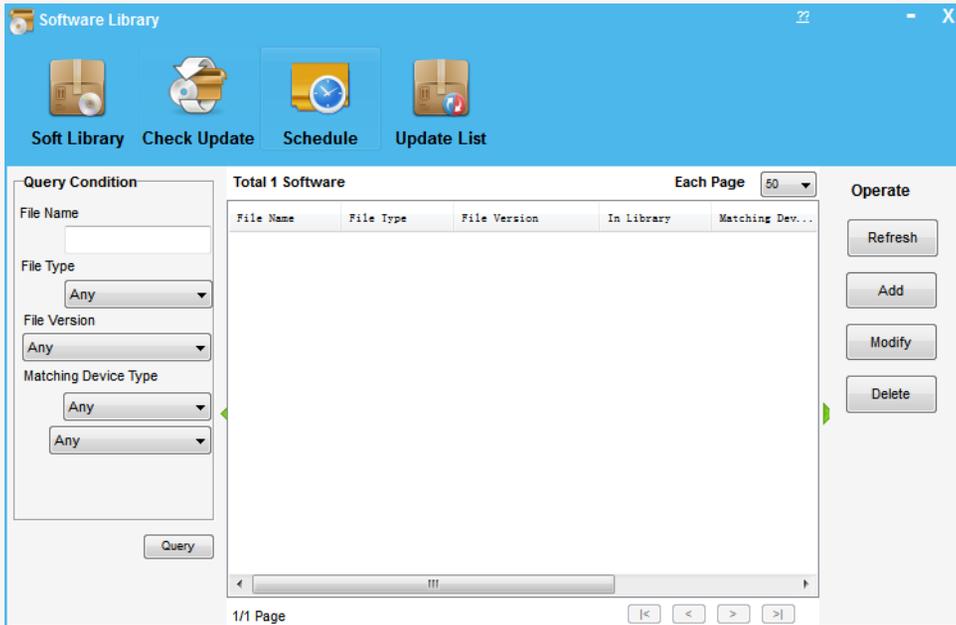
File library menu contains the program software. The menu item is mainly used to save the various configurations and program-related file information of device maintenance module. As shown below.



Server configuration interface

The button  on the bar is the same as the menu item.

Click the menu item to open the interface of device software library, as shown below.

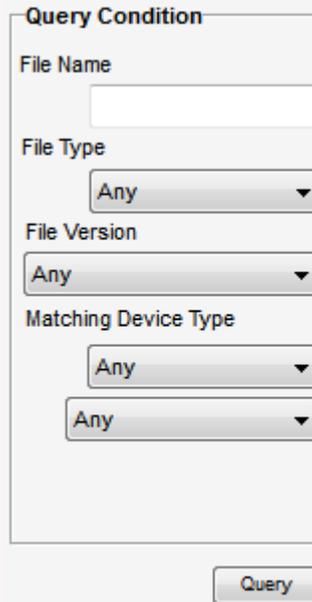


Device software library interface

The interface is divided into four areas: *Soft Library*, *Check Update*, *Schedule* and *Update List*.

### *Soft Library*

*Soft Library* can be divided into Query Condition and software-related information (for example, File Version and Matching Device Type). As shown below.



The image shows a 'Query Condition' form with the following fields:

- File Name:** A text input field.
- File Type:** A dropdown menu with 'Any' selected.
- File Version:** A dropdown menu with 'Any' selected.
- Matching Device Type:** Two dropdown menus, both with 'Any' selected.

A 'Query' button is located below the form.

query interface of device software library

**File Name:** it is the file name of the program software, and it does not contain the file path

**File Type:** it is used to specify the search scope of the file, and it is divided into BootRom and device software.

**File Version:** the version number of the program software

**Matching Device Type:** the corresponding device type

Operation section of software information is as shown below.

Total 1 Software Each Page 50 ▾

File Name	File Type	File Version	In Library	Matching Dev...
-----------	-----------	--------------	------------	-----------------

**Operate**

Refresh

Add

Modify

Delete

1/1 Page |< < > >|

operation interface of software information

**Modify device software!** X

**File Information**

File Path	<input type="text" value="C:\Users\Administrator\Desktop\"/>
File Name	<input type="text" value="J0R001B01D001P004SP8host.arj"/>
File Size	<input type="text" value="7116830"/> (Bytes)
File Version	<input type="text" value="V100R001B01D001P004SP8"/>

**Software Device Information**

Matching Device Type	<input type="text" value="OLT"/> <input type="text" value="EL5610-08P"/>
Matching Board Ty	<input type="text"/>
Matching BootRom Version	<input type="text" value="V10"/>

**Other Information**

Remark	<input type="text"/>
--------	----------------------

OK Cancel

operation interface of adding device software

**File Path:** You can set the directory where the file is located by clicking the browse button after the input box.

**File Name:** the file name of the program software.

**Device Type:** the device type which corresponds to the program software.

**File Size:** When you set the correct file path and file name, the system will automatically calculate the file size, and the unit is byte.

**File Version:** the version number of the program software.

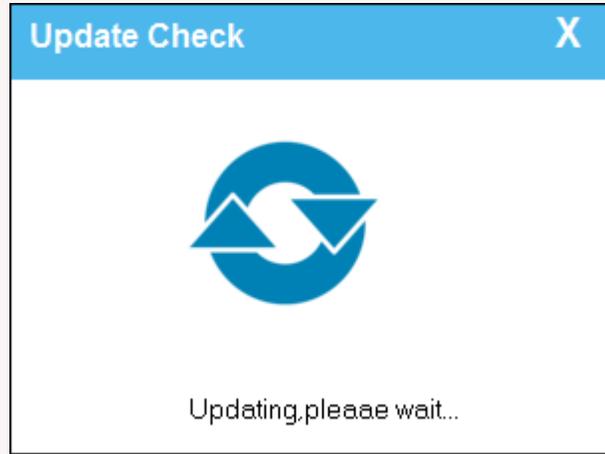
**In Library:** the time when it is added to the system. It cannot be modified.

**Matching Bootrom Version:** When the input file type is device software, the project needs to be filled in to clarify the Bootrom version on which the device software is running so as to avoid version incompatibility. The system will confirm the input file type based on the contents of the input box. For example, if the corresponding Bootrom is empty, it means the input file type is the Bootrom, otherwise the input file type is the device software.

**Remark:** the description of the file can be added here.

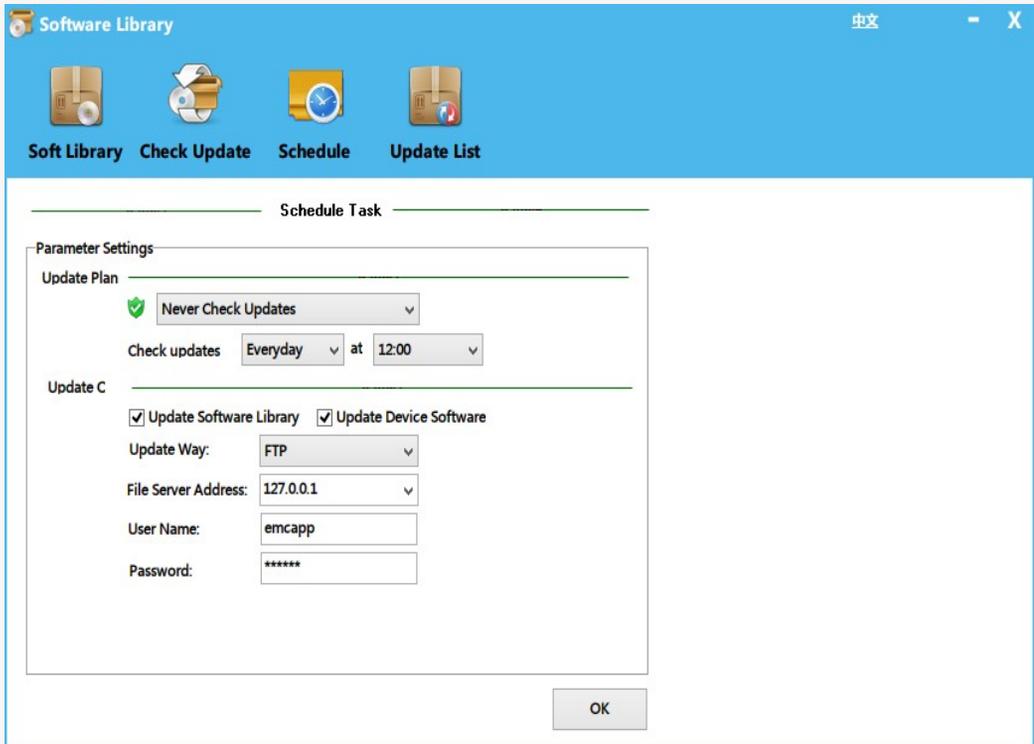
When you select a line of records in the software information list at the lower part of the interface, the relevant information of the log file will be displayed in the input box of the information display area automatically. You can add, modify, delete and so on via right-click operation.

*Update Check*



Update check operation interface

## Schedule Task



Schedule Task interface

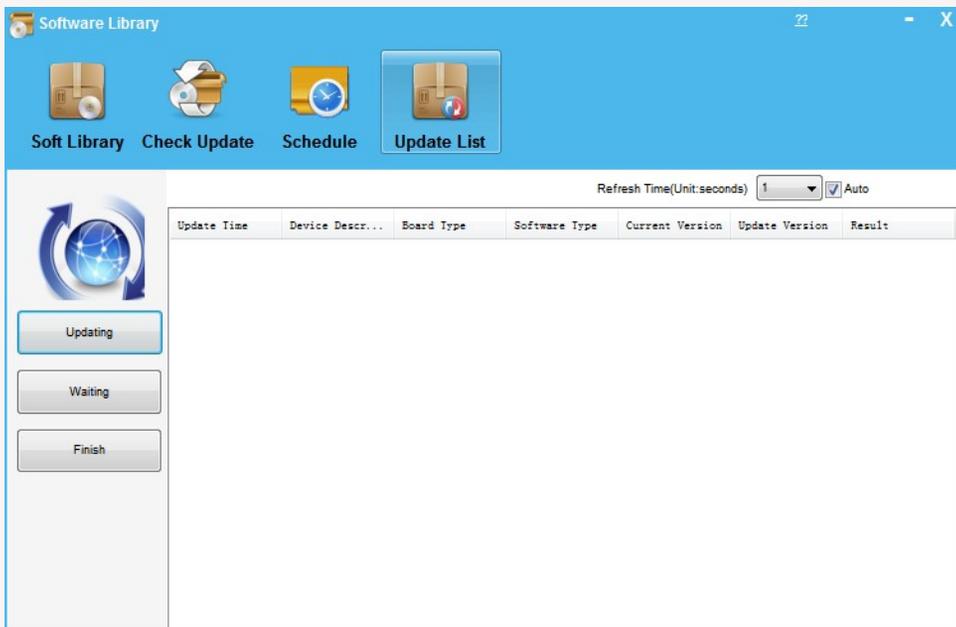
Update plan includes: Never check upgrade, check upgrade and auto-check update. The latter two plans have further update options.

As shown above, select “**Update Software Library**” refers to update the software library version when the device software version is higher than the software version in the software library. Similarly, select “**Update Device**

**Software**” refers to update the device when the software version in the device depot is higher than the device version.

Upgrade mode is divided into FTP, TFTP. User can choose one from these two modes and then fill in the relevant parameters.

### *Update List*



Operation interface of update list

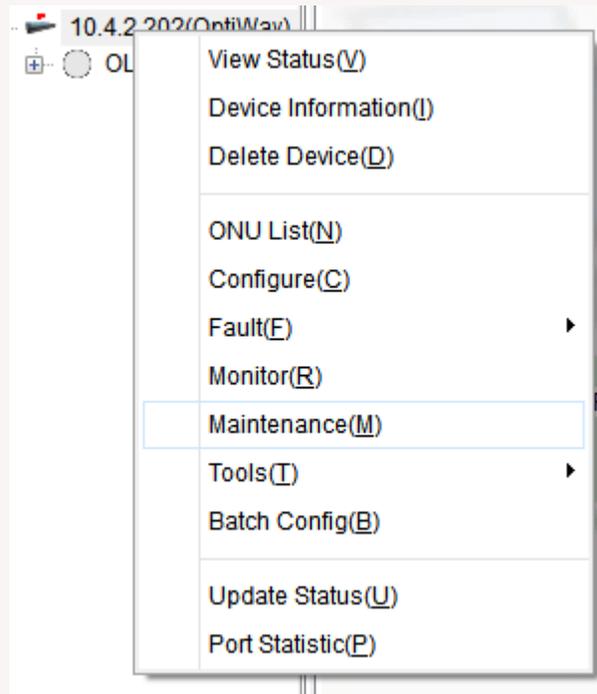
## Equipment Maintenance Operation

The equipment maintenance operation consists of five steps: select device, select server, select operation type, select operation file, select file transfer operation. The first four operations need to be carried out manually by the user. The fifth operation runs automatically by the system.

### **Select Device Object**

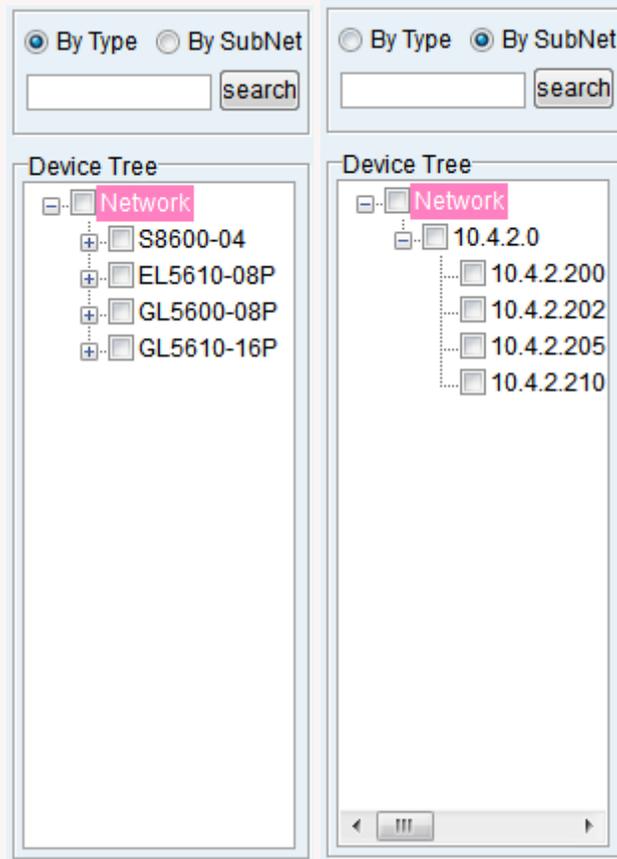
Open the device maintenance interface, you can see the right lower device selection tree, you can specify the device for the device maintenance operation through the device selection tree.

There will be no device on the device maintenance tree if the device maintenance interface is opened through the main interface menu. if you open the device maintenance interface through the device menu, the current device will be selected by default, as shown below.



Open the device maintenance interface through the device menu

You can update the organization of the device tree by type or by subnet on the device tree, as shown below.



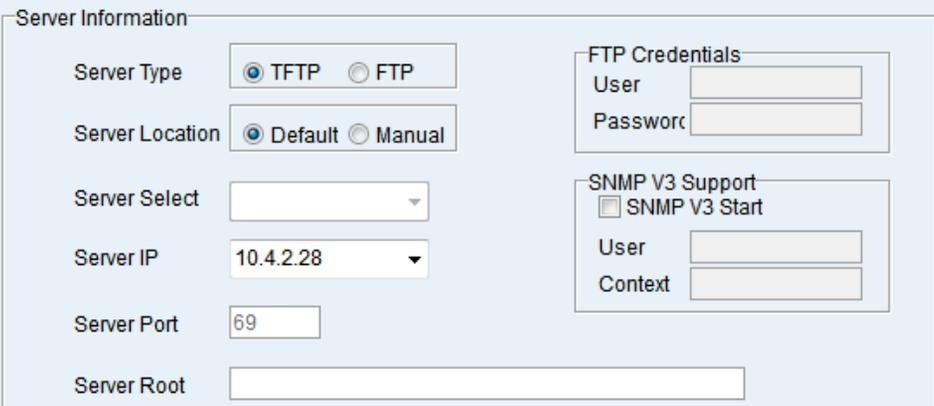
Organize the device tree in different ways

On the device tree, if you select the high-level node, select all the sub-nodes under it will be selected automatically.

## Server Select

*Server Select* refers to select file transfer server, including the service

type, the server address and other related operations. As shown below.



The screenshot shows a configuration window titled "Server Information". It contains several fields and sections:

- Server Type:** Radio buttons for TFTP (selected) and FTP.
- Server Location:** Radio buttons for Default (selected) and Manual.
- Server Select:** A dropdown menu.
- Server IP:** A dropdown menu showing "10.4.2.28".
- Server Port:** A text input field containing "69".
- Server Root:** A long text input field.
- FTP Credentials:** A section with "User" and "Password" text input fields.
- SNMP V3 Support:** A section with a checkbox for "SNMP V3 Start" (unchecked), and "User" and "Context" text input fields.

#### Server Select

There are two types of servers, TFTP and FTP.

The server location is also divided into two types, one is the default server location, if selected, the device maintenance operation will run the default TFTP server on the NMS server. Moreover, the address and path are the default contents of the NMS.

**Note:** If you select the default server location, the server selection, server address, server path are in the non-editable state. These three items can be available only when you switch to a custom location.

When the custom location option is in effect, the user can select the pre-defined server name from the drop-down box option selected by the server,

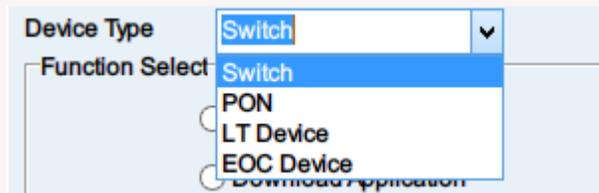
and the selected server-related information is automatically filled in. see to the server menu operation introduction for more details of the Custom Server.

If you do not have a suitable pre-defined server, you can also manually enter the server address and the server root path.

The server root path should be entered correctly in the use time. Otherwise, the client cannot transfer the file with the server, resulting in the operation failed.

### Select Device Type

There are four types of device type: switch, PON, LT Device and EOC Device. Different device types are correspond to different function options.



operation selection of device maintenance

## Switch

Device Type: Switch

Function Select

- Download Bootrom
- Download Application
- Download Configuration
- Upload Log
- Upload Configuration
- Upload Application

Next >> Exit

function selection of switch

**Download Bootrom:** the Bootrom file is sent from the client to the device to update the firmware.

**Upload Log:** It refers to obtaining the current log information of the device from the device and saving it on the specified path in the form of a file.

**Download Application:** It refers to the device system software is sent from the client to the device to update the device software.

**Upload Configuration:** It refers to getting the current configuration information of the device from the device and saving it on the specified path in the form of a file.

**Download Configuration:** the configuration file of the device is sent to the device from the client to update the device configuration parameters.

**Upload Application:** It refers to getting the current software information of the device from the device and saving it on the specified path in the form of a file.

*PON*

Device Type: PON

Function Select

- Download Control Bootrom
- Download Control Application
- Download Configuration
- Download OLT App
- Download PON Bootrom
- Download PON Application
- Download GE Bootrom
- Download GE Application
- Download ONU App
- Download ONT App
- Upload Configuration
- Upload Log
- Upload Application

Next >>      Exit

function selection of OLT and ONU

**Download Control Bootrom:** It refers to distributing the Boot ROM file from the client to the device to update the device firmware.

**Download PON Application:** It refers to send the PON board Bootrom from the client to the device to perform firmware update for PON board devices.

**Upgrade Configuration:** It refers to send the ONU software from the client to the device to update the device ONU software.

**Upgrade Control Application:** It refers to send the master software from the client to the device to update the device master software.

**Download GE Bootrom:** It refers to send PON board software from the client

to the device to update the device software.

**Upload Log:** It refers to getting the current log information of the device from the device and saving it on the specified path in the form of a file.

**Download Configuration:** It refers to send the device configuration file from the client to the device to update the device configuration parameters.

**Download GE Application:** It refers to send the GE board Bootron files from the client to the device to update the firmware for GE board device.

**Upload Application:** It refers to getting the current log information of the device from the device and saving it on the specified path in the form of a file.

**Download OLT App:** It refers to send the OLT software from the client to the OLT device to update the OLT device software.

**Download ONT App:** It refers to send the OLT software from the client to the OLT device to update the OLT device software.

### *LT Device*

The screenshot shows a software configuration window for an LT Device. At the top, there is a 'Device Type' dropdown menu with 'LT Device' selected. Below this is a 'Function Select' section containing two radio button options: 'Download Voice gateway software' and 'Download Interval Business Software'. At the bottom right of the window, there are two buttons: 'Next >>' and 'Exit'.

### LT Device

**Download Voice gateway software:** the voice gateway software is sent from the client to the LT device to upgrade the voice gateway software.

**Download Interval Business Software:** the interval business software is sent from the client to the LT business, and upgrade the LT.

### *EOC Device*

The screenshot shows a software configuration window for an EOC Device. At the top, there is a 'Device Type' dropdown menu with 'EOC Device' selected. Below this is a 'Function Select' section containing two radio button options: 'Download EOC App' and 'Download CNU App'. At the bottom right of the window, there are two buttons: 'Next >>' and 'Exit'.

## EOC Device

**Download EOC App:** the EOC central office software is sent from the client to the device to update the EOC equipment.

**Download CNU App:** the EOC terminal software is sent from the client to the device, and upgraded for the EOC equipment.

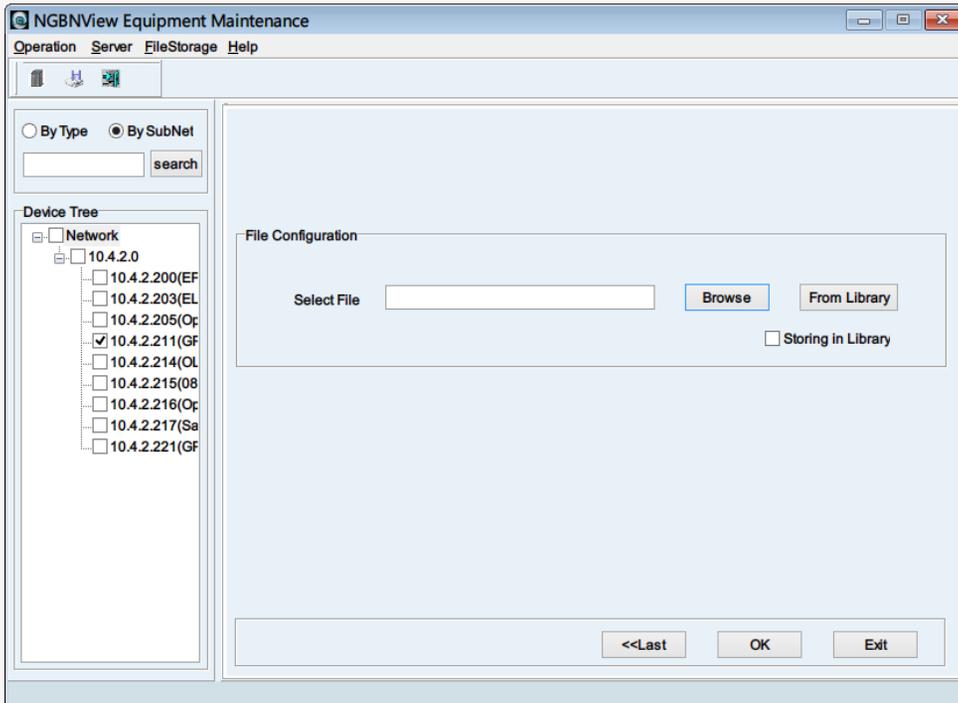
### Select Operation File

After setting the server related information and operation type, you can click the **Next** button to enter the file selection interface.

There are two parts of file selection interface: one is the file download interface. Different devices have different operations. The other is the file upload interface, including upload device configuration and upload device log.

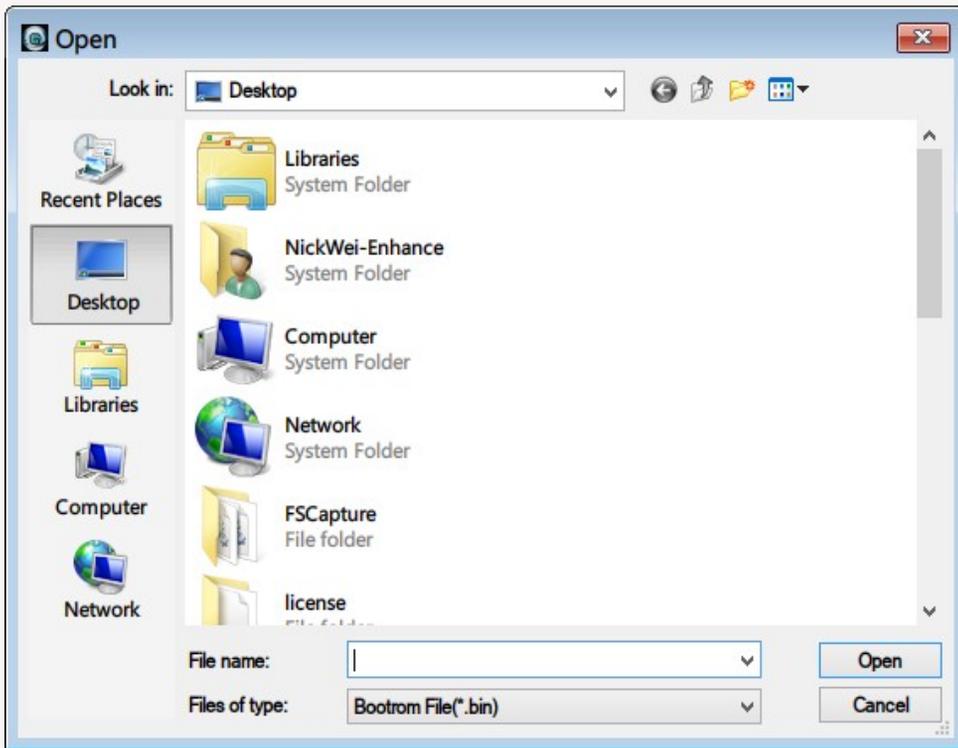
#### *File Download Interface*

The file download interface is mainly used to select an existing file to send to the device. So users can browse the file manager directly to select the file, or select the file from the device software library. As shown below.

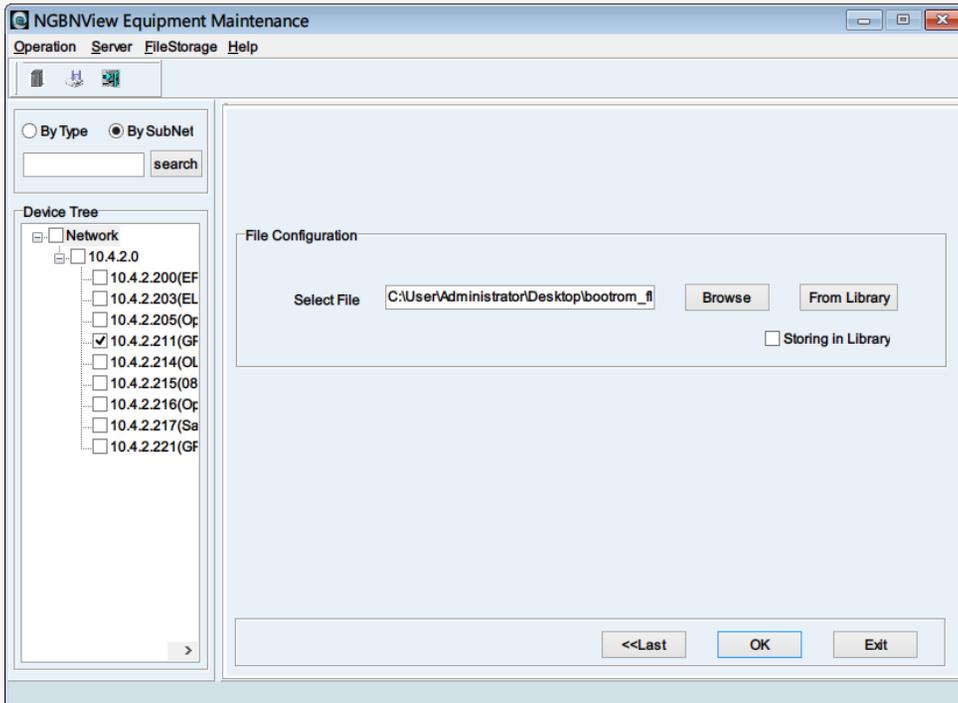


File download selection interface

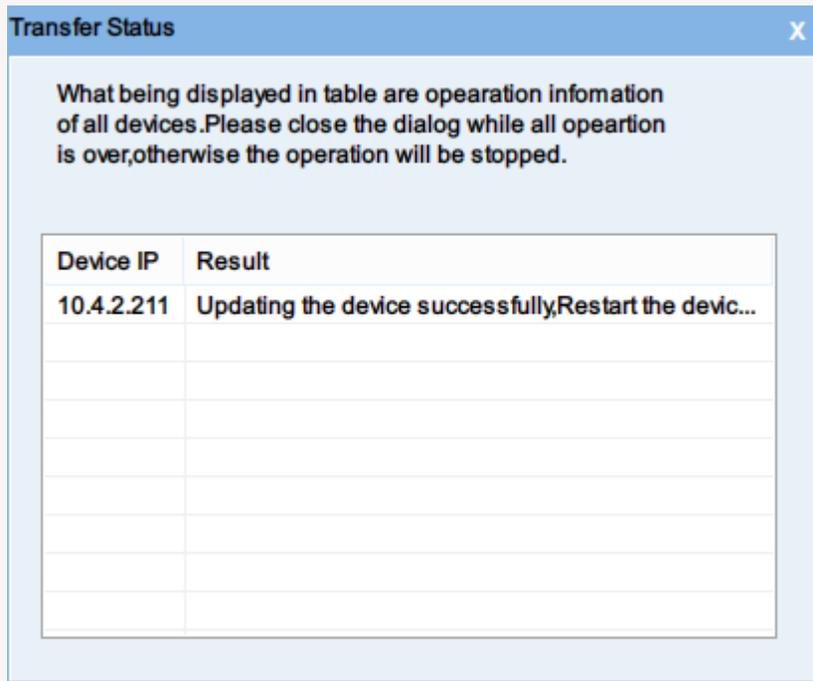
Click the **Browse** button, and then you can open the file selection interface. After selecting the file to be downloaded to the device, click **Open**, and then the file and its path are filed in the selection box. Click **ok** to confirm the upgrade.



Select a file from the file manager

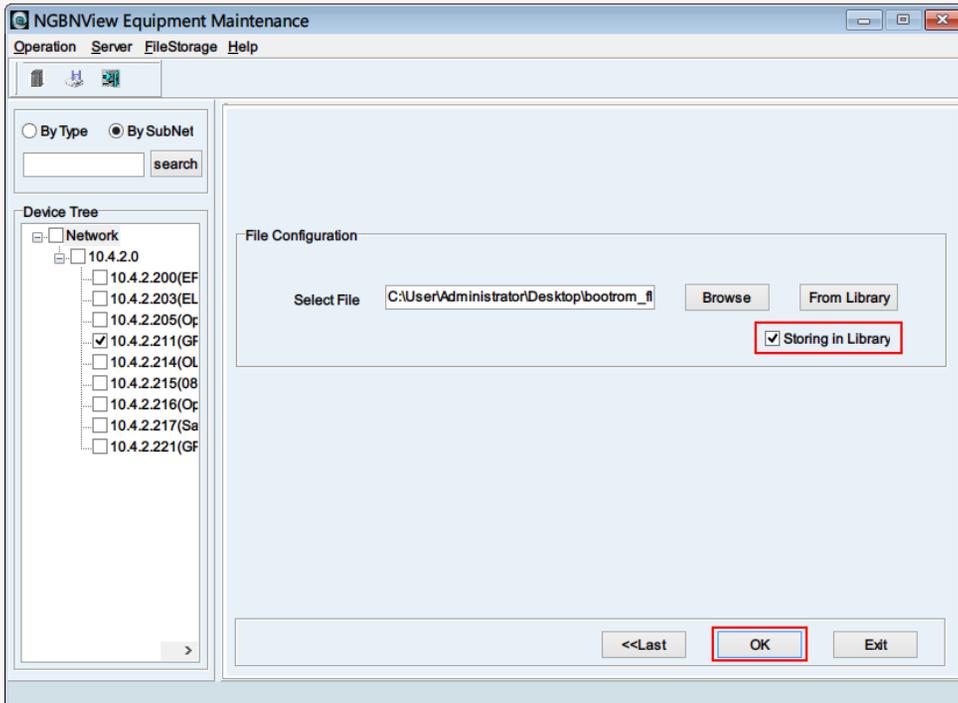


Select the upgrade file

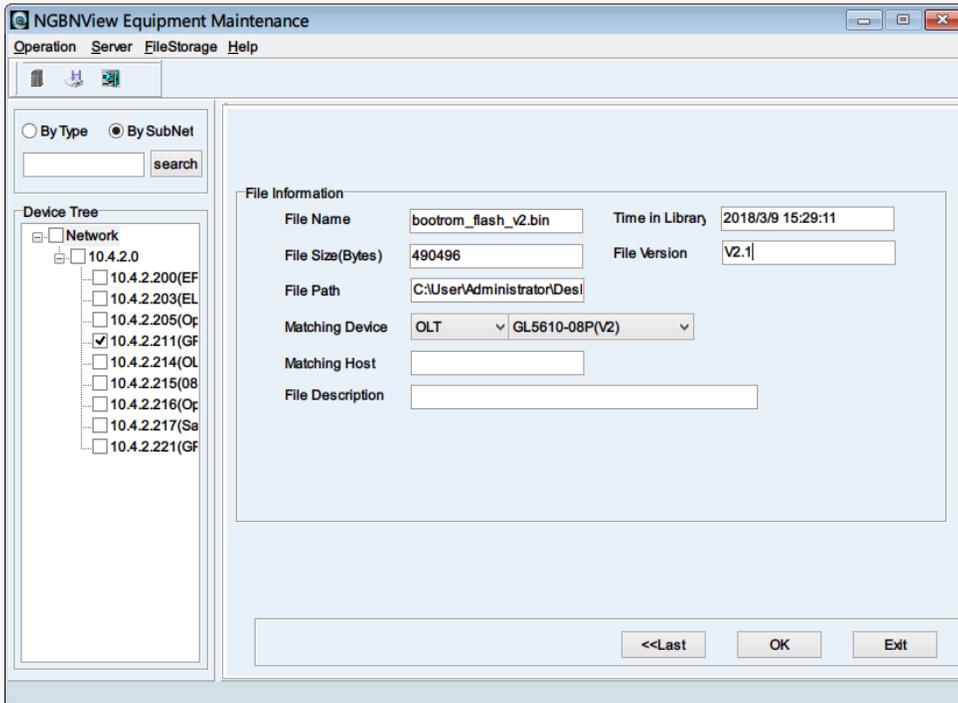


Upgrade success

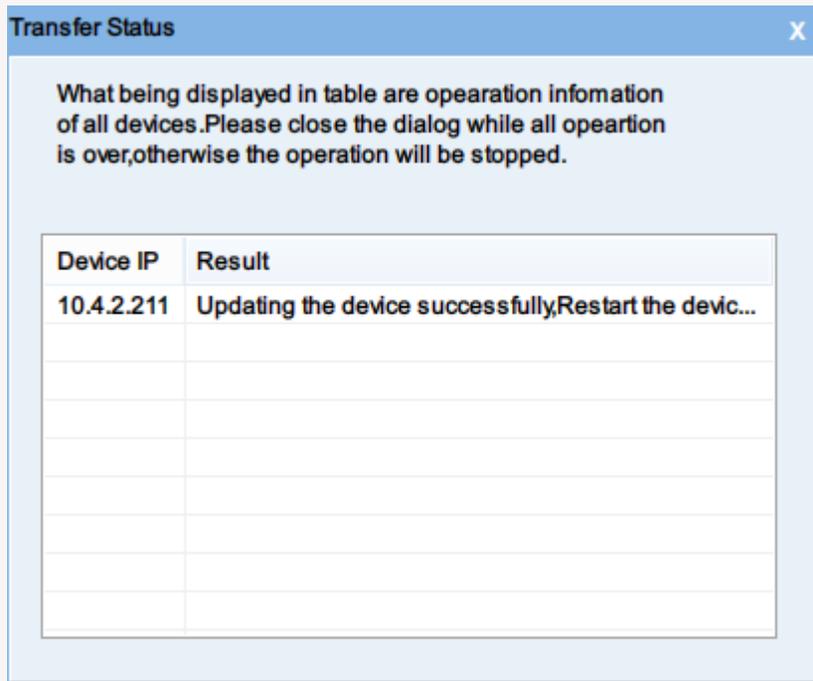
The file information will be displayed if you check “**storing in library**”. Fill in the relevant file information and click **OK** to save the upgrade file to the library and upgrade it.



storing in library

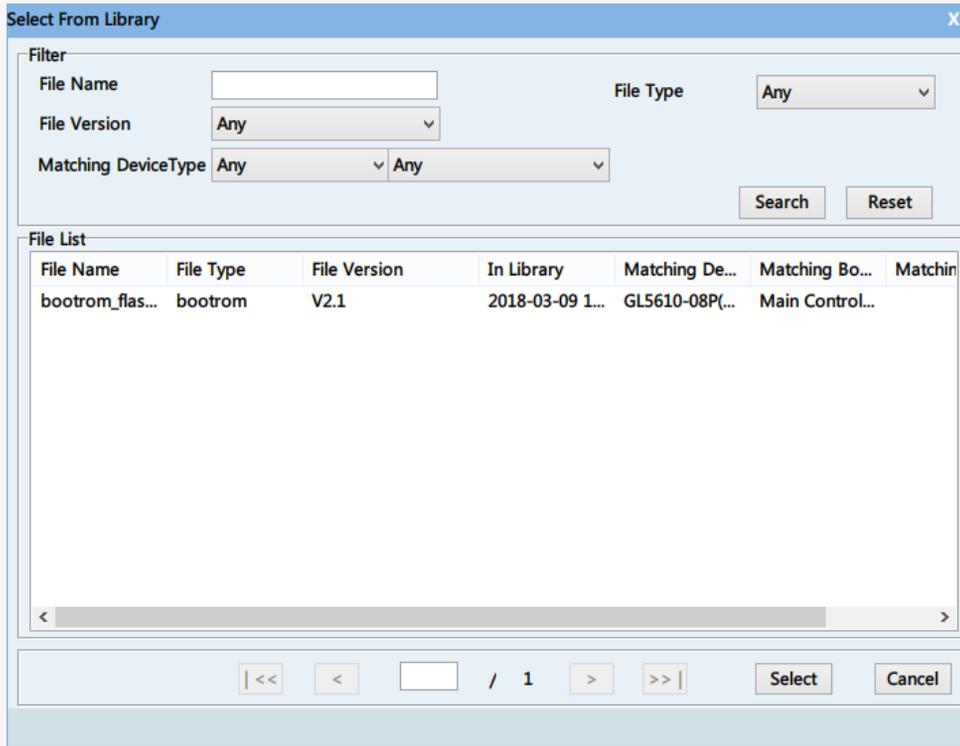


Fill in the relevant file information



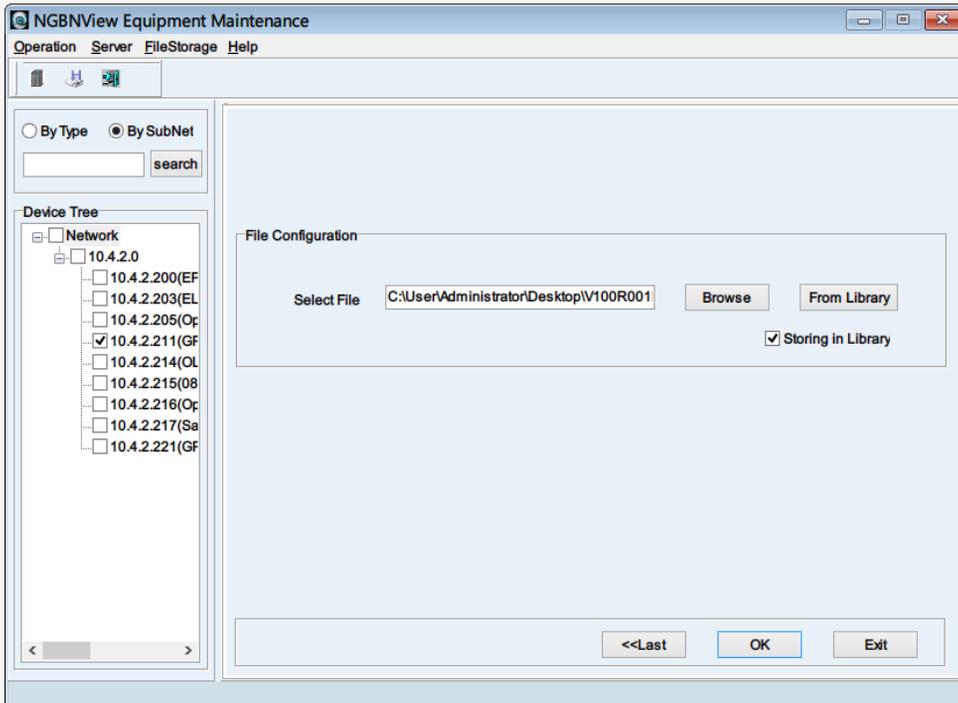
Upgrade success

Click the  button to open the selection interface of library file, as shown below.



selection interface of library file

The interface consists of the upper part of the search operation and the lower part of the file list. When you find the needed file, click to show the file information and then click **Select** button. As shown below.

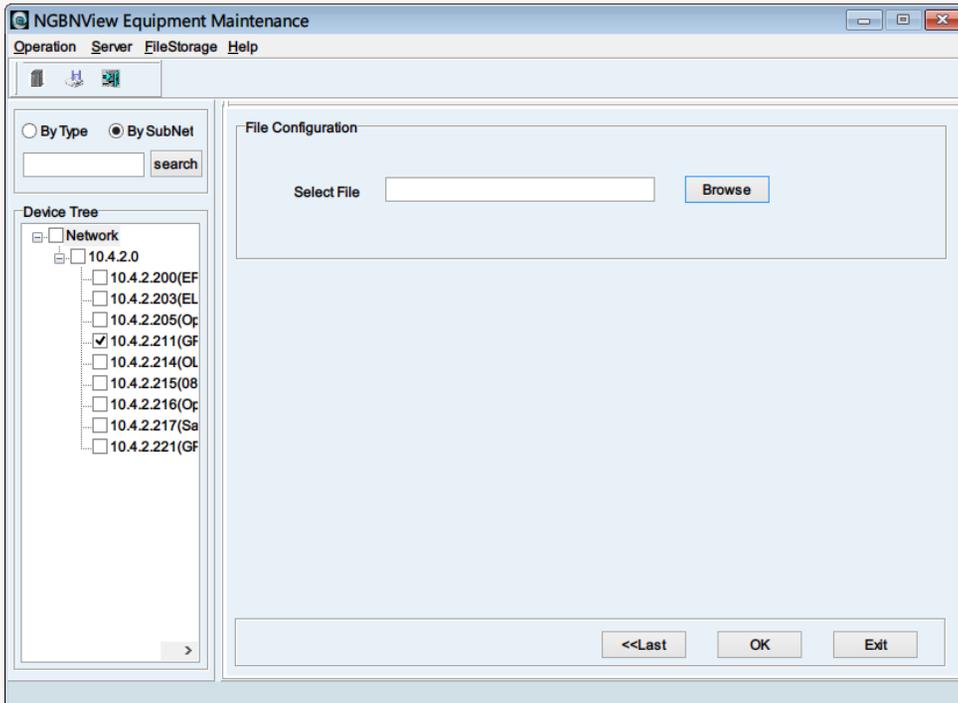


Select the file from the library

The relevant information of the file will be displayed on the bottom of the interface to facilitate the user to check the file and avoid the wrong operation.

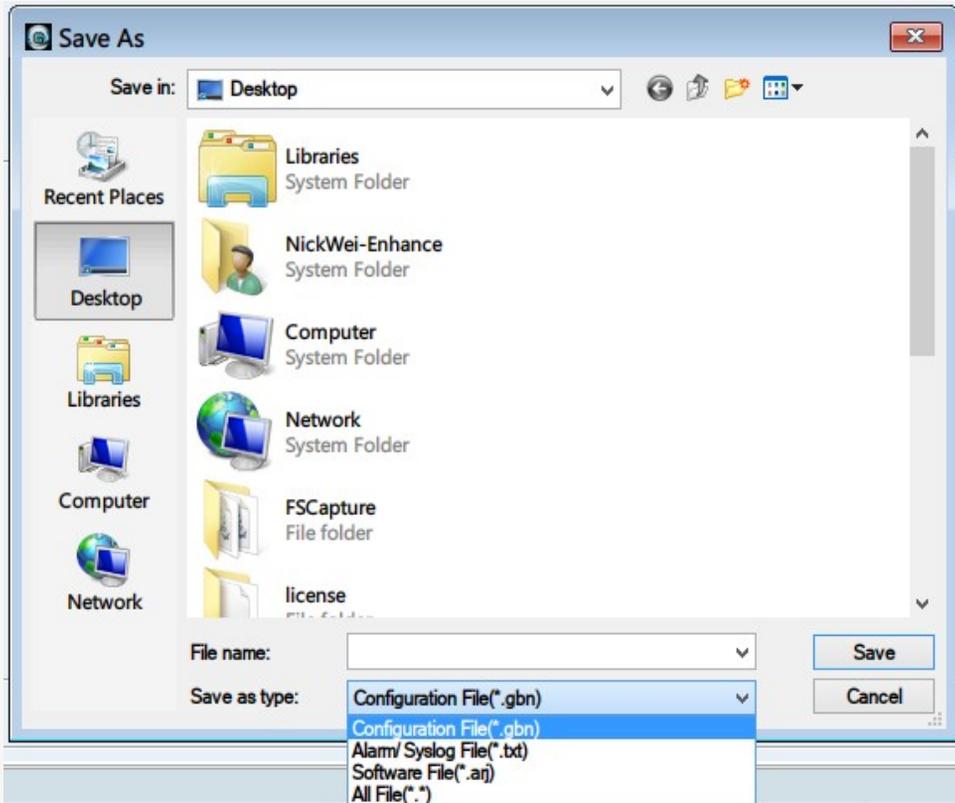
### *File Upload Interface*

Compared with the download interface, the file upload interface is simple. There is only a file selection box and *Browse* button, as shown below.



File upload interface

Click the **Browse** button to open a file save dialog box, and then select the path and name of the file, click the **Save** button. As shown below.



save box of file upload

You can upload the file name by entering in the file name box, or select the existing file. If you select the existing file, it will pop up the prompt box that the file has already existed.

According to the different upload operations, the file expanded-name will be different. The expanded-name of upload configuration file is .gbn. The

expanded-name of the log alert is .txt. The expanded-name of the application alert is .arj. If you choose to save the file name which does not end with the corresponding expanded-name, it will automatically be followed after the corresponding expanded-name.

## **File Transfer Operation**

After selecting the relevant file, click the **OK** button. The corresponding file transfer operation will begin, and it will open a file transfer interface to display the progress of file transfer.

The interface will display the address of the operation device and the current operation condition.

Depending on the upload or download operation, the displayed result information is not the same.

For the upload operation, the operation information between the device and the server will be displayed firstly. After the file is transferred to the server by the device, it will perform the file transfer operation from the server to the client.

For the download operation, the order is the opposite. the file transfer operation is from the client to the server firstly, and then the file transfer operation is from the server to the device.

Let's take a brief look at the various contents of the operation result information.

The file is transferring between the server and the device: it means that the current server is interacting with the device for file transfer.

The file transfer is successful between the server and the device; it means that file transfer between the server and the device is successful.

**Successful file transfer:** it means that the entire operation is completed successfully.

**False file transfer:** the handle between the device and the server is false, and it is with error number.

**Successful transmission:** the file transfer is successful between the server and the client.

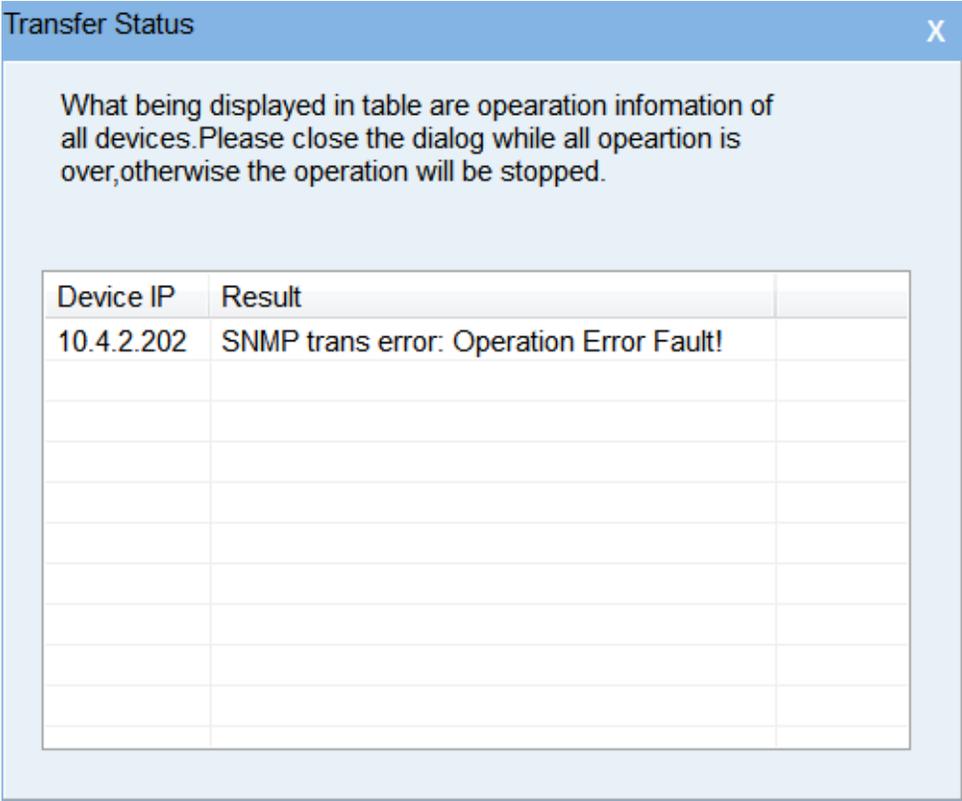
**The file does not find:** the file does not find between the server and the client.

**Time-out occurs:** A file timeout occurs between the server and the client.

**A local file cannot write:** the transfer occurs that a file cannot write between the server and the client. There are generally a number of processes in the operation of the same file.

**Other errors:** other unknown errors.

Sometimes the following error prompt may appear.



error prompt

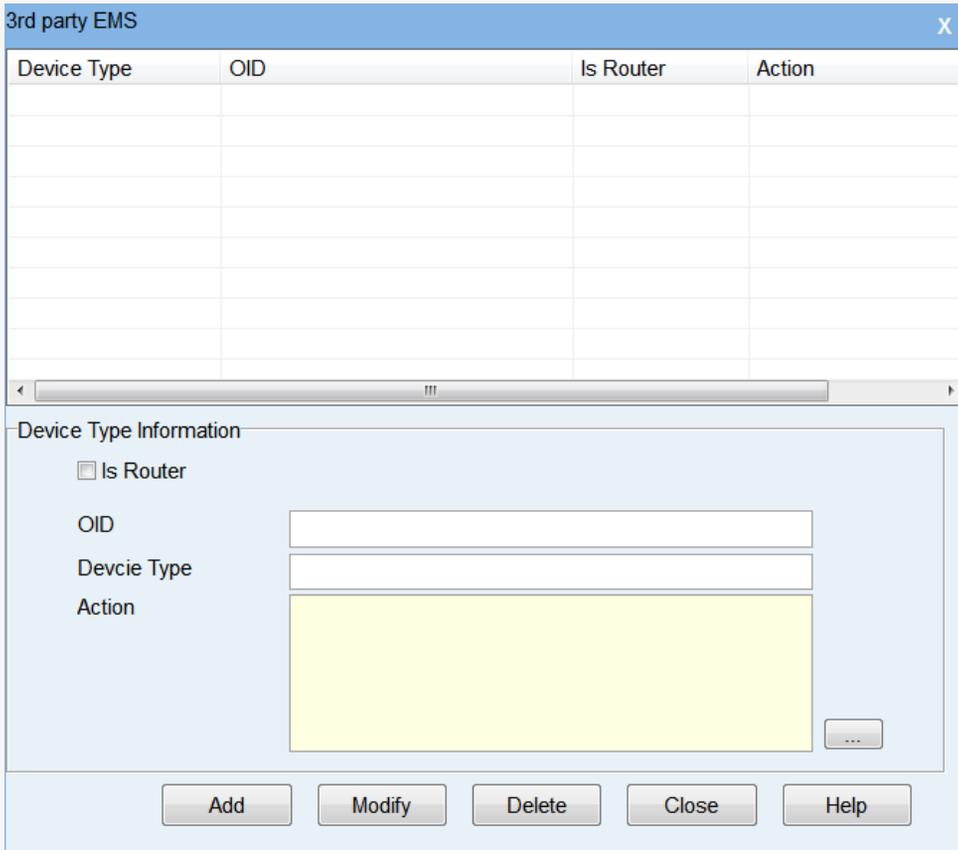
The reason for this error occurs, one may be that the device cannot be connected, the other is the NMS has error device write community name. You need to open the device property interface in the device menu, and then modify the write community name.

## 3<sup>rd</sup> Party EMS

### Overview for 3<sup>rd</sup> Party EMS

The 3<sup>rd</sup> party EMS function is mainly to facilitate the user to integrate the 3<sup>rd</sup> device operation application. You can set the OID and the device type for the device. The corresponding application is called through the **“Configuration Management”** of the 3<sup>rd</sup> party device.

Open the 3<sup>rd</sup> party EMS is integrated on the frame menu. As shown below.



Open the 3rd party EMS interface on the frame menu

You can use “**Add**”, “**Modify**”, “**Delete**” to complete the operation, the main operations include:

**Is Router:** whether the device is L3 equipment.

**Device OID:** the OID value of the device.

**Device type:** the model of the equipment.

**Action:** execute the operation string.

## Module Param Settings

The module parameter settings are mainly for the convenience of users to specify the program parameters. Click the button  to open the interface of module parameter settings. The below figure is the opening interface.



You can use **Add/ Modify/Delete/All Delete** to complete the operation, the main operation includes:

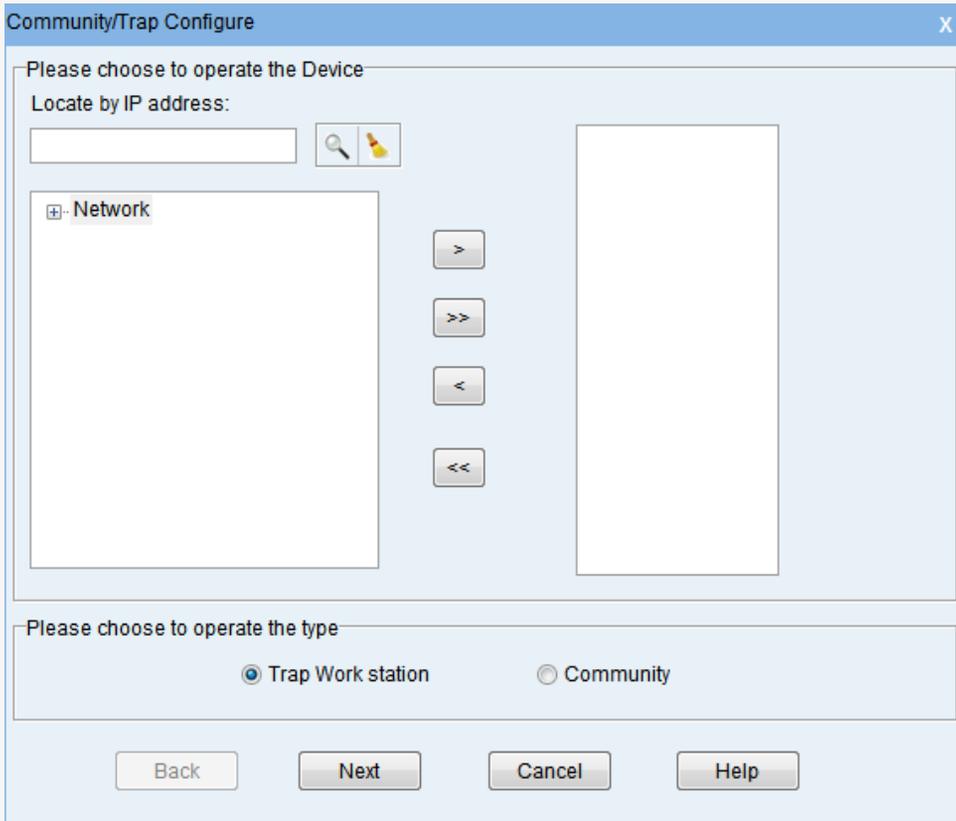
Name: the name of the parameter.

Value: the value of the parameter.

## Community/Trap Configure

It bulk configures the device's community, Trap hosts, etc.

Open the Trap workstation and community name settings interface through “**Operation**” → “**Community/trap Configure**”. As shown below.



Modify the community name

This function is used to modify the community name and the Trap work of the device. Firstly, you should select to modify (configured device). Secondly, select the type of operation (trap workstation or community name). And then click the “**Next**” button to configure.

Click the “**Next**” button, configure the Trap workstation interface as shown

below.

Community/Trap Configure

Please choose to operate the type

Add Operate     Modify Operate     Delete Operate

Please fill in parameter value

Default Write Community:

Old Trap work station IP address:

Old Trap work station Community:      V1 Ver     V2c Ver

New Trap work station IP address:

New Trap work station Community:      V1 Ver     V2c Ver

If Default write Community incorrect, select for use network of target.

Back    OK    Cancel    Help

configuration interface of trap workstation

In this interface, you can add/modify /delete the Trap workstation configuration. When you add a Trap workstation, you need to fill in the write community name of the device (all devices must have the same write community name), trap workstation IP address, trap workstation community

name, selection version type (recommend V2c version), and finally click “**OK**” button to add trap workstation.

Modify and delete operations are similar to the add operation.

Click the “**Next**” button to modify the write community name interface. As shown below.

Community/Trap Configure

Please choose to operate the type

Add       Modify       Delete

Please fill in parameter value

Default Write Community:

Old Community:

New Community:        ro       rw

If default write Community incorrect, select for use network of target.

Newer network of target read or write Community at the same time.

Back      OK      Cancel      Help

Modify the community name

In this interface, you can add/modify/delete the community name of the selected device. When you add a community name, you need to fill in the write community name of the device (all devices must have one same write community name). Enter a new community name, select the new community name type (read only or read and write). It is recommended to select “*Newer network of target read or write Community at the same time*”, and finally click “**OK**” button to finish adding the community name.

Modify and delete operations are similar to the add operation.

## Configure Polling Interval

### Overview for Polling Interval

The polling interval function is mainly for the convenience of users can easily modify the all the polling interval of the platform equipment. You can set by the subnet, group, GN.Link and the device type. By setting different polling intervals for different devices, you can reduce the burden of the network and prevent a large number of devices from polling at the same time thus causing the network storms or blocking.

## Modify the Polling Interval

Modification interface of the polling interval can be opened on the object menu or frame menu. If open on different locations, the interface will be slightly different. The picture below shows the interface opened on the frame menu.

**Configure Polling Interval** X

**Modify Detail**

Poll Interval(s):

Status     Enabled

Attribute     Enabled

**Select Type**

On View     On Device Type

**Object Select**

- [-] Network
  - [-] IP
    - [-] 10.4.2.0
      - 10.4.2.200
      - 10.4.2.202
      - 10.4.2.205
      - 10.4.2.210
      - 10.4.2.222

OK    Close    Help

## Polling interval configuration

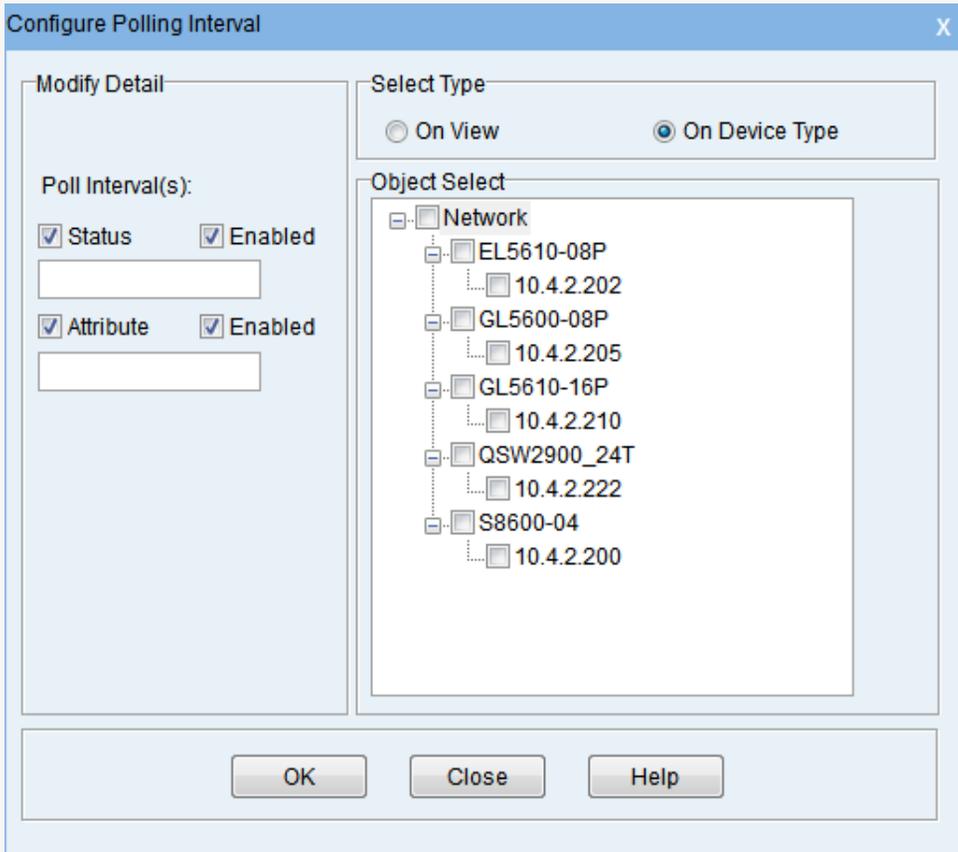
### **Parameter settings**

**Polling interval:** There are the state and the attribute for users to select. When you select state/ attribute, it indicates that the item should be polled. When check to enable, the polling will be carried out immediately and the polling time is required to be configured.

### **Select time**

**On View:** when you select it, the IP address of the device will be displayed. Select the target IP address, and click **OK** to poll.

**On Device Type:** when you select it, the devices that are grouped by device type appear. After selecting the target device for polling, click "**OK**". As shown below.



By device type

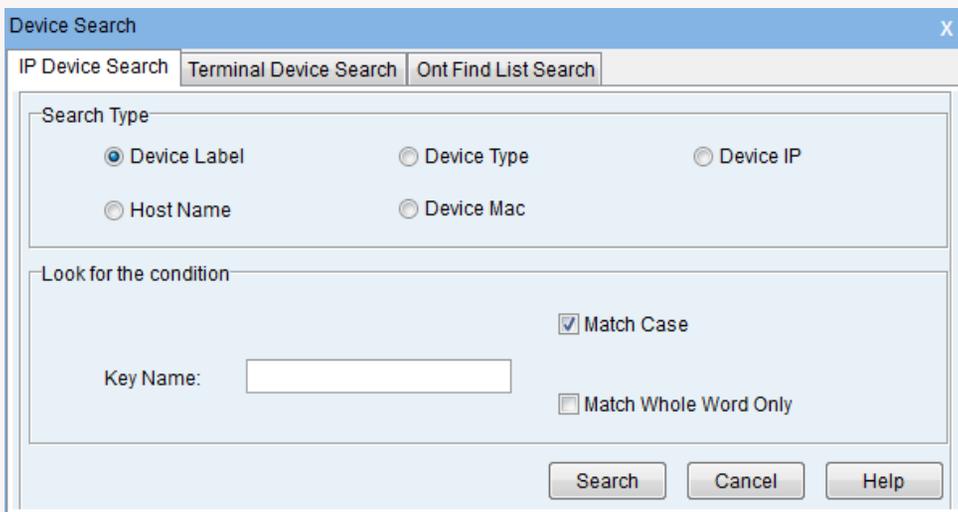
After setting the status and attributes accordingly, click **OK**. The following interface appears.



## Device Search

Device search is divided into terminal equipment search and IP device search.

**IP Device Search:** find the nodes in the current navigation tree. The interface is as shown below.



The screenshot shows a dialog box titled "Device Search" with a close button (X) in the top right corner. The dialog has three tabs: "IP Device Search" (selected), "Terminal Device Search", and "Ont Find List Search". The "IP Device Search" tab contains a "Search Type" section with five radio button options: "Device Label" (selected), "Device Type", "Device IP", "Host Name", and "Device Mac". Below this is a "Look for the condition" section with a "Key Name:" label and an empty text input field. To the right of the input field are two checkboxes: "Match Case" (checked) and "Match Whole Word Only" (unchecked). At the bottom right of the dialog are three buttons: "Search", "Cancel", and "Help".

IP device search

The device ID in the search type is same as the device ID in the device attributes.

Select the search type and then enter the search condition keywords to display the search results with a list. If you select the item, the interface will be

as below.

Device Search

IP Device Search Terminal Device Search Ont Find List Search

Search Type

Device Label  Device Type  Device IP

Host Name  Device Mac

Look for the condition

Key Name:

Match Case

Match Whole Word Only

Search Cancel Help

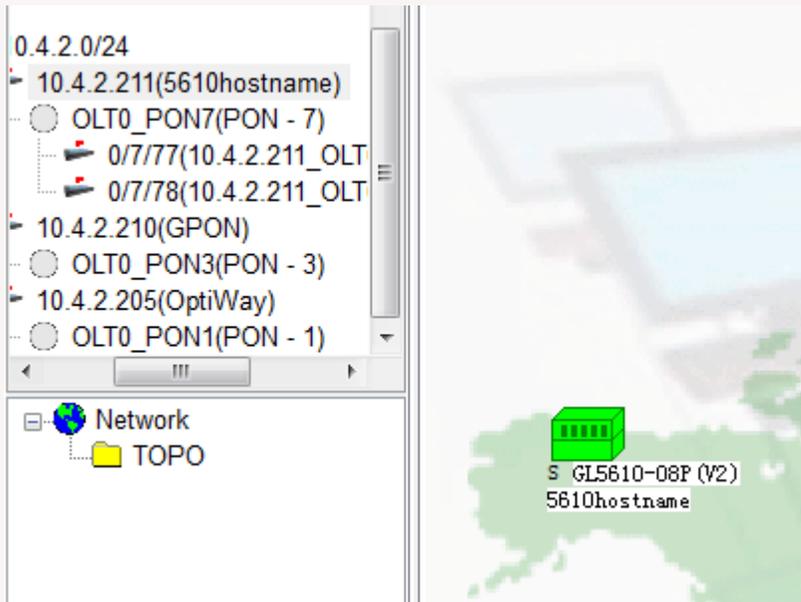
Look for the result

Device Label	Device Type	Device IP	Status	Host Name	MacAddress
10.4.2.211	GL5610-08P(V2)	10.4.2.211	On-li...	5610hostname	00:0A:5A:4B:B
	PON	10.4.2.211_O...	Off-li...	PON - 7	
10.4.2.210	GL5610-16P	10.4.2.210	On-li...	GPON	00:0A:5A:3D:5
	PON	10.4.2.210_O...	Off-li...	PON - 3	
10.4.2.205	GL5600-08P	10.4.2.205	On-li...	OptiWay	00:0A:5A:FF:A7
	PON	10.4.2.205_O...	Off-li...	PON - 1	

Find 6 devices!

display the search result in a list form

In this case, if you double-click a node in the table, the node will be selected in the navigation tree. As shown below.



Select the nodes on the navigation tree

As you can see, double-click the "10.4.2.211" node on the table and the node will be selected on the navigation tree.

**Terminal Device Search:** Search the terminal device. The opened interface is as shown below.

Device Search

IP Device Search Terminal Device Search Ont Find List Search

Query Items

MacAddress   ONT SN

Label   ONT Label

Type   ONT Description

IP Address   User Mac

ONT Loid

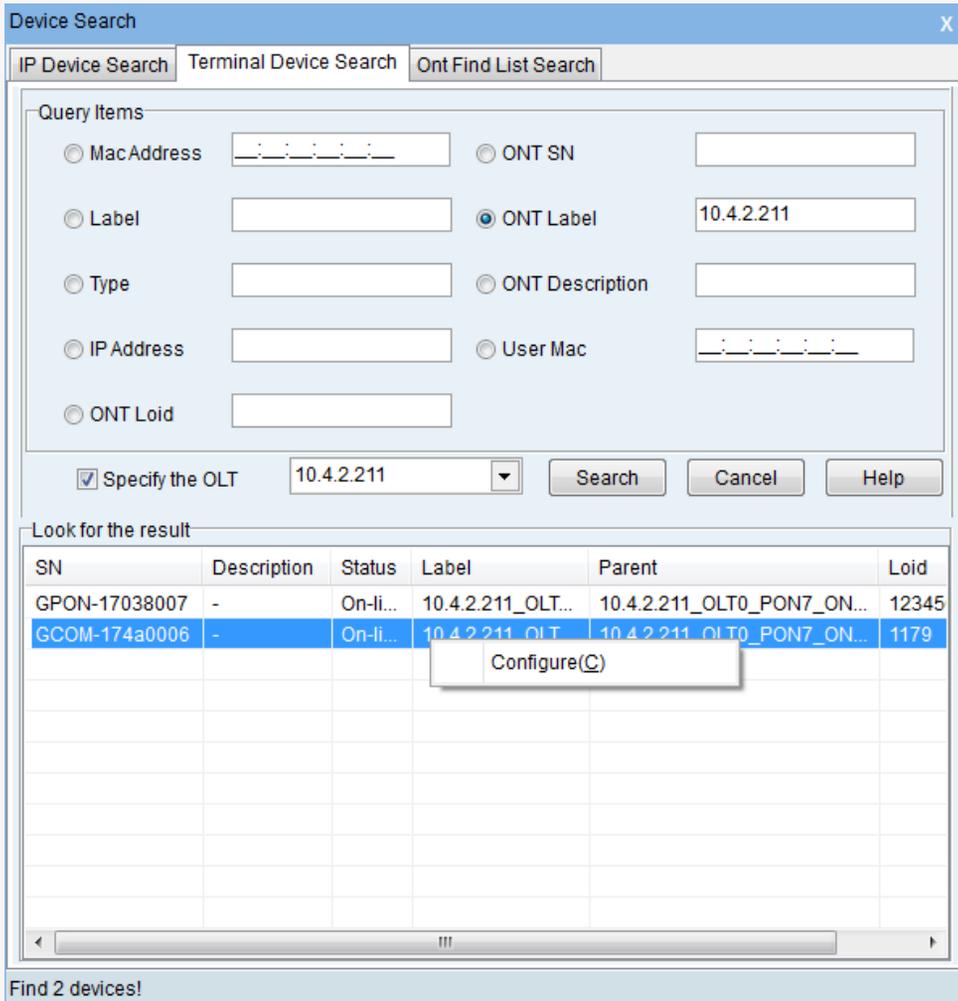
Specify the OLT

Terminal device search

**Specify OLT:** you can search by specifying an OLT.

Enter the corresponding information of the device after the corresponding search item to search.

For example, select the ONT label to search, as shown below.



### Terminal device search

You can see the equipment that matches the device label. The displayed information includes the MAC address, device type, etc. The configuration management is on the right-click menu. Click and enter the configuration

management interface.

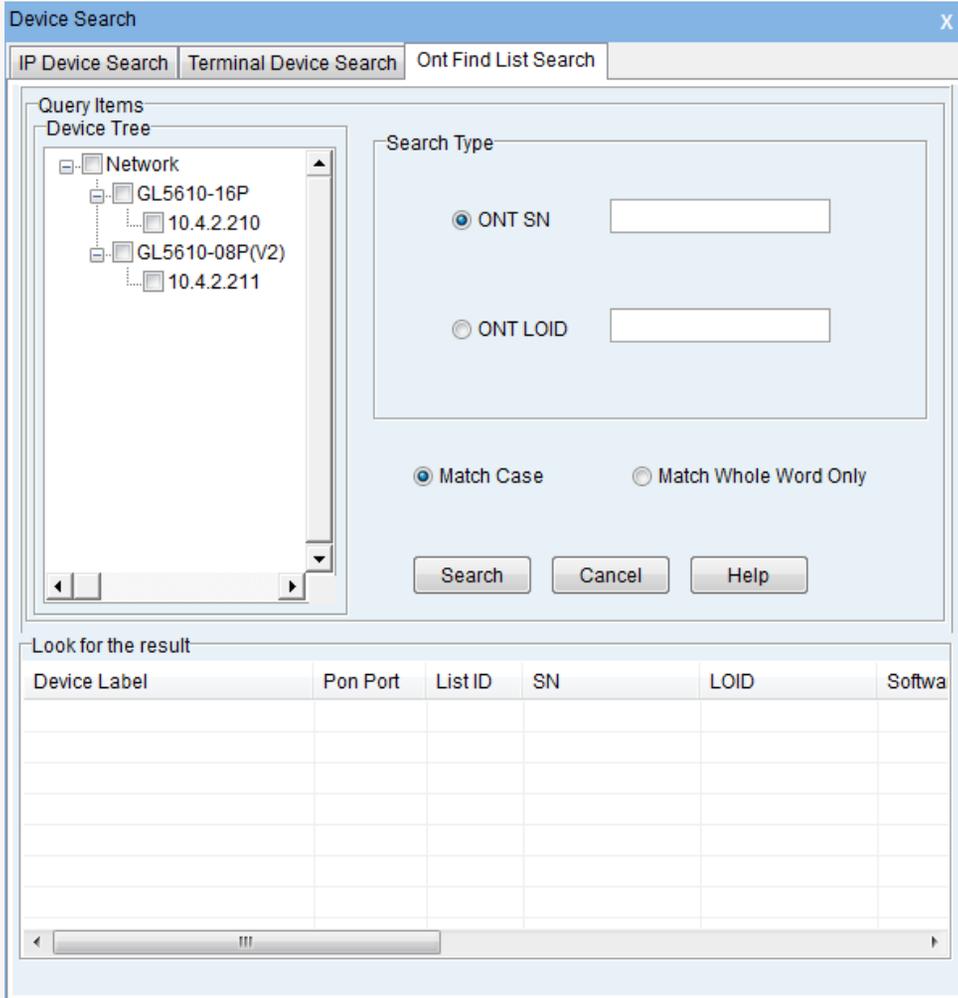
The screenshot shows a web-based configuration interface titled "Configuration Management (IP:10.4.2.211 OLT:0 PON:7 ONT:78)". On the left is a navigation menu with options: GPON ONT, ONT Base information, Port status information, ONT WAN information, ONT VOIP Register Settings, Light module diagnosis, ONT active/deactivation, Restore the factory settings, and ONT Restart. The main area is titled "SNMP" and contains the following fields:

Version	version2c	Port	161
Timeout	5	Retries	1
Read Comm	*****	Write Comm	*****
Engine ID		Context Name	
Security Model	v3	Security Level	NoAuth,NoPriv
User Name			
Auth Protocol	NONE	Priv Protocol	NONE
Auth Password		Priv Password	

An "Apply" button is located at the bottom center of the configuration area.

Configuration management

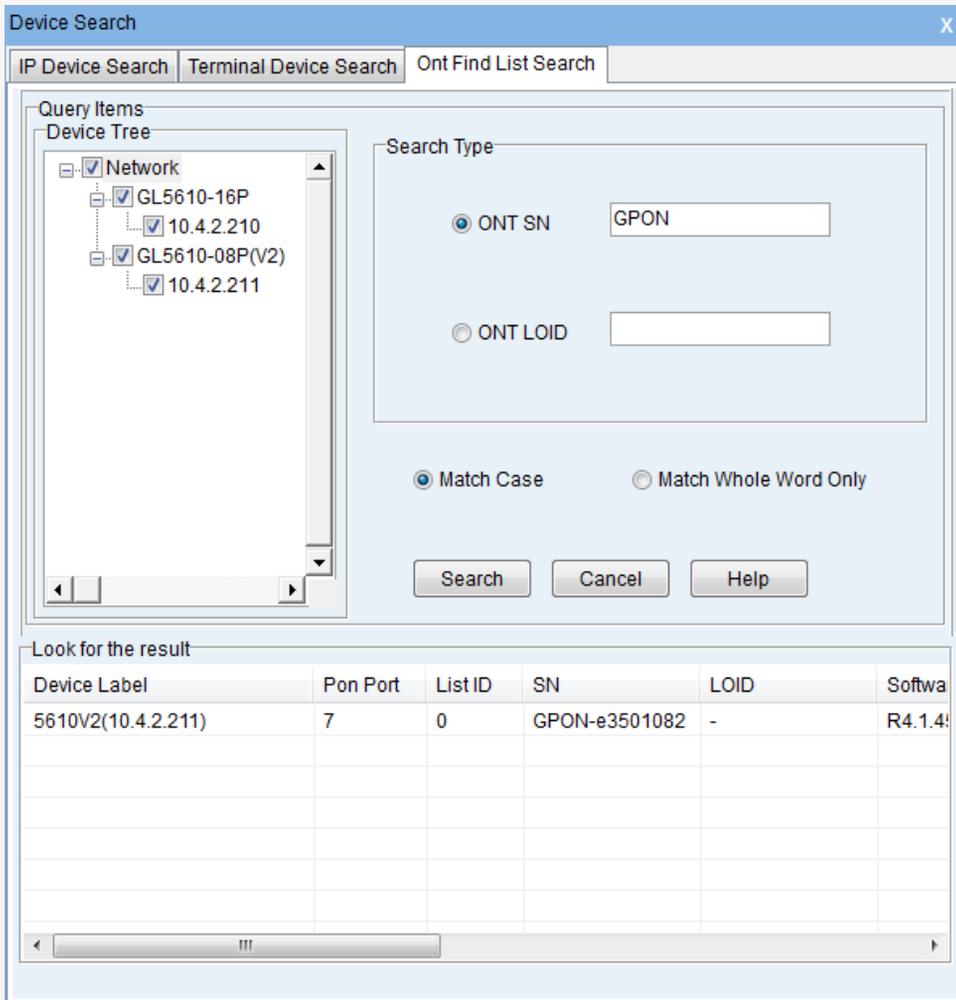
**ONT Find List Search:** This function is used to search the ONT in the discovery list, searching for an OLT or all OLTs based on SN or LOID.



### ONT find list search

Select the corresponding query item and then enter the corresponding information of the device to query.

For example, select the ONT SN, as shown below:



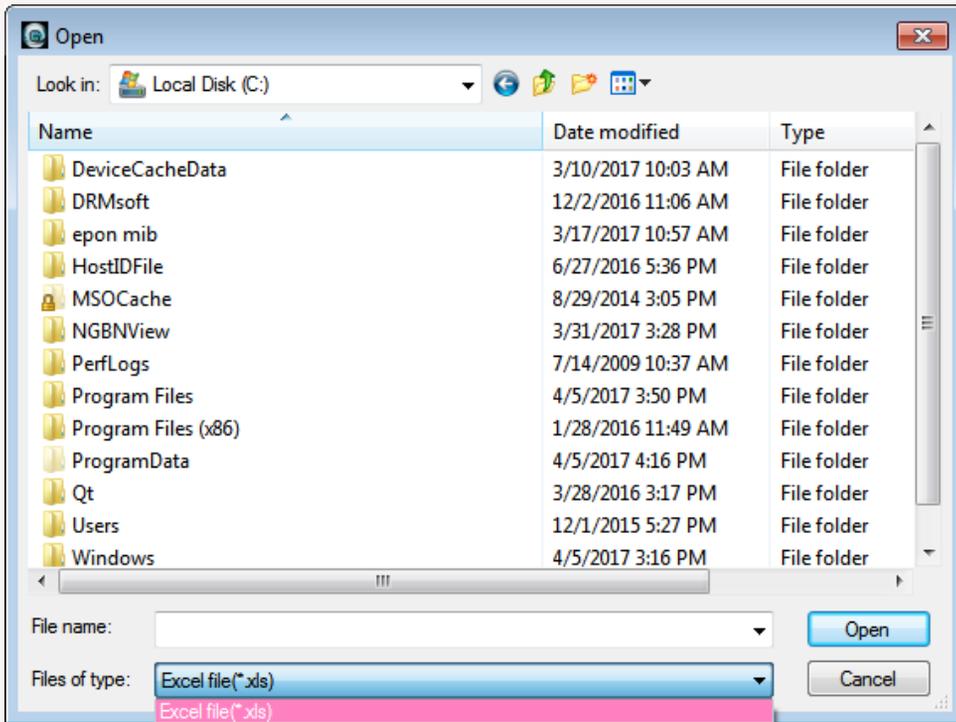
Search interface

The interface shows the matching device, and it shows the information of Device Label, PON Port and so on.



## PON terminal user interface

“**Import file to list**” refers to batch import switch port description information and user account. Click the "**Import file to list**" button, the following interface will pop up.



The selecting file path interface of importing file to list

The imported files can be in xls file format. Select the file to be imported to import user information to the next interface.



Index	UserA...	PMan	SMan	Device IP	Switch Name	Switch BW	Terminal MAC	Port	User Name	Telephone	E-Mail	Address	Remark
1	123	100	10	10.4.2.210	GL5610	100	12:34:56:10:32:45	1/2/3	testuser	6556110		111111@qq...	

- Go ONU(U)
- Go OLT(L)
- Refresh(R)
- Search(S)
- Add(A)
- Modify(M)
- Delete(D)
- Derive File(O)
- LeadIn File(I)

total: 1    40    Item/Page    The 1    Page/ 1    Page    << < > >>    Refresh

### Information browsing interface

As shown above, the right-click menu supports to locate ONU, locate OLT, Refresh, Search, Add, Modify (You cannot modify the Mac. If you want to modify the Mac, please delete the information and then add), Search (It supports fuzzy search and accurate search). On this interface, users can also perform information exporting.

## Switch User Management

<u>S</u> witch User Management	<ul style="list-style-type: none"> <li>Search(S)</li> <li>User Management(U)</li> <li>Manage User Information(M)</li> </ul>
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## Switch User Management Menu

### **Search**

" Search" can be used to find a specific user. The following figure shows a selectable search conditions.

**Search Database** X

**Search Database**  **Exact Match**

**User Account Num**

**Lan ID**

**Lan Name**

**Device IP**

**Switch Name**

**Port ID**

**User Name**

**User Telephone**

**User Address**

search

Select the search conditions, and then enter the corresponding information in the subsequent input box → Click "**Search**" to check the device information

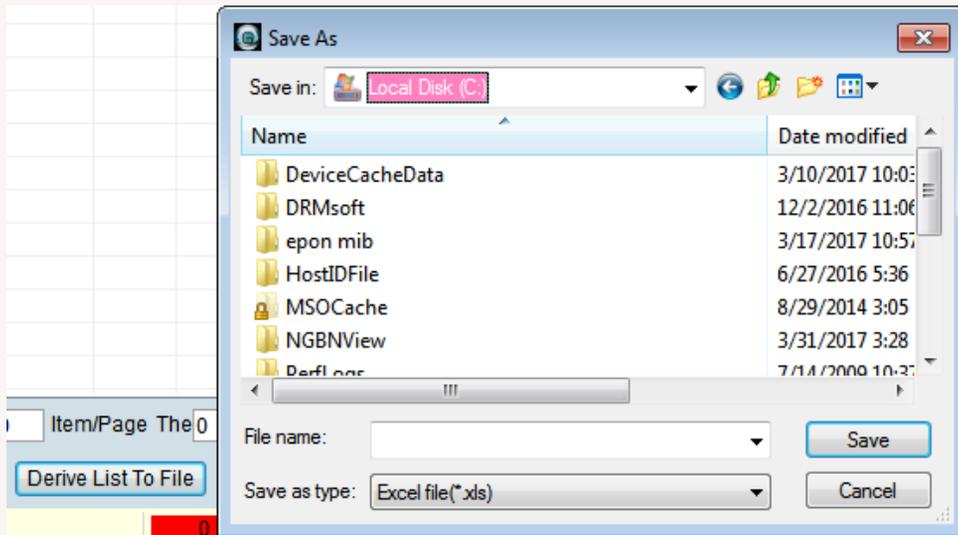
→Select a record of the record results, click on the "**Go Port.**"If the device can be found, the device will be displayed. →Right-click the mouse to open the "Open Panel" menu. When the mouse is moved to a port, the user information for that port is displayed. As shown below, the user information includes the port number, user account number, and port status.

## **User Management**

*Derive list to File* is used to save the user information in the current system through the file. The file information can be imported into the NMS through the *Import to File*. Similarly, the file saved format also contains xls, txt and csv formats.



operation menu of importing the user information to the list



export the list information to the file operation menu

## Manage User Information

User management list contains *User Start*, *User Forbid*, *Find Device*, *Go Port*, *Modify*, *Delete* and *Derive File*. As shown below.

Index	Us...	PVlan	SVlan	LanID	Lan Na...	Device IP	Switch ...	Switch ...	PortID	Port Stat...	Port De...	User Na...	Telepho...	E-Mail	Job Add...	Remark
1	GX7890...	2300				10.4.2.2...		S120	13	启用	e0/1		2789056			

- User Start
- User Forbid
- Find Device
- Go Port
- Modify
- Delete
- Derive File
- Update Vlan
- Update All Vlan
- Update BandWidth

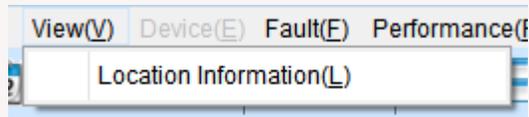
total: 1    40    Item/Page    The 1    Page/ 1    Page    |<<   <   >   >>|   Refresh   Help

Manage user information

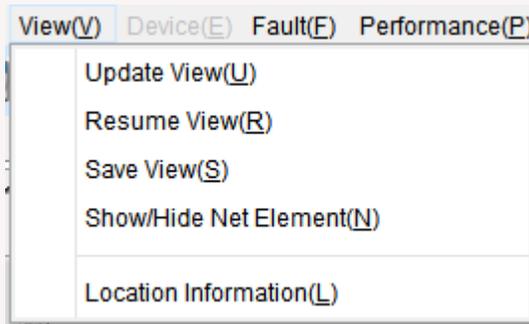
# View Management

## Menu of View Management

The view management menu as shown below (TOPO panel have these options, otherwise only one geographic information appears). The following sections will detail the functions of these menus.



view menu for other panels



view menu for topo panel

## **Update View**

Refresh TOPO View.

## **Resume View**

Resume to current view.

## **Save View**

Save view.

## **Show/Hide Net Element**

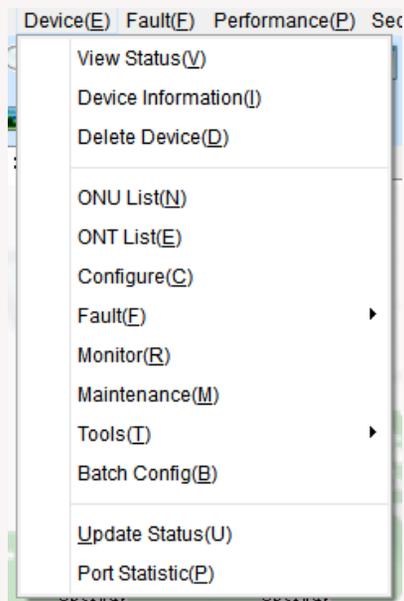
As shown below. Select a certain net element to show or hide.



# Device Management

## Device Menu

This option is valid only if you select one or multiple devices. The device management menu is shown below. The following sections provide detailed descriptions of these menu functions.



## Device Management



Note: Different types of devices correspond to different menu items. Such as Glink switches, ONUs, EOC terminal lists, and so on. But the main functions of the devices are as shown above.

## View Status

Click on the menu of device panel to show the layout of optical port and copper port. For example, select node 10.4.2.210, right-click on the device icon of GL5610-08P (V2) in the device view, and then click the menu of Device Panel. As shown below.



device panel



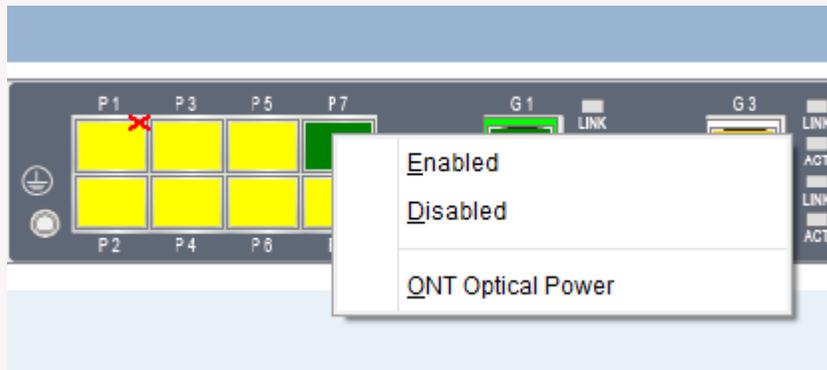
Note: In the network management system, the device panel is displayed in the panel display window. The window displays multiple panels of the device. You can control it through the Hide and Close buttons in the window.

**Port status:** Port status in the device panel combines ifTable (ifAdminStatus) and the port state of the spanning tree (dot1dStpPortState). Broken (6) and adminstate (2) are red; Forwarding (5) and adminstate (1) are green; listening(3), learning (4), disabled (1), blocking (2), and adminState (1) are yellow.

**Enable/disable port:** The red fork on the top right of the port indicates the port is disabled, otherwise it indicates that the port is enabled.

**Port type:** The color of the outer ring of the port - the black box represents the trunk port, the green box represents the hybrid port, and the white box represents the access port.

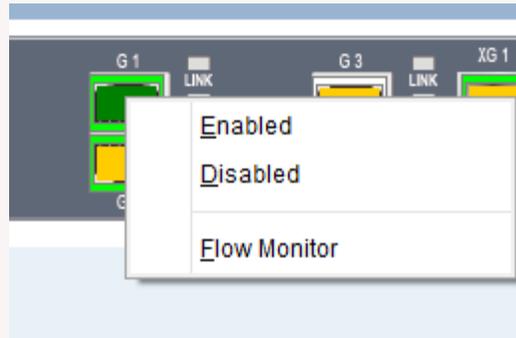
right-click menu of PON interface:



right-click menu of PON interface

**Enabled:** enable the interface



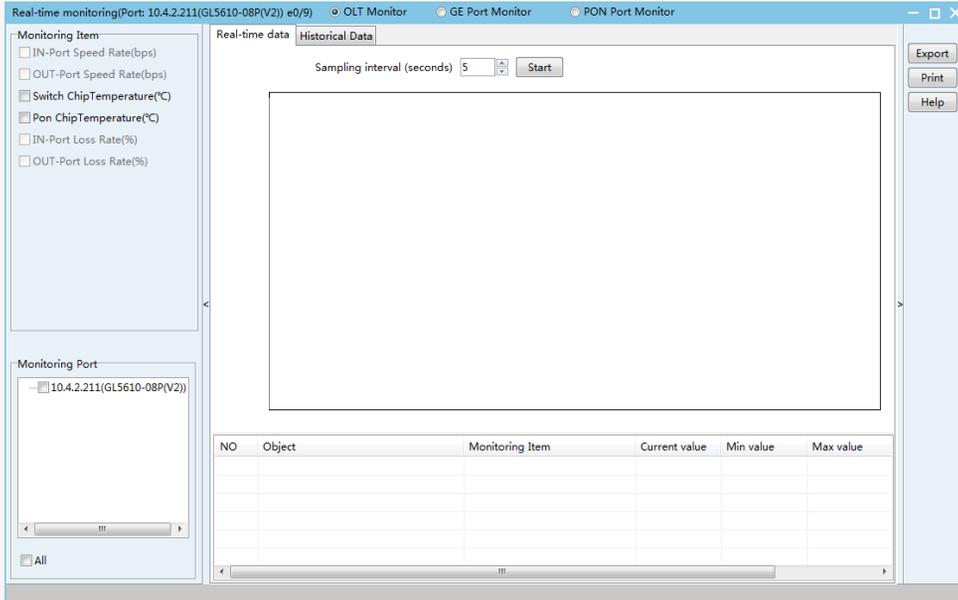


right-click menu of GE interface

**Enabled:** enable the interface

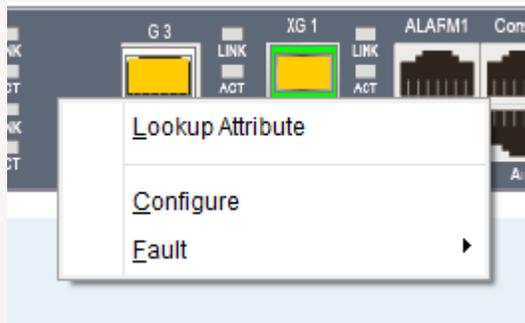
**Disabled:** disable the interface

**Flow Monitor:** monitor interface traffic



Flow monitor

right-click menu of board card:



right-click menu of board card

**Lookup Attribute:** show OLT attribute

OLT Attribute

Slot No: 0

Enabled Poll

Status Poll: 7200

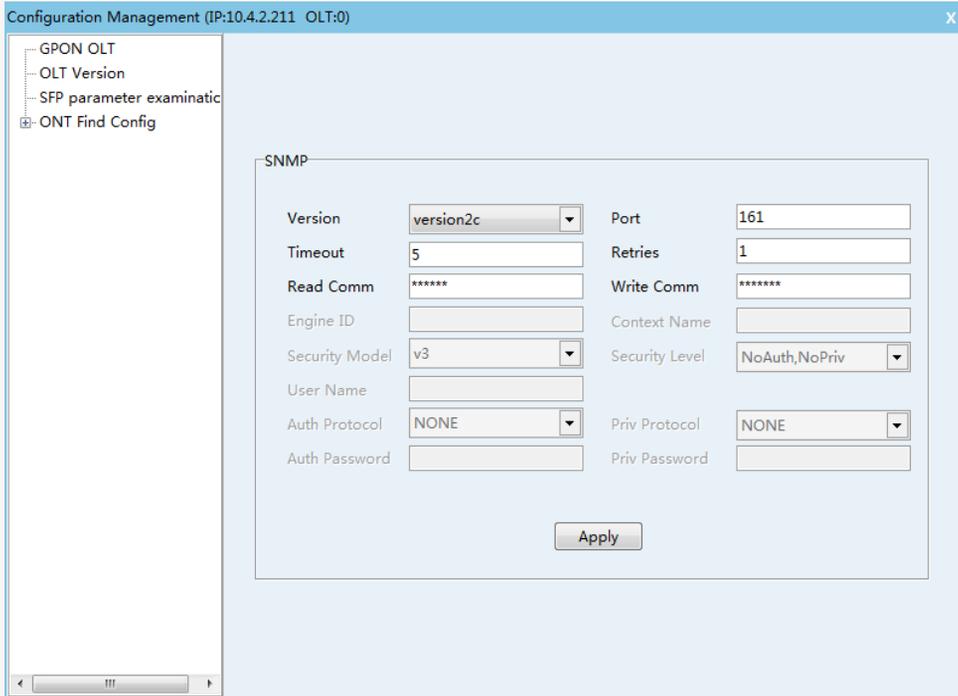
Profile Poll: 600

Remark:

Modify Close

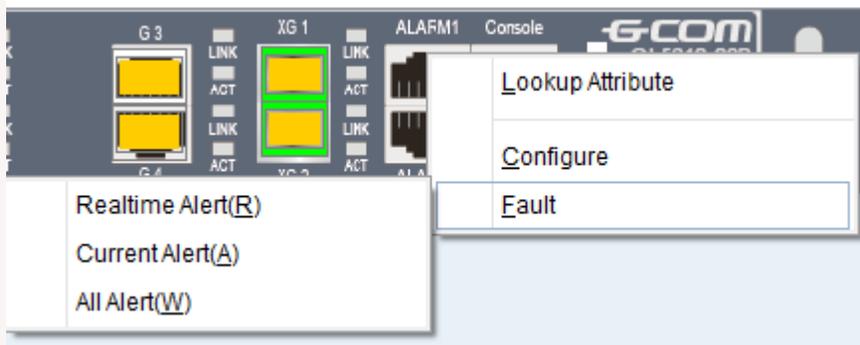
Lookup attribute

**Configure:** configure OLT management



Configure

**All Alert:** show all alerts of this device



All alert

## Device Information

Click the "Device Information" menu to open a list of attributes for this device. As shown below.

Device Information
X

---

**The basic attributes**

Device Name:

Device Label:

Host Name:

Device Status:

Status Poll:   Attr Poll:

Device Icon:

---

**IP relevant attributes**

IP Address:

Subnet Mask:

Parent Net:

---

**SNMP attributes**

Version:  SNMP Port:

Read Comm...:  User Name:

Write Comm...:  Context:

OID:

---

**Location Information**

city:  section:

District:

Buliding:  Floor:

---

**Memo**

## device attribute

In this interface, users can browse / modify these attributes. Some of the attributes are described in the following table.

### attributes description

attribute	description
Device name	Managed object name. It is the unique identifier of the managed object, and the user cannot modify it.
Device ID	Managed object ID. The user can modify it to an easy-to-remember or easy-to-distinguish name. If you change the ID, the device name in the Map will be modified at the same time.
Host name	Host name of management object. You can modify the host name. If you modify the host name, the device host name will be modified at the same time.
Device state	It identifies the state (importance) of the object in the network database and also indicates the level of danger of the corresponding device.
Device polling	The network management platform detects the device status at the specified time.
Device icon	The icon that the management object displays in the NMS.
IP address	IP address

Subnet mask	Subnet mask
Parent Net	Parent Net

## Gn.Tel

It sends the encapsulated telnet request to the GN.LINK terminal.

## Add GNLink Client End

GN.Link is divided into Server end and Client end. Client devices can register on the Server device and send the handshake packets periodically to ensure communication with the server. Add the GNLink client refers to register on the server.

The Server device accepts the registration of the client device and stores the information about the Ethernet switch under it. In addition, it also provides man-machine dialogue management interface and network management platform to provide the necessary interface so that the network management platform can remotely manage and monitor the Ethernet switch under it. Last but not least, it makes the appropriate management and response based on the query commands and device settings. Each Serve supports the management up to 96 Ethernet switches one-time.

## Delete NEs

This operation is used to delete selected objects and their sub-objects.



Note: If the user deletes the device through deleting NE, the system will delete the corresponding device in the management device view.

## ONU List

View the details of ONU, as shown below.

ONU Position	Status	ONU Label	ONU Name	ONU Type	ONU IP	ONU MAC	LLID(HEX)	Round Trip Time(M)	Registration Time	ONU Software Version
0/1/1	On-line	OptiWay	OptiWay	EN2000-04...	192.168.1.1	00:0A:5A:17:43:...	02	50	17/03/29 14:34:04	V6.1.1.1
0/1/2	Off-line	epon	epon	other	192.168.1.1	00:0A:5A:FF:FF:...	-	<= 10	-	
0/1/3	On-line	epon	epon	EN2000-04...	192.168.1.1	00:0A:5A:00:43:...	01	15	17/03/29 14:34:04	B01D004P2

### Details for ONU list

The list details the ONU location, status, type, MAC address, IP address of the ONU, etc.

Click the right button to pop up the interface shown below



device name and device label. As shown below.

The basic attributes

Device Name 10.4.2.202\_OLT0\_PON1\_ONU1

Device Label OptiWay

Location Information

city section

District

Bulding Floor

Memo

Modify Close

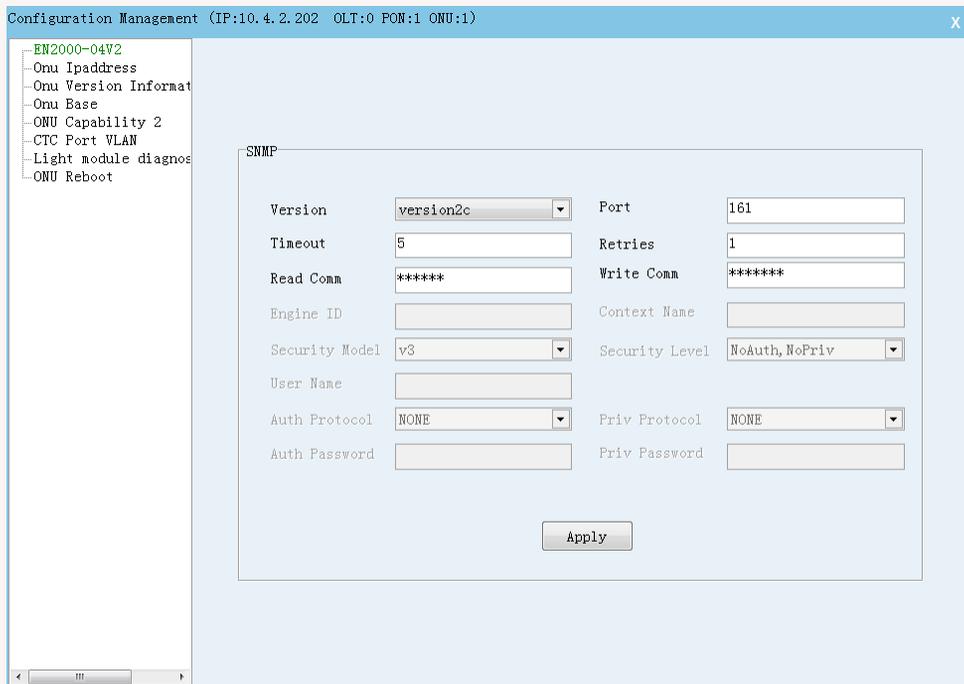
ONU attributes

**Delete Device:** Remove the ONU node from the client. You can redisplay

the node by refreshing the list.

**Fault:** Device realtime alert information, current alert information, all alert information.

**Configure:** Enter the configuration management interface.



The screenshot shows a web-based configuration interface titled "Configuration Management (IP:10.4.2.202 OLT:0 PON:1 ONU:1)". On the left, a sidebar menu lists various configuration options: EN2000-04V2, Onu Ipaddress, Onu Version Informat, Onu Base, ONU Capability 2, CTC Port VLAN, Light module diagnos, and ONU Reboot. The main content area displays the "SNMP" configuration page with the following fields:

Version	version2c	Port	161
Timeout	5	Retries	1
Read Comm	*****	Write Comm	*****
Engine ID		Context Name	
Security Model	v3	Security Level	NoAuth, NoPriv
User Name			
Auth Protocol	NONE	Priv Protocol	NONE
Auth Password		Priv Password	

An "Apply" button is located at the bottom center of the configuration form.

### ONU Configuration Management

**Tools:** See to [Tools](#) for details.

**Current User Statistic:** View the current number of users accessing the



Password: The password

**Onu Vlan Config:** Perform the VLAN configuration on the port which under the ONU CTC mode

The screenshot shows the 'Onu Vlan Config' window. On the left, there are dropdown menus for 'ONU Type' (set to 'other') and 'VLAN Config Mode' (set to 'CTC'). Below these is a 'Selected ONU List' table with one entry: '10.4.2.200\_OLT4\_PON7\_ONU2'. The main area is titled 'CTC Port VLAN' and contains several input fields: 'Port No' (1), 'VLAN Mode' (Tag), 'Default VLAN(1-4094)', 'TPID(HEX: 0-FFFF)' (8100), 'OLD TPID(HEX: 0-FFFF)', 'NEW TPID(HEX: 0-FFFF)', 'OLD VLAN(1-4094)', and 'NEW VLAN(1-4094)'. There are 'Modify' and 'Delete' buttons. At the bottom is a table with columns: Port No, VLAN Mode, Default..., TPID(HEX), OLD TPI..., NEW TPI..., OLD VLAN, and NEW VLAN. The table is currently empty. At the bottom right are 'OK' and 'Exit' buttons.

VLAN batch configuration

**Batch Config:** see to [Batch Configuration](#).

**Monitor:** see to [Monitor](#).

**Update Status:** update the ONU status.

**Reboot ONU:** reboot ONU.

**EOC List:** show EOC CO list.

**CNU List:** show EOC terminal list..

**EOC Topo:** View the TOPO diagram of the EOC device.

**User MAC Location:** Find the device according to the user MAC of the specified OLT.

## ONT List

The ONTs under GPON and EPON are basically similar to the ONU list.

ONT Positi...	Status	Last Offline R...	Description	Label	ONT Type	ONT SN	ONT Loid	Distance(m)	Software	Ma
0/7/77	● On-line	Normal	-	10.4.2.211_OLT0_PON7_ONT77	-	GPON-17038007	123456789	<10	V1.0	R4
0/7/78	● On-line	Normal	-	10.4.2.211_OLT0_PON7_ONT78	c40-428	GCOM-174a0006	1179	<10	C40-428	R4

ONT list

However, some GPON devices have some special features. As shown in the following figure:



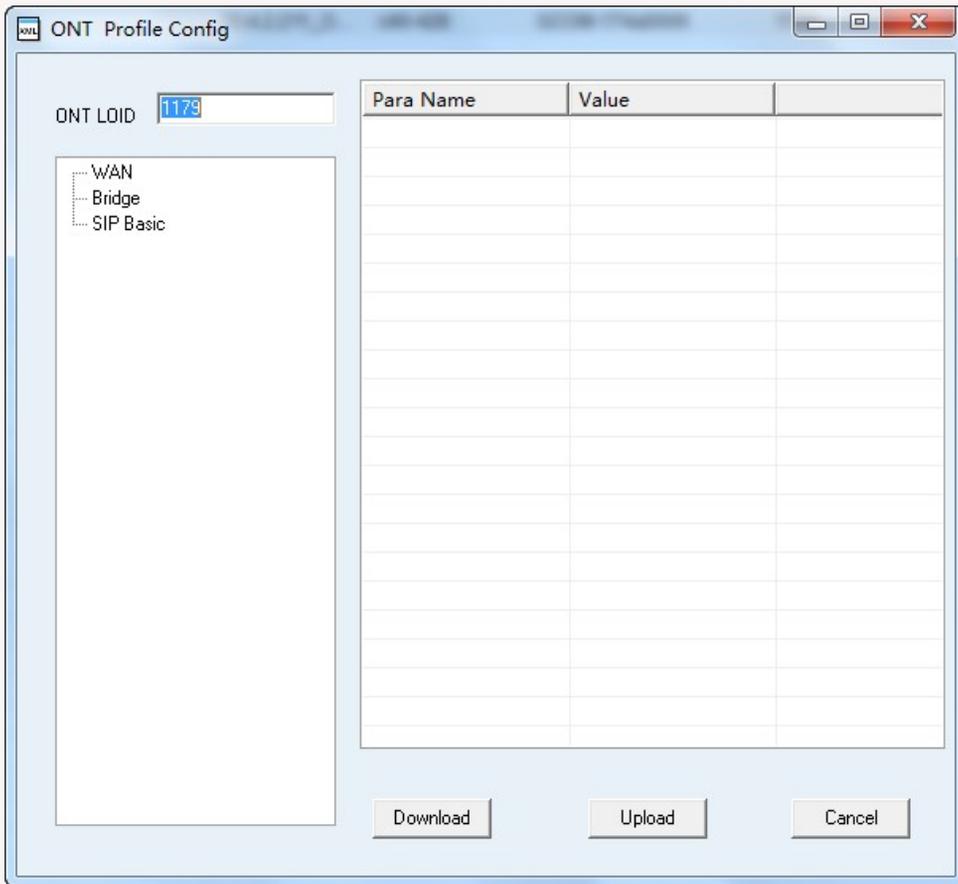
Ont Profiles Information X

Device IP : 10.4.2.211      ONT Position : 0/7/78      SN:GCOM-174a0006

<p>Vlan Profile Names</p> <p>C591S593</p>	<p>Vlan Profile Indexes</p> <p>1</p>
<p>Us Profile Names</p> <p>FLP</p>	<p>Us Profile Indexes</p> <p>4</p>
<p>Ds Profile Names</p> <p>FLP</p>	<p>Ds Profile Indexes</p> <p>4</p>
<p>Dbas Profile Names</p> <p>HOME_100M</p>	<p>Dbas Profile Indexes</p> <p>3</p>
<p>Line Profile Name</p> <p>HOME_100M</p>	<p>Line Profile Index</p> <p>1</p>
<p>Rule Profile Names</p> <p>HOMEUSER2</p>	<p>Rule Profile Index</p> <p>845</p>
<p>Unique Profile Names</p> <p>-</p>	<p>Unique Profile Index</p> <p>-</p>

**ONT Profile Config:** It is used to edit xml configuration files



**Set Profile To OLT:** It is used to load the XML commands to the OLT, and then download xml configuration file when OLT receives the command from the network management.

## S2000B Device List

View some information about the device, such as IP address, MAC address and device type. As shown below.

Index	ONU Position	Label	Status	IP	Mac	Mask	Gateway	Device Type	Software Version

S2000B device list

## Fault

### Fault Menu

As shown below. The fault can be divided into three types: real time alert, current alert and all alert.

Fault( <u>F</u> )	Realtime Alert( <u>R</u> )
Monitor( <u>R</u> )	Current Alert( <u>C</u> )
Maintenance( <u>M</u> )	All Alert( <u>A</u> )

Fault

## Realtime Alert

It real-time refreshes alert information. This option allows you to see when the alert is issued. As shown below.

No	Level	Source	Label	Descri...	Type	Postion	Alert Describe	Alert Time
124	Minor	10.4.2.202_OLTO_PO...	10.4.2...	epon	Poll...	SZnanshanQio...	ONU off-line.	4/5/2017 6:4...
123	Minor	10.4.2.202_OLTO_PO...	10.4.2...	OptiWay	Poll...	SZnanshanQio...	ONU off-line.	4/5/2017 6:4...

realtime alert list

## Current Alert

Check the current alert information.

## All Alert

Check all alert information.

## Monitor

See to [Real-time Monitoring](#) for details.

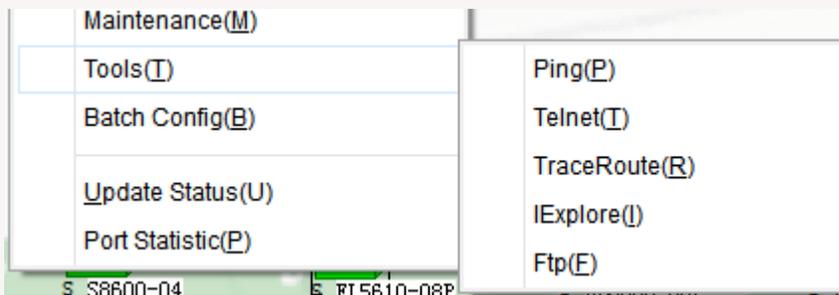
## Maintenance

See to [Equipment Maintenance](#) for details.

## Tools

### Menu

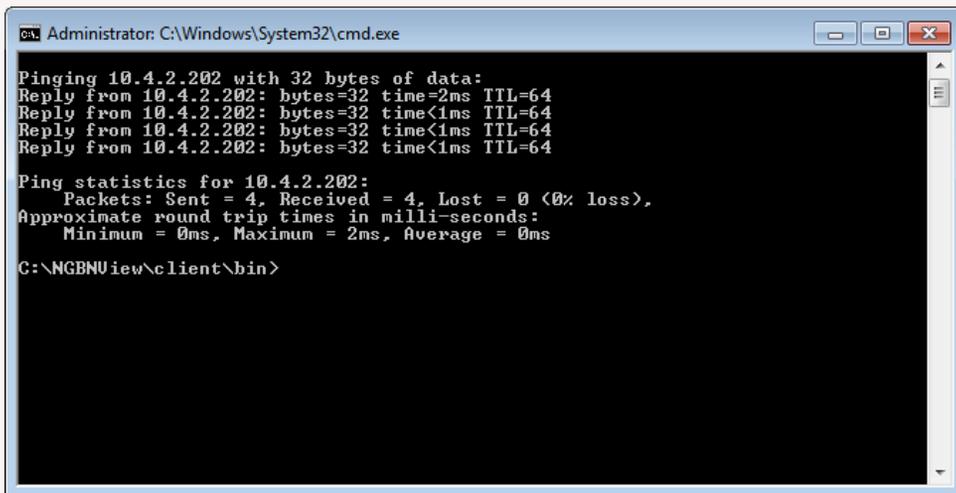
The menu is shown below.



tools

## Ping

It checks the connectivity of the device, click to shown the DOS interface, as shown below.



```
Administrator: C:\Windows\System32\cmd.exe
Pinging 10.4.2.202 with 32 bytes of data:
Reply from 10.4.2.202: bytes=32 time=2ms TTL=64
Reply from 10.4.2.202: bytes=32 time<1ms TTL=64
Reply from 10.4.2.202: bytes=32 time<1ms TTL=64
Reply from 10.4.2.202: bytes=32 time<1ms TTL=64

Ping statistics for 10.4.2.202:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 2ms, Average = 0ms

C:\NGBNUIew\client\bin>
```

ping

## Telnet

It supports to Telnet to the specified device. As shown below.

```
CS1 Telnet 10.4.2.202
Username(1-32 chars):admin
Password(1-16 chars):*****
```

Login Telnet interface

```
CS1 Telnet 10.4.2.202
OptiWay>en
OptiWay#c t
OptiWay(config)#sh interface

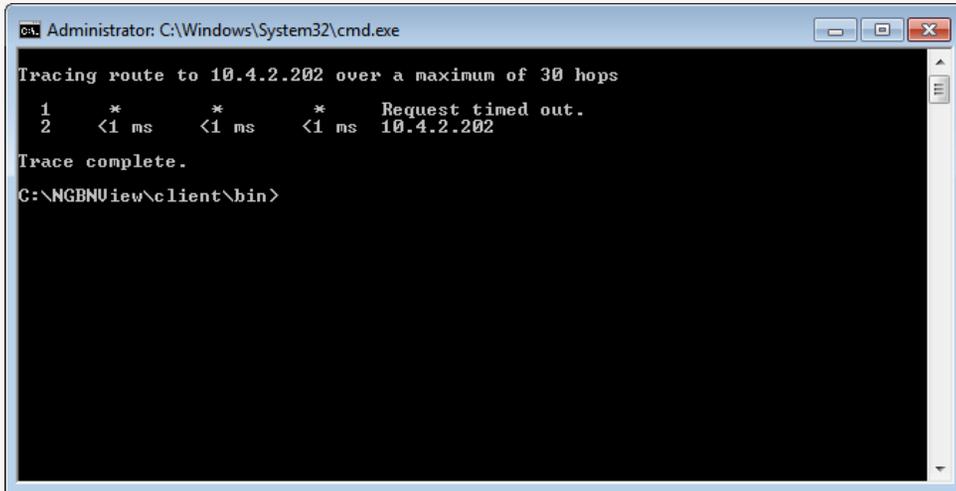
Gigabit Ethernet e0/1 current state: enabled, port link is down
Hardware address is 00:0a:5a:30:f2:33
SetSpeed is auto, ActualSpeed is unknown, Duplex mode is unknown
Current port type: 1000BASE-T
Priority is 0
Flow control is disabled
Broadcast storm control target rate is 49984pps
PUID is 1
Port mode: hybrid
Tagged VLAN ID
Untagged VLAN ID :1
Input : 31805 packets, 2912261 bytes
        18527 broadcasts, 12581 multicasts, 697 unicasts
Output : 5362 packets, 384444 bytes
        3 broadcasts, 4662 multicasts, 697 unicasts

Gigabit Ethernet e0/2 current state: enabled, port link is down
Hardware address is 00:0a:5a:30:f2:33
SetSpeed is auto, ActualSpeed is unknown, Duplex mode is unknown
Current port type: 1000BASE-T
```

command operation on the device after login

## Traceroute

It provides the routing query from the network to the designated device.



```
Administrator: C:\Windows\System32\cmd.exe
Tracing route to 10.4.2.202 over a maximum of 30 hops
  1  *          *          *          Request timed out.
  2  <1 ms     <1 ms     <1 ms     10.4.2.202
Trace complete.
C:\NGBNU\iew\client\bin>
```

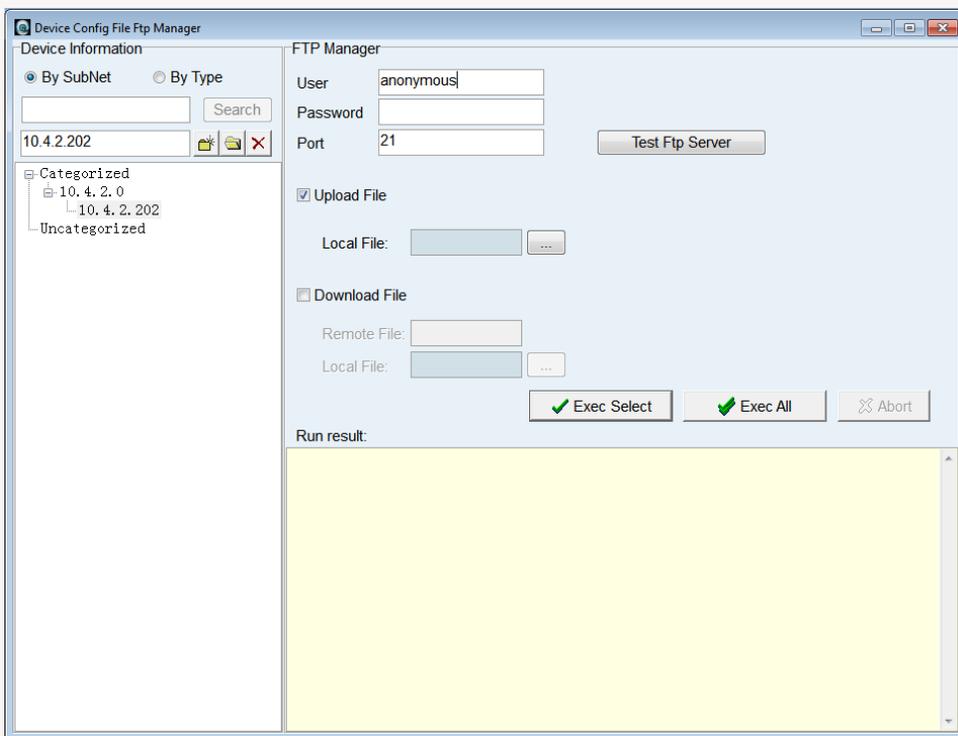
traceroute

## Explore

Enter the network page to view the management. Only devices with this feature are supported.

## FTP

Only the specific device can use this feature. Currently, it only supports 2600-16T. Click to enter the interface of device configuration file FTP manager, as shown below.



FTP Manager

**Device Information:** Select the device by type or by subnet.

**FTP Manager:** 1、 **User:** It is used for FTP server login. You can specify the user or login anonymously. 2、 **Test FTP Sever:** It tests whether the FTP server is enabled.

**Upload File:** It uses FTP server to upload files. Click  to open the file you want to upload.

**Download File:** It uses FTP server to download files, including remote files and local files.

**Run result:** Display the upload and download the information.

## Batch Config

### Overview for Batch Configuration

The batch configuration adopts remote login device via telnet by default. It distributes the script file of the pre-configured command line to complete configuration tasks with the same type of multi-device one-time. Batch configuration not only improves productivity, but also reduces errors.

Batch configuration also supports a single device for serial out-of-band management, with features similar to "HyperTerminal". By connecting the

serial port of the network management client to the console port of the network communication device, you can access the command line interface (CLI) of the system to implement the configuration operation of the network communication device.

## Select Device

When you select multiple devices with the mouse, you can configure multiple devices of the same type at the same time. Both the virtual device and the ONU can only be configured for batch configuration separately, and cannot be changed the configuration type. If the IP address of virtual device is invalid address format, it will be automatically filtered out. ONU Batch Configuration selects the device through the ONU list or ONU information. The device list lists the selected devices and the user name and password used when logging in to the device. If the user name and password are empty, it means that it uses the default user; if you do not use the default user, click on the user name or password corresponding to the table to modify it.

Select one or several devices, "**Device**" → "**Batch Config**", the following interface appears.

**Device Select**

Device Type: QSW2900\_24T

- [-] QSW2900\_24T
  - [-] 10.4.2.0
    - 10.4.2.222

**Command line file operation**

Config Mode:  Telnet     Serial Port

Select File:  Browse    ConfigTemplate Library

Execute    Cancel    Help

Remote config command line

**Default Account**

User Name:

PassWord:

**Device List**

Device IP	User Name	PassWord
10.4.2.222	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="password"/>

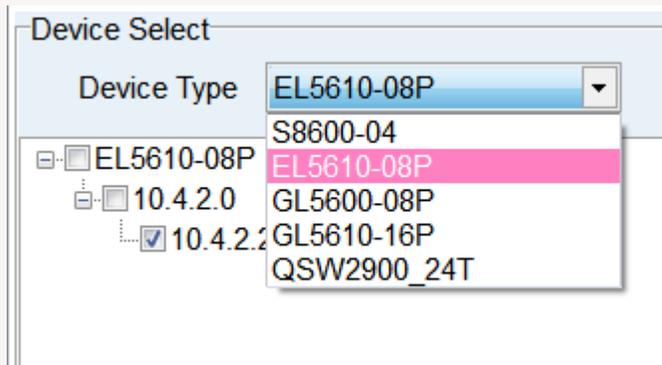
**Operate Log**

Clear log    Derive log to file

### Batch Configuration

If the device name or password in the selected device list is empty, it means it adopts the default user name or password. If the device does not use the default settings, you can click the corresponding item to modify it.

In the device type, select the appropriate device. As shown below.



device type deletion

If you change the configuration mode to be serial port, the interface of serial port parameters setting will be displayed. The user account is used to log in to the network communication device. If the configuration mode is *serial port*, the command line distributed is related to the type of network communication device connected to the serial port, having no concern with the device type selected by the mouse.

serial port parameters Settings:

the serial port to which the device is connected. You can check which serial port is connected by right-click on **"My Computer"** → **"Device Information"** → **"Hardware"** → **"Device Manager"**.

Bits per second: It refers to the baud rate, ranging from 110-25600 range, and it defaults to 9600.

Data bit: There are 5,6,7,8 for you to select. Adopt the default setting will be OK.

Parity check: Adopt the default setting will be OK.

Stop bit: Adopt the default setting will be OK.

User Account

User Name

PassWord

The serial port parameters set

Serial Port

Port Set

Bits per second

Data bit

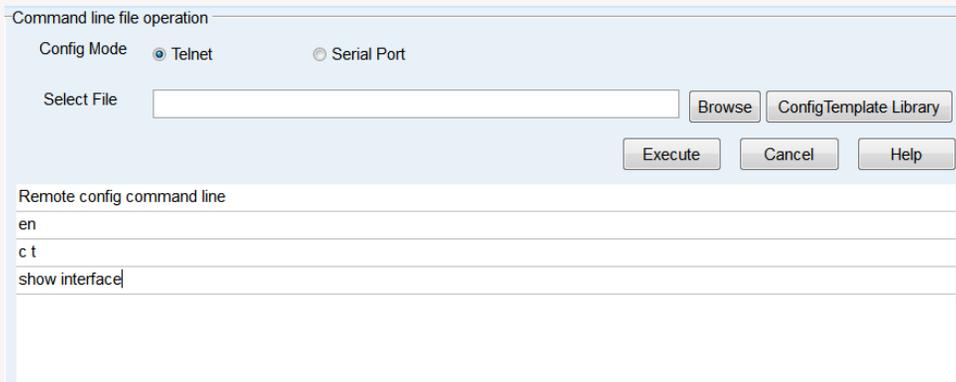
Parity check

Stop bit

serial port parameters setting

## Command Line File Operation

You can choose script file of command line by "**Browse**", and then enter the dialog box of opening file to select the file. You can also select "**Config Template Library**" to select the file you want to import from the list. After finishing importing the file, it will make a preliminary judgment on the file to see if the file is suitable for the selected device.



Command line file operation

Config Mode  Telnet  Serial Port

Select File

Remote config command line

en

c t

show interface|

operation interface of command line file

Click "**Execute**" and the command line will perform the configuration.

For example: it distributes the corresponding commands according to the port status (access/ hybrid/ trunk) when add the port to the specified VLAN.

Remote config command line: You can add/ delete the manual input

commands via right-click and select it.

## Operate Log

It displays all records of this operation and supports to clear the log and export the log to the file. When the configuration fails, the command line will display the corresponding prompt.



operate log interface

## Update Status

This operation is used to update the status of the managed object, that is, it is to perform a status polling operation on the managed object. You can select one or multiple devices to update. During the implementation of the update, it will check whether the device is still connected, whether the device is in the abnormal situation, etc. If the device is in the abnormal situation, it will give the alert prompt. As shown below (Figure 1). After updating the state, the

interface shown in Figure 2 appears. You can see that an emergency alert appears in the status bar.

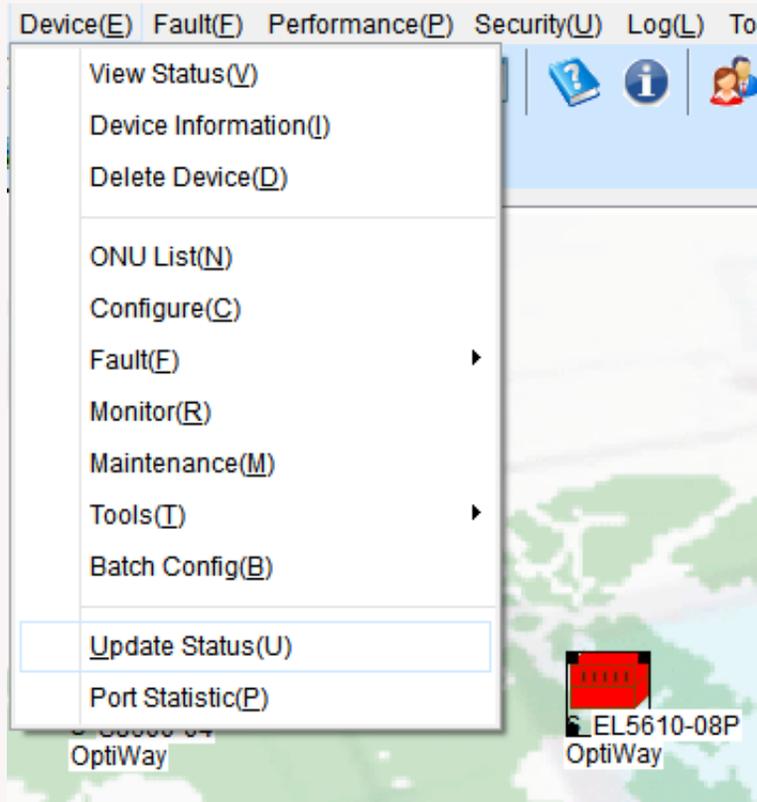


Figure 1 (update status)

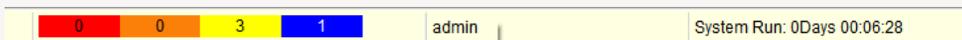


Figure 2 (alert status bar)

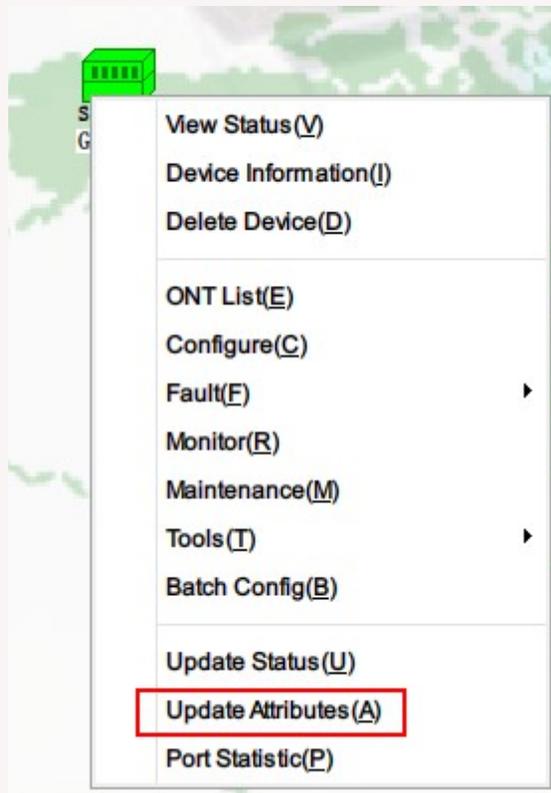
Click the alert information to check it. As shown below.

No	Level	Source	Label	Descri...	Type	Conf...	Position	Alert Describe	Alert Time	Confirm Time
124	Minor	10.4.2.202_OLT0_PO...	10.4.2...	epon	Foll...	Unco...	SZnanshanQio...	ONU off-line	4/5/2017 6:4...	

alert

## Update Attributes

This operation is used to update the basic properties of the managed device.

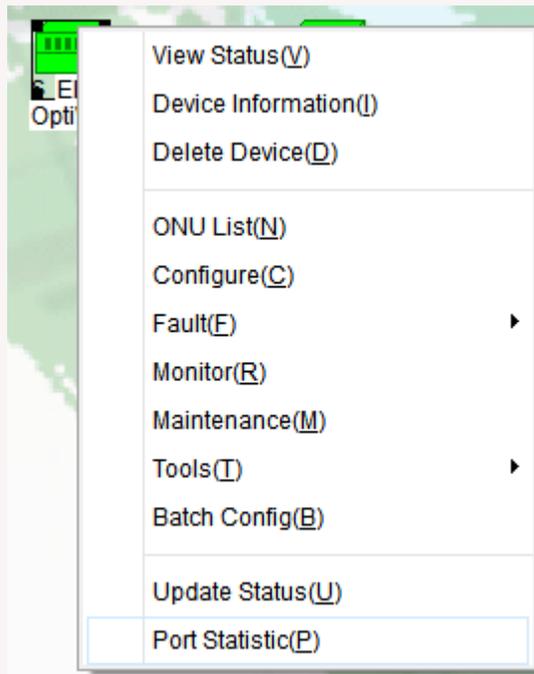


update attributes

## Port Statistics

Port statistics can count the total number of network ports, as well as the number of ports that are being used and the number of ports that are idle. The port with red color in the device panel means that it is the free port and the remaining ports with other colors means that the ports are being used.

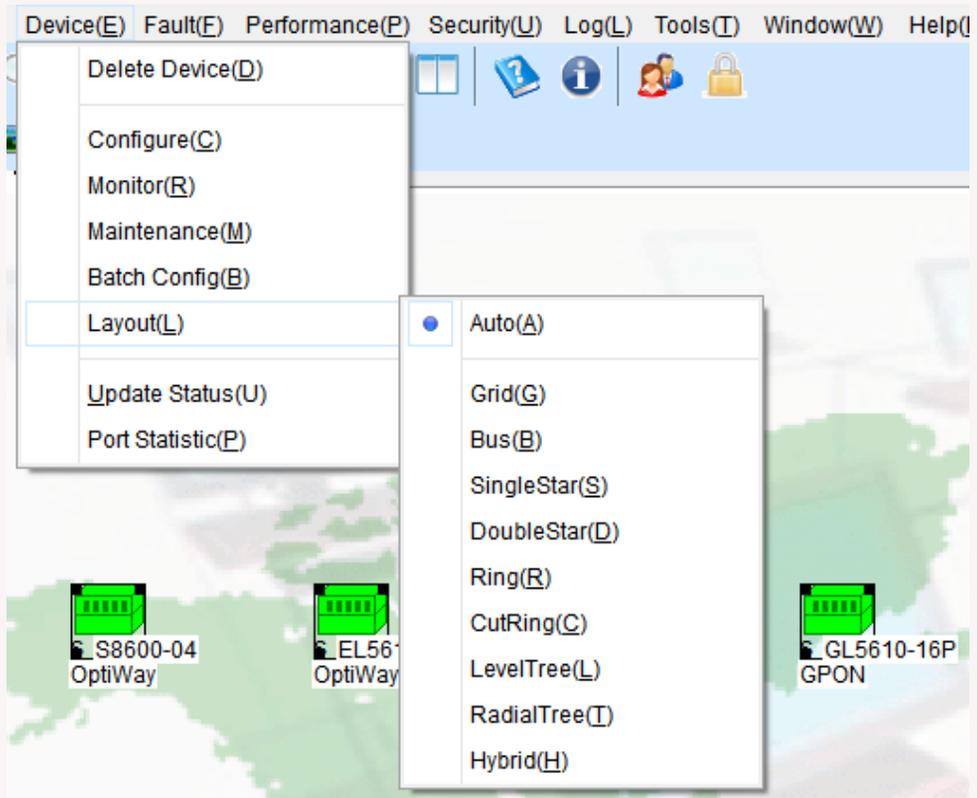




Open the port statistics interface through the device menu

## Device Layout

It is the layout of multiple devices. As shown below. Select multiple devices, click "**Device**" → "**Layout**".



Device layout



Hybrid mode

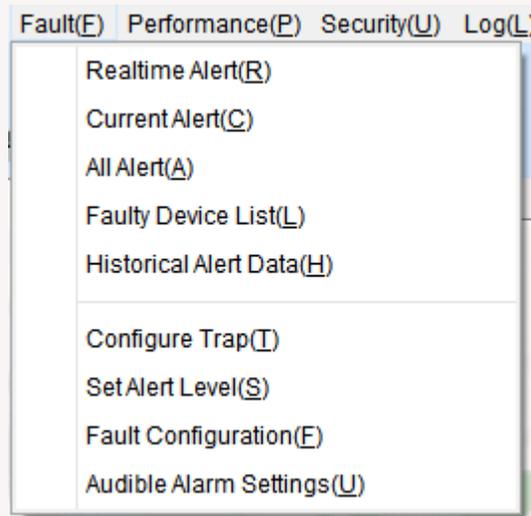


grid mode

# Fault

## Fault

This section is mainly about the equipment faults, as shown below. The following sections will provide a detailed description for these contents.



Fault menu

## Realtime Alert

It real-time refreshes the alert information. This option allows you to see the time when the alert is issued. As shown below.

No	Level	Source	Label	Descripti...	Type	Confirm Status	Postion	Alert Describe	Alert Time
124	Minor	10.4.2.202_OLT0_PO...	10.4.2.202	epon	Poll(D...	Unconfirmed	SZnanshanQio...	ONU off-line.	4/5/2017 6:49:0...

real-time alert list

## Current Alert

Check the alert information in the current state.

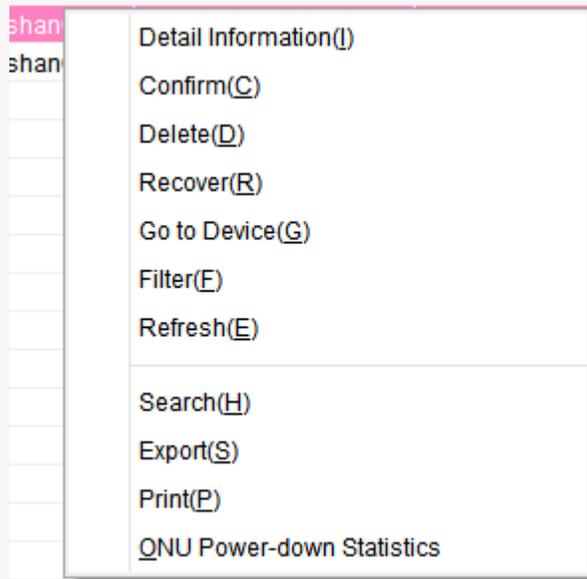
## All Alert

Check all the alert information

# Alert Menu

## Alert Overview

Alert menu is mainly for the corresponding operation of the specific alert information. As shown below.



right-click menu of the alert

## Alert Details

As shown below.

Alert Detail Information X

Source	10.4.2.202_OLT0_PON1_ONU1	Level	Minor
Alert Time	4/5/2017 6:46:51 PM		
Description	ONU off-line.		

Historical Alert

Deal with the record

Alert details

details for alert attribute

attribute	description
Alert source	It refers to the faulty MO (managed object). The platform updates the corresponding MO status based on the fault source attribute of the alert object.
Alert level	It identifies alert attributes for alert severity.
Alert time	The date and time of the alert.
Fault description	It stores any supplemental information for the alert event.
Alert history	The historical process of alert state transition
Management record	It refers to the management record of the NMS administrator when processing the alert.

**Alert Acknowledgement:** It refers to confirm the user name of the current operation on the responsible person list of the alert.

**Add:** It refers to the handling suggestion of the alert, displayed in the processing record.

**Close:** close the dialog box

**Help:** Open the help file

## Go to Device

You can locate the corresponding device of the alert information. The device being located will be displayed on the device view.

10.4.2.202_OLT0_PO...	10.4.2.202	ann	Poll/D	Unres	
10.4.2.202_OLT0_PO...					Detail Information(I)
10.4.2.200					Confirm(C)
10.4.2.220					Delete(D)
10.4.2.209					Recover(R)
10.4.2.210					Go to Device(G)
10.4.2.205					Filter(F)
127.0.0.1					Refresh(E)
10.4.2.202					Search(H)
10.4.1.102					Export(S)
					Print(P)
					QNU Power-down Statistics



EL5610-08P  
OptiWay

Go to device

## Filter Setting

Filter Setting

Filter Type: Allowable

Type:

- Device
  - Discovery
  - Poll
- Trap
  - Syslog
  - Whole
  - Port
  - Unknown
- Plat
  - MAIN
  - DISCOVERY
  - POLL
  - FAULT
  - CONFIG
  - SECURITY

Level:  Critical  Major  Minor  Warning  Clear  Info

Net Element

- 10.4.2.202

Add Delete

Apply Default Close

Filter Setting

**【Filter Type】** : There are three types: shielded, allowable and None.

**【Type】** : Users can select devices, Trap, and platforms separately.

**【Level】** : There are six kinds of alert level, and you can select multiple.

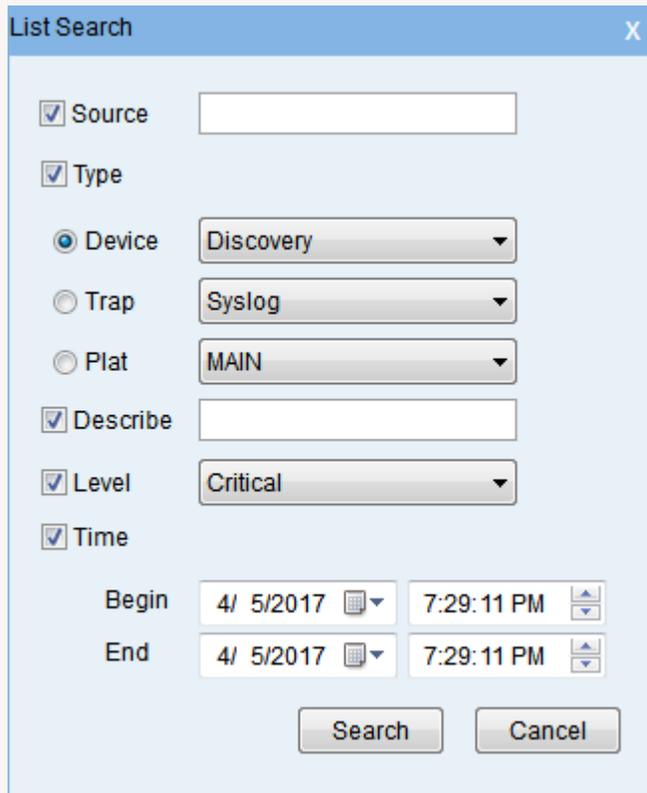
【Net Element】 : You can add or remove NEs

## Refresh

Refresh alert list.

## List Search

Click on the **Search** button, and then the following dialog box will pop up.



The image shows a 'List Search' dialog box with a blue title bar and a close button (X) in the top right corner. The dialog contains several search criteria, each with a checked checkbox and a corresponding input field or dropdown menu. The criteria are: Source (text input), Type (checkbox), Device (radio button selected, dropdown menu showing 'Discovery'), Trap (radio button unselected, dropdown menu showing 'Syslog'), Plat (radio button unselected, dropdown menu showing 'MAIN'), Describe (checkbox, text input), Level (checkbox, dropdown menu showing 'Critical'), and Time (checkbox). The Time section includes 'Begin' and 'End' fields, each with a date and time input and a calendar icon. At the bottom, there are 'Search' and 'Cancel' buttons.

<input checked="" type="checkbox"/> Source	<input type="text"/>	
<input checked="" type="checkbox"/> Type		
<input checked="" type="radio"/> Device	Discovery	
<input type="radio"/> Trap	Syslog	
<input type="radio"/> Plat	MAIN	
<input checked="" type="checkbox"/> Describe	<input type="text"/>	
<input checked="" type="checkbox"/> Level	Critical	
<input checked="" type="checkbox"/> Time		
Begin	4/ 5/2017	7:29:11 PM
End	4/ 5/2017	7:29:11 PM

dialog box of alert search

**【Source】** : Where the alert comes from.

**【Type】** : It can be selected from device, trap, plat

**【Describe】** : Alert description

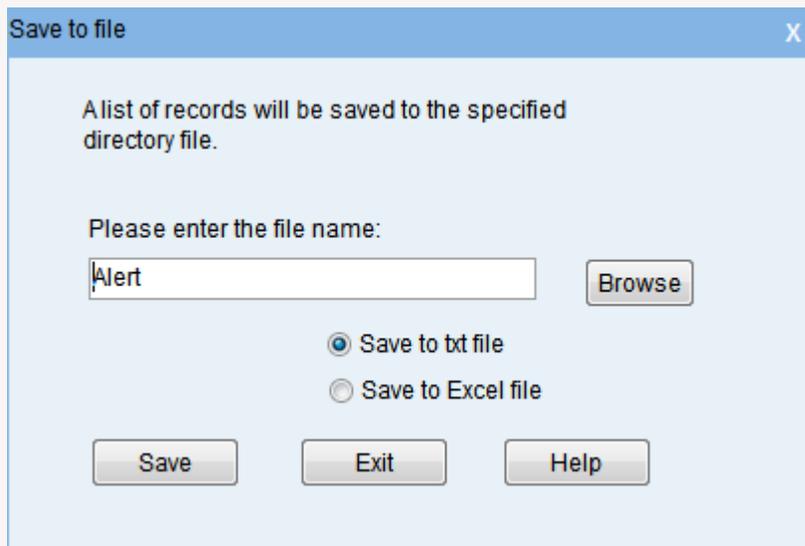
**【Level】** : Which one of the six levels?

**【Time】** : The start and end time of the alert you want to search.

## Export

### Save to txt file

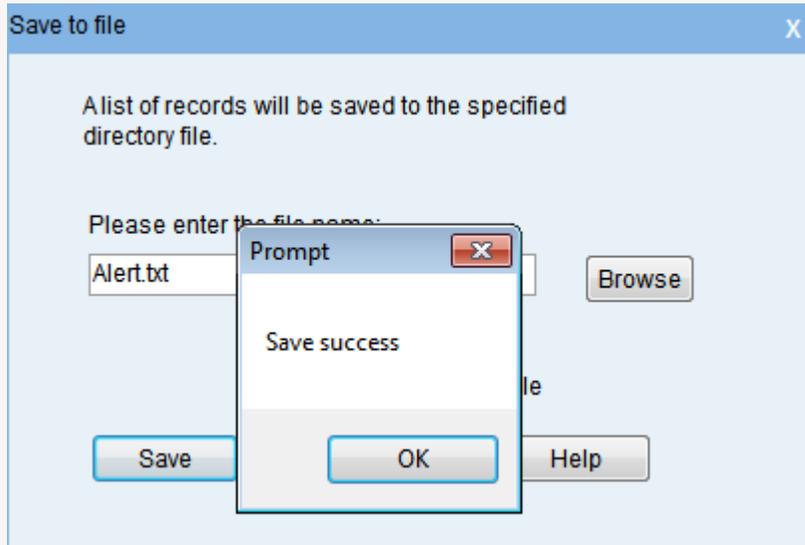
In the main menu, select "**Export**" → "**Save to txt file**" to save the current alert list to a file. When this menu is selected, a dialog box will pop up as shown below.



dialog box of saving alert

Enter the file name. If the file name does not end with ".txt", it will automatically add the suffix of ".txt" when saving. Saving path of the file can be set in the fault management, or click "**Browse**", and then select the saving

path. After saving the file successfully, there will be a prompt box as shown below.



prompt box of successful saving

### Save to Excel file

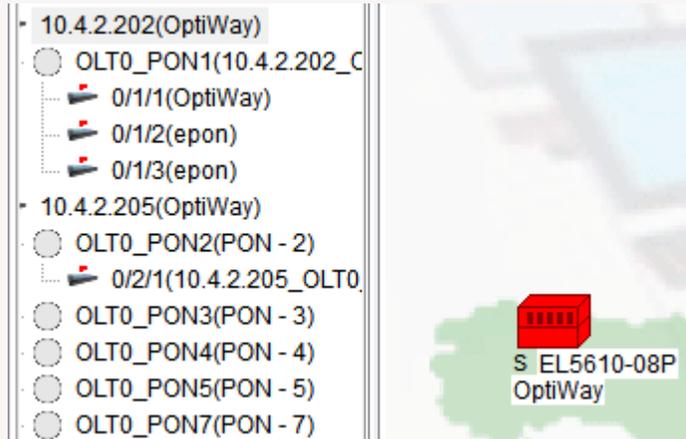
In the main menu, select "**Export**" → "**Save to Excel file**" to save the current page alerts in an Excel file. Compared with the plain text format, it shows more clearly. "Save to Excel File" is similar to "Save to file", and the file will be saved to the specified path with the suffix of ".xls".

### Print

In the main menu, select "**Print**" to print out the current alert lists.



Select a fault device and click on “**Go to Device**” button to select the device in the navigation tree. As shown below.



go to the faulty device

The faulty device list will be automatically updated when it is opened. If you need to view the current faulty list after opening the interface, click the **Refresh** button.

## Historical Alert Data

It is used to browse the backup alerts saved in the system, and the backup alerts will be displayed in the alert browsing interface. Click the "**Historical Alert Data**" to open the interface as shown below.

### History Alert Browsing

Select the year of the alert you want to browse and click "**Browse**" to see the corresponding alerts.

Index	Level	Source	Type	Recover Status	Confirm Status	Alert Describe	Alert Time	Recover Time	Confirm Time
20717	Minor	10.4.2.210_OLTO_FORT_ONT128	Port	Unrestored	Unconfirmed	OLTO FORT ONT128 occurred LDAMi alert	2017-04-12 14:28:33		
20718	Minor	10.4.2.210_OLTO_FORT_ONT127	Port	Unrestored	Unconfirmed	OLTO FORT ONT127 occurred LDAMi alert	2017-04-12 14:29:22		
20719	Minor	10.4.2.210_OLTO_FORT_ONT128	Port	Unrestored	Unconfirmed	OLTO FORT ONT128 occurred LDAMi alert	2017-04-12 14:29:22		
20720	Minor	10.4.2.210_OLTO_FORT_ONT127	Port	Unrestored	Unconfirmed	OLTO FORT ONT127 occurred LDAMi alert	2017-04-12 14:31:08		

### History Alert List

## Configure Trap

### Trap

Filter Trap is mainly to browse the Trap event information and make the appropriate treatments. Users can operate various types of Traps on the

panel. Trap events can be divided into six levels: info, clear, warning, minor, major and critical. The severity level is incrementally increasing.

Filter	Default Trap	SNMP Version	Trap Name	Trap Type	Trap OID	Level	Source	Content
No	Yes	V1	EponSwitchSyslog	Syslog	1.3.6.1.4.1.13464.1.2.1.1.9#6#12	Info	\$Source_SYSLOG	Device SYSLOG.
No	Yes	V2	EponSwitchSyslog	Syslog	1.3.6.1.4.1.13464.1.2.1.1.9.12	Info	\$Source_SYSLOG	Device SYSLOG.
No	Yes	V2	SaveConfig	Whole	1.3.6.1.4.1.13464.1.2.1.1.7.3.1	Info	\$Source	device\$Source The confi
No	Yes	V1	SaveConfig	Whole	1.3.6.1.4.1.13464.1.2.1.1.7.3#6#11	Info	\$Source	device\$Source The confi
No	Yes	V2	PON_LoginStatus	Whole	1.3.6.1.4.1.17409.1#6#0	Clear	\$Source	Illegal user login
No	Yes	V1	Nscrv_coldStart1	Whole	1.3.6.1.4.1.105#6#3	Clear	\$Source	Device cold start, Macadd
No	Yes	V1	POE_PowerDownReachthreshold	Whole	1.3.6.1.2.1.105#6#3	Clear	\$Source	The power Consumption
No	Yes	V2	POE_PowerDownReachthreshold	Whole	1.3.6.1.2.1.105.0.3	Clear	\$Source	The power Consumption
No	Yes	V1	CPUUnBusy	Whole	1.3.6.1.4.1.13464.1.2.1.1.2.24#6#2	Clear	\$Source	CPUIdle
No	Yes	V1	PON_LoginStatus	Whole	1.3.6.1.4.1.13464.1.9#6#31	Clear	\$Source	Illegal user login
No	Yes	V2	CPUUnBusy	Whole	1.3.6.1.4.1.13464.1.2.1.1.2.24.2	Clear	\$Source	CPUIdle
No	Yes	V1	StpInstNewRoot	Whole	1.3.6.1.2.1.17.8.1.1.14.1#6#1	Warning	\$Source	MSTP root bridge change
No	Yes	V2	Gbn_StpNewRoot	Whole	1.3.6.1.4.1.13464.1.2.4.3.1.1.18.6	Warning	\$Source	STPChange the root brid
No	Yes	V1	Rfc_authFail	Whole	1.3.6.1.6.3.1.1.5#6#0	Warning	\$Source	SNMP community authen
No	Yes	V1	Gbn_StpNewRoot	Whole	1.3.6.1.4.1.13464.1.2.4.3.1.1.18#6#6	Warning	\$Source	STPChange the root brid
No	Yes	V2	StpInstNewRoots	Whole	1.3.6.1.2.1.17.8.1.1.14.1.1	Warning	\$Source	MSTP root bridge change
No	Yes	V1	CPUBusy	Whole	1.3.6.1.4.1.13464.1.2.1.1.2.24#6#1	Warning	\$Source	CPUbusy
No	Yes	V2	CPUBusy	Whole	1.3.6.1.4.1.13464.1.2.1.1.2.24.1	Warning	\$Source	CPUbusy
No	Yes	V2	Rfc_authFail	Whole	1.3.6.1.6.3.1.1.5.5	Warning	\$Source	SNMP community authen
No	Yes	V1	Rfc_newRoot	Whole	1.3.6.1.2.1.17#6#11	Minor	\$Source	Node becomes new root
No	Yes	V1	POE_PowerReachthreshold	Whole	1.3.6.1.2.1.105#6#2	Minor	\$Source	The power Consumption
No	Yes	V1	Rfc_egpLoss	Whole	1.3.6.1.6.3.1.1.5#6#0	Minor	\$Source	EGPAdjacent members k
No	Yes	V1	Rfc_topoChange	Whole	1.3.6.1.2.1.17#6#2	Minor	\$Source	Port of tree becomes For
No	Yes	V2	Rfc_topoChange	Whole	1.3.6.1.2.1.17.0.2	Minor	\$Source	Port of tree becomes For
No	Yes	V2	Rfc_newRoot	Whole	1.3.6.1.2.1.17.0.1	Minor	\$Source	Node becomes new root
No	Yes	V2	POE_PowerReachthreshold	Whole	1.3.6.1.2.1.105.0.2	Minor	\$Source	The power Consumption
No	Yes	V2	Rfc_egpLoss	Whole	1.3.6.1.6.3.1.1.5.6	Minor	\$Source	EGPAdjacent members k
No	Yes	V1	Nscrv_trap	Whole	1.3.6.1.4.1.17409.1#6#1	Major	\$Source	device warning
No	Yes	V1	Rfc_coldStart	Whole	1.3.6.1.6.3.1.1.5#6#0	Critical	\$Source	Device cold start
No	Yes	V1	Nscrv_coldStart	Whole	1.3.6.1.4.1.17409.1#6#0	Critical	\$Source	Device cold start
No	Yes	V2	Rfc_warmStart	Whole	1.3.6.1.6.3.1.1.5.2	Critical	\$Source	Device warm start
No	Yes	V2	Rfc_coldStart	Whole	1.3.6.1.6.3.1.1.5.1	Critical	\$Source	Device cold start
No	Yes	V1	Rfc_warmStart	Whole	1.3.6.1.6.3.1.1.5#6#0	Critical	\$Source	Device warm start
No	Yes	V1	S7606_PowerRunning	Port	1.3.6.1.4.1.25506.8.35.12.1#6#4	Info	\$Source_POWER\$0	Slave power\$0 is running
No	Yes	V2	S7606_PowerRunning	Port	1.3.6.1.4.1.25506.8.35.12.1.3	Info	\$Source_POWER\$2	Master power\$2 is runnin

### Trap browsing

The bottom of the panel is the total number of alerts and displaying settings. As shown below.

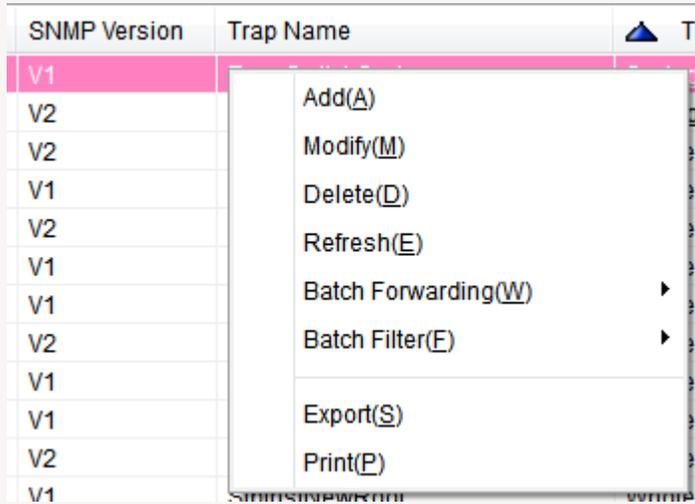


### Total Traps and the display settings

The total number of alerts in the figure above is 309, the length of current

display page is 40, and the right four buttons  are used for page turning.

Right-click the trap event, and then the interface will be shown below.



right-click menu

## Modify Trap

**Add:** add the trap type.

**Modify:** Modify the trap event. You must select a trap event. As shown below.

Modify Trap

Modify Trap

Filter Trap       Forwarding

Trap Name: EponSwitchSyslog

Trap Type: Syslog

SNMPv1       SNMPv2c

Enterprise OID: 1.3.6.1.4.1.13464.1.2.1.1.9

Generic Type: 6      Specific Type: 12

Trap OID: 1.3.6.1.4.1.13464.1.2.1.1.9.6.12

Default Level: Info

Level: Info

Source: \$Source\_SYSLOG

Content: Device SYSLOG:

OK      Cancel      Help

modify trap

**【Filter Trap】** : Whether to filter the trap

**【Trap Name】** : The name of the trap

**【Trap Type】** : There are three trap types: syslog, whole and port

**【SNMPV1/SNMPV2】** : Which kind of SNMP it belongs.

**【Enterprise OID】** : When the trap is a SNMPv1 message, the option box is valid for sending the OID of SNMPV1.

**【Generic Type】** : It includes coldStart, warmStart, linkDown, linkUp, authenticationFailure, egpNeighborLoss, enterpriseSpecific. And it belongs to SNMPv1 trap information.

**【Specific Type】** : Specific Type

**【Trap OID】** : SNMPV2 OID

**【Level】** : The level of the trap event. There are six levels.

**【Source】** : the source of the trap event

**【Content】** : the details of the trap event

**Delete:** delete the trap event. You must select one trap event.

**Refresh:** refresh the list.

**Batch Forwarding:** select one or more alarms to forward

**Batch Filter:** select one or more alarms to filter

**Export:** export the list.

**Print:** print the list.

## Set Alert Level

### Level Modification

The alert level interface is shown below. In this interface, the alert level can be modified.

Level	Default Level	Type	Alert Reason
Warning	Warning	DISCOVERY(Plat)	Something wrong with the device volumes of adding compared with the subnet exists
Warning	Warning	DISCOVERY(Plat)	The IP not exists in the device,please add it by yourself
Warning	Warning	DISCOVERY(Plat)	The IP maybe Broadcast address,please add it by yourself
Info	Info	DISCOVERY(Plat)	Node is already exists in the database
Info	Info	DISCOVERY(Plat)	Unable to add node, node is unreachable
Critical	Critical	SECURITY(Plat)	License: the number of nodes has reached the maximum number of authorized nodes!
Info	Info	DISCOVERY(Plat)	Something error to getting the device netmask,using the netmask appointed
Major	Major	DISCOVERY(Plat)	GnLink server SNMP agent data error, client objects can not add to the system.
Warning	Warning	DISCOVERY(Plat)	The netmask of the device which is discovered by auto-discover is error
Info	Info	DISCOVERY(Plat)	Host is not snmp enable
Warning	Warning	DISCOVERY(Plat)	The netmask of the device which is discovered by auto-discover is error compared with the subnet exist!
Info	Info	Poll(Device)	Port has removed
Clear	Clear	Poll(Device)	Connected to device
Minor	Minor	Poll(Device)	Unable connect to device,please confirm its running
Minor	Minor	Poll(Device)	Port disabled
Major	Major	Poll(Device)	Port broken
Minor	Minor	Poll(Device)	Port blocking
Clear	Clear	Poll(Device)	Port normal
Info	Info	Poll(Device)	Port unknown
Minor	Minor	Poll(Device)	OLT is not in slot
Clear	Clear	Poll(Device)	OLT is in slot,registred
Warning	Warning	Poll(Device)	OLT is in slot,but not registered
Minor	Minor	Poll(Device)	Pon Port down
Clear	Clear	Poll(Device)	Pon Port normal
Info	Info	Poll(Device)	Pon Port unknown
Minor	Minor	Poll(Device)	ONU is off-line
Clear	Clear	Poll(Device)	ONU is on-line
Minor	Minor	Poll(Device)	ONU is law-less
Warning	Warning	Poll(Device)	ONU is unregistered
Minor	Minor	Poll(Device)	ONT is off-line
Clear	Clear	Poll(Device)	ONT is on-line

Total 33 Each 40 Page The 1 /1 Page

Trap Level Threshold Level |<< < > >>|

The interface of alert settings

Default Level	Type	
Warning	DISCOVERY(Plat)	Som
Warning	DISCOVERY(Plat)	The I
Warning		
Info		le
Info		ib
Critical		er
Info	DISCOVERY(Plat)	Som

Modify(M)  
Refresh(R)  
Export(E)

Right-click menu of alert level setting

### Modify Alert Level

Level:

Default Level:

Type:

Alert Reason:

## operation interface of modifying alert level

As shown above, users can customize the alert severity according to different requirements. It supports to export the alerts to the local.

## Trap Level

Click the "Trap Level" button to enter the Trap settings interface.

Please refer to [Configure Trap](#) for detail operation.

Filter	Default Trap	SNMP Version	Trap Name	Trap Type	Trap OID	Level	Source	Content
No	Yes	V1	EpanSwitchSyslog	Syslog	1.3.6.1.4.1.13484.1.2.1.1.9Vt6Vt2	Info	\$Source_STCLOG	Device STCLOG
No	Yes	V2	EpanSwitchSyslog	Syslog	1.3.6.1.4.1.13484.1.2.1.1.9.12	Info	\$Source_STCLOG	Device STCLOG
No	Yes	V2	SavaConfig	Whole	1.3.6.1.4.1.13484.1.2.1.1.7.3.1	Info	\$Source	device\$Source The confi
No	Yes	V1	SavaConfig	Whole	1.3.6.1.4.1.13484.1.2.1.1.7.3Vt6Vt1	Info	\$Source	device\$Source The confi
No	Yes	V2	POM_LoginStatus	Whole	1.3.6.1.4.1.13484.1.9.31	Warning	\$Source	Illegal user login
No	Yes	V1	Rservtv_colStart1	Whole	1.3.6.1.4.1.17409.1Vt6Vt0	Warning	\$Source	Device cold start, Hacc
No	Yes	V1	POE_PowerDownReachthreshold	Whole	1.3.6.1.2.1.105Vt6Vt3	Warning	\$Source	The power Consumption o
No	Yes	V2	POE_PowerDownReachthreshold	Whole	1.3.6.1.2.1.105.0.3	Warning	\$Source	The power Consumption o
No	Yes	V1	CPUIBBusy	Whole	1.3.6.1.4.1.13484.1.2.1.1.2.24Vt6Vt2	Warning	\$Source	CPUIBIdle
No	Yes	V1	POM_LoginStatus	Whole	1.3.6.1.4.1.13484.1.9Vt6Vt31	Warning	\$Source	Illegal user login
No	Yes	V2	CPUIBBusy	Whole	1.3.6.1.4.1.13484.1.2.1.1.2.24.2	Warning	\$Source	CPUIBIdle
No	Yes	V1	StpInstNewRoot	Whole	1.3.6.1.2.1.17.8.1.1.14.1Vt6Vt1	Warning	\$Source	STPchange the root brid
No	Yes	V2	Ohn_StpNewRoot	Whole	1.3.6.1.4.1.13484.1.2.4.3.1.1.10.6	Warning	\$Source	STPchange the root brid
No	Yes	V1	Rfc_authFail	Whole	1.3.6.1.6.3.1.1.5Vt6Vt0	Warning	\$Source	SNMP community authenti
No	Yes	V1	Ohn_StpNewRoot	Whole	1.3.6.1.4.1.13484.1.2.4.3.1.1.18Vt6Vt6	Warning	\$Source	STPchange the root brid
No	Yes	V2	StpInstNewRoot	Whole	1.3.6.1.2.1.17.8.1.1.14.1.1	Warning	\$Source	STP root bridge change
No	Yes	V1	CPUIBBusy	Whole	1.3.6.1.4.1.13484.1.2.1.1.2.24Vt6Vt1	Warning	\$Source	CPUIBBusy
No	Yes	V2	CPUIBBusy	Whole	1.3.6.1.4.1.13484.1.2.1.1.2.24.1	Warning	\$Source	CPUIBBusy
No	Yes	V2	Rfc_authFail	Whole	1.3.6.1.6.3.1.1.5.5	Warning	\$Source	SNMP community authenti
No	Yes	V1	Rfc_newRoot	Whole	1.3.6.1.2.1.17Vt6Vt1	Minor	\$Source	Node becomes new root o
No	Yes	V1	POE_PowerReachthreshold	Whole	1.3.6.1.2.1.105Vt6Vt2	Minor	\$Source	The power Consumption o
No	Yes	V1	Rfc_eggLoss	Whole	1.3.6.1.6.3.1.1.5Vt6Vt0	Minor	\$Source	EGPAdjacent members los
No	Yes	V1	Rfc_topChange	Whole	1.3.6.1.2.1.17Vt6Vt2	Minor	\$Source	Port of tree becomes Po
No	Yes	V2	Rfc_topChange	Whole	1.3.6.1.2.1.17.0.2	Minor	\$Source	Port of tree becomes Po
No	Yes	V2	Rfc_newRoot	Whole	1.3.6.1.2.1.17.0.1	Minor	\$Source	Node becomes new root o
No	Yes	V2	POE_PowerReachthreshold	Whole	1.3.6.1.2.1.105.0.2	Minor	\$Source	The power Consumption o
No	Yes	V2	Rfc_eggLoss	Whole	1.3.6.1.6.3.1.1.5.6	Minor	\$Source	EGPAdjacent members los
No	Yes	V1	Rservtv_trap	Whole	1.3.6.1.4.1.17409.1Vt6Vt1	Major	\$Source	device warning
No	Yes	V1	Rfc_colStart	Whole	1.3.6.1.6.3.1.1.5Vt6Vt0	Critical	\$Source	Device cold start
No	Yes	V1	Rservtv_colStart	Whole	1.3.6.1.4.1.17409.1Vt6Vt0	Critical	\$Source	Device cold start
No	Yes	V2	Rfc_warStart	Whole	1.3.6.1.6.3.1.1.5.2	Critical	\$Source	Device warm start
No	Yes	V2	Rfc_colStart	Whole	1.3.6.1.6.3.1.1.5.1	Critical	\$Source	Device cold start
No	Yes	V1	Rfc_warStart	Whole	1.3.6.1.6.3.1.1.5Vt6Vt0	Critical	\$Source	Device warm start
No	Yes	V1	S7606_PowerRunning	Port	1.3.6.1.4.1.25506.8.35.12.1Vt6Vt4	Info	\$Source_POWERSD	Slave power\$D is runnin
No	Yes	V2	S7606_PowerRunning	Port	1.3.6.1.4.1.25506.8.35.12.1.3	Info	\$Source_POWER\$2	Master power\$2 is runni
No	Yes	V2	S7606_PowerRunning	Port	1.3.6.1.4.1.25506.8.35.12.1.2	Info	\$Source_POWER\$2	Power\$2 run!
No	Yes	V2	S8600_PowerRunning	Port	1.3.6.1.4.1.13484.1.2.1.3.3.12	Info	\$Source_POWER\$2	power\$2 run!
No	Yes	V2	LTCmdFirstOnlineId	Port	1.3.6.1.4.1.17409.2.2.1.3.1	Info	\$Source_DOC	EDC Information:termina
No	Yes	V1	S8600_PowerRunning	Port	1.3.6.1.4.1.13484.1.2.1.3.3Vt6Vt12	Info	\$Source_POWER\$0	power\$0 run!

Trap level



# Fault Configuration

## Overview for Fault Management

Fault management configuration includes four parameter setting interfaces: basic configuration, send rule, send setting and SMS gateway. Only "admin" users can be able to perform this functional configuration.

Open the related functional configuration interface via **“Fault”**→ **“Fault Configure”**.

## Basic Configuration

Fault Configuration X

Basic Configuration | Send rule | Send Setting | SMS Gateway

Alert

Clear alerts automatically after

Don't Clear

Clear after  hours

Back up the alerts monthly

Delete device and alerts at the same time

Keep Alerts active for

months

Display Realtime Alerts for the last

days

Filter Multiple Alerts within

seconds

Filter Unknown Trap

configuration interface of fault management

**【 Clear alerts automatically after 】** : When there is a clear warning, you can choose not to delete or you can set the delete interval. It is recommended to delete the useless information every few hours.

**【 Back up the alerts monthly 】** : Do you need to back up the alert information monthly?

**【 delete device and alerts at the same time 】** : Whether to delete the corresponding alert information when delete the device.

**【 keep Alerts active for 】** : It refers to how many months you want to keep the alert messages.

**【 Display Realtime Alerts for the last 】** : Display the alert information for the selected number of days

**【 Filter Multiple Alerts within 】** : Customize how many seconds to filter repeat alerts

**【 Filter Unknown Trap 】** : Whether to filter the unknown alert information

## **Send Rule**

The *Send Rule* means that the user needs to set the corresponding alert



## send rule

Rules are displayed on the interface as a list. Displaying items are *Start* (whether to enable the rule), *Rule Name*, *Fault Source* and *Send Type*. The user edits the rule by adding rules, modifying rules, and deleting rules via the list as shown below.

When click "**Add** ", the interface of alert rule setting appears. Fill in the data in the corresponding rules page. As shown below.

Alarm Rule Config

MailAlert Config NoteAlert Config

Rule Name:   Start

Filter conditions

Type

- Device
  - Discovery
  - Poll
- Trap
  - Syslog
  - Whole
  - Port
  - Unknown
- Plat
  - MAIN
  - DISCO
  - POLL
  - FAULT

Level  Critical  Major  Minor  Warning  Clear  Info

Net Element:

(A number of fault source ";" separated, also inputs 10 most muc

Mail Context

Sender address

Receiver address

Mail title  Default title  Custom title

Mail text  Default Text  Custom Text

add rule

At the top of the interface, you need to enter the rule name and choose whether to enable the rule. The default is enabled. The characters of rule

name should be within 20 bytes, either English or Chinese is OK.

**Filter conditions:** It should contain the specified fault source and the specified alert level. When an alert that meets these conditions occurs, the rule will be sent. The network element can be assigned multiple, separated by ";", and it supports up to 10 fault sources. When you fill in a network element, you can use wildcards:

(\*) — It can replace any character;

(!) — It indicates that the specified string is not included.

Mail alert configuration, the receiver address can be separated by ";" to send to more than one receiver, and it is up to 5.

Similarly, in the SMS alert configuration, the SMS receiver number can be separated by ";" to send to more than one receiver, and it is up to 5.

The mail's title and body can be in the default format, or you can customize the format. The default format is: Title [Fault Source] [Fault Description]; the text contains the fault source, fault level, fault description and failure time. SMS default content includes fault source, fault level and fault description. When the alert message to be sent contains the alert information exceeding the maximum capacity of a text message, the alert information will be sent in several pieces, and it will display which one is this message on the

SMS header. The SMS header format is for example 1/3.

## **Send Setting**

Send settings are mainly used to set parameters of the SMS and e-mail sending. The interface is as shown below.

Fault Configuration X

Basic Configuration Send rule Send Setting SMS Gateway

Mail Setup

Server Address

Requires Authentication

Username

Password

SMS Sender Setup

SMS center number:

Country code:

Transmission delay:  ms

Serial Parameter Setup

ID  Veri

Band rate  Data bit  Stop bit

Apply OK Exit

the interface of sending setting

The interface is divided into three parts. The top is the mail parameter

settings, and it needs to enter the mail server address. If the server requires authentication, you need to select the authentication item and fill in the account number and password.

The middle is the SMS parameter settings. It needs to set the local SMS center number as well as the country code and the transmission delay time. The value range of transmission delay is between 5000-50000 ms. In order to ensure the normal transmission of text messages, it is recommended to set the delay interval as 10000 ms or more than 10000 ms.

The bottom is the serial port parameters setting. You need to set the serial port number used by the GSM terminal and the related parameters of the serial port. The serial port parameters vary depending on the GSM terminal.

## **SMS Gateway**

Set the SMS gateway parameters, such as register the gateway account or add/modify/delete the gateway account, password and other settings. As shown below.

Fault Configuration X

Basic Configuration | Send rule | Send Setting | **SMS Gateway**

**User Register**

If you do not have a SMS gateway account, please register

Support for SMS Gateway  ▼

Go to the website to register

**Account List**

Gateway	Name	Type	Use ...

SMS Gateway setting

## Audible Alarm Settings

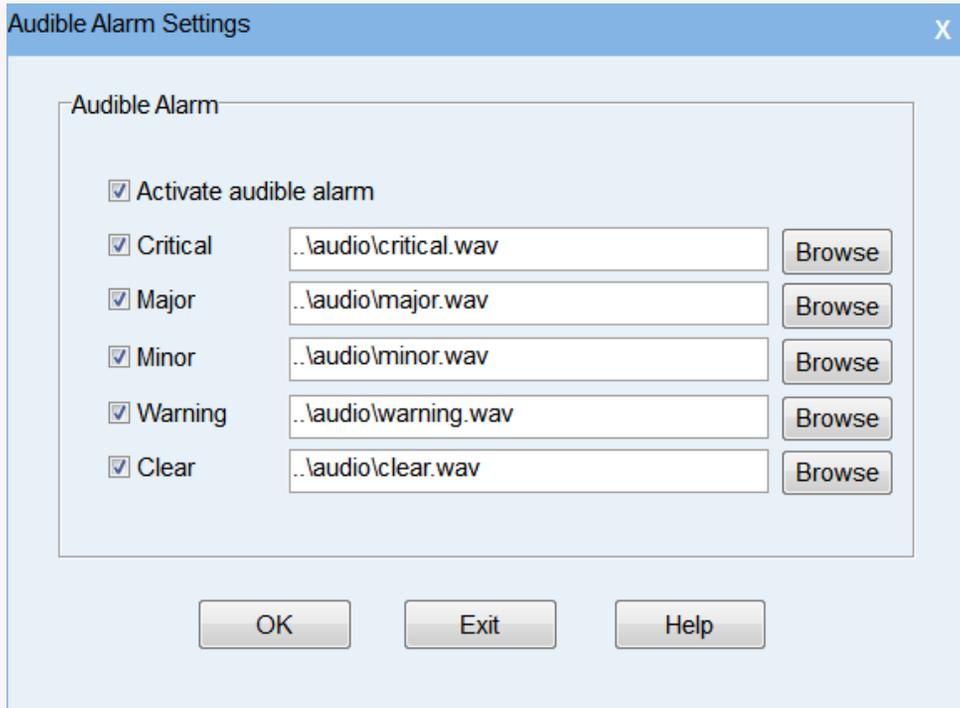
**Audible Alarm:** It can inform the network administrator through the audible sound when the system occurs an alarm. Users can be able:

Decide whether to generate a sound notification for a certain level of fault alarm;

Use different sound notifications for different fault levels;

Control the start and stop of the sound notification function.

The configuration interface of audible alarm is shown below.



the configuration interface of audible alarm

You can use the system default sound to be the sound of the alarm, or you can select the path of sound file through the "**Browse**" button which is following the different alarm levels. The check box before the different alarm level is used to control whether to enable the corresponding alarm sound.

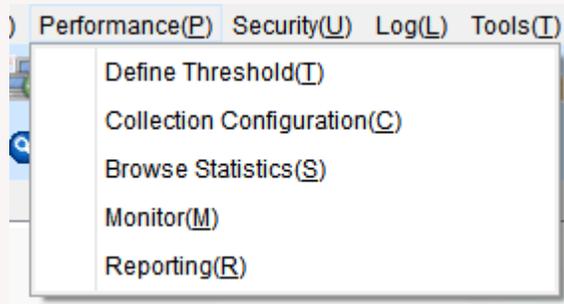
# Performance Management

## Overview for Performance Management

The performance management of NGBNView mainly provides the following functions: *Define Threshold*, *Collection Configuration*, *Browse Statistics*, *Monitor* and *Reporting*. *Collection Configuration* is the basis of performance management. The user sets the data that needs to be collected, such as how many data bytes a device receives, how many data bytes has been sent, how much the speed rate the port is, etc. However, the *Browse Statistics* is to collect the data statistics, and then generate reports as required to get an acquaintance of the current network usage. For example, it can get an acquaintance that whether the port utilization meets the requirements, whether the network load is balanced, and so on. Users can also according to the custom threshold rules, effective monitoring and management of the network through the network events, alerts and other means.

The menu of performance management is as shown below. The following

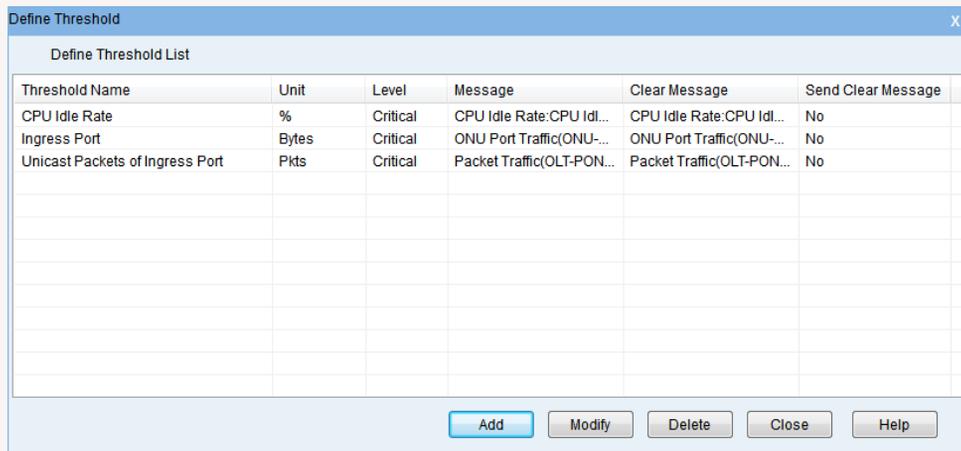
sections will provide a detailed description for these functions.



menu of performance management

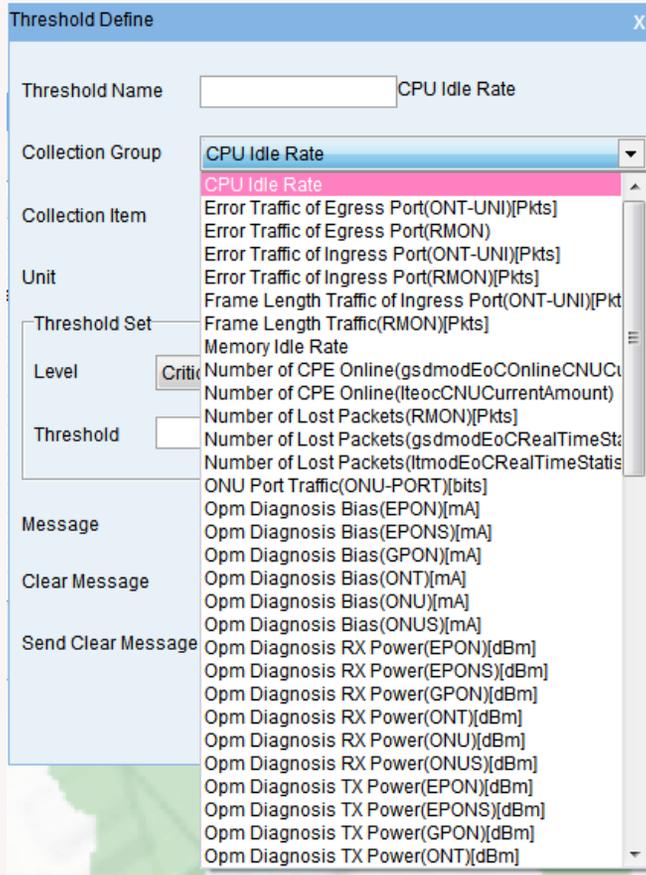
## Define Threshold

Click the menu "Performance " → "Define Threshold " item, the following interface appears:



the interface of the define threshold

The list shows all the defined thresholds in the current NGBNView, as shown in the figure above. According to the different collection group, it can be divided into different thresholds, which also can be divided into different collection items, but the general situation is to adopt the same threshold. Here, we add one to illustrate. Click "**Add**" button, the following interface will be appeared.



adding the threshold definition

**Threshold Name:** adds an identifier to the threshold (optional). If you do not add the identifier, it will default to the collection group name.

**Collection Group:** which kind of threshold do you want to add?

**Collection Item:** The different collection items which are under the

collection group

**Unit:** Collection units.

**Level:** The level of the alert that is generated by the threshold. There are five types: critical, major, minor, warning and clear.

**Threshold Type:** It has three kinds. As shown below.

max—If the collection value exceeds the threshold value, an alert event is generated

equal —If the collection value equals to the threshold value, an alert event is generated

min —If the collection value is less than the threshold value, an alert event is generated

**Threshold:** Compare the collection value with the threshold value and then generate a threshold alert event.

**Reset Value:** When the collection value reaches this value, the alert event is restored to the normal state (it means that the alert event is cleared).

**Message:** The description information is displayed when an alert event is generated.

**Clear Message:** The description information is displayed when the status of the alert event returns to normal (it means that the alert event is cleared).

**Send Clear Message:** Whether to generate a device normal event or not when the device status is restored.

Click **OK** to add a threshold, other values can be the default value except the threshold value and reset value. The threshold value and reset value must be filled as the circumstances may require.

In the interface of Threshold Define, you can click the "**Delete**" button to delete the selected threshold definition directly, or click the "**Modify**" button (or double click on the selected line), and then the interface of modifying threshold definition will be appeared. As shown below.

**Threshold Define** X

Threshold Name

Collection Group

Collection Item

Unit

**Threshold Set**

Level  Threshold Type

Threshold  Reset Value

Message

Clear Message

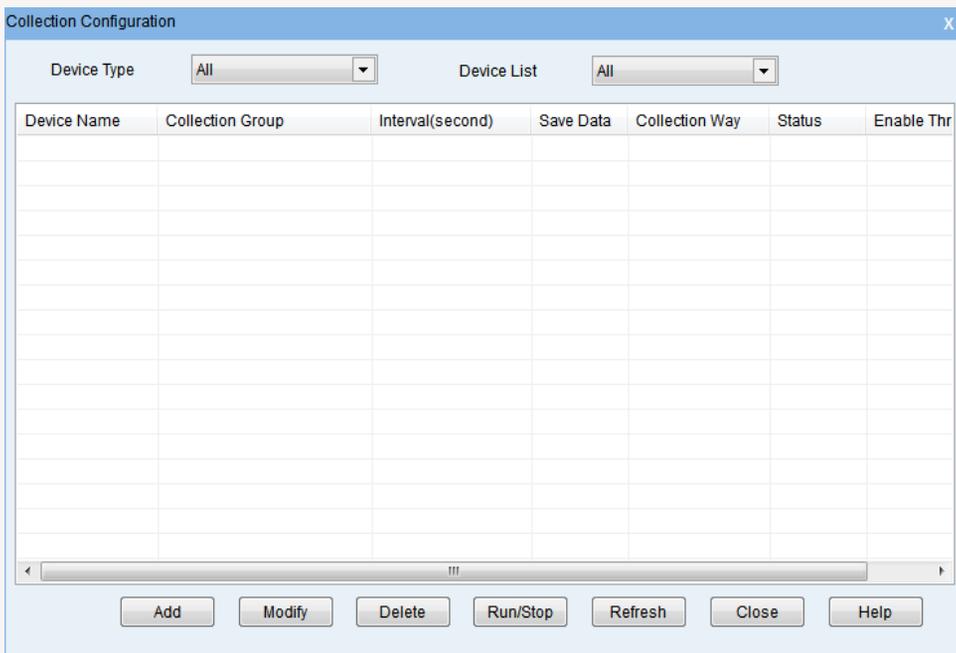
Send Clear Message

modify the threshold

## Collection Configuration

Through the collection configuration, you can add/ modify/delete the device to be collected and its collection items, and then perform the background collection on some equipment performances, and it can generate historical performance reports.

Click " **Performance** " → "**Collection Configuration**", and the following interface will be appeared.



The screenshot shows a window titled "Collection Configuration" with a close button (X) in the top right corner. Below the title bar, there are two dropdown menus: "Device Type" and "Device List", both currently set to "All". Below these is a table with the following columns: "Device Name", "Collection Group", "Interval(second)", "Save Data", "Collection Way", "Status", and "Enable Thr". The table is currently empty. At the bottom of the window, there is a horizontal scrollbar and a row of seven buttons: "Add", "Modify", "Delete", "Run/Stop", "Refresh", "Close", and "Help".

the interface of collection configuration

See to [Add/Modify/Delete the Collection Configuration](#) to view the addition/ modification/ deletion of the collection configuration.

**Run/Stop:** Select one or some equipment to collect;

**Refresh:** Refresh the interface.

**Close:** Close the interface;

**Help:** Start the online help documentation.

## Definition List for Collection Configuration (for a certain device)

Firstly select the device type. Secondly select the device IP from the corresponding device list. The definition list includes six attributes:

**Device Name:** device IP

**Collection Group:** collection items

**Interval (second):** collection interval

**Save Data:** To poll whether to save the collection data to the database.

**Collection Way:** Periodic collection or booking collection

**Status:** Start/stop the collection

**Enable Threshold:** Whether to enable the threshold



Note:

Periodic collection——The system collects data periodically according to the specified interval. Moreover, the system starts the collection task from the moment the user defines the data collection item until the user stops or deletes the data collection.

Booking collection ——The system initiates the collection task at the specified time and terminates the collection task at the specified time.

## Add/Modify/Delete the Collection Configuration

### Add

In the collection configuration interface, click the  , the following interface will appear.

BatchCollectionForm X

select type

On View  On Device Type

Select Device

Network NMS

- 10.4.2.0
  - 10.4.2.200
  - 10.4.2.202
  - 10.4.2.205
  - 10.4.2.210
  - 10.4.2.222

10.4.2.202

>

>>

<

<<

Next Cancel

Add data collection item (一)

BatchCollectionForm X

Collection Item  
Collection Group

All checked  
 Port Traffic(ifTable)[bits]  
 Packet Traffic(RMON)[Pkts]  
 Number of Lost Packets(RMON)[Pkts]  
 Error Traffic of Ingress Port(RMON)[Pkts]  
 Error Traffic of Egress Port(RMON)  
 Frame Length Traffic(RMON)[Pkts]  
 Opm Diagnosis Temp(EPONS)[iael]

Group Name	Name	Threshold

Interval (Second)

Collection Way

Periodic Collection       Booking Collection

Begin Date and Time

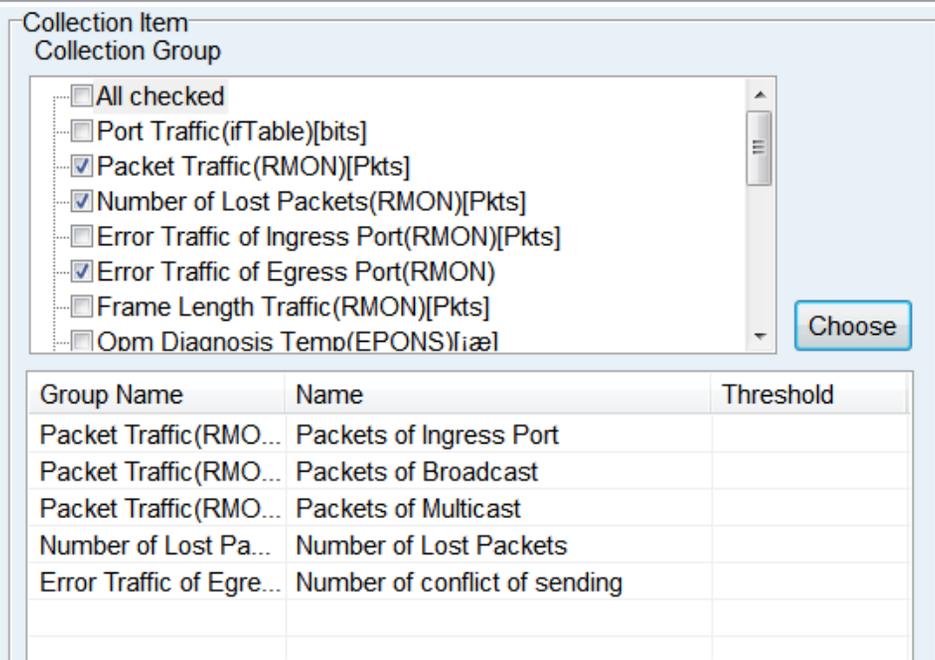
End Date and Time

Only collect the value of surpass the threshold for Opm

Save     
  Create Day Report     
  Create Weekly Report  
 Create Month Report

## Add data collection item (二)

**Collection Group:** Select the collection type. Firstly select an item, secondly click **Choose**, and then it will appear the follow interface.



Group Name	Name	Threshold
Packet Traffic(RMO...	Packets of Ingress Port	
Packet Traffic(RMO...	Packets of Broadcast	
Packet Traffic(RMO...	Packets of Multicast	
Number of Lost Pa...	Number of Lost Packets	
Error Traffic of Egre...	Number of conflict of sending	

collection group

Set the parameters for data collection configuration:

It includes: *Interval Second* (polling interval), *Save* (whether to save the collected data to the database), *Collection Type* (relative or absolute),

*Collection Way* (periodic collection or booking collection), *Threshold Setting*.

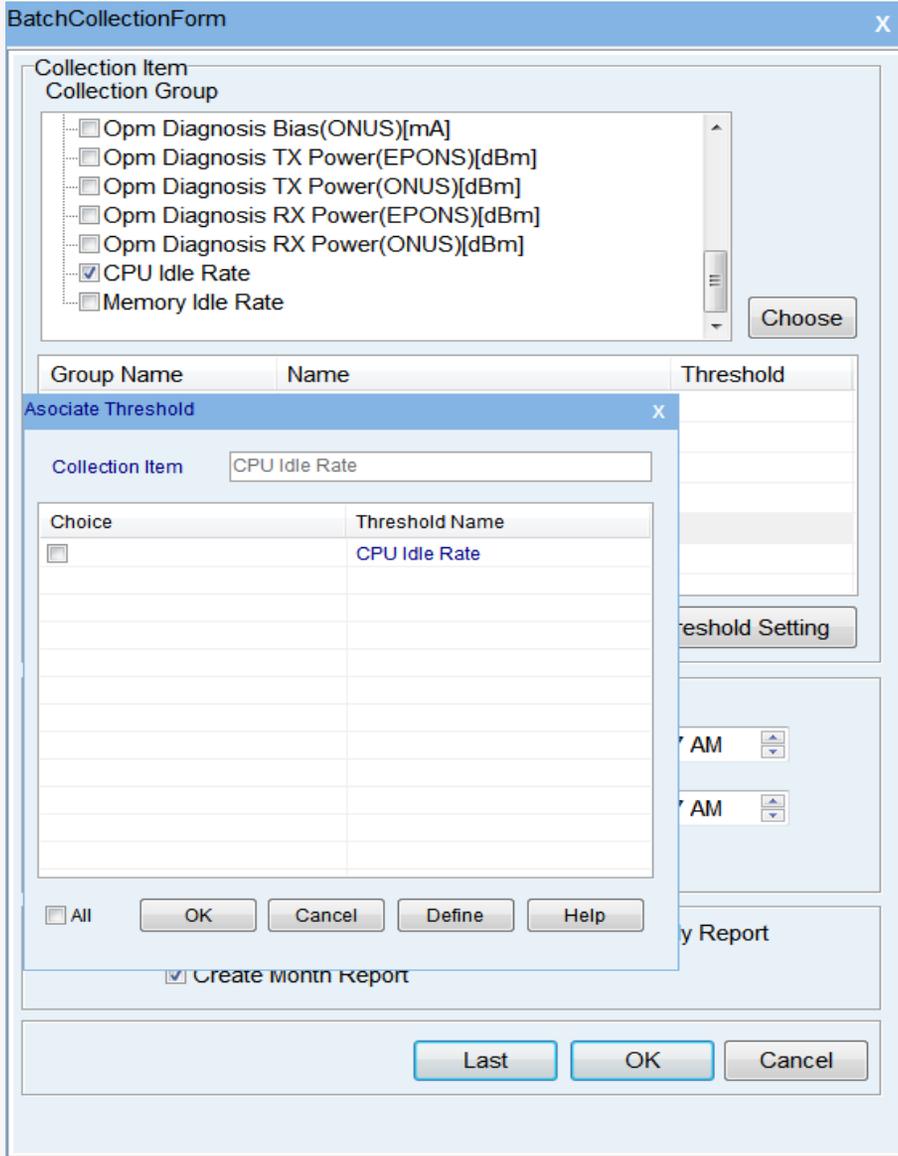
Among them, the collection mode is divided into two types: periodic collection and booking collection.

For periodic collection, the data collection is started immediately after the data collection is added. As to the booking collection, it requires to configure the begin time and end time of the collection. And the collection process will begin only when the begin time is reached. When select periodically collection to be the collection mode, the user can specify whether to generate a daily report.

Note: When the user specifies a time interval greater than 7 days, a prompt will pop up: Prompt due to the time interval is too large, may be lost too early to collect the data (by the system defined database emptying plan task decision).

**Threshold:** One data collection item can have multiple threshold settings.

Click on the **Threshold Setting**, and then the interface of adding threshold will appear. As shown below.



interface of adding threshold

“**Collection Item**” displays the data collection items to be added to the threshold. The following list shows all the defined thresholds. User can select one or multiple of the listed threshold definitions.

Click **OK** button in the interface of adding/modifying threshold to return to the threshold interface, and then the user-selected threshold definition will be displayed in the threshold column of "Collection Item". As shown below.

BatchCollectionForm X

Collection Item  
Collection Group

- All checked
- Port Traffic(ifTable)[bits]
- Packet Traffic(RMON)[Pkts]
- Number of Lost Packets(RMON)[Pkts]
- Error Traffic of Ingress Port(RMON)[Pkts]
- Error Traffic of Egress Port(RMON)
- Frame Length Traffic(RMON)[Pkts]
- Opm Diagnosis Temp(EPONS)[iæ]

Group Name	Name	Threshold
Number of Lost P...	Number of Lost Packets	Number of Lost Packets

Interval (Second)

Collection Way

Periodic Collection     
  Booking Collection

Begin Date and Time

End Date and Time

Only collect the value of surpass the threshold for Opm

Save     
  Create Day Report     
  Create Weekly Report

Create Month Report

adding data collection item

Click "**OK**" to complete the addition of data collection configuration.



Note:

- 1、 When select the booking collection to be the collection way, the booking time (end time - begin time) cannot be less than the time interval.
- 2、 If you want to generate a historical performance report, you must check to save and create the daily report, weekly report, and monthly report.

## Modify

In the data collection configuration interface, select one collection group→ click the "**Modify**" button (or double-click the selected line), and then the modifying interface will appear. As shown below:

**Collection Items** [X]

Device Name: 10.4.2.202

Collection Group: Number of Lost Packets(RMON)[Pkts] ▼

Name	Threshold
Number of Lost Packets	Number of Lost Packets

Interval (Second): 900 [Threshold Setting]

Collection Way:

Cycle collection       Precontract collection

Begin Date and Time: 4/ 6/2017 9:30:14 AM

End Date and Time: 4/ 6/2017 9:30:14 AM

Save       Create Day Report       Create Weekly Report  
 Create Month Report

[OK] [Cancel] [Help]

modification interface of collection item

The relationship of the above "collection item" and "collection group" may be a one-to-many, that is, one data collection type may contain multiple data

collection items.

It is similar to the adding of collection item. Users can set collection parameters for multiple collection items of this collection type, including *Interval Second* (polling interval), *Save* (whether to save the collected data to the database), *Collection Type* (relative or absolute), *Collection Way* (periodic collection or booking collection), *Threshold Setting*, etc. Click "**OK**" to save the parameter values.

## Delete

In the data collection configuration interface, select one collection group → click the "**Delete**" button, and then the system will pop up a confirmation dialog box. Click "**OK**" to delete the selected data collection type, or click "**No**" / "**Cancel**" to undo the operation.

## Start/Stop Data Collection

In the data collection configuration interface, select one collection group → click the "**Run / Stop**" button, you can immediately start /stop the current data collection.



Note: Only the data collection configuration with status of "start"/ "stop" can be started/ stopped.

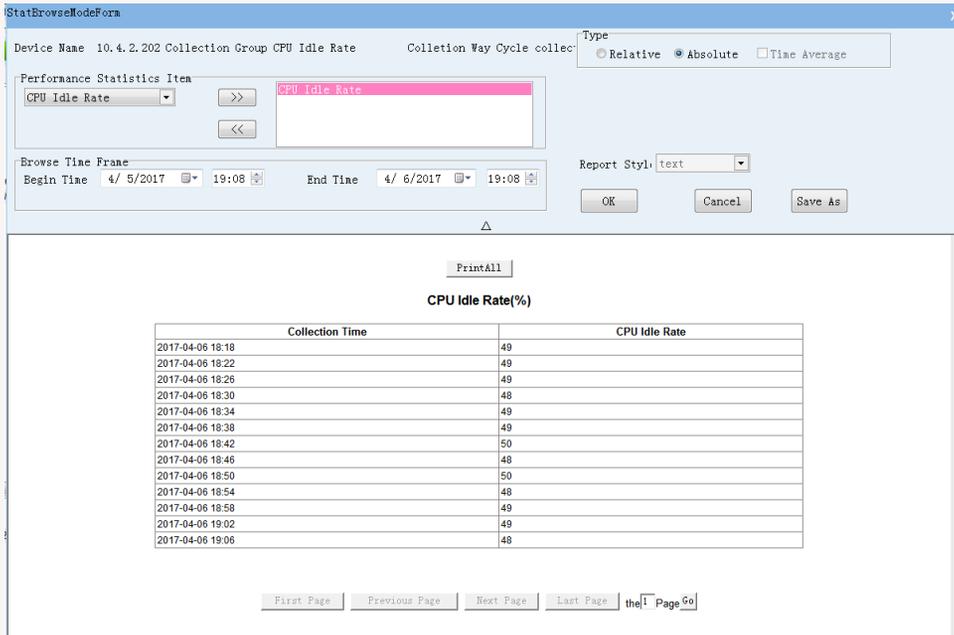
## Refresh

In the data collection configuration interface, you can click the "**Refresh**" to refresh the data.

## Browse Statistics

Click "**Performance**" → "**Browse Statistics**", the following interface appears.





CPU idle rate

## Monitor

### Overview for Real-time Monitoring

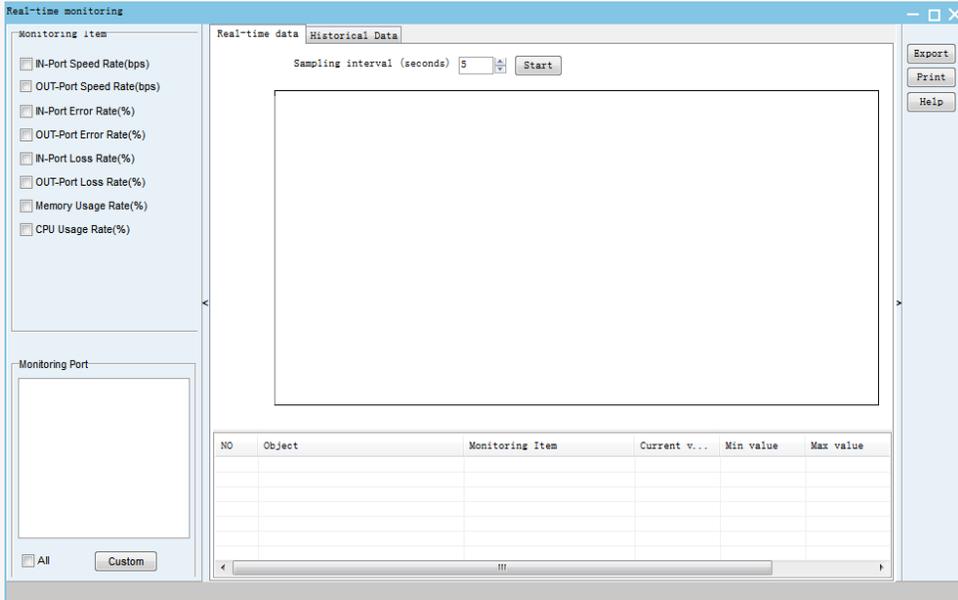
Real-time monitoring refers to real-time monitor the equipment performance and port performance, collecting and refreshing the display interface according to the specified time interval. It can help network managers

to better understand the operation status of the equipment so that network administrators can take the necessary steps in an emergency

## Operating Instructions for Real-time

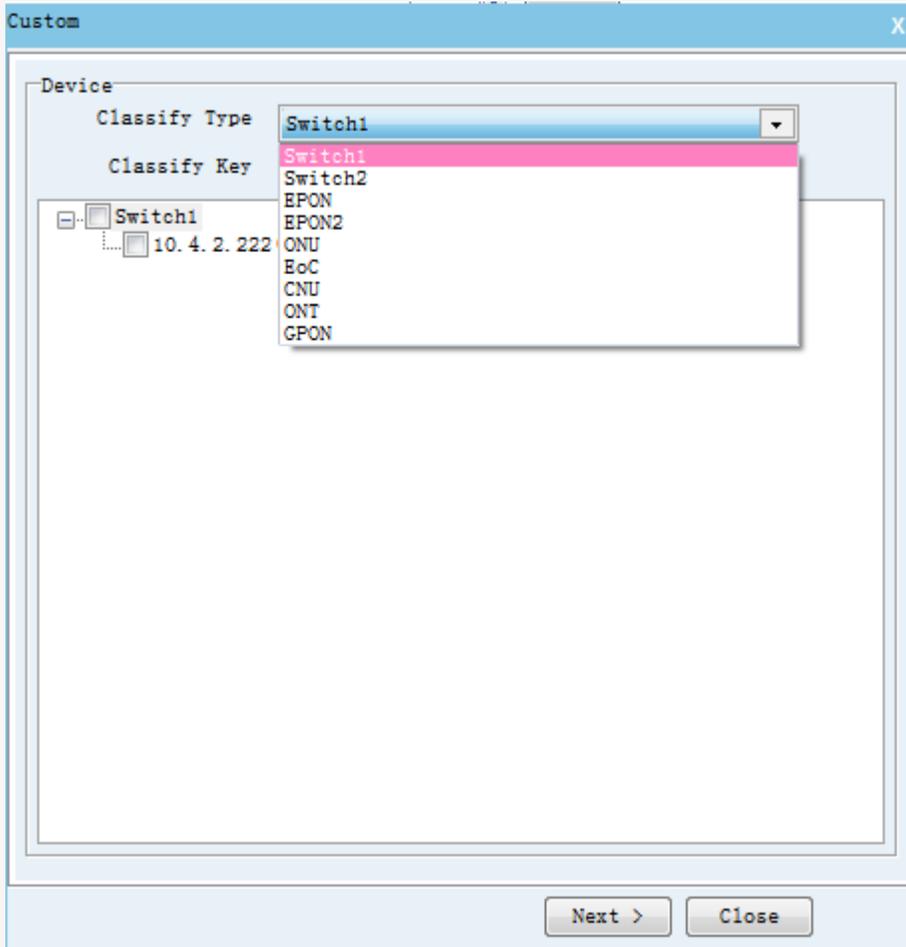
### Monitoring

In the main interface of real-time monitoring, select "**Performance**" → "**Monitor**" to open the main interface of performance monitoring. Or you can firstly select a certain device and then right-click it, secondly select "**Monitor**" on the toolbar that appears to open the main interface of performance monitoring.



interface of real-time monitoring

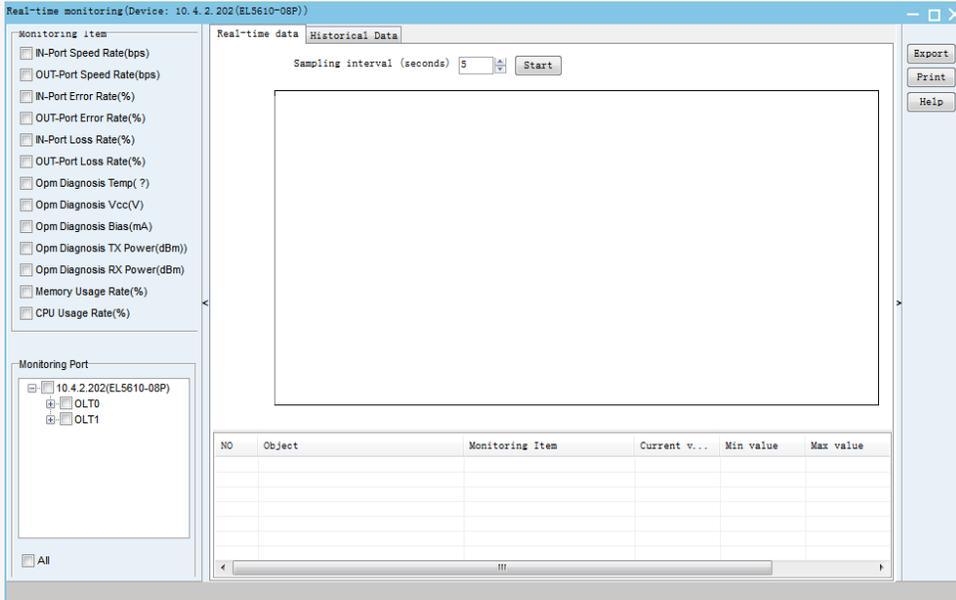
Click on the **Custom**, and then it will pop up the interface as shown below.



select the device type

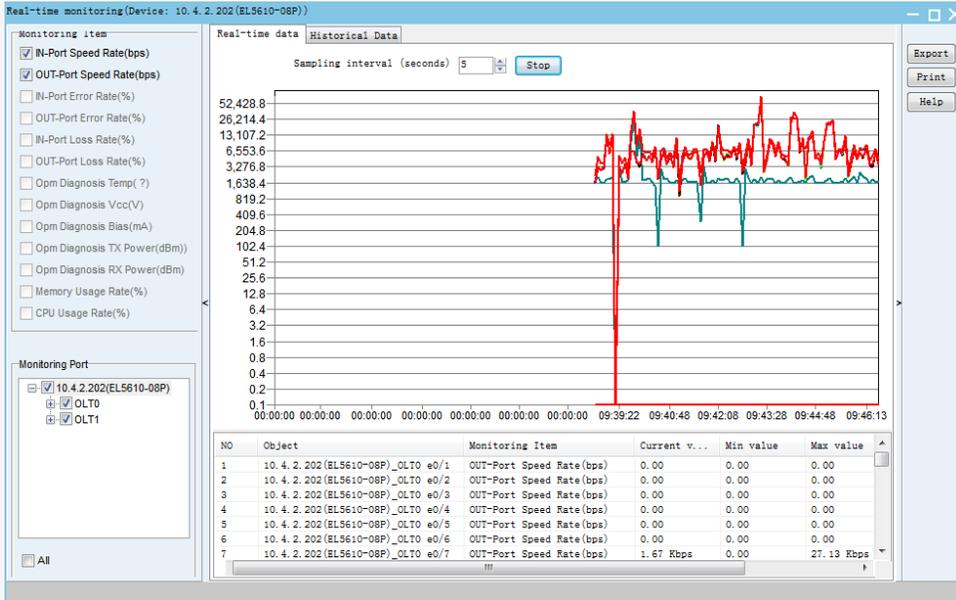
Select the classify type → Select one or more devices of the same type →  
Click **Next** and then it will pop up the interface as shown below.





### real-time monitoring

In the monitoring item, select the monitoring type. In the monitoring port, select the port you want to monitor. Click **Start** to start monitoring. As shown below.



real-time data of the monitored device



Note: The current window allows only 8 monitoring items, that is,

the list of monitored objects can only allow up to 8 lines of records. The system allows up to 10 real-time monitoring windows to be opened at the same time. And if you re-select the monitoring item, the previous information in the monitoring area will disappear and restart again. But you can view the value log via historical data.

Finally, the user can export or print the monitoring data according to the

actual needs.

## Monitoring Item

### **Port Rate**

It monitors the rate of egress (ingress) ports. By monitoring the rate diagram, you can view the operating status of the device to see the stability and size of the port rate over a certain time interval. It provides a reference for network administrators to discover, locate, and troubleshoot network problems.

### **Port Error**

It monitors the error rate of the egress (ingress) ports. By monitoring the rate map, you can view the operating status of the device to see the trend of the error rate in a certain time interval. It provides a reference for network administrators to discover, locate, and troubleshoot network problems.

### **Port Loss Rate**

It monitors the loss rate of the egress (ingress) ports. By monitoring the rate map, you can view the operating status of the device to see the trend of packet loss rate of the device at a certain time interval. It provides a reference for network administrators to discover, locate, and troubleshoot network

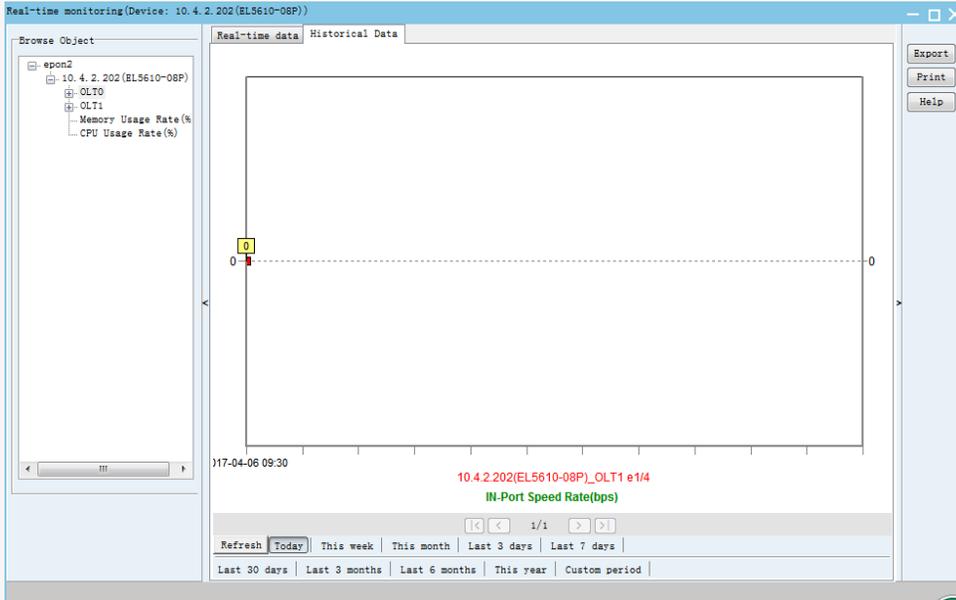
problems.

### **Memory/CPU Usage Rate**

It monitors the memory / CPU usage rate of the device. By monitoring the memory / CPU usage rate, you can view the operating status of the device to see the changing status of the device's memory / CPU usage rate during a certain time interval. It provides a reference for network administrators to discover, locate, and troubleshoot network problems.

## **Historical Data**

View the monitoring records saved in the history database via historical data. As shown below.



memory utilization

It can view the monitoring records of today, this week, this month, last 3 days, last 30 days, last 3 months, last 6 months, this year and custom period.

## Reporting

It is related to the scheduled task. In the scheduled task, specify the time for the report to be generated in the scheduled task. After finishing configuration, the server will automatically generate the report at the specified time. Users can view history performance report via this menu.

### History Performance Report



Daily Report



Weekly Report



Monthly Report

history performance report

### History Performance Report

File Name	Modify Time	Size
2017_3_31.htm	2017/4/1 04:00	269 Bytes
2017_4_1.htm	2017/4/2 04:00	6 KB
2017_4_2.htm	2017/4/3 04:00	17 KB
2017_4_3.htm	2017/4/4 04:00	15 KB
2017_4_4.htm	2017/4/5 04:00	16 KB
2017_4_5.htm	2017/4/6 04:00	13 KB

daily report

### History Performance Report

File Name	Modify Time	Size
2017_3_26-2017_4_1.htm	2017/4/3 02:00	6 KB

weekly report

## History Performance Report

File Name	Modify Time	Size	
2017_3.htm	2017/4/1 03:00	263 Bytes	

monthly report



Note: To generate the report, you must set the time in the scheduled task, and you must check the Daily Report, Weekly Report, and Monthly Report in the settings of the collection configuration.

# Security Management

## Security Menu

The menu functions of security management are as shown below. Subsequent sections will give a detailed description for these functions.

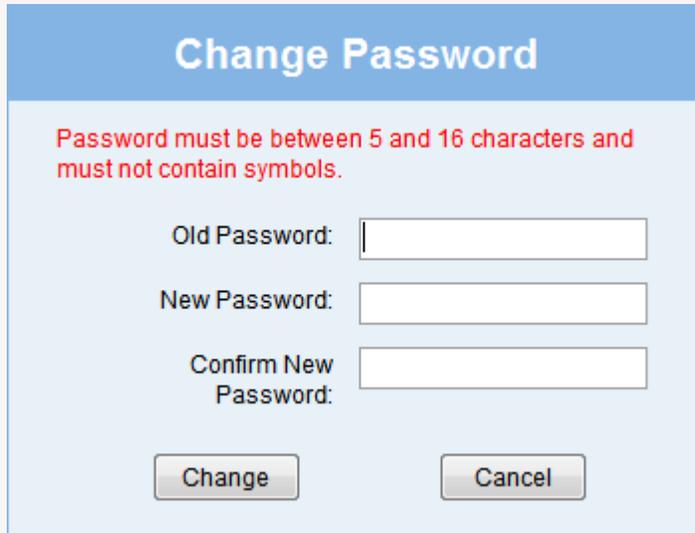


drop-down list of security management

## Change Password

Users who are already logged in to the system can modify their passwords by clicking on the **"Security " → "Change Password "**, as shown

below.



**Change Password**

Password must be between 5 and 16 characters and must not contain symbols.

Old Password:

New Password:

Confirm New Password:

The image shows a 'Change Password' dialog box with a blue header. Below the header, there is a red instruction: 'Password must be between 5 and 16 characters and must not contain symbols.' There are three text input fields labeled 'Old Password:', 'New Password:', and 'Confirm New Password:'. At the bottom, there are two buttons: 'Change' and 'Cancel'.

interface of password modification

## Online User Manage

It displays information about online users and TL1 users. As shown below:



The screenshot shows a web application window titled "Online User Manage". It contains a table with the following data:

User ID	Session ID	Login IP	Port	Login Time
admin	60E2F243FF098D8EC7F2BF0B0D066...	127.0.0.1	4876	4/5/2017 7:06:46 PM
user	39525338CB5D55B784750A64CC8523...	127.0.0.1	6588	4/6/2017 10:02:48 AM

A "Prompt" dialog box is overlaid on the table, asking "Are you sure to kick out user?". It has "Yes" and "No" buttons. At the bottom of the application window, there are "Kick Out", "Refresh", and "Exit" buttons.

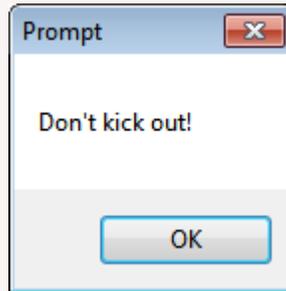
Kicking out the online user

The screenshot shows a "Prompt" dialog box with the following text:

Has been kicked out, will be forced to exit the system!

OK

the prompt for the user who is kicked out



the prompt for the failure of user kicking out

## Security Configure

### Overview for Security Configuration

It centrally manages system users, including:

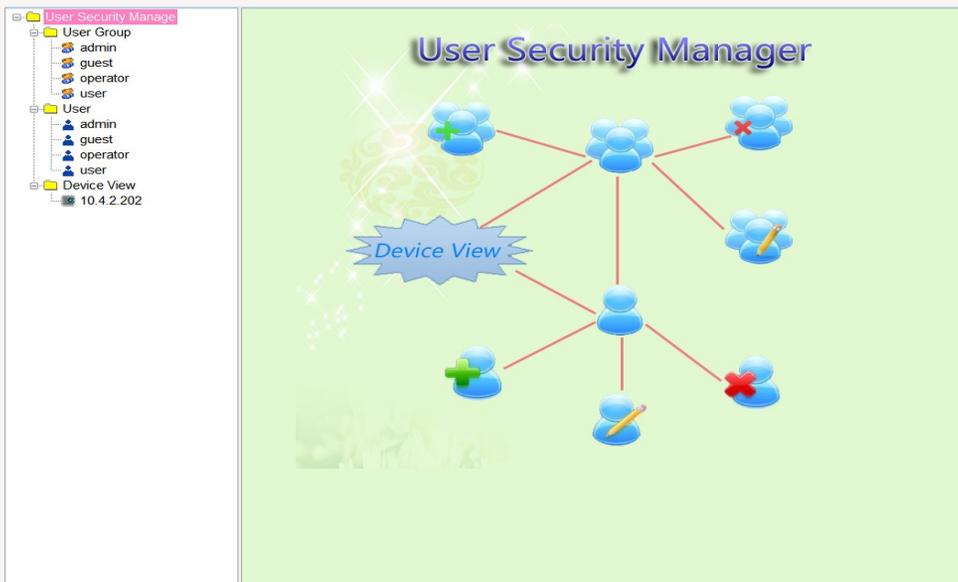
- 1、 Create system user
- 2、 Delete system user
- 3、 Set the user's account and password
- 4、 Display and set the user's current status
- 5、 Set the user's privileges
- 6、 Set user-manageable devices
- 7、 Set the user's profile

8、 View the user's operation record

9、 Modify user password

10、 Query user-manageable device, personal name, and user ID

The system user management list displays the ID, user name, user group, and user status of the current system user. The status includes the online status, offline status, enable/disabled status, account expiration, password expiration, and entry inhibited. The main interface of user security management is as shown below.

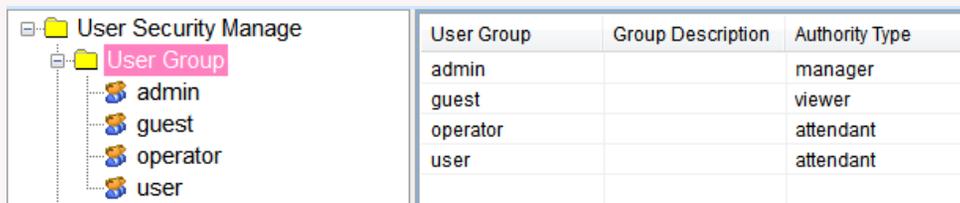


main interface of user security manager

# User Group

## Overview for User Group

The user group is a collection of user authorities, and each user must have a corresponding user group. As shown below.



The screenshot shows a user management interface. On the left, a tree view under 'User Security Manage' contains a 'User Group' folder, which is highlighted in pink. Below it are four user icons labeled 'admin', 'guest', 'operator', and 'user'. On the right, a table lists the user groups and their authority types.

User Group	Group Description	Authority Type
admin		manager
guest		viewer
operator		attendant
user		attendant

User Group

## Add User Group

Click the **Add** button, the following interface appears:

The image shows a software dialog box titled "Add User Group". It features a light blue background and a title bar with a close button (X). The dialog contains three main input areas: a text box for "User Group", a large yellow text area for "Group Description", and a dropdown menu for "Authority Type". The dropdown menu is currently open, displaying three options: "manager" (highlighted in pink), "attendant", and "viewer". At the bottom of the dialog, there are two buttons: "OK" and "Cancel".

Add User Group

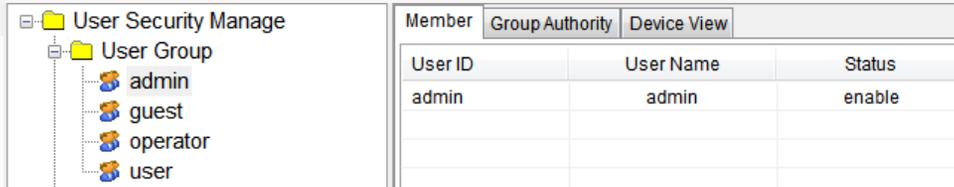
**User Group:** User group name.

**Group Description:** It is a brief description of the group, such as operation authorities, members and so on.

**Authority Type:** It has three types of authorities: manager, attendant, viewer. Different types of authorities correspond to different authorities.

## Operation for Single User Group

**Member:** Each user group has a user with the same name as the user group. The following is the admin user group membership.

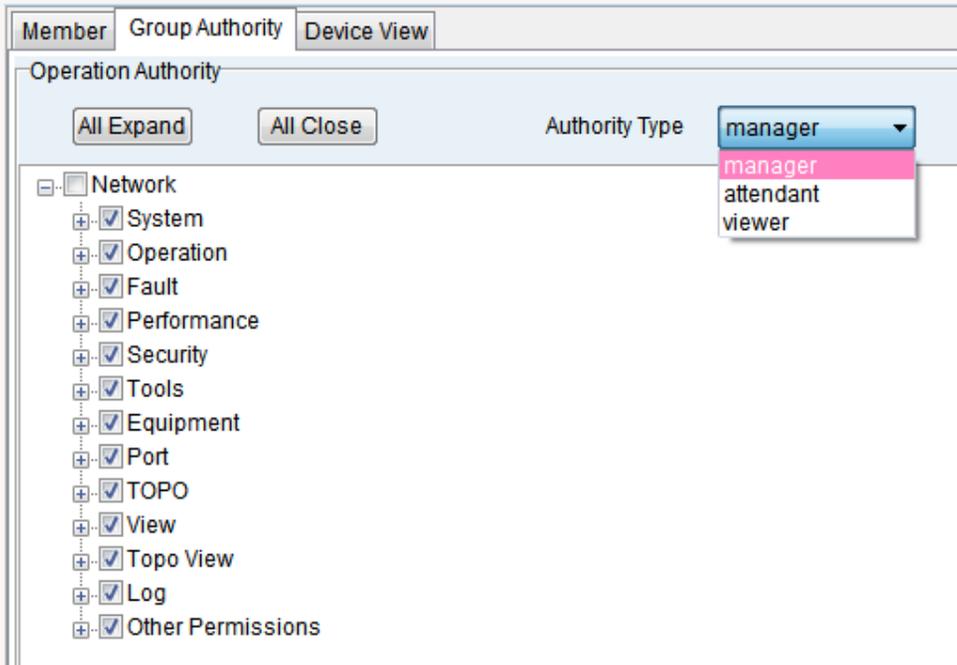


The screenshot shows a user management interface. On the left, a tree view under 'User Security Manage' contains a 'User Group' folder with four sub-items: 'admin', 'guest', 'operator', and 'user'. On the right, a table with tabs 'Member', 'Group Authority', and 'Device View' is displayed. The 'Member' tab is active, showing a table with columns 'User ID', 'User Name', and 'Status'. The first row contains the values 'admin', 'admin', and 'enable'.

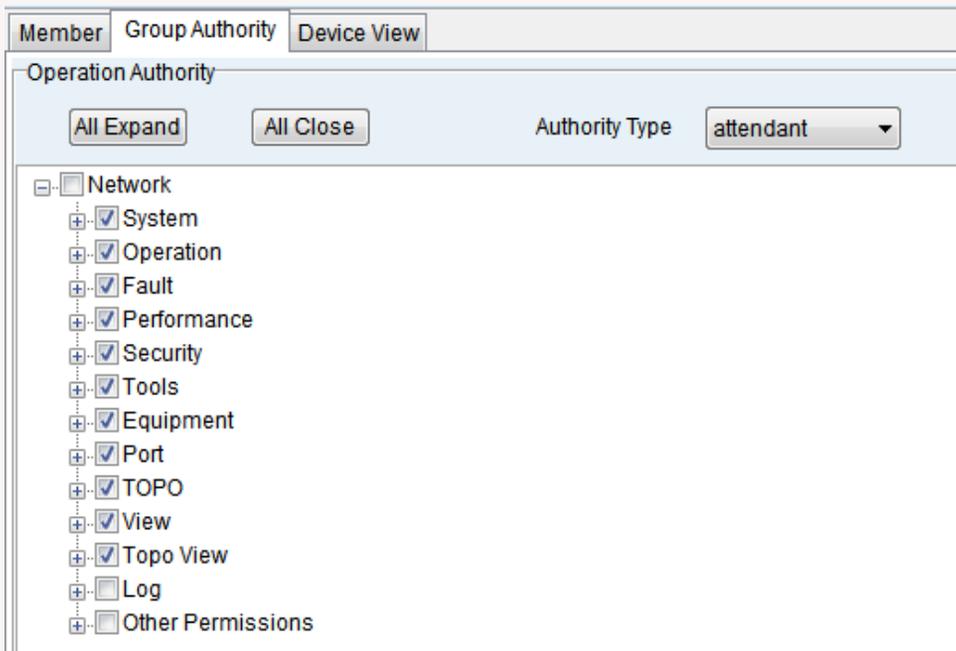
User ID	User Name	Status
admin	admin	enable

admin user group

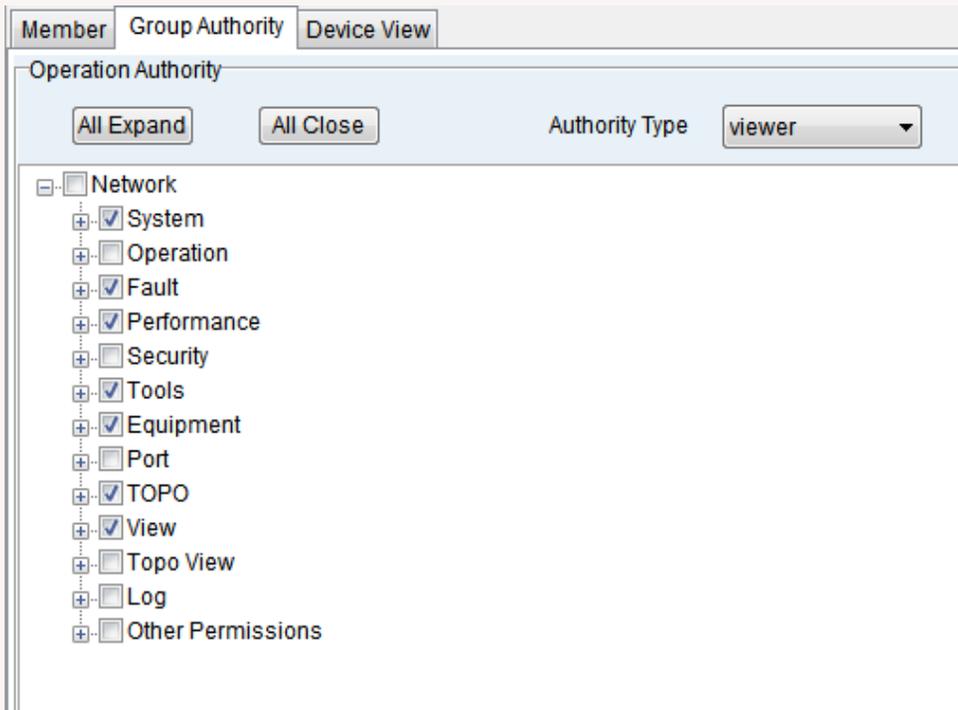
**Group Authority:** Different user groups correspond to different authorities. The following figure shows manager authority which is at the highest level. The second is the attendant and the lowest level is the viewer.



manager authority



attendant authority



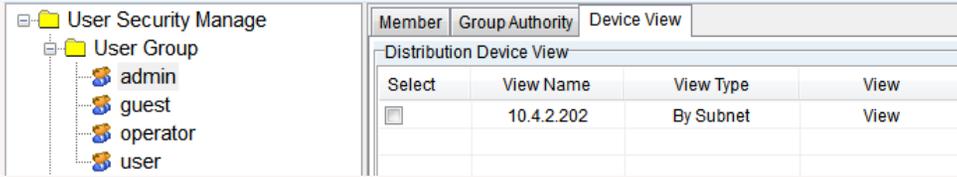
Viewer authority



Note: Each user group can subdivide the operation authorities. See Table 9-1

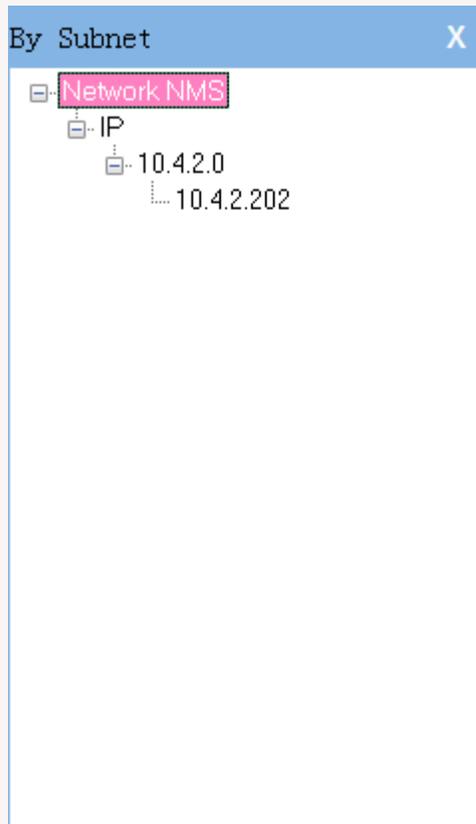
for details.

**Device View:** It requires adding the device to the device view so that the user group can manage this device view.



device view

As shown above. After selecting, the user group can manage the device view. The following interface will appear if you click to view.



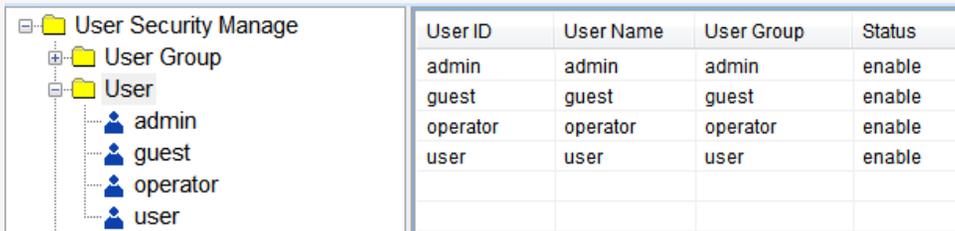


								highest level. It can not only configure the system, backup and restore the database and shut down the server, but also perform security management.
--	--	--	--	--	--	--	--	--

## User

### User

The following figure shows the user operation interface. The system defaults to four users.



The screenshot shows a user management interface. On the left is a tree view with the following structure:

- User Security Manage
  - User Group
  - User
    - admin
    - guest
    - operator
    - user

On the right is a table with the following data:

User ID	User Name	User Group	Status
admin	admin	admin	enable
guest	guest	guest	enable
operator	operator	operator	enable
user	user	user	enable

user interface

## Add User

Adding user mainly includes three sections: the first is user ID, password and the user group. The second is the account duration and password duration. The third is the user information, including the user name, phone number, E-Mail address and job address. Among them, the user ID and user password are required items. As shown below.

The screenshot shows a dialog box titled "Add User" with a close button (X) in the top right corner. The dialog is divided into three main sections. The top-left section contains four fields: "User ID:" (text input), "Password:" (text input), "Confirm:" (text input), and "User Group:" (dropdown menu with "admin" selected). The top-right section contains two fields: "Account Limit(Days):" (text input with "0") and "Password Limit(Days):" (text input with "0"). The bottom section contains four fields: "User Name:" (text input), "Telephone:" (text input), "E-Mail:" (text input), and "Job Address:" (text input). At the bottom of the dialog are three buttons: "Add", "Cancel", and "Help".

adding user

**User ID:** the required item when adding the user ( the length is 5-28 ) 。

**Password:** the required item when adding the user

**User Group:** the required item when adding the user and it defaults to guest.

**Account Limit (Days):** account duration. 0 means no time limit, the default is 0.

**Password Limit (Days):** password duration. 0 means no time limit, the default is 0.

## **Edit User**

### *User Information*

Modifying the user is almost the same as adding the user. The difference is that the password modification is independent and it has the "User Status". Click on a certain user to edit the user, and it will automatically pop up the user interface.

The screenshot shows a web-based user management interface. On the left is a tree view with folders for 'User Security Manage', 'User Group', and 'User'. Under 'User', there are three user icons labeled 'admin', 'guest', and 'operator', and another 'user' icon. Below these is a 'Device View' folder. The main area has tabs for 'User Info', 'User Authority', 'Device View', and 'Access Control List'. The 'User Info' tab is active and contains several fields: 'User ID' (admin), 'User Group' (admin), 'User Status' (enable), 'Account Limit(Days)' (0), and 'Password Limit(Days)' (0). There is a 'Modify Password' button. Below these are fields for 'User Name' (admin), 'Telephone', 'E-Mail', and 'Job Address'. A dropdown for 'Default Access Control List Matching Strategy' is open, showing options 'allow', 'allow', and 'decline'. At the bottom are 'OK', 'Refresh', and 'Help' buttons.

#### user information

**User Status:** enable/disable. When **enable** is selected, if the user is logged in, the user will be forced to exit the system.

**Account Limit:** Specify the number of days. If you do not re-modify after the specified time, you cannot use it. 0 is unlimited.

**Password Limit:** Specify the number of days. If you do not re-modify after the specified time, you cannot use the password. 0 is unlimited.

**Modify Password:** Click on the “**Modify Password**”, and then the interface will pop up as below.

**Modify Password**

UserName: admin

New password:

Confirm password:

Password duration: 0

OK Cancel

modify password

User Name: user name

Telephone: telephone number of the user

E-Mail : E-Mail address of the user

Job Address: job address of the user

Default Access Control List Matching Strategy: Access to a specific range of IP addresses. “allow” means that you can access to that specific range of IP addresses; “decline” means that you cannot access to that specific range of IP addresses

## *User Authority*

It defaults to the user group authority, but you can customize the authority.

For more information, see *User Group Authority*.

## *Device View*

This function must firstly add the device to the user group, otherwise it cannot be operated.

## *User Access List*

Increase the access control list. As shown below.

The screenshot shows a software interface with a main window titled "Distribution Access Control List" and a modal dialog box titled "User Access List".

The main window has a tabbed interface with "User Info", "User Authority", "Device View", and "Access Control List" tabs. Below the tabs is a table with the following columns: "Select", "List Name", "Start IP Address", "End IP Address", "Access Type", "Modify", and "Delete". The table is currently empty.

The "User Access List" dialog box is open, showing the following fields:

- List Name:
- Start IP Address:
- End IP Address:
- Access Type:

At the bottom of the dialog box are "OK" and "Cancel" buttons. At the bottom of the main window are "OK", "Refresh", "Add", and "Help" buttons.

Increase the access control list

**List Name:** list name

**Start IP Address:** The start address of the access IP.

**End IP Address:** The end address of the access IP.

**Access Type:** Whether the user can access this IP address.

### **Delete User**

Use the mouse to click to display a record of the user to delete the record, and then click "**Delete**" icon of the toolbar to delete the user. At this moment, the following dialog box will appear. If you click "**Yes**", the user will be deleted.



No.	User Name	Operate Name	Time	Status
20	admin	User login	2017-05-05 17:27:37	Success
19	admin	User exit	2017-05-05 17:27:36	Success
18	admin	User login	2017-05-05 17:14:23	Success
17	admin	User exit	2017-05-05 17:14:22	Success
16	admin	User login	2017-05-05 16:48:48	Success
15	admin	User exit	2017-05-05 16:48:47	Success
14	admin	User exit	2017-05-05 16:39:27	Success
13	admin	User login	2017-05-05 16:30:11	Success
12	admin	User exit	2017-05-05 16:30:09	Success
11	admin	User login	2017-05-05 16:29:59	Success
10	admin	User login	2017-05-05 16:16:12	Success
9	admin	User exit	2017-05-05 16:16:12	Success
8	admin	User login	2017-05-05 16:13:50	Success
7	admin	User exit	2017-05-05 16:13:50	Success
6	admin	User login	2017-05-05 16:13:41	Success
5	admin	User exit	2017-05-05 16:13:40	Success
4	admin	User login	2017-05-05 14:49:37	Success
3	admin	User exit	2017-05-05 14:49:36	Success
2	admin	User login	2017-05-05 14:38:00	Success
1	admin	User login	2017-05-05 10:36:49	Success

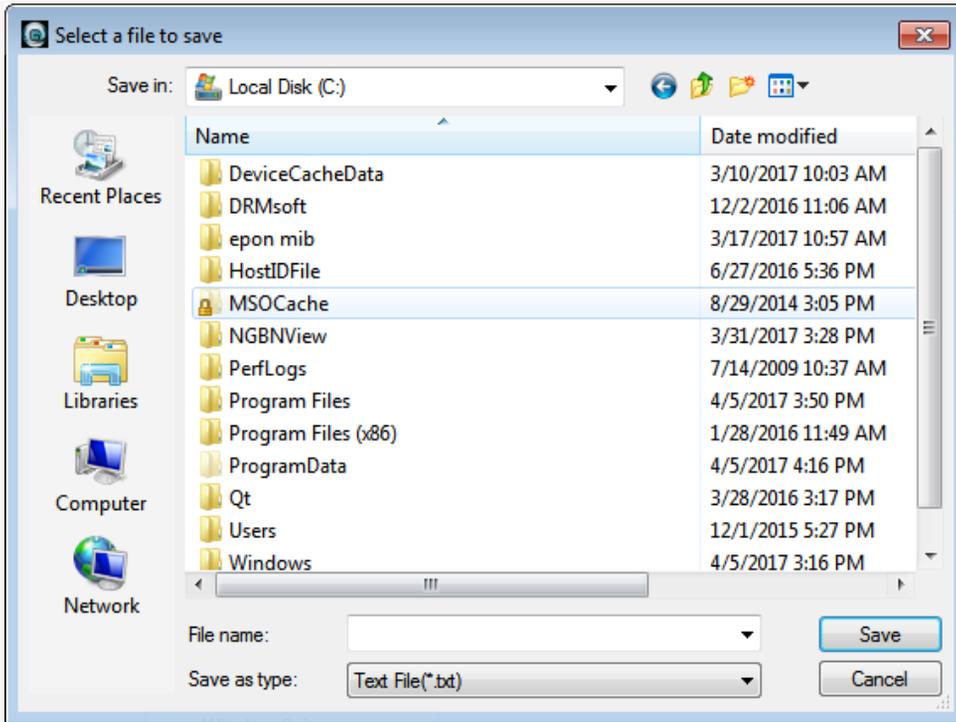
Monthly Auto Clear


Total: 20 Each 40 Page The 1 / 1 Page

### operation record of system user

When you click “Save to File”, the File dialog box appears. As shown below.

Set the correct path, file name and file type, and then click the **Save** button.



dialog box of save file

## Device View

It means that you can configure a view that contains a specific device and assign it to a specified user so that the user can only manage the device contained in the view.

Device View Configure	
View Name	View Type
10.4.2.202	By Subnet

device view

If there is a corresponding device under the View Name, double-click the column to open the device view window. As shown in below.

Device View Configure	
View Name	View Type
10.4.2.202	By Subnet

By Subnet X

- Network NMS
  - IP
    - 10.4.2.0
      - 10.4.2.202

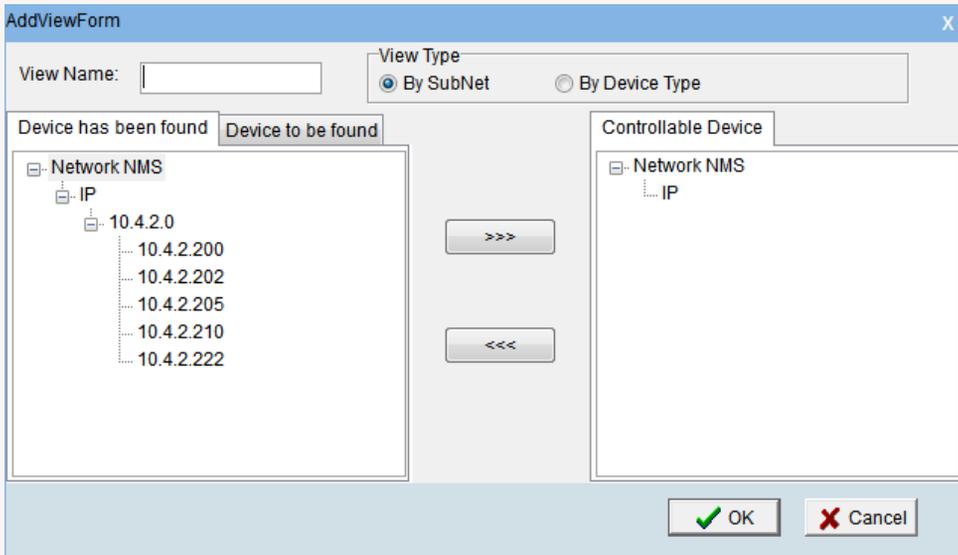
Device View Configuration

If there is no appropriate view in the list, you can add a new view.

Adding a view refers to the device in which the current management object database is stored in the left tree for the user to select the manageable device and create a new view.



Click the , as shown below.



Add a new view

Set the view name → Select the view type → Select the appropriate device from the left side of the device tree, which can form a device management view.

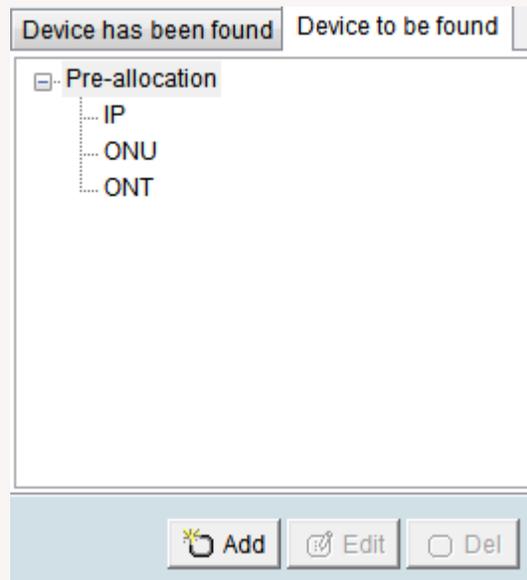
Click the **Delete** button to remove the selected view from the system. If the view is assigned to the user, it will be also removed from the user.



Note: If the user deletes the device by the deleting NE, the system will delete the corresponding device in the management device view.

**Device has been found:** The device already exists in the system.

**Device to be found:** It is used to search for devices that already exist but not yet found. As shown below.



Device to be found

Click the **Add** button, the following interface will appear.

**Add/Modify PreAssigned IP**

**Subnet**  
Subnet:  Mask Bits:

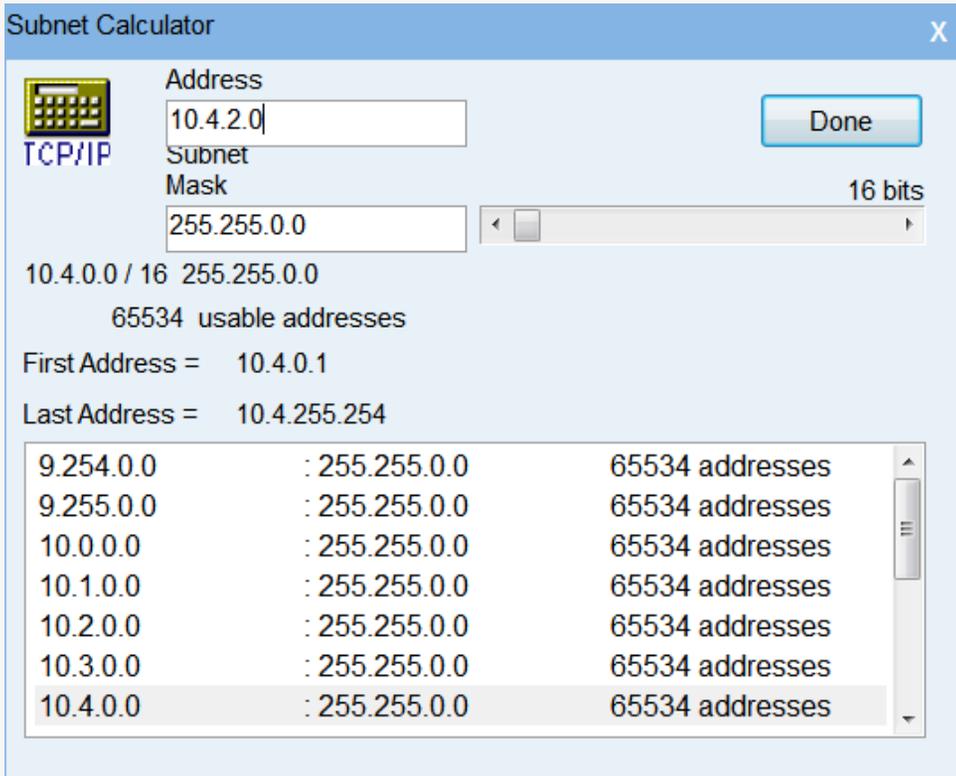
**IP Section**  
Start IP:   End IP:   IP Number:

**ONU**  
OLT IP:   
 SLOT No  
SLOT No:   
 PON Port  
SLOT No:  PON No:   
 ONU No  
SLOT No:  PON No:   
ONU Start No:  ONU End No:

**ONT**  
OLT IP:   
 SLOT No  
SLOT No:   
 PON Port  
SLOT No:  PON No:   
 ONT No  
SLOT No:  PON No:   
ONT Start No:  ONT End No:

Adding operation

**Subnet:** Select a subnet to calculate subnet. As shown below.



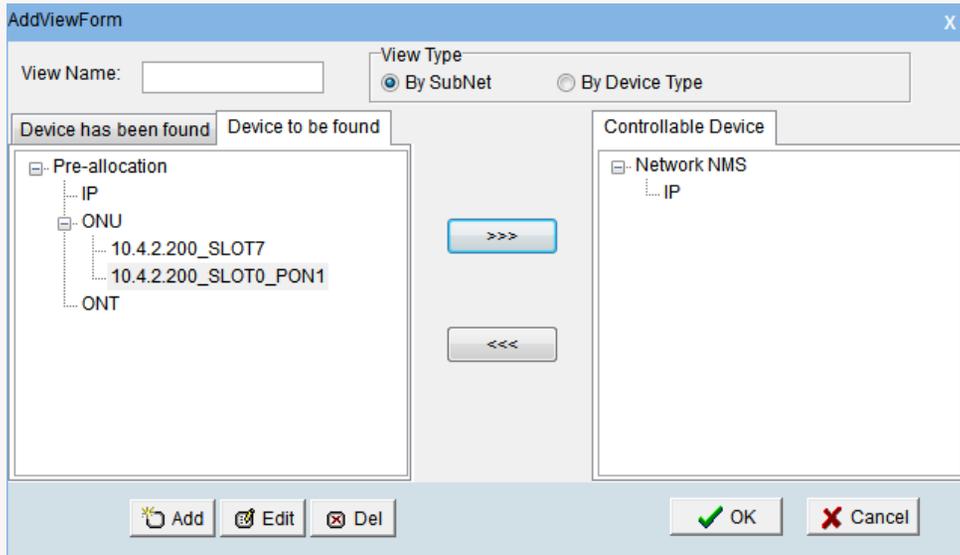
subnet calculator

**IP:** It is used to calculate the available IP addresses. The start IP address refers to the IP start address, and the end IP address refers to the IP end address. IP number refers to the number calculated from the start IP address. Moreover, you can only choose one between the IP end address and the IP number.

**ONU:** It searches the ONU device. Firstly, select the IP address of the

OLT and then search it through the slot number / PON port / ONU number.

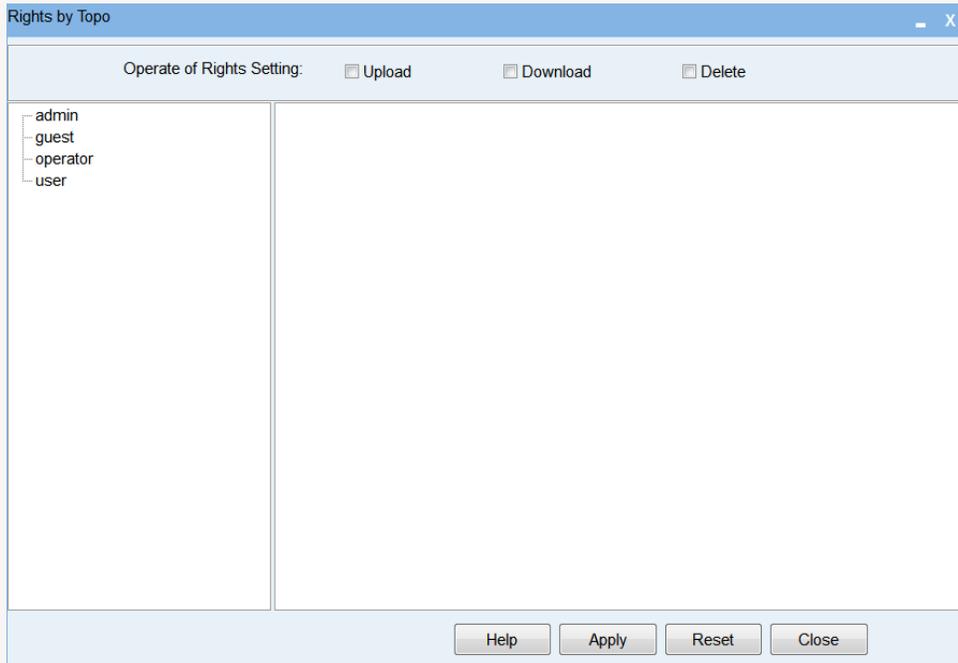
The search result is shown below.



search result

## Right by Topo

Click "**Security**" → "**Rights by Topo**" menu to specify the topo map rights for the user (this function requires the back-end server to run the FTP server). As shown below.



Rights by Topo

## ONT User Manage

### Add User

User management interface is as follows, and it can be able to add/delete/modify/refresh the user.



Ont User Operation Form

**User Info**

User ID: 0003

Password: \*\*\*\*\*

Confirm: \*\*\*\*\*

User Name: ontUser3

**choose ONT**

Device IP 10.4.2.205

- 0/2/1(10.4.2.205\_OLT0\_PON2\_ONT1)
- 0/3/1(10.4.2.205\_OLT0\_PON3\_ONT1)
- 0/3/2(10.4.2.205\_OLT0\_PON3\_ONT2)
- 0/3/3(10.4.2.205\_OLT0\_PON3\_ONT3)
- 0/3/12(10.4.2.205\_OLT0\_PON3\_ONT12)
- 0/4/1(10.4.2.205\_OLT0\_PON4\_ONT1)
- 0/4/2(10.4.2.205\_OLT0\_PON4\_ONT2)
- 0/4/3(10.4.2.205\_OLT0\_PON4\_ONT3)
- 0/4/4(10.4.2.205\_OLT0\_PON4\_ONT4)
- 0/5/1(10.4.2.205\_OLT0\_PON5\_ONT1)

Config Clear Cancel

Add ONT User

## User Modify/Delete/Locate

After selecting the user, click the **"Modify"** button or right click to select **"Modify"** to modify the user information and the corresponding ONT.

**Ont User Operation Form**

**User Info**

User ID: 0003

Password:

Confirm:

User Name: ontUser3

**choose ONT**

Device IP: 10.4.2.205

- 0/2/1(10.4.2.205\_OLT0\_PON2\_ONT1)
- 0/3/1(10.4.2.205\_OLT0\_PON3\_ONT1)
- 0/3/2(10.4.2.205\_OLT0\_PON3\_ONT2)
- 0/3/3(10.4.2.205\_OLT0\_PON3\_ONT3)
- 0/3/12(10.4.2.205\_OLT0\_PON3\_ONT12)
- 0/4/1(10.4.2.205\_OLT0\_PON4\_ONT1)
- 0/4/2(10.4.2.205\_OLT0\_PON4\_ONT2)
- 0/4/3(10.4.2.205\_OLT0\_PON4\_ONT3)
- 0/4/4(10.4.2.205\_OLT0\_PON4\_ONT4)
- 0/5/1(10.4.2.205\_OLT0\_PON5\_ONT1)

**Config** **Clear** **Cancel**

Modify ONT User

Select the user and then delete it:

User ID	User Name	Online Status	Login Time	ONT Index	ONT Label	ONT Status
0001	ontUser	Off-line		10.4.2.205_0/2/1	10.4.2.205_OLTO_PON...	Off-line
0002	ontUser2	Off-line		10.4.2.205_0/3/3	10.4.2.205_OLTO_PON...	Off-line
0003	ontUser3	Off-line		10.4.2.205_0/3/3	10.4.2.205_OLTO_PON...	Off-line

Add

Modify

Delete

Locate

Delete ONT User

Enter the user ID or ONT logo to see the search results.

User ID	<input type="text" value="0001"/>	ONT Label:	<input type="text"/>	<input type="button" value="Query"/>		
User ID	User Name	Online Status	Login Time	ONT Index	ONT Label	ONT Status
0001	ontUser	Off-line		10.4.2.205_0/2/1	10.4.2.205_OLTO_PON...	Off-line

Interface for querying ONT User

## ONT Location

The user can locate the ONT to the corresponding device ONT list. As shown below.

User ID	User Name	Online Status	Login Time	ONT Index	ONT Label	ONT Status
0001	ontUser	Off-line		10.4.2.205_0/2/1	10.4.2.205_OLTO_PON...	Off-line
0002	ontUser2	Off-line		10.4.2.205_0/3/3	10.4.2.205_OLTO_PON...	Off-line
0003	ontUser3	Off-line		10.4.2.205_0/3/3	10.4.2.205_OLTO_PON...	Off-line

Add

Modify

Delete

Locate

## Interface of ONT location

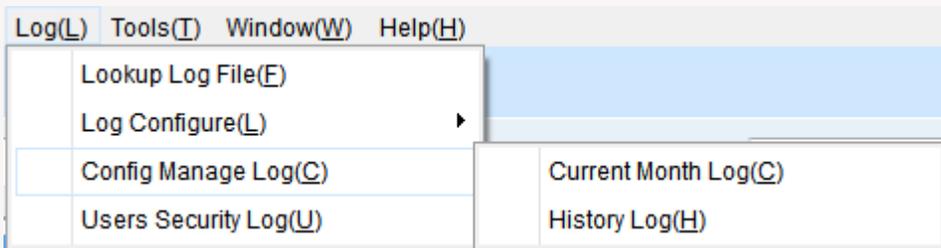
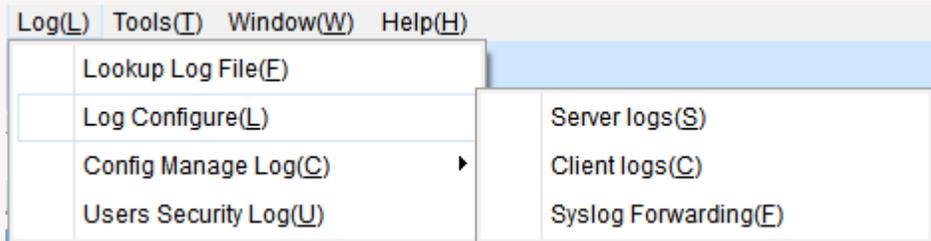
ONT Positi...	Status	Offline Reason	Description	Label	ONT Type	ONT SN	ONT Loid	Distance(m)	Software	MainSoftwareVers...	Vendor
0/3/1	Off-line	Signal Lost		10.4.2.205_O...	No Device Typ...	GPONe3501082		-	-	-	GPON
0/3/2	Off-line	Signal Lost		10.4.2.205_O...	No Device Typ...	qtect13090055		-	-	-	qtect
0/3/3	Off-line	Signal Lost		10.4.2.205_O...	No Device Typ...	GPONd3400141		-	-	-	GPON

## ONT lists

# Log Management

## Log Menu

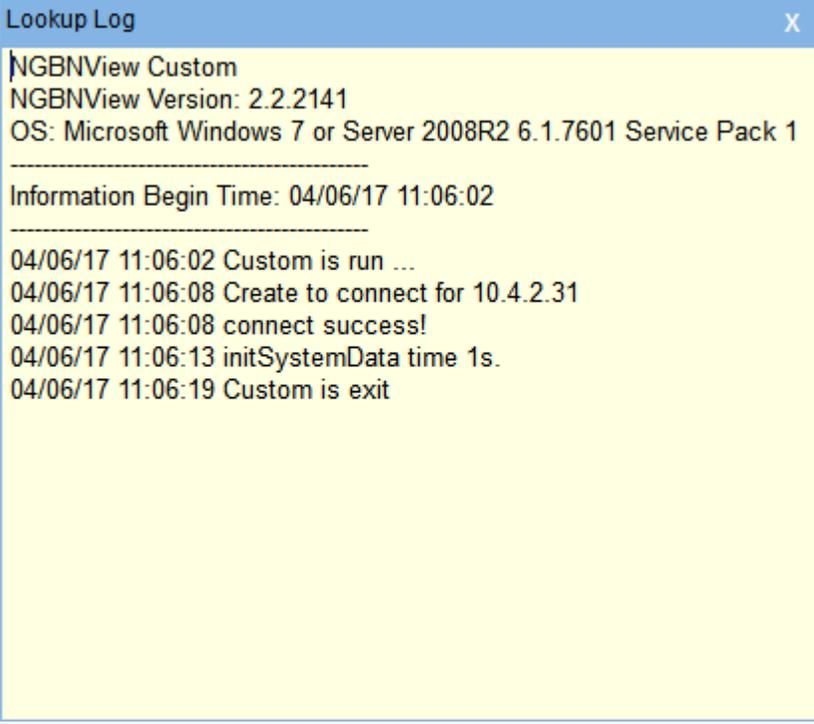
The log management menu is shown below. Subsequent sections will give a detailed description for these menu functions.



Log Management Menu

## Lookup Log File

Open the interface of client log to display the current client log. As shown below.



```
Lookup Log X
NGBNView Custom
NGBNView Version: 2.2.2141
OS: Microsoft Windows 7 or Server 2008R2 6.1.7601 Service Pack 1
-----
Information Begin Time: 04/06/17 11:06:02
-----
04/06/17 11:06:02 Custom is run ...
04/06/17 11:06:08 Create to connect for 10.4.2.31
04/06/17 11:06:08 connect success!
04/06/17 11:06:13 initSystemData time 1s.
04/06/17 11:06:19 Custom is exit
```

log window

## Log Configure

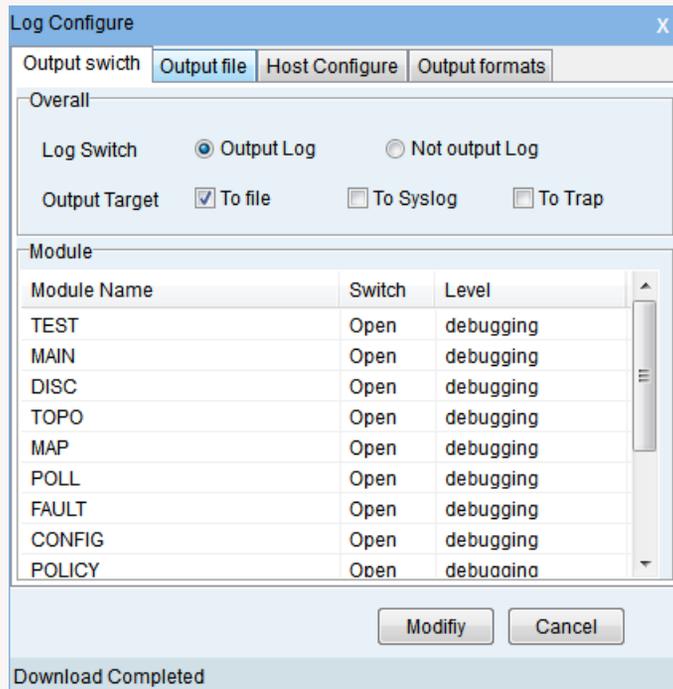
Log configuration module is mainly used to set the server, client, alert forwarding and main modules running information. These include:

1. *Output Switch*
2. *Output File*
3. *Host Configure*
4. *Output Formats*

Take the log configuration of the server as an example. The log configuration of the client is the same as that of the server. The difference is that the log configuration of the server is obtained from the server and the log level can be configured on the server while the related operations of the client on the log configuration need to be restarted to take effect.

## Output Switch

It includes log output switch, output target selection and log module level setting. As shown below.



interface of output switch

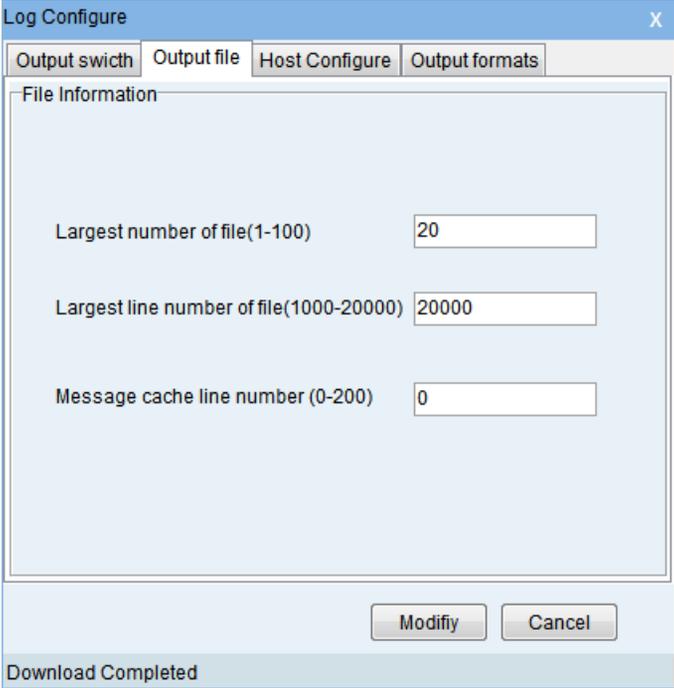
**Log Switch:** It refers to whether to output the log.

**Output Target:** It includes "output to file", "output to Syslog" and "output to Trap". You can choose multiple.

**Module Level:** It is used to set the following twelve module log output switches and levels in the system: TEST MAIN DISC TOPO MAP POLL FAULT CONFIG POLICY SECURITY SERVER TFTP.

## Output File

It is used to control the maximum number of log files, the maximum rows and cache lines of each file. As shown below.



The screenshot shows a dialog box titled "Log Configure" with a close button (X) in the top right corner. The "Output file" tab is selected, and the "File Information" section is visible. It contains three input fields:

Parameter	Value
Largest number of file(1-100)	20
Largest line number of file(1000-20000)	20000
Message cache line number (0-200)	0

At the bottom of the dialog, there are "Modify" and "Cancel" buttons. A status bar at the very bottom indicates "Download Completed".

the interface of output file

## Host Configure

It is used to configure the Syslog and Trap host address and port number. Moreover, the number of Syslog and Trap hosts cannot exceed 15. As shown below.

The screenshot shows a window titled "Log Configure" with a close button (X) in the top right corner. The window has four tabs: "Output swith", "Output file", "Host Configure", and "Output formats". The "Host Configure" tab is active. It contains two sections: "Syslog" and "Trap". Each section has a table with two columns: "HostAddress" and "Port". To the right of each table are three buttons: "Add", "Modify", and "Delete". At the bottom of the window, there are two buttons: "Modify" and "Cancel". A status bar at the very bottom of the window displays "Download Completed".

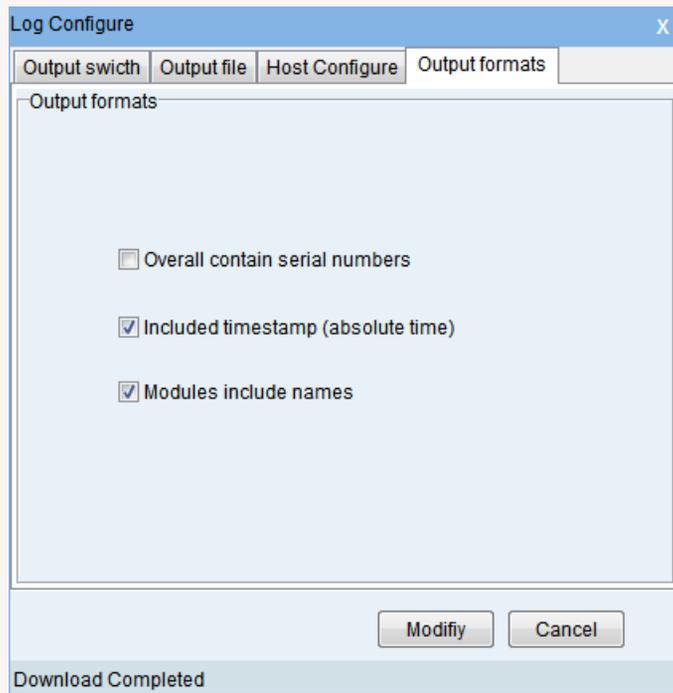
HostAddress	Port

HostAddress	Port

Host Configuration

## Output Formats

It is used to configure whether to include the global serial number, timestamp, and module name, as shown below.



interface of output format

## Config Manage Log

It is mainly used to record the time that the user performs the configuration management and saves the configuration results for a certain device.

## Current Month Log

The browse list shows the serial number of operation (N.), user name (Userid), device IP type (Source), operation item (Item), configuration content (Content), configuration time (Time) and configuration status (Status) of each configuration operation.

▼ N.	Userid	Source	Item	Content	Time	Status
1	admin	10.4.2.202(EL5610-08P)	Equipment to restart	systemReset 2;	2017-04-01 11:32:50	success

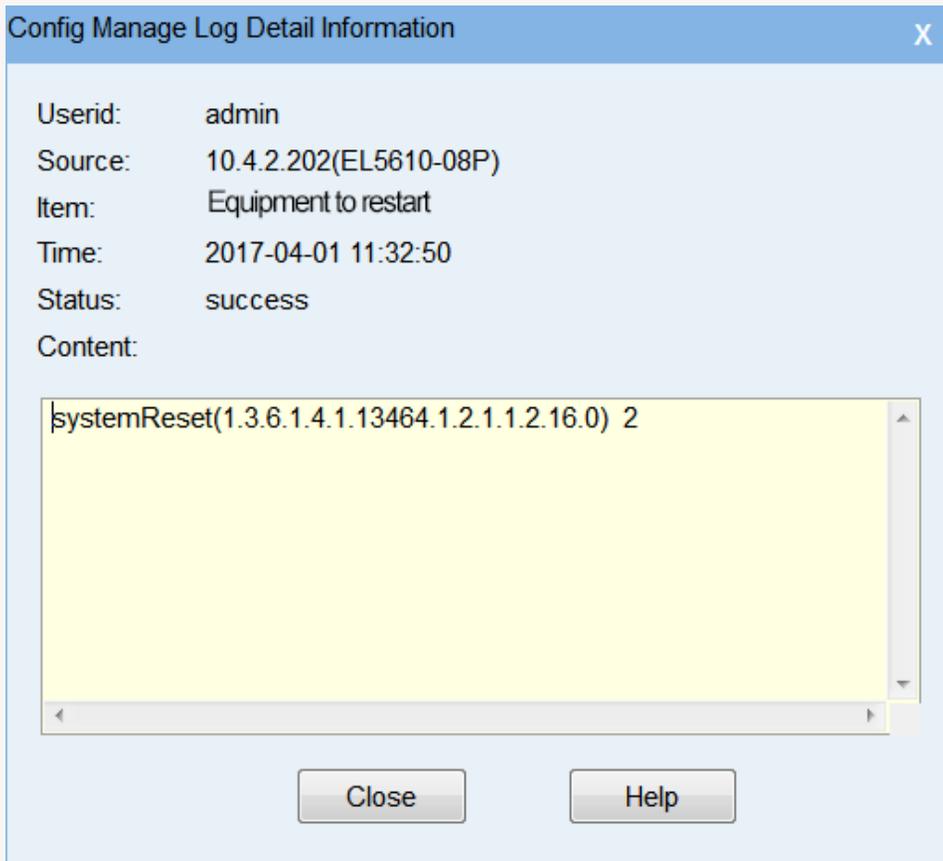
current month log

When you click the right button, it will appear the menu as shown below.

No	Userid	Source	Item	▼ Content	Time	Status
1	admin	10.4.2.202(EL5610-08P)	Equipment to restart	systemReset 2;	2017-04-01 11:32:50	success

Detail Information(D)

Right-click menu of log management



log management

**Userid:** Device Username

**Source:** The IP address of the device and the corresponding type.

**Item:** What kind of configuration it had performed.

**Time:** The time that the user performed the configuration

**Status:** Success/Failure

**Content:** Display Details of the configuration.

## History Configuration Log

It records the user's configuration management operation with the form of .htm.

History Config Log		
File Name	Modify Time	Size
2017-03.htm	2017/4/1 05:00	495 Bytes

### History Configuration Log

In the "**Schedule Task**" → "**Config Manage Log Policy 4**", time is set at 5 o'clock on the 1st of each month

## Users Security Log

User security log shows user operation-related and TL1 operation-related information, as shown below:

No.	User Name	User Ip Address	Operate Name	Time	Status
10	admin	104.2.31	TL1-LOGOUT	2018-03-15 15:30:21	success
9	admin	104.2.31	TL1-LOGIN	2018-03-15 15:29:51	success
8	admin	127.0.0.1	User login	2018-03-14 16:36:09	Success
7	admin	127.0.0.1	User login	2018-03-08 17:02:38	Success
6	admin	127.0.0.1	User exit	2018-03-08 16:50:02	Success
5	admin	127.0.0.1	User login	2018-03-08 11:33:02	Success
4	admin	127.0.0.1	User exit	2018-03-08 11:32:51	Success
3	admin	127.0.0.1	User login	2018-03-07 15:12:11	Success
2	admin	127.0.0.1	User exit	2018-03-07 15:02:31	Success
1	admin	127.0.0.1	User login	2018-03-07 11:02:07	Success

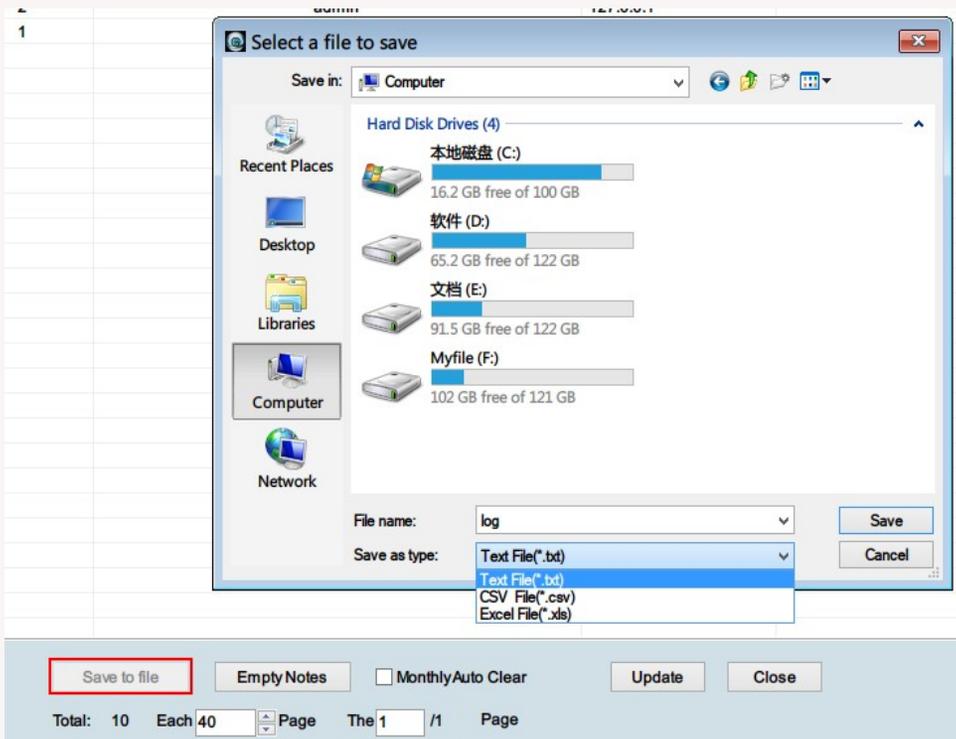
Monthly Auto Clear

Total: 10    Each 40    Page    The 1 / 1    Page

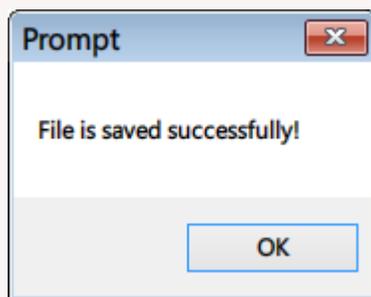
security log

Click the **“Save to file”** button to export the log record to a file for viewing.

As shown below:

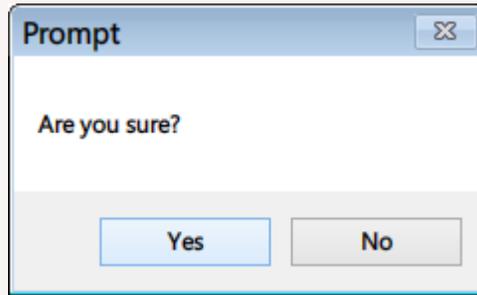


Save to file



Save success

Click the **“Empty Notes”** button to clear the current user security log.

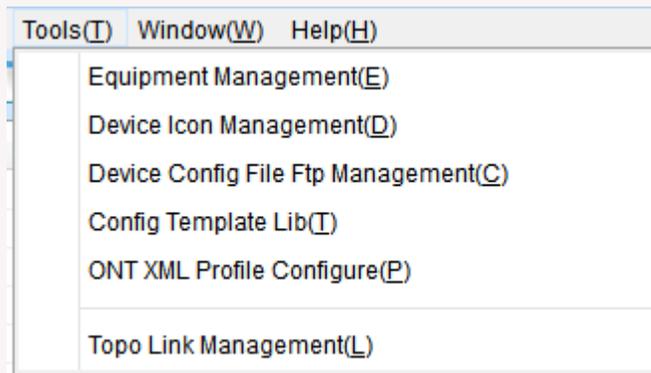


Empty notes

# Tools

## Tools Menu

The tools menu is shown below. The following sections provide a detailed description of these menu functions.



toolbar menu

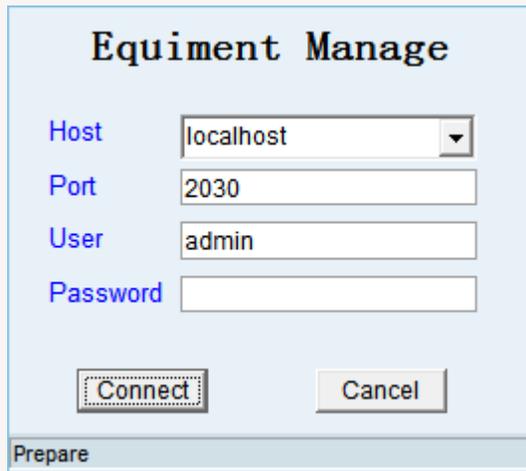
# **Equipment Management**

## **Overview for Equipment Management**

In the process of network management, the user not only monitors the operation of the network equipment but also wants to manage the network equipment as its own equipment assets, maintaining information such as the device location, asset number, and replacement record and so on. As a result, the equipment management system is added to the platform as an auxiliary tool for the integrated network management system.

## **Login Interface of Equipment Management**

The login interface of equipment management is similar to the client login interface. It also requires entering the front end server address, port, user name and password. The user name and password are the same as those of the network management system. In addition, it can automatically record the used server address as the client login interface. The interface is shown below.



The image shows a dialog box titled "Equipment Manage" with a light blue background. It contains four input fields: "Host" (a dropdown menu with "localhost" selected), "Port" (a text box with "2030"), "User" (a text box with "admin"), and "Password" (an empty text box). Below the fields are two buttons: "Connect" and "Cancel". At the bottom of the dialog, there is a status bar with the text "Prepare".

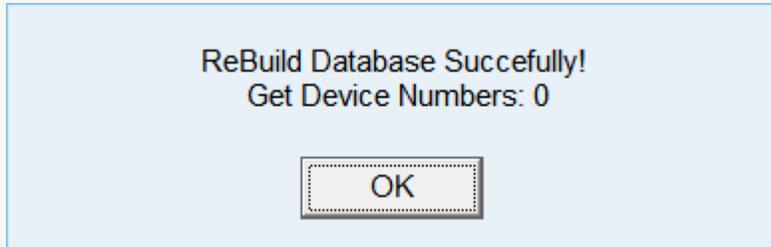
Login Interface of Equipment Management

## Main interface displaying

### Overview for Main Interface

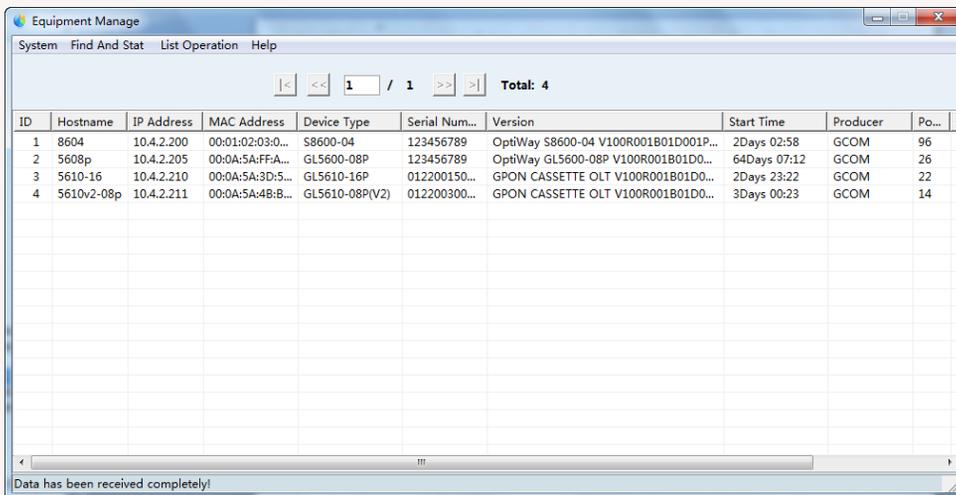
Input the correct server information and user information in the login interface and click the "**Connect**" button to enter the main interface of the equipment management. If it is the first time that you enter the equipment management module, the module will automatically detect the equipment information that exists in the system and give the corresponding prompts. You can also click the **Tools** on the client main interface→ **Equipment**

**Management.** As shown below.



rebuild database prompts

Click "OK" to enter the main interface. As shown below.



the main interface of Equipment Management

The main interface is divided into two parts: the menu bar and data browsing. There are four items in the menu, including the controls of the equipment management lists. Data browsing is divided into upper part and

lower part, the upper part is the browsing control while the lower part is the equipment management list.

In addition, there will be a pop-up menu if you right-click the mouse on the device management list, which is the same as the operation menu of the interface menu bar.

### **Equipment Management Data List**

It contains 9 data items.

**ID:** It identifies the serial number of the device in the equipment management module database. The serial number is automatically assigned, that is, when the used device is deleted, its serial number will be automatically empty, so that the new device will not use the serial number of the used equipment.

**Device Name:** It uses the NMS device name. When the system adds the new equipment, it automatically obtains the device information from the network management system database. Device name is generally used equipment IP address;

**Device Type:** The type that the device is identified when adding to the network management system.

**Equipment ID:** This item is empty when the device is added to the

equipment management module for the first time. You need to manually enter the equipment management ID or serial number of the device. It is specified by the user.

Device version: It shows the version number of the device;

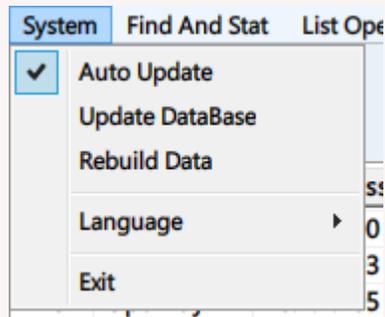
Run time: The current running time of the device, which is polled by the network management system platform.

Producer: It is the same as the device type, and it is from the network management system to obtain equipment corresponding information.

Port: The number of ports the device contains.

Location: It is automatically generated by the location of the device in the network management system, usually by the combination of five levels of geographical location information.

## System Menu of Equipment Management

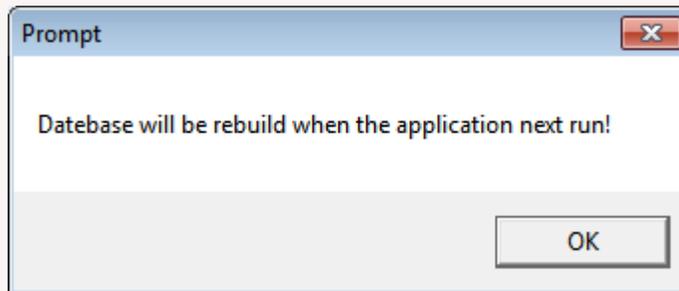


system menu

It contains 4 menu items: automatically updated at startup (Rebuild), manually update (Update Data Base), language (Language) and exit (Exit).

**Auto Update** is to set the equipment management module to the status of the first startup. In this case, when the equipment management module is restarted, the newly added device in the NMS will be added to the equipment management module to update the equipment management module data.

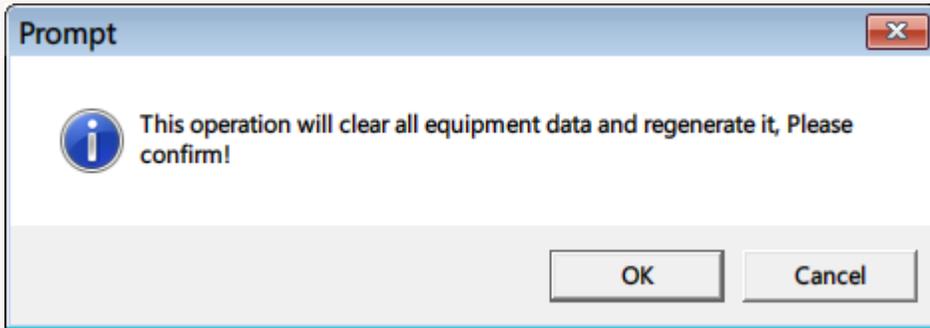
Select this menu item, and then the corresponding prompt will be shown as below.



prompt interface of update database

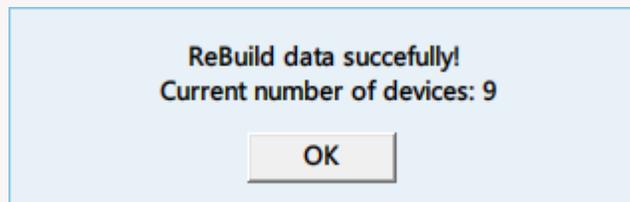
**Update DataBase:** Manually update the database to show the number of updated devices.

**Rebuild Data:** This function is used to delete all data in equipment management and re-read the data. As shown below:



rebuild the data

Click the **OK** button to rebuild the data:

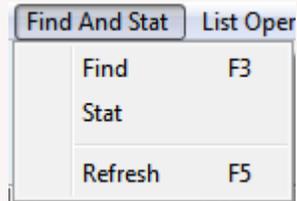


rebuild the data successfully

**Language:** Currently support Chinese and English.

**Exit:** It will exit the equipment management module after clicking this item.

## Find and Stat

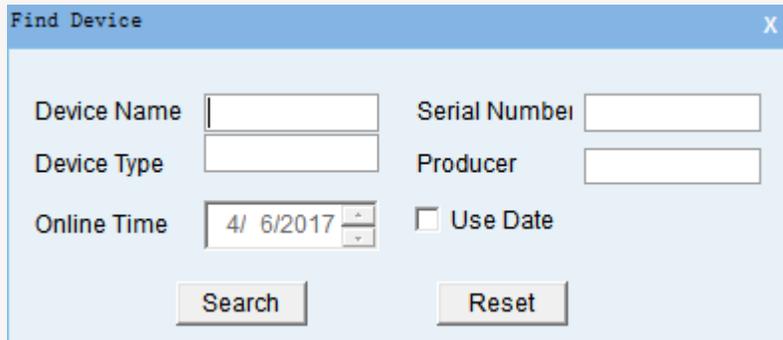


Find and Stat

It contains three items: Find, Statistics and Refresh.

### *Find*

Click **Find** to open the search interface, as shown below.



A screenshot of a search interface titled "Find Device". It features several input fields: "Device Name", "Serial Number", "Device Type", "Producer", and "Online Time" (with a date picker showing "4/ 6/2017"). There is also a checkbox labeled "Use Date". At the bottom, there are "Search" and "Reset" buttons.

Search Interface

Input one or more of the information such as device name, equipment serial number, device type, producer, online time, etc., and then the relevant information will be searched from the information list.

The search conditions adopt fuzzy search except the Online Time. Only the data that satisfies the search condition will be searched.



Note: The online time can be used as the search condition only when you click to select it. The search results will be displayed in the data list, as shown below.

The screenshot shows the 'Equipment Manage' application window. At the top, there are menu options: System, Find And Stat, List Operation, and Help. Below the menu is a navigation bar with buttons for '<', '<<', '1 / 1', '>>', and '>'. To the right of these buttons, it says 'Total: 1'. The main area contains a table with the following columns: ID, Hostname, IP Address, MAC Address, Device Type, Serial Num..., Version, Start Time, Producer, and Po... The table has one row of data: ID 4, Hostname 5610v2-08p, IP Address 10.4.2.211, MAC Address 00:0A:5A:4B:..., Device Type GL5610-08P(V2), Serial Num... 012200300..., Version GPON CASSETTE OLT V100R001B01D0..., Start Time 3Days 00:32, Producer GCOM, and Po... 14. A 'Find Device' dialog box is open in the foreground, containing input fields for IP Address (10.4.2.211), Device Type, Serial Number, Producer, and Online Time (2017/ 7/27). There is also a checkbox for 'Use Date' and 'Search' and 'Reset' buttons. At the bottom of the window, a status bar says 'Data has been received completely!'.

ID	Hostname	IP Address	MAC Address	Device Type	Serial Num...	Version	Start Time	Producer	Po...
4	5610v2-08p	10.4.2.211	00:0A:5A:4B:...	GL5610-08P(V2)	012200300...	GPON CASSETTE OLT V100R001B01D0...	3Days 00:32	GCOM	14

the displaying of search result

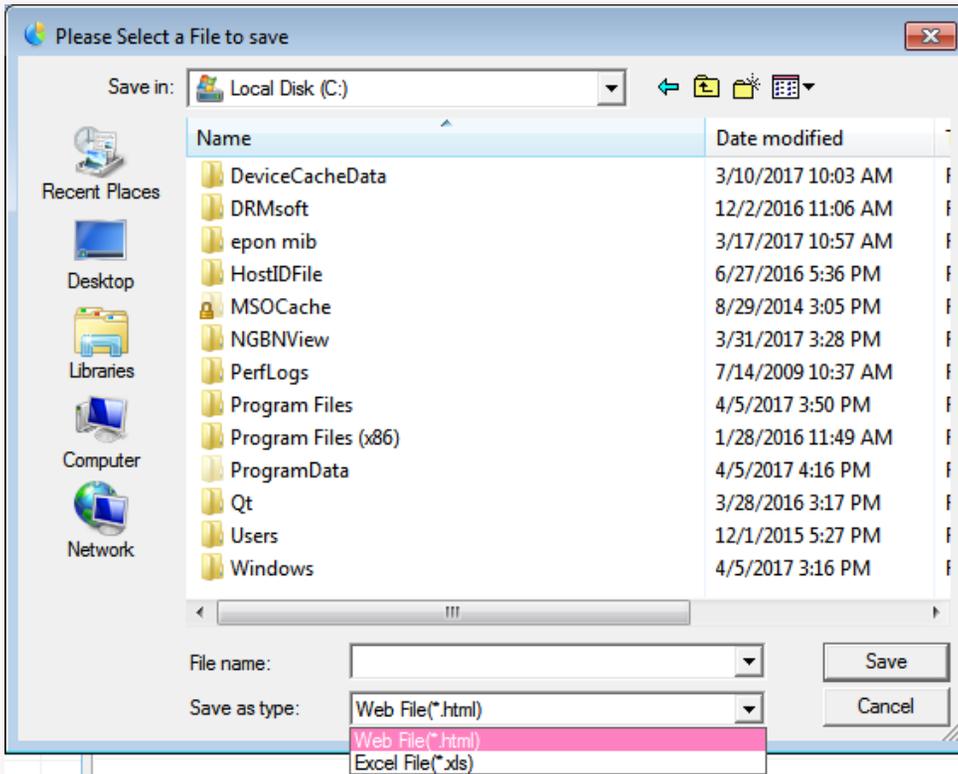
### Stat

It is used to perform statistics and output the data in the list according to various conditions. As shown below.



device management list will be calculated and displayed, and the statistical results will be displayed in the list of statistical interfaces.

Users can not only observe the statistical results in the statistics list, but also export the data to the file by clicking the **Export** button. Currently, the statistics results support export as .html files and .xls files, as shown below. Users determine the save mode according to the type of file.



save the statistics results

The following is the .html files save mode.

Equipment Management Statistic	
By Device Type--4/6/2017	
Device Type	Count
EL5610-08P	1
GL5600-08P	1
GL5610-16P	1
QSW2900_24T	1
S8600-04	1
	5

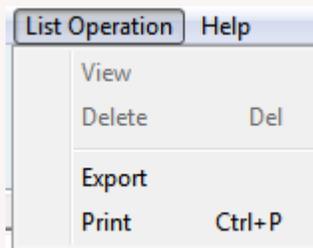
.html files save mode

Users can also print the statistics by clicking the **Print** button.

### *Refresh*

The refresh operation retrieves the equipment management data from the backend database.

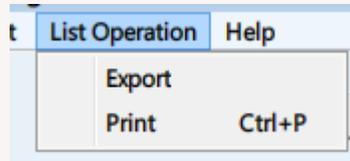
### Operation Menu of the Equipment Management



Operation Menu

If no row is selected in the data display list, View and Delete are not be

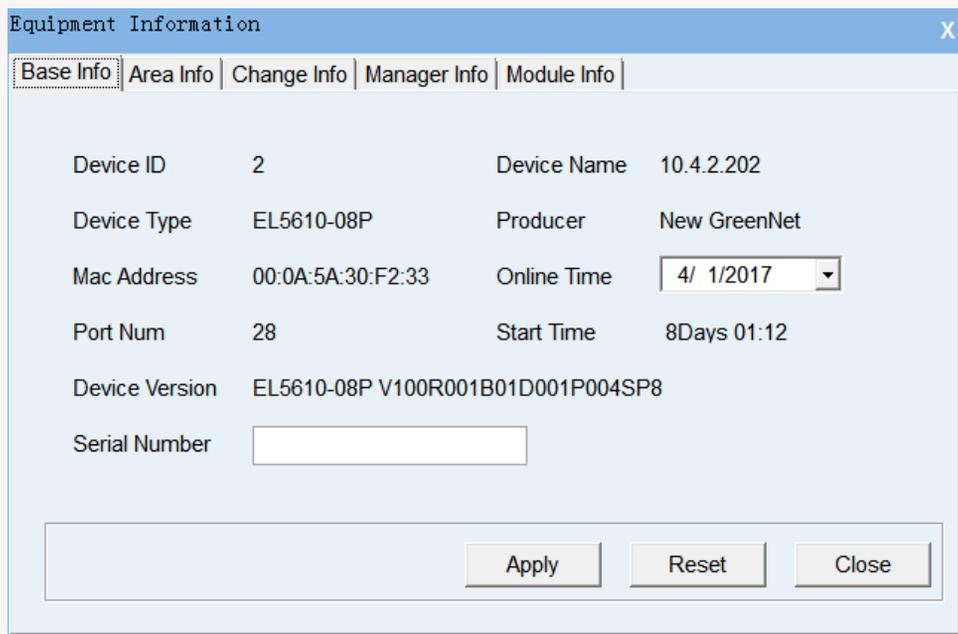
available. As shown below:



Menu of List Operation

### View

When you select a device record in the list, click View or double-click on the record to open the device details interface. As shown below.

A screenshot of a dialog box titled 'Equipment Information'. The dialog has a blue header bar with a close button (X) on the right. Below the header is a tabbed interface with five tabs: 'Base Info', 'Area Info', 'Change Info', 'Manager Info', and 'Module Info'. The 'Base Info' tab is selected and highlighted. The main area of the dialog displays the following information:

Device ID	2	Device Name	10.4.2.202
Device Type	EL5610-08P	Producer	New GreenNet
Mac Address	00:0A:5A:30:F2:33	Online Time	4/ 1/2017
Port Num	28	Start Time	8Days 01:12
Device Version	EL5610-08P V100R001B01D001P004SP8		
Serial Number	<input type="text"/>		

At the bottom of the dialog, there are three buttons: 'Apply', 'Reset', and 'Close'.

#### equipment detail information

Device details are divided into five parts: basic information (Base Info), location information (Area Info), replacement information (Change Info), manager information (Manager Info) and module information (Module Info).

Base Info: It includes some basic data of the equipment, such as Device ID, Device Type, Device Name, Mac Address, etc., as shown above. The page provides modification function of the Device ID and Online Time. After modification, click **Apply** to update the modification to the database;

Area Info: It shows the device location information. The displaying is divided into five levels: city, section, district, building, and floor. As shown below.

The image shows a software dialog box titled "Equipment Information" with a close button (X) in the top right corner. The dialog has a tabbed interface with five tabs: "Base Info", "Area Info", "Change Info", "Manager Info", and "Module Info". The "Area Info" tab is currently selected. Inside the dialog, there are five dropdown menus arranged in two columns. The left column contains "city" (set to "SZ"), "District" (set to "QiongYuLoad"), and "Floor" (empty). The right column contains "section" (set to "nanshan") and "Building" (empty). At the bottom of the dialog, there are three buttons: "Apply", "Reset", and "Close".

area information interface

Change Info: It shows the device updated / replaced status at run time, including the device type, update time, and device Mac address. The interface provides related operations on change information, including adding, modifying, and so on.



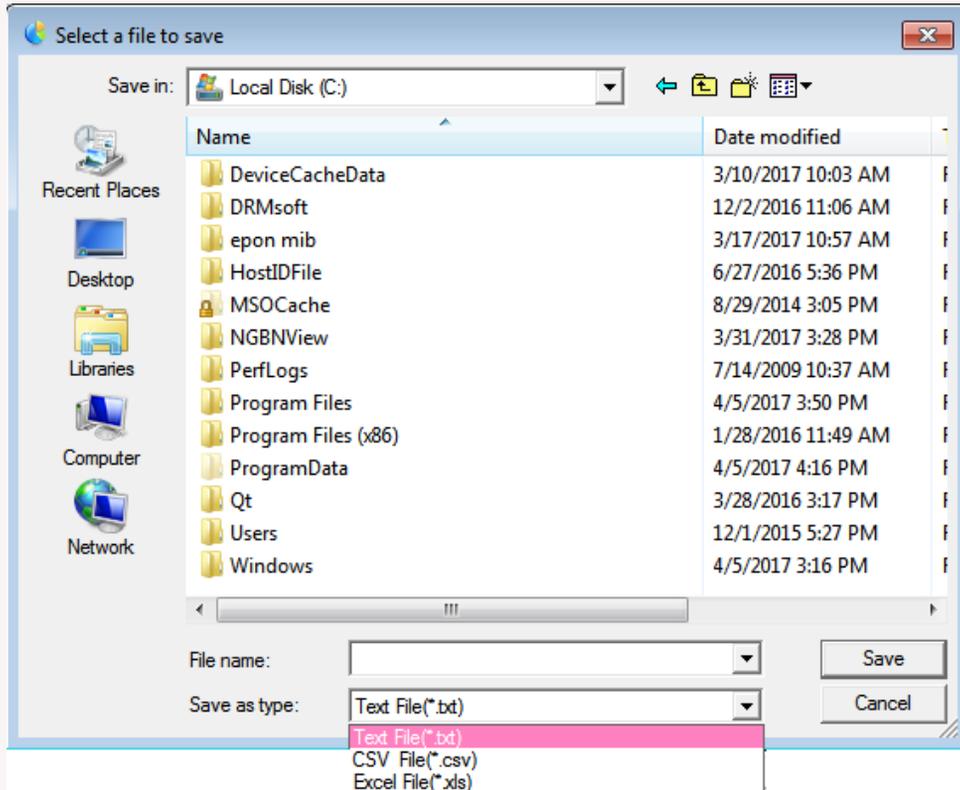
The image shows a software window titled "Equipment Information" with a close button (X) in the top right corner. The window has a tabbed interface with five tabs: "Base Info", "Area Info", "Change Info", "Manager Info", and "Module Info". The "Manager Info" tab is currently selected and active. Inside this tab, there are three input fields: "Manager", "Contact No.1", and "Contact No.2". At the bottom of the window, there is a panel containing three buttons: "Apply", "Reset", and "Close".

The interface of manager information

The module information displays information such as *Slot*, *State*, *Config Type*, *Real Type*, *Version*, and so on.



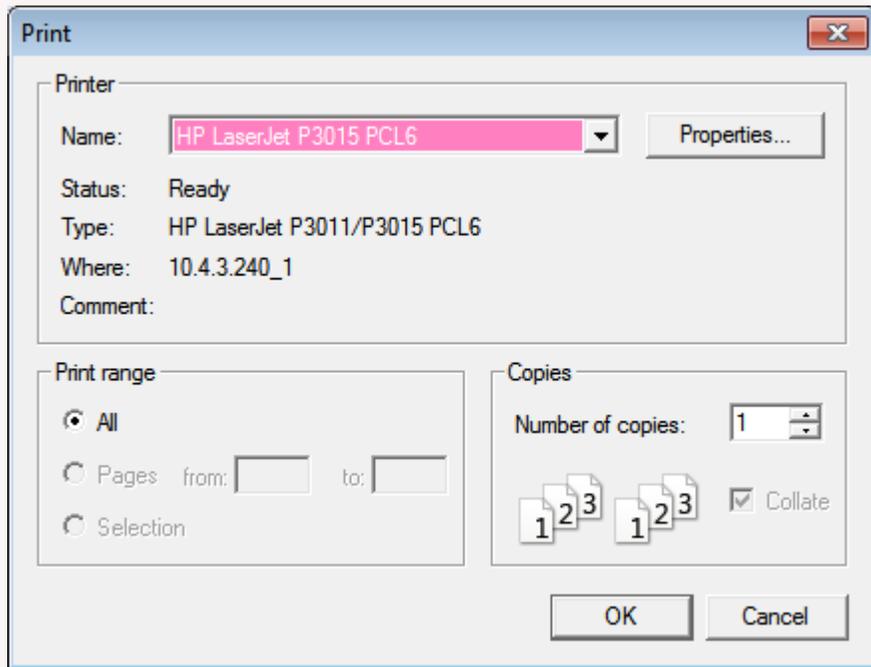
the file name and select the file type through the pop-up file box. As shown below.



export interface of data list

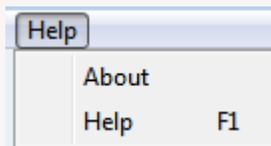
### *Print*

The print item opens the system print interface and provides the function to print out the list of current devices. As shown below.



print interface of data list

## Help

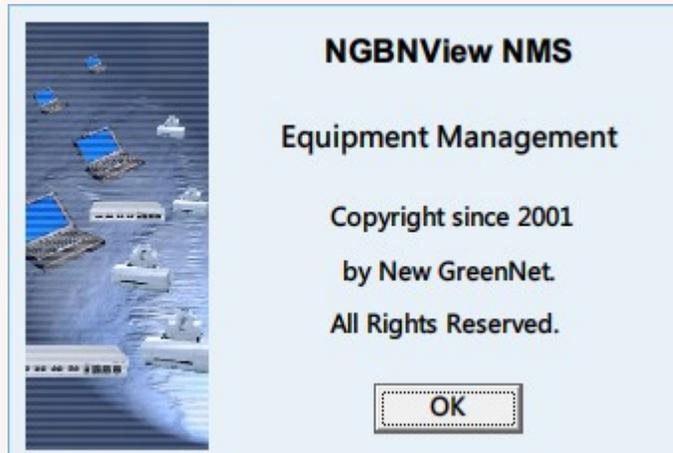


help menu

The help menu contains *About* and *Help*.

**About:** Display the information such as the copyright of the corresponding

software.

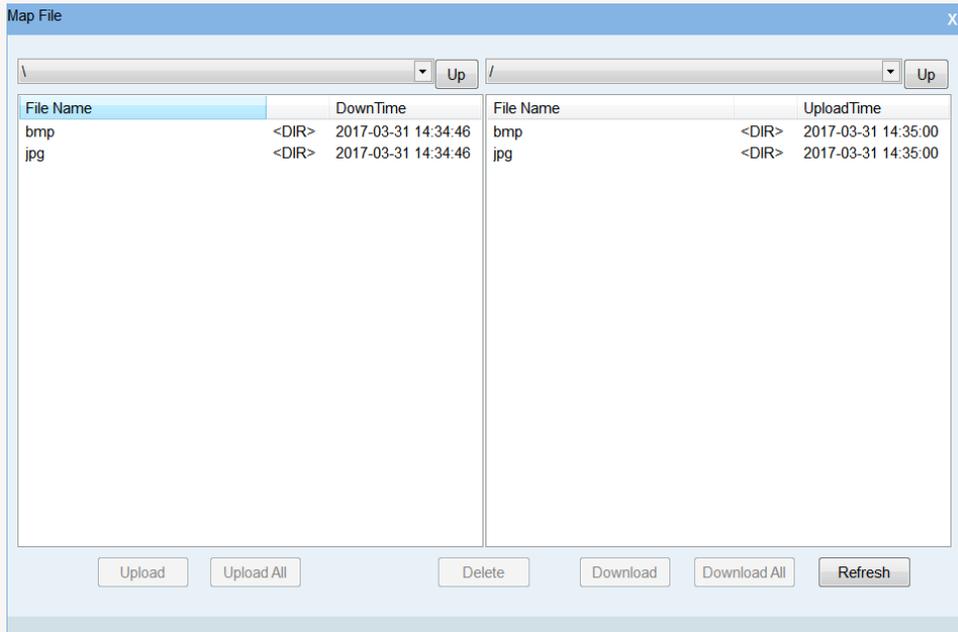


interface of About

**Help:** It will open the online help document.

## Device Icon Management

Select the menu "**Tools**" → "**Device Icon Management**". If it prompts "failed connect to the FTP server, please check the FTP server!" You can close the window, and then reopen it in the case of ensuring that the back-end server is running the FTP server. As shown below.



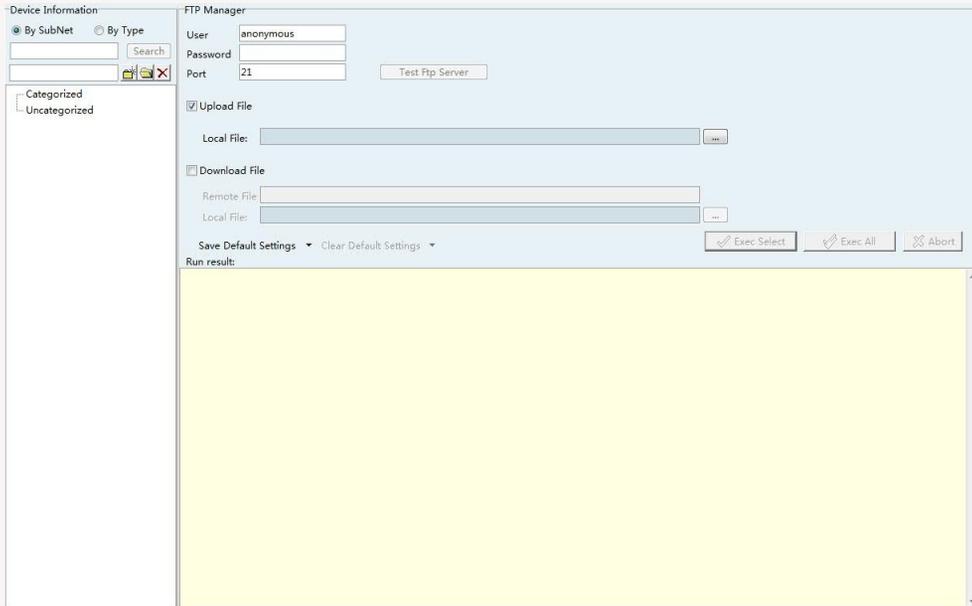
Map File Interface

You can not only upload the local device image to the server, but also download the device image of the server to the local image. The device icon for the displaying can be changed by right-clicking on the device pop-up menu **"Device Information" → "Device Icon"**.

## Device Config File Ftp Management

It is used to manage the FTP server username and password, as shown

below. Please refer to FTP for detailed description.



FTP interface

## Config Template Lib

### Template Name

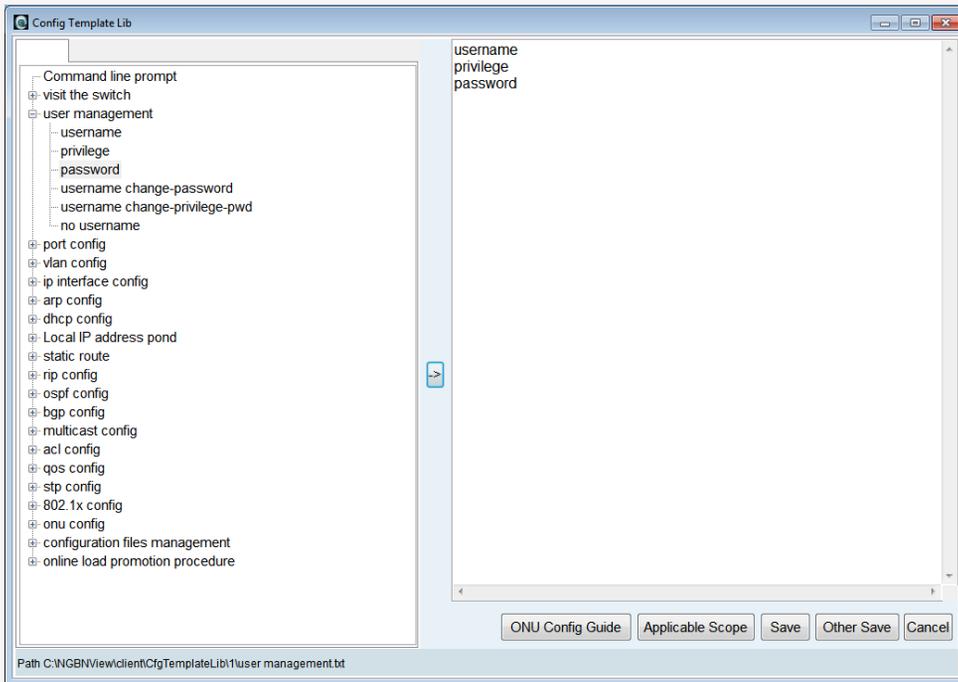
Click system main menu item "**Tools**" → "**Config Template Lib**" to open it. You can upload the configuration file to the list for others to download and





## Command Line File

Right-click the pop-up menu "Add" or "Modify" and then the interface will be shown below.



file interface of command line

The command line prompt is provided on the left side of the interface. Select a certain command, click "->", then it will display the command line on the right side of the interface display area. The command line menu item on

the left side of the interface provides the right-click menu item for creating "New Command line / New Directory / Modify / Delete".

## Applicable Scope

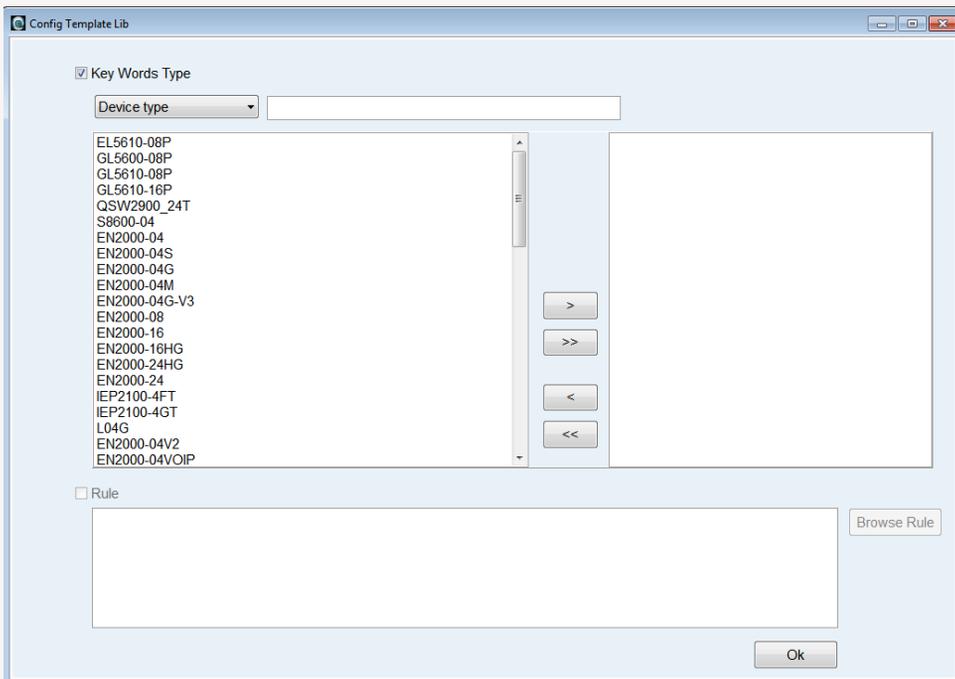
"*Applicable Scope*" is used to enable the system to automatically recognize whether the script file is adapted to the device while performing "*bulk configuration*".

Click "*Applicable scope*", the interface will be as shown below. The scope provides "*Key Words Type*" and "*Rules*". The "*Key Words Type*" includes "Device type" and "Device vendor".

If you select "*Device Type*", it indicates that the current command line file only applies to the selected types. When performing *Bulk Configuration*, the current device type will be compared to the type saved in the command line file. If the type is not found in the file, it means that the imported command line file does not apply to this device.

If you select "*Device Vendor*", it means that the current command line file only applies to the corresponding device vendor. When performing the "*bulk configuration*", the corresponding device vendor of device type (corresponding relationship can be found from the "*find configuration - device list*") will be

compared to the device vendor saved in the command line file. If the device vendor does not match, the imported command line file does not apply to this type of device. It means that the imported command line file does not apply to this device.



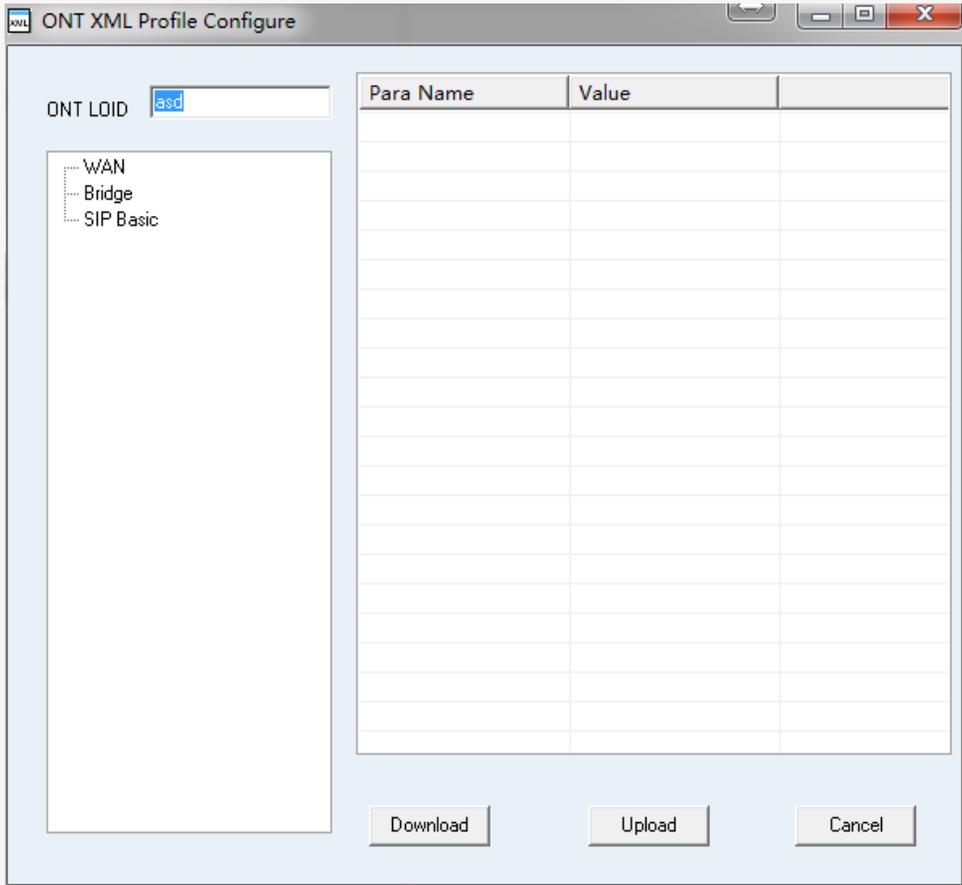
Applicable scope

# **ONT XML Profile Configure**

## **ONT XML Profile Config**

In the “ONT List” or “Topo View”, then select “ONT Profile Config”, you will enter the “ONT Profile Config” interface.

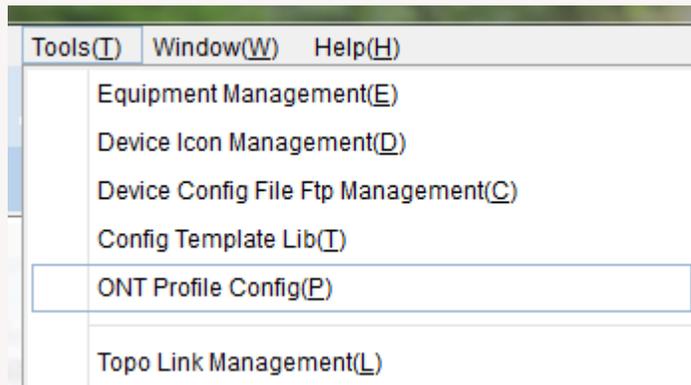
As show below:



ONT Profile Config

Or you can also select the 'ONT Profile Config' under the 'Tools' at the menu to enter the 'ONT Profile Config' without ONT Loid.

As shown below



### ONT Profile Config

In this interface, you can config the WAN, Bridge and SIP.

### **WAN**

WAN Config interface as shown below:

The screenshot shows the 'ONT XML Profile Configure' window. On the left, there is a tree view with 'WAN' selected, and 'Bridge' and 'SIP Basic' are visible below it. The 'ONT LOID' field contains 'asd'. The 'Select WAN' dropdown is set to '1', and the 'WAN Name' field contains 'WAN1'. The 'WAN Connection' section has 'enable' selected. The 'Service Type' section has 'INTERNET', 'VOIP', 'IPTV', and 'TR069' checkboxes, all of which are unchecked. The 'NAT Status' section has 'enable' selected. The 'Priority' field is empty. The 'Connection Type' dropdown is set to 'pppoe'. The 'PPPoE' section has 'User Name' and 'User Password' fields, both empty, and 'Account Enable' with 'enable' and 'disable' radio buttons, where 'disable' is selected. The 'VLAN' field is empty. At the bottom, there are buttons for 'Download', 'Upload', 'Delete', 'OK', and 'Cancel'.

### WAN Config Interface

Click "Create New Connection", the NMS will create new WAN.

Click "Download" button, the NMS client will get the last profile from server

Click "Upload" button, the NMS client will synchronize local files to the server

Click "Delete" button, the NMS will delete the current WAN.

Click “OK” button, the NMS will save the current changes to profile file.

Click “Cancel” button, the NMS will exit the “ONT Profile Config” interface.

## Bridge

Bridge Config interface as shown below:

The screenshot shows the "ONT XML Profile Configure" window. On the left, a tree view shows "WAN" expanded with "Bridge" selected. The main area contains the following fields and controls:

- ONT LOID:
- Select Bridge:  (dropdown)
- Bridge Name:
- Bridge:  enable  disable
- VLAN Mode:  (dropdown)
- VLAN:
- Configure traffic filter rules:
  - Port:  (dropdown)
  - Action:  (dropdown)
- Table with columns: Port, Untaged Traffic, Tag Traffic Action

At the bottom, there are buttons for "Download", "Upload", "Delete", "OK", and "Cancel".

## Bridge Config Interface

Click “Add New Bridge”, the NMS will create new Bridge.

Click “Download” button, the NMS client will get the last profile from server

Click “Upload” button, the NMS client will synchronize local files to the server

Click “Delete” button, the NMS will delete the current Bridge.

Click “OK” button, the NMS will save the current changes to profile file.

Click “Cancel” button, the NMS will exit the “ONT Profile Config” interface.

## **SIP Basic**

SIP Basic Config interface as shown below:

The screenshot shows a window titled "ONT XML Profile Configure". On the left, there is a tree view with "WAN Bridge" and "SIP Basic" (highlighted in blue). Above the tree view is a text field for "ONT LOID" containing "asd". The main area is divided into two sections: "SIP Account" and "SIP Server".

**SIP Account**

Base Port(0-65535)	5060	
Host Part URI	192.168.10.213	
POTS Interface	POTS1	POTS2
User Name	9801	9802
Password	9801	9802
User Part AOR	9801	9802
	Delete	Delete

**SIP Server**

Outbound Proxy	
Registrar Address	192.168.10.213

At the bottom of the window are four buttons: "Download", "Upload", "OK", and "Cancel".

SIP Basic Config Interface

Click "Download" button, the NMS client will get the last profile from server

Click "Upload" button, the NMS client will synchronize local files to the server

Click "OK" button, the NMS will save the current changes to profile file.

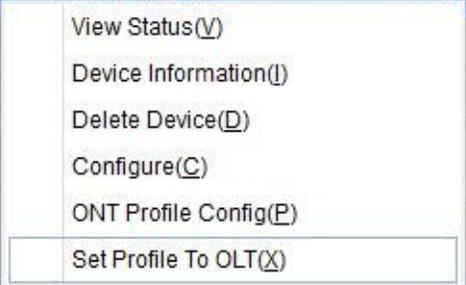
Click "Cancel" button, the NMS will exit the "ONT Profile Config" interface.

## Set Profile To OLT

In the "ONT List" or "Topo View", then select "Set Profile To OLT", then the NMS will send the profile to OLT.

As shown below

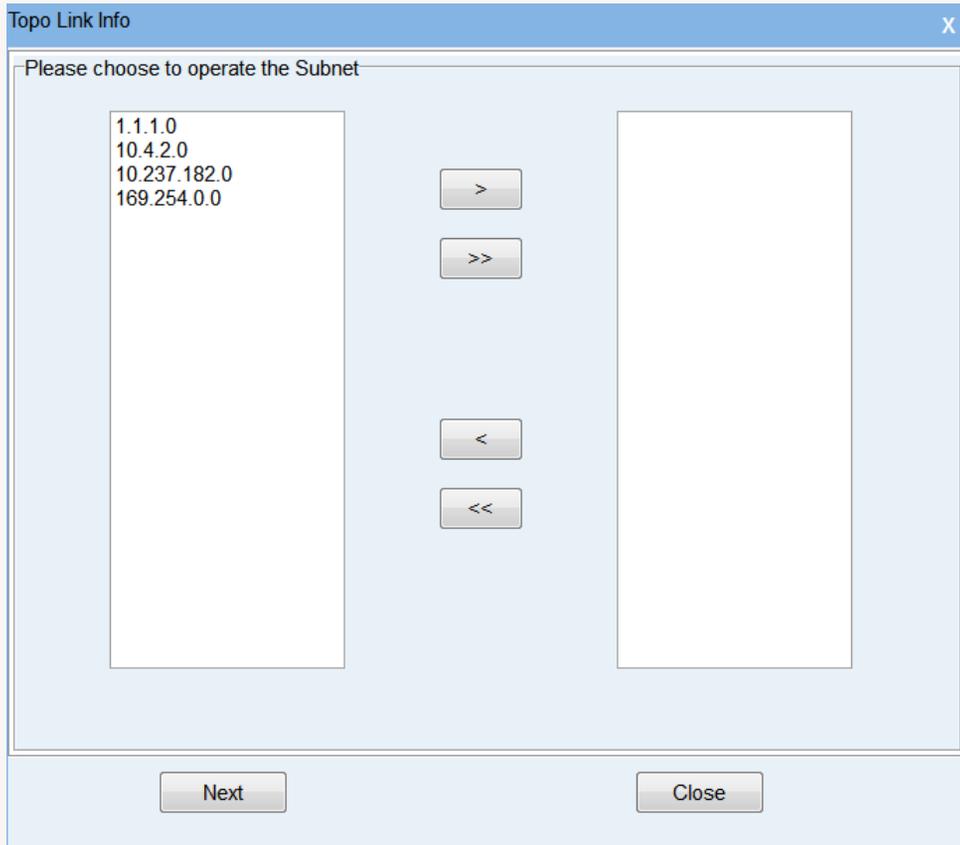
ONT ID	Status	Last Online Time	Description	Label	ONT Type
01777	On-line	Fiber has bee...	-	10-10-011-0	GP



Set Profile To OLT

## Topo Link Management

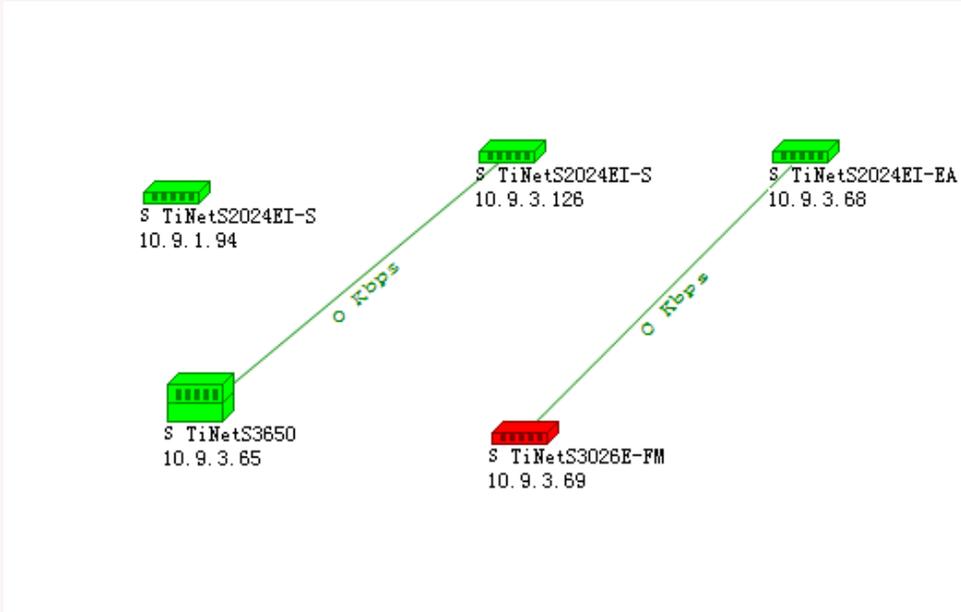
Select the menu "Tools" → "Topo Link Management", as shown in the following figure.



interface of topo link information

Select the subnet to be operated and click **Next**, as shown above.



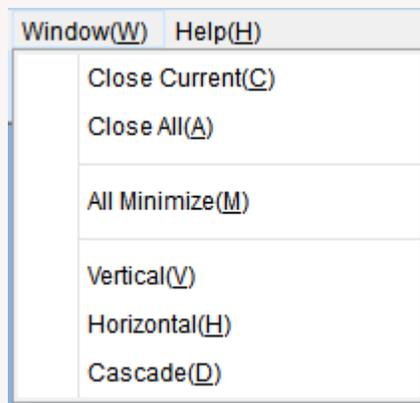


interface of topo view

# Window and Help

## Window

It includes closing the current window (Close Current), closing all windows (Close All), minimizing all (All Minimize), vertical tiling (Vertical), horizontal tiling (Horizontal) and cascading menu (Cascade). As shown below.



Window Menu

The menu item functions are as follow:

Close Current: Close the currently window.

Close All: Close all windows that have been opened.

All Minimize: Minimize all windows that have been opened.

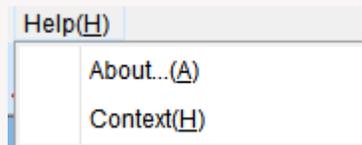
Vertical: Show all windows that have been opened on the panel with vertical tiling way.

Horizontal: Show all windows that have been opened on the panel with horizontal tiling way.

Cascade: Show all windows that have been opened on the panel with cascading menu way.

## Help

The help menu includes **About** and **Context**. As shown below.



help menu

The functions of menu items are as follow:

**About:** Display information about the NGBView Network Management

System.



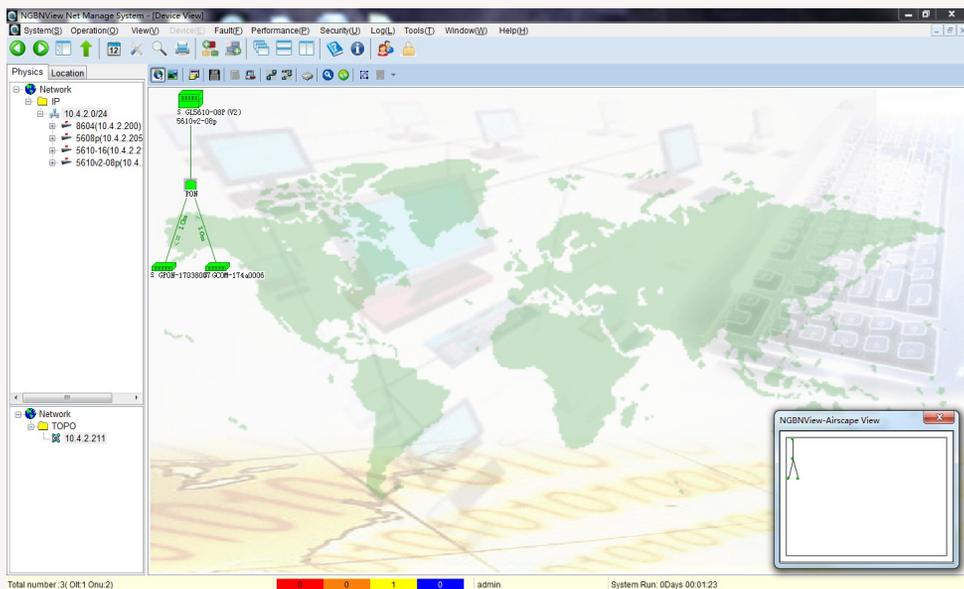
About

**License:** Start the network management system help.

# View

## Physical View

Click the IP navigation tree in the top half part of the physical navigation tree, and the subnet view will be opened in the right window. The subnet view organizes the devices in a subnet manner without showing the physical topo of the device. As shown below.



## interface of physical view

Subnet views are automatically added, that is, they are automatically organized and generated based on the status of devices currently being added to the NGBNView system.

Subnet view of the equipment is organized in subnet way. Taking into account the large number of devices is not easy to observe, so it takes the page display way and it is sorted by 50 devices. In addition, it indicates the address range of the in-page device on the tab bar at the top of the view.

The corresponding operation buttons are provided at the top of the view, the left-to-right operations are "Select", "Aerial View", "View Settings", "Add Nodes", "Delete Nodes", "Add Wires", "Add Autowires", "TOPO Chart Queries" "Select All" "Layout".

**Select:** You can click the mouse to select equipment.

**Aerial View:** Display the aerial view showing the entire view in a miniature way.

**View Settings:** Open the view settings interface, and then you can set the size of the device icon. The display label for the device icon is shown below.

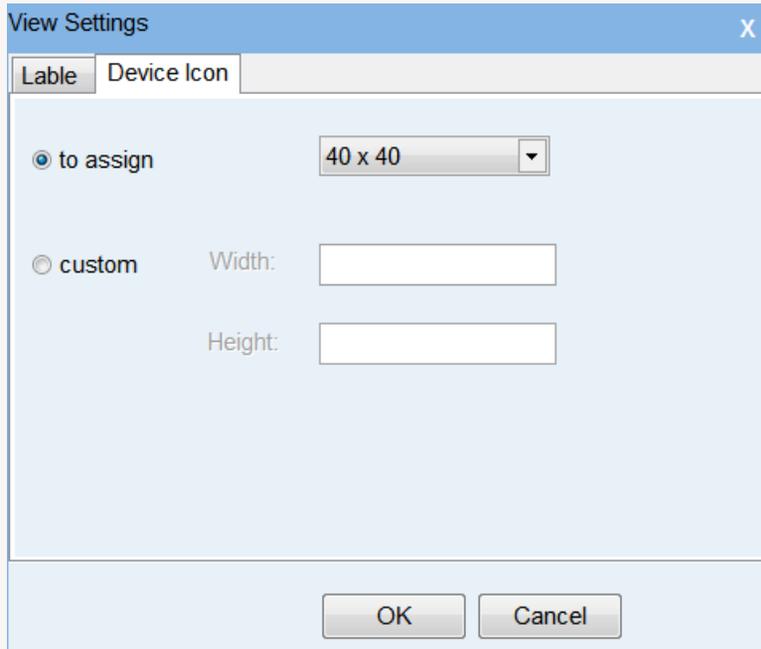
View Settings X

Lable Device Icon

Device Label

- Type
- IP Address
- Label
- Host Name
- Mac Address

OK Cancel



view settings

**Select All:** Select all devices;

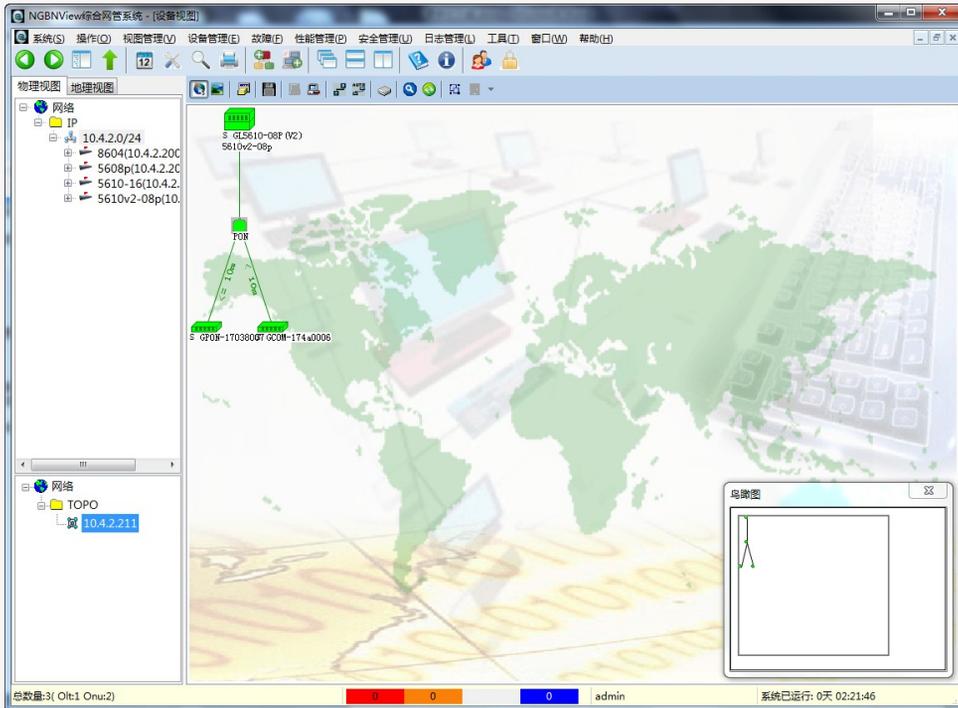
**Layout:**  can be used only when more than two devices are selected. It is the layout of the equipment, including grid type, bus type, single star type, double star type, ring type, cut ring type, hierarchical tree type, divergent tree type and mixed type.

There are a few options that will be mentioned in the topo view, so they will not be repeated here.

# Topo View

## Interface of Topo View

You can open the topo view via the navigation tree in the top of the physical navigation tree. As shown below.



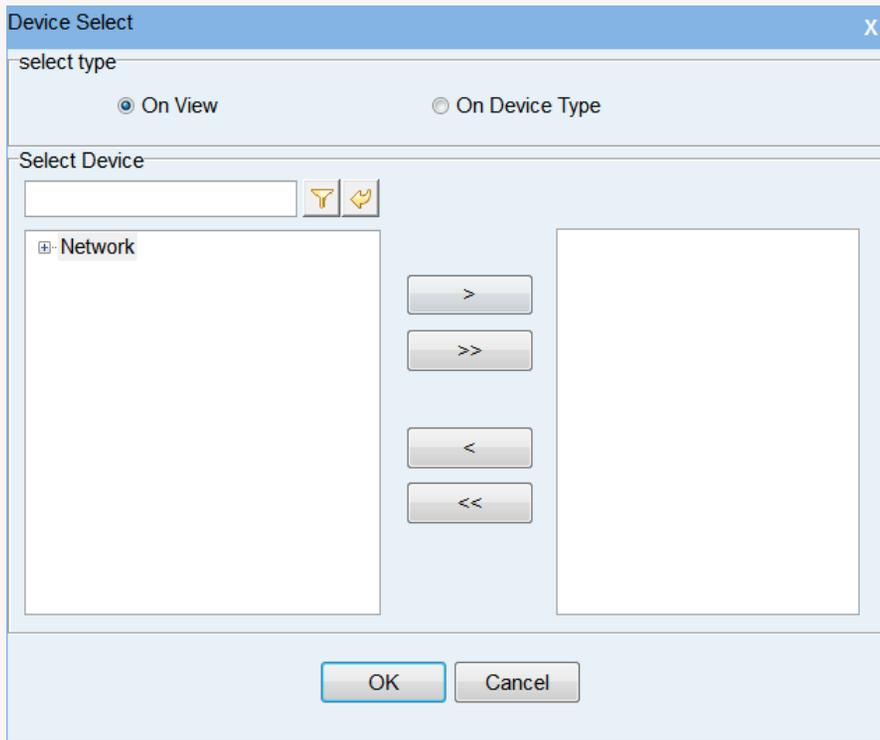
topo view

## Menu View

As shown above. Compare with the subnet view, toolbar of the topo view has more than six function buttons, and the function buttons from left to right are "Save", "Add Nodes", "Delete Nodes", "Add Link" "Add Fact Link", "Add Dummy Link".

**Save:** Save the contents of the current topo view;

**Add Nodes:** Open the *Add Nodes* interface, and then you can select the nodes you want to add to the topo view. As shown below. Add the device which is on the left side of the interface to the right side, and then you can add it to the topo view.



add devices to the topo view

**Delete Nodes:** Select a node in the topo view, and then click the button to delete;

**Add Link:** Add links for the two nodes in the topo map. Select the two nodes as shown below. After clicking the button, the two devices will be added automatically in the connection interface. Set the connection port on both sides, select the connection type and click **OK** to finish the adding operation;

The image shows a dialog box titled "Add Link" with a close button "X" in the top right corner. The dialog contains four dropdown menus arranged in a 2x2 grid: "Source", "Source Port", "Target", and "Target Port". Below these dropdowns are two radio buttons: "Fact Link" (which is selected) and "Dummy Link". At the bottom of the dialog are two buttons: "OK" and "Exit".

add links

**Fact Link:** If there are links in the database, it will automatically add the links to the topo view by clicking the corresponding button.

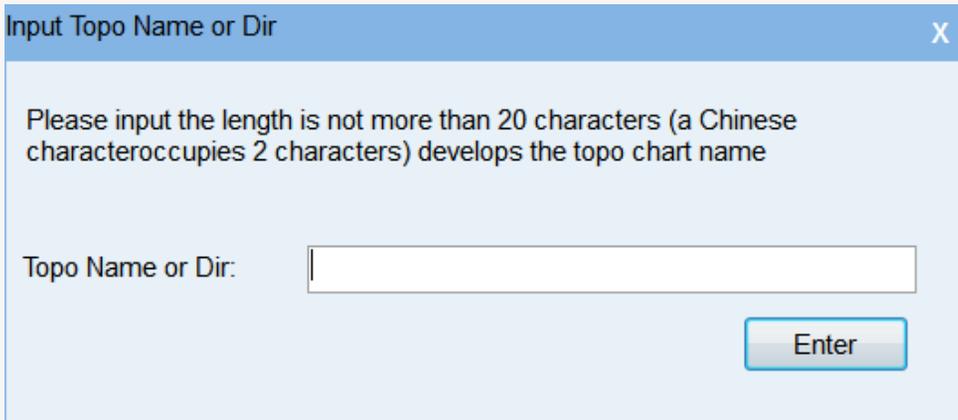
**Dummy Link:** For some nodes that cannot be managed by the NMS, you can add them to topo map by the dummy nodes way to better organize the topo.

## Add Topo View

The topo view is different from the subnet view. Topo view must be set up manually by the user. On the topo map navigation tree, there are three types of nodes, one is the root node "NGBNView network", which is unique and inoperable; the second is the directory, and there is a folder icon before the

node name; the third one is the topo view, and there is also a special icon before the node name.

Users can only add a topo view in the directory node (the second type). Select a directory node, click the right mouse button in the pop-up menu, select "New Topo", you can open the interface of adding topo view. As shown below.



Input Topo Name or Dir X

Please input the length is not more than 20 characters (a Chinese character occupies 2 characters) develops the topo chart name

Topo Name or Dir:

Enter

add topo view

Enter the view name here and click **OK** to add a topo view node to the selected directory.

The node of new topo view is blank, but it can add the device nodes through the toolbar on the topo view. Right-click the view bar to add nodes, as shown below.

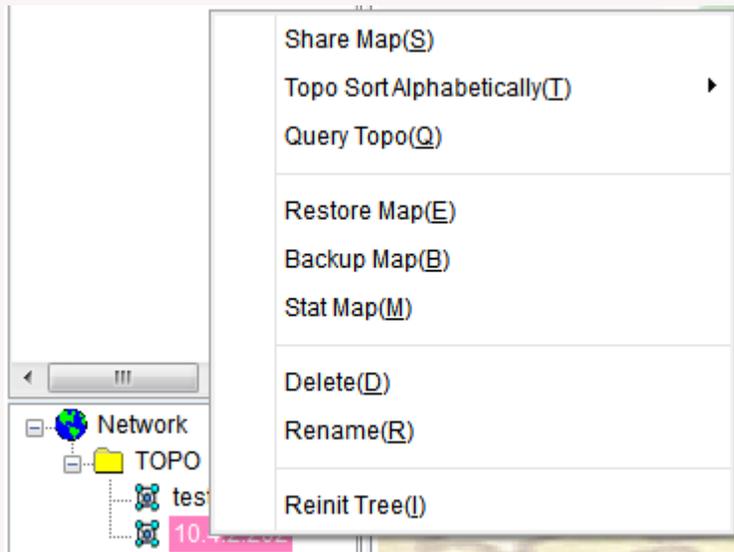


Add nodes

In the pop-up menu of the directory node, select "*New directory*", you can create a subdirectory in the directory.

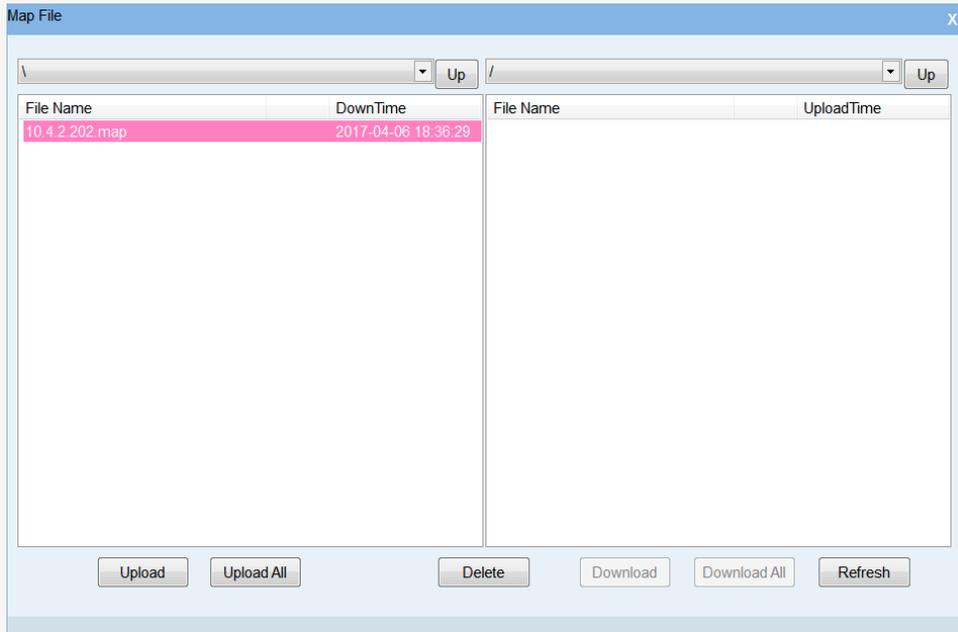
## Topo View Operation

In the topo view node, right-click on the mouse, it will appear the pop-up menu as shown below:



right-click operation of the topo view

**Share Map:** The pop-up menu of topo view node and directory node, user can open the Share Map interface through the menu item "*Shared Map*". As shown below.



### Operation of Share Map

The left side of the Share Map interface is the topo view files and the corresponding directory saved by the local client while the right side is the topo view files and the corresponding directory saved by the back-end server. If you open the interface on a different node menu, there will be some differences in the local directory of the left side interface.

Users can select files or directories on this interface to upload them to the server for sharing. Users can also download the selected files or directories to the local, so that the local can be able to display the corresponding topo view.

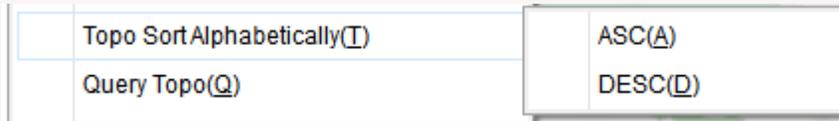
Different users can access different topo views and corresponding operations. Please refer to the description in the Security Log Management section.



Note: When sharing a Map, you must ensure that the back-end server starts the FTP server (you can start it in the Tools menu of the back-end server interface).

### **Topo Sort Alphabetically:**

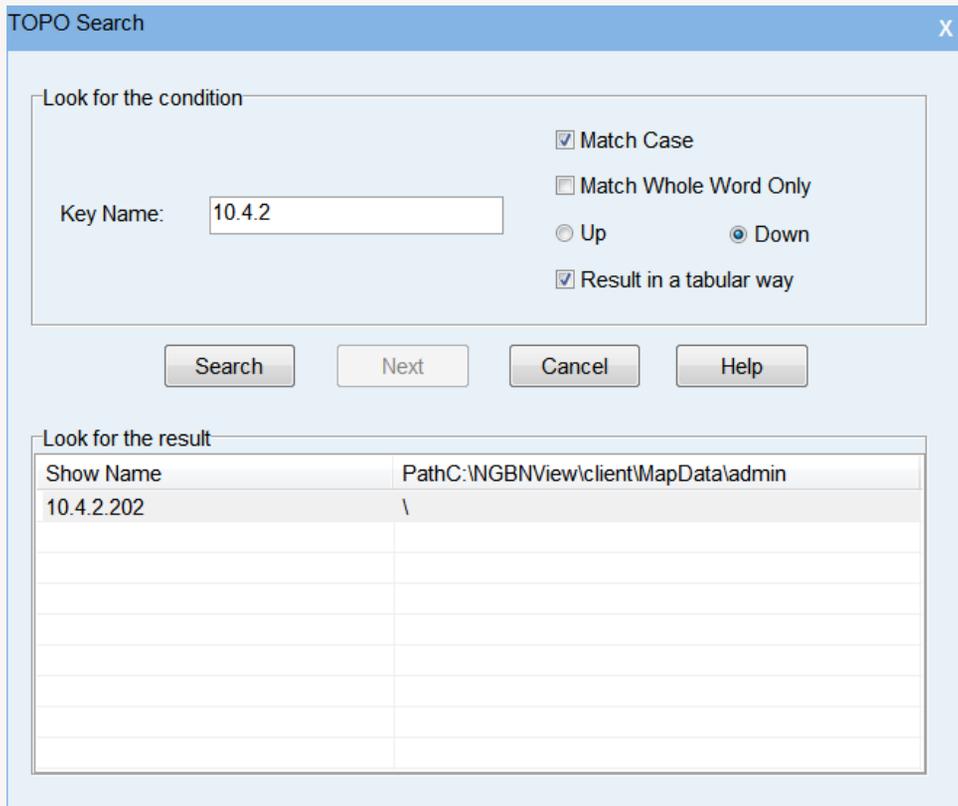
On the pop-up menu of topo view nodes and directory nodes, users can control the order in which the directory nodes are displayed in the topo view via the **Topo Sort Alphabetically** → **ASC/DESC** . As shown below.



Topo Sort Alphabetically

### **Query TOPO:**

It searches the nodes in the current TOPO view navigation tree and its interface is as shown below.



#### TOPO search

*“Result in a tabular way”* is used to control the display location of the search results. If you select this item, the interface changes

In this case, double-click a node in the table, and the node is selected on the navigation tree.

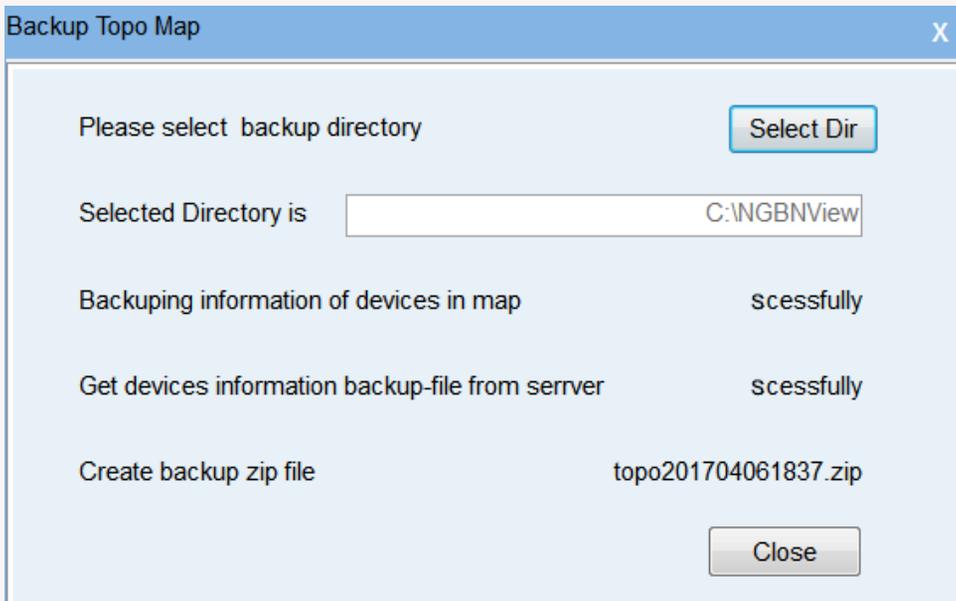
If you do not select *“Result in a tabular way”*, the first node which is found

in the navigation tree will be selected.

If there is more than one result, you can click the **Next** to automatically select the next one. If the results are shown in a tabular way, it will be selected both in the list and navigation tree. The **Up** and **Down** buttons control the next traverse direction and it will return to the top one when traversing the last one.

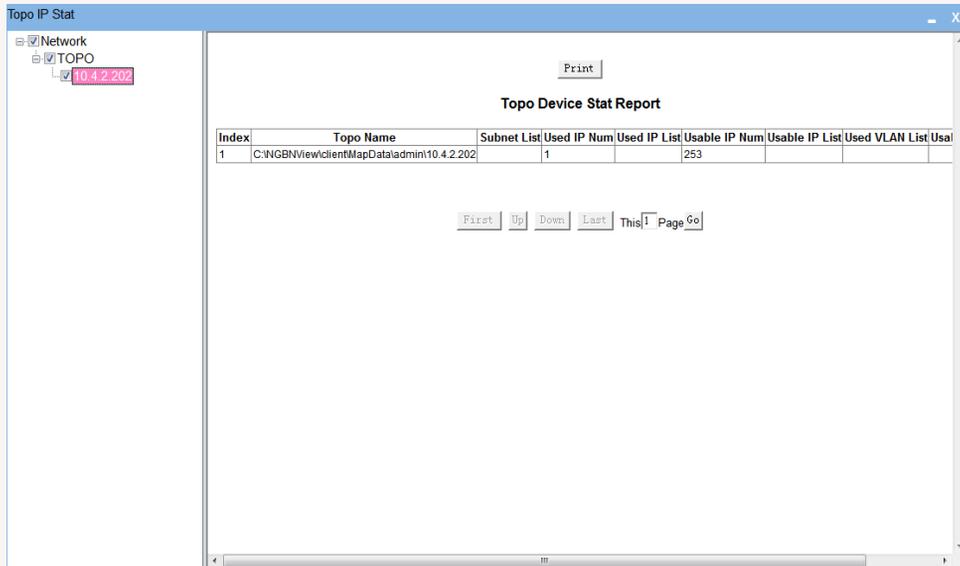
**Revert Topo Map:** Import the backed up topo files into the topo view.

**Backup Topo Map:** Save the topo map information of the nodes to be backed up in the selected navigation tree in the specified directory in the *.map* file format. As shown below



Backup topo map

**Topo IP Statistics:** Show the relevant information in the topo map, as shown below.



The screenshot shows a window titled 'Topo IP Stat'. On the left is a tree view with 'Network' expanded to show 'TOPO', which is further expanded to show '10.4.2.202'. The main area contains a 'Print' button and a 'Topo Device Stat Report' table. The table has columns for Index, Topo Name, Subnet List, Used IP Num, Used IP List, Usable IP Num, Usable IP List, Used VLAN List, and Usable IP List. The first row shows Index 1, Topo Name C:\INGBNView\clientMapData\admin\10.4.2.202, Subnet List, Used IP Num 1, Used IP List, Usable IP Num 253, Usable IP List, Used VLAN List, and Usable IP List. Below the table are navigation buttons: First, Up, Down, Last, This Page, and Go.

Index	Topo Name	Subnet List	Used IP Num	Used IP List	Usable IP Num	Usable IP List	Used VLAN List	Usable IP List
1	C:\INGBNView\clientMapData\admin\10.4.2.202		1		253			

Topo IP Statistics

**Delete:** Clicking on this menu to delete the current topology view

**Rename:** Click the menu item to modify the topo view name

**Reinit Tree:** Retrieve the information of topo map navigation tree.

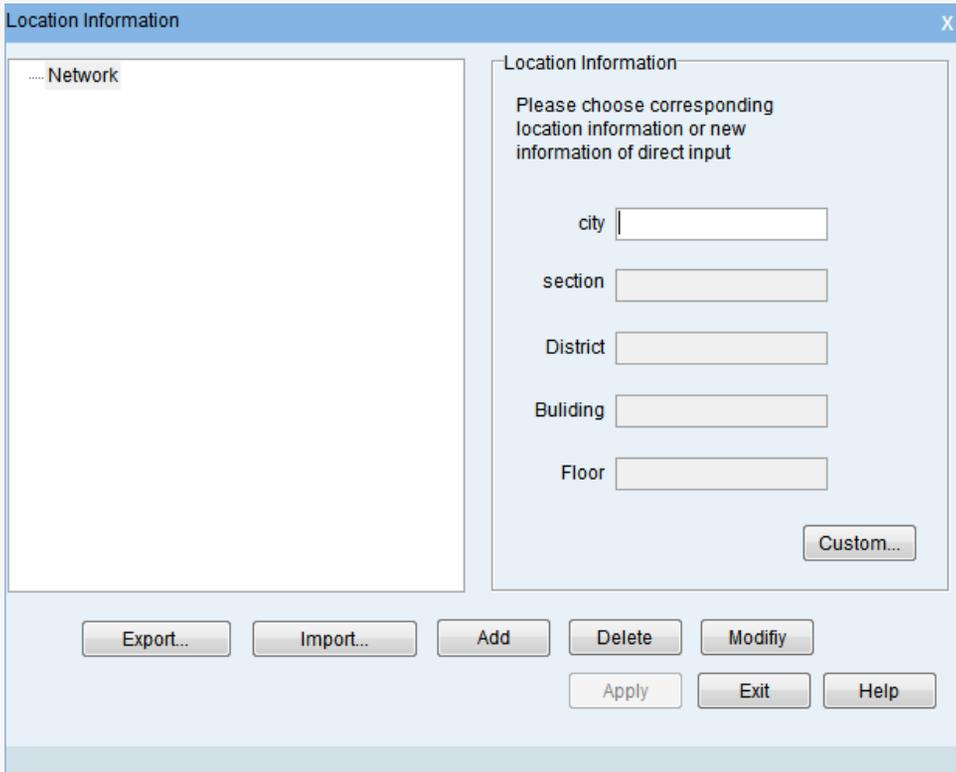
# Location View

## Overview for Location View

Location view is mainly to facilitate the user to use non-IP management mode to manage the device. The construction of the location view is constructed by the way that the user specifies the device organization rules and then sets it. After the system is installed, the location view requires the user to manually add it.

## Construct Navigation Tree of Location View

From the menu "**View**" → "**Location Information**", open the interface as shown below.



interface of location information

Firstly, use the mouse click the location where you want to add the nodes at the navigation tree of the left side of the interface. Secondly, input the corresponding location information or select the relevant information at the right side of the interface. After confirming that the information is filled in correctly, click **Add**. Finally, you can find the new node in the navigation tree on the left side of the interface. User can edit the tree node through the

**"Delete"** and **"Modify"** buttons on the lower part of the interface.

At the same time, users can also use Excel to export/import the location information via the **Export/Import** button. The specific format can be understood by the exporting file.



Note: On the navigation tree of Location Information, select the node you want to delete and click the Delete button to complete the delete operation. In this case, the node is deleted only from the navigation tree, but the devices it represents will not be deleted from the platform.

## Pad Location View Data

Select the node on the navigation tree of physical view, and then select the device you want to display on the location view, right-click **Device Information** to configure the location information for the device. When you click **"Modify"**, you can find the device on the location view. Place the mouse on the device icon and there will be information as shown in the figure.



S: GL5610-08P(GP)  
GP0] Device Name: 10.4.2.211  
Host Name: GPON  
Device Location:  
Device IP: 10.4.2.211  
Device Mac: 00:0A:5A:4B:B7:79  
Device manufacturer: New GreenNet  
Device OID: 1.3.6.1.4.1.13464.1.10.7.3  
Device type: GL5610-08P(V2)  
sub-net: 10.4.2.0  
running time: 2Days 23:37  
Device notes:

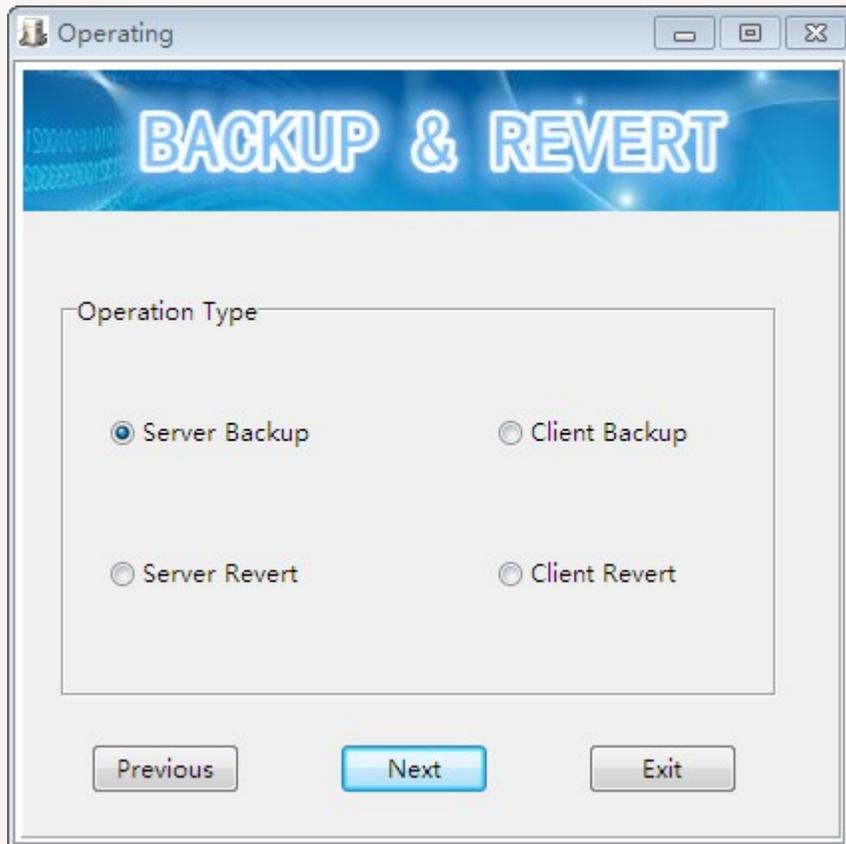
Device information

# System Backup

System backup module transfers various files between the client and the server via the FTP protocol (file transfer protocol).

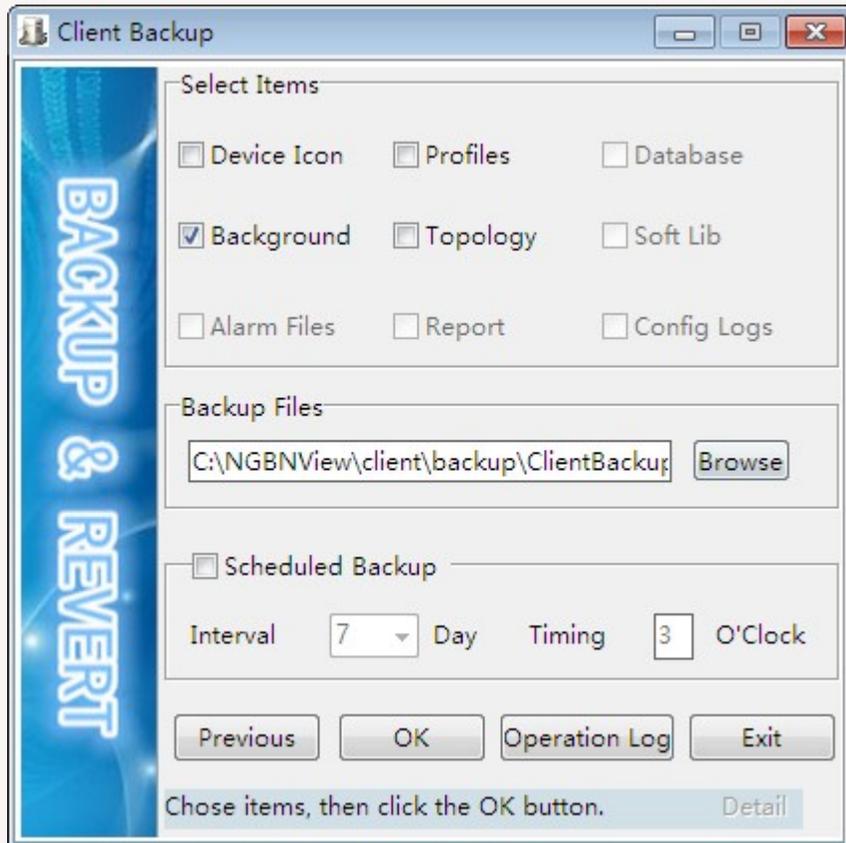
## Client Backup and Revert Backup

Click “**Start→Program→NGBNview →Tools→System Backup**”. And then the following figure will appear.



the main interface of the system backup

## Client Backup

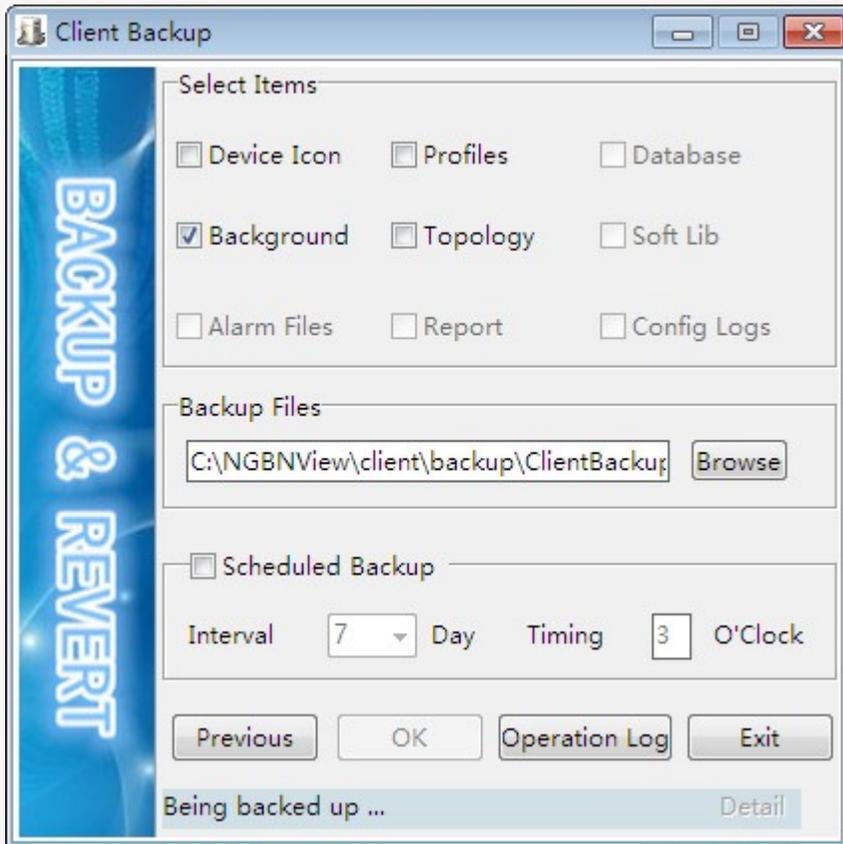


the interface of client backup

**Select Items:** It provides four backup options, including: Device Icon, Profiles, Background and Topology. Select the content you want to back up

and click **OK**. As shown above.

Click OK, as shown below.



result interface of client backup

Click *Detail*, the following interface will appear.

```

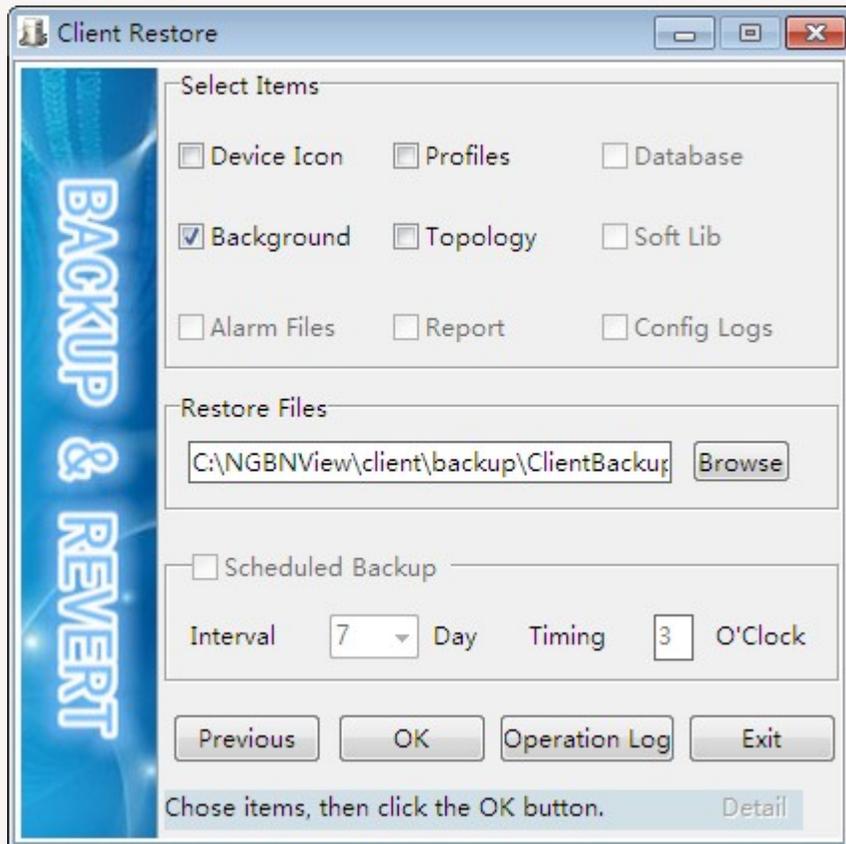
RAR 5.10 Copyright (c) 1993-2014 Alexander Roshal 10 Jun 2014Registered to SeVenUpdating archive C:\NGBNView
RAR 5.10 Copyright (c) 1993-2014 Alexander Roshal 10 Jun 2014Registered to SeVenCreating archive C:\Users\A
nul.jpg 0% OK Adding C:\NGBNView\client\images\backupenu2.jpg
1% OK Adding C:\NGBNView\client\images\color3.ico
1% OK Adding C:\NGBNView\client\images\device.ico
1% OK Adding C:\NGBNView\client\images\enter.bmp
dding C:\NGBNView\client\images\goback.ico
23% OK Adding C:\NGBNView\client\images\help_1.bmp
15% OK Adding C:\NGBNView\client\images\manage-er
ent\images\manage-chs.bmp
37% OK Adding C:\NGBNView\client\images\manage-er
efresh.bmp
49% OK Adding C:\NGBNView\client\images\refresh.ico
23% OK Adding C:\NGBNView\client\images\scheduleToolButton_mo.bmp
utton.bmp
70% OK Adding C:\NGBNView\client\images\scheduleToolButton_mo.bmp
71% OK Adding C:\NGBNView\client\images\sortup.ico
71% OK Adding C:\NGBNView\client\images\sortup.ico
73% OK Adding C:\NGBNView\client\images\toolhelp.ico
73% OK Adding C:\NGBNView\client\images\toolhelp.ico
OK Adding C:\NGBNView\client\images\viewlog.ico
74% OK Adding C:\NGBNView\client\images\viewlog.ico
100% OK Adding C:\NGBNView\client\images\zoomwin.ico

```

interface of detailed information

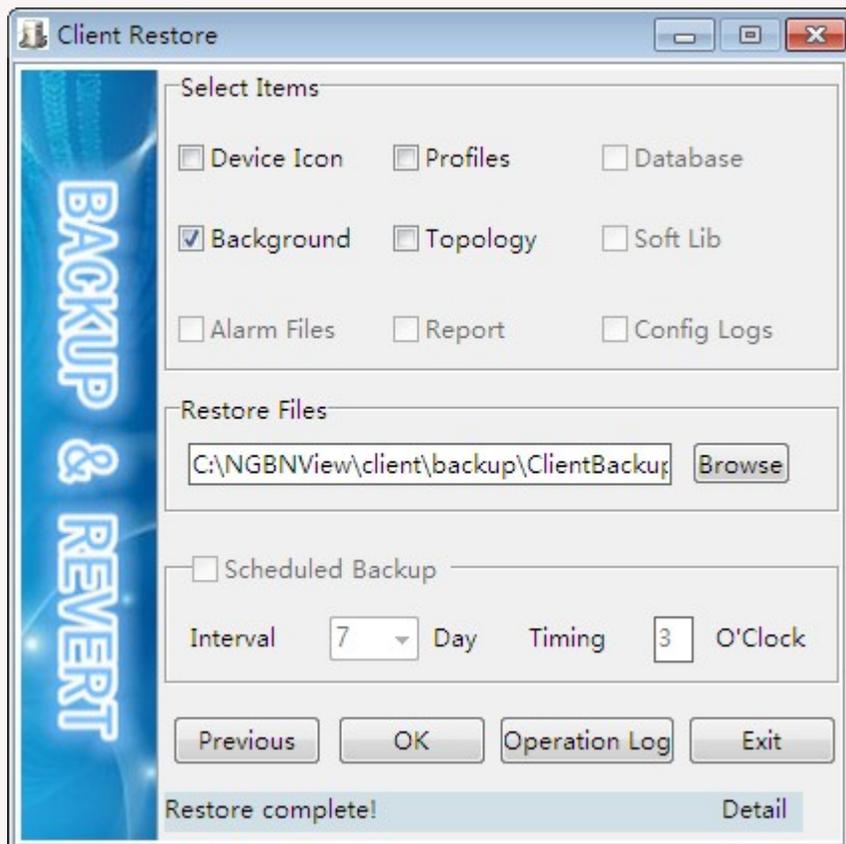
## Client Revert

Client revert provides four restore options: *device icons*, *topo*, *background images*, and *configuration files*. Select the content you want to revert, click **OK**, as shown below.



the interface of client revert

Click on the "Next", there will pop-up the interface of "whether to delete the existing data and then restore". Select it, as shown below.



result interface of client revert

Click **Detail**, as shown below.

```

RAR 5.10 Copyright (c) 1993-2014 Alexander Roshal 10 Jun 2014Registered to SeVeNUpdating archive C:\NGBNView
RAR 5.10 Copyright (c) 1993-2014 Alexander Roshal 10 Jun 2014Registered to SeVeNCreating archive C:\Users\A
nul.jpg 0% OK Adding C:\NGBNView\client\images\backpenu2.jpg
1% OK Adding C:\NGBNView\client\images\color3.ico
1% OK Adding C:\NGBNView\client\images\device.ico
15% OK Adding C:\NGBNView\client\images\enter.bmp
23% OK Adding C:\NGBNView\client\images\goback.ico
23% OK Adding C:\NGBNView\client\images\help_1.bmp
23% OK Adding C:\NGBNView\client\images\manager-er
ent\images\manage-chs.bmp
49% OK Adding C:\NGBNView\client\images\refresh.ico
70% OK Adding C:\NGBNView\client\images\scheduleToolButton_mo.bmp
71% OK Adding C:\NGBNView\client\images\sortup.ico
73% OK Adding C:\NGBNView\client\images\toolhelp.ico
74% OK Adding C:\NGBNView\client\images\viewlog.ico
100% OK Adding C:\NGBNView\client\images\zoomwin.ico

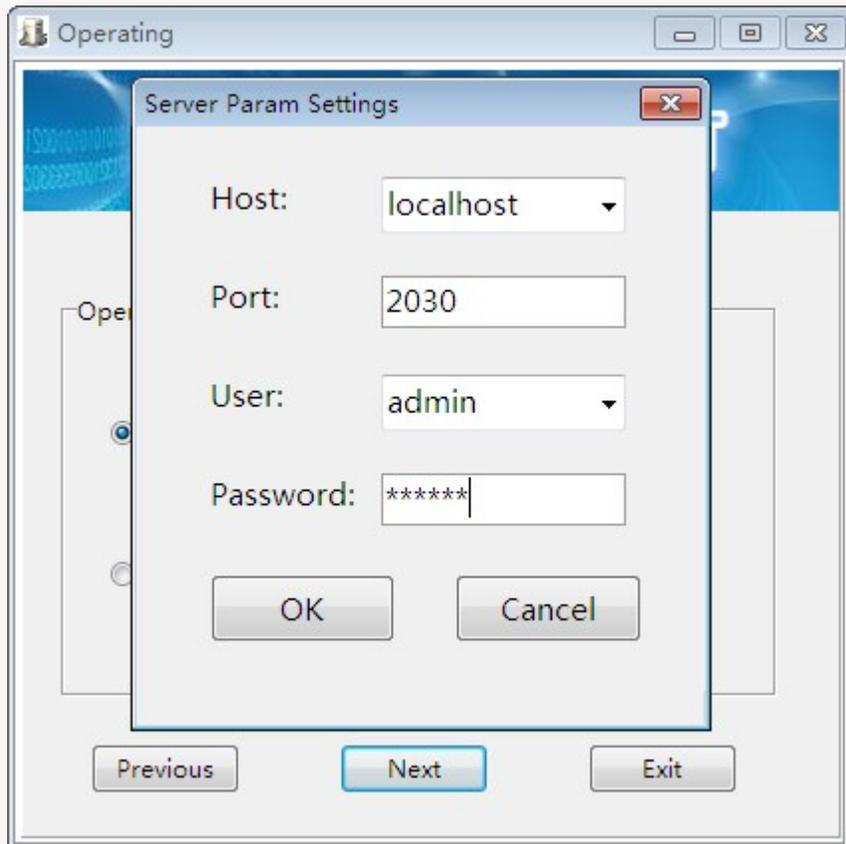
RAR 5.10 Copyright (c) 1993-2014 Alexander Roshal 10 Jun 2014Registered to SeVeNExtracting from C:\NGBNView
1% OK Extracting C:\NGBNView\client\images\backpenu1.jpg
3% OK Extracting C:\NGBNView\client\images\color2.ico
6% OK Extracting C:\NGBNView\client\images\delete_mo.png
13% OK Extracting C:\NGBNView\client\images\ended.bmp
20% OK Extracting C:\NGBNView\client\images\gnlinkdevice.ico
20% OK Extracting C:\NGBNView\client\images\group2.png
25% OK Extracting C:\NGBNView\client\images\LTCardPanel.bmp
41% OK Extracting C:\NGBNView\client\images\red.ic
49% OK Extracting C:\NGBNView\client\images\save.bmp
50% OK Extracting C:\NGBNView\client\images\ShowTree.ico
54% OK Extracting C:\NGBNView\client\images\TFTP_2.bmp
59% OK Extracting C:\NGBNView\client\images\viewalert.ico
81% OK Extracting C:\NGBNView\client\images\zoommax.ico

```

the interface of detail information

## System Backup and Revert

The login interface of server backup and revert is similar to the login interface of client backup and revert. It also requires entering the front end server address, port, user name and password. The user name and password are the same as those of the network management system. In addition, it can automatically record the used server address as the client login interface. The interface is shown below.

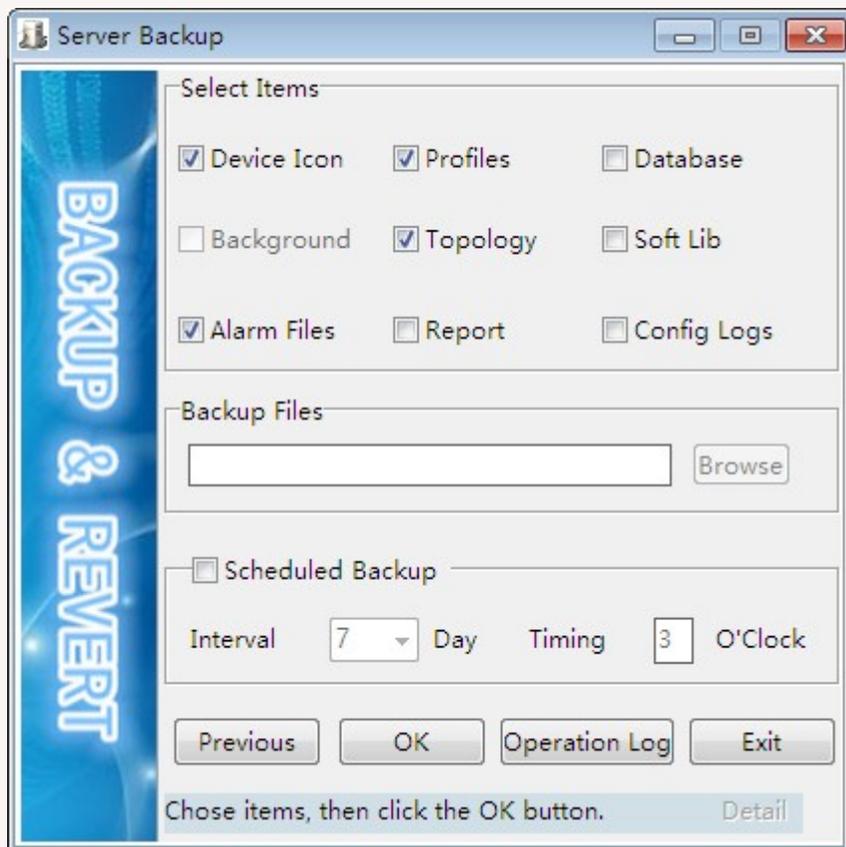


login interface of server system

During the server system backup and revert, it requires the back-end server starting the FTP server.

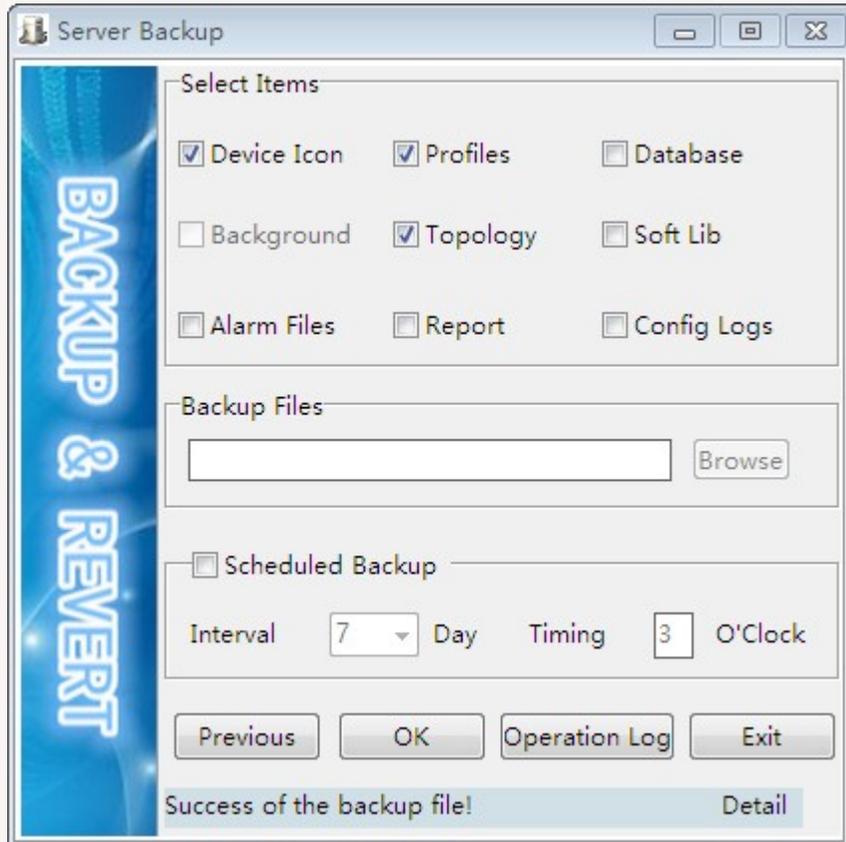
## Server Backup

**Server backup:** It includes *Device Icon, Profiles, Database, Topology, Soft Lib, Alarm Files, Report* and *Config Logs*. Select the content you want to back up and click **OK**. As shown below.



the interface of server backup

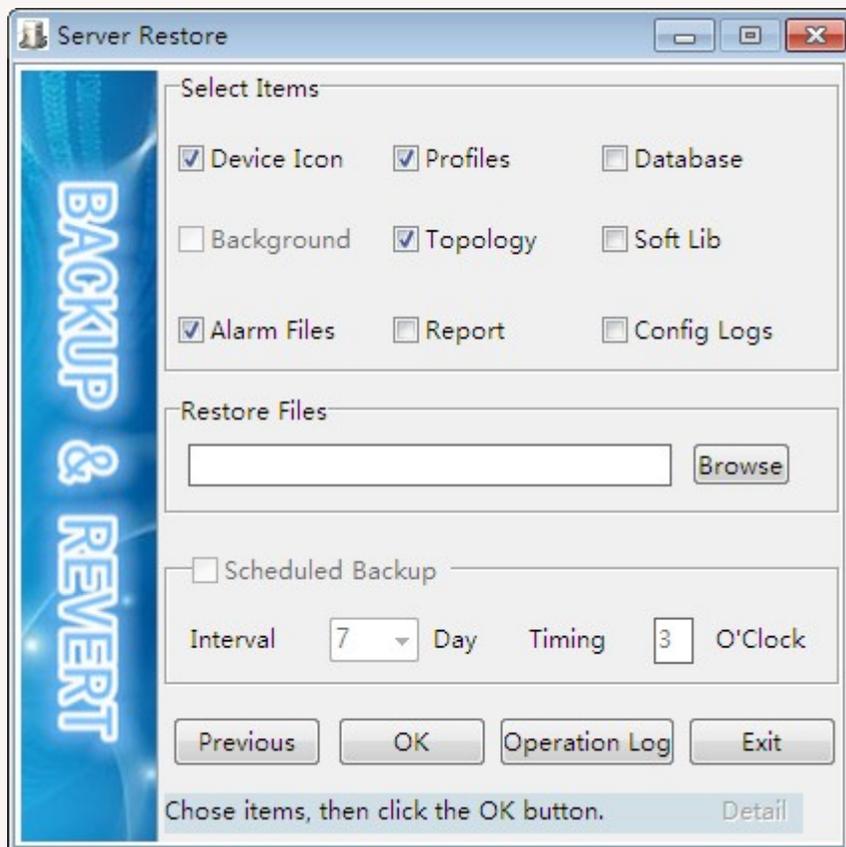
Click OK, as shown below.



result interface of server backup

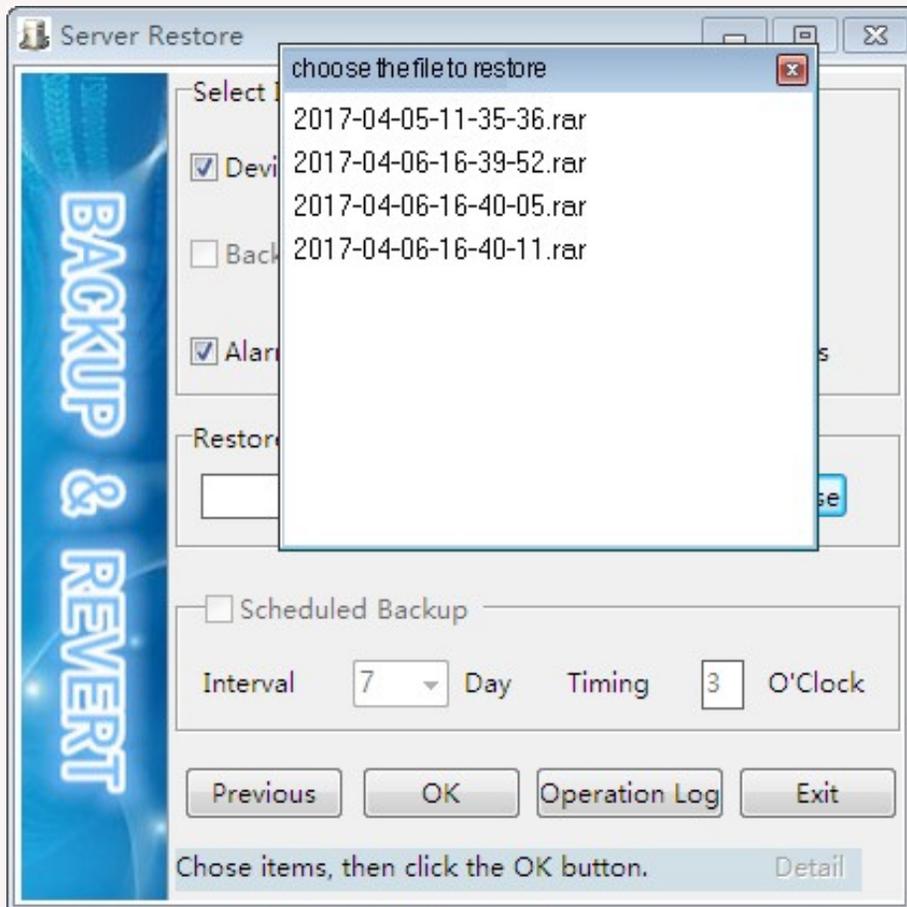
## Server Revert

**Server revert provides the following revert options:** Device Icon, Profiles, Database, Background, Topo, Soft Lib, Alarm Files, Report, Config Logs. Select the item you want to revert, as shown below.



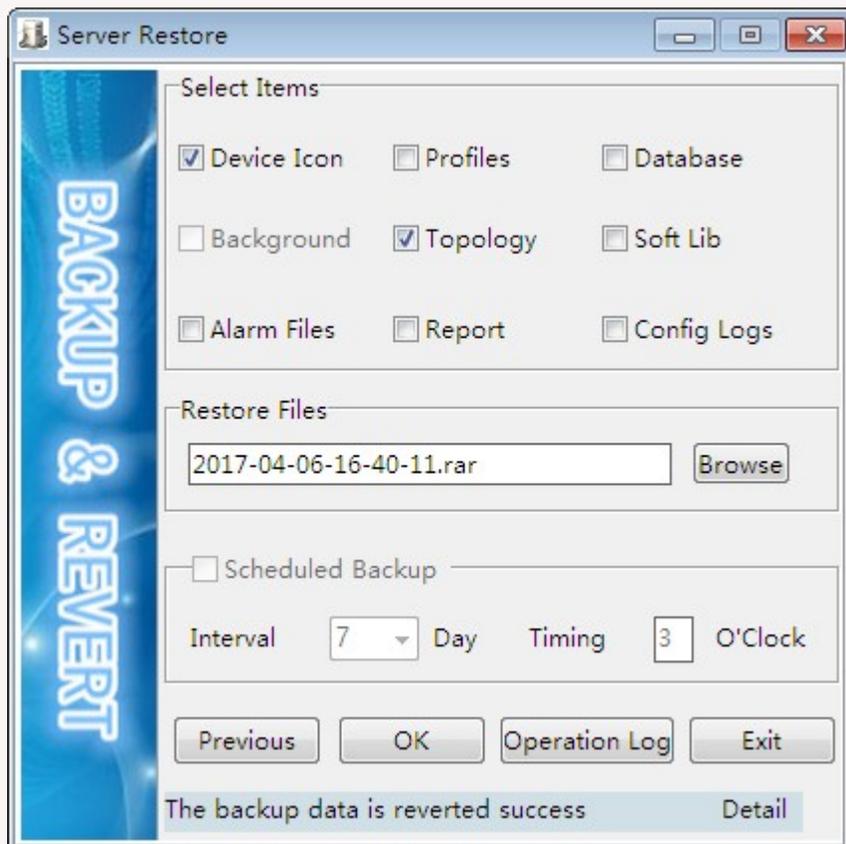
interface of client revert

Click on the **Browse**, the server reads the backup RAR files of fixed directory, and then select the RAR you want to revert, as shown below.



the result interface of client revert

Click OK, as shown below.

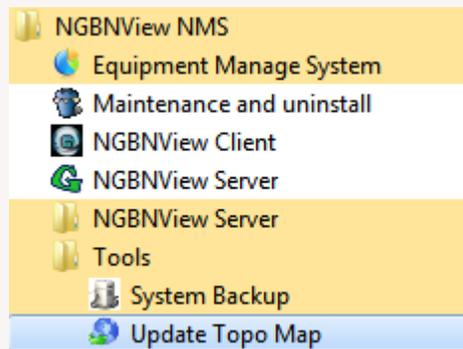


the result interface of server revert

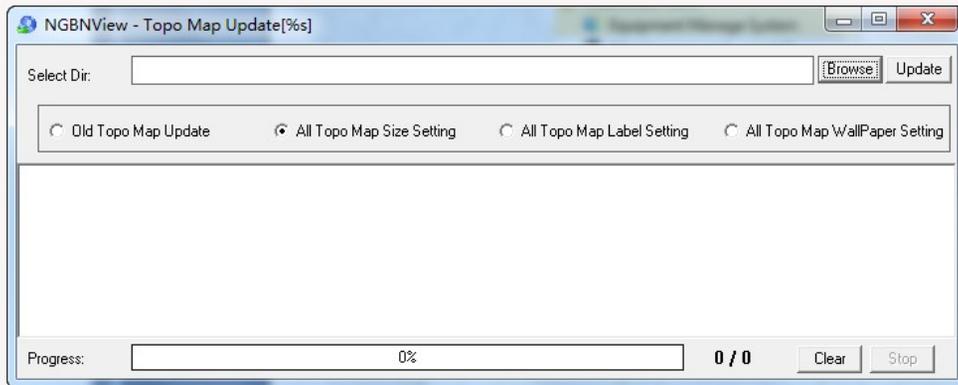
# Update Topo Map

## Overview for Update Topo Map

This chapter focuses on the operation of the topo, mainly for the bulk operation. If you choose a bulk operation of the topo, you do not need to set up or update one by one. The main functions of the topo map are to update the old version of the topo map, set the size and device label of the topo map. You can also set the background color for the topo view. Open the update topo as follows.



the open interface of update topo map



the interface of update topo map

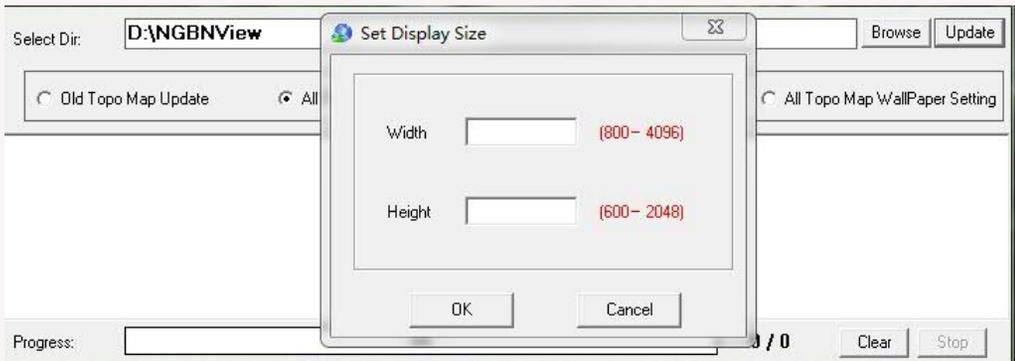
**Select Dir:** The location where the update topo map is stored. You can find the folder where the topo is located by ***Browse***.

## Update the Old Version of Topo Map

It mainly updates the previous topo to meet the requirements of the new version of the topo.

## Set All Topo Map Size

It resets the size of the topo of the folder. Select the option and click Update. As shown below.

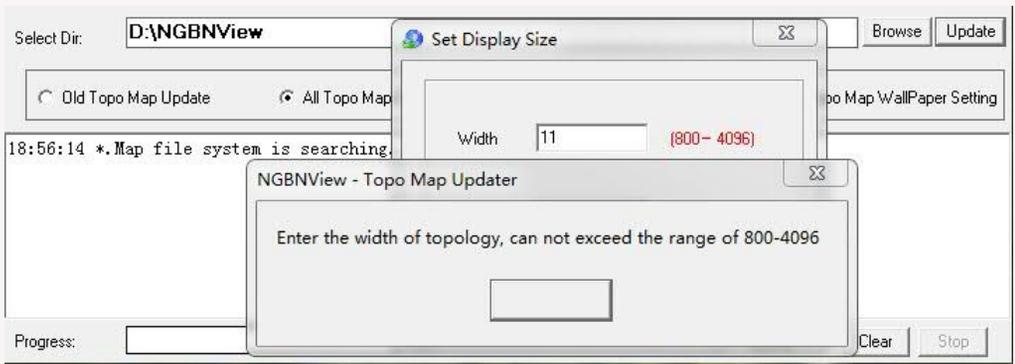


set the size of topo map

**Width:** range from 800-4098

**Height:** range from 600-208

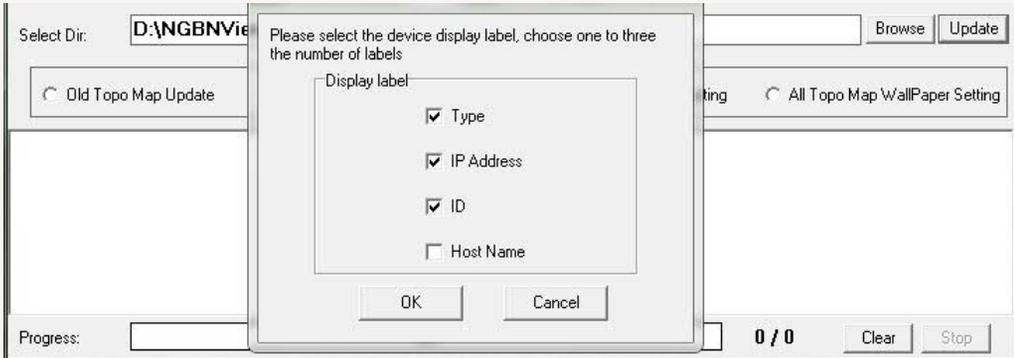
**Note:** If the value is outside this range, a prompt will appear. As shown below.



prompt interface

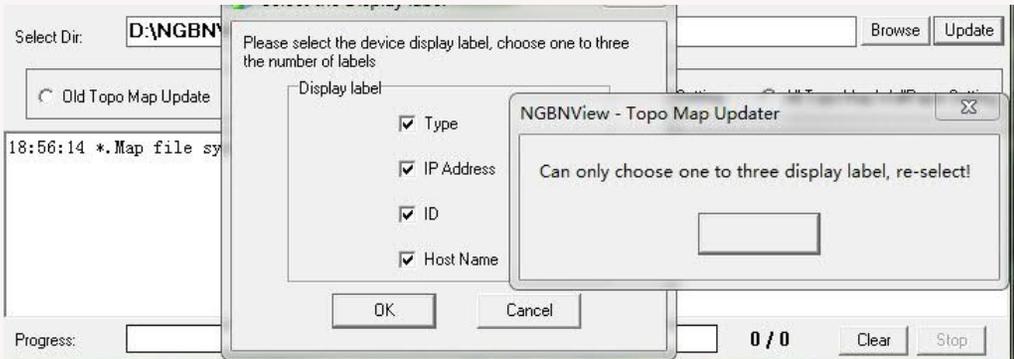
## Set All Topo Map Label

Make some annotations for the topo, as shown in the following figure.



set all topo map label

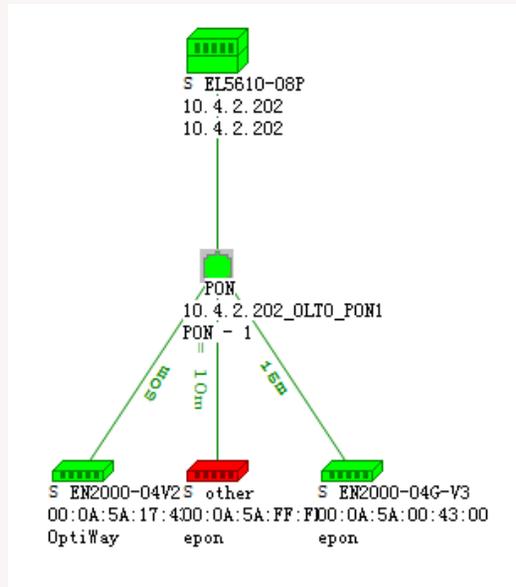
In the topo map, the label can be displayed type, IP address, device ID, host name, etc. Select at least one item but up to three items. If you select more than three items, the following prompt appears.



prompt interface

After setting the label to be displayed, click **OK**. The topo will be updated.

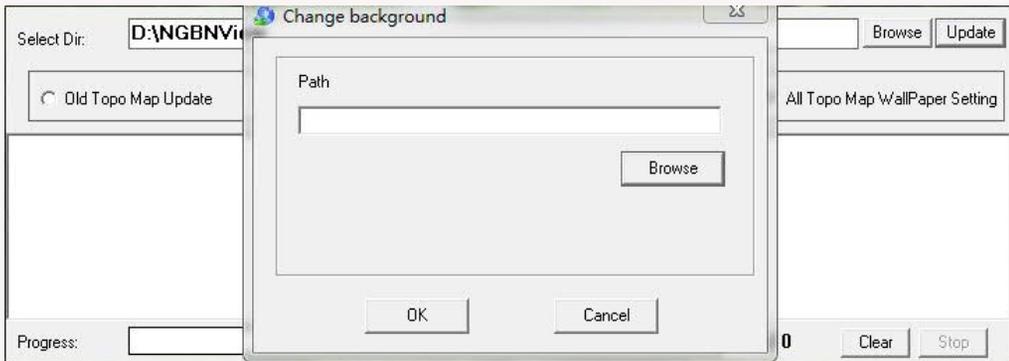
The update result is as shown below.



update result

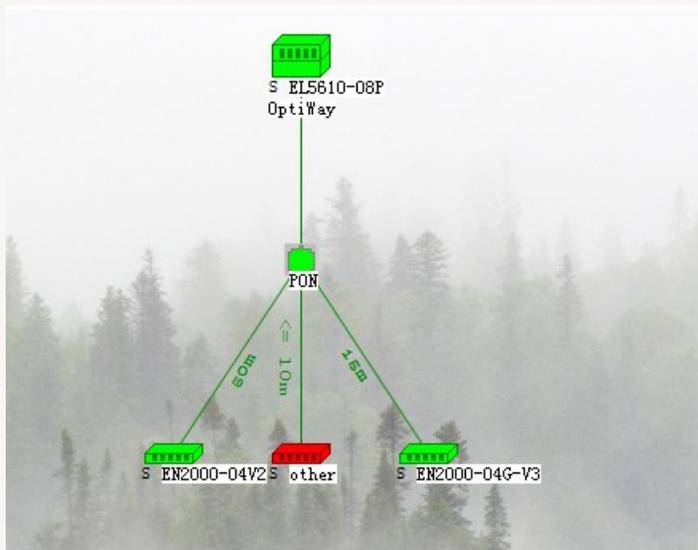
## Change Topo Background Color

This function is mainly to change the background color of the topo. As shown below.



Sets the background color of the topo

**Path:** Select the background color you want, and the picture only supports .jpg and .bmp. Select the picture you want, click OK to update. As shown below.



The Color of Update Topo Map

# Appendix A Technical Support

Users can easily access technical support information. The appendix describes these avenues.

The information contained in the Appendix is accurate only at the time of publication. For the most up-to-date information, please visit our website.

Online Technical Services - we offer 24/7/365 customer support through the following online systems.

our World Wide Web site : [www.szgcom.com](http://www.szgcom.com)

World Wide Web site—Please visit our World Wide Web site where customers can access service information online, such as technical documentation, software, maintenance technical manuals and expert services.



Note: The above services do not require a username and password.

Technical support from network providers - If you need special help, please contact your network provider. Many network providers are also service

partners of our company, and they are equally competent to provide a wide range of services, including network design, installation, hardware maintenance, application training and support services.