

2018

# NMS Web 2.0

*NMS Operation Manual*



# Introduction

**NMS Web 2.0**, researched and developed by BDCOM, is a multi-platform network management system supporting several protocols, such as SNMP, HTTP, CLI. It contains abundant tools to monitor network performance, amicable interface display for customers, all-sided but simple functions of network configuration and so on. It is helpful for NMS to immensely improve the efficiency of network operation. NMS has the ability to real time monitor the whole network, helping Administrator realize centralized management in LAN.

*NMS Web Operation Manual* is a brief but detailed manual aiming at NMS. Through this manual, network administrator can get details in all management functions and operation approaches of NMS.

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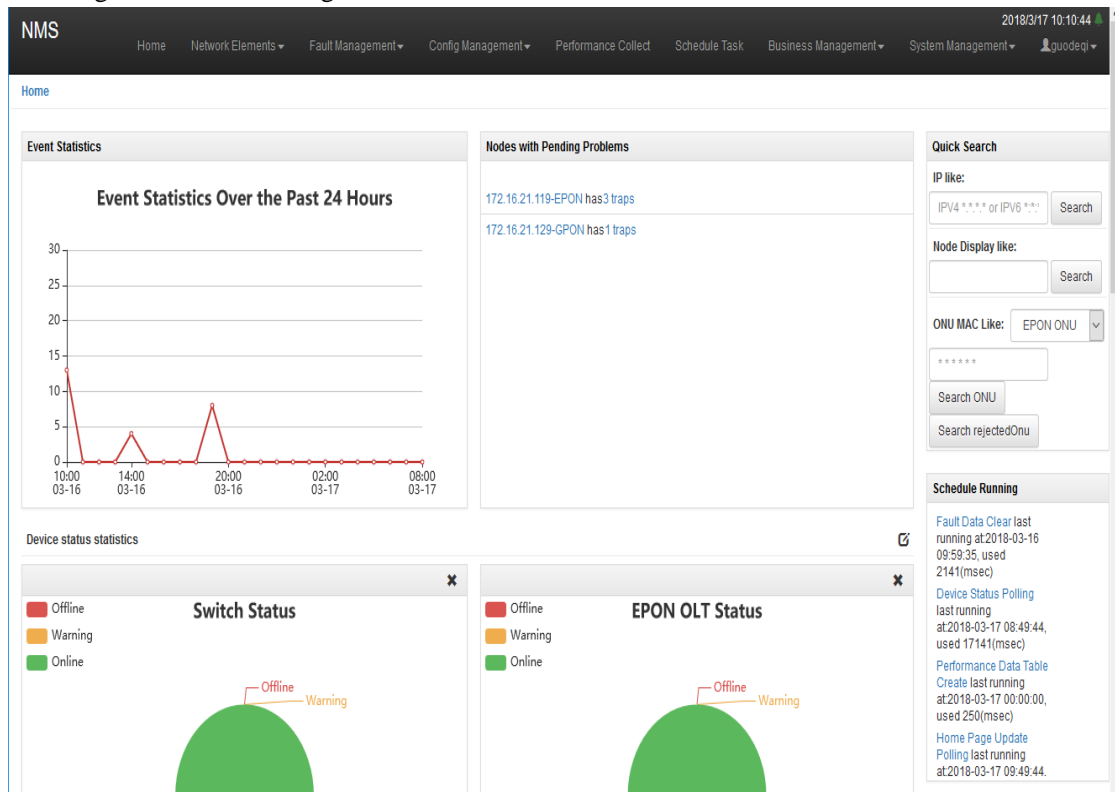
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# 1 Home

Log in NMS, see the figure.







## 1.1 Statistics

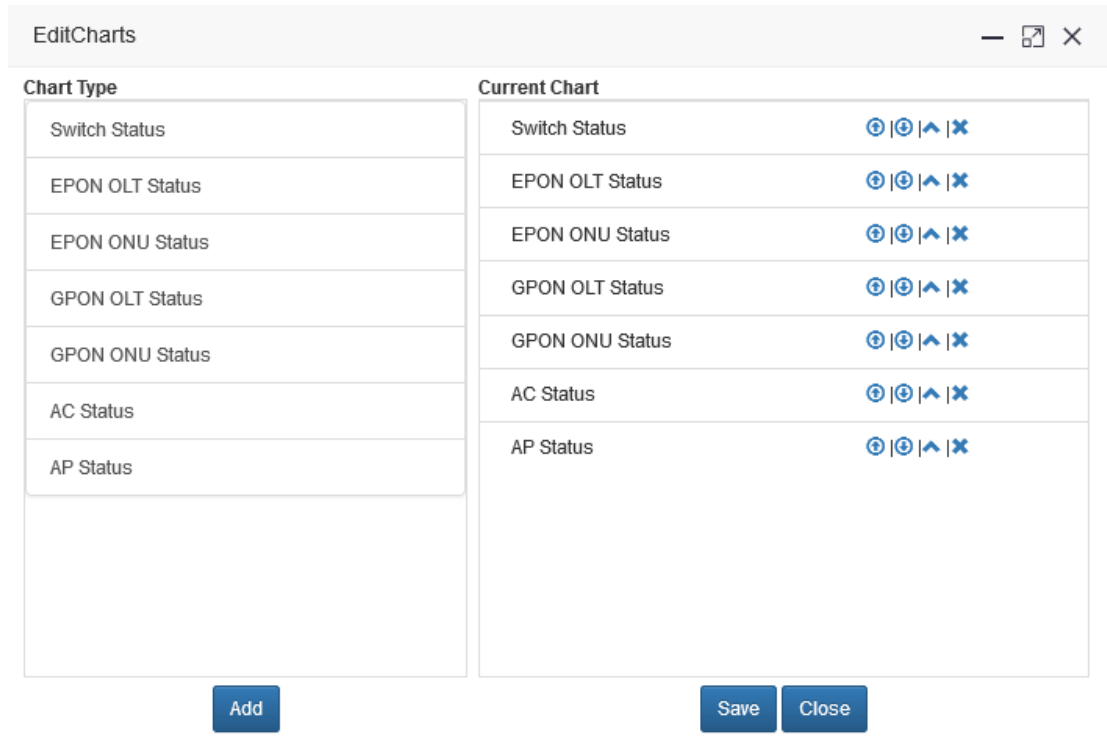
The main four parts:

1: **Event Statistics Over the Past 24 Hours** shows the alarm total received by NMS every hour in the past 24-hour event statistics;

2: **Nodes with Pending Problems** shows the top 10 devices reported mostly in the past 24 hours, as counted by NMS. Click the device name to enter device management interface; click **Warnings** to enter the warning management interface.

3: **Switch Status** shows the amount and status of all the devices in NMS. Click the editing button on the rightest side of **Device status statistics** to edit the display and order of charts. See the figure. Choose the necessary type in **Chart Type** and click **Add** to add it in **Current Chart**. Click     to edit. Click **Save** to display the edited chart on **Home**.





4: **EPON OLT Status** is the core timing tasks statistics. It displays the execution time and time consuming for every part. For task role and configuration, please refer to **Management Element** for details.

## 1.2 Quick Search

Click **Quick Search** to locate the device quickly and manage it. See the following figure, by searching **IP like**, **Node Display like** and **ONU MAC Like** to locate and manage the device. All three routes support fuzzy query to match the corresponding device. ONU Search includes EPON ONU and GPON ONU; EPON ONU requires ONU MAC address, while GPON ONU requires GPON ONU SN, that is serial number.

**Search rejectedOnu provides** rejected ONU search. Such function covers all EPON OLT in NMS to get all rejected ONU statistics. It can filter based on input MAC address. So the rejected ONU can be located and bound quickly.



## 2 Network Elements

**Discovery and Management** offers management portal to devices, an entry for all managed devices. After input, the devices will be differentiated by NMS automatically according to the type, condition and so on. The system provides appropriate management methods for all different devices. NMS receives basic data of devices and saves all such data in background database. Meanwhile, based on different types, all devices will be displayed on relevant interfaces.

The top is the navigation bar. On the navigation bar, click **Network Elements** -> **Discovery Element** to enable the **Discovery Element** configuration interface. See the following figure.

The screenshot shows the NMS web interface. The top navigation bar includes 'Home', 'Network Elements', 'Fault Management', 'Config Management', 'Performance Collect', 'Schedule Task', 'Business Management', and 'System Management'. The 'Discovery Element' configuration form contains the following fields and buttons:

- Discovery Node: [Text Input]
- Discovery Net: [Text Input]
- IP Address: [Text Input]
- Netmask: [Text Input]
- SNMP Port: [Text Input, value: 161]
- Discovery Type: [Text Input]
- Add To Area: [Text Input]
- SNMP Version: [Dropdown Menu, value: V2]
- Community: [Text Input, value: public]
- Buttons: Add, Delete, Clear All, Save, LoadHistoryRecord, Discovery

At the bottom, a table header is visible with columns: No., IP Address, Netmask, SNMP Version, SNMP Info, SNMP Port, Discovery Type, Area.

**Discovery Element** can enable users to configure topology discovery conveniently and flexibly. For example, users can configure and discover the used protocol and parameter, discover all nodes in a certain network, devices in certain IP segment and something else defined by users. The configuration function of **Discovery Element** enable administrators to make relevant changes in configuration based on the following two properties:

- ◆ **Discovery Node**
- ◆ **Discovery Net**

### 2.1 Discovery Node

With mechanism of **Discovery Element**, users can be forced to discover the appointed device or other devices with particular ports and agencies, when discovering any other device in the network. Therefore, it becomes convenient for users to first discover and add the preferential specifics of nodes and devices when operating **Discovery Element**.

On the **Discovery Element** interface, choose the property page of **Discovery Node**. See the following figure.

Discovery Node    Discovery Net    Log Search

IP Address:     Netmask:

SNMP Port:     Discovery Type:

Add To Area:

SNMP Version:

Community:

No.	IP Address	Netmask	SNMP Version	SNMP Info	SNMP Port	Discovery Type	Area
-----	------------	---------	--------------	-----------	-----------	----------------	------

### 2.1.1 RealTime Discovery Logs

Operation steps:

- ◆ On the property page, enter IP address (IP address of the discovered node is required), net mask of node, SNMP port, discovery type, SNMP version and safety info into their relevant text boxes.
- ◆ Click **Add**. IP address and net mask will be added into the discovery list and NMS will discover those nodes.
- ◆ After the above operations, click **Discovery**.
- ◆ The interface is shown as the following figure.

RealTime Discovery Logs ✕

Id	IP	Device Type	Device Model	Status	Discover Time
No data available in table					

0%

### 2.1.2 Save Discovery Node and Load History Record

After finishing the list, click **Save** to memorize the data in the database for the next use.

Discovery Node    Discovery Net    Log Search

IP Address:     Netmask:

SNMP Port:     Discovery Type:

Add To Area:

SNMP Version:

Community:

No.	IP Address	Netmask	SNMP Version	SNMP Info	SNMP Port	Discovery Type	Area
1	172.16.21.129	255.255.255.0	v2	public	161	GPON	

If history records exist, click **LoadHistoryRecord** to select history nodes in **Discovery history nodes**. Tick the required nodes in the checkbox in line 1, click **Add**; click **Delete** to clear history records; click **Close** to disenable the interface.

Discovery history nodes							X
<input type="checkbox"/>	IP Address	Netmask	SNMP Version	SNMP Info	SNMP Port	Discovery Type	
<input type="checkbox"/>	172.16.21.129	255.255.255.0	v2	public	161	GPON	

Showing 1 to 1 of 1 entries

previous **1** next

## 2.2 Discovery Net

Click **Start IP** and **End IP** to configure the range where only appointed IP address is discovered in the network. Here are the steps:

- ◆ Type in **Start IP** and **End IP**;
- ◆ Enter relevant Net mask, SNMP information, etc.;
- ◆ Click **Add** to finish the configuration;
- ◆ Click **Discovery** to enable **Discovery Net**.

Several IP address ranges can be configured in the same network.

Start IP     End IP     Netmask

SNMP Port     Discovery Type

Add To Area

SNMP Version

Community

No.	Start IP	End IP	Netmask	Discovery Type	SNMP Version	SNMP Port	SNMP Info	Area
-----	----------	--------	---------	----------------	--------------	-----------	-----------	------

## 2.3 Log Search

After configuring Discovery Node, click **Discovery** to enable **Log Search**. The discovered network, device will show up in logs. If there is **Discovery Net**, the interface will be presented as the following figure.

RealTime Discovery Logs
✕

Id	IP	Device Type	Device Model	Status	Discover Time
No data available in table					

Stop Discovery

0%

Search in **Log Search** to inquire device discovery and deleted logs. Search the records in self-defined conditions, or the default search involves all logs.

Discovery Node
Discovery Net
Log Search

Device IP

Device Type All ▼

Device Model

Start Time

End Time

[Query Log](#)

show 10 ▼ entries

NO.	Device IP	Device Type	Device Model	Operation Type	Discover Time	Operation
1	172.16.21.129-GPON_ONU_55	ONU	unknown	Add	2018-03-08 17:16:01	✕
2	172.16.21.129-GPON_ONU_54	ONU	unknown	Add	2018-03-08 17:16:01	✕
3	172.16.21.129-GPON_ONU_52	ONU	unknown	Add	2018-03-08 17:16:01	✕
4	172.16.21.129-GPON_ONU_44	ONU	unknown	Add	2018-03-08 17:16:01	✕
5	172.16.21.129-GPON_ONU_43	ONU	0000	Add	2018-03-08 17:16:01	✕
6	172.16.21.129-GPON_ONU_40	ONU	unknown	Add	2018-03-08 17:16:01	✕
7	172.16.21.129-GPON_ONU_39	ONU	unknown	Add	2018-03-08 17:16:01	✕
8	172.16.21.129-GPON_ONU_38	ONU	unknown	Add	2018-03-08 17:16:01	✕

Showing 1 to 10 of 32 entries

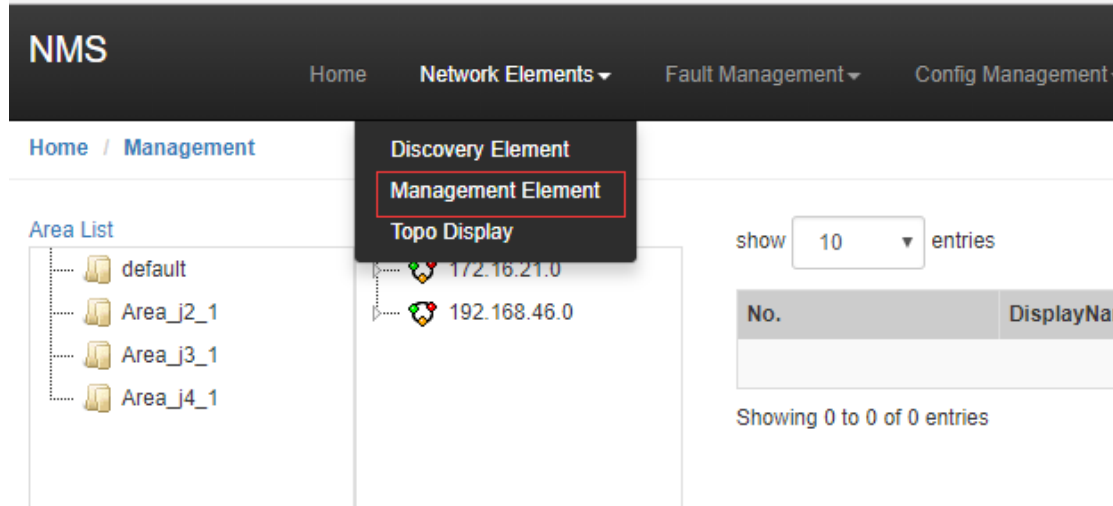
previous
1
2
3
4
next

## 2.4 Caution

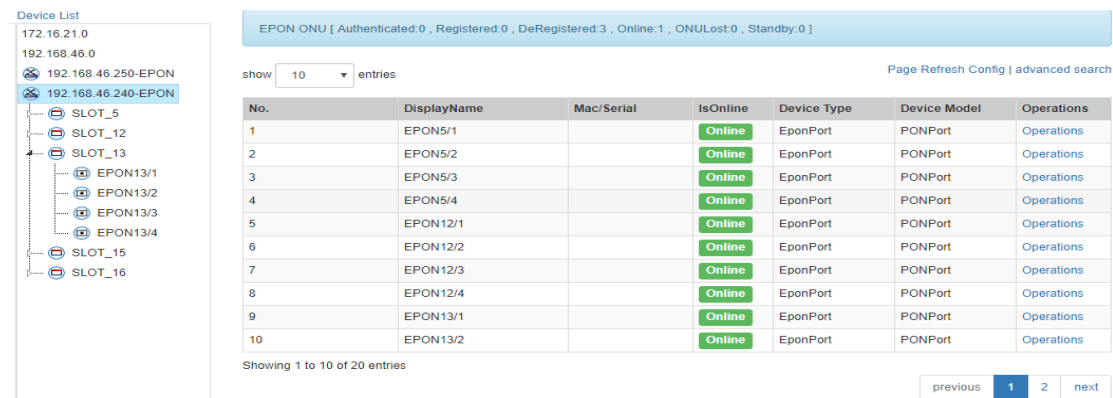
When some device has existed in NMS, the device will not be rediscovered or discovered during **Discovery** operation.

### 3 Management Element

**Management Element** provides preservation and configuration for discovered nodes. Click **Network Elements -> Management Element** to enable the interface. See the following figure.



In the interface, select the area in **Area List**. The net tree (there is only one default area in original state and all devices are tacitly approved to be in default area) shows up in **Device List**. Following the chosen area and tree nodes, the relevant device details can be noticed in the form, and further configuration and preservation management can be operated. See the following figure.



#### 3.1 Page Refresh Config

**Page Refresh Config** can periodically refresh the table data, default disabled. Upon being enabled, it can get the latest data updates from the database regularly, consuming a certain amount of server performance, so short polling time is not recommended. See the following figure.



Page Refresh Config
✕

**Status** Disable ▼

**interval** -1

Confirm
Cancel

### 3.2 advanced search

**advanced search** can search switches like EPON, GPON, ONU, etc.. The general retrieval short keys: CTRL+F; if not, do the following.

Page Refresh Config | advanced search

Device Model	Operations
PONPort	<a href="#">Operations</a>
PONPort	<a href="#">Operations</a>

advanced search
✕

**Device Type:** All ▼

**IP:** precision ▼ IP Address

**Name:** precision ▼ Name

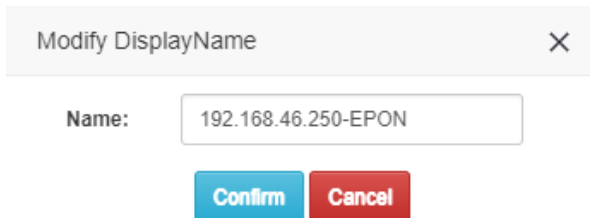
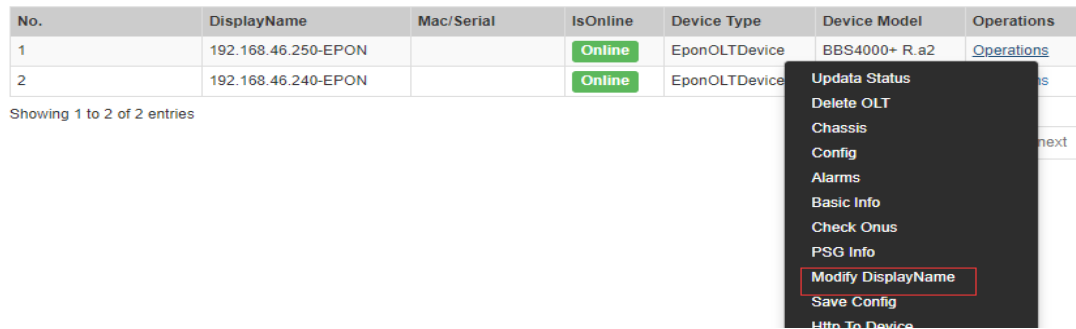
**Displayname:** fuzzy ▼ Displayname

**Mac:** precision ▼ fc fa f7 c5 c6 23

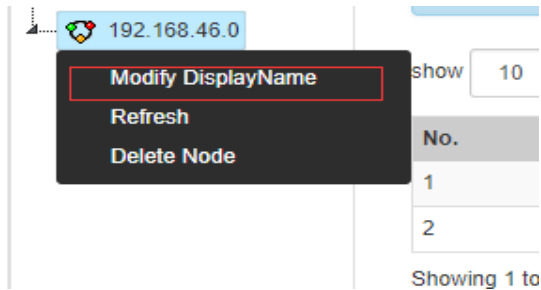
Search
Cancel

### 3.3 Modify DisplayName

To set names of the discovered devices, click **Modify DisplayName** in the right form. See the figure.



To modify the display names, right-click one certain tree node and choose **Modify DisplayName**. See the following figure.



### 3.4 Update Status

NMS offers rear-end timing polling to update status. The update works every 2 hours tacitly. To acquire latest device connectivity, click **Operations->Update Status**. See the figure.





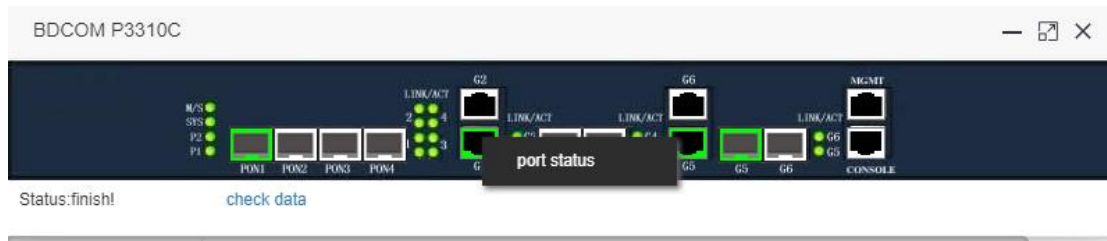
### 3.5 Delete OLT

Operate **Delete OLT** to remove some devices from NMS; if the device is right proceeding the NMS polling, **Delete OLT** may fail. Please delete that later.

Device Type	Device Model	Operations
EponOLTDevice	BBS4000+ R.a2	<a href="#">Operations</a>
EponOLTDevice		<ul style="list-style-type: none"> <li>Update Status</li> <li style="border: 1px solid red; padding: 2px;">Delete OLT</li> <li>Chassis</li> </ul>

### 3.6 Chassis

Just click **Operations->panel** to check **port status**. Shutdown and no shutdown operations are provided. See the figure.



### 3.7 Config

Click **Operation-> Config** and choose one certain option, click **Operations** to realize the configuration.

172.16.21.119-EPON ( test )	
Config	Operations
Managed Object Attribute	<a href="#">Operations</a>
Vlan Management	<a href="#">Operations</a>
OLT PON Optical Power Batch Set	<a href="#">Operations</a>
Batch Telnet Community Set	<a href="#">Operations</a>
Storm Control	<a href="#">Operations</a>
MultiCast	<a href="#">Operations</a>
PortControl	<a href="#">Operations</a>
PON Power Limit	<a href="#">Operations</a>

[Close](#)

### 3.8 Alarms

Click **Operation->Alarms** to see the alarms information of the device.

172.16.21.119-EPON ( test ) Alarms

Export Current Page Alert Export All Alert Refresh Sure Select **Batch Delete** Precise Search 172.16.21.119 Search

show 10 entries

No.	Trap Src	Trap Level	Trap Description	Affirm Status	Modify Time	Operations
1	172.16.21.119-EPON ( test )	<b>Critical Trap</b>	General fault, Port:[EPON0/1:2] has broken!	Unconfirmed	2018-03-08 11:28:07	<a href="#">Detail/Delete/Affirm/locate</a>
2	172.16.21.119-EPON ( test )	<b>Critical Trap</b>	General fault, Port:[EPON0/1] has broken!	Unconfirmed	2018-03-08 11:22:48	<a href="#">Detail/Delete/Affirm/locate</a>

Showing 1 to 2 of 2 entries

previous 1 next

### 3.9 Basic Info

Click **Operation->Basic Info** to see the basic information.

Basic Info-172.16.21.119-EPON ( test )

**Basic Info** Card Info Port Info Chip Info

IP Address 172.16.21.119-EPON

Device Model P3310C

Run time 16 days, 1 hours, 3 minutes, 32 seconds.

Bin Version BDCOM(tm) P3310C Software, Version 10.1.0E Build 50303  
Compiled: 2018-2-10 13:54:28 by WANG\_ZHIMIN  
ROM: System Bootstrap,Version 0.4.1,Serial num:00316000101

Refresh

### 3.10 Check Onus

Click **Operation->Check Onus** to configure and retrieve on OLT ONU list.

Check Onus

device List

- All Epon Devices
- Business Partition
- 172.16.21.119-EPON ( test )
  - SLOT\_0
    - EPON0/1
    - EPON0/2
    - EPON0/3
    - EPON0/4

EPON ONU [ Authenticated:0 , Registered:0 , DeRegistered:8 , Online:1 , ONULost:0 , Standby:0 ]

show 10 entries DataBase Query ONU Name Search Export Export All Simple

No.	ONU Name	Belong Device	BelongPonPort	Mac
1	EPON0/1:1	172.16.21.119-EPON ( test )	EPON0/1	11 11 11 11 11
2	EPON0/2:16	172.16.21.119-EPON ( test )	EPON0/2	12 32 44 44 4
3	EPON0/3:1	172.16.21.119-EPON ( test )	EPON0/3	11 11 33 33 4
4	EPON0/3:2	172.16.21.119-EPON ( test )	EPON0/3	11 11 33 33 4
5	EPON0/3:6	172.16.21.119-EPON ( test )	EPON0/3	11 11 33 33 4
6	EPON0/3:3	172.16.21.119-EPON ( test )	EPON0/3	11 11 33 33 4
7	EPON0/3:5	172.16.21.119-EPON ( test )	EPON0/3	11 11 33 33 4
8	EPON0/3:4	172.16.21.119-EPON ( test )	EPON0/3	11 11 33 33 4
9	EPON0/1:2 ( 测试 )	172.16.21.119-EPON ( test )	EPON0/1	fa fc fe 12 34

Below the device list tree are 3 main nodes: **All Epon Device**, **Business Partition**, **Epon(test)**. Click **All Epon Device** to search all onu; **Business Partition** to divide onu into different business so as to statistics search. Right click **Business Partition** to add new business. Choose the certain business, right click to delete or rename it. See the figure.

Select one onu, click **Business Partition** to put the onu below the appointed business.

Business Partition

- 172.16.21.119-EPON ( test )
  - SLOT\_0

show 10 entries DataBase Query ONU Name Search

No.	ONU Name	Belong Device	Be
1	EPON0/1:1	172.16.21.119-EPON ( test )	EP
2	EPON0/2:16	172.16.21.119-EPON ( test )	EP
3	EPON0/3:1	172.16.21.119-EPON ( test )	EP
	EPON0/3:2	172.16.21.119-EPON ( test )	EP
	EPON0/3:6	172.16.21.119-EPON ( test )	EP
	EPON0/3:3	172.16.21.119-EPON ( test )	EP
	EPON0/3:5	172.16.21.119-EPON ( test )	EP
	EPON0/3:4	172.16.21.119-EPON ( test )	EP
	EPON0/1:2 ( 测试 )	172.16.21.119-EPON ( test )	EP

- Delete ONU
- Chassis
- Config
- Alarms
- Basic Info
- Modify DisplayName
- Reboot ONU
- Switch ONU PON
- Business Partition



Click the onu, and the menu will pop up. See the figure.

No.	ONU Name	Belong Device	BelongPonPort	M
1	EPON0/1:1	172.16.21.119-EPON ( test )	EPON0/1	1
2	EPON0/2:16	172.16.21.119-EPON ( test )	EPON0/2	1
3		172.16.21.119-EPON ( test )	EPON0/3	1
4		172.16.21.119-EPON ( test )	EPON0/3	1
5		172.16.21.119-EPON ( test )	EPON0/3	1
6		172.16.21.119-EPON ( test )	EPON0/3	1
7		172.16.21.119-EPON ( test )	EPON0/3	1
8		172.16.21.119-EPON ( test )	EPON0/3	1
9		172.16.21.119-EPON ( test )	EPON0/1	fe

- Delete ONU
- Chassis
- Config
- Alarms
- Basic Info
- Modify DisplayName
- Reboot ONU
- Switch ONU PON
- Business Partition

**Delete ONU:** Remove the onu from database or log off the device;

**Chassis:** Check onu port status.



**Config:** Configure the onu. See the figure for details.

EPON0/1:1	
<b>Config</b>	<b>Operations</b>
Managed Object Attribute	<a href="#">Operations</a>
ONU Ranging	<a href="#">Operations</a>
ONU Optical Power Set	<a href="#">Operations</a>
ONU Vlan Management	<a href="#">Operations</a>
ONU Loop Test	<a href="#">Operations</a>
Onu Qos Config	<a href="#">Operations</a>
UNI Port Limit Rate	<a href="#">Operations</a>
Serial Server Config	<a href="#">Operations</a>
EPON ONU Multicast Config	<a href="#">Operations</a>

**Close**

**Alarms:** Check the alarms. Refer to **3.8 Alarms** for details.

**Basic Info:** Check **ONU IfIndex**, **Distance**, **Config Info** and **SFP**. See the figure.

Basic Info-EPON0/1:1									
Basic Info									
Belong Olt				Upper Pon Port		Slot Number		IsOnline	
172.16.21.119-EPON ( test )				EPON0/1		0		DeRegistered	
ONU LLID	Mac	Device Model	ONU IfIndex	Distance(m)	ONU Status	Hardware Version	Software Version	Rx Power(dBm)	Tx Power(dBm)
21	11 11 11 11 11 11	----	21	0	deregistered				

PON To ONU Rx Power(dBm):

**Modify DisplayName:** Modify ONU display names so as to manage them.

**Reboot ONU:** Remote control ONU reboot.

**Switch ONU PON:** ONU active-standby switch between PSG or Hand in Hand.

**Business Partition:** Configure business for ONU.

### 3.11 PSG Info

Click **Operations->PSG Info** to see the PSG information.

PSG Info							
psgDiid	psgIfDescr	activeEponDiid	standbyEponDiid	currentActiveEponDiid	currentActiveEponIfDescr	currentStandbyEponDiid	currentStandbyEponIfDescr

### 3.12 Save Config

Click **Operations->Save Config** to save the operation.

### 3.13 Http To Device

Click **Operations->Http To Device** to log in to the device.

### 3.14 Https To Device

Click **Operations->Https To Device** to log in to the device.

### 3.15 Telnet To Device

Click **Operations->Telnet To Device** to log in to the device.

### 3.16 ONU Hand in Hand Info

Click **Operations->ONU Hand in Hand Info** to check the client information. See the figure.

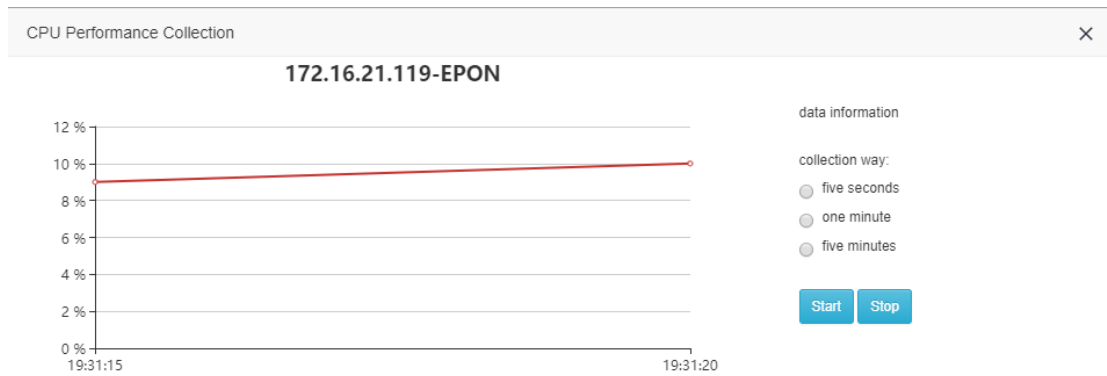
No.	DisplayName	Mac	Status	Ifindex	Belong PON	Peer OLT	Peer PON	Peer DisplayName	Peer Mac	P
The data in the table is empty										

### 3.17 Reboot Device

Click **Operations->Reboot Device** to remotely control the reboot.

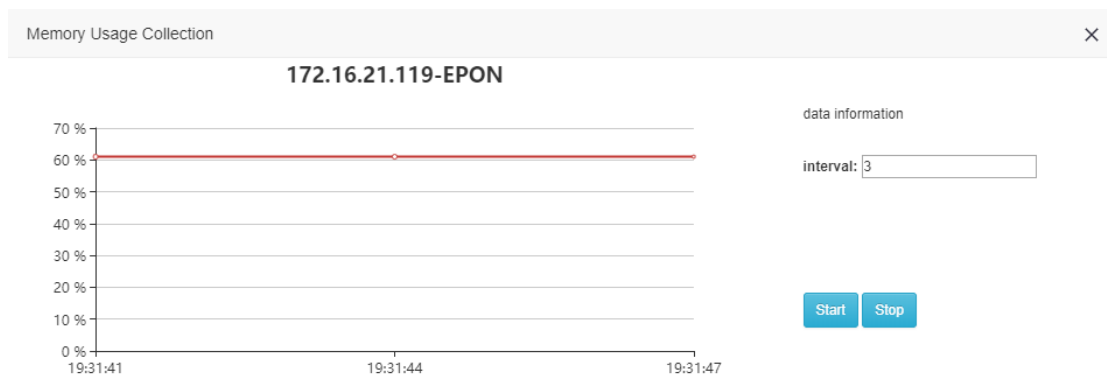
### 3.18 CPU Performance Collection

Click **Operations->CPU Performance Collection** to check CPU loading conditions. See the figure.



### 3.19 Memory Usage Collection

Click **Operations->Memory Usage Collection** to check the memory usage of the device. See the figure.



### 3.20 Device List Sort Node

Click **default** to sort net nodes and OLT nodes display order in net tree. See the figure.

Area List

- default
- Area\_j2\_1
- Area\_j3\_1
- Area\_j4\_1

Device List

- Sort Node
- 172.16.21.0
- 192.168.46.0
- 192.168.46.250-EPON
- 192.168.46.240-EPON

GPO

show

No.

1
2

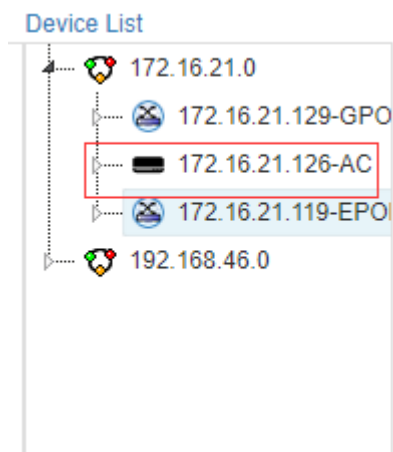
Click the certain buttons to sort nodes and save it. For sorting net nodes, click **Sort Node**. (Caution: after sorting, all tree nodes in every area will change together, each sort for each area is temporarily non supported.).

Sort Node		X
192.168.46.240-EPON		⊕   ⊕   ^
192.168.46.250-EPON		⊕   ⊕   ^

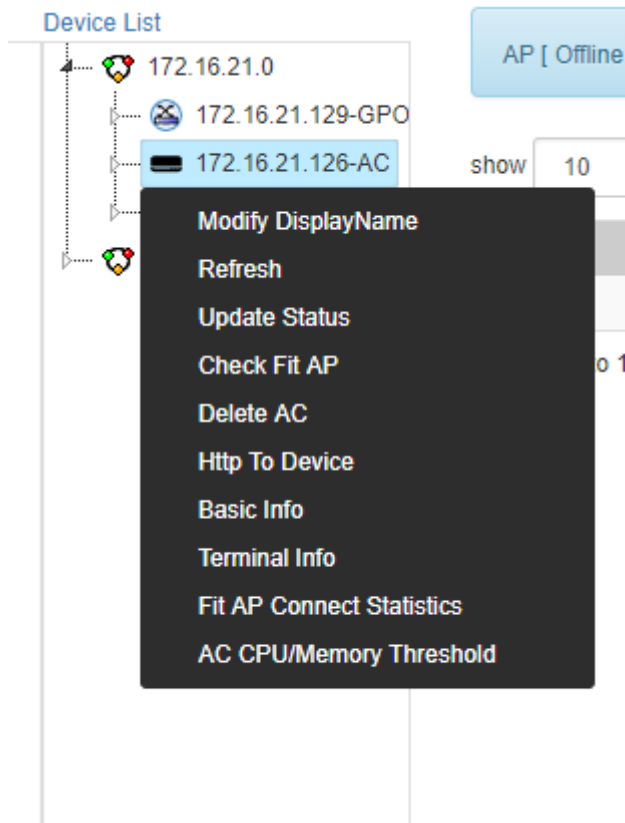
## 3.21 AC/AP

### 3.21.1 AC

Enable **Device List**, **-AC** will be presented. Right click it to check its functions.







**Delete AC:** Clear AC devices from NMS database to rediscover.

**Http To Device:** Log in to AC devices and configure the device through web. See the figure.



**Basic Info:** Check **AC Base Info**, including **Software Version**, **Hardware Version**, **Manufacture**, **UpTime**, etc. See the figure.

172.16.21.126-AC Base Info
- [icon] X

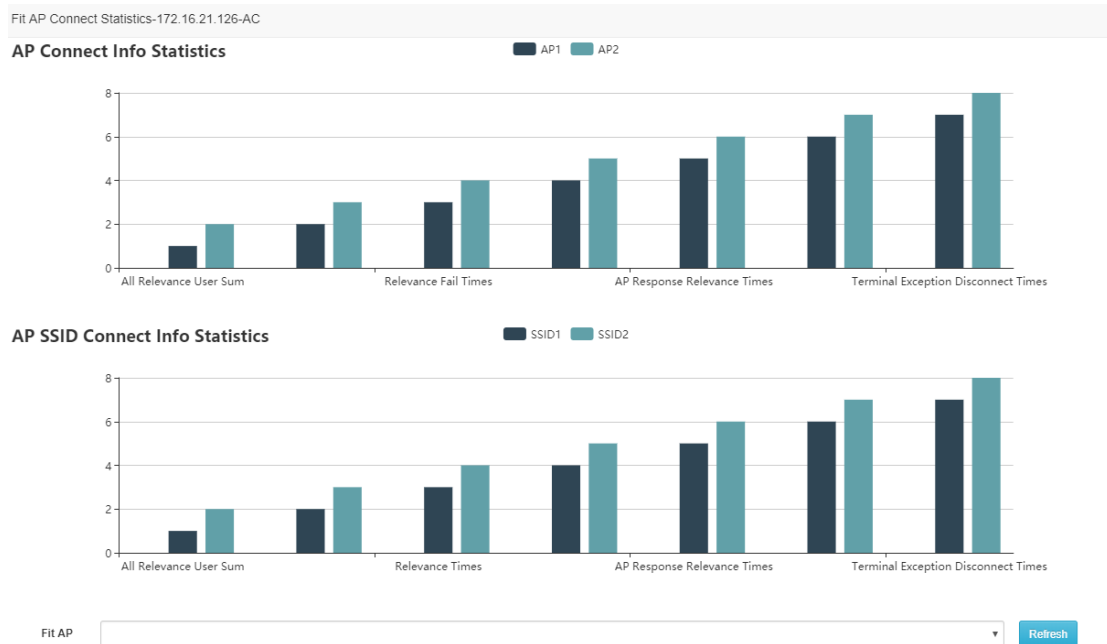
Device Name	localhost.localdomain	Description	Linux 3.10.0-327.el7.x86_64 #1 SMP Thu Nov 19 22:10:57 UTC 2015		
Contacts	unknown	Location	unknown	Manufacture	ZTE
SerialNumber	00:0c:29:c7:26:ee	Model	ZXWL ALIYUN	Type	0
Time	Thu Mar 22 15:40:58 2018	UpTime	24 days, 1:53:40.54	IP Address	172.16.21.126
IP NetMask	255.255.255.0	Gateway Address	0.0.0.0	Mac Address	00:0c:29:c7:26:ee
Software Version	2030	Software Vendor	ZTE	CPU Type	
Memory Type	unknown	Memory Size(KB)	0	Flash Size(KB)	0
Firmware Version	1.0	Hardware Version	1.0		

**Terminal Info:** Check all devices wirelessly connected to AP. See the figure.

172.16.21.126-AC Terminal Info
- [icon] X

ZONE ID	Terminal MAC	AP ID	AP BSSID	Dot11Auth	AuthMode	Security	Security Ciphers	Terminal IP	Cr

**Fit Connect Statistics:** Respectively count connecting terminal and SSID of every AP. See the figure.



**AC CPU/Memory Threshold:** Set the CPU of the device and memory alarm threshold. See the figure.

AC CPU/Memory Threshold-172.16.21.126-AC ✕

CPU(%)

Memory(%)

### 3.21.2 AP

**dbac:** The lower level node of AC, shows the field, followed by AP device.

172.16.21.126-AC

dbac

172.16.21.119-EPO

192.168.46.0

show  entries Page Refresh Config | advanced search

No.	DisplayName	Mac/Serial	IsOnline	Device Type	Device Model	Operations
1	apwwwwww	wwwwww	Offline	NMSAp	UnKnow	Operations
2	ap84:79:73:27:db:b0	84 79 73 27 db b0	Online	NMSAp	ZXWL WE2622	Operations
3	ap00 02 66 66 66 66	00 02 66 66 66 66	Offline	NMSAp	UnKnow	Operations
4	ap00 03 66 66 66 66	00 03 66 66 66 66	Offline	NMSAp	UnKnow	Operations
5	ap00 01 66 66 66 66	00 01 66 66 66 66	Offline	NMSAp	UnKnow	Operations
6	ap00 00 66 66 66 66	00 00 66 66 66 66	Offline	NMSAp	UnKnow	Operations
7	ap00 08 66 66 66 66	00 08 66 66 66 66	Offline	NMSAp	UnKnow	Operations
8	ap00 0a 66 66 66 66	00 0a 66 66 66 66	Offline	NMSAp	UnKnow	Operations
9	ap00 0b 66 66 66 66	00 0b 66 66 66 66	Offline	NMSAp	UnKnow	Operations
10	ap00 0c 66 66 66 66	00 0c 66 66 66 66	Offline	NMSAp	UnKnow	Operations

Showing 1 to 10 of 15 entries

Click one selected AP to pop up the function menu. See the figure.

line	Device Type	Device Model	Operations
line	NMSAp	UnKnow	Operations
line	NMSAp		
line	NMSAp		
line	NMSAp		
line	NMSAp	UnKnow	Operations
line	NMSAp	UnKnow	Operations

Modify DisplayName

Http To Device

Port Info

Fit AP CPU/Memory Threshold

**Modify DisplayName:** With Http to Device, is familiar with AC.

**Port Info:** Check all port attributes of AP. See the figure.

ap84:79:73:27:db:b0 Port Info - [ ] X

Port Description	Type	MTU(byte)	Speed(Mbps)	Mac	Admin Status	Oper Status	Status Keep Time	IP
lo	softwareLoopback	65536	10000000	00:00:00:00:00:00	UP	UP	0	127.0.0.1
eth0	ethernetCsmacd	1500	1000000000	84:79:73:27:db:b0	UP	UP	0	
wifi0	ieee80211	1500	0	84:79:73:27:db:b0	UP	UP	0	
wifi1	ieee80211	1500	0	84:79:73:27:db:b1	DOWN	DOWN	0	
gre0	tunnel	1476	0	00:00:00:00:00:00	DOWN	DOWN	0	
gretap0	ethernetCsmacd	1476	1000000000	00:00:00:00:00:00	DOWN	DOWN	0	
teq10	other	1500	0	00:00:00:00:00:00	DOWN	DOWN	0	
ovs-system	ethernetCsmacd	1500	1000000000	b2:a0:f2:8b:9d:d5	DOWN	DOWN	0	
br-ovs	ethernetCsmacd	1500	1000000000	84:79:73:27:db:b0	UP	UP	0	
eth0.2	ethernetCsmacd	1500	1000000000	84:79:73:27:db:b0	UP	UP	0	
eth0.3	ethernetCsmacd	1500	1000000000	84:79:73:27:db:b0	UP	UP	0	

**Fit AP CPU/Memory Threshold:** Set AP CPU/Memory Threshold, if exceeded, the device will send alarms to NMS.

Fit AP CPU/Memory Threshold-ap84:79:73:27:db:b0 X

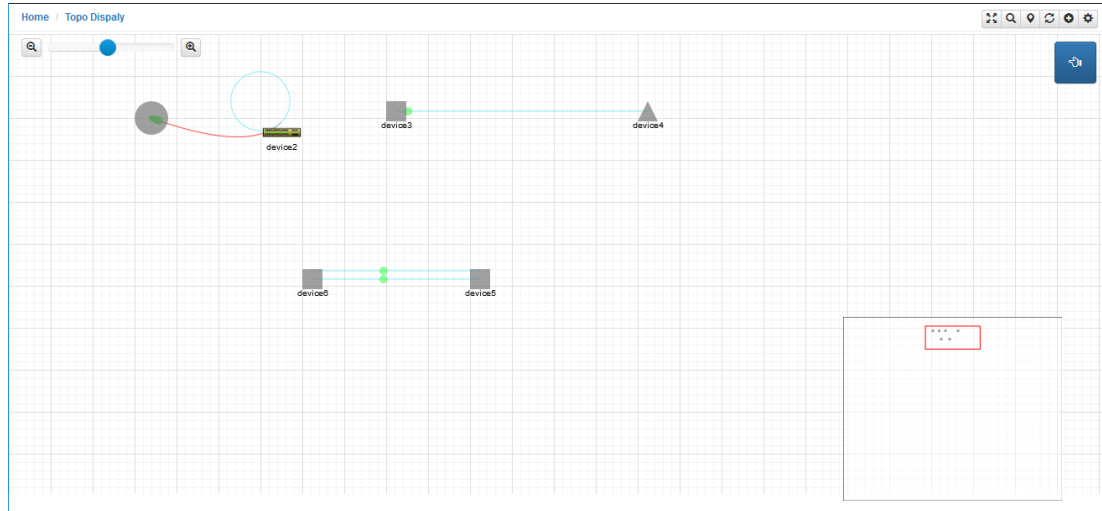
CPU(%)

Memory(%)


Showing 1 to 10 of 15 entries

## 4 Topo Display

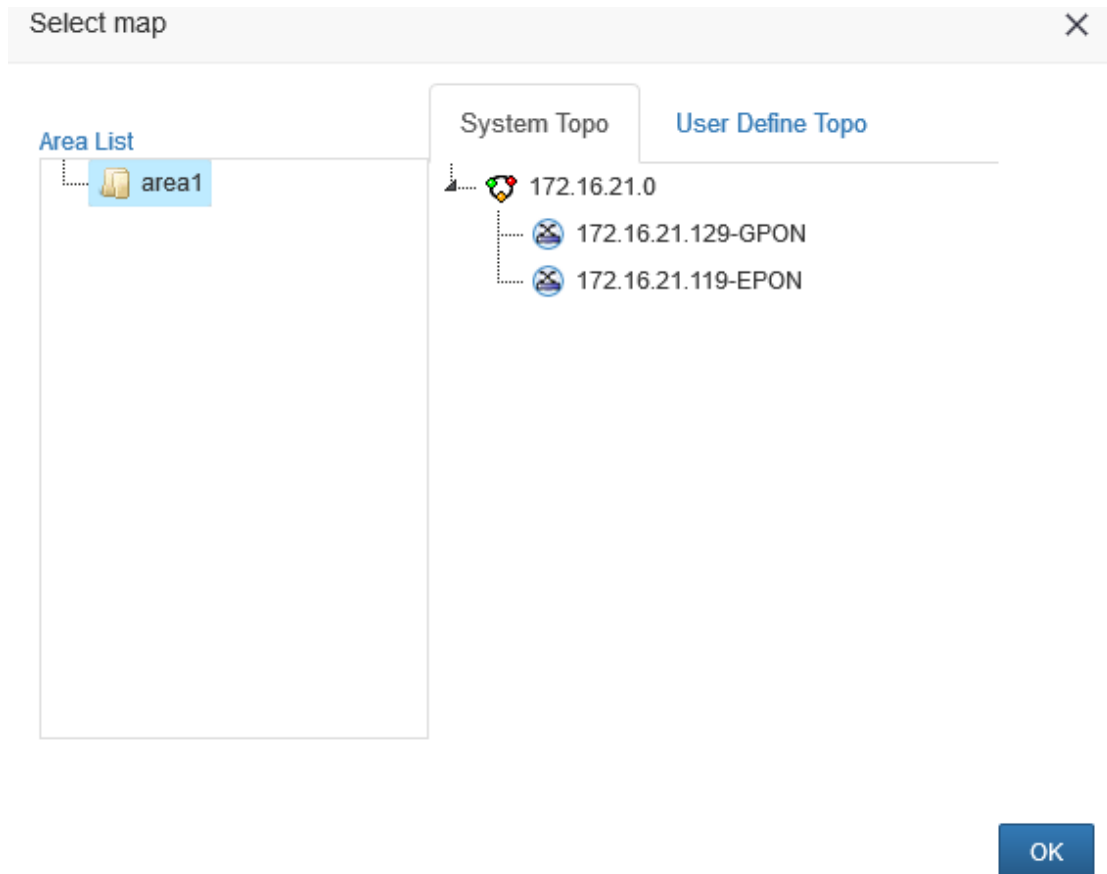
Click **Network Elements->Topo Display**. See the figure. An topology example is displayed. Tool bar and choice buttons are on the top right.



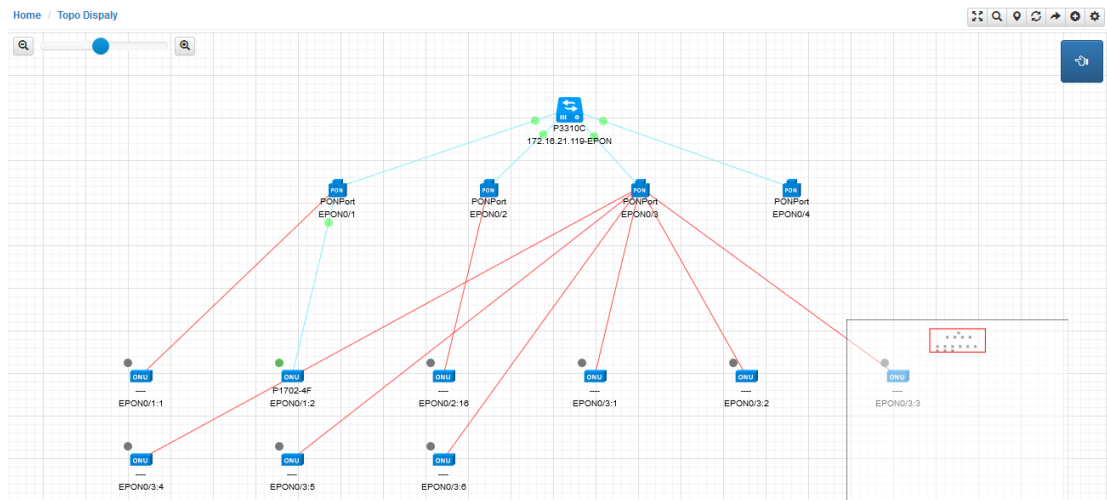
### 4.1 Select map

Click . **Area List** is on the left; topo list right, including **System Topo** and **User Define Topo**. **System Topo** only display network reality discovered by NMS but does not support edition. If necessary, turn to **User Define Topo** so as to edit and save the location and attachments.

Choose network topology, topology and link status of all switches in the network will be displayed. Choose OLT topology, link and status between OLT and ONU will be displayed.



The following figure is OLT topology.



## 4.2 Search Device

If a lot of nodes exist in Topo, click  to locate one certain node.



The list of all devices in Topo will pop up, you can locate any node in the list. Click **Select** to

make the selected one display in the centre of the Topo.

Search Device
✕


show  entries
search:


MO Name	Operation
172.16.21.129-GPON	Select
GPON0/1	Select
GPON0/10	Select
GPON0/11	Select
GPON0/12	Select

Showing 1 to 5 of 31 entries

previous
1
2
3
4
5
6
7
next

### 4.3 Select Layout

If the automatic layout of the current topology is unsatisfying, click  to relayout the topology. Only oriented layout algorithm is supported. See the figure.


🔄 🔍  ↻ ⬇️ ➡️ ⦿

Select Layout
✕

Layout: Force Direct Layout ▼


OK
Cancel

### 4.4 Refresh

If you need retrieve the latest information about the topology, click . Attention: Such a function takes a long time to get the latest information from the device side and update the network management database. If the latest database is needed, click the previous **Select** to reopen the diagram.

🔄 🔍   ⬇️ ➡️ ⦿

## 4.5 Save


Click  to save the current topology as a picture to local.



## 4.6 Select Belongs Role and Area

NMS defined two Topo types: One is **System Topo**, the other is **User Define Topo**. **System Topo** does not support edition. If necessary, turn to **User Define Topo** so as to edit. After the turning, the real status of the device and links are displayed.



Click . See the figure. Enter **Map Name**, **Belong Role**, and **Belong Area**. Click **OK**, a self-defined topology will show up in the corresponding area. Attention: only users having selected the role before have access to browse.

Select Belongs Role and Area
✕

**Map Name**

**Belong Role**  ▼

**Belong Area**  ▼

## 4.7 Create Map

Based on the reality, users can select some devices to create a user-defined topology operation.





The 1<sup>st</sup> step: Enter the **Map Name**, **Belong Role**, and **Belong Area**. Click **Next**.

### Create Map ×

**Basic Infos** >

Select Devices >

Select Real Links >

#### Basic Infos

**Map Name**

**Belong Role**

**Belong Area**

Back Next

The 2<sup>nd</sup> step: Tick the device in the middle table and click **Add** to load it on the right list. If misoperating, select it on the right list and click **Remove**. The devices on the right list will finally be included in Map when creating it. Click **Next**.

### Create Map ×

Basic Infos >

**Select Devices** >

Select Real Links >

#### Select Devices

Search
  Add

<input type="checkbox"/>	No.	MO Name
<input type="checkbox"/>	1	172.16.21.0
<input checked="" type="checkbox"/>	2	172.16.21.119-EPON
<input type="checkbox"/>	3	172.16.21.129
<input type="checkbox"/>	4	172.16.21.119-EPON_PON_7
<input type="checkbox"/>	5	172.16.21.119-EPON_PON_8
<input type="checkbox"/>	6	172.16.21.119-EPON_PON_9
<input type="checkbox"/>	7	172.16.21.119-EPON_PON_10

Showing 1 to 20 of 49 entries

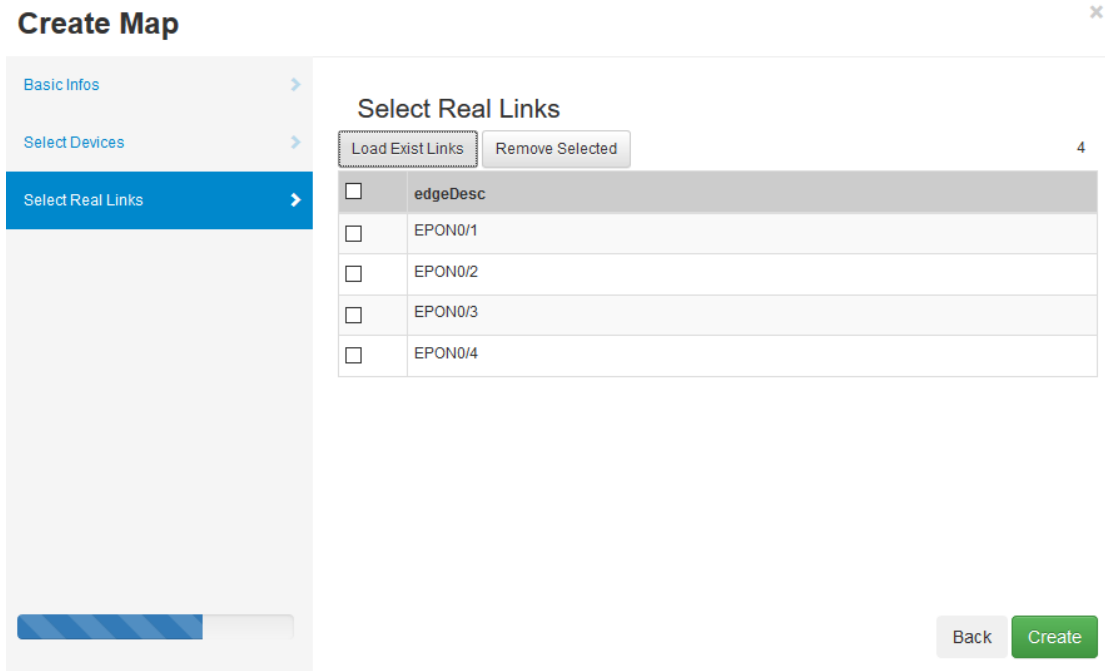
previous next

Remove
1

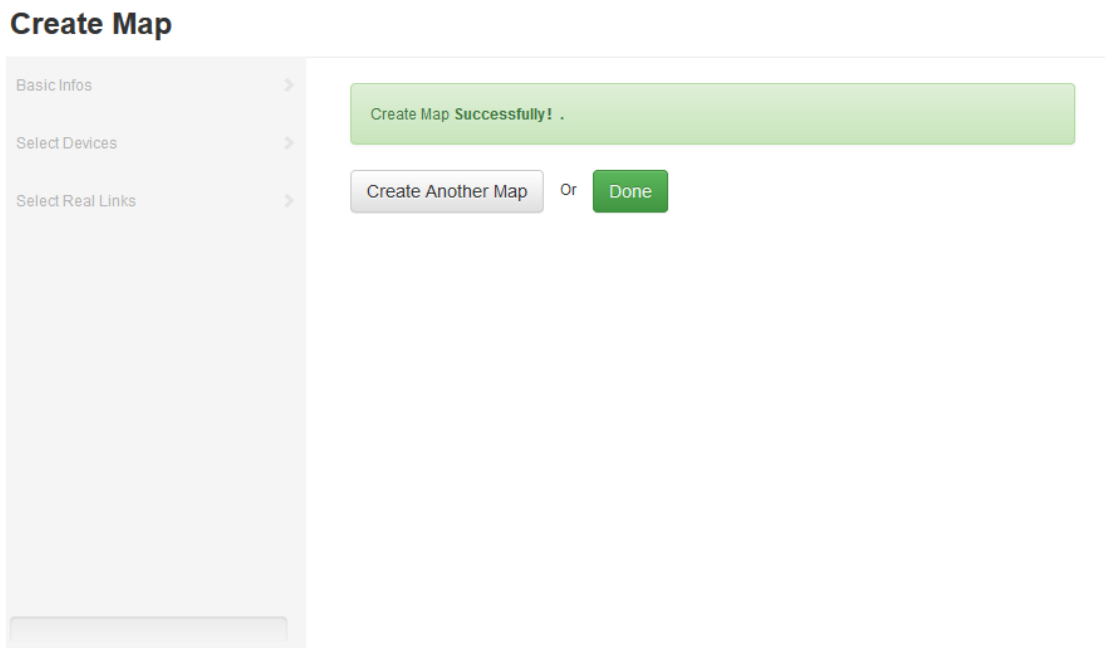
172.16.21.119-EPON

Back Next


The 3<sup>rd</sup> step: Load the links discovered by NMS in the previous step so as to generate the association among the devices when creating **User Define Topo**. See the figure. Tick some link and click **Remove Selected**. The rest links will be included in **Create Map**. After selection, click **Create**.



The result.




## 4.8 Add Map Symbol

Enable one self-defined map, click , and see the figure.

✕
Add Map Symbol

udNode realNode



**Display Name**

**posX**

**posY**

**width**

**height**

**image**

OK
Cancel

The added symbols have 2 types: 1. Completely self-defined while NMS does not maintain its state. Just click the symbol and input the basic information; 2. Managed by NMS with NMS maintenance. Tick in the table, click **Add**. In the right list are devices adding to the map. After confirmation of links selection, click **OK**.

✕
Add Map Symbol

udNode realNode

Search
Add

Remove

<input checked="" type="checkbox"/>	No.	MO Name
<input checked="" type="checkbox"/>	1	172.16.21.0
<input checked="" type="checkbox"/>	2	172.16.21.119-EPON
<input checked="" type="checkbox"/>	3	172.16.21.129
<input checked="" type="checkbox"/>	4	172.16.21.119-EPON_PON_7
<input checked="" type="checkbox"/>	5	172.16.21.119-EPON_PON_8
<input checked="" type="checkbox"/>	6	172.16.21.119-EPON_PON_9
<input checked="" type="checkbox"/>	7	172.16.21.119-EPON_PON_10

Showing 1 to 20 of 49 entries

previous
next

20
^

172.16.21.0  
 172.16.21.119-EPON  
 172.16.21.129  
 172.16.21.119-EPON\_PON\_7  
 172.16.21.119-EPON\_PON\_8  
 172.16.21.119-EPON\_PON\_9  
 172.16.21.119-EPON\_PON\_10  
 172.16.21.52  
 172.16.21.42  
 172.16.21.129-GPON  
 172.16.21.129-GPON\_PON\_14  
 172.16.21.129-GPON\_PON\_15  
 172.16.21.129-GPON\_PON\_16  
 172.16.21.129-GPON\_PON\_17  
 172.16.21.129-GPON\_PON\_18  
 172.16.21.129-GPON\_PON\_19  
 172.16.21.129-GPON\_PON\_20

20
v

OK
Cancel

Add Map Symbol ×


Load Exist Links Remove Selected 17

<input type="checkbox"/>	edgeDesc
<input type="checkbox"/>	Gig0/4-Gig1/1
<input type="checkbox"/>	Gig0/4-Gig0/2
<input type="checkbox"/>	EPON0/1
<input type="checkbox"/>	EPON0/2
<input type="checkbox"/>	EPON0/3
<input type="checkbox"/>	EPON0/4
<input type="checkbox"/>	Gig0/2-Gig1/1
<input type="checkbox"/>	GPON0/1
<input type="checkbox"/>	GPON0/2
<input type="checkbox"/>	GPON0/3

OK Cancel

## 4.9 Add MapLink

Enable one self-defined map, press **Ctrl** and click two nodes that need to be wired up.

click . See the figure. Double click the certain port on the left and **Save**. ( If no ports are loaded, no selection.)

Add MapLink
✕

Source Port: 172.16.21.119-EPON@31    [Select](#)   [Remove](#)

GigaEthernet0/5

GigaEthernet0/6

GigaEthernet0/4

GigaEthernet0/3

GigaEthernet0/1

GigaEthernet0/2

Dest Port: 172.16.21.42@34    [Select](#)   [Remove](#)

GigaEthernet1/1

GigaEthernet1/2

GigaEthernet1/3

GigaEthernet1/4

GigaEthernet0/1

GigaEthernet0/2

GigaEthernet0/3


GigaEthernet0/4

flowType: rainMeter ▼

udEdgeDesc:

Save
Close

### 4.10 Edit

Enable one self-defined map, select one link and click . See the figure.

Edit
✕

lineType: Line ▼

flowType: none ▼

status: on ▼

OK
Cancel

If elements are selected instead of links, the interface is shown as the following.

edit✕

**displayname:**


**posX:**

**posY:**


**width:**

**height:**


#### 4.11 Delete User Define Topo elements

Enable one user define topo, select one link or node, click .

#### 4.12 Select the saving location

Enable one user define topo, adapt all location of nodes and click .

#### 4.13 Delete the User Define Topo

Enable one user define topo, click .

## 5 Fault Management

When being operated, devices may face faults. Checking the certain fault benefits NMS. The fault device with solutions can be located based on fault information.

Here comes an explanation: **Warning Trap**:

The initial level of **Warning Trap**:

**Critical**, **Major**, **Minor**, **Warning**, **Clear**, **Info**, **Unknown**

**Critical**: Red signal. The device may break down or the port is unlinked.

**Major**: Nodes break down.

**Minor**: Nodes break down.

**Warning**: Nodes break down.

**Info**: Blue signal. No device break down.

**Unknown**: NMS cannot identify the warning.

**Clear**: Green signal. After responding to **Critical**, **Major**, **Minor**, **Clear** will show up, informing that the device is out of warning trap and return to normal.

NMS provides detailed fault information, including events and warnings.

### 5.1 Events

Click **Fault Management->Events**. Operations like filtering, exporting, deleting, positioning, etc. are enabled. See the figure.

No.	Trap Src	Trap Level	Trap Description	Create Time
1	172.16.21.129 , GPON0/3:2	Clear Trap	GPON ONU[GPON0/3:2]Serial Number[4244434DF79D62FC]Auto-Configured	2018-03-10 10:10:10
2	172.16.21.129-GPON	Clear Trap	General fault, Port:[GPON0/3] has connected!	2018-03-10 10:10:10
3	172.16.21.129 , GPON0/3:2	Clear Trap	GPON ONU[GPON0/3:2]Serial Number[4244434DF79D62FC]Registered	2018-03-10 10:10:10
4	172.16.21.129-GPON	Clear Trap	General fault, Port:[GPON0/3:2] has connected!	2018-03-10 10:10:10
5	172.16.21.129-GPON	Critical Trap	General fault, Port:[GPON0/3:2] has broken!	2018-03-10 10:10:10
6	172.16.21.129-GPON	Critical Trap	General fault, Port:[GPON0/3] has broken!	2018-03-10 10:10:10
7	172.16.21.129 , GPON0/3:2	Critical Trap	GPON ONU[GPON0/3:2]Serial Number[4244434DF79D62FC]DeRegistered	2018-03-10 10:10:10
8	172.16.21.129 , GPON0/3:2	Clear Trap	GPON ONU[GPON0/3:2]Serial Number[4244434DF79D62FC]Auto-Configured	2018-03-10 10:10:10
9	172.16.21.129-GPON	Clear Trap	General fault, Port:[GPON0/3:2] has connected!	2018-03-10 10:10:10
10	172.16.21.129-GPON	Clear Trap	General fault, Port:[GPON0/3] has connected!	2018-03-10 10:10:10

Showing 1 to 10 of 14 entries

### 5.1.1 Search

You can search in precise and fuzzy conditions. Fill in the conditions and click **Search**.

### 5.1.2 Delete

Tick in the **Alarms** table, click **Batch Delete** for batch deletion or just click **Delete** in entry operation bar for single deletion.

### 5.1.3 Detail

Click the hyperlink in **eventDetail** to display the event details. See the figure.

The screenshot shows a modal window titled "eventDetail" with a close button (X) in the top right corner. The modal contains the following information:

- eventId:** 3877
- category:** 2
- Trap Source:** 172.16.21.129
- subsource:** 29
- subsource type:** port
- priority:** 5
- trap level:** 1
- entity id:** 172.16.21.129\_SWITCH\_29
- eventDesc:** General fault, Port:[GPON0/16] has broken!
- Create Time:** 2018-03-23 10:36:37
- descArgs:** GPON0/16

At the bottom center of the modal is a blue "Close" button.

Click the hyperlink in **Events** to display **Management**. See the figure.

The screenshot shows a table titled "Management" with a search bar and a table of entries. The table has the following columns: No., DisplayName, Mac/Serial, IsOnline, Device Type, Device Model, and Operations. There is one entry in the table.

No.	DisplayName	Mac/Serial	IsOnline	Device Type	Device Model	Operations
1	GPON0/16:1		Online	GponONUDevice	GP1501-1G	Operations

Below the table, it says "Showing 1 to 1 of 1 entries". At the bottom right, there are "previous", "1", and "next" navigation buttons.

### 5.1.4 Export Current Page Event & Export All Event

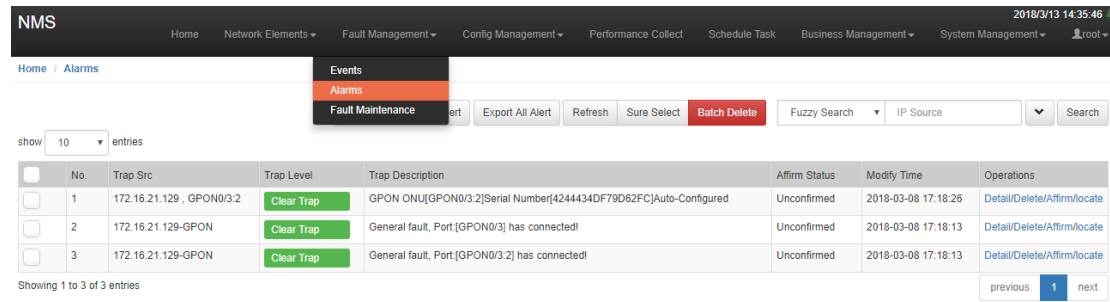
Click **Export Current Page Event** and the information will be saved in Excel format. Click **All Event** to export all event information to local.

## 5.2 Alarms

Click **Fault Management->Alarms** to enable the interface. Operations like filtering,



exporting, deleting, positioning, etc. are enabled. See the figure.



### 5.2.1 Search

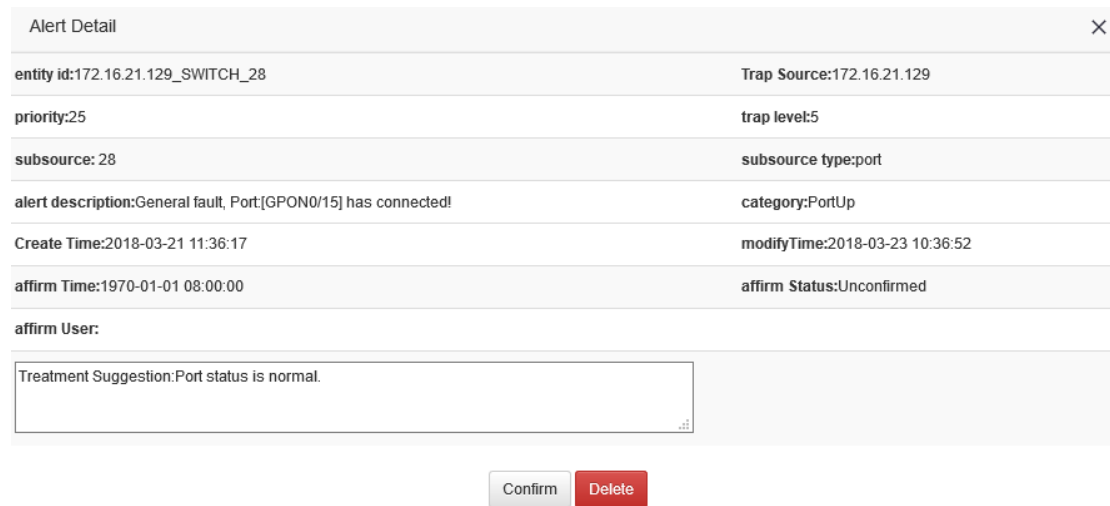
You can search in precise and fuzzy conditions. Fill in the conditions and click **Search**; on the left, more condition list can be displayed/undisplayed.

### 5.2.2 Delete

Tick in the **Alarms** table, click **Batch Delete** for batch deletion or just click **Delete** in entry operation bar for single deletion.

### 5.2.3 Detail

Click **Alert Detail** to display the alert details. See the figure.



Click the hyperlink in **Alert Detail** to enable **Management**.

Management — ☒ ×

show 10 entries advanced search

No.	DisplayName	Mac/Serial	IsOnline	Device Type	Device Model	Operations
1	172.16.21.129		Online	SwitchObject	GP3600-16	<a href="#">Operations</a>
2	172.16.21.129-GPON		Online	GponOLTDevice	GP3600-16	<a href="#">Operations</a>

Showing 1 to 2 of 2 entries

previous 1 next

### 5.2.4 Sure Select

Tick alerts in entry check box, and click **Batch Affirm** for batch affirmation; click **Affirm** for single affirmation.

### 5.2.5 Export Current Page Alert & Export All Alert

Click **Export Current Page Alert** and the information will be saved in Excel format. Click **All Alert** to export all alert information to local.

## 5.3 Fault Maintenance

Click **Fault Management->Fault Maintenance** to enable the in interface.

### 5.3.1 Trap Category

On **Trap Category, Fault Maintenance** interface, one certain alarm can be set in terms of save, transfer, post, etc.

NMS 2018/2/13 14:36:02

Home Network Elements Fault Management Config Management Performance Collect Schedule Task Business Management System Management root

Home / Fault Maintenance

Events Alarms **Fault Maintenance**


Trap Category Trap Level Trap Host

show 10 entries Add Batch Delete search:

<input type="checkbox"/>	No.	Description	Level	NeedSave	NeedPush	NeedForward	Trap Old	Operations
<input type="checkbox"/>	1	UnknowTrap	Unknown Trap	true	true	false	UNKNOWN	<a href="#">✕</a>
<input type="checkbox"/>	2	Port Down	Critical Trap	true	true	true	.1.3.6.1.6.3.1.1.5.3	<a href="#">✕</a>
<input type="checkbox"/>	3	Port Up	Clear Trap	true	true	true	.1.3.6.1.6.3.1.1.5.3	<a href="#">✕</a>
<input type="checkbox"/>	4	Port Down	Critical Trap	true	true	true	.1.3.6.1.6.3.1.1.5.4	<a href="#">✕</a>
<input type="checkbox"/>	5	Port Up	Clear Trap	true	true	true	.1.3.6.1.6.3.1.1.5.4	<a href="#">✕</a>
<input type="checkbox"/>	6	EPON OLT PON Port Alarm	Critical Trap	true	true	true	.1.3.6.1.4.1.3320.101.6.3.2	<a href="#">✕</a>
<input type="checkbox"/>	7	Rmon Rising Threshold Alarm	Major Trap	true	true	true	.1.3.6.1.2.1.16.0.1	<a href="#">✕</a>
<input type="checkbox"/>	8	Rmon Falling Threshold Alarm	Major Trap	true	true	true	.1.3.6.1.2.1.16.0.2	<a href="#">✕</a>
<input type="checkbox"/>	9	The Attack Message	Info Trap	true	true	true	.1.3.6.1.4.1.3320.2.222.2.1	<a href="#">✕</a>
<input type="checkbox"/>	10	Cold Start	Clear Trap	true	true	true	.1.3.6.1.6.3.1.1.5.1	<a href="#">✕</a>

Showing 1 to 10 of 79 entries

previous 1 2 3 4 5 ... 8 next

Click any , and see the figure. **bindsFlag** is not recommended to be edited. It identifies the level of **Warning Trap** based on binding variables. Besides, **Description, Level**, etc. can be set.

Edit category
✕

trapOid:

bindsFlag:

trapDesc:

trapLevel:

needSave:  Yes  No

needPush:  Yes  No

needForward:  Yes  No

### 5.3.2 Trap Level

Some levels can be self-defined and bound with categories. Set **Priority**, **Color** and **Description**. The less the priority value, the higher the priority level. Click **Trap Suppress** to set the strategies associated with the priority.

Trap Category
Trap Level
Trap Host

show 10 entries
Add  
search:

<input type="checkbox"/>	No.	Priority	Description	Audio	Color	Operations
<input type="checkbox"/>	1	5	Critical Trap	Critical Voice	Critical Trap	<a href="#">🔗</a> <a href="#">✕</a>
<input type="checkbox"/>	2	10	Major Trap	Major Voice	Major Trap	<a href="#">🔗</a> <a href="#">✕</a>
<input type="checkbox"/>	3	15	Minor Trap	Minor Voice	Minor Trap	<a href="#">🔗</a> <a href="#">✕</a>
<input type="checkbox"/>	4	20	Warning Trap	Warning Voice	Warning Trap	<a href="#">🔗</a> <a href="#">✕</a>
<input type="checkbox"/>	5	25	Clear Trap	Clear Voice	Clear Trap	<a href="#">🔗</a> <a href="#">✕</a>
<input type="checkbox"/>	6	30	Info Trap	Warning Voice	Info Trap	<a href="#">🔗</a> <a href="#">✕</a>
<input type="checkbox"/>	7	50	Unknown Trap	Warning Voice	Unknown Trap	<a href="#">🔗</a> <a href="#">✕</a>

Showing 1 to 7 of 7 entries
previous 1 next

Click **Trap Suppress**. See the interface. For example, the trap will be pushed if the priority is less than or equal to 40. If the priority is less than or equal to 40, the trap will be stored in the database for retrieval analysis. If the priority is less than or equal to 20, the trap will be considered as a senior trap and pushed to the client display.

Trap Suppress
✕

Trap Push Priority:

Trap Save Priority:

High Level Trap:

Save
Close

### 5.3.3 Trap Host

If the trap needs hosting, click **Add** in **Trap Level**.

Trap Category
Trap Level
Trap Host

show 10 entries
Add
Refresh

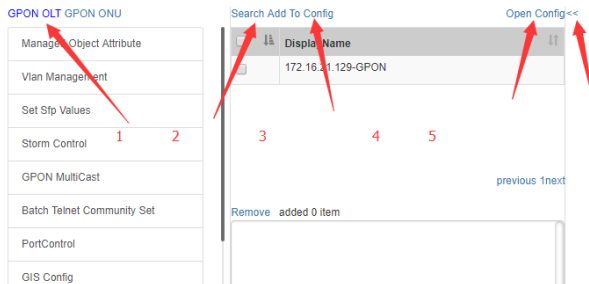
No.	IP	Port	ForwardLevel	Version	Enabled	SecurityInfos	Operations
The data in the table is empty							

Showing 0 to 0 of 0 entries

previous
next

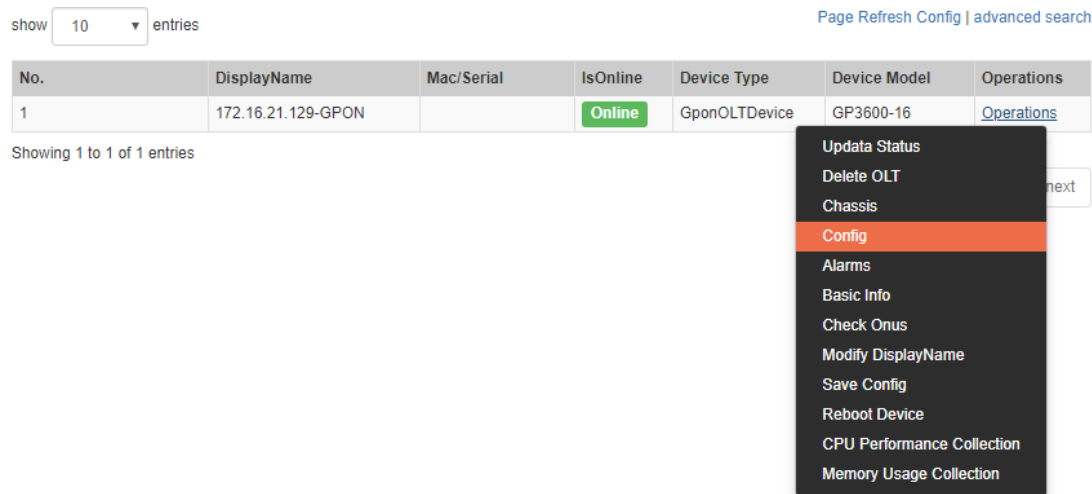
## 6 Config Management

Click **Config Management** in the navigation bar. Choose **Epon Config** or **Switch Config** to enable the list. The overall configuration steps are basically the same. Therefore, the steps are introduced based on **Gpon Config**. Enable **Gpon Config**, and see the following.



- 1 First select OLT or ONU, and then set the corresponding configuration;
- 2 Select the device that need configuring in the middle table; quickly locate it by **Search**;
- 3 Double click the target device or click **Add To Config**;
- 4 Click **Open Config** to enable the configuration;
- 5 <<: Hide the left device selection interface.

The basic steps are the above. You can also click **Management Element->Config** to configure.



### 6.1 Switch Device

#### 6.1.1 Managed Object Attribute

**Managed Object Attribute** helps modify basic information saved through **Network**

**Elements**, including Mo DisplayName, Read/Write Community (required in SNMP) , telnet basic information ( the same to ssh ) , Enterprise ID (modification is not recommended for communication failure between NMS and devices). Enable the interface, fill in the form and save it.

Mo Name	172.16.21.52
Mo DisplayName	172.16.21.52
Read Community	bdcom
Write Community	bdcom
Telnet Username	Telnet Username
Telnet Password	Telnet Password
Enable Password	Enable Password
Enterprise ID	3320
<input type="button" value="Save"/>	

### 6.1.2 Vlan Management

VLAN (Virtual Local Area Network) is a kind of new data exchange technology which divides the LAN equipment from logic into network segments to realize virtual working group. It is mainly used in switches and routers, but mainstream applications are still in the switch. However, not all switches have this function; only those with 3<sup>rd</sup> layer above in VLAN protocol have this function, referred to their instructions.

VLAN helps solve the problem that the switch cannot limit the broadcast when making LAN interconnection. It can divide a LAN into multiple logical LAN – VLAN, each of which is a broadcast domain. In a VLAN, the inter-host communication is the same as in a LAN, while the VLAN cannot communicate directly, so that the broadcast message is limited in a VLAN.

Click **Vlan Management**. See the figure.

Vlan ID	Vlan Name	Egress Port	ForbiddenEgress Port	Untagged Port	Operation
<input type="checkbox"/>	1	undefined undefined	undefined undefined	undefined undefined	
<input type="checkbox"/>	2	undefined undefined	undefined undefined	undefined undefined	
<input type="checkbox"/>	3	undefined undefined	undefined undefined	undefined undefined	
<input type="checkbox"/>	4	undefined undefined	undefined undefined	undefined undefined	
<input type="checkbox"/>	5	undefined undefined	undefined undefined	undefined undefined	
<input type="checkbox"/>	6	undefined undefined	undefined undefined	undefined undefined	
<input type="checkbox"/>	7	undefined undefined	undefined undefined	undefined undefined	
<input type="checkbox"/>	8	undefined undefined	undefined undefined	undefined undefined	
<input type="checkbox"/>	9	undefined undefined	undefined undefined	undefined undefined	
<input type="checkbox"/>	10	undefined undefined	undefined undefined	undefined undefined	

**Vlan Management** includes **Vlan Config**, **Port Vlan Config**, **QinQ or Flat Translate Items** and **InterfaceVlan&IPConfig**.

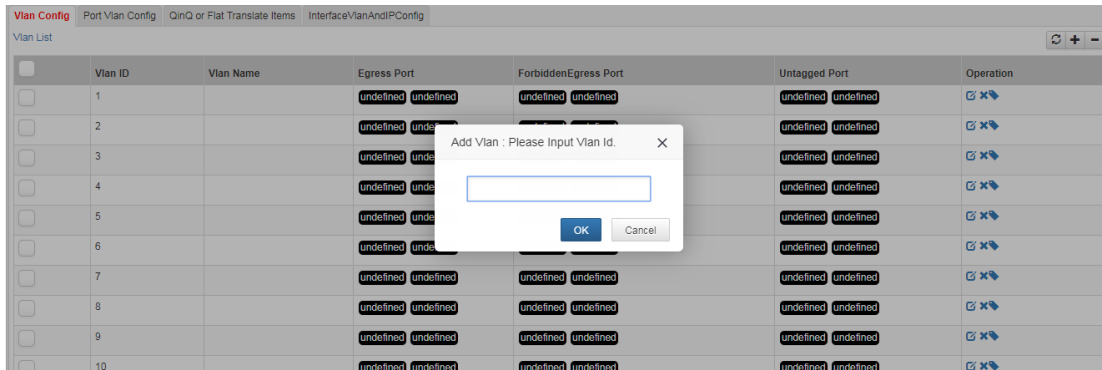
### 6.1.2.1 Vlan Config

See the figure.

Vlan ID	Vlan Name	Egress Port	ForbiddenEgress Port	Untagged Port	Operation
1		undefined undefined	undefined undefined	undefined undefined	🔗 🗑️
2		undefined undefined	undefined undefined	undefined undefined	🔗 🗑️
3		undefined undefined	undefined undefined	undefined undefined	🔗 🗑️
4		undefined undefined	undefined undefined	undefined undefined	🔗 🗑️
5		undefined undefined	undefined undefined	undefined undefined	🔗 🗑️
6		undefined undefined	undefined undefined	undefined undefined	🔗 🗑️
7		undefined undefined	undefined undefined	undefined undefined	🔗 🗑️
8		undefined undefined	undefined undefined	undefined undefined	🔗 🗑️
9		undefined undefined	undefined undefined	undefined undefined	🔗 🗑️
10		undefined undefined	undefined undefined	undefined undefined	🔗 🗑️

◆ Add Vlan

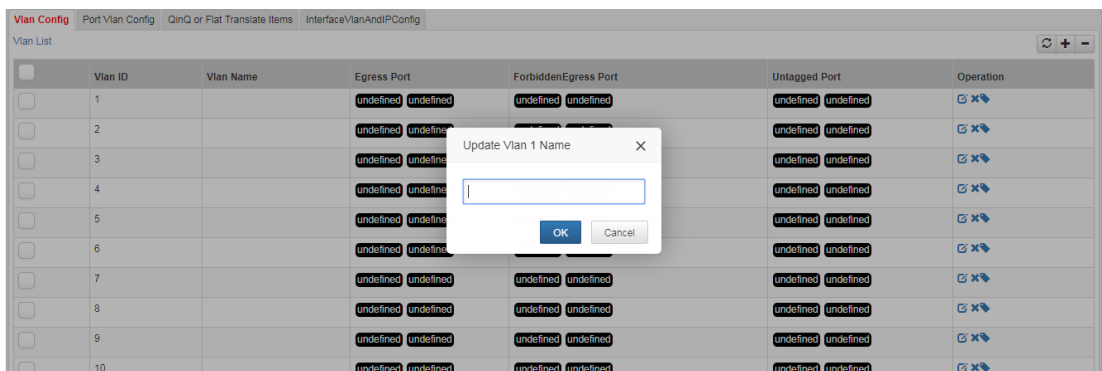
Click ..



Enter Vlan ID and click OK to add one Vlan, but the existing Vlan ID cannot be add.

◆ Update Vlan 1 Name

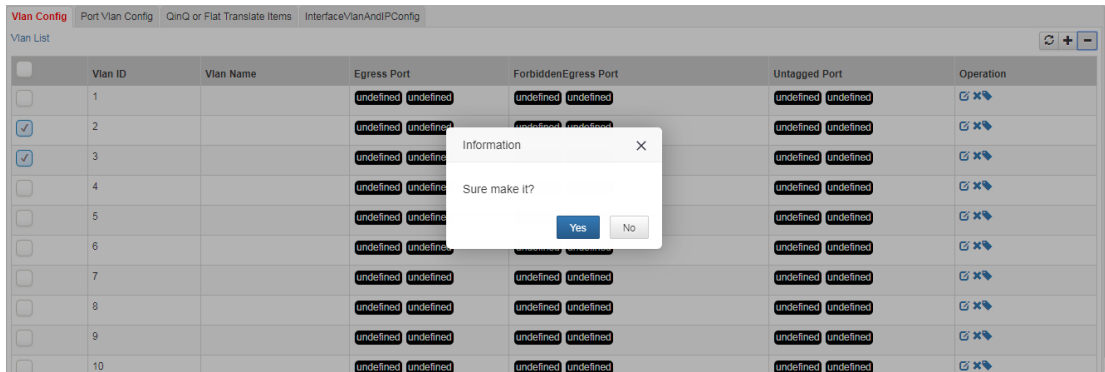
On **Vlan Config**, select one vlan and click . See the figure.



Note: Vlan ID with 1 cannot be updated.


◆ Delete one or batch Vlans

click or select one or batch Vlans and click . See the figure.



Click **Yes** to sure delete the selected Vlan or not.

◆ Refresh

Click  to regain Vlan information from the device.

Note: There are four parts in the screen table;

Vlan Id: Represent each Vlan;

Vlan Name: Distinguish Vlans and benefit administrator management;

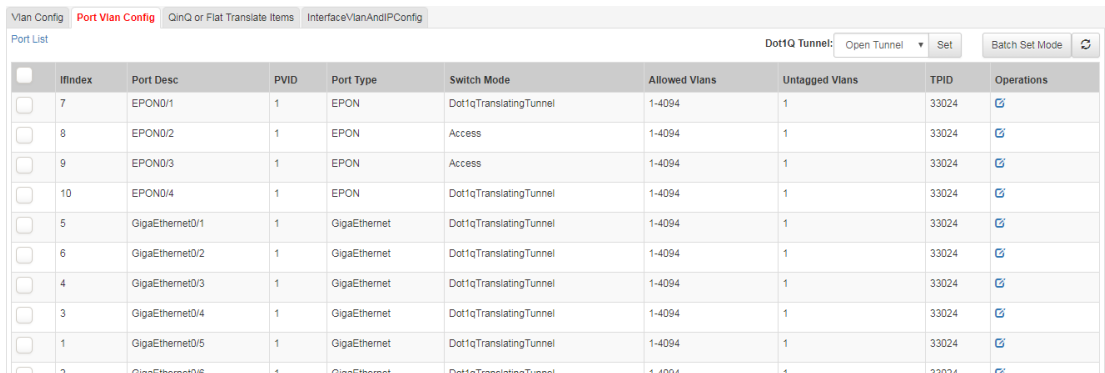
Egress Ports: Included in the Vlan ports. Double click to check;

ForbiddenEgressPorts: Excluded in the Vlan ports. Double click to check;


UntaggedPorts: Untagged ports.

### 6.1.2.2 Port Vlan Config

Click **Port Vlan Config** to switch the configuration screen. See the figure.



**PVID** (Port-based Vlan ID) is Vlan ID of the port, relating to VIAN TAG when a port sends and receives data frame. There are 2 types of the switch ports: 1. **ACCESS**, directly connecting the device at access layer; 2. **TRUNK**, for aggregation between the devices. **ACCESS** is characterized by a flow that only conforms to PVID. Different from **ACCESS**, **Trunk** has one intrinsic **VLAN** of its own, sending connection data or controlling flow among devices like cdp and bpdu. Data frames from the device itself are not tagged when they are sent out because VID is pvid, resulting in the tag remove, while when the end receives untagged data frames, it will tag the frames with **VLAN** of its own. Check the forwarding table. If the destination address is based on the end, remove the tag; if not, forward to other **TRUNKS** and remove the tag. (Because a switch only has one eigen removed tag of **VLAN** pvid=vid.).

The table shows **PVID**, **Port Type**, **Switch Mode**, **Allowed Vlans** and **Untagged Vlans**. Select any line, click , the configuration interface will pop up, see the figure.



Index	Port Desc	PVID	Port Type	Switch Mode	Allowed Vlans	Untagged Vlans	TPID	Operations
7	EPON0/1	1	EPON	Dot1qTranslatingTunnel	1-4094	1	33024	<input type="checkbox"/>
8	EPON0/2	1	EPON	Access	1-4094	1	33024	<input type="checkbox"/>
9	EPON0/3	1	EPON	Access	1-4094	1	33024	<input type="checkbox"/>
10	EPON0/4	1	EPON	Dot1qTranslatingTunnel	1-4094	1	33024	<input type="checkbox"/>
5	GigaEthernet0/1	1	GigaEthernet	Dot1qTranslatingTunnel	1-4094	1	33024	<input type="checkbox"/>
6	GigaEthernet0/2	1	GigaEthernet	Dot1qTranslatingTunnel	1-4094	1	33024	<input type="checkbox"/>
4	GigaEthernet0/3	1	GigaEthernet	Dot1qTranslatingTunnel	1-4094	1	33024	<input type="checkbox"/>
3	GigaEthernet0/4	1	GigaEthernet	Dot1qTranslatingTunnel	1-4094	1	33024	<input type="checkbox"/>
1	GigaEthernet0/5	1	GigaEthernet	Dot1qTranslatingTunnel	1-4094	1	33024	<input type="checkbox"/>

Only when **Switch Mode: Trunk**, to configure **Allowed Vlan** and **Untagged Vlan** is accessible. Input value: **1,3,5,7** or **1,3-5,7** or **1-7**. The specific operation is as follows.

**Allowed Vlan 1-9:** set the allowed vlans as vlan1-vlan9

**Allowed Vlan add 1-9:** add the allowed vlans, vlan1-vlan9

**Allowed Vlan except 1-9:** except vlan1-vlan9, the rest are allowed vlans

**Allowed Vlan remove 1-9:** delete allowed vlans from vlan1-vlan9

**Allowed Vlan all:** set vlan1-vlan4094 as allowed vlans

**Allowed Vlan none:** no allowed vlans

The same operations to **Untagged Vlan**.

Batch Set Mode allows batch set mode. See the figure.

Index	Port Desc	PVID	Port Type	Switch Mode	Allowed Vlans	Untagged Vlans	TPID	Operations
7	EPON0/1	1	EPON	Dot1qTranslatingTunnel	1-4094	1	33024	<input type="checkbox"/>
8	EPON0/2	1	EPON	Access	1-4094	1	33024	<input checked="" type="checkbox"/>
9	EPON0/3	1	EPON	Access	1-4094	1	33024	<input checked="" type="checkbox"/>
10	EPON0/4	1	EPON	Dot1qTranslatingTunnel	1-4094	1	33024	<input type="checkbox"/>
5	GigaEthernet0/1	1	GigaEthernet	Dot1qTranslatingTunnel	1-4094	1	33024	<input type="checkbox"/>
6	GigaEthernet0/2	1	GigaEthernet	Dot1qTranslatingTunnel	1-4094	1	33024	<input type="checkbox"/>
4	GigaEthernet0/3	1	GigaEthernet	Dot1qTranslatingTunnel	1-4094	1	33024	<input type="checkbox"/>
3	GigaEthernet0/4	1	GigaEthernet	Dot1qTranslatingTunnel	1-4094	1	33024	<input type="checkbox"/>
1	GigaEthernet0/5	1	GigaEthernet	Dot1qTranslatingTunnel	1-4094	1	33024	<input type="checkbox"/>

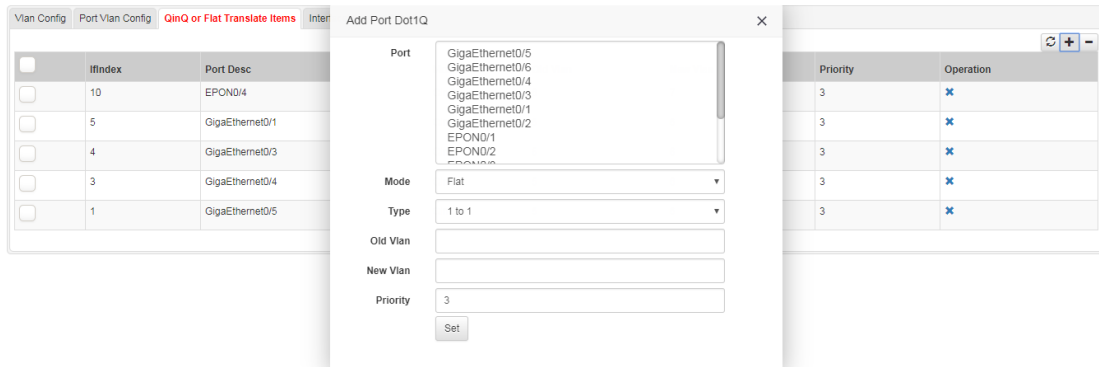
### 6.1.2.3 QinQ or Flat Translate Items

Shift to **QinQ or Flat Translate Items** and see the figure.

Index	Port Desc	Mode	Old Vlan	New Vlan	Priority	Operation
10	EPON0/4	QinQ	6	7	3	<input checked="" type="checkbox"/>
5	GigaEthernet0/1	QinQ	5	6	3	<input checked="" type="checkbox"/>
4	GigaEthernet0/3	QinQ	5	6	3	<input checked="" type="checkbox"/>
3	GigaEthernet0/4	QinQ	5	6	3	<input checked="" type="checkbox"/>
1	GigaEthernet0/5	QinQ	5	6	3	<input checked="" type="checkbox"/>

◆ Add

Click .

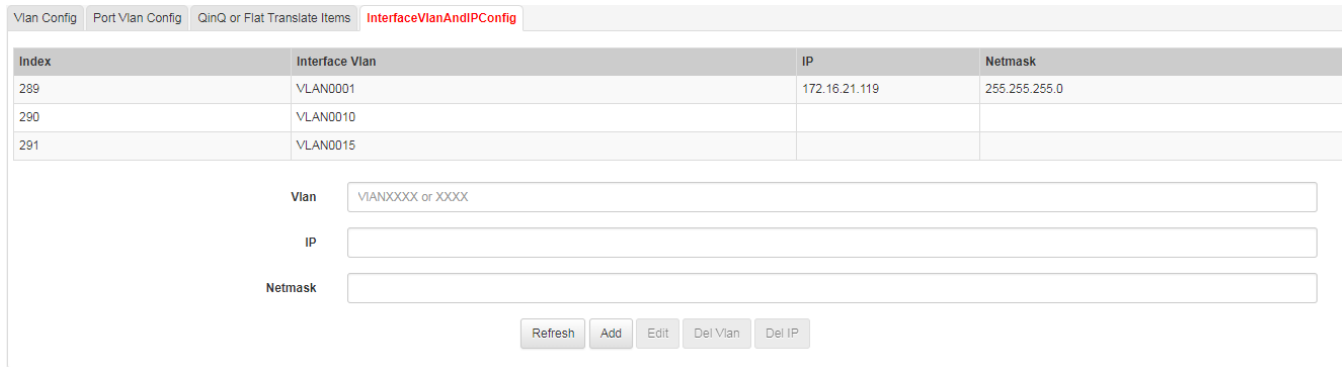


- 1.**Port**: Select one port to configure;
- 2.**Mode**: Two modes are available: Flat and QinQ;
- 3.**Old Vlan**: Input a separate vlanid such as 1 or 2; multiple vlanid, such as 1-10. Multi-input can only be used in the format "1-10";
- 4.**New Vlan**: Input only one vlanid like 1;
- 5.**Priority**: 8 levels, from 0 to 7.

After filling in the table, click **Set**. Click  to delete certain items you want to delete.

### 6.1.2.4 InterfaceVlanIPConfig

Shift to **Interface&Vlan IP**, see the figure.



◆ **Add**

After filling, click **Add** to create VLAN0002 port, as well as its IP. You can just fill in **Vlan** without **IP** or **Netmask** only to create vlan.

**Vlan**

**IP**

**Netmask**

## ◆ Edit

Click any column in **InterfaceVlanAndIPConfig** to edit **IP** and **Netmask**. Click **Edit** to save.

Index	Interface Vlan	IP	Netmask
289	VLAN0001	172.16.21.119	255.255.255.0
290	VLAN0010		
291	VLAN0015		

Vlan	<input type="text" value="VLAN0001"/>
IP	<input type="text" value="172.16.21.119"/>
Netmask	<input type="text" value="255.255.255.0"/>

## ◆ Delete

**1.Del Vlan**

Select any column on **Interface Vlan**. Click **Del Vlan** to delete Vlan and IP

**2.Del IP**

Select any column on **Interface Vlan**. Click **Del IP** to delete IP and netmask except Vlan.

**6.1.3 Batch Telnet Community Set**

It can batch configure Telnet(SSH) and SNMP Community of all devices in NMS. Enable the interface, and see the figure. Click **Save** to update Telnet and SNMP information.

Read Community	<input type="text" value="Read Community"/>
Write Community	<input type="text" value="Write Community"/>
Telnet Username	<input type="text" value="Telnet Username"/>
Telnet Password	<input type="text" value="Telnet Password"/>
Enable Password	<input type="text" value="Enable Password"/>

**6.1.4 Switch PON Port Monitor**

This function is mainly aimed at setting monitoring threshold when switch optical ports receive and transmit optical power. If the optical power exceeds the threshold, to realize monitoring, the device will report to the NMS terminal. See the figure.

search:

<input type="checkbox"/>	No.	Port Description	Is Monitor	Tx Power	Rx Power	Temperature
<input type="checkbox"/>	1	FastEthernet0/1	false	-65535 DBm	-65535 DBm	-65535 /256 °C
<input type="checkbox"/>	2	FastEthernet0/2	false	-65535 DBm	-65535 DBm	-65535 /256 °C
<input type="checkbox"/>	3	FastEthernet0/3	false	-65535 DBm	-65535 DBm	-65535 /256 °C
<input type="checkbox"/>	4	FastEthernet0/4	false	-65535 DBm	-65535 DBm	-65535 /256 °C
<input type="checkbox"/>	5	FastEthernet0/5	false	-65535 DBm	-65535 DBm	-65535 /256 °C
<input type="checkbox"/>	6	FastEthernet0/6	false	-65535 DBm	-65535 DBm	-65535 /256 °C
<input type="checkbox"/>	7	FastEthernet0/7	false	-65535 DBm	-65535 DBm	-65535 /256 °C
<input type="checkbox"/>	8	FastEthernet0/8	false	-65535 DBm	-65535 DBm	-65535 /256 °C
<input type="checkbox"/>	9	GigaEthernet1/1	false	-65535 DBm	-65535 DBm	-65535 /256 °C

Rising Threshold  Falling Threshold  Polling Interval  S

**Set Monitor steps:**

1 Tick ports; 2 Enter **Rising/Falling Threshold** and **Polling Interval**; 3 Click **Set Monitor**.

**Remove Monitor steps:**

1 Tick ports; 2 Click **Remove Monitor**.

**6.1.5 Storm Control**

Expand **Storm Control** to configure threshold value. Tick the types of threshold, fill in the threshold, and tick one or more check boxes in the last column. If **Storm Control** is disabled without filling in the value, the threshold value of selected ports will be set as 0. See the figure.

PortIfIndex	Port Description	Broadcast Threshold	Multicast Threshold	Unicast Threshold	<input type="checkbox"/>
5	GigaEthernet0/1	0	0	0	<input type="checkbox"/>
6	GigaEthernet0/2	0	0	0	<input type="checkbox"/>
7	GigaEthernet0/3	0	0	0	<input type="checkbox"/>
8	GigaEthernet0/4	0	0	0	<input type="checkbox"/>
9	GigaEthernet0/5	0	0	0	<input type="checkbox"/>
10	GigaEthernet0/6	0	0	0	<input type="checkbox"/>
11	GigaEthernet0/7	0	0	0	<input type="checkbox"/>
12	GigaEthernet0/8	0	0	0	<input type="checkbox"/>

Broadcast Threshold
  Multicast Threshold
  Unicast Threshold

**6.1.6 Port General Control**

Expand the control interface to enable **Port Rate Limit, Port Flow Control And Status, Port Aggregation.**

**Port Rate Limit:**

First tick in **PortIfIndex**, select in **In/Out Port** and **Type**. Click **Set**. See the figure.

<input type="checkbox"/>	PortIndex	Port Desc	Ingress Type	Ingress Rate	Egress Type	Egress Rate	SpeedDesc
<input type="checkbox"/>	5	GigaEthernet0/1	Not Set	-1	Not Set	-1	<1-16384> -- Configure Bandwidth(unit:64kpbs)
<input type="checkbox"/>	6	GigaEthernet0/2	Not Set	-1	Not Set	-1	<1-16384> -- Configure Bandwidth(unit:64kpbs)
<input type="checkbox"/>	7	GigaEthernet0/3	Not Set	-1	Not Set	-1	<1-16384> -- Configure Bandwidth(unit:64kpbs)
<input type="checkbox"/>	8	GigaEthernet0/4	Not Set	-1	Not Set	-1	<1-16384> -- Configure Bandwidth(unit:64kpbs)
<input type="checkbox"/>	9	GigaEthernet0/5	Not Set	-1	Not Set	-1	<1-16384> -- Configure Bandwidth(unit:64kpbs)
<input type="checkbox"/>	10	GigaEthernet0/6	Not Set	-1	Not Set	-1	<1-16384> -- Configure Bandwidth(unit:64kpbs)
<input type="checkbox"/>	11	GigaEthernet0/7	Not Set	-1	Not Set	-1	<1-16384> -- Configure Bandwidth(unit:64kpbs)
<input type="checkbox"/>	12	GigaEthernet0/8	Not Set	-1	Not Set	-1	<1-16384> -- Configure Bandwidth(unit:64kpbs)
<input type="checkbox"/>	13	GigaEthernet0/9	Not Set	-1	Not Set	-1	<1-16384> -- Configure Bandwidth(unit:64kpbs)

In/Out Port: all | Type: No Limit | Refresh | Set

**Port Flow Control And Status:**

Tick in the first column. Click the bottom buttons: **Open Flow Control**, **Close Flow Control**, **Open Port** and **Close Port**. See the figure.

<input type="checkbox"/>	PortIndex	Port Description	Port Flow Control	Admin Status	Oper Status
<input type="checkbox"/>	5	GigaEthernet0/1	DOWN	UP	DOWN
<input type="checkbox"/>	6	GigaEthernet0/2	DOWN	UP	UP
<input type="checkbox"/>	7	GigaEthernet0/3	DOWN	UP	DOWN
<input type="checkbox"/>	8	GigaEthernet0/4	DOWN	UP	DOWN
<input type="checkbox"/>	9	GigaEthernet0/5	DOWN	UP	DOWN
<input type="checkbox"/>	10	GigaEthernet0/6	DOWN	UP	DOWN
<input type="checkbox"/>	11	GigaEthernet0/7	DOWN	UP	DOWN
<input type="checkbox"/>	12	GigaEthernet0/8	DOWN	UP	DOWN
<input type="checkbox"/>	13	GigaEthernet0/9	DOWN	UP	UP

Refresh | Open Flow Control | Close Flow Control | Open Port | Close Port

**Port Aggregation:**

Click **Add** to add aggregation ports.

Add Aggregation Port ✕

**Aggregation Port Number**

**Aggregation Pattern**

static ▼

ok
Cancel

Tick in the first column. Click **link aggregation port config**.

link aggregation port config
✕

**Logic Port Number**

**Physical Port**

1-GigaEthernet1/1

2-GigaEthernet1/2

3-GigaEthernet1/3

4-GigaEthernet1/4

5-GigaEthernet1/5

### 6.1.7 Transmission Rate Monitor

Its main function is to monitor when the switch sends and receives flow. See the figure.

search:

<input type="checkbox"/>	No.	Port Description	Is Monitor(r/t)	ifHCInOctetsBound(Bps)	ifHCOutOctetsBound(Bps)
<input type="checkbox"/>	1	FastEthernet0/1	true / true	65535 / 0	65535 / 0
<input type="checkbox"/>	2	FastEthernet0/2	true / true	65535 / 1	65535 / 1
<input type="checkbox"/>	3	FastEthernet0/3	false / false		
<input type="checkbox"/>	4	FastEthernet0/4	false / false		
<input type="checkbox"/>	5	FastEthernet0/5	false / false		
<input type="checkbox"/>	6	FastEthernet0/6	false / false		
<input type="checkbox"/>	7	FastEthernet0/7	false / false		
<input type="checkbox"/>	8	FastEthernet0/8	false / false		
<input type="checkbox"/>	9	GigaEthernet1/1	false / false		

Receive Rising Threshold 
 Receive Falling Threshold 
 Send Rising Threshold 
 Send Falling Threshold 
 Polling Interval  S

● **Set Monitor**

Select at least one port in the first column, fill in the bottom blanks: Receive/Send Rising Threshold, Receive/Send Falling Threshold and Polling Interval. Click **Set Monitor**. See the first 2 lines of the figure.

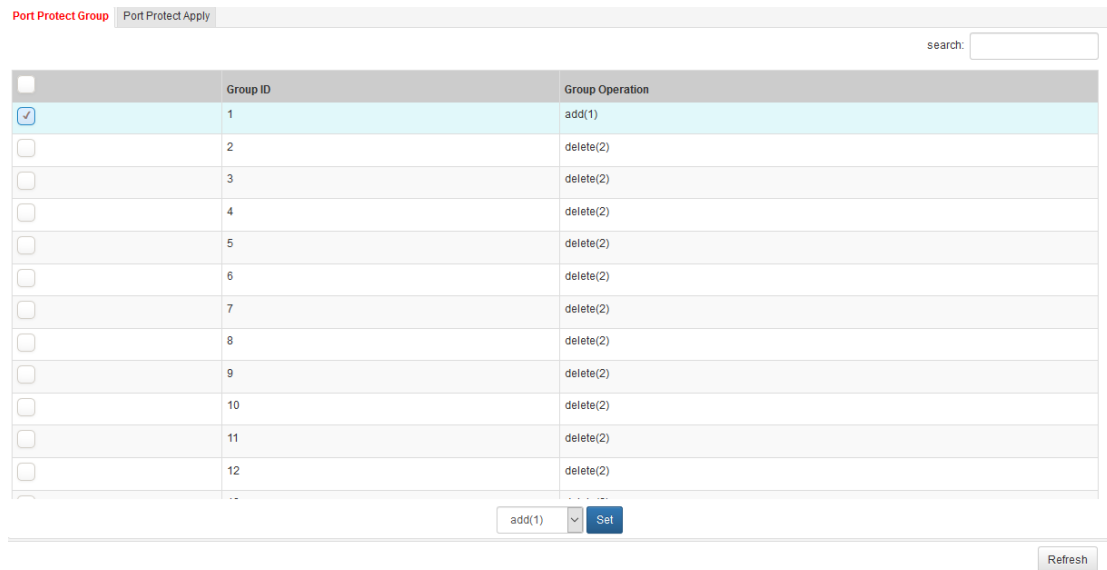
● **Remove Monitor**

Select at least one port in the first column, click **Remove Monitor**.

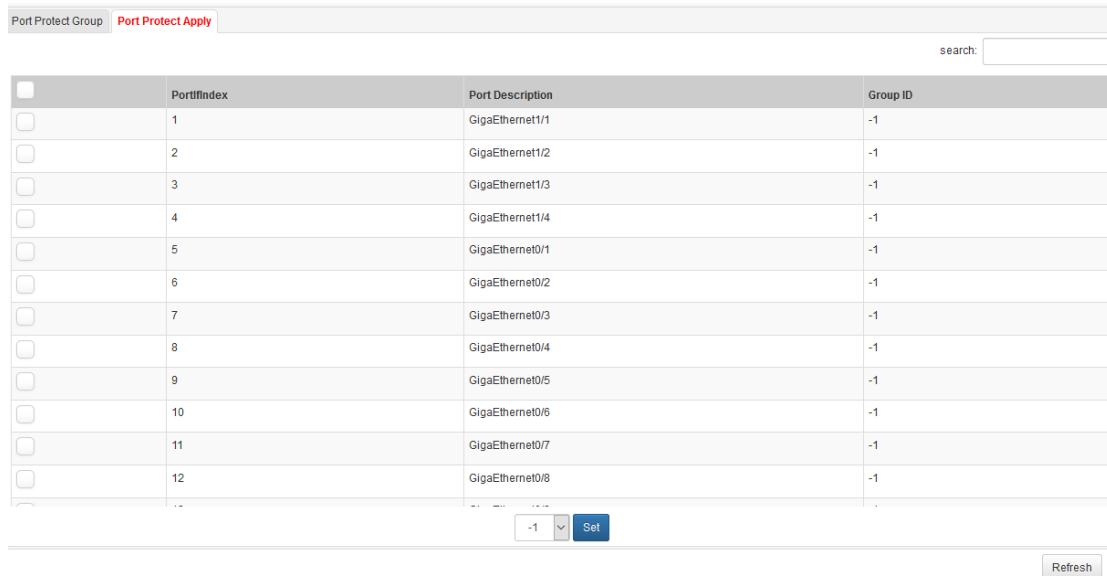
### 6.1.8 Port Protect Group

Such a function has 2 parts: 1. **Port Protect Group**; 2. **Port Protect Apply**.

See the figure. Click one ID, as well as **add** or **delete** to enable or disenable the selected protect group.



See the figure. Tick the port, and select the protect group requiring to be added in the drop-down list below. Click **Set**.



### 6.1.9 ACL Config And Application

ACL (Access Control List) is a list of instructions for the router and switch interface, used for controlling the in/out data packages.

This section introduces the ACL module operation in the network management system in detail.

Types of ACL :

- ◆ IP ACL
- ◆ MAC ACL

Based on operation, types of ACL:

- ◆ New ACL
- ◆ Rules for configuring ACL
- ◆ Apply ACL:
  - Issued to PON
  - Issued Iliid
  - Issued ONU

To create new ACL (IP ACL, MAC ACL), enable **ACL Config And Application**. See the figure.

The screenshot shows the 'ACL Item' configuration page. At the top, there are tabs for 'IP ACL' and 'MAC ACL'. Below the tabs is a table with the following data:

No.	ACL Name	Rule Count Number	Rule Type	Current Status	Operations
1	12	2	Standard Rules	Yes	Delete Items/Item Detail/Add Rule
2	1234	1	Standard Rules	Yes	Delete Items/Item Detail/Add Rule
3	aaa4	3	Expanded Rules	Yes	Delete Items/Item Detail/Add Rule
4	b2	2	Expanded Rules	Yes	Delete Items/Item Detail/Add Rule
5	t12	2	Standard Rules	Yes	Delete Items/Item Detail/Add Rule
6	t133	0	Standard Rules	Yes	Delete Items/Item Detail/Add Rule

Below the table, there are buttons for 'Refresh', 'Create Items', and 'Port Config'. The 'Add Rule' section includes:

- Action: Deny (dropdown)
- Mode:  IP  IP Range  Any
- Source IP: [text input]
- Source Mask: [text input]
- Start IP: [text input]
- End IP: [text input]
- Log:
- Buttons: OK, Cancel

### 6.1.9.1 Create IPACL

Select IP ACL on **IP ACL**, click **Create Items** to create a ACL item. On the pop-up, enter ACL name and type.

After creating an ACL item, the item will be added into the interface **ACL Config And Application**, but the amount of rules is 0. So click **Add Rule** to add the rules.

#### 1. Standard Rules

Click **Add Rule** to set rules. Click **OK**.

#### 2. Expanded Rules

Click **Add Rule** to set rules. The following interface will pop up.



✕
Add Expanded Rules

**Expanded**

**ACL**

aaa4

**Action**

Permit

**Protocol**

IP

0-255

**Source Address**

Mode  IP  IP Range  Any

Source IP  Source Mask

Start IP  End IP

Port Config    Operate NEQ    Port No ftp-data(2)

**Destination Address**

Mode  IP  IP Range  Any

Dst IP  Dst Mask

Dst Start IP  Dst End IP

Port Config    Operate NEQ    Port No ftp-data(2)

**Other Condition**

Priority Select Ple    TOS Select Ple    log

Time-Range     Established no    Location 0

ICMP Type 0-255    IGMP Type 0

OK
Close

Click **OK**.

When it comes to MAC ACL creation and rule add, please refer to IPACL operation instructions.

### 6.1.9.2 Search and Delete IPACL

- Search IP ACL information

In ACL item list, click **Item Detail** in the checked line to get **ACL Item And Rule Info**. See the following interface.

ACL Item And Rule Info-172.16.21.129
✕

Item Name

Item Type

ACL Rule Counts

No.	Action	Source IP	Source Mask	Start IP	End IP	Compare	Any	Log	Current Status
1	Deny	0.0.0.0	0.0.0.0	172.16.21.0	172.16.21.119	Range	No	Disable	Enable
2	Deny	172.16.21.15	255.255.255.0	0.0.0.0	0.0.0.0	Mask	No	Disable	Enable

The fields in the form is the standard rule information. If necessary, select any **ACL** by clicking the drop-down list of **Item Name**.

Note: select one rule and click **Delete Rule** to remove the rule.

- Delete ACL

In ACL, click **Delete Rule** to delete the selected item.

### 6.1.9.3 Port Config List (IP ACL)

Applying IP ACL is a way to send the created IP ACL to the PON, realizing filtering. Click **Port Config, Port Config List(IP ACL)** will pop up. See the figure.

Port Config List(IP ACL)✕

	Port	ingress	egress
<input type="checkbox"/>	GPON0/1		
<input type="checkbox"/>	GPON0/2		
<input type="checkbox"/>	GPON0/3		
<input type="checkbox"/>	GPON0/4		
<input type="checkbox"/>	GPON0/5		
<input type="checkbox"/>	GPON0/6		
<input type="checkbox"/>	GPON0/7		
<input type="checkbox"/>	GPON0/8		
<input type="checkbox"/>	GPON0/9		

ConfigDelete

Configuration steps:

- **Config**

It is used to configure **ACL** to **ingress** and **egress** of **PON**. Refer to the above configuration steps (Batch is available.), click **Config** to configure the **ACL** sent to **ingress** and **egress**. Finally click **OK**. See the figure.

Ingress: Entrance for ACL

Egress: Exit for ACL

Port Config-172.16.21.129
✕

**Port**

GPON0/1,GPON0/3

Ingress

12

Egress

OK
Close

- Delete

It is used to delete the **ACL** configured in **ingress** and **egress**. Select **PON** on **Port Config List (IPACL)** interface, click **Delete** to delete the selected **ACL**.

In terms of **MAC ACL** configuration, please refer to IP ACL operation instruction.

### 6.1.10 QoS Queue and Scheduling Mode config

Click **QoS queue and scheduling mode config**, see the figure.

Global Cos Mapping Config		Global Band Width Weight Config	Global Dispatch Model Config
id	Global Cos Mapping Cos	id	Global Cos Mapping Queue
<input type="checkbox"/>	0		1
<input type="checkbox"/>	1		1
<input type="checkbox"/>	2		2
<input type="checkbox"/>	3		2
<input type="checkbox"/>	4		3
<input type="checkbox"/>	5		3
<input type="checkbox"/>	6		4
<input type="checkbox"/>	7		4

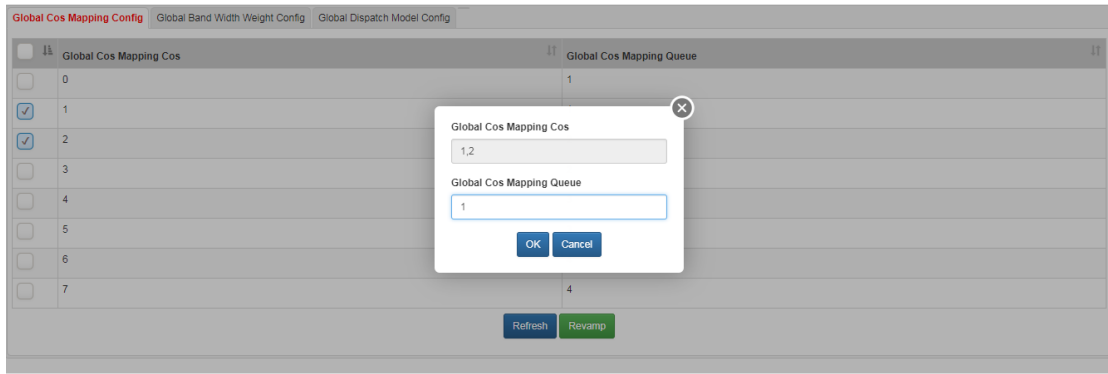
Refresh
Revamp

#### 6.1.10.1 Global Cos Mapping Config

Its interface is shown as the above.

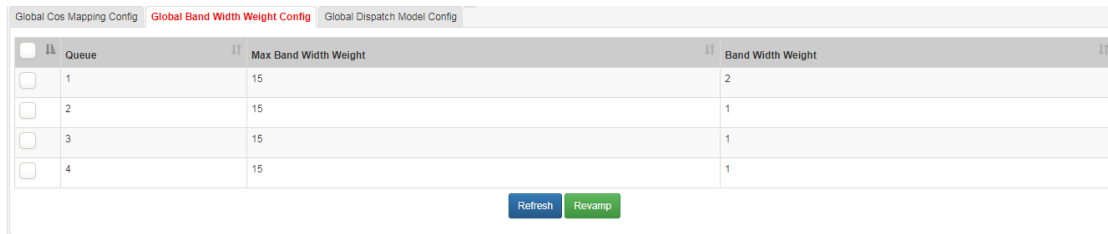
- ◆ Refresh

Select one or more items in the form, click **Refresh**.



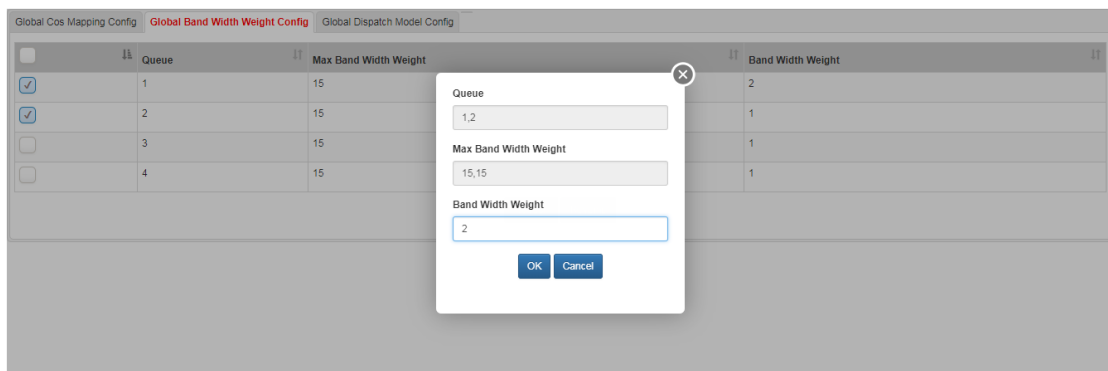
### 6.1.10.2 Global Band Width Weight Config

Click **Global Band Width Weight Config**, and see the figure.



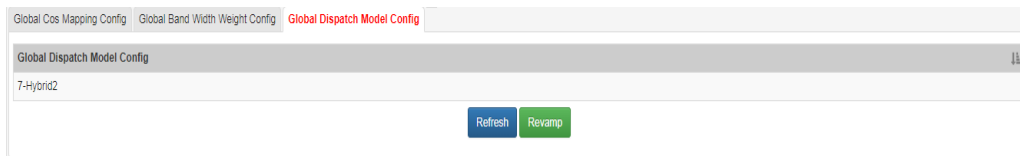
◆ Refresh

Select one or more items in the form, click **Refresh**.



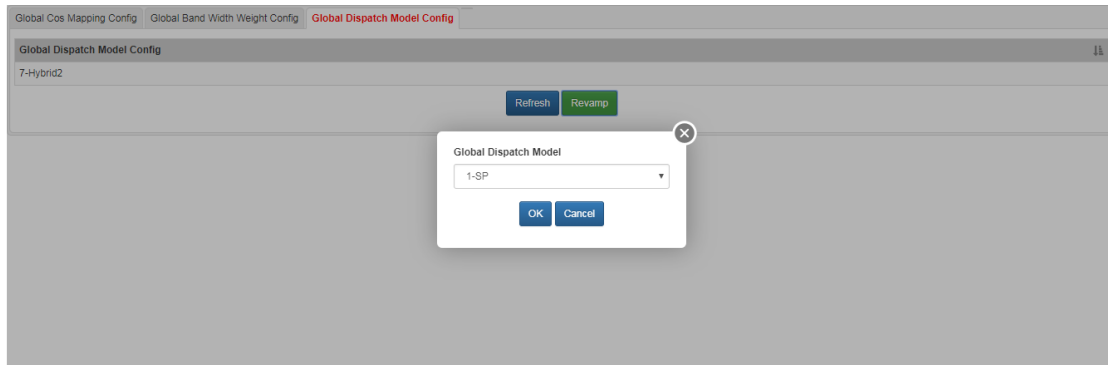
### 6.1.10.3 Global Dispatch Model Config

Click **Global Dispatch Model Config**, see the figure.



◆ Refresh

Select one or more items in the form, click **Refresh**.



### 6.1.11 QoS Strategy Config

Click **QoS Strategy Config**, see the figure.

>>

No.	Strategy Name	Strategy Desc	QoS Match Criteria	Operation
1	77	1111	Match Specific	
2	ppp	NA	Match Specific	
3	uuu	NA	Match Specific	
4	yyy	NA	Match Specific	

◆ Add

Click to pop up the configuration wizard.

The 'Create QoS' wizard is shown in the 'Basic Infos' step. It contains two text input fields: 'QoS Name' with the value 'test' and 'QoS Desc' with the value 'test'. 'Back' and 'Next' buttons are at the bottom right.

Next, match criterias.

The 'Create QoS' wizard is shown in the 'Match Criteria' step. It includes a 'Match Any Package' dropdown set to 'Yes'. Below are three rows of configuration options, each with a dropdown menu, an operation dropdown, and an 'Enable' checkbox:
 



- Match IP ACL Name: [dropdown] | Match IP ACL Operation: Not Me |  Enable Match IP ACL
- Match IPv6 ACL Name: [dropdown] | Match IPv6 ACL Operation: Not Me |  Enable Match IPv6 ACL
- Match Mac ACL Name: [dropdown] | Match Mac ACL Operation: Not Me |  Enable Match Mac ACL

 Additionally, there are 'Start Vlan ID' (4095), 'End Vlan ID' (4095), and 'Vlan Mask' (0) fields, with an 'Enable Vlan Matching' checkbox. 'Back' and 'Next' buttons are at the bottom right.

Next, match VLAN, CoS, MAC. See the figure.

Next, enable **Color Blindness Mode Config**. See the figure.

Click **Commit** to manage to add Qos Strategy.

- ◆ Edit
- Click  to edit the strategy.
- ◆ Delete
- Click  to delete the strategy.

### 6.1.12 QoS Port

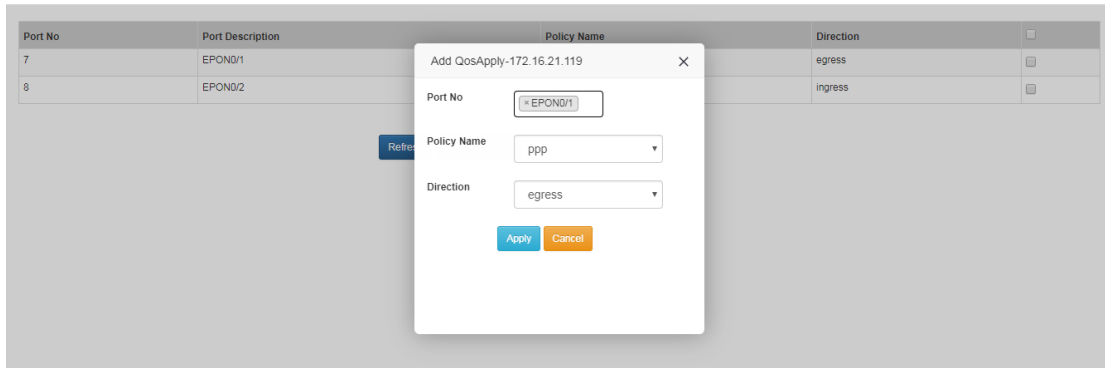
**QoS Strategy** can be applied to some port. One port can apply several strategies, while one strategy can be applied to several ports. In the same port, the earlier the strategy is applied, the more prioritized it will be. That is, if the message matches two policies at the same time, the action of the first matching strategy should be taken.

Click **QoS Port Ap**. See the figure.

Port No	Port Description	Policy Name	Direction	<input type="checkbox"/>
7	EPON0/1	77	egress	<input type="checkbox"/>
8	EPON0/2	uuu	ingress	<input type="checkbox"/>

[Refresh](#) [Add](#) [Delete](#)

- ◆ Add
- Click **Add**, and see the figure.



Select **Port** and its strategy, click **Apply** to apply the strategy in port.

### 6.1.13 STP Config

Refresh the form values above the form, and click **Set** to set STP. See the figure.

Specification	<input type="text" value="3"/>	StpMaxAge	<input type="text" value="2000"/>	Priority	<input type="text" value="32768"/>
HelloTime	<input type="text" value="200"/>	TopologyChange	<input type="text" value="22 days, 0.48:45:00"/>	HoldTime	<input type="text" value="0"/>
TopChanges	<input type="text" value="3"/>	ForwardDelay	<input type="text" value="1500"/>	DesignatedRoot	<input type="text" value="20:00:fc:fa:f7:4e:9f:00"/>
BridgeMaxAge	<input type="text" value="20"/>	BridgeForwardDelay can not be empty!	<input type="text" value="15"/>	BridgeHelloTime	<input type="text" value="2"/>
StpRootPort	<input type="text" value="6"/>	RootPathCost	<input type="text" value="400000"/>		

Port	Priority	Status	Enable	PathCost	DesignatedRoot	BridgePathCost	DesignatedBridge	DesignatePort	ForwardTransitions	
<input type="checkbox"/>	1	128	1	2	200000	00:00:00:00:00:00:00:00	0	00:00:00:00:00:00:00:00	0	0
<input type="checkbox"/>	2	128	1	2	200000	00:00:00:00:00:00:00:00	0	00:00:00:00:00:00:00:00	0	0
<input type="checkbox"/>	3	128	1	2	200000	00:00:00:00:00:00:00:00	0	00:00:00:00:00:00:00:00	0	0
<input type="checkbox"/>	4	128	1	2	200000	00:00:00:00:00:00:00:00	0	00:00:00:00:00:00:00:00	0	0
<input type="checkbox"/>	5	128	1	2	200000	00:00:00:00:00:00:00:00	0	00:00:00:00:00:00:00:00	0	0

Tick the port in the first line. Click **Port STP Config** to configure the STP. See the figure.

Port-5-STP Config
✕

**Port No**

**Priority**

**PathCost**

### 6.1.14 Syslog Server Config

**Syslog Server Config** is mainly used for the designated device to send Syslog. See the following interface.



IP	Level	Operation
172.16.21.111	emerg	

Refresh and Add buttons are on the top right corner. The Add interface is shown in the following. 8 levels: **emerg**, **alert**, **critical**, **error**, **warning**, **notice**, **info**, **debug**, ranking from high to low. Syslog level of the device above or equal to the set level will be sent to the specified IP.

Add Syslog Item
✕

**Level**

emerg
▼

**IP**

Add

- emerg
- emerg
- alert
- critical
- error
- warning
- notice
- info
- debug

### 6.1.15 Static Route Config

Fill in **static IP**, click **Add** to add the static route. Tick in the first line and click **delete** to delete batch. See the figure.

Static Route List

Serial Number	Static Route
no matching result	

Static Route Config

Static IP:

Refresh
Add
delete

## 6.2 EPON Device

### 6.2.1 Managed Object Attribute

Please refer to section 6.1.1.

### 6.2.2 Vlan Management

Please refer to section 6.1.2.

### 6.2.3 OLT PON Optical Power Batch Set

Select **OLT** and **ONU Optical Batch Set**. The following interface will pop up.

Send Optical Power Upper Limit:	Optical Power Permission: 1 Enabled ▼	Optical Power Upper Limit Threshold(0.1dBm): <input type="text" value="Integer: -400~82"/>	Optical Power Back Threshold(0.1dBm): <input type="text"/>
Send Optical Power Lower Limit:	Optical Power Permission: 1 Enabled ▼	Optical Power Lower Limit Threshold(0.1dBm): <input type="text"/>	Optical Power Back Threshold(0.1dBm): <input type="text"/>
Receive Optical Power Upper Limit:	Optical Power Permission: 1 Enabled ▼	Optical Power Upper Limit Threshold(0.1dBm): <input type="text"/>	Optical Power Back Threshold(0.1dBm): <input type="text"/>
Receive Optical Power Lower Limit:	Optical Power Permission: 1 Enabled ▼ 2 forbidden	Optical Power Lower Limit Threshold(0.1dBm): <input type="text"/>	Optical Power Back Threshold(0.1dBm): <input type="text"/>

Threshold unit is 0.1dBm, between -400 and 82. Click **Save** to batch set all the ONU optical power threshold under OLT.

### 6.2.4 Batch Telnet Community Set

Please refer to section 6.1.3.

### 6.2.5 Storm Control

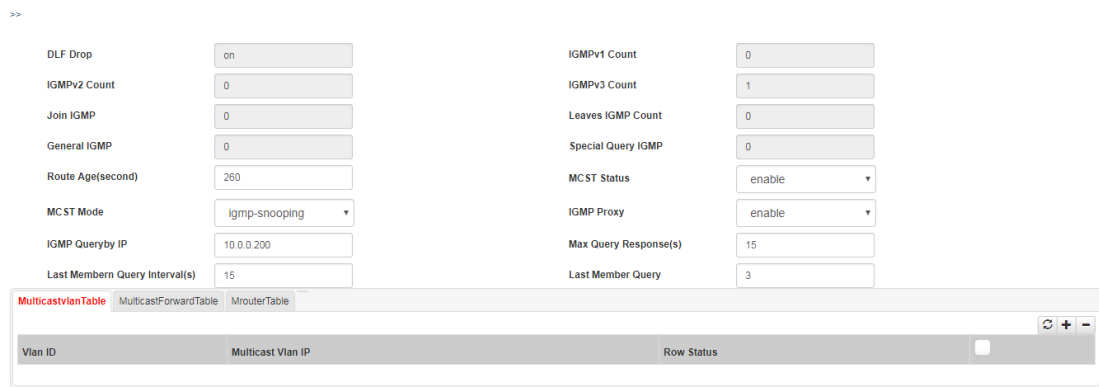
Please refer to section 6.1.5.

### 6.2.6 MultiCast

**Multicast transmission:** A point-to-point network connection is implemented between the sender and each recipient. If a sender transfers the same data to multiple recipients at the same time, only the same packet is copied. It improves data transfer efficiency and reduces the congestion in the backbone network.


IGMP runs between the host and the multicast router directly connected to the host. The host uses IGMP to tell the local router that it wants to join and receive information about a particular multicast group, while the router periodically queries the members of a given group within the LAN whether it is active (that is, whether the network still has members belonging to a multicast group), realizing the collection and maintenance of network group membership. 3 IGMP versions: IGMPv1, IGMPv2, IGMPv3.

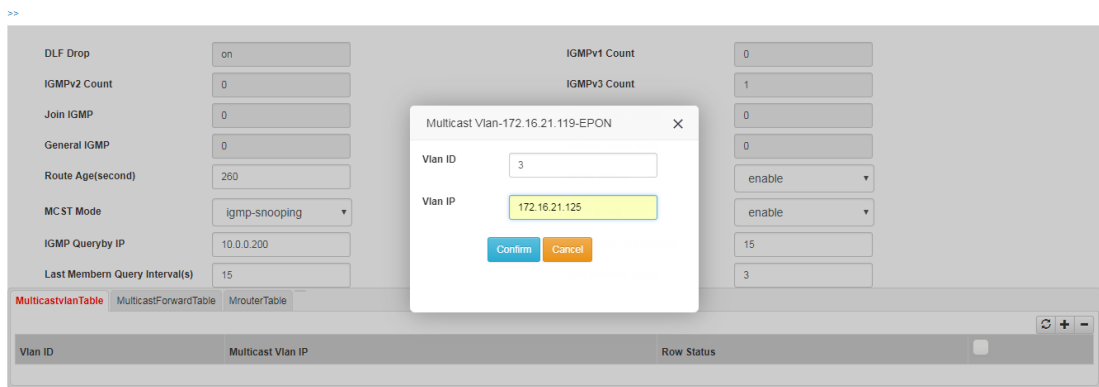
OLT multicast configuration is the configuration of some global attributes for OLT group. Click **Multicast Set**, and see the figure.




Note: The gray part on the left cannot be modified.

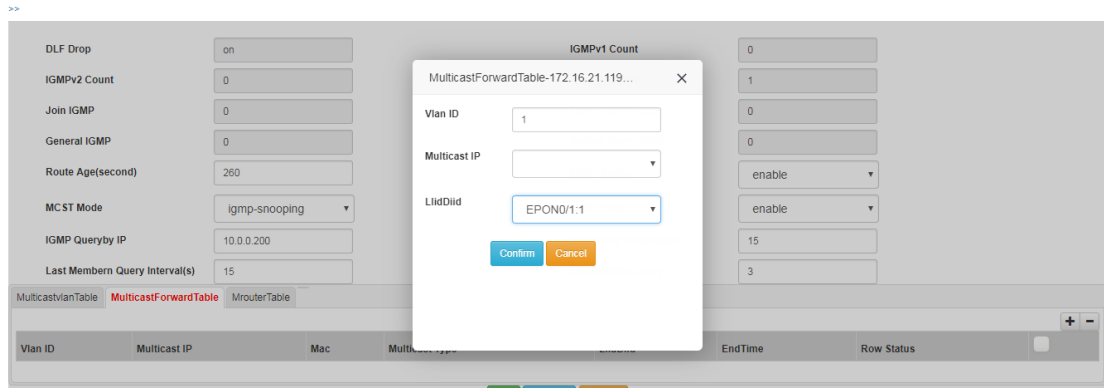
◆ Add **MulticastVlanTable**

Click , see the figure.




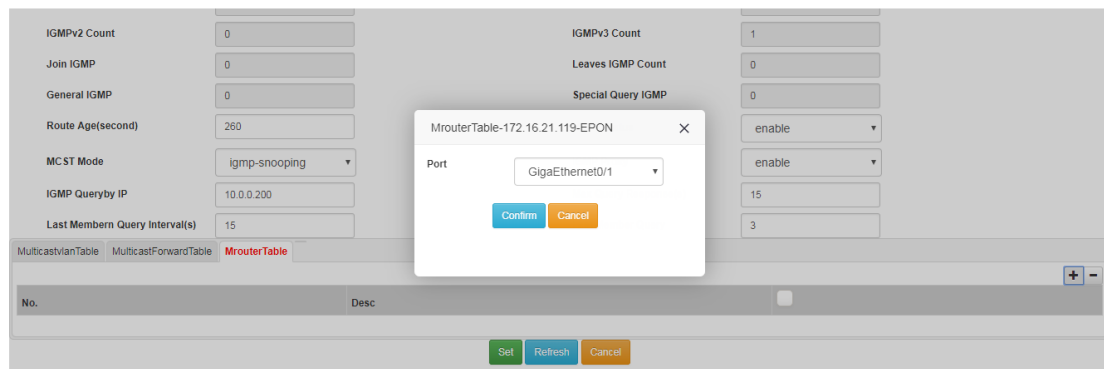
◆ Add **MulticastForwardTable**

Click **MulticastForwardTable** to shift the interface. Click .



◆ Add MrouterTable

Click **MrouterTable** to shift the interface. Click . See the figure.



### 6.2.7 PortControl

Please refer to section 6.1.6.

### 6.2.8 PON Power Limit

See the figure.

PONList

EPON0/1  
EPON0/2  
EPON0/3  
EPON0/4  
EPON0/1:2

Set(-400~82,unit:0.1dbm)

rx:

rxUpLimit:

rxDownLimit:

tx:

txUpLimit:

txDownLimit:

In **PONList**, double click selected PON to load the lower limit of the light power of the current PON. The default ceiling value of the sending light power is 82, and the default floor value is -400. Adapt based on reality and click **Set**. Click **Reset** to restore the light power of the PON to the default value.

## 6.2.9 QoS Global Cos And Bandwidth

Please refer to section 6.1.10.

## 6.2.10 QoS Strategy Config

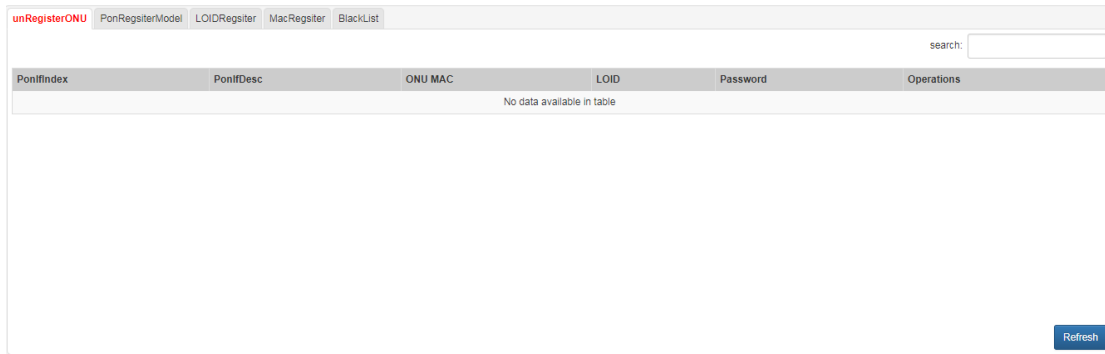
Please refer to section 6.1.11.

## 6.2.11 PonPortQosApply

Please refer to section 6.1.12.

## 6.2.12 ONU Auth Mode

Click **ONU Auth Mode**. See the figure.



Including: **unRegisterONU**, **PonRegisterModel**, **LOIDRegister**, **MacRegister**, **BlackList**.

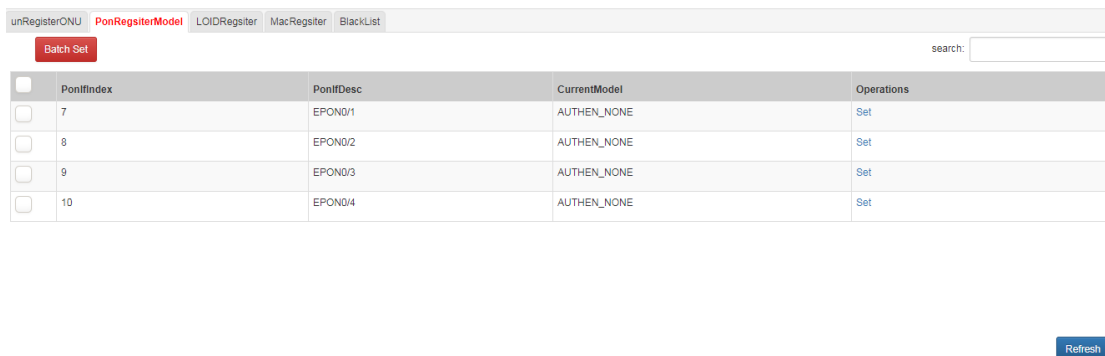
### 6.2.12.1 unRegisterONU

See the above figure.

The states of ONU: 1: **authenticated**, 2: **registered**, 3: **deregistered**, 4: **auto\_config**. The state shown above is all registered ONUs. Click **Bind** to bind ONU. No registered ONU devices in OLT, so no data list is displayed in the figure.

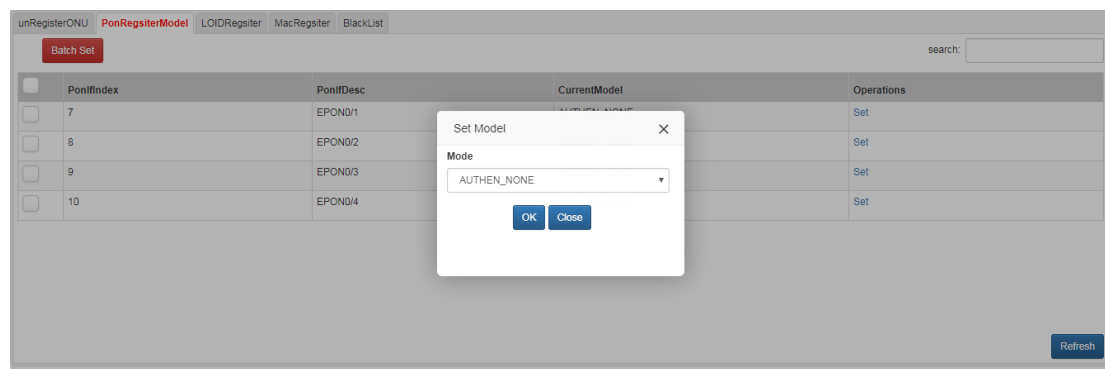
### 6.2.12.2 PonRegisterModel

Click **PonRegisterModel**. See the figure.



◆ Set

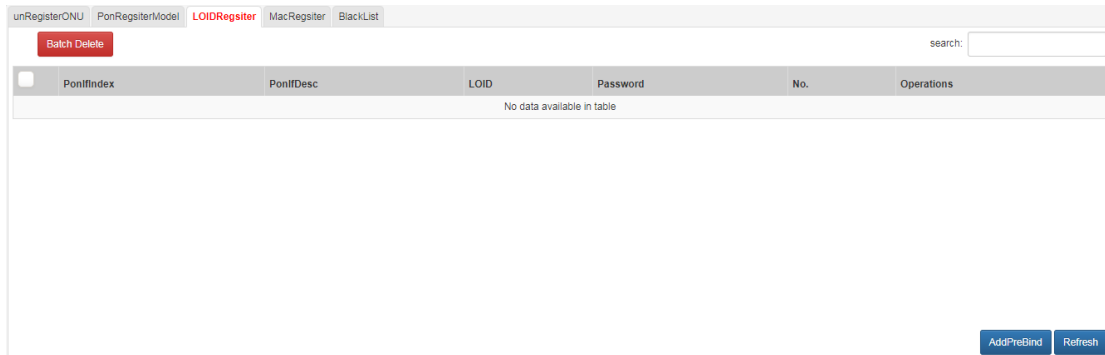
Click **Set** and see the following pop-up.



Select one mode to set.

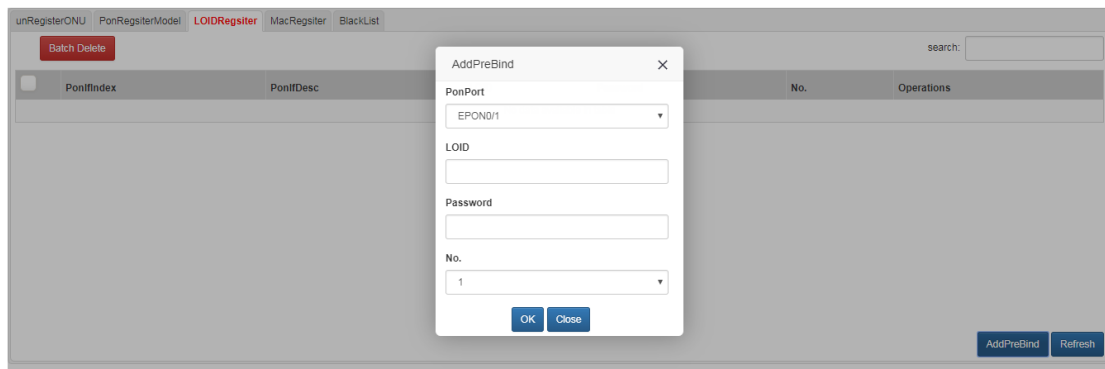
### 6.2.12.3 LOIDRegister

Click **LOIDRegister**, and see the interface.



◆ Add

Click **AddPreBind** to add.

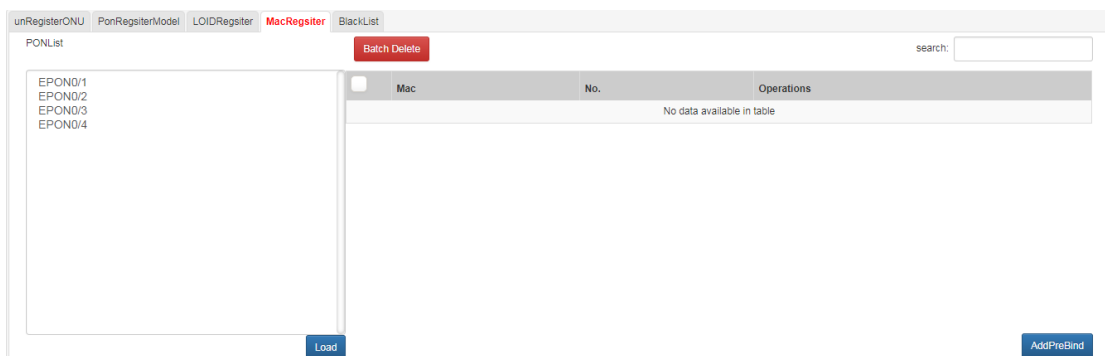


◆ Delete

Click **Delete** or **Batch Delete** in **Operation**.

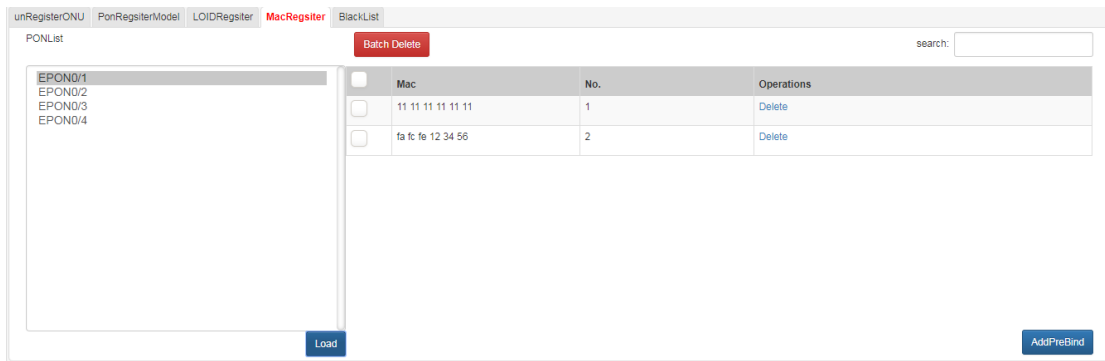
### 6.2.12.4 MACRegister

Click **MACRegister** to shift the following interface.

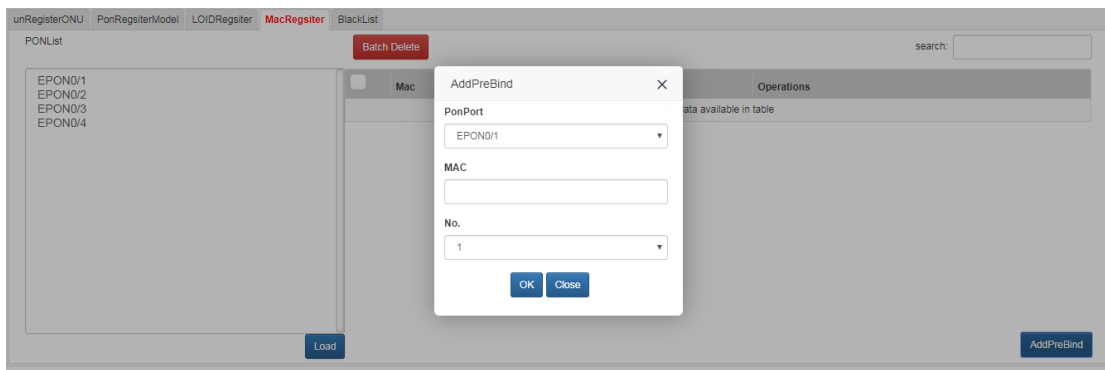


◆ Load

Select PON in **PONList**, and click **Load** to check the bound ONU.



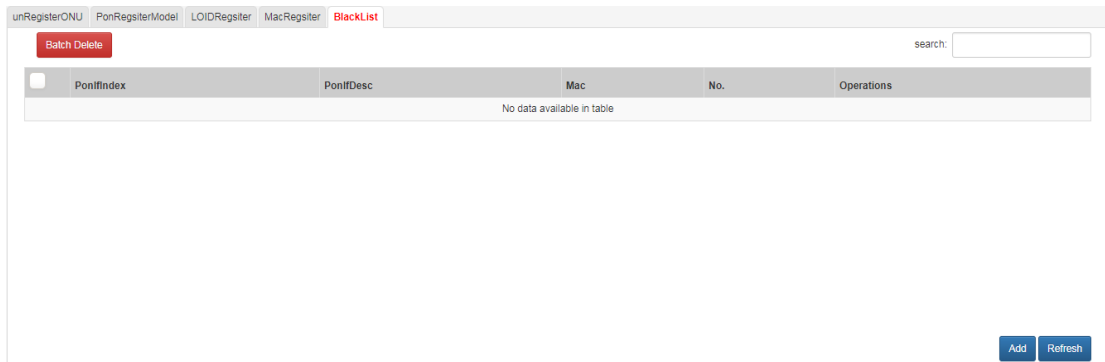
◆ Add  
Click **AddPreBind** to add.



◆ Delete  
Click **Delete** or **Batch Delete** in Operation.

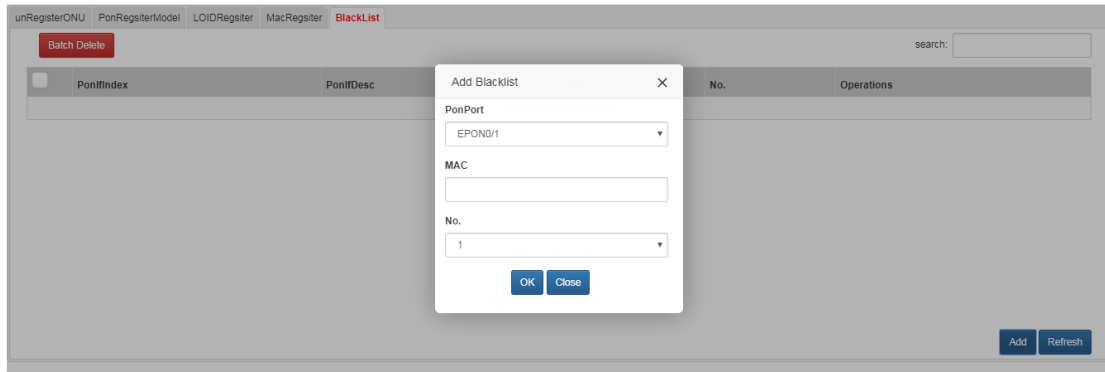
### 6.2.12.5 BlackList

Click **BlackList**.



◆ Add  
Click **Add** to add.





### 6.2.13 ACL Config And Application

Please refer to section 6.1.9.

### 6.2.14 ONU Global Vlan Config Template

#### 6.2.14.1 Templates List

Click **Templates List** to enter the interface. See the figure.

<input type="checkbox"/>	Index	Template Name	TSTP Enabled	Rf Output Attenuation	Operations
<input type="checkbox"/>	1	GDQ3_onuvlan	Valid	true	<a href="#">Edit</a>
<input type="checkbox"/>	2	test1225_onuvlan	Valid	true	<a href="#">Edit</a>
<input type="checkbox"/>	3	testnew01	Valid	true	<a href="#">Edit</a>

- Create template  
Click **Create** to enter the following interface.

ONU Global Vlan Template Create ✕

Template Name 
 RSTP on-off  Enable  Disable
 Rf Output Attenuation

ALL
  UNI1  UNI2  UNI3  UNI4  UNI5  UNI6  UNI7  UNI8  UNI9  UNI10  UNI11  UNI12  UNI13  UNI14  UNI15  UNI16  UNI17  UNI18  UNI19  UNI20  UNI21  UNI22  UNI23  UNI24  UNI25  UNI26  UNI27  UNI28  UNI29  UNI30  UNI31  UNI32

Uni Port No	Vlan Mode	Cos	Start VID	End VID
The data in the table is empty				

Input **Template Name**, select **UNI**, and click **Add**. The selected UNI port will be added to the middle table of the page. **Remove** can delete the selected line in the form(The operation is not saved at this time.). **Reset** can reset the interface into no added data state. **Save** will save all operation.

- **Edit**  
 Select one line in **TemplateList**, and click **Edit** to enable the edition interface, the same operation as **Create**.
- **Delete**  
 Select one or more items and click **Delete** to delete it.

### 6.2.14.2 Bind ONU Config Templates

Click **Bind ONU Config Templates** on top left to enable the interface. See the figure.

Templates List **Bind ONU Config Templates** Vlan Usage Information

172.16.21.119-EPON

- SLOT\_0
  - EPON0/4
  - EPON0/1
  - EPON0/3
  - EPON0/2

Pon Index	Pon Descr	Template Name	ONU VendorID	ONU ModuleID	Operations
7	172.16.21.119-EPON_PON_7	GDQ3_onuvlan	BDCM	6013	Delete Items
10	172.16.21.119-EPON_PON_10	2222_onuvlan	BDCM	1016	Delete Items
10	172.16.21.119-EPON_PON_10	2222_onuvlan	BDCM	1024	Delete Items
10	172.16.21.119-EPON_PON_10	zxcv_onuvlan	BDCM	3010	Delete Items
10	172.16.21.119-EPON_PON_10	GDQ2_onuvlan	BDCM	6013	Delete Items

- **Check bound templates**  
 During the initialization of **Bind ONU Config Templates**, all bound templates of PON are displayed. Click PON in the left tree node to display the bound template of the selected

PON.

- Bind

Select at least one PON on the left tree. Click **bind**.

Choose ONU Type And Template
✕

Onu Type

- P1501DR BDCM 6013
- P2016 SHBD 1016
- P2024B 0000 224B
- P1720-4F BDCM D400
- IEP1108F-4S-L-V-M BDCM 4112
- P2016B BDCM 216B
- IEP1108F-L-V-M BDCM 4111
- P2000-08P BDCM 208P
- P2008 SHBD 1010
- P1504E BDCM 154E
- P1501B 0000 3022
- P1504 0000 3023
- IEP1208F-4S-L-V-M BDCM 4110
- P1704-4GV BDCM 6019
- 1004B 0000 3024
- P1704-4GVC-S BDCM 6018
- P1504C BDCM 154C
- IEP1204-4S-V 0000 3020
- P1204 0000 3021
- P1006-2FXS-RF SHBD 1007
- IEP1208C-4S-L 0000 3009

Edit ONU Type

Index	Template Name	TSTP Enabled	Rf Output Attenuation
1	GDQ3_onuvlan	Valid	true
2	test1225_onuvlan	Valid	true
3	testnew01	Valid	true

bind
Refresh

Select at least one of the ONU types on the left, select one right template and click **bind**. The corresponding ONU type of the selected PON can be successfully bound to the template.

- Edit ONU Type

Select **ONUType** and click **Edit ONU Type** to enable the interface. See the figure.

Edit ONU Type
✕

Add

show  entries search:

Index	ONUType	Vendor ID	Module ID
1	P1501DR	BDCM	6013
2	P2016	SHBD	1016
3	P2024B	0000	224B
4	P1720-4F	BDCM	D400
5	IEP1108F-4S-L-V-M	BDCM	4112
6	P2016B	BDCM	216B
7	IEP1108F-L-V-M	BDCM	4111
8	P2000-08P	BDCM	208P
9	P2008	SHBD	1010
10	P1504E	BDCM	154E

Delete
Refresh

◆ Add

Enter **ONUType**, **Vendor ID**, **Module ID** and click **Add**.

◆ Delete

Select the ONU type to be deleted(ctrl+left-click to select more) and click **Delete**.

### 6.2.14.3 Vlan Usage Information

Click **Vlan Usage Information** to enable the interface to check the bound templates.

### 6.2.15 GIS Config

Through this function, GIS can be configured. The configuration interface is shown in the following.

参数	值	参数	值	参数	值
经度	120	纬度	50	高度(m)	10
水平误差(m)	10	高度误差(m)	0	区域代码	110108001011
时间戳	1499357770	签名	b	校验码	5898

操作按钮: 生成校验码, 刷新, 保存

### 6.2.16 Static Route Config

Please refer to section 6.1.15.

### 6.2.17 PON Port Cleft Grafting

Select **Source PON Port** and **Destination PON Port**. Click **Execute**.

Source PON Port: EPON0/1      Destination PON Port: EPON0/1

Execute

### 6.2.18 OLT Encryption Config

Select **Encrypt State** and **Encrypt Model**, refresh **Key Update Cycle** and click **Set**.

Encrypt Status

false

Encrypt Model

triple churing

Key Update Cycle(millisecond)

10000

Set Refresh

### 6.2.19 Switch PON Port Monitor

Please refer to section 6.1.4.

### 6.2.20 STP Config

Please refer to section 6.1.13.

### 6.2.21 OLT Port Mirror

Select **OLT Port Mirror**. See the interface.

>>

Port Info

EPON0/1  
EPON0/2  
EPON0/3  
EPON0/4  
GigaEthernet0/1  
GigaEthernet0/2  
GigaEthernet0/3  
GigaEthernet0/4

Session1

Source

Rx Only

>

<

Interface	Session	Type	Status
GigaEthernet0/5	session1	Source	Both
GigaEthernet0/6	session1	Destination	---

Confirm Refresh

**Session, Type, Status** are drop-down selection boxes.

**Session**: four types: Session1, Session2, Session3, Session4; **Type**: **Source**—the current original port, **Destination**—destination port to which the configuration port information is copied; **Status**: **Rx Only**—Only the mirror receiving port configures information, **Tx Only**—Only the mirror sending port configures information, **Both**—both have 3 definitions.

Multiple port information can be configured as source port information, while only one can be destination port, that is, the destination port copies the configuration information for multiple source ports. **Session1,2, 3, 4** represent that the device supports such four configuration rules at most.

## 6.2.22 DBA Config

**DBA** is a mechanism for the dynamic allocation of uplink bandwidth within a time interval of "microseconds or milliseconds". EPON's DBA setting is the upstream flow for each ONU.

### 6.2.22.1 DBA Global Attributes-172.16.21.119-EPON

As is shown in the following figure.

DBA Global Attributes-172.16.21.119-EPON LLID Bandwidth Config-172.16.21.119-EPON

DBA Mode: Hybrid DBA  
 DBA Algorithms: NONWORKCONSERV  
 DBA Cycle Time(TQ):  
 DBA Discovery Frequency: 128  
 DBA Discovery Time: 14000

Set Refresh

The above figure shows the global attributes of OLT DBA. Click **Set** to configure the attributes; **Refresh** to retrieve the latest value from the device. During configuration, when DBA Mode is set as **Hybrid DBA** and **Software DBA with dynamic cycletime**, **DBA Cycle Time** cannot be configured.

### 6.2.22.2 LLID Bandwidth Config-172.16.21.119-EPON

Click **LLID Bandwidth Config**, and see the figure.

	Name	IfIndex	Belong Port	UP PIR	UP CIR	UP FIR	DOWN PIR	DOWN CIR	DOWN FIR
<input type="checkbox"/>	EPON0/1:1	21	EPON0/1	100000	1000	0	100000	1000	0
<input type="checkbox"/>	EPON0/1:2	23	EPON0/1	555	555	555	100000	1000	0
<input type="checkbox"/>	EPON0/2:16	99	EPON0/2	100000	1000	0	100000	1000	0
<input type="checkbox"/>	EPON0/3:1	29	EPON0/3	100000	1000	0	100000	1000	0
<input type="checkbox"/>	EPON0/3:2	30	EPON0/3	100000	1000	0	100000	1000	0
<input type="checkbox"/>	EPON0/3:3	269	EPON0/3	100000	1000	0	100000	1000	0
<input type="checkbox"/>	EPON0/3:4	270	EPON0/3	100000	1000	0	100000	1000	0
<input type="checkbox"/>	EPON0/3:5	271	EPON0/3	100000	1000	0	100000	1000	0

Modify Refresh

Select one or more items, click **Modify** and the following figure will pop up.

LLID Bandwidth Modify
✕

**Name**

**Bandwidth Type**

**PIR**

**CIR**

**FIR**

**Bandwidth Type**, **CIR** and **FIR** can be modified. If **DBA Mode** is **Hardware DBA**, **FIR** cannot be modified. Select **Bandwidth Type: Up Bandwidth/Down Bandwidth**. Click **Set**. Normally, the interface will be shut down.

### 6.2.23 Syslog Server Config

Please refer to section 6.1.14.

### 6.2.24 ONU Configure Template

Click **ONU Configure Template**, and select **Template Create**. Set **Template Name** as **test**, click **Add** to add the template to the list. Select the test template line and click **delete** to delete the template. See the figure.

Template Create
Command Config
Template Issue

Template Name	Command Number
test	1
GDD3_onuvlan	3
JNTest01	0
test1225_onuvlan	2
testnew01	0

Template Config

Template:

Click **Command Config**, select **test** in the **Template Name** drop-down selection box, fill in the command in **Template** textbox. Click **Add** to add the command into the list. Select the item and click **Delete**. See the following figure.

Template Create **Command Config** Template Issue

Template Name	Command Index	Command Info
test	1	epon onu port 2 ctc vlan mode tag %2@2
test1225_onuvlan	1	epon onu port 1 ctc vlan mode tag %1@1
GDO3_onuvlan	1	epon onu port 2 ctc vlan mode tag %2@100
GDO3_onuvlan	2	epon onu port 3 ctc vlan mode tag %3@200
GDO3_onuvlan	3	epon onu port 4 ctc vlan mode tag %4@300
test1225_onuvlan	2	epon onu port 2 ctc vlan mode tag %2@2

Template Command Config

Template Name:  Command Index:  Command Info:

Click **Template Issue**, select one template in the apply list. Fill in the text to be modified in **Template Apply Config**. Click **Modify** to finish the modification. If you click **Add** after filling in information in **Template Apply Config**, the information will be added into the apply list. Click the certain item, click **Delete** to delete it. See the figure.

Template Create Command Config **Template Issue**

Pon Port	Template Name	ONU LLID	Parameter
EPON0/1	GDO1_onuvlan	1	
EPON0/1	test	3	111

Template Apply Config

Pon Port:  Template Name:  ONU LLID:

Parameter:

In **Parameter** textbox, fill in the parameters required by the command in **Command Config**.

### 6.2.25 ONU Bind PON

In **ONU Bind PON** are static ONUs. If ONU is offline, the bind will not be cancelled. Unbound ONU are dynamic. If ONU is offline, the bond will be cancelled. So you can bind ONU or cancel directly the bind.



ONU Bind PON
ONU Unbind PON

ONU Bind List

Pon Index	PON Name	ONU Name	ONU MAC	Select
7	EPON0/1	EPON0/1:1	11 11 11 11 11 11	<input type="checkbox"/>
7	EPON0/1	EPON0/1:2	fa fc fe 12 34 56	<input type="checkbox"/>
8	EPON0/2	EPON0/2:16	12 32 44 44 44 44	<input type="checkbox"/>
9	EPON0/3	EPON0/3:2	11 11 33 33 44 45	<input type="checkbox"/>
9	EPON0/3	EPON0/3:3	11 11 33 33 44 46	<input type="checkbox"/>

previous
1
2
next

Update
Cancel Bind

Bind Select

Opened

▼

Set

## 6.2.26 Port Protect Group

Please refer to section 6.1.8.

## 6.2.27 ONU Managed Object Attribute

It is used in modifying **Mo Name**. The interface is shown in the following. Click **Save** to save.

Mo Name	172.16.21.119-EPON_ONU_21
Mo DisplayName	EPON0/1:1
Mo Mac Address	11 11 11 11 11 11
<span style="border: 1px solid #ccc; padding: 5px 15px; background-color: #ccc;">Save</span>	

## 6.2.28 ONU Ranging

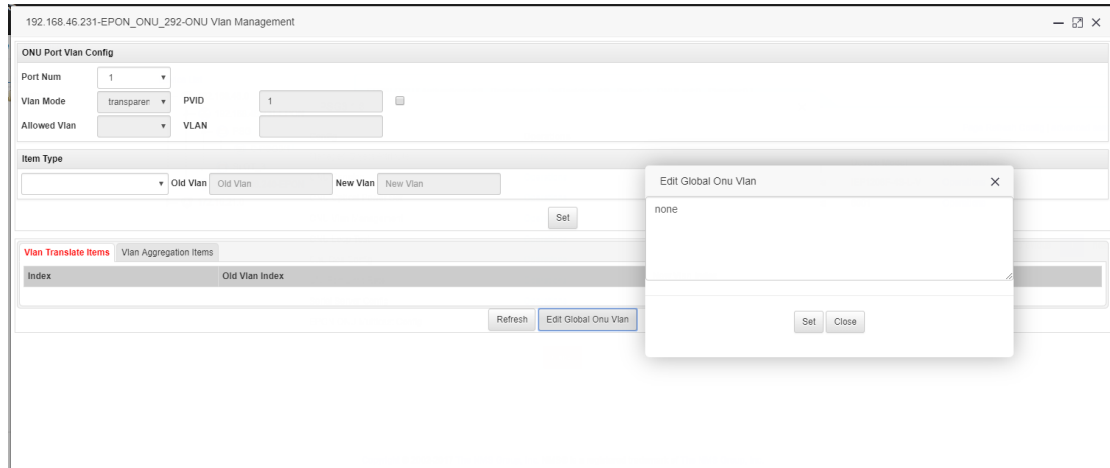
Display the page to present the distance between the selected ONU and OLT, as well as ONU state. Click **Refresh** to refresh.

## 6.2.29 ONU Optical Power Set

Refer to **ONU Optical Power Set** for details.

### 6.2.30 ONU Vlan Management

It is used to configure ONU Port Vlan, including **Vlan Mode**, Vlan value in trunk, as well as the deletion and addition of **Vlan Translate Items** and **Vlan Aggregation Items**. **Edit Global Onu Vlan** is also supported.



Based on your needs, configure ONU Port Vlan and delete or add **Vlan Translate Items** and **Vlan Aggregation Items**.

### 6.2.31 ONU Loop Test

Select **ONU Loop Test**. See the figure.

<input type="checkbox"/>	Port Num	Loop Switch
<input type="checkbox"/>	1	Down
<input type="checkbox"/>	2	Down
<input type="checkbox"/>	3	Down
<input type="checkbox"/>	4	Down
<input type="checkbox"/>	5	Down
<input type="checkbox"/>	6	Down
<input type="checkbox"/>	7	Down
<input type="checkbox"/>	8	Down

Loop Switch:

Set **Loop Switch** as Up or Down.

### 6.2.32 ONU QoS Config

Display the interface to configure **ONU QoS Apply** and **UNI Port QoS Apply**.

**ONU QoS Apply:**

Click **Add**, select **Policy Name** and click **Apply**. See the figure.

onu qos apply-172.16.21.119-... ×

onu port

EPON0/4:1

Policy Name

ppp ▼

Apply Cancel

**UNI Port Qos Apply:**

Click **Add**, select **UNI Port** and **Policy Name** and click **Apply**. See the figure.

UNI Port Qos Apply ×

UNI Port

▼

Policy Name

▼

Apply Cancel

**6.2.33 ONU UNI Port Limit Rate**

Tick in the first check box, select **Port Type**, fill in setting values and click **Set**. Click **Refresh** to refresh. See the figure.

DisplayName

EPON0/3:2

Name

172.16.21.119-EPON\_ONU\_30

	Port No	egress	ingress
<input type="checkbox"/>	1	1000000	1000000
<input type="checkbox"/>	2	1000000	1000000
<input type="checkbox"/>	3	1000000	1000000
<input type="checkbox"/>	4	1000000	1000000

Port Type

all

Refresh

Set

### 6.2.34 Serial Server Config

OLT serial configuration includes **Serial Port Global Properties Config** and **Serial Port Config**. Click **Serial Port Config** to enable the interface. Select **Serial Port Server Config** in OLT including serial ports to enable the following interface.

>>

Serial Port Global Properties Config

Serial Port Config

Serial Port Work Mode

None
  Tcp-Client
  Udp
  Tcp-Server

---

Serial Port Work Port

Serial Port Server Address

---

The above are session configuration, aiming at OLT ports. Click **Serial Port Config** to enable the following interface.

Serial Port Global Properties Config

Serial Port Config

Serial Port Sequence No	Port Status	Port Speed	Port Data Bits	Port Halt Bits	Port Parity	Port Flow Control	Data Read Interval	Data Read Bytes	Keepalive Mode	Keepalive Idle	Keepalive Timeout	Keep

Click one line in the form, that is some serial port so as to enable button **Config**. Click **Config** to pop up configuration interface aiming at the serial port.

## 6.2.35 EPON ONU Multicast Config

**EPON ONU Multicast Config** is used to set **UNI TAG-Strip** and **UNI Max-GroupNum**. Add Msct Vlan items for ONU. See the figure.

The screenshot shows the configuration interface for EPON ONU Multicast. It includes the following elements:

- ONU MCST Mode:** A dropdown menu set to "igmp-snooping".
- ONU UNI:** A dropdown menu.
- UNI TAG-Strip:** A dropdown menu.
- UNI Max-GroupNum:** A text input field containing "1-64".
- Apply:** A button to save the configuration.
- Table:** A table with columns: "ONU LLID", "ifSequenceNo", "Msct Vlan ID", and "Select". The table is currently empty.

To set the values of **UNI TAG-Strip** and **UNI MAX-GroupNum**, first select one UNI port in **ONU UNI** pull-down list and then fill in **UNI TAG-Strip** and **UNI MAX-GroupNum**. Click **Apply** to send the configuration.

Click to add Msct Vlan items. Tick the data in the form. Click to delete it.

## 6.3 GPON Config

### 6.3.1 Managed Object Attribute

Please refer to section 6.1.1.

### 6.3.2 Vlan Management

Please refer to section 6.1.2.

### 6.3.3 GPON-Set Sfp Values

It is mainly used to set Temperature Upper Limit, Voltage Upper Limit, Voltage Lower Limit, Electric Current Upper Limit and Electric Current Lower Limit, enabling NMS to receive alarms. The configuration interface is shown as the following.

172.16.21.129-GPON-Set Sfp Values

Port No:

Send Optical Power Upper Limit:  
 Optical Power Permission:  Optical Power Upper Limit Threshold(0.1dBm):  Optical Power Back Threshold(0.1dBm):

Send Optical Power Lower Limit:  
 Optical Power Permission:  Optical Power Lower Limit Threshold(0.1dBm):  Optical Power Back Threshold(0.1dBm):

Temperature Upper Limit:  
 Temperature Upper Permission:  Temperature Upper Limit Threshold(°C):  Temperature Upper Back Threshold(°C):

Temperature Lower Limit:  
 Temperature Lower Permission:  Temperature Lower Limit Threshold(°C):  Temperature Lower Back Threshold(°C):

Voltage Upper Limit:  
 Voltage Upper Permission:  Voltage Upper Limit Threshold(V):  Voltage Upper Back Threshold(V):

Voltage Lower Limit:  
 Voltage Lower Permission:  Voltage Lower Limit Threshold(V):  Voltage Lower Back Threshold(V):

Electric Current Upper Limit:  
 Electric Current Upper Permission:  Electric Current Upper Limit Threshold(mA):  Electric Current Upper Back Threshold(mA):

Electric Current Lower Limit:  
 Electric Current Lower Permission:  Electric Current Lower Limit Threshold(mA):  Electric Current Lower Back Threshold(mA):

### 6.3.4 Storm Control

Please refer to section 6.1.5.

### 6.3.5 GPON MultiCast

The configuration interface is as the following.

172.16.21.129-GPON-GPON MultiCast

Device Index:  Igmp Mode:


Router Ageing Time(s):  Router Response Time(s):

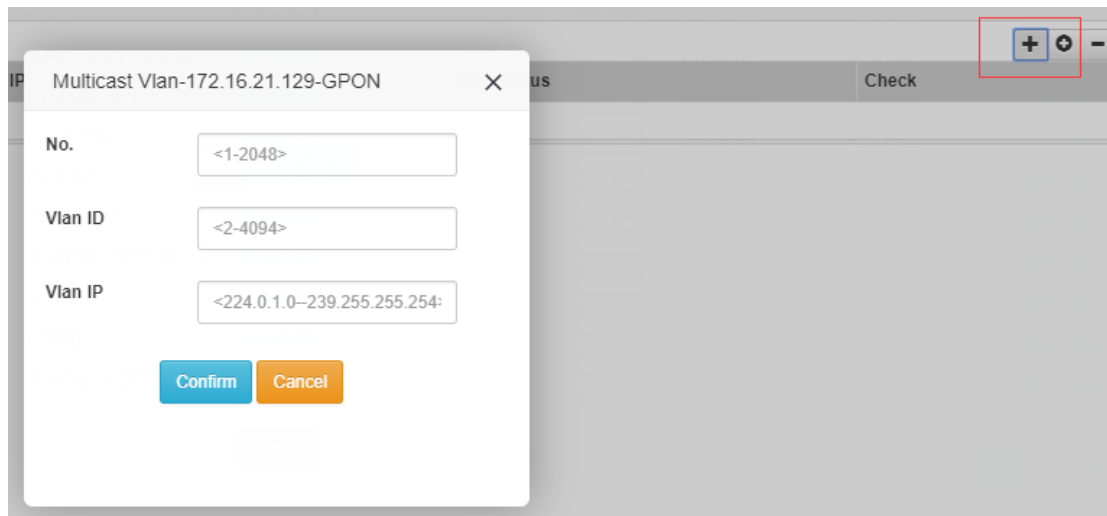
Igmp Robust:  CTC Vlan:

Proxy VID:  CTC Mode:

MulticastVlanTable MulticastForwardTable

No.	Vlan ID	Multicast Vlan IP	Row Status	Check
<input type="button" value="Set"/> <input type="button" value="Refresh"/>				

Click  on the right to add **Multicast Vlan**.



### 6.3.6 Batch Telnet Community Set

Please refer to section 6.1.3.

### 6.3.7 Port Rate Limit

Please refer to section 6.1.6.

### 6.3.8 GIS Config

Please refer to section 6.2.15.

### 6.3.9 GPON ONU Register

Click **GPON ONU Register** and the interface is shown in the following.

OLTName	CurrentModel	Operations
172.16.21.129-GPON	NONE	Set

[Refresh](#)

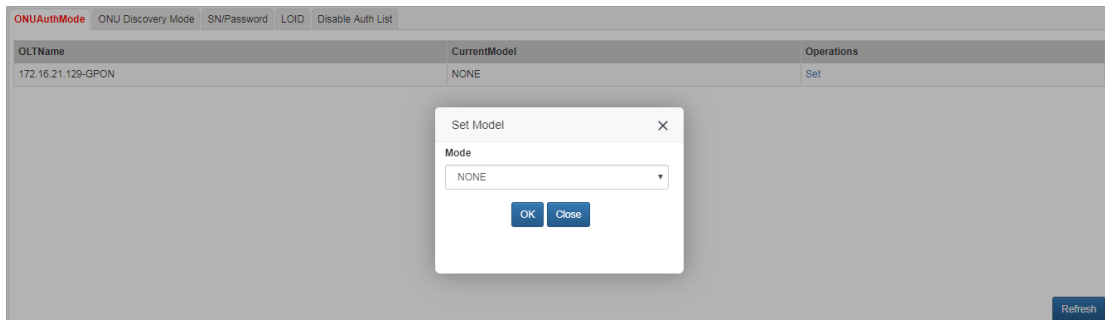
**GPON ONU Register** includes **ONUAuthMode**, **ONU Discovery Mode**, **SN/Password**, **LOID**, **Disable Auth List**.

### 6.3.9.1 ONUAuthMode

**ONUAuthMode** interface is shown in the following.

◆ **Set**

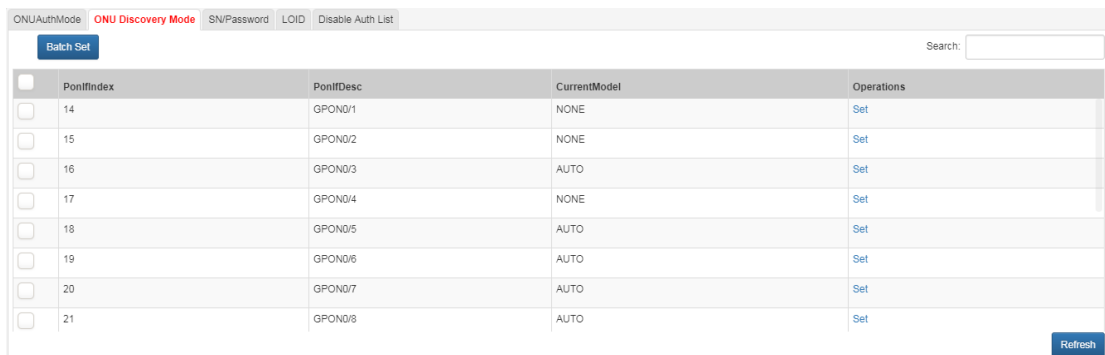
Click **Set** to enable **Set Model**. See the figure.



**Mode: NONE, SN, SN/PASSWORD, LOID.**

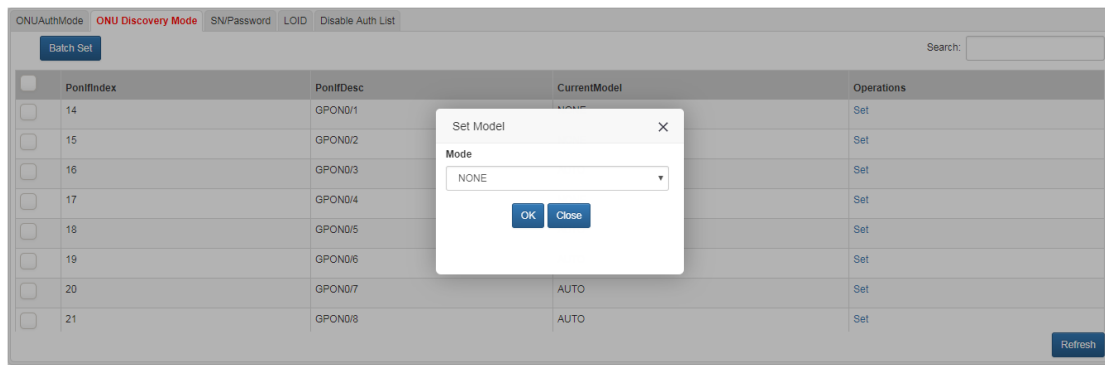
### 6.3.9.2 ONU Discovery Mode

**ONU Discovery Mode** interface is shown in the following.



◆ **Set**

Click **Set** to configure the single pop-up interface.



**Mode: NONE, AUTO, MANUAL.**

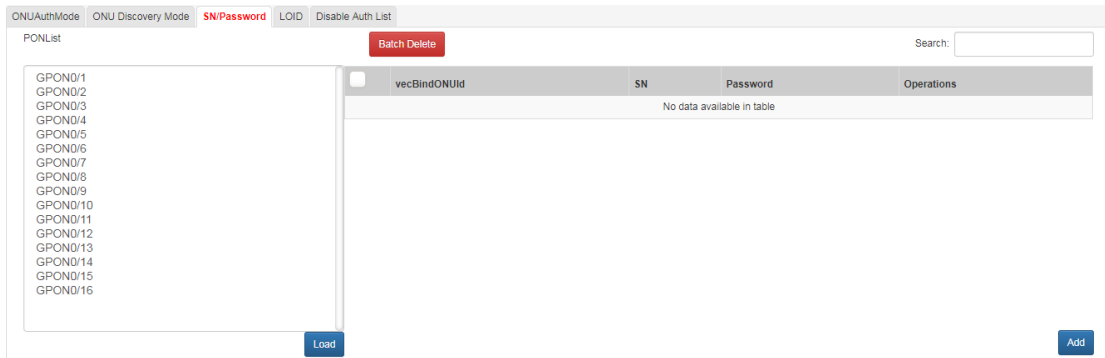


◆ **Batch Set**

Tick multiple lines, click **Batch Set**.

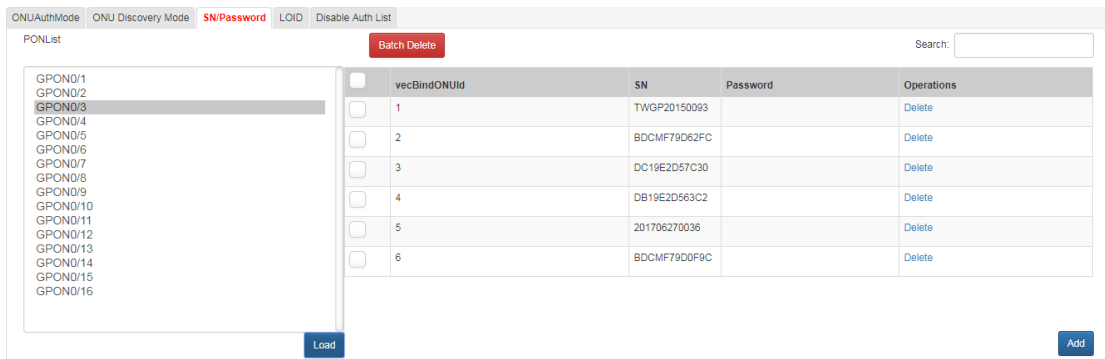
**6.3.9.3 SN/Password**

click **SN/Password**, see the figure.



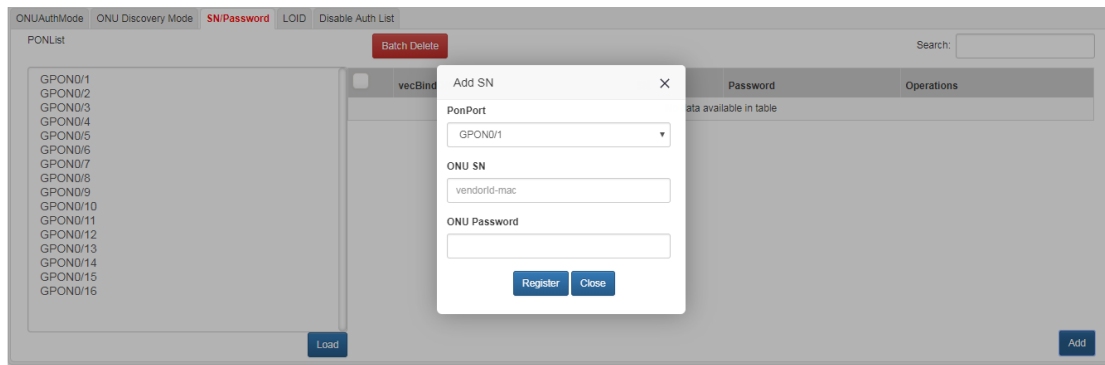
◆ **Load**

Select one PON in the list. Click Load and ONU bound in the selected PON will be presented in the right form. See the figure.



◆ **Add**

Click **Add** to pop up the interface.



◆ **Delete**

Click **Delete** in **Operations** or select multiple lines for batch delete.

**6.3.9.4 LOID**

Click **LOID**. See the figure.

	PonIfIndex	PonIfDesc	LOID	Password	No.	Operations
<input type="checkbox"/>	14	GPON0/1	123478	333	1	Delete
<input type="checkbox"/>	14	GPON0/1	1234	22	2	Delete
<input type="checkbox"/>	16	GPON0/3	user	password	1	Delete

◆ Add

Click **Add** to pop up the interface.

◆ Delete

Click **Delete** in **Operations** or select multiple lines for batch delete.

### 6.3.9.5 Disable Auth List

Click **Disable Auth List**. See the figure.

◆ Authentication

Click **Authentication** in **Operations** or select multiple lines for **Batch Authentication**.

### 6.3.10 ACL Config And Application

Please refer to section 6.1.9.

### **6.3.11 GPON ONU Configure Template**

Please refer to section 6.2.24.

### **6.3.12 Syslog Server Config**

Please refer to 6.1.14.

### **6.3.13 QoS Queue and Scheduling Mode Config**

Please refer to section 6.1.10.

### **6.3.14 QoS Strategy Config**

Please refer to section 6.1.11.

### **6.3.15 QoS Port**

Please refer to section 6.1.12.

### **6.3.16 Static Route Config**

Please refer to section 6.1.15.

### **6.3.17 STP Config**

Please refer to section 6.1.13.

### **6.3.18 OLT Port Mirror**

Please refer to section 6.2.21.

### **6.3.19 Port Protect Group**

Please refer to section 6.1.8.

### **6.3.20 ONU Managed Object Attribute**

Please refer to section 6.2.27.

### 6.3.21 GPON ONU Flow Control

**GPON ONU Flow Control** takes effect in the form of a configuration file. New configuration files can be created in advance and then applied. See the figure.

— ☒ ×

172.16.21.129-GPON\_ONU\_56-GPON ONU Flow Control

ONU Flow Control-GPON0/16:1

Profile Name  Apply

GPON0/16:1:Apply Profile List:

Profile No	Profile Index	Name	UNI Type	UNI Port	UsMap Type	Vlan Start	Vlan Stop	Cos	VirPort No
1	1	flow-mapping-default	Ethernet-Uni	0	user-port	0	0	No Set	1

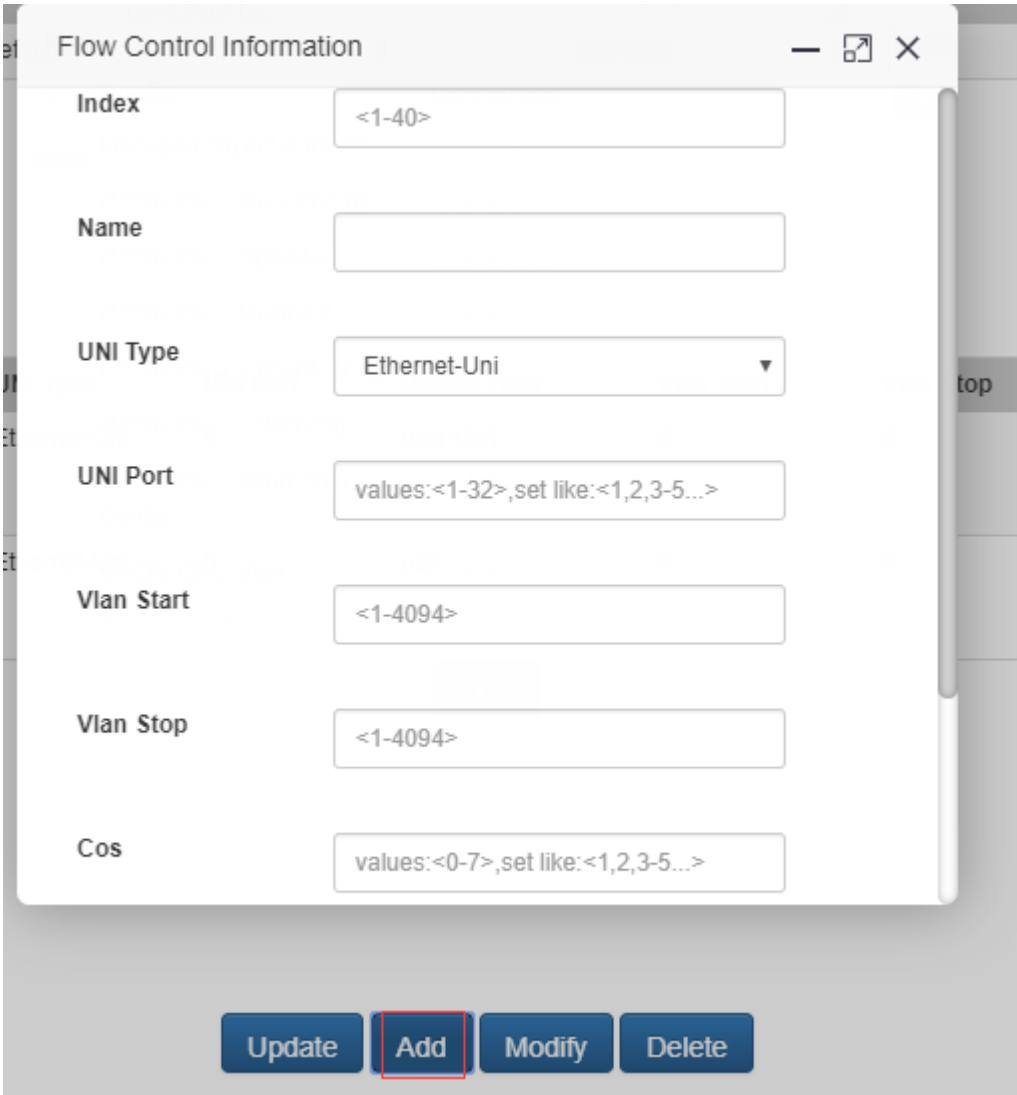
previous 1 next

Profile List:

Profile No	Profile Index	Name	UNI Type	UNI Port	UsMap Type	Vlan Start	Vlan Stop	Cos	VirPort No	Select
1	1	flow-mapping-default	Ethernet-Uni	0	user-port	0	0	No Set	1	<input type="checkbox"/>
2	1	flow-mapping-default-hgu	Ethernet-Uni	0	pbit	0	0	7	1	<input type="checkbox"/>

previous 1 next

Update
Add
Modify
Delete



The image shows a dialog box titled "Flow Control Information" with a close button (X) and a maximize button. The dialog contains several input fields and a dropdown menu:

- Index:** Text input field containing "<1-40>".
- Name:** Empty text input field.
- UNI Type:** Dropdown menu showing "Ethernet-Uni".
- UNI Port:** Text input field containing "values:<1-32>,set like:<1,2,3-5...>".
- Vlan Start:** Text input field containing "<1-4094>".
- Vlan Stop:** Text input field containing "<1-4094>".
- Cos:** Text input field containing "values:<0-7>,set like:<1,2,3-5...>".

At the bottom of the dialog, there are four buttons: "Update", "Add", "Modify", and "Delete". The "Add" button is highlighted with a red border.

### 6.3.22 GPON ONU OptValue

It is used to set **Send/Receive Optical Power Upper/Lower Limit** and **Optical Power Alarm**. The interface is shown below.

GPON ONU OptValue-GPON0/16:1

Send Optical Power Upper Limit:  
 GponOnu Optical Power Upper Limit Threshold(0.5dBm):

Send Optical Power Lower Limit:  
 GponOnu Optical Power Lower Limit Threshold(0.5dBm):

Receive Optical Power Upper Limit:  
 GponOnu Optical Power Upper Limit Threshold(0.5dBm):

Receive Optical Power Lower Limit:  
 GponOnu Optical Power Lower Limit Threshold(0.5dBm):

Optical Power Alarm  
 Optical Power Alarm Button:

6.3.23 GPON ONU Multicast

**GPON ONU Multicast: Static Multicast Configuration, Dynamic Multicast Configuration, Multicast Configuration.** The interface is shown below.

First add configured files and then apply it to send multicast configuration.

172.16.21.129-GPON\_ONU\_56-GPON ONU Multicast -- [ ] X

Static Multicast Configuration
Dynamic Multicast Configuration
Multicast Configuration

UNI Port: 
 Profile Name:

Profile List:

SMcstProfile No	SMcstProfile Index	SMcstName	GemPort	VlanId	SourceIpv4	Ipv4Start	Ipv4Stop	SourceIpv6	Ipv6Start	Ipv6Stop	BandWidth	PreviewLength
1	1	2223	0	No Set	No Set	No Set	No Set	No Set	No Set	No Set	No Set	No Set
1	2	2223	0	4093	No Set	No Set	No Set	No Set	No Set	No Set	No Set	No Set
1	3	2223	0	No Set	No Set	No Set	No Set	No Set	No Set	No Set	No Set	No Set

172.16.21.129-GPON\_ONU\_56-GPON ONU Multicast

Static Multicast Configuration | **Dynamic Multicast Configuration** | Multicast Configuration

UNI Port: 1 Profile Name: ---Cancel---

Apply

Profile List:

DMcstProfile No	DMcstProfile Index	DMcstName	GemPort	VlanId	SourceIpv4	Ipv4Start	Ipv4Stop	SourceIpv6	Ipv6Start	Ipv6Stop	BandWidth	PreviewLength
2	1	222	0	No Set	No Set	224.0.0.1	224.0.0.2	No Set	No Set	No Set	No Set	0

previous 1 next

Update Add Modify Delete

172.16.21.129-GPON\_ONU\_56-GPON ONU Multicast

Static Multicast Configuration | Dynamic Multicast Configuration | **Multicast Configuration**

UNI Port: 1 Profile Name: ---Cancel---

Apply

Profile List:

McstProfileNo	McstName	McstStandard	IGMP Version	Control Mode	FastLeave Mode	Upstream IGMP TCIVlan	Upstream IGMP TCIPbits	Upstream IGMP TagControl	M
2	223	ITU-G988		Snooping	disable	0	0	Transparent	0

previous 1 next

Update Add Modify Delete

### 6.3.24 GPON ONU VirPortManage

GPON ONU VirPortManage includes ONU Virtual Port Manage and Virtual PORT Vlan Translate.

#### 6.3.24.1 ONU Virtual Port Manage

ONU Virtual Port Manage interface is shown below.

ONU Virtual Port Manage-GPON0/1:1 Virtual Port Vlan Translate-GPON0/1:1

Basic Infos

ONU: GPON0/1:1 Port No: 1

Virtual Port Info

Virtual Port Manage Status: no-shutdown-unlocks GEM Port Bind: 257 Speed Limit the Downside: 0

OK

Select Port No. and set Virtual Port Manage Status as no-shutdown-unlocks/shutdown-locks.

Fill in **Speed Limit the Downside** and click **OK**.

### 6.3.24.2 Virtual PORT Vlan Translate

**Virtual PORT Vlan Translate** interface is shown below.

ONU Index	Virtual Port	Item	Mode	N:1	Range Start Src Vlan	Range End Src Vlan	Not Range Src Vlan	Dest Vlan	Mix Outer Vlan	Priority
<input type="checkbox"/>	30	2	1	Flat	1:1	0	0	4	6	0
<input type="checkbox"/>	30	3	1	Flat	1:1	0	0	3	4	3
<input type="checkbox"/>	30	4	1	Range-QinQ		1	2		3	0
<input type="checkbox"/>	30	13	1	Mix		0	0	3	3	4
<input type="checkbox"/>	30	17	1	Mix		0	0	3-6,8-10	3	4
<input type="checkbox"/>	30	19	1	Mix		0	0	5,7-9,99	6	8

Config

Virtual Port:  Mode:  N:1:

Range Start Src Vlan:  Range End Src Vlan:  Not Range Src Vlan:

Dest Vlan:  Mix Outer Vlan:  Priority:

- **Add**  
In the second half of the interface, fill in the information of the virtual port to be added according to the input box. Click **Add** to present the added information in the first half of the interface.
- **Delete**  
Click the first column selection box to select a row and click **Delete** to delete the item.

### 6.3.25 GPON ONU UNICongfig

**GPON ONU UNICongfig** interface is shown below.

Apply or Current Config

Uniport:  Apply Config File:

Autonegotiation:  Port Speed:  Duplex:

Expected Type:  Max Frame Size:  Interface Wiring:

profileList

Index	Name	Autonegotiation	Port Speed	Duplex	Expected Type	Max Frame Size	Interface Wiring
2	GG2	disable	auto	auto		1518	auto

- **Add**  
Click **Add** to enable the following interface.



Add Uni Config File
✕

<b>Index</b>	<input type="text"/>
<b>Name</b>	<input type="text"/>
<b>Port Speed</b>	<input type="text" value="auto"/>
<b>Duplex</b>	<input type="text" value="auto"/>
<b>Max Frame Size</b>	<input type="text"/>
<b>Interface Wiring</b>	<input type="text" value="dce"/>

Fill in **Name** and configuration basic information. Click **Confirm** to add it. Check it in **Add Uni Config File**.

- Refresh

Select a row in the configuration file list. Click **Refresh** and the following steps are the same as **Add**.

- Delete

Select a row in the configuration file list. Click **Delete** to delete it.

- Apply/Current Config

Select **Uniport** and the configuration file to be applied. Click **Apply** and check its current information.

### 6.3.26 GPON ONU Bandwidth Config

- **GPON ONU Bandwidth Config** concludes filling in the configuration file and application profile. The overall steps are **ONU Rate Profile** -> **Virtual Port Profile** or **Tcont Profile** -> **Bandwidth Profile** -> **ONU Bandwidth Config**.

#### 6.3.26.1 ONU Rate Profile

Click **ONU Rate Profile** to enable the following interface.

Index	Name	Rate Assured Bandwidth	Rate Peak Bandwidth
1	ratelimit-default	1244160	1244160
2	testspeed	257	258
3	333223	4444	44337
4	33324	4444	44337
5	ratelimit-add	1244160	1244160
6	33357	4444	44337
8	test01	3333	4444

Index	<input type="text"/>	Name	<input type="text"/>
Rate Assured Bandwidth	<input type="text"/>	Rate Peak Bandwidth	<input type="text"/>

- Add

Fill in **Name** in the second half of the interface. And set the rate to ensure the bandwidth and the rate peak bandwidth (Ensure that the bandwidth is not greater than the peak bandwidth.). Click **Add** and it will be shown in the first half.

- Delete

Click the selected row in the list, and click **Delete** to delete it.

### 6.3.26.2 Virtual Port Profile

Click **Virtual Port Profile** to enable the following interface.

Index	Name	Encryption Mode	Up Priority	Down Priority	ONU Rate Profile
1	virtual-port-default	Disable	8	8	ratelimit-default
2	testvircof	Disable	3	6	testspeed
3	testtest	Enable	1	1	ratelimit-default
4	testtest1	Enable	1	1	ratelimit-default
5	test001	Enable	1	3	ratelimit-default

Index	<input type="text"/>	Name	<input type="text"/>	Encryption Mode	<input type="text" value="Enable"/>
Up Priority	<input type="text" value="1"/>	Down Priority	<input type="text" value="1"/>	ONU Rate Profile	<input type="text" value="ratelimit-default"/>

- Add

Fill in **Name** in the second half of the interface. Select the configuration items to configure the completed ONU rate profile. Click **Add**.

- Delete

Click the selected row in the list and click **Delete**.

### 6.3.26.3 Tcont Profile

Click **Tcont Profile** to enable the interface.

ONU Bandwidth Config-GPON0/1:1 | Bandwidth Profile | **Tcont Profile** | Virtual Port Profile | ONU Rate Profile

Index	Name	Tcont Type	Tcont Fixed Bandwidth	Tcont Assured Bandwidth	Tcont Peak Bandwidth
1	tcont-default	tcont-type3	0	512	1024000
2	testtcont	tcont-type1	320	0	0
3	test01	tcont-type1	1088	0	0
4	test02	tcont-type2	0	2240	0
5	test03	tcont-type3	0	2240	3328
6	test04	tcont-type4	0	0	3328
7	test05	tcont-type5	1088	2240	3328

Index:  Name:  Tcont Type:

Tcont Fixed Bandwidth:  Tcont Assured Bandwidth:  Tcont Peak Bandwidth:

- **Add**  
Fill in **Name** in the second half of the interface. Select Tcont Type (Different Tcont Type can be configured with different types of bandwidth). Click Add to add it and it will show up in the first half.

- **Delete**  
Click the selected row in the list and click **Delete**.

### 6.3.26.4 Bandwidth Profile

Click **Bandwidth Profile** to enable the interface.

ONU Bandwidth Config-GPON0/1:1 | **Bandwidth Profile** | Tcont Profile | Virtual Port Profile | ONU Rate Profile

Index:  Name:

Virtual Port Index:  Tcont Id:

Tcont Profile:  Virtual Port Profile:

- **Add**  
Fill in **Name**, select **Index**, fill in **Tcont Id (1-8)** and select **Tcont Profile** and **Virtual Port Profile**. Click Add to apply it in **Bandwidth Profile**.

### 6.3.26.5 ONU Bandwidth Config

Click **ONU Bandwidth Config** to enable the interface below.

The screenshot shows the 'ONU Bandwidth Config-GPON0/1:1' interface. At the top, there are tabs for 'Bandwidth Profile', 'Tcont Profile', 'Virtual Port Profile', and 'ONU Rate Profile'. Below the tabs, there is an 'Apply Profile' dropdown menu set to 'test' and an 'Apply' button. The 'Current Config' section contains several input fields: Virtual Port (1), Tcont Fixed Bandwidth (0), Virtual Port Encryption Mode (Disable), ONU Assured Bandwidth (1244160), Tcont Id (3), Tcont Assured Bandwidth (512), Up Traffic Priority (8), ONU Peak Bandwidth (1244160), Tcont Type (tcont-type3), Tcont Peak Bandwidth (1024000), and Down Traffic Priority (8). Below this is the 'Bandwidth Profile Table' with the following data:

Index	Name	Virtual Port Index	Tcont Id	Tcont Profile Id	Virtual Port Profile Id
1	nbind-default	1	1	1	1
2	test	1	3	1	1
2	test	2	8	2	2
2	test	3	3	1	1
2	test	4	7	2	2
3	rrrr	1	4	1	1
3	rrrr	4	3	1	1

At the bottom of the table are 'Refresh', 'Add', and 'Delete' buttons.

- **Apply Profile**  
Select a bandwidth profile in the top **Apply Profile** selection box and click **Apply**. You can check the state in **Current Config**.
- **Bandwidth Profile Table**  
In **Bandwidth Profile Table**, each bandwidth profile and virtual port Index will be presented. Click one line to check the detailed configuration of virtual port in the current profile.
- **Add**  
Click Add to enable **Bandwidth Config**.

### 6.3.27 GPON ONU Vlan

Vlan Configuration takes effect when applying template. First add the template and apply it to ONU UNI port.

The screenshot shows the '172.16.21.129-GPON\_UNU\_56-GPON ONU Vlan' configuration page. It features a 'UNI Port' dropdown set to '1' and a 'Profile Name' dropdown set to '234', with an 'Apply' button. Below this is the 'GPON0/16:1:Apply Profile List' table:

Index	Name	Vlan Mode	PVID	Trunk Vlans	IPOE Vlan	PPPOE Vlan	ARP Vlan	IPv6 Vlan	IPOE COS	PPPOE COS	ARP COS	IPv6 COS	PVID Start	PVID
4	234	Transparent	2		0	0	0	0	-1	-1	-1	-1		

Below the table is an 'Item' section with columns for 'Source Vlan' and 'Destination Vlan', containing the text 'The data in the table is empty'. There are 'previous' and 'next' navigation buttons. A 'Profile List' section is also present, showing a table with the same data as above, and a 'previous' button with '1' highlighted and a 'next' button. At the bottom are 'Update', 'Add', 'Modify', and 'Delete' buttons.

GPON ONU Vlan Information
— □ ×

Index	<input type="text" value="Auto"/>	Name	<input type="text"/>
Vlan Mode	<input type="text" value="Transp: ▼"/>	PVID	<input type="text" value="1-4094"/>
Trunk Vlans	<input "="" type="text" value="(1,3,5,7)or("/>	IPOE Vlan	<input type="text" value="1-4094"/>
PPPOE Vlan	<input type="text" value="1-4094"/>	ARP Vlan	<input type="text" value="1-4094"/>
IPv6 Vlan	<input type="text" value="1-4094"/>	IPOE Cos	<input type="text" value="0-7"/>
PPPOE Cos	<input type="text" value="0-7"/>	ARP Cos	<input type="text" value="0-7"/>
IPv6 Cos	<input type="text" value="0-7"/>	PVID Start	<input type="text" value="1-4094"/>

### 6.3.28 ONU Loop Test

ONU Loop Test interface is shown below. Tick UNI port, select the loop switch in pull-down list. Click **Confirm** to set it.

172.16.21.129-GPON\_ONU\_57-ONU Loop Test
— □ ×

	Port Num	Loop Switch
<input type="checkbox"/>	1	Down

Loop Switch

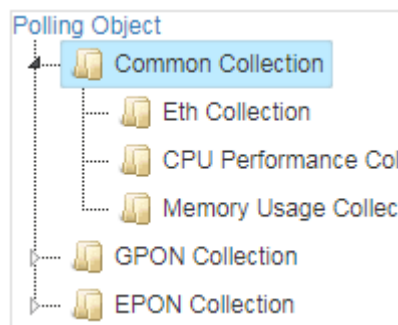
## 7 Performance Collect

**Performance Collect** is introduced in the chapter. It means within a certain period of time, operation parameters can be checked and displayed through statistical graph on the interface to learn about the operation state during this time.

The content includes **Real-time Collection**, **Timing Collection** and **History Collection**. **Real-time Collection: Common Collection, GPON Collection and EPON Collection**, etc. Click **Performance Collection** in navigation bar to enable the interface.

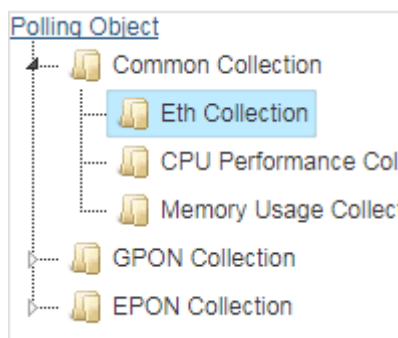
### 7.1 Common Collection

Find the tree menu on the left, and click **Polling Object->Common Collection**.

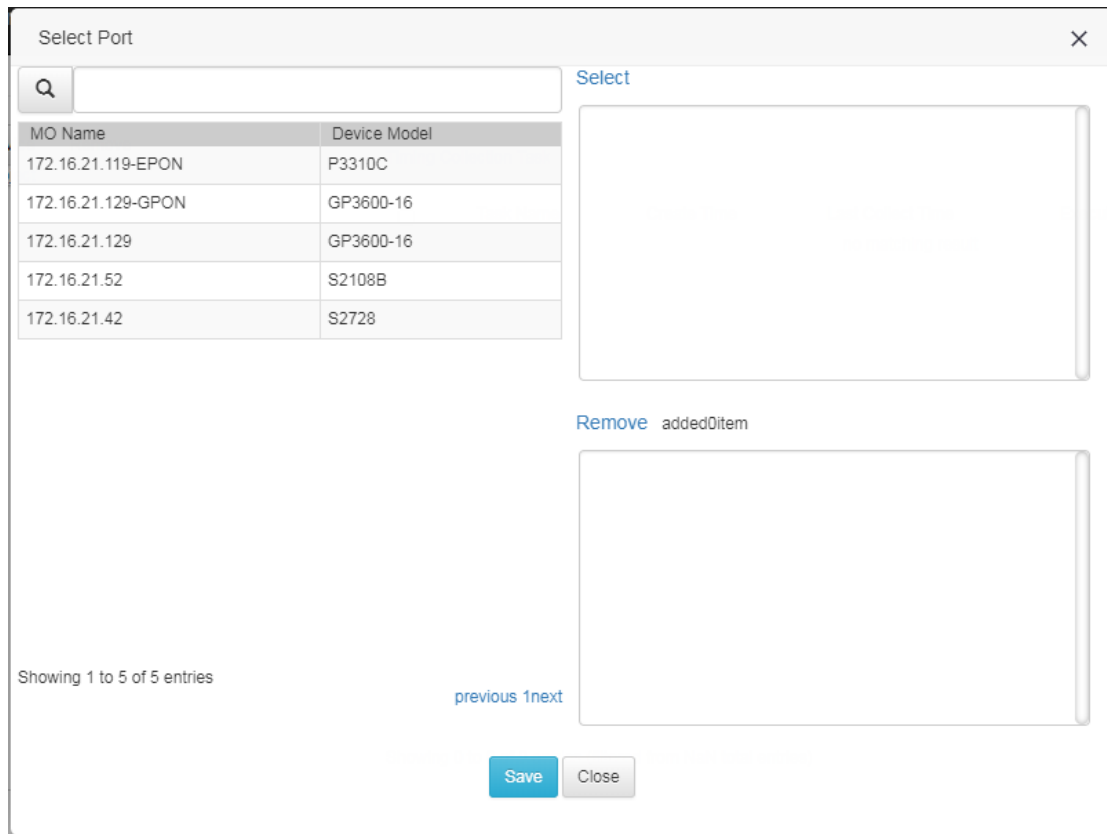


As is shown above, **Common Collection** includes **Eth Collection**, **CPU Collection**, **Memory Usage Collection**.

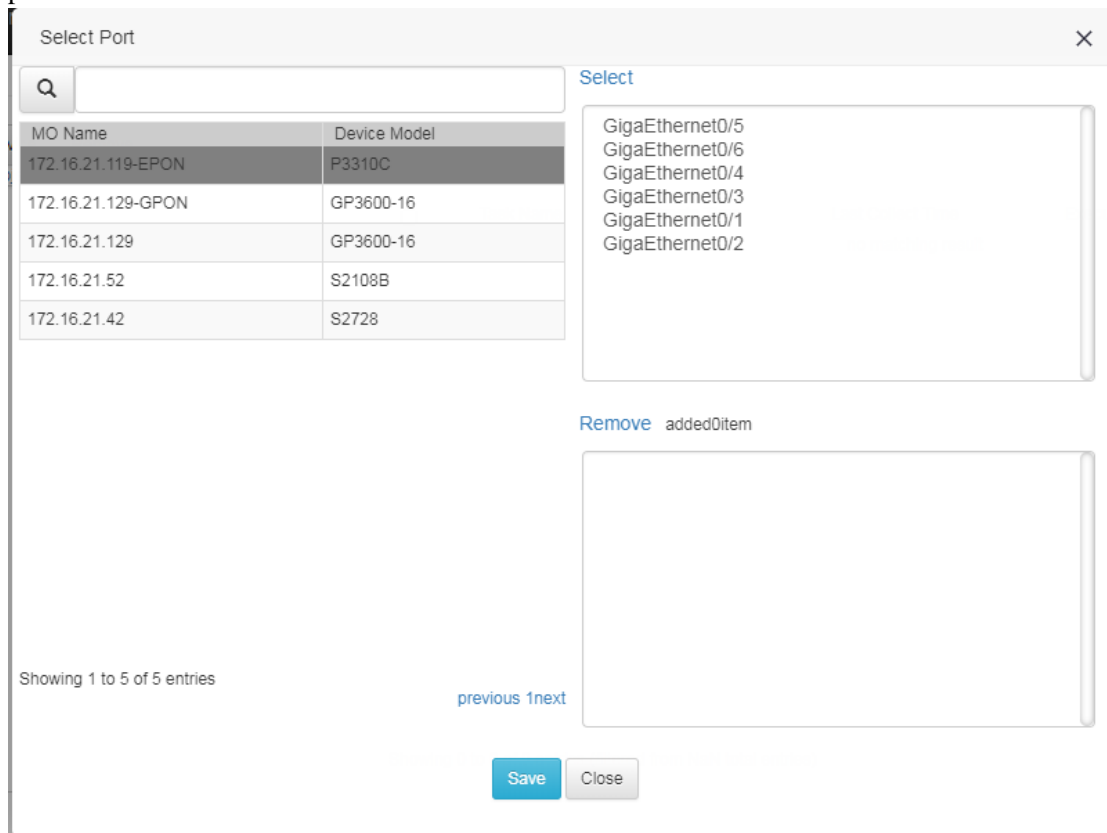
#### 7.1.1 Eth Collection



As is shown above, click **Common Collection -> Eth Collection** to enter the **Select Port**.



As is shown above, device list is shown on the left, click the device there and all Ethernet ports are shown on **Select**.



Double click the port or click Select to add it, and the added port will be displayed in the list

box under **Select**.

The 'Select Port' dialog box contains the following elements:

- Search Bar:** A text input field with a magnifying glass icon.
- Table:**

MO Name	Device Model
172.16.21.119-EPON	P3310C
172.16.21.129-GPON	GP3600-16
172.16.21.129	GP3600-16
172.16.21.52	S2108B
172.16.21.42	S2728
- Select List:** A list box containing: GigaEthernet0/5, GigaEthernet0/6, GigaEthernet0/4, GigaEthernet0/3, GigaEthernet0/1, and GigaEthernet0/2. The last item is highlighted.
- Remove:** A button labeled 'Remove' with the text 'added2item' next to it.
- Selected Object List:** A list box containing: 172.16.21.119-EPON-GigaEthernet0/1 and 172.16.21.119-EPON-GigaEthernet0/2.
- Navigation:** 'Showing 1 to 5 of 5 entries' and 'previous 1next' buttons.
- Buttons:** 'Save' and 'Close' buttons at the bottom.

Double click the selected ports in the list box or click **Remove** to remove the ports.  
Click **Save**. The selected ports will be displayed in **Selected Object**.

The 'Selected Object' list box contains the following entries:

- 172.16.21.119-EPON-GigaEthernet0/1
- 172.16.21.119-EPON-GigaEthernet0/2

Click **Real-time Collection** to enable the interface.

The 'Eth Collection' interface includes the following components:

- Collection Items:** A dropdown menu set to 'IfHCInOctets(Bps)' and a 'Polling Time(s):' input field.
- Graph:** A line graph showing data over time from 00:00 on 03-18 to 00:00 on 03-19. The y-axis ranges from 0 to 1.
- Start Time:** 'Start' and 'End' input fields.
- Buttons:** 'Start', 'End', 'Help', and 'Export' buttons.
- Table:**

PortName	IfHCInOctets(Bps)	IfHCOutOctets(Bps)	IfHCInUcastPkts	IfHCOutUcastPkts	IfOutMulticastPkts	IfOut
172.16.21.119-EPON-GigaEthernet0/1						
172.16.21.119-EPON-GigaEthernet0/2						

The collection interface includes **Collection Items, Polling Time, Start, End**.



**Collection Items:** The selected collection items will be drawn in the above diagram.

**Polling Time:** Collection time interval, in which the shortest time is 10 seconds.

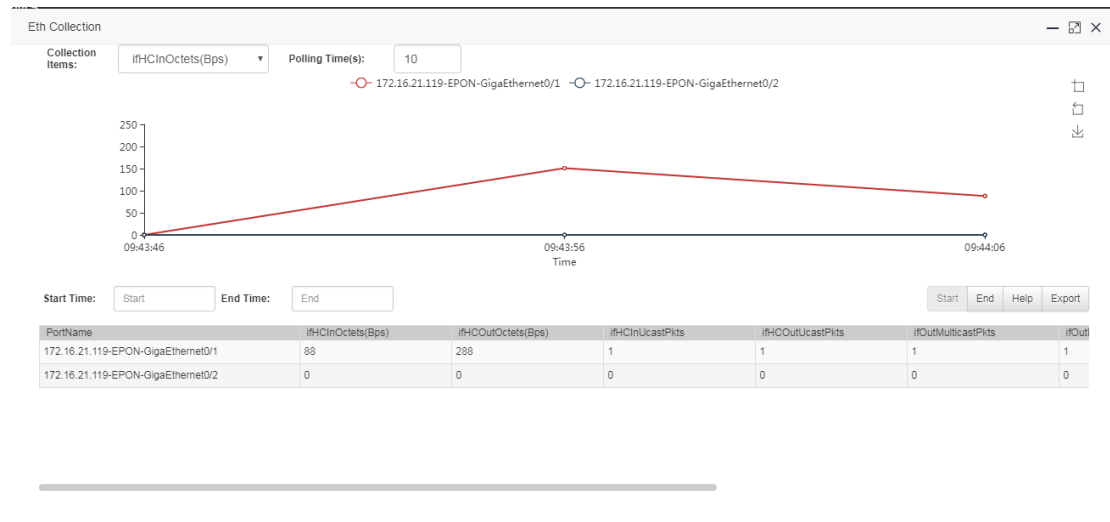
**Start:** Start the collection.

**End:** End the collection.

**Export:** Export the data from the table below into an excel file.

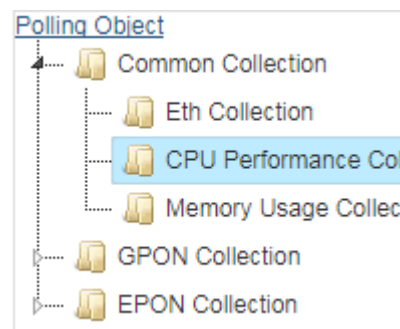
**Start Time, End Time:** Set the start/end collection time. Without set, collection will work all the time until you click **End** or disable the collection interface.

Select **Collection Items**, fill in **Polling Time**, and click **Start** to do the collection. The interface is shown as below.



The collection data has two parts: Above is curve chart, showing the real-time data of **Collection Items**; below shows the table statistics of flow information about each collection port. The port names in the table correspond to each port, and the other columns correspond to the collection items.

### 7.1.2 CPU Performance Collection



As is shown above, click **Common Collection->CPU Performance Collection** to enable **Select Device**.

Select Device ×

Q

MO Name	Device Model
172.16.21.119-EPON	P3310C
172.16.21.129-GPON	GP3600-16
172.16.21.129	GP3600-16
172.16.21.52	S2108B
172.16.21.42	S2728

Select added0Item

Showing 1 to 5 of 5 entries

[previous](#) [next](#)

Save Close

Select the device on the left, and click **Select** to add it.

Select Device ×

Q

MO Name	Device Model
172.16.21.119-EPON	P3310C
172.16.21.129-GPON	GP3600-16
172.16.21.129	GP3600-16
172.16.21.52	S2108B
172.16.21.42	S2728

Select added1Item

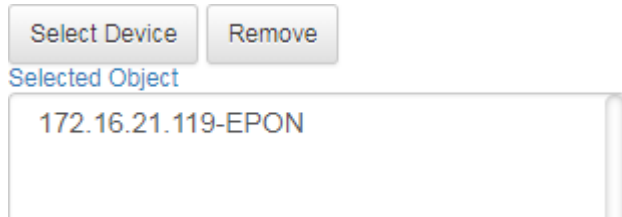
172.16.21.119-EPON

Showing 1 to 5 of 5 entries

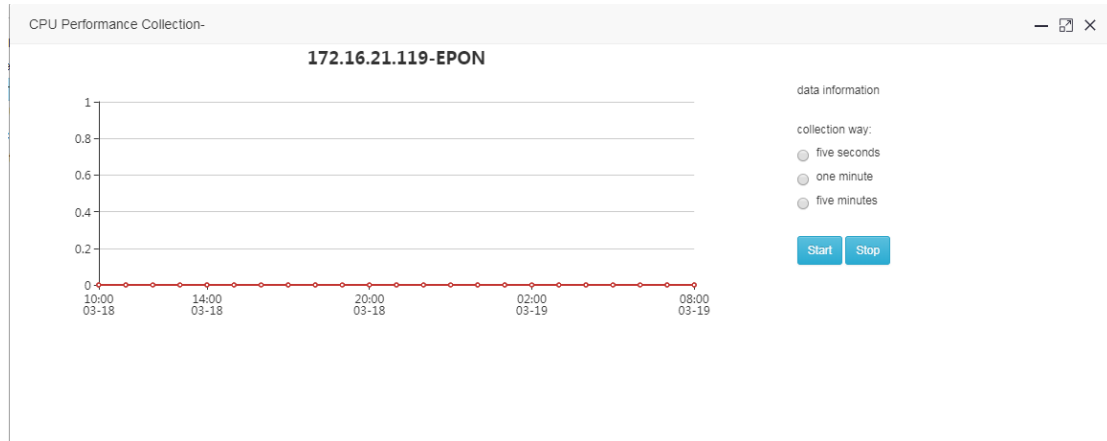
[previous](#) [next](#)

Save Close

Click **Save**. The selected ports will be displayed in **Selected Object**.



Click **Real-time Collection** to enable the interface.



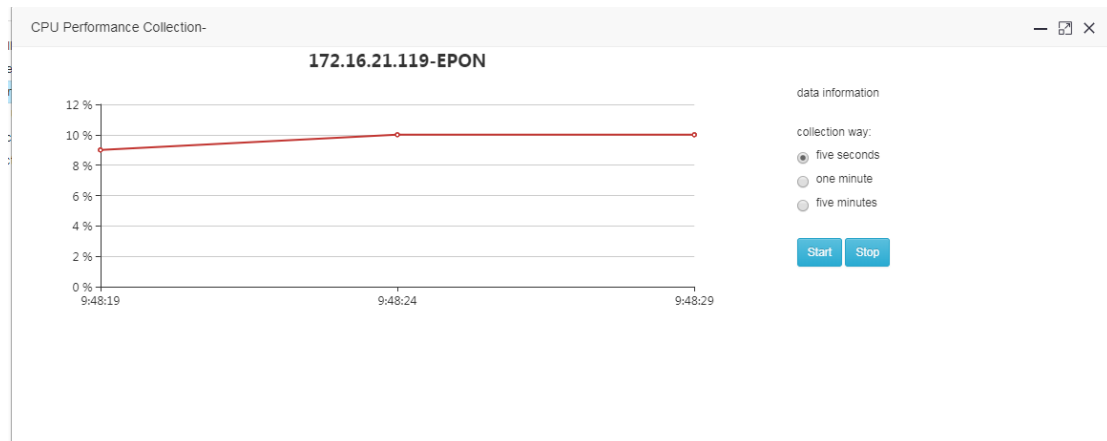
The interface concludes **collection way, Start, Stop.**

**collection way: collection time interval**

**Start:** to start

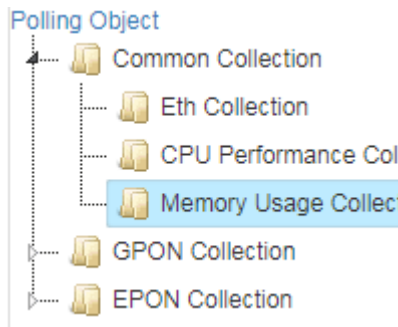
**Stop:** to stop

Select one collection way, click Start to enable the collection. The interface is shown as below.



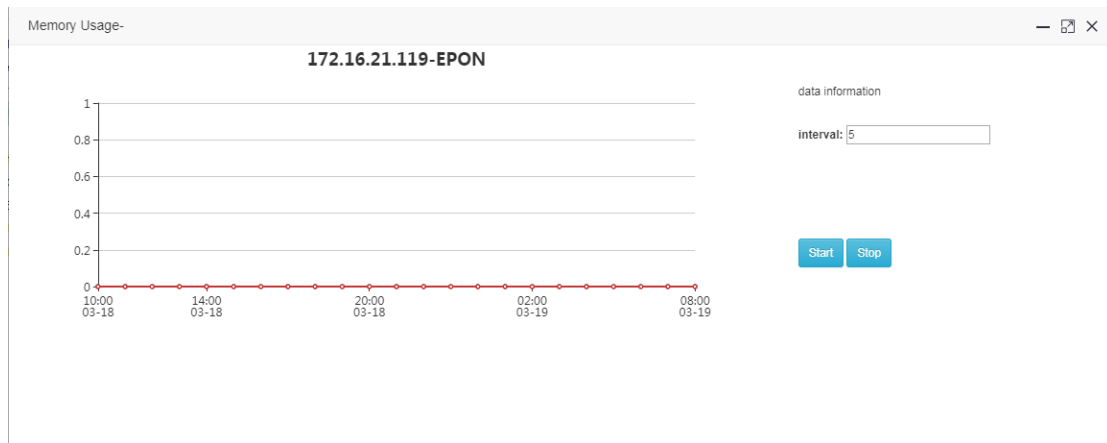
The left-hand chart shows real-time changes in CPU usage.

### 7.1.3 Memory Usage Collection



As is shown above, click Common Collection->Memory Usage Collection to enable Selected Object. The selection steps are the same as 7.1.2 CPU Performance Collection.

After selection, click **Real-time Collection** to enable the interface. See the figure.



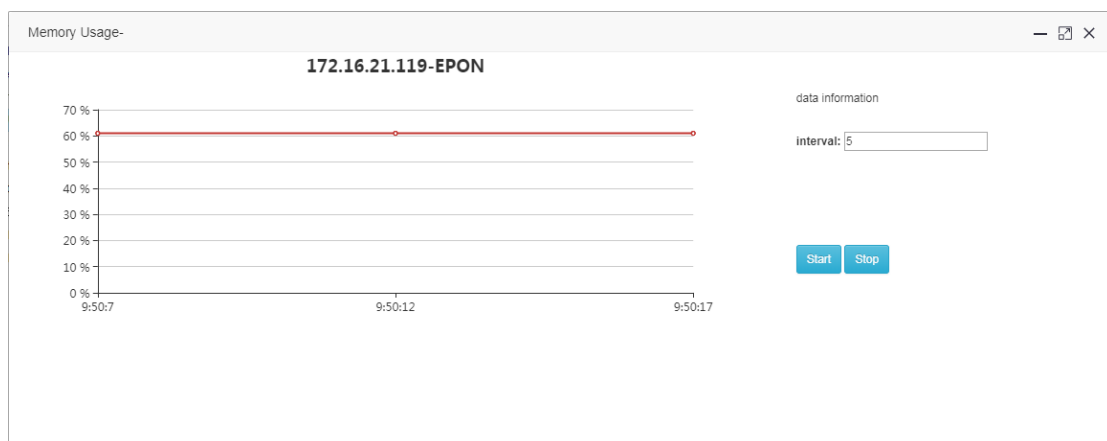
The interface includes **interval, Start, Stop.**

**interval:** collection time interval

**Start:** to start

**Stop:** to stop

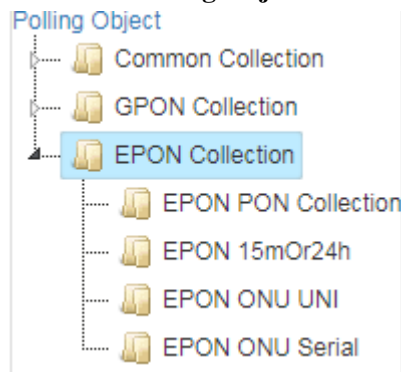
Select **interval** and click **Start** to do the collection. The interface is below.



The left diagram shows real-time changes in memory usage.

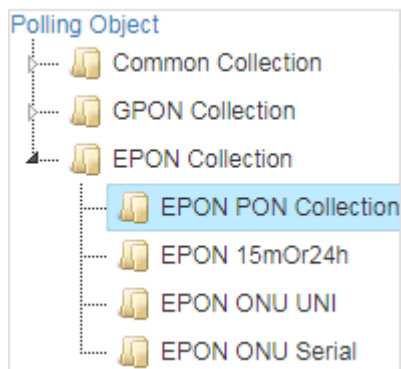
## 7.2 EPON Collection

Click **Polling Object->EPON Collection** in the tree list of left NMS interface.



As is shown above, **EPON Collection: EPON PON Collection, EPON 15mOr24h, EPON ONU UNI, EPON ONU Serial.**

### 7.2.1 EPON PON Collection



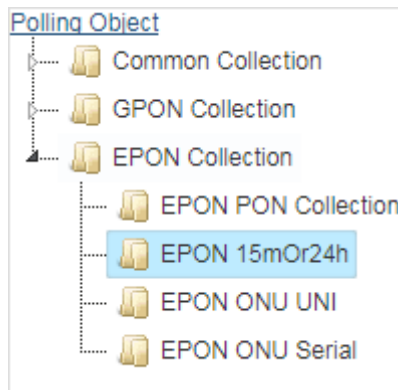
As is shown above, click **EPON Collection -> EPON PON Collection** to enter the interface.

The selection steps are generally the same as 7.1.1 **Eth Collection** besides that in the selection list show EPON PON ports.

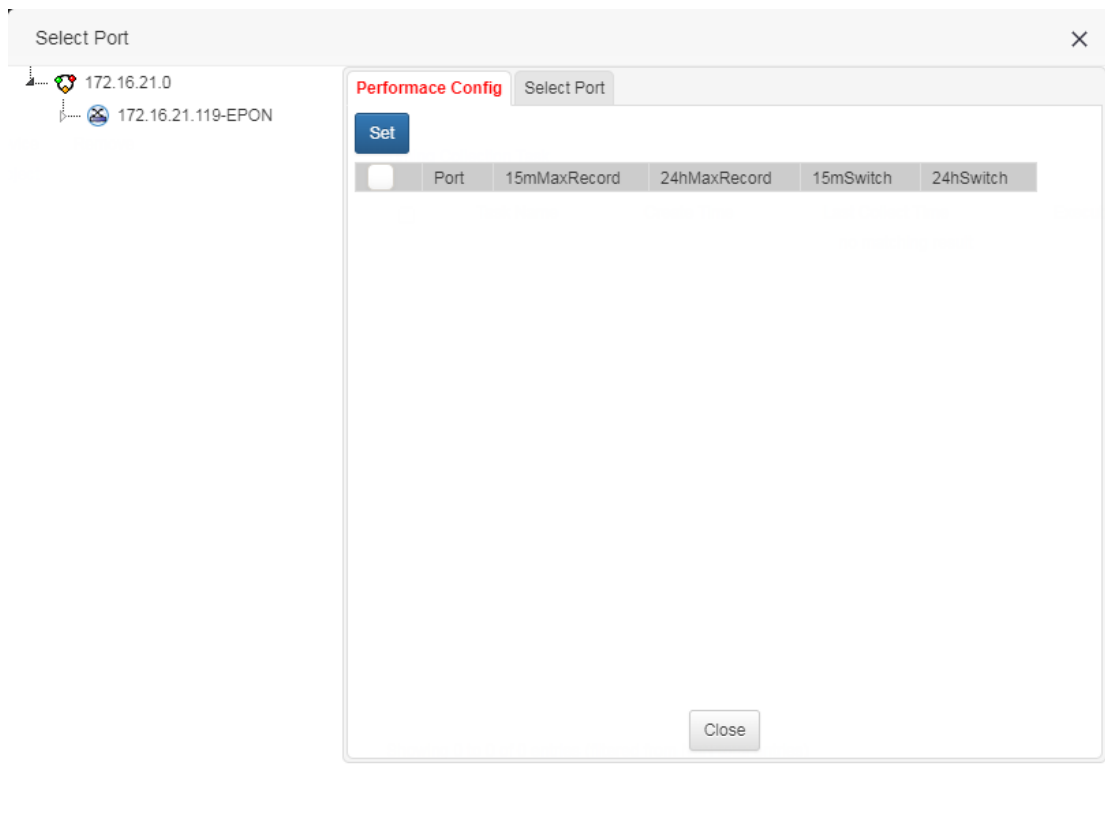
After saving the selection, click **Real-time Collection** to enable the interface.

The collection steps are the same as 7.1.1 **Eth Collection**.

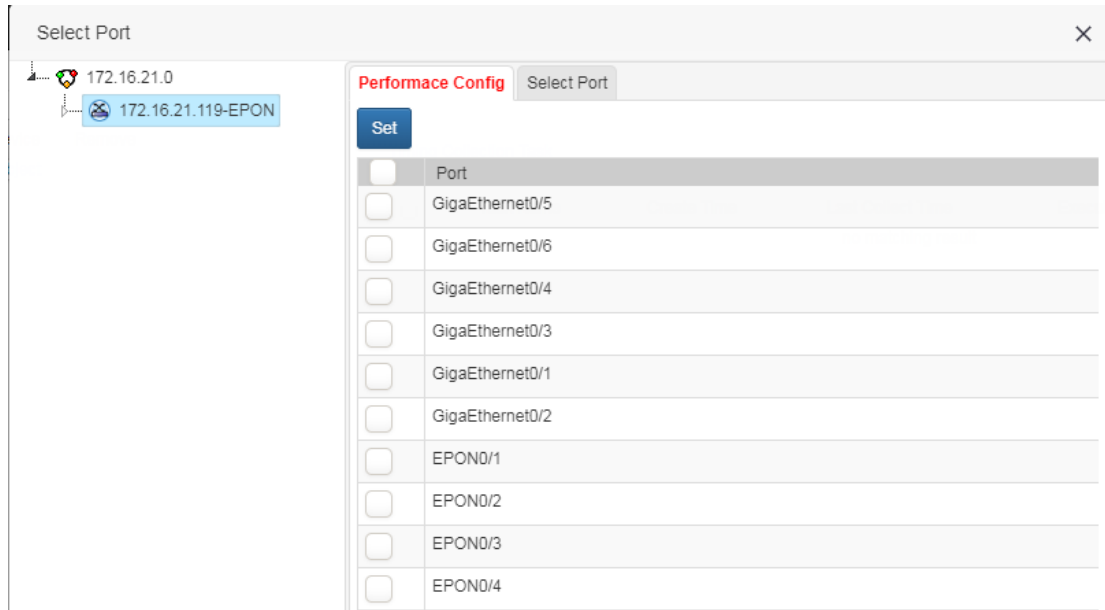
## 7.2.2 EPON 15mOr24h



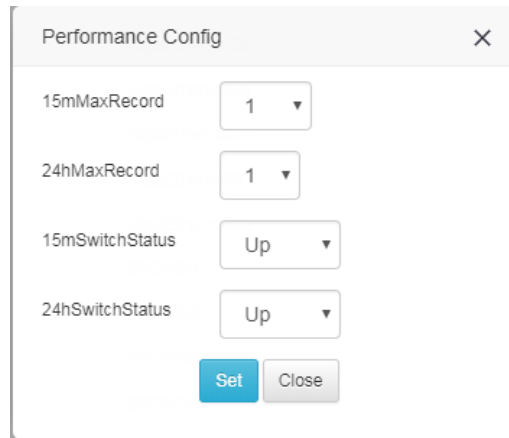
As is shown above, click **EPON Collection->EPON15mOr24h** to enter the selection interface.



A tree list of devices is on the left area, EPON devices supported here. **Performance Config** and **Select Port** are on the right. Click EPON devices, all port configuration will be displayed in **Performance Config**.

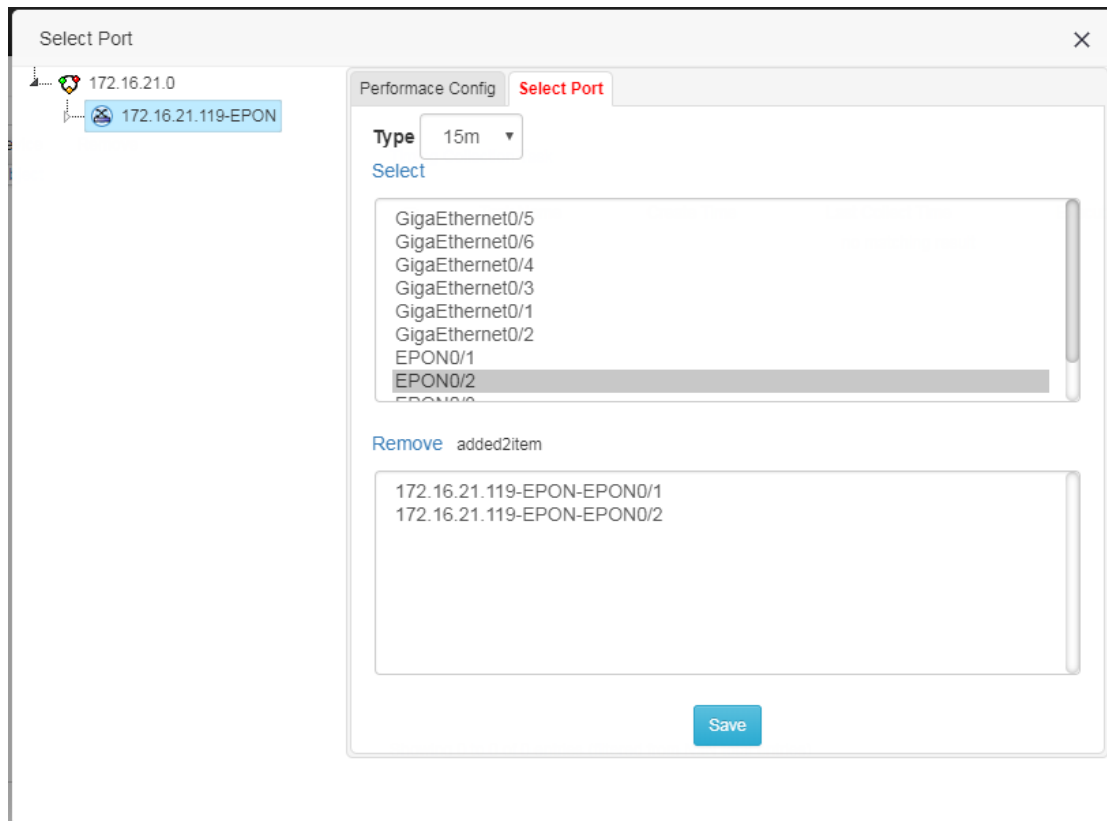


Tick the port, and click **Set** to enable the configuration interface.

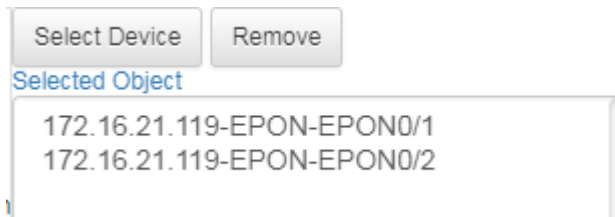


On the interface, select **MaxRecord**, **15m/24hSwitchStatus** to be configured.

Click **Select Port** and enable the interface.

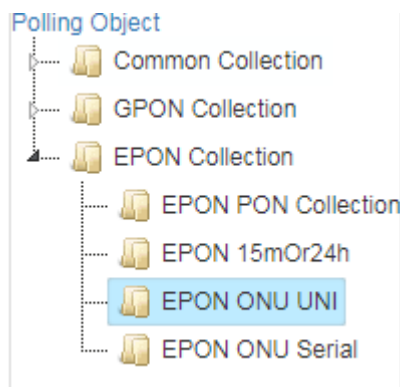


Click **Select** or double click the port to be added. **Type**: 15m or 24h. Click **Save**.



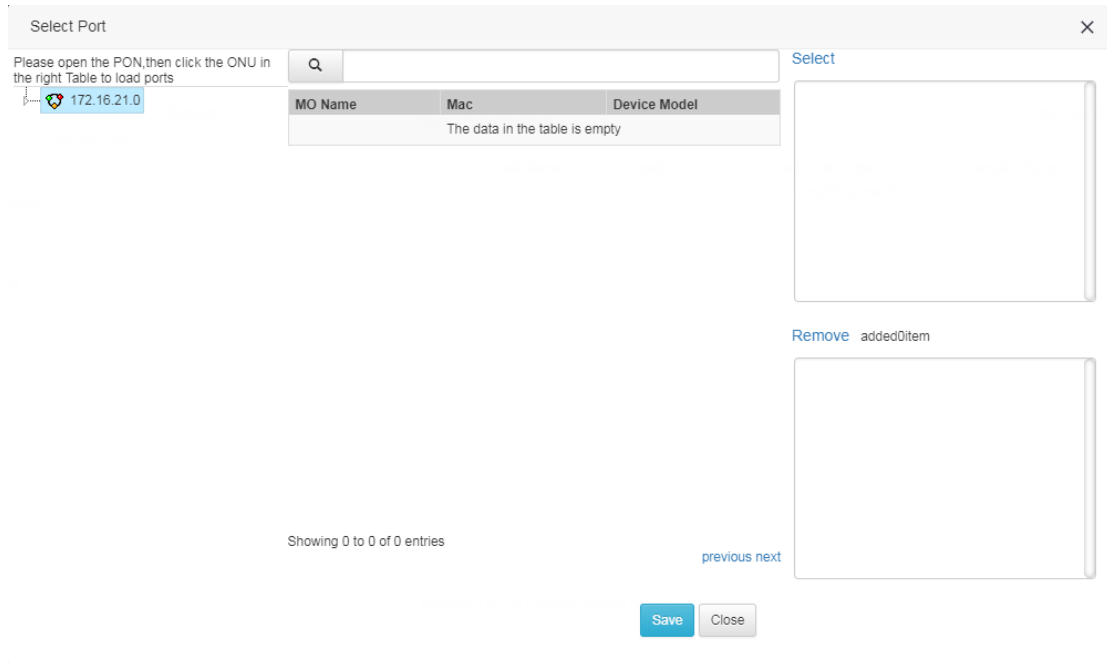
After save, click **Real-time Collection** to enable the interface.  
The collection steps are the same as 7.1.1 **Eth Collection**.

### 7.2.3 EPON ONU UNI



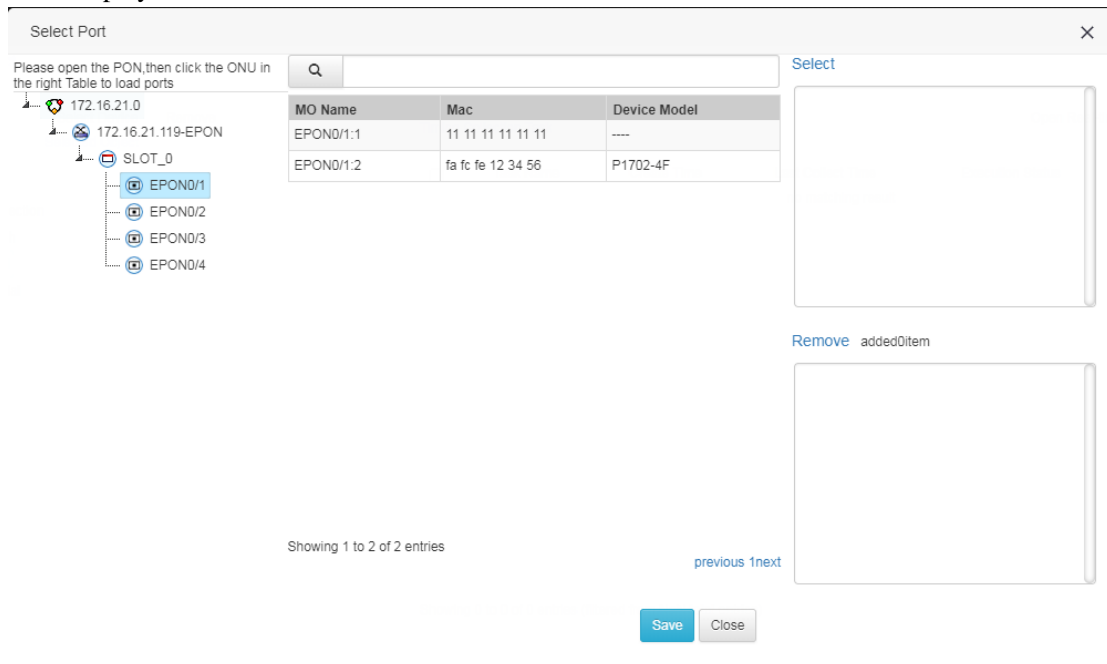
As is shown above, click **EPON Collection->EPON ONU UNI Real-time Statistics** to enable the interface.



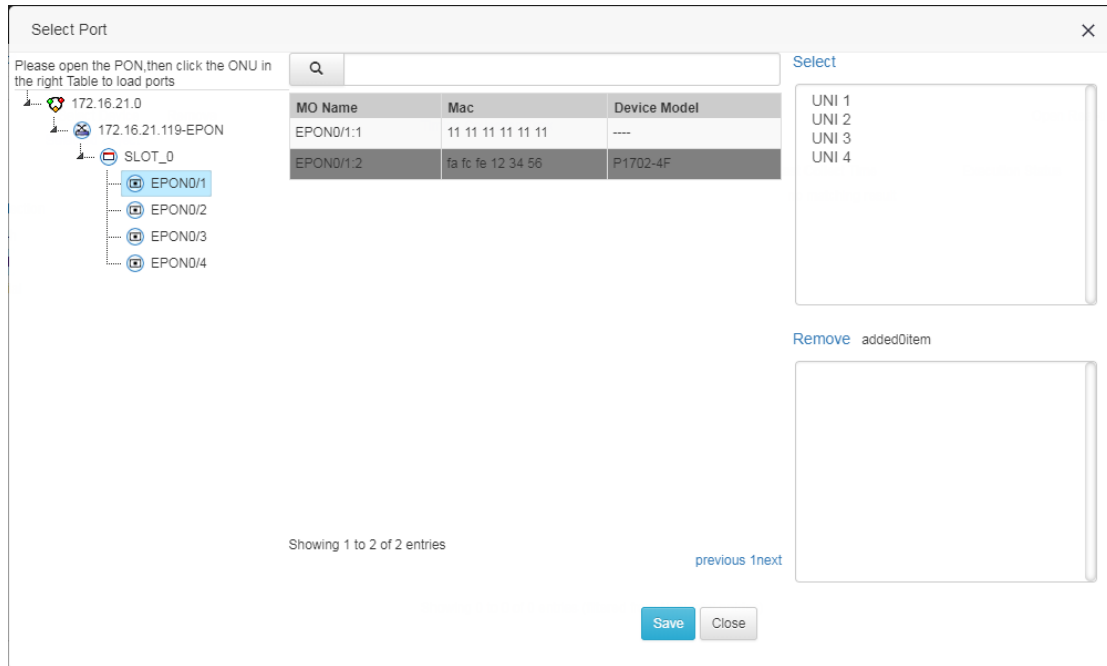


A tree list of devices is on the left area, EPON devices supported here; **ONU** on the centre; **UNI** on the right.

Display the left tree, and click **PON**.

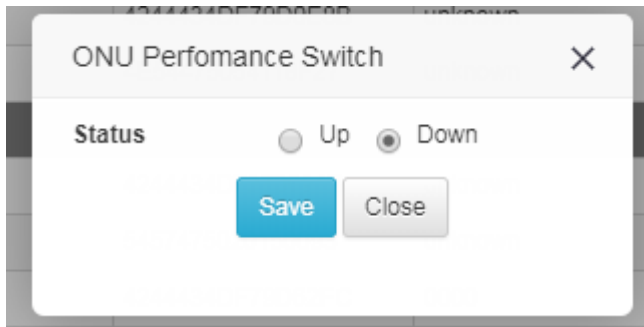


As is shown in the figure, the form may display **PON ONU**, and click the **ONU**.



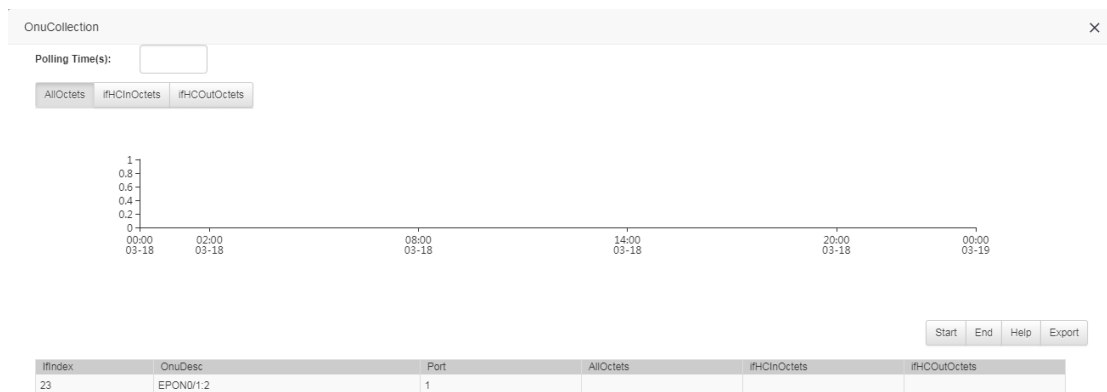
The **UNI** port is shown in the right selection bar. Double click the **UNI** or click **Select** to save it.

When adding the port, if **ONU Performance Switch** is **Down**, the following interface will pop up.



Set **ONU Performance Switch** as **Up** to enable **add** again.

After selection and save, click **Real-time Collection** to enable the interface.



**OnuCollection** includes **Polling Time**, **Start**, **End**, **Export**.

**Polling Time:** Interval;

**Start:** To start;

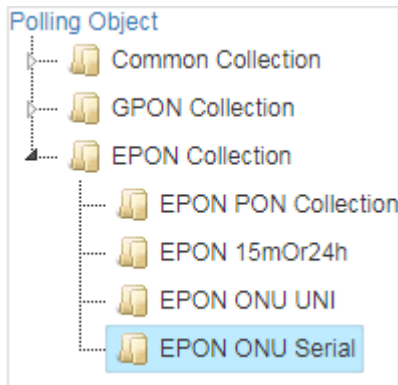
**End:** To end;

**Export:** to export EXCEL.

**OnuCollection** covers 3 diagrams: **AllOctets**, **ifHCInOctets**, **ifHCOutOctets**. Click them to shift.

After setting **Polling Time**, click **Start** to collect.

## 7.2.4 EPON ONU Serial



As is shown above, click **EPON Collection->EPON ONU Serial** to enable the interface.

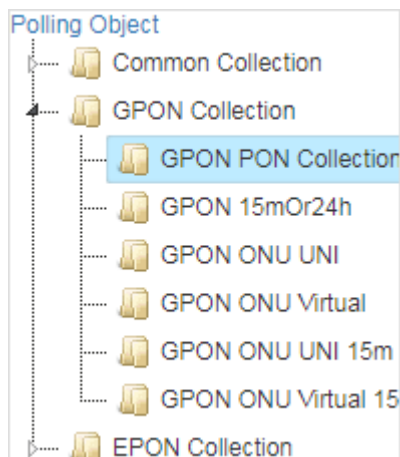
The selection steps are almost the same as 7.1.2 **EPON ONU UNI Real-time** besides that in the selection list show EPON PON serials.

After save, click **Real-time Collection** to enable the interface.

The collection steps are the same as 7.1.1 **Eth Collection**.

## 7.3 GPON Collection

### 7.3.1 GPON PON Collection



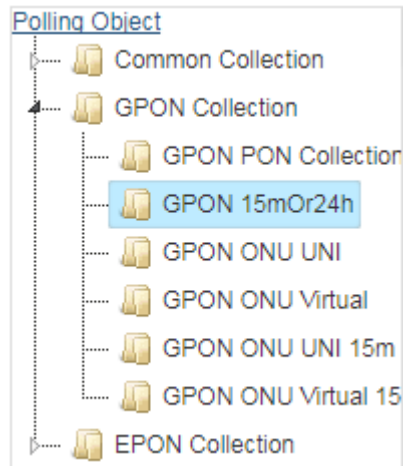
As is shown above, click **GPON Collection->GPON PON Collection** to enable **Select Port**.

The selection steps are almost the same as 7.1.1 **Eth Collection** besides that in the selection list show GPON PON.

After selection, click **Real-time Collection** to enable the interface.

The collection steps are the same as 7.1.1 **Eth Collection**.

### 7.3.2 GPON 15mOr24h

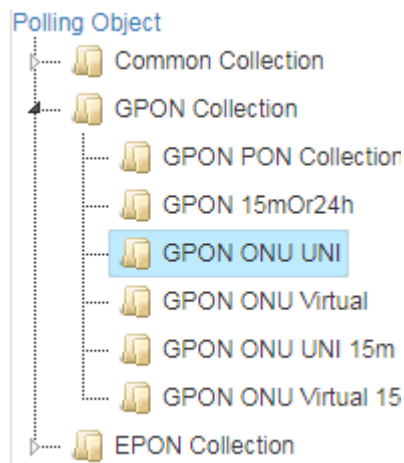


As is shown above, click **GPON Collection->GPON 15mOr24h** to enable the interface.

The port selection and performance configuration steps are the same as 7.2.2 **EPON 15mOr24h**. After selection, click **Real-time Collection** to enable the interface.

The collection steps are the same as 7.1.1 **Eth Collection**.

### 7.3.3 GPON ONU UNI

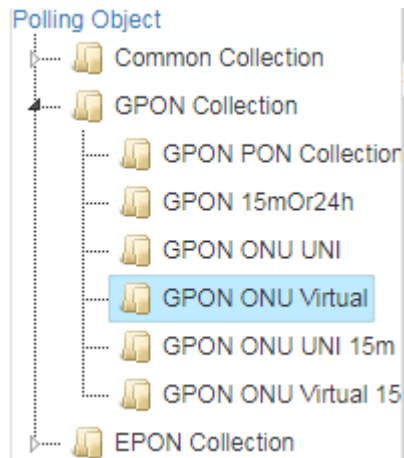


As is shown above, click **GPON Collection->GPON ONU UNI Real-time** to enable the interface.

The selection steps are the same as 7.2.3 **EPON ONU UNI Real-time**. After selection, click **Real-time Collection** to enable the interface.

The collection steps are the same as 7.1.1 **Eth Collection**.

### 7.3.4 GPON ONU Virtual

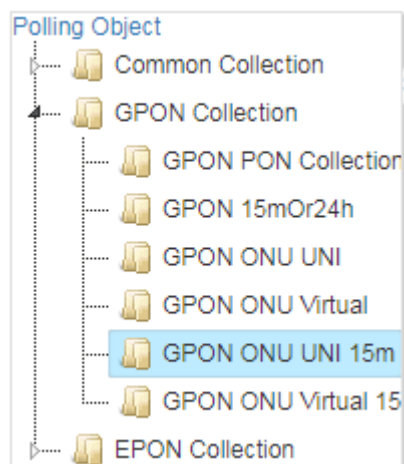


As is shown above, click **GPON Collection->GPON ONU Virtual** to enable the interface.

The selection steps are the same as 7.2.3 **EPON ONU UNI Real-time**. After selection, click **Real-time Collection** to enable the interface.

The collection steps are the same as 7.1.1 **Eth Collection**.

### 7.3.5 GPON ONU UNI 15m

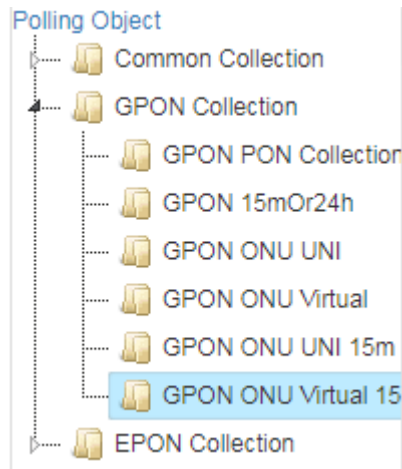


As is shown above, click **GPON Collection->GPON ONU UNI 15m** to enable the interface.

The selection steps are the same as 7.2.3 **EPON ONU UNI Real-time**. After selection, click **Real-time Collection** to enable the interface.

The collection steps are the same as 7.1.1 **Eth Collection**.

### 7.3.6 GPON ONU Virtual 15m



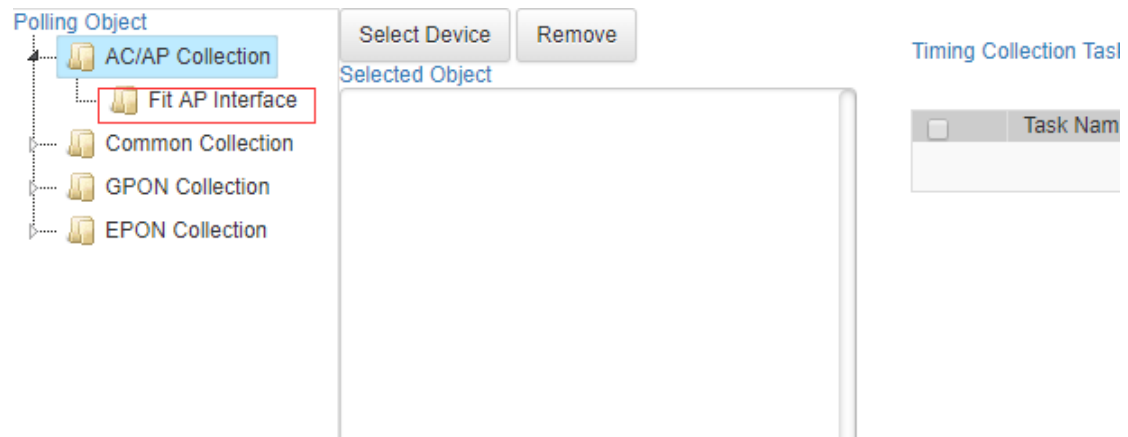
As is shown above, click **GPON Collection->GPON ONU Virtual 15m** to enable the interface.

The selection steps are the same as 7.2.3 **EPON ONU UNI Real-time**. After selection, click **Real-time Collection** to enable the interface.

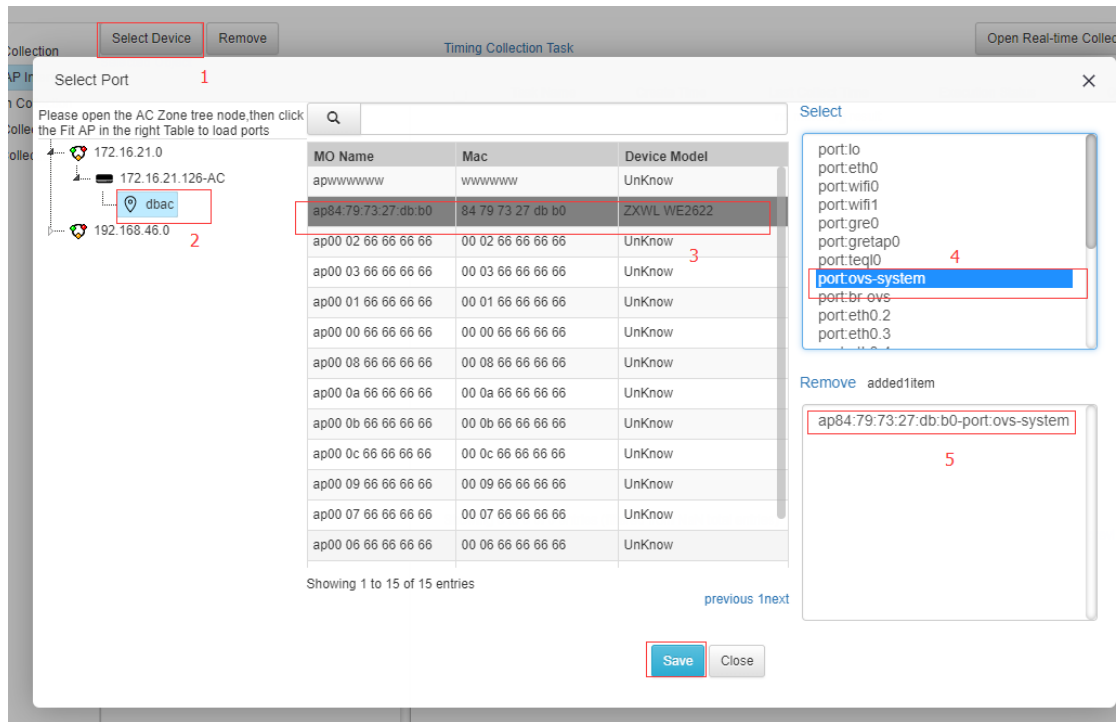
The collection steps are the same as 7.1.1 **Eth Collection**.

### 7.4 AC/AP Collection

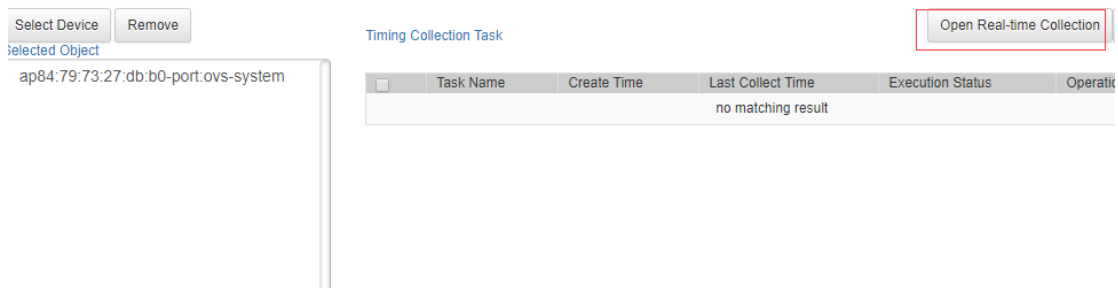
It is used to count **Fit Ap interface** performance. The interface is shown below.



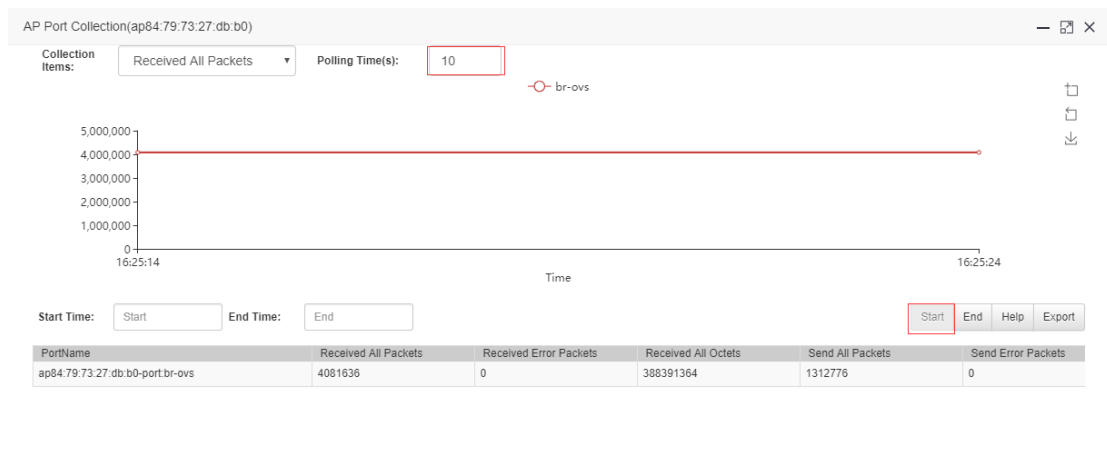
In **Select Device**, select AC device. Click **dbac** to display **AP** device list. Click one certain AP device to present AP port. Double click it to add it to 5. Click **Save**.



After save, AP port can be checked. Click **Open Real-time Collection**.



The following interface will pop up. Set **Polling Time** and **Collection Items**. Click **Start** to enable the collection. See the figure.



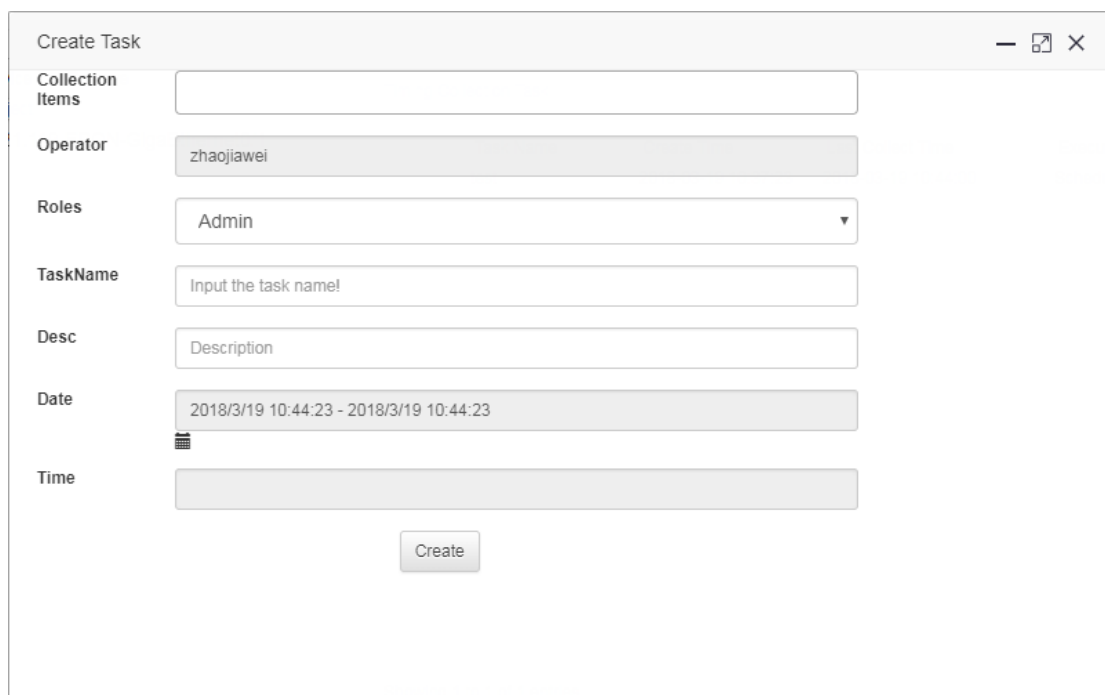
No need for collection, click **End** to export the data.

## 7.5 Timing Collection

**Collection Items** for **Create Task** include **Eth Collection**, **CPU Performance Collection**, **Memory Usage Collection**, **PON Collection**, **EPON ONU UNI Real-time Statistics**, **EPON ONU Serial Real-time Statistics**, **GPON ONU UNI Real-time Statistics**, **GPON ONU Serial Real-time Statistics**.

Steps for **Create Task**:

- (1) Select the port or device. (The same steps as above **Select Port**.)
- (2) Click **Create** in the right to enter the interface.



The screenshot shows a web-based form titled "Create Task". The form has the following fields and values:

- Collection Items:** An empty text input field.
- Operator:** A text input field containing "zhaojiawei".
- Roles:** A dropdown menu with "Admin" selected.
- TaskName:** A text input field with the placeholder text "Input the task name!".
- Desc:** A text input field with the placeholder text "Description".
- Date:** A date and time range selector showing "2018/3/19 10:44:23 - 2018/3/19 10:44:23".
- Time:** An empty text input field.

A "Create" button is positioned at the bottom center of the form.

See the figure:

The interface covers **Collection Items**, **Operator**, **Roles**, **TaskName**, **Desc**, **Date**, **Time**.

**Collection Items:** the collected items

**Operator:** the current operator

**Roles:** the current roles

**TaskName:** the collected task name

**Desc:** the description of the collected task

**Date:** as is shown below, select the start and end date



The 'Create Task' dialog box shows the following fields and options:

- Admin:** Admin
- TaskName:** Input the task name!
- Desc:** Description
- Date:** 2018/3/19 10:44:23 - 2018/3/19 10:44:23
- Time:**
  - Today
  - Tomorrow
  - Next 7 Days
  - Next 30 Days
  - Custom** (highlighted)
  - Apply
  - Cancel

The calendar shows March 2018 and April 2018. The date 19th of March is selected.

**Time:** As is shown below, select the interval or time of the task

The 'Create Task' dialog box shows the following fields and options:

- Collection Items:** [Empty]
- Operator:**
  - hour
  - interval
  - interval(m) 1
- Roles:**

00:00	01:00	02:00	03:00	04:00	05:00
06:00	07:00	08:00	09:00	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
- TaskName:** [Empty]
- Desc:** all
- Date:** [Empty]
- Time:** [Empty]
- Create:** [Button]

(3) Click **Create** to make it.

(4) Click the items in the left tree list, the collection task will be displayed in the right form.

See the figure.

The interface shows the following components:

- Polling Object:**
  - Common Collection
  - Eth Collection** (Selected)
  - CPU Performance Col
  - Memory Usage Collec
  - GPON Collection
  - EPON Collection
- Timing Collection Task:**

Task Name	Create Time	Last Collect Time	Execution Status	Operation
test	2018-03-19 10:37:23	2018-03-19 10:45:00	Scheduled	Operation

(5) Click **Operation** in the form to pause or delete.

Timing Collection Task Open Real-time Collection Create

<input type="checkbox"/>	Task Name	Create Time	Last Collect Time	Execution Status	Operation
<input type="checkbox"/>	test	2018-03-19 10:37:23	2018-03-19 10:45:00	Scheduled	Operation

History Collect  
 Delete  
 Pause Schedule

## 7.6 History Collect

History Collect is operation data of the device in a certain period of history. It means history data collected from the device at a certain interval (configurable) by the network management system background program.

Click **Operation** in **Timing Collection Task** to check history collect.

Timing Collection Task Open Real-time Collection Create

<input type="checkbox"/>	Task Name	Create Time	Last Collect Time	Execution Status	Operation
<input type="checkbox"/>	test	2018-03-19 10:37:23	2018-03-19 10:45:00	Scheduled	Operation

History Collect  
 Delete  
 Pause Schedule

The interface is as follows.

History Collect ×

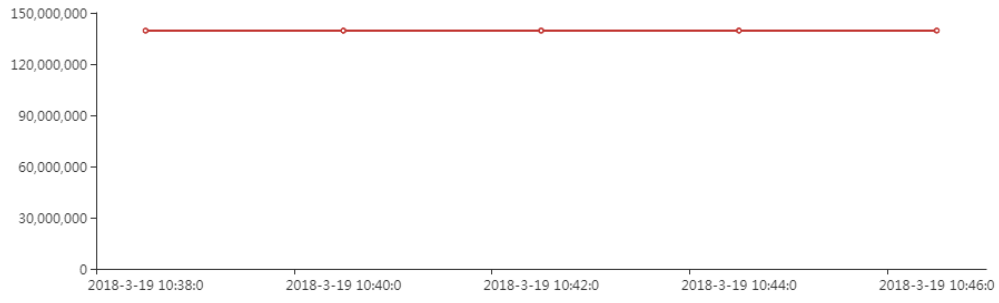


Start Time:     End Time:

Select **Start Time** and **End Time** to check history collect.

History Collect ×

**History Collect** ○ 172.16.21.119-EPON-GigaEthernet0/1端口入流量(Bps)



Start Time:  ✓ End Time:  ✓

## 8 Schedule Task

Schedule Task provides users with some simple visual task management configuration, support batch processing and the function of timing to perform some tasks, helping users to reduce repetitive operations and flexible time for task execution.

It consists of three main categories: a) Upgrade Task; b) Backup Task; c) System Task. For Upgrade Task and Backup Task, NMS supports users to perform task creation, update, delete, etc.; for System Task, when NMS performs such task in normal operation, such task only partially supports users with polling interval refresh, not allowing users to create and delete such task.

Main configuration items for Upgrade Task and Backup Task:

- Config File Upgrade
- Version File Upgrade
- DB Recovery
- ONU Version File Upgrade

Main configuration items for System Task:

- Performance Data Table Create
- Fault Data Clear
- Home Page Update Polling
- Device Status Polling
- Device Config Save

Particularly stating, for tasks requiring upgrades or backups of files on the device, firstly the user needs to set the Telnet user name and password in the properties of the selected device, because the username and password must be entered correctly when NMS performs the task, logging on to the device via Telnet or SSH mode when performing the task. (The NMS default Telnet and SSH login username and password are the same.).

The detailed description is shown in the figure below.

The screenshot displays the NMS Schedule Task interface. On the left is a sidebar menu with categories: Upgrade Task (including Upgrade Hot Patch, Config File Upgrade, ONU Version File Upgrade, Version File Upgrade, DB Recovery), Backup Task (including Version File Backup, Config File Backup, DB Backup), and System Task (including Performance Data Table Create, Fault Data Clear, Home Page Update Polling, Device Status Polling, Device Config Save). The main area shows a 'Task List' table with 5 entries, all with 'Enable' status and 'Scheduled' execution status. Below the table, it indicates 'Showing 1 to 5 of 5 entries' and 'The latest log: (0%)'.

No.	TaskName	Task Description	Status	Execution Status	Period	Create User	Create Time	Update Time
1	Device Config Save	Device Config Save	Enable	Scheduled	Time_Task	root	2018-02-05 11:17:21	
2	Home Page Update Polling	Home Page Update Polling	Enable	Scheduled	Time_Task	root	2018-02-05 11:17:21	
3	Performance Data Table Create	Performance Data Table Create	Enable	Scheduled	Time_Task	root	2018-02-05 11:17:21	
4	Device Status Polling	Device Status Polling	Enable	Scheduled	Time_Task	root	2018-02-05 11:17:21	
5	Fault Data Clear	Fault Data Clear	Enable	Scheduled	Time_Task	root	2018-02-05 11:17:21	

### 8.1 Create Task

For Upgrade Task and Backup Task, tasks can be created based on needs. The creation of

each task will then be described in detail.

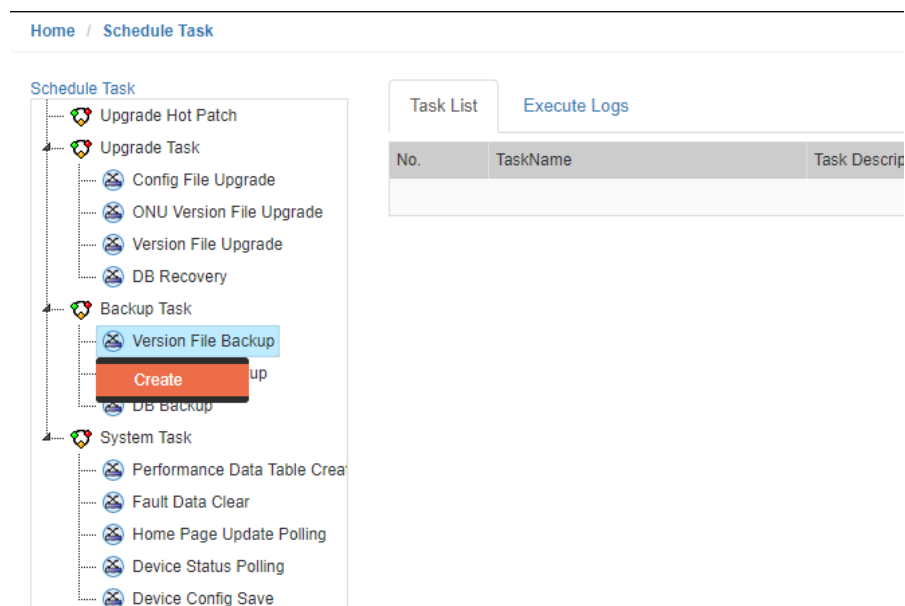
### 8.1.1 Create Backup Task

Backup Task is a backup of some files or data on a device or system so as to ensure that the equipment or system is configured or data restored at some special time while the service is operated normally.

#### 8.1.1.1 Create Version File/Config File Backup

**Creat Version File Backup** and **Config file Backup** are basically the same; the only difference is that the list of files is different when selecting files. It will be illustrated in detail referring to **Version File Backup**.

- 1) Click **Schedule Task** on **Home** to enter the management interface. Select **Version File Backup** from left tree nodes, and right click it to enable **Create**. Click **Create** to enable the create guideline.



- 2) The guideline is shown below. On this page, it requires users to input **TaskName** and **Task Description**. Meanwhile, the roles visible to the task must be selected.

The screenshot shows the 'Version File Backup' configuration window with the 'Basic Infos' tab selected. The window has a sidebar on the left with three items: 'Basic Infos' (selected), 'Select Devices', and 'Schedule Detail Config'. The main area is titled 'Basic Infos' and contains the following fields:

- TaskName:** BinVersionBackup (with a green checkmark)
- Create User:** root
- Role:** Admin (selected from a dropdown)
- Task Desc:** BinVersion File Backup

At the bottom right, there are 'Back' and 'Next' buttons.

After filling in the Basic Infos, click **Next**.

- 3) Next is **Select Devices**, that is the backup of the files requiring backup. When selecting devices, filter the selected files based on device types or input ip address **Device List** to do real-time search.

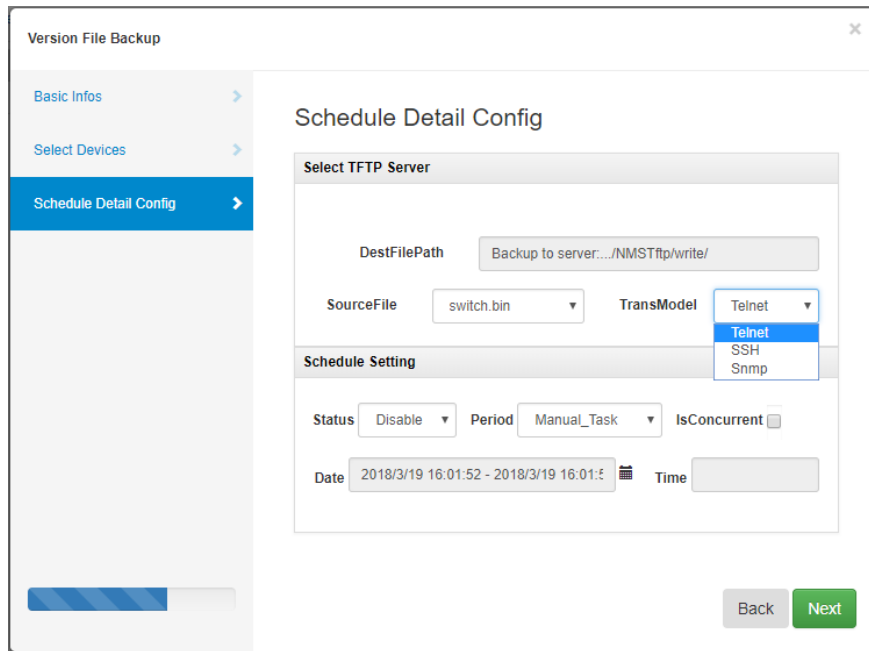
On the left list is **Device List** while right is **Selected Device**. Users can select and counter select the devices through the displayed buttons or double clicking the devices. After that, click **Next**.

The screenshot shows the 'Version File Backup' configuration window with the 'Select Devices' tab selected. The window has a sidebar on the left with three items: 'Basic Infos', 'Select Devices' (selected), and 'Schedule Detail Config'. The main area is titled 'Select Devices' and contains the following elements:

- Filter:** Radio buttons for 'All' (selected), 'EPON', 'GPON', and 'Switch/Router'.
- Device List(1):** A list with a search bar and one entry: 172.16.21.119.
- Selected Device(1):** A list with a search bar and one entry: 172.16.21.129.
- Navigation:** Four buttons between the lists: a right arrow (>), a double right arrow (>>), a left arrow (<), and a double left arrow (<<).

At the bottom right, there are 'Back' and 'Next' buttons.

- 4) Third is mainly about **Select TFTP Server** and **Schedule Setting**. See the following interface.



The parameters are defined as follows:

**DestFilePath:** The saved destination of the backup

**SourceFile:** The files requiring backup from the device

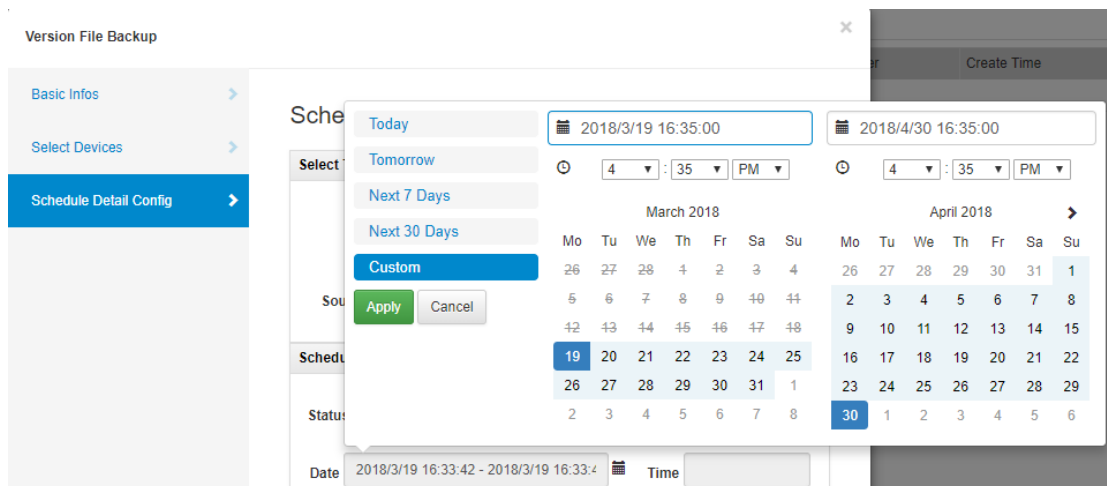
**TransModel:** Protocols through which NMS backups files. NMS currently supports three models: **Telnet, SSH, Snmp.**

**Status:** The status of tasks after creation, including **Disable** and **Enable**. **Disable:** The disabled task will not be executed although it has been created. **Enable:** The enabled task can be executed.

**Period:** The mode of the task, including **Manual Task** and **Timing Task**. For **Manual Task**, it requires users to click the task to modify it after selecting the task. For **Timing Task**, it is executed periodically according to the preset time.

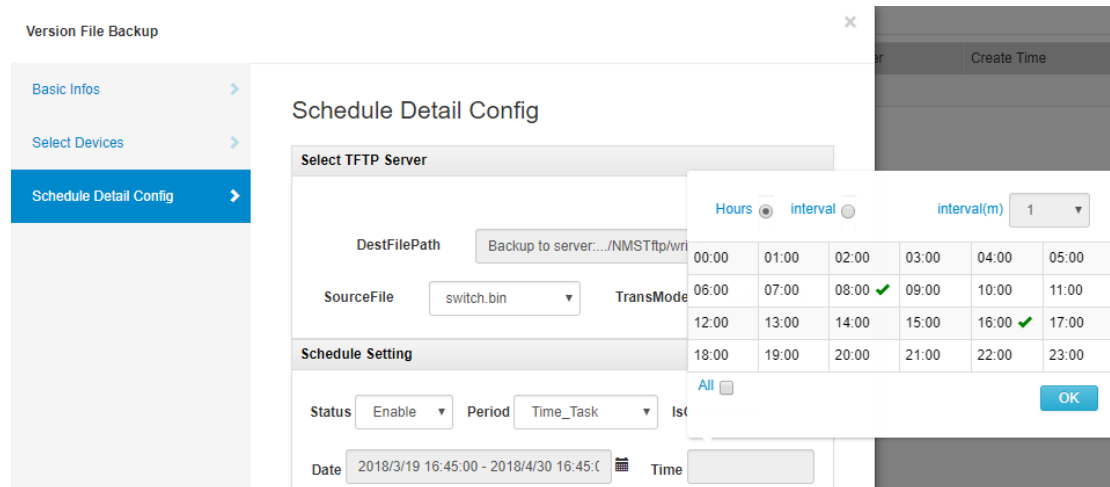
**IsConcurrent:** Whether the multiple way of execution is permitted in the overlapping time or not. For example, one task takes 10 seconds to execute but its period was set as 5 seconds before. If **IsConcurrent** is enabled, the second execution of the task will start with the first one is still on, that is, one task runs multiply in the overlapping time. No **IsConcurrent** is favorable.

**Date:** The executed time of the task, that is execution is only on in certain period. Only when **Period** is set as **Timing Task**, **Date** is enabled to set. See the following interface.

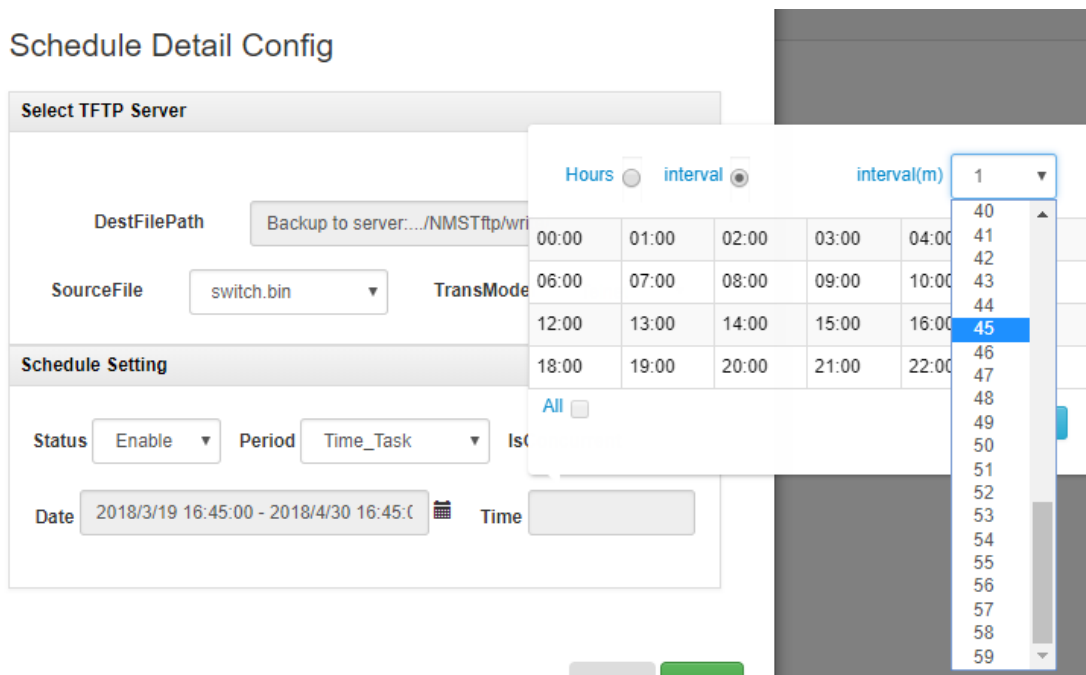


Select the start and end of time, and click **Apply**. Or select Next 7 Days, Next 30 Days, etc. to do quick set.

**Time:** The executed period of the task. Only when **Period** is set as **Timing Task**, **Time** is enabled. See the figure.

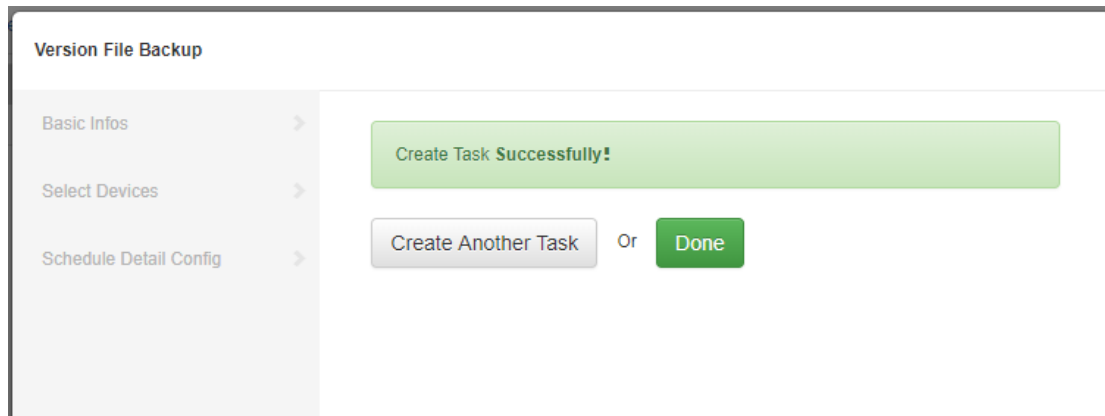


The modes of interval: 1. Execute at the appointed hours; 2. Execute every few minutes. In the above figure is displayed the execution at 8 am and 4 pm. If the interval needs setting, click **interval** first, then specific minutes. See the figure.



5) After setting, click **Next** to check whether the task is created successfully or not. See the figure.

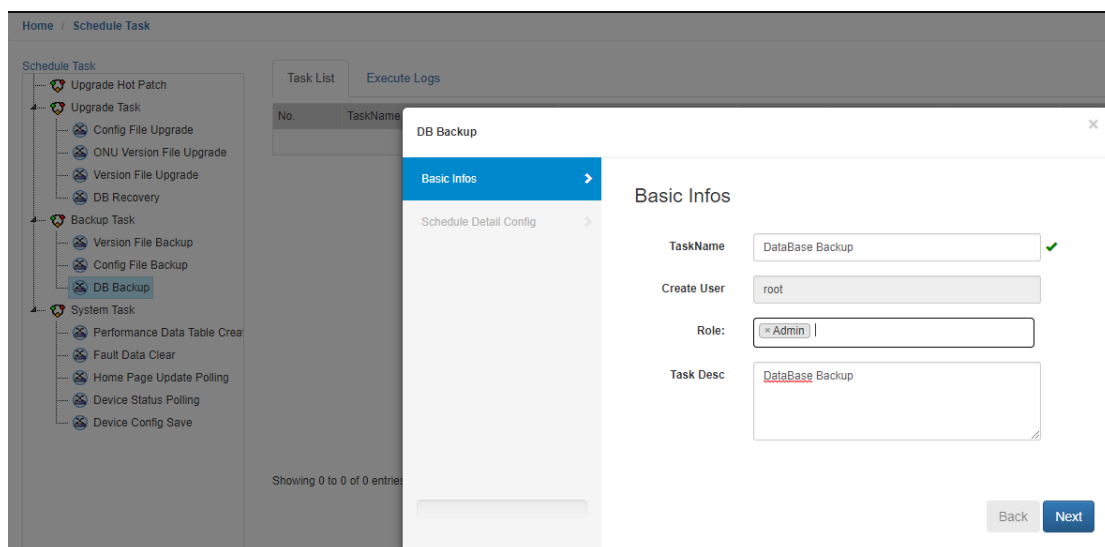




### 8.1.1.2 DB Backup

**DB Backup** is used to backup the data in the database of NMS, in case that the data can be recovered when NMS fails.

- 1) Select **DB Backup** in **Schedule Task**. Right click to enable **Create**. Click it to enter the created guideline.



**Basic Infos** should correspond to that of **Version File Backup**. Please refer to **create Version File Backup**. After filling in the form, click **Next**.

- 2) Next is **Schedule Detail Config**. The specific parameters are the same as that of **Version File Backup**. Please refer to that.

The screenshot shows the 'DB Backup' configuration window with the 'Schedule Detail Config' tab selected. The 'Parameters Config' section contains the following fields:

- Backup File Path:** Backup to server.../Backup/DBBackup/
- Status:** Enable
- Period:** Time\_Task
- Date:** 2018/3/19 17:27:11 - 2018/3/19 17:27:11
- Time:** Hours:00:00

At the bottom right, there are 'Back' and 'Next' buttons.

3) After modification, click Next to check whether the task is created successfully or not. See the figure.

The screenshot shows the 'DB Backup' configuration window with the 'Schedule Detail Config' tab selected. A green success message is displayed: 'Create Task Successfully!'. Below the message are two buttons: 'Create Another Task' and 'Done'.

## 8.1.2 Create Upgrade Task

**Create Upgrade Task** mainly aims at upgrading the version and configuration, as well as recovering the data of NMS database. (The source of the data must be NMS database backup.)

### 8.1.2.1 Create Version File Upgrade/Config File Upgrade/ONU Version File Upgrade

To create **Version File Upgrade**, **Config File Upgrade**, **ONU Version File Upgrade**, three of them share the generally same steps. The steps will be illustrated in detail with **Version File Upgrade**.

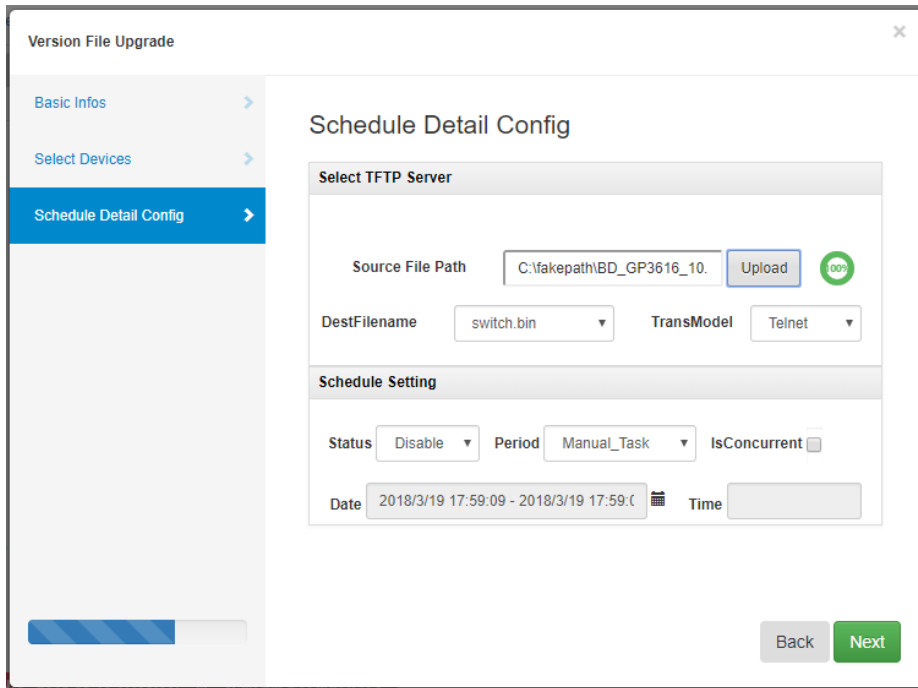
- 1) Select **Version File Upgrade** on **Schedule Task**, and right click it to enable **Create**. Click **Create** to enable the create guideline.
- 2) To fill in Basic Infos, refer to **Creat Version File Backup**.

- 3) To select the device, refer to **Creat Version File Backup**.
- 4) To modify **Schedule Setting**, here introduce in detail some specific parameters. refer to **Creat Version File Backup** for general parameters.

**Source File Path:** Due to the upgrade here, it requires users to upload version files.

Click on the input box to select the version file, and click **Upload** to upload user’s file to NMS server. It is **Bin** file that upgrade uses it when the task is executed.

**DestFileName:** The file to be upgraded. When execution is on, the file will be replaced by the uploaded file.



- 5) After configuring scheduling parameters, click Next to check whether the task is created successfully or not.

### 8.1.3 System Task

**System Task** means a series of default tasks created by NMS to support the normal operation of NMS, not supporting users to create or delete any of them but refresh the polling time of some task based on some needs. It will be illustrated in detail with **Fault Data Clear**.

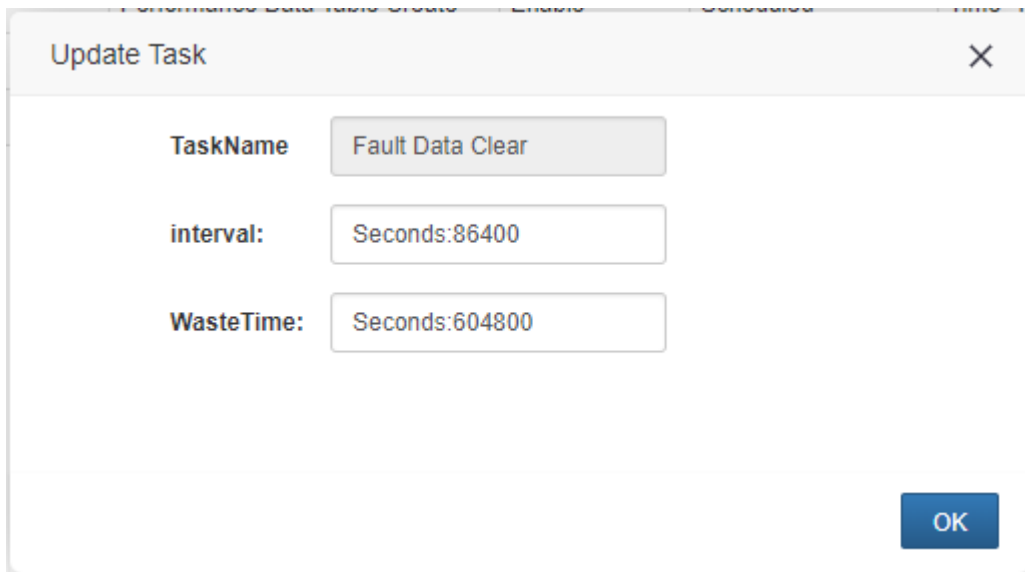
Select **Fault Data Clear** in Task List. Right click it to pop up the menu list, which includes **Upgrade Task**, **Start Execute Task**, and **Pause Schedule**. See the figure.

No.	TaskName	Task Description	Status	Execution Status	Period	Create User	Create Time	Update Time
1	Device Config Save	Device Config Save	Enable	Scheduled	Time_Task	root	2018-02-05 11:17:21	
2	Home Page Update Polling	Home Page Update Polling	Enable	Scheduled	Time_Task	root	2018-02-05 11:17:21	
3	Performance Data Table Create	Performance Data Table Create	Enable	Scheduled	Time_Task	root	2018-02-05 11:17:21	
4	Device Status Polling	Device Status Polling	Enable	Scheduled	Time_Task	root	2018-02-05 11:17:21	
5	Fault Data Clear	Fault Data Clear	Enable	Scheduled	Time_Task	root	2018-02-05 11:17:21	

A context menu is overlaid on the 'Fault Data Clear' row, containing three options: 'Update Task', 'Start Execute Task', and 'Pause Schedule'.

The three operations are explained in detail below.

**Upgrade Task:** To upgrade the task, mainly refreshing the polling interval. See the figure.



Here, **interval** means the executed interval of the task, whose unit is **second**, and users just refresh the seconds when setting; **WasteTime** means the alarms during which period should be deleted. As is shown in the above, 604800 means the deletion of history alarm since 7 days ago in NMS.

**Start Execute Task:** To start the execution at once, which can be used to immediately execute some tasks having not been at the polling time.

**Pause Schedule:** To pause the schedule of some task, that is, if the task need scheduling still, click **Resume Schedule**. See the figure.

No.	TaskName	Task Description	Status	Execution Status	Period	Create User	Create Time	Update Time
1	Device Config Save	Device Config Save	Enable	Scheduled	Time_Task	root	2018-02-05 11:17:21	
2	Home Page Update Polling	Home Page Update Polling	Enable	Scheduled	Time_Task	root	2018-02-05 11:17:21	
3	Performance Data Table Create	Performance Data Table Create	Enable	Scheduled	Time_Task	root	2018-02-05 11:17:21	
4	Device Status Polling	Device Status Polling	Enable	Scheduled	Time_Task	root	2018-02-05 11:17:21	
5	Fault Data Clear	Fault Data Clear	Enable	Paused	Time_Task	root	2018-02-05 11:17:21	

## 8.2 Task List

After creation, some operations to the created tasks are supported by NMS, including **Update Task**, **Delete Task**, **Start Execute Task**, **Pause Schedule** and **Resume Schedule**. It will be illustrated with **Version File Backup**.

Select the task to be operated in **Task List**, and right click the operation items. See the figure.

No.	TaskName	Task Description	Status	Execution Status	Period	Create User	Create Time	Update Time
1	BinVersion Backup	BinVersion Backup	Enable	Scheduled	Time_Task	root	2018-03-20 11:42:49	2018-03-20 14:00:44

**Update Task:** To update the task, which is the same as **Create Task**. Users can update the created tasks based on needs, including Task Description, the selection of the device, transmission mode

and update the scheduling time.

**Delete Task:** To delete the created task

**Start Execute Task:** To start the execution at once, which can be used to immediately execute some tasks having not been at the polling time.

**Pause Schedule:** To pause the schedule of some task, that is, if the task need scheduling still, click **Resume Schedule**.

**Resume Schedule:** To schedule some task set as **Pause Schedule**. See the figure.

No.	TaskName	Task Description	Status	Execution Status	Period	Create User	Create Time	Update Time
1	BinVersion Backup	BinVersion Backup	Enable	Paused	Time_Task	root	2018-03-20 14:05:15	

Context menu options: Update Task, Delete Task, Resume Schedule

### 8.3 Execute Logs

Execute Logs is used to display the executed results of some tasks excluding NMS tasks. Users can search the executed results and specific information of the created tasks. During execution, click progress bar to check the execution condition. See the figure.

No.	TaskName	Task Description	Status	Execution Status	Period	Create User	Create Time	Update Time
1	BinVersion Backup	BinVersion Backup	Enable	Executed	Time_Task	root	2019-03-20 14:05:15	2019-03-20 14:20:10

The latest log: BinVersion Backup: [Success 2019-03-20 14:21:26]—172.16.21.119 执行成功!

BinVersion Backup (80%)

The results is shown below. Filtrate according to **TaskName, Execute Time, Execute Result**.

No.	TaskName	Execute Time	Execute Result	Execute Spend Time(ms)	Result Detail
1	BinVersion Backup	2018-03-20 14:29:01	Success	28015	172.16.21.119 succeed!

The latest log: BinVersion Backup: [Success 2018-03-20 14:29:01]—172.16.21.119 succeed!

BinVersion Backup (100%)

## 9 Business Management

### 9.1 Active EPON ONU

Refer to the *Operation Manual*.

### 9.2 EPON Business Type Management

Refer to the *Operation Manual*.

### 9.3 Active GPON ONU

Click **Business Management->Active GPON ONU** to enable the interface. Its main functions are selecting the ONU model for user information binding, retrieval, and locating OLT/ONU. See the figure.

Home / Open GPON ONU

Start Time  End Time  ONU SN  Username

User Phone  User Address

show 10 entries

No.	OLT	SN	Update Time	BusinessType	Username	User Phone	UserAddr	Operation
1	172.16.21.129-GPON	4244434DF79D0E8B	2018-03-19 14:07:58		Test02			<a href="#">Operations</a>
2	172.16.21.129-GPON	4244434DFC9D0F99	2018-03-19 14:07:46		Test01			<a href="#">Operations</a>
3	172.16.21.129-GPON	4244434D73620001	2018-03-19 13:50:42		Test			<a href="#">Operations</a>

Showing 1 to 3 of 3 entries previous 1 next

- Add

Click **Add** to enable the following interface.

Open GPON ONU ✕

Select ONU >

Input User Infos >

ONU SN

No.	OLT	ONU DisplayName	SN	Operation
1	172.16.21.129-GPON	GPON0/1:1	4244434D73620001	<input type="checkbox"/>
2	172.16.21.129-GPON	GPON0/1:3	4244434DFC9D0F99	<input checked="" type="checkbox"/>
3	172.16.21.129-GPON	GPON0/1:4	4244434DFC9D0F11	<input type="checkbox"/>
4	172.16.21.129-GPON	GPON0/1:6	4244434DFC9D0F58	<input type="checkbox"/>
5	172.16.21.129-GPON	GPON0/2:1	4244434DF79D0E8B	<input type="checkbox"/>
6	172.16.21.129-GPON	GPON0/2:2	4E54475054118F27	<input type="checkbox"/>
7	172.16.21.129-GPON	GPON0/2:3	4E55475054117758	<input type="checkbox"/>
8	172.16.21.129-GPON	GPON0/2:4	4244434D73706917	<input type="checkbox"/>
9	172.16.21.129-GPON	GPON0/3:1	5457475020150093	<input type="checkbox"/>
10	172.16.21.129-GPON	GPON0/3:2	4244434DF79D62FC	<input type="checkbox"/>

Showing 1 to 10 of 14 entries previous 1 2 next

Select one ONU detail( Users can retrieve based on ONU SN.). Click **Next**. See the interface.

Open GPON ONU x

Select ONU >

Input User Infos >

ONU: 172.16.21.129-GPON | GPON0/1:3 | 4244434DFC9D0F99

---

UserName

User Phone

UserAddr

BusinessType

Belong Area

Remark

Back
Create

Input user information, and click Create to make it.

- Query

On **Open GPON ONU**, input the details on the first half and click **Query**.

Select one line. Click **Operations**. See the figure.

Home / Open GPON ONU

Start Time  End Time  ONU SN  Username

User Phone  User Address  Query Add

show 10 entries

No.	OLT	SN	Update Time	BusinessType	Username	User Phone	UserAddr	Operation
1	172.16.21.129-GPON	4244434DF79D0E8B	2018-03-19 14:07:58		Test02			<a href="#">Operations</a>
2	172.16.21.129-GPON	4244434DFC9D0F99	2018-03-19 14:07:46		Test01			
3	172.16.21.129-GPON	4244434D73620001	2018-03-19 13:50:42		Test			

Showing 1 to 3 of 3 entries

Detail

Delete

Position OLT

Position ONU

- Detail Display

Click **Detail Display**. See the figure.

ONU: 172.16.21.129-GPON | GPON0/2:1 | 4244434DF79D0E8B

---

UserName

User Phone

UserAddr

BusinessType

Belong Area

Remark

Create Time

Save

Users can check or edit the information. Click **Save** to save it.

- Delete

Click **Delete** to delete the open information.

- Locate OLT

Click **Locate OLT** to enable the OLT management interface.

- Locate ONU

Click **Locate ONU** to enable the ONU management interface.

## 9.4 App Download

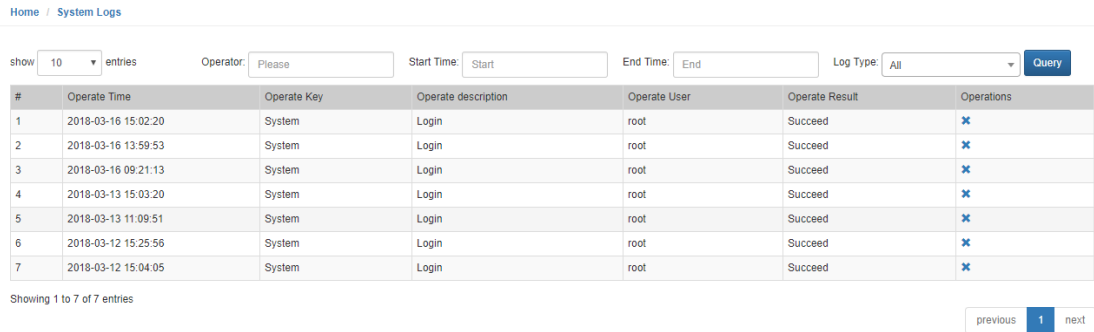
Refer to Operation Manual.



## 10 System Management

### 10.1 System Logs

Click **System Management->System Logs** to enable the interface. It mainly records the user's relatively sensitive operation to the system and device, such as login/out, add/delete, refresh, etc. See the figure below.



Conditions for Query:

1. **Operator:** To fill in the exact operator, or the query will cover all.
2. **Start/End Time:** The period of the operation, or the query will cover all.
3. **Log Type:** To select the type, or the query will cover all.

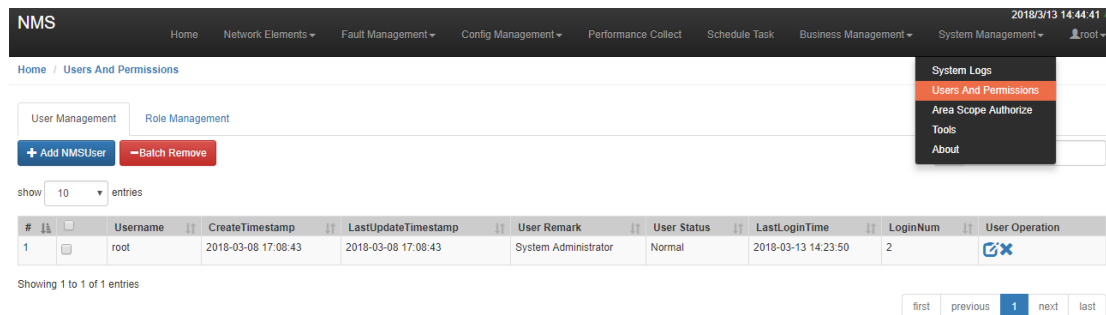
After selection, click **Query**.

Click **Delete** to delete the record.

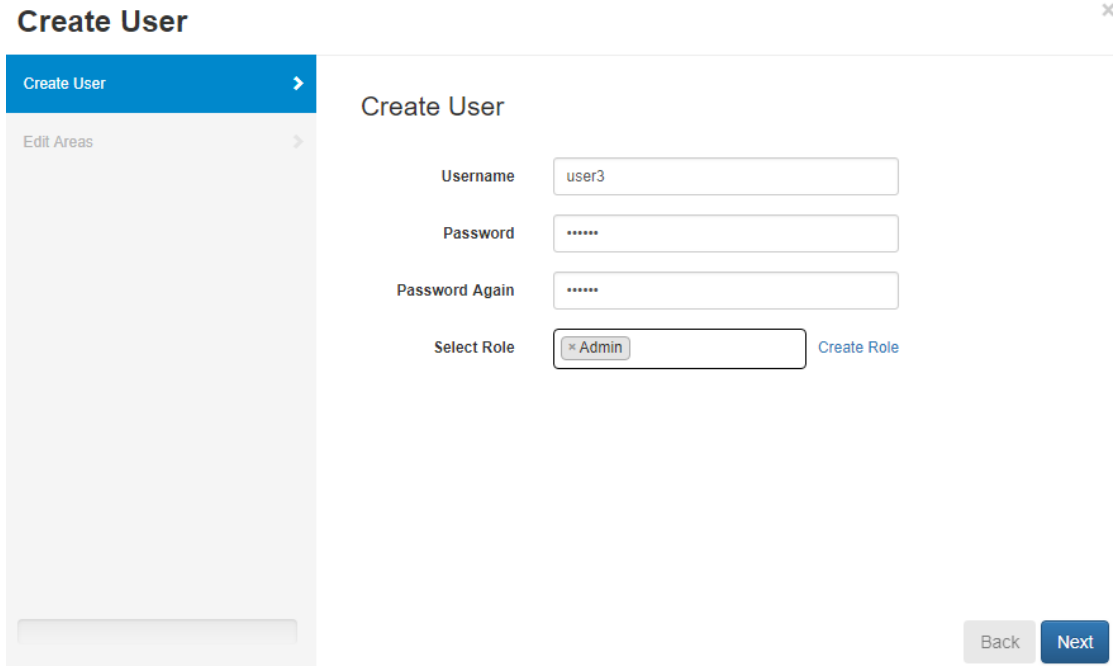
### 10.2 Users And Permissions

#### 10.2.1 Add NMSUser

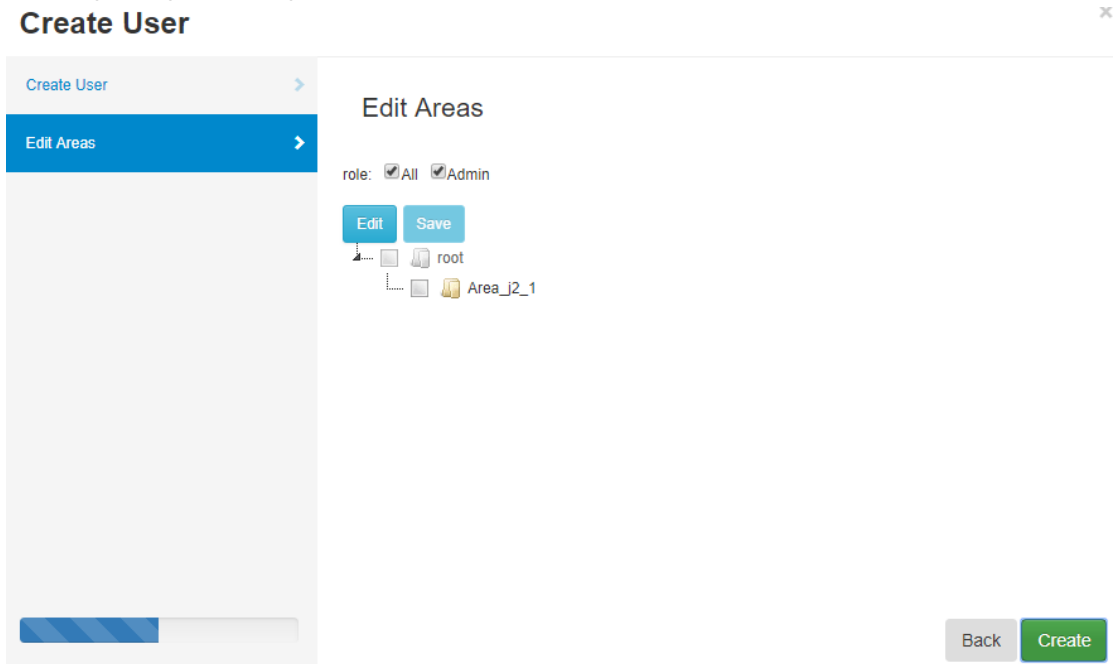
Click **System Management->Users And Permissions** to enable the interface. See the figure.



Click **Add NMSUser** to pop up the guideline. See the figure. Fill in the **Username** and **Password** and **Select Role** to enable **Next**.



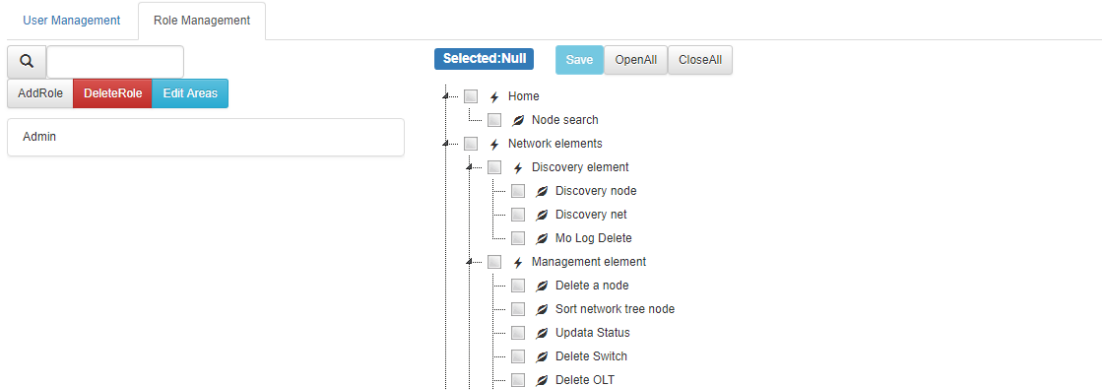
The interface shows below. The initial area covers all. If the user requires more, click **Edit**, selecting a single role to grant an area. Then click **Save**.



After finishing the above steps, click **Create**.

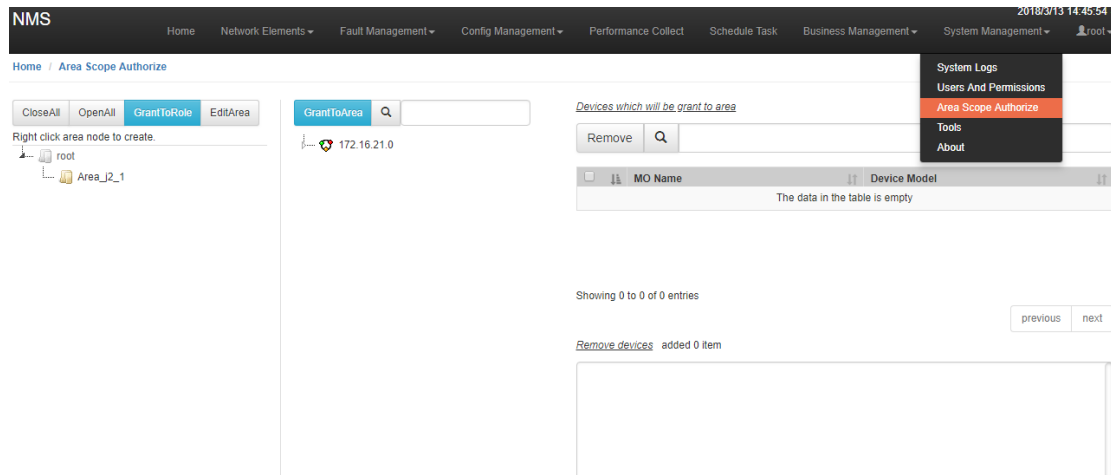
### 10.2.2 Role Management

Click **Role Management** to enable the interface which includes AddRole, DeleteRole, BindRole(To grant new areas, please enter **Edit Area**).



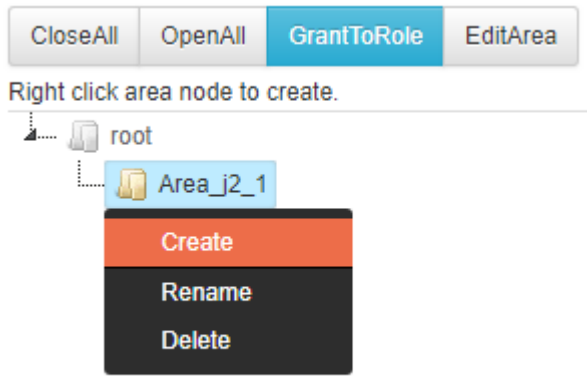
### 10.3 Area Scope Authorize

Click **System Management->Area Scope Authorize** to enable the interface. After finishing the following steps, authorize the role to the user to control user's access to the device, realizing the area management.



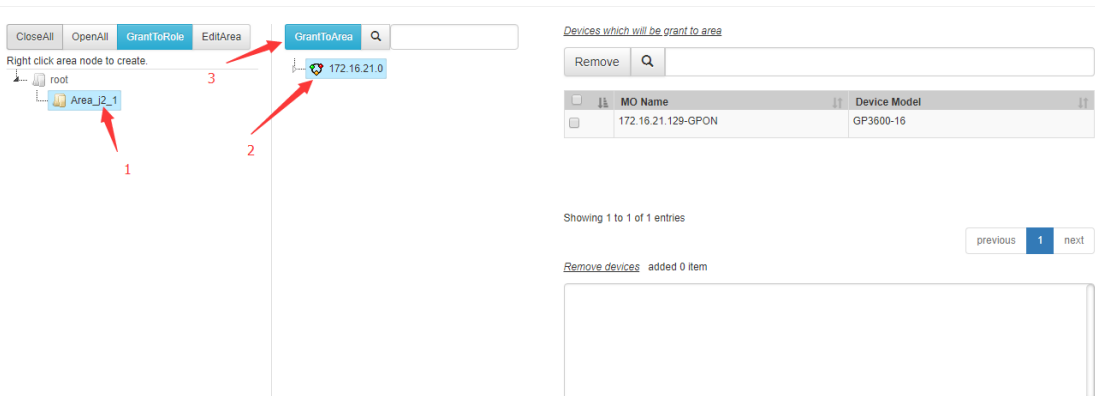
#### 10.3.1 Create Area

On the left of the above figure is a tree structure of **Area**. Right click the certain nodes to create. Users can rename or delete it later.



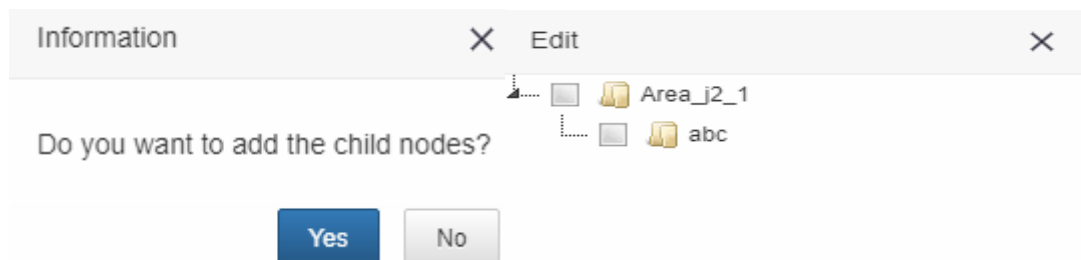
### 10.3.2 GrantToArea

On the middle of the interface is device tree. After creation, select the corresponding area and the devices to be granted. Click **GrantToRole** to make it. (For further filtering, select the corresponding data in the right form; click Remove, NMS will exclude the removed devices when granting.) See the figure.

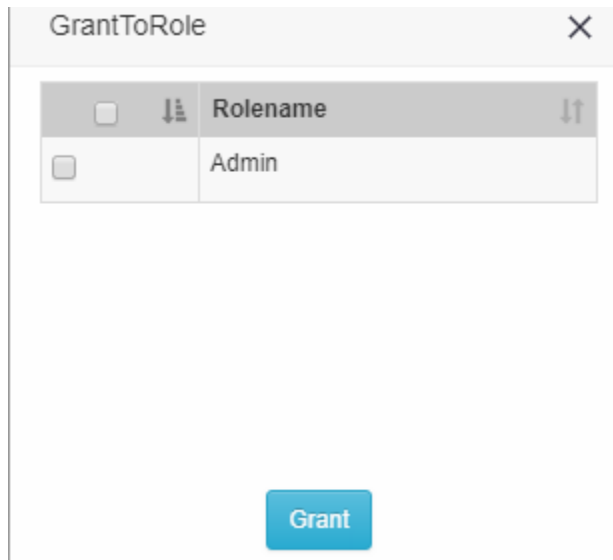


### 10.3.3 GrantToRole

First select the area, and click **GrantToRole**. If the selected area includes child nodes, NMS will give a notice whether to add the child nodes or not. The selection of Area interface will pop up.

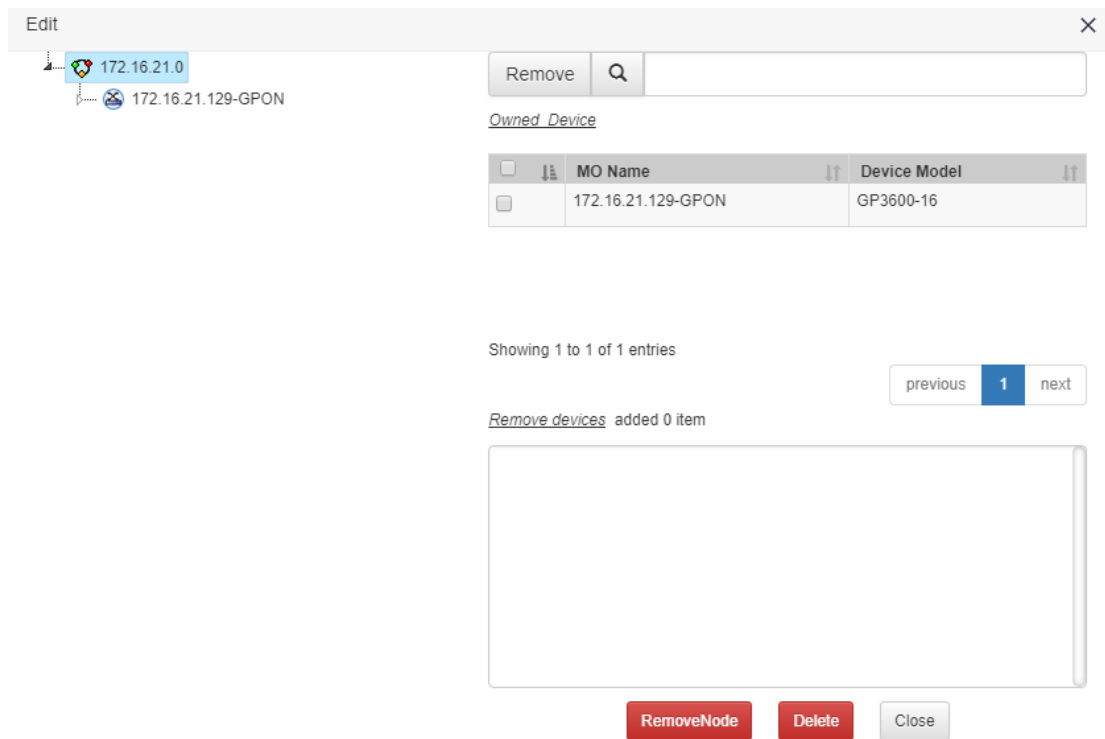


After selecting nodes, click **Yes** to select roles. Click **Grant** to grant the area to the role. ( If deleting some area from the role, please return to **Users And Permissions**.)



### 10.3.4 Edit

If the included device in Area requires removing, 1. Select one area; 2. Click edit buttons to enable the interface. See the figure.



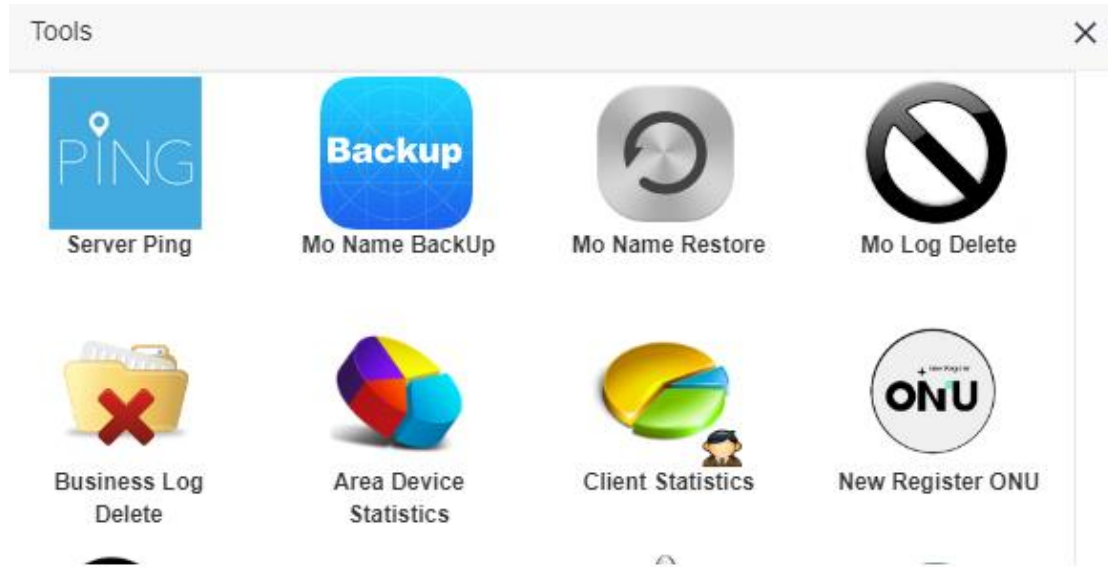
2 strategies of deletion are offered:

1. Remove directly the nodes and child nodes. Select the corresponding nodes on the left tree, and then click **RemoveNode**.
2. Remove one certain node. Select the corresponding nodes on the left tree, and their child nodes will show on the right form. Select the nodes and click **Remove**, the nodes to be removed will be displayed below. After confirmation, click **Delete** to remove the

nodes and their child nodes.

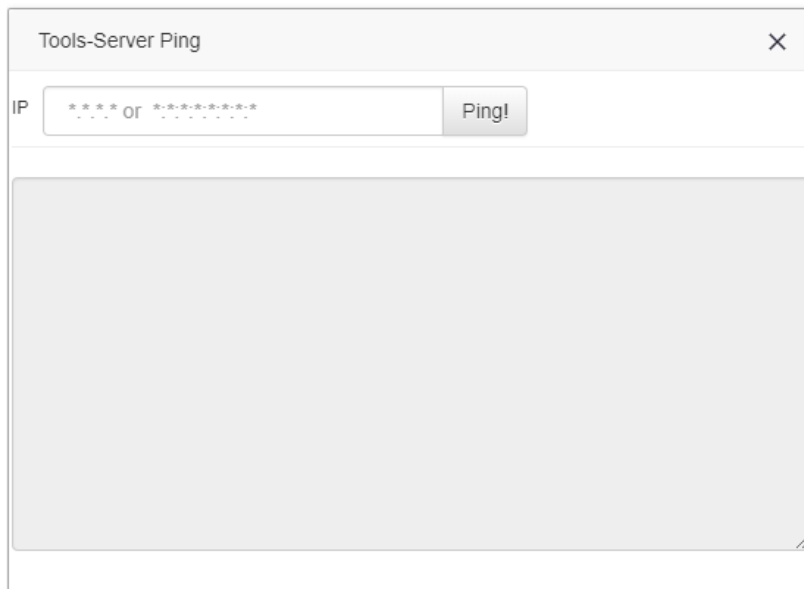
## 10.4 Tools

NMS includes some small tools for network management. Click **System Management->Tools** to enable the interface. See the figure.



### 10.4.1 Server Ping

It provides users with operation through **Tools-Server Ping**. It is mainly used to check whether the device is connected to **Server Ping** or not. See the following.



## 10.4.2 Mo Name BackUp

It is used to create the backup for displayed names of managed items. The backup file is in the form of **.xls**. See the figure.

	A	B	C	D
1	No.	IP( or ONU Mac)	Mo DisplayName	Device Type
2	1	172.16.21.119-EPON	172.16.21.119-EPON	EponOLTDevice
3	2	172.16.21.129-GPON	172.16.21.129-GPON	GponOLTDevice
4	3	172.16.21.129	172.16.21.129	Sw itchObject
5	4	172.16.21.52	172.16.21.52	Sw itchObject
6	5	172.16.21.42	172.16.21.42	Sw itchObject
7	6	11 11 11 11 11 11	EPON0/1:1	EponONUDevice
8	7	fa fc fe 12 34 56	EPON0/1:2	EponONUDevice

1. **Onekey Backup:** Click **Onekey Backup** to create backup for all displayed names of OLT and ONU, in the form of **.xls**.

### 10.4.2.1 ONU DisplayName BackUp

See the figure.

1. **Backup All:** Click **Backup All** to create backup for all ONU display names.  
 2. **Backup By Olt:** Input **OLT Name** to match obscurely all managed nodes. See the figure.

1| Add To BackUp

172.16.21.119-EPON

172.16.21.129-GPON

Click **Add To BackUp** to add the selected OLT to the list. See the figure.

172.16.21.119-EPON Add To BackUp

No.	Olt Name	Olt DisplayName
1	172.16.21.119-EPON	172.16.21.119-EPON

Showing 1 to 1 of 1 entries  
[previous](#) [next](#)

BackUp By Olt

Click **BackUp By Olt** to create backup for all OLT ONU display names in the form of **.xls**.

#### 10.4.2.2 Switch And Olt Display Name BackUp

Click **Switch And Olt Display Name BackUp**. See the figure.



Tools-Mo Name BackUp

Onu DisplayName BackUp **Switch And Olt DisplayName BackUp**

BackUp All

Network Name Add To BackUp

No.	Network	Network DisplayName
The data in the table is empty		

Showing 0 to 0 of 0 entries  
[previous](#) [next](#)

BackUp By Network

One Touch Backup

1. **BackUp All:** Click **BackUp All** to create backup for all current **Switch And Olt Display Name**.
2. **BackUp By Network:** Input Network Name needing backup to match obscurely all managed nodes. See the figure.

No.	Network
1	172.16.21.0

Add To BackUp

Click **Add To BackUp** to add the selected network nodes to the list. See the figure.

No.	Network	Network DisplayName
1	172.16.21.0	172.16.21.0

Showing 1 to 1 of 1 entries  
[previous](#) [next](#)

Click **BackUp By Network** to create backup for all switch and olt display name in the form of .xls.


### 10.4.3 Mo Name Restore

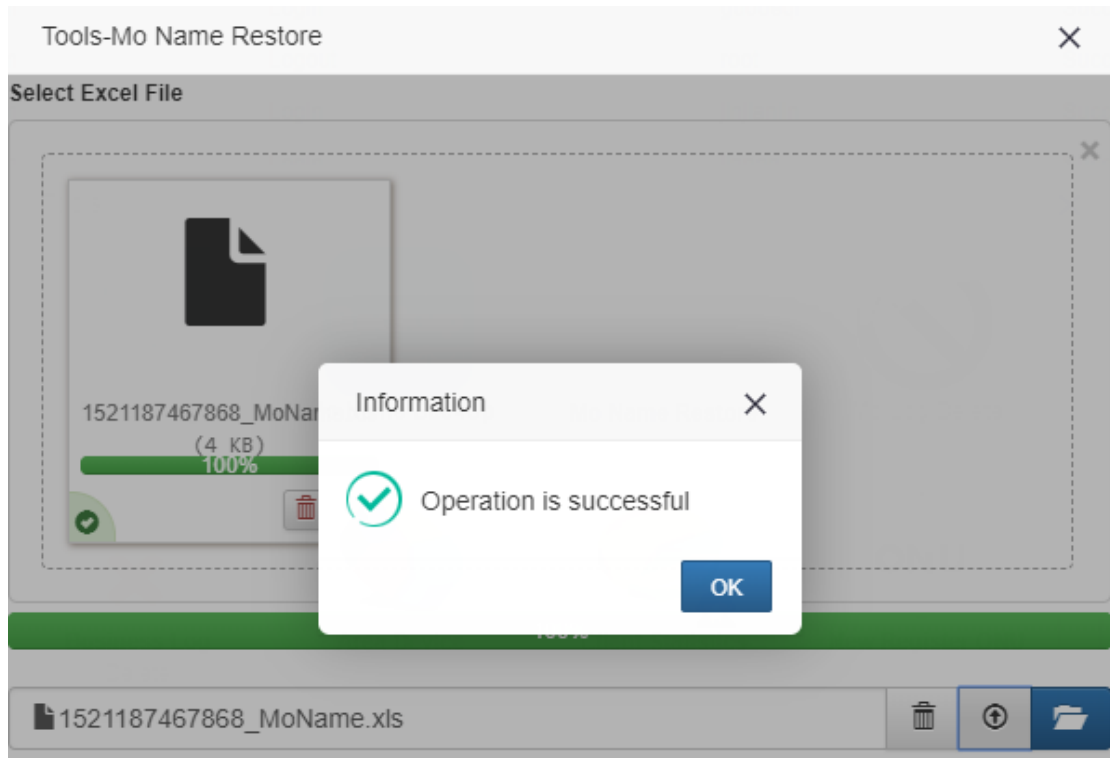
With the display name backup in 10.4.2, display names of the discovered devices can be restored. See the figure.

Tools-Mo Name Restore

Select Excel File

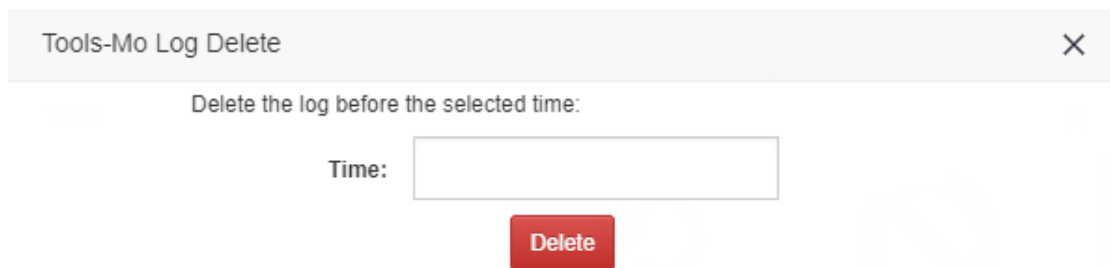
Drag & drop files here ...

Click the selection button of files or pull the backup files into . The display name of the managed devices can be restored. See the figure.



#### 10.4.4 MO log Delete

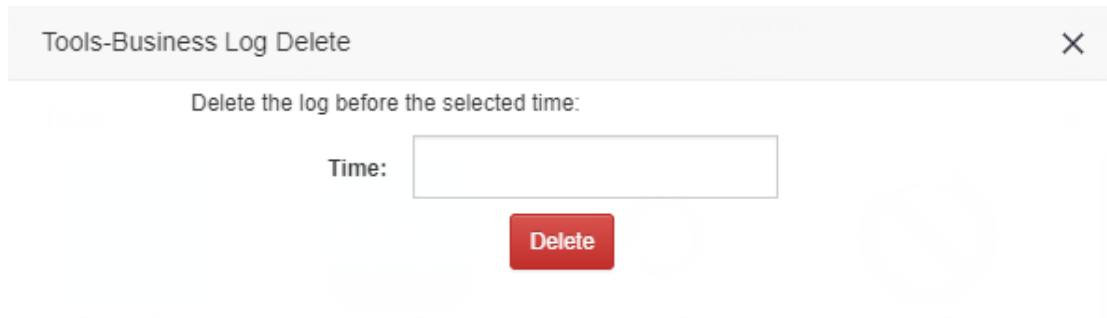
See the figure.



Select the time to be deleted. Click **Delete** to batch delete the MO logs corresponding to the time in **Discovery**.

#### 10.4.5 Business Log Delete

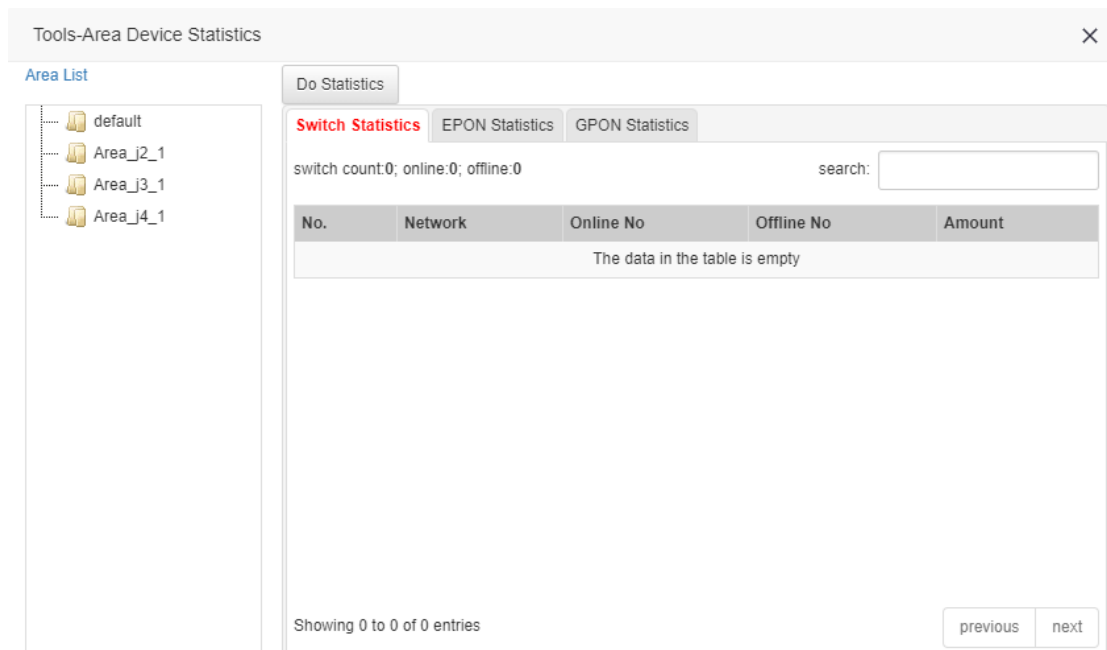
See the figure.



Select the time to be deleted. Click **Delete** to batch delete the logs corresponding to the time.

### 10.4.6 Area Device Statistics

Do statistics about **online/offline/switch count** according to device types (GPON/EPON/Switch). See the figure.



### 10.4.7 Client Statistics

It can do client statistics. Click **System Management->Tools->Client Statistics**. See the figure.

Tools-Client Statistics <span style="float: right;">×</span>				
No.	IP	UserName	Login Time	Is Online
1	172.16.21.21	jianan	2018-03-19 09:36:51	true
2	172.16.21.21	jianan	2018-03-19 09:16:18	true
3	172.16.21.125	jinjianlin	2018-03-19 09:12:12	true
4	172.16.21.219	zhaojiawei	2018-03-19 09:07:39	true

Refresh

### 10.4.8 New Register ONU

**New registered ONU** will show on the interface so that ONU can be easier enabled and remarked. When ONU is new registered, the alarms of the port bind will show, which represents the displayed ONU. So make sure to receive the alarms.

Tools-New Register ONU <span style="float: right;">×</span>					
show <input type="text" value="10"/> entries		search: <input type="text"/>		<input type="button" value="Remove from new onu"/>	
<input type="checkbox"/>	Belong Olt	Mac	DisplayName	Register time	Operation
The data in the table is empty					

Showing 0 to 0 of 0 entries

### 10.4.9 Terminal Query By Mac

Based on mac bottom allied with ONU, do terminal query of **Belong Olt, Belong ONU, Slot Number, pon port number**, with lateral support of the device. See the figure.

Tools-Terminal Query By Mac
✕

Mac:

Belong Olt	Belong ONU	Slot Number	pon port number	ONU index	ONU Uni port number	Vlan
No matching records found						

### 10.4.10 Batch Issue Config Order

Enable **Tools-Batch Issue Config Order**. First select configured device: **All** and **IP**. All: Configure all devices in NMS database; IP: Configure single IP device managed by NMS. After selecting the device, input username and password of **telnet** on the below page. When necessary, the password of **enable** should be input together. Input the command to be configured on the middle page. Click **enter** every time when each command is input. After input all, click **Set**. The sending time depends on the amount of devices. Please wait patiently until **Operation is successful** shows up. Click **Show Result** to check whether the configuration of each device is successful or not.

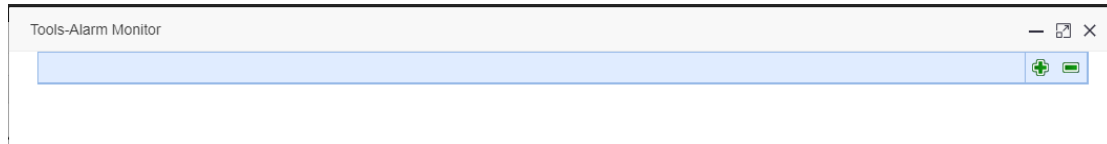
Tools-Batch Issue Config Order
✕



All    
  IP    

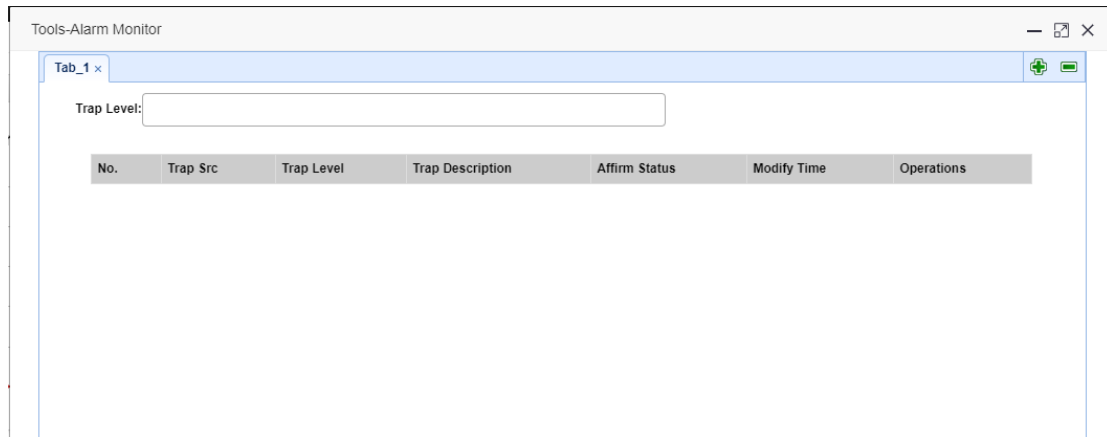
```
enable
conf
snmp-server community aa rw
```

### 10.4.11 Alarm Monitor

It can monitor alarms and filter the levels of alarms. Click **System Management->Tools->Alarm Monitor**. See the figure.



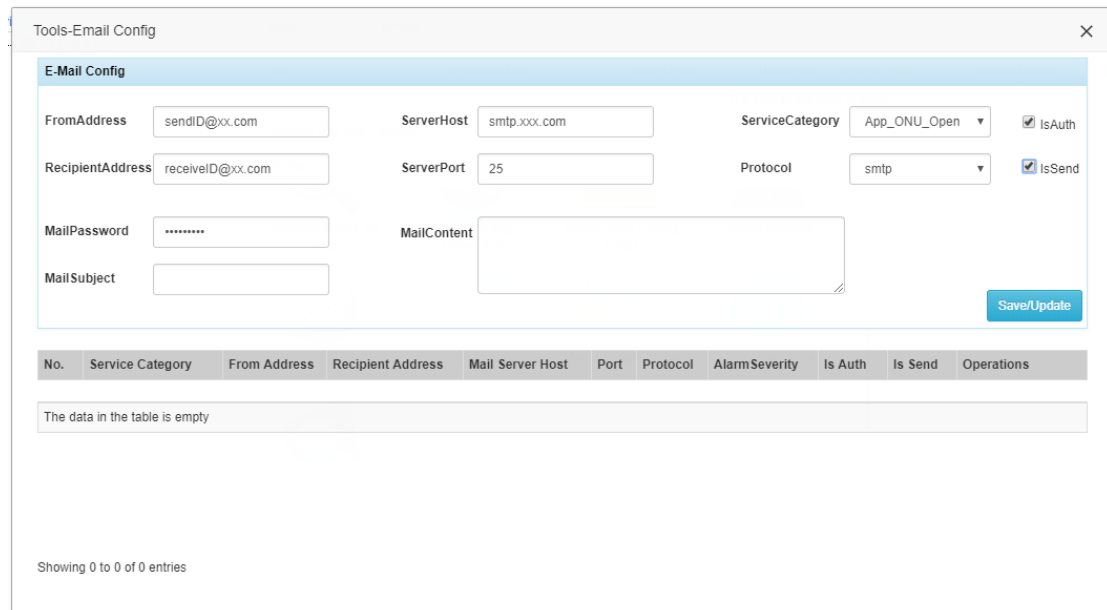
Click  to create a monitoring form and select the levels of alarms to be monitored so as to enable the monitor. If multiple forms are necessary, click  to create more. (Caution: Upon enabling **Alarm Monitor**, the real-time display of the alarms will be screened and all alarms will be displayed after being filtered on the interface.)



See the figure. In **Trap Level**, select the level of filtering. Only if the traps correspond to the selected level, it will show in the below form.

### 10.4.12 EMAIL Config

It mainly aims at informing the traps on NMS and offers of ONU application. Users can pre configure the e-mail based on their needs. See the figure.



Parameters of configuration:

**FromAddress:** The address from which emails are sent;

**ServerHost:** The address of the host server;

**ServiceCategory:** The service targeted by the configuration of the emails. NMS 本 offers two services: **ONU-Open** and **Alarm**. If **Alarm** is selected, the configuration only aims at **Alarm**, that is, upon receiving alarms, NMS will send emails to the appointed recipient email.

**RecipientAddress:** The address to receive emails;

**ServerPort:** The port number to send the email account server;

**Protocol:** The protocol adopted by the email sending;

**MailPassword:** The login password of emails;

**MailSubject:** The subject of emails;

**MailContent:** The content of emails;

**IsAuth:** Whether the authentication of user ID should be sent with emails or not.

**IsSend:** The switch of sending emails. If it is not selected, the email will not be sent even when the **ServiceCategory** is enabled. So select it for sending emails.

After filling in all information, click Save/Update to enable email service. Meanwhile, you can check the configured email categories in the form. See the figure.

The screenshot shows a web interface for configuring email services. The main form includes fields for FromAddress, RecipientAddress, MailPassword, MailSubject, ServerHost, ServerPort, MailContent, ServiceCategory, Protocol, IsAuth, and IsSend. A 'Save/Update' button is located at the bottom right of the form. Below the form is a table listing the configured email categories.

No.	Service Category	From Address	Recipient Address	Mail Server Host	Port	Protocol	AlarmSeverity	Is Auth	Is Send	Operations
1	App_ONU_Open	sendID@xxx.com	recevieID@xxx.com	smtp.xxx.com	25	smtp		true	true	<a href="#">Edit/Delete</a>

Showing 1 to 1 of 1 entries

It also support the upgrade and deletion for created emails. From the figure above, **Edit/Delete** is offered in the end column. Click **Edit** to do upgrade, refilling the configuration of the mail service to the configuration bar. Users can modify it based on their needs. Click **Save/Update** after modification.

### 10.4.13 LLDP Table

It is used to help check the LLDP connection between the network topology of the switch. See the figure.



Tools-LLDP Table
✕

IP Address:

Community:

SNMP Version:  ▼

Enterpriseld:

SNMP Port:

localPortTable
localManAddrTable
remotePortTable
remoteManAddrTable

lldpLocPortNum	lldpLocPortId	lldpLocPortDesc
No data available in table		

Input **IP Address**, **Enterpriseld** ( In **Managed Objects Properties** in **Config**, the ID can be checked. ), and **Community**. Click **Load** to acquire LLDP information.

### 10.4.14 MAC Address Table

It is used to check Mac Address information and supports the setting of **Mac Aging Time**. Input IP Address. If the pull-down list is displayed, select one item on it, and NMS will automatically load **Enterpriseld**, **Community**, **NMP Port**. If not, please fill in the information manually. After filling, click **Load** to check **Mac Address Table**. If **Mac Aging Time** needs setting, click **Set**. (Unit: s)

Tools-Mac Address Table
✕

IP Address:

Community:

SNMP Version:  ▼

Enterpriseld:

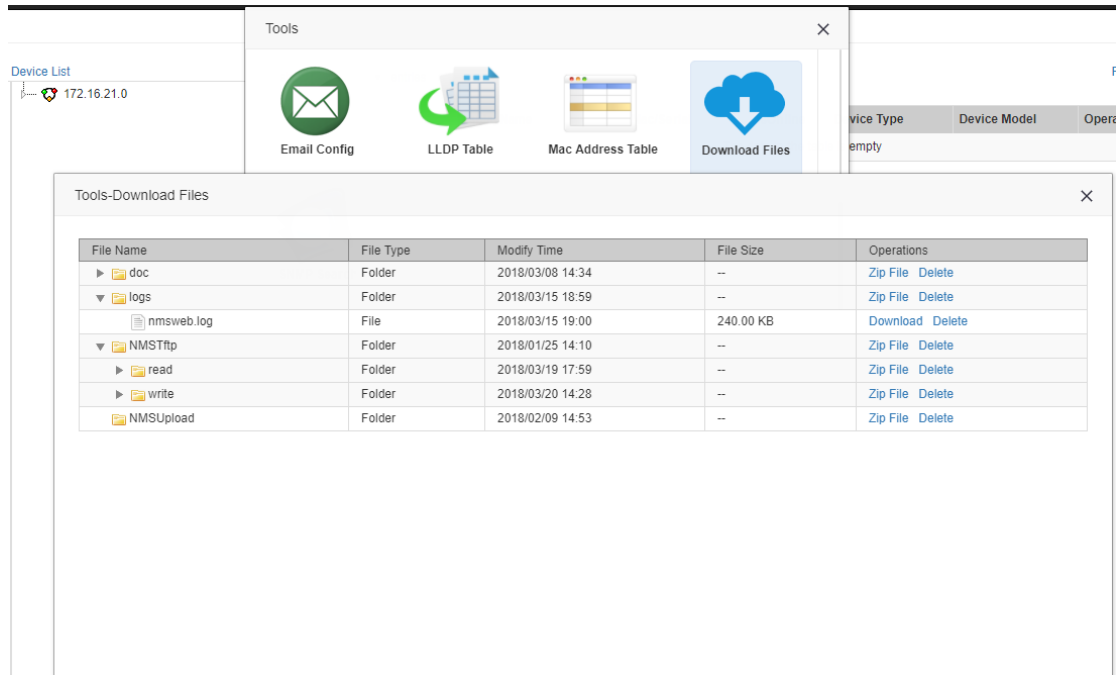
SNMP Port:

Mac Aging Time:

No.	Vlan	Mac	Port	Type
The data in the table is empty				

### 10.4.15 Download Files

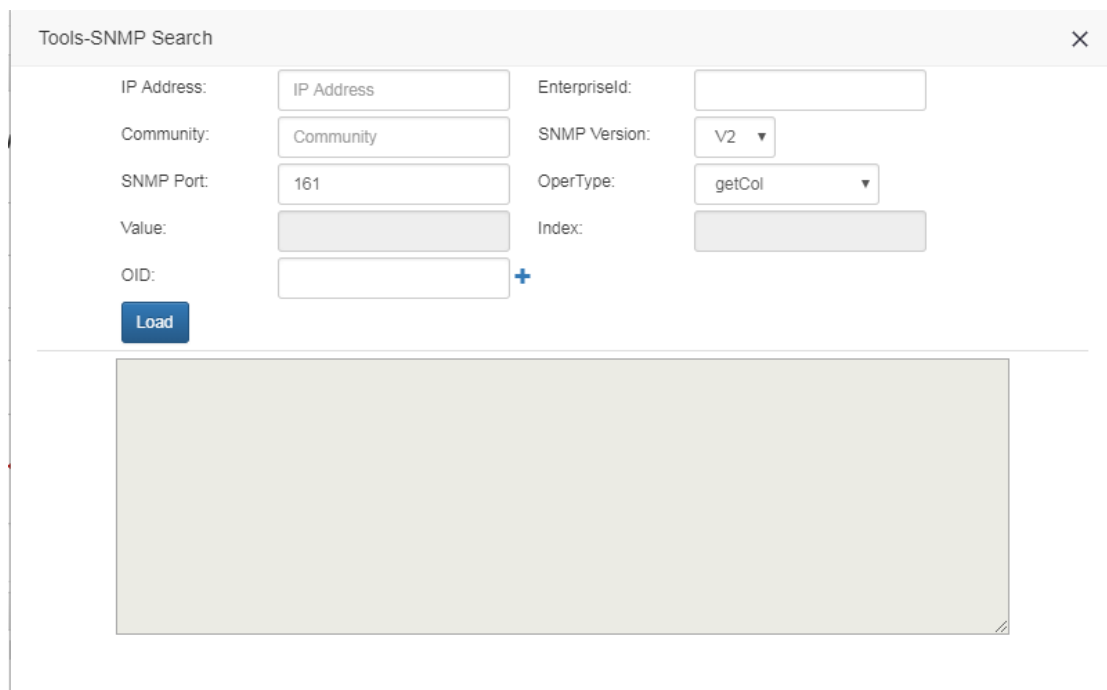
It offers some files to users in loading and deletion tasks. Whether the file is accessible to load or not depends on the configuration of NMS. See the figure.



From the figure, the interface is displayed in the form of tree graph. Click the folder in the first column to display the files. It only support one single file to be downloaded instead of the folder. But the folder can be downloaded after compression.

### 10.4.16 SNMP Search

It can help search and assign the nodes or lines of **mib**. Click **System Management->Tools->SNMP** to enable the interface. See the figure.



Search steps:

1. Fill in **IP Address**, **Enterpriseld**, **Community**, **SNMP Port**.
2. Select **OperType**

OperType:

Index:

- getCol
- getCol
- getNode
- getValueByIndex
- setNode
- setValueByIndex

3. Fill in **OID**, click **Load** for search. (If **value** and **index** are selected, the **value** and **index** should be input.)

## 10.5 About

Click **System Management->About** to enable the interface. See the figure.

About
×

---

**System Name:** NMS

---

**System Type:** NMS

---

**Version Number:** Beta 2.0.6 20180301

---

**Problem Repair:**

## 10.6 Caution

A summary of the overall domain management steps:

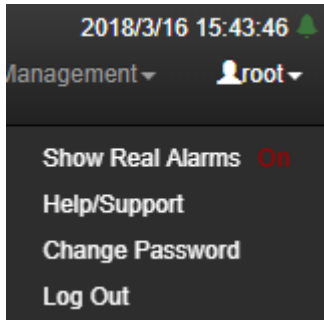
1. Discover device
2. Create area
3. Grant to area
4. Create role
5. Grant to role
6. Create user and appoint role

Step 2, 3 must be operated on the regional authorization interface.(Step3 can be granted in discovering devices, and NMS will automatically send the discovered device to the area.)

Step4, 5, 6 can be finished in the guideline of **Create User**.

## 11 root

Hover the mouse on **root** on the top right corner to display the pull-down list. See the figure.



### 11.1 Show Real Alarms On/Off

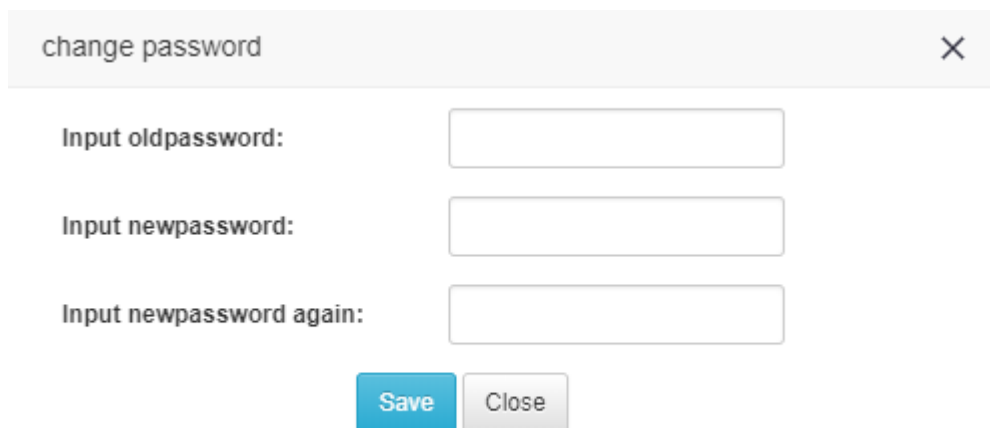
Its state: **On/Off**. **On**: The real-time alarms will pop up; **Off**: No pop-up.

### 11.2 Help/Support

Refer to *NMSWeb2.0 Operation Manual*.

### 11.3 Change Password

Click **change password** to pop up the following interface.

A screenshot of a 'change password' dialog box. The dialog has a title bar with the text 'change password' and a close button (X) on the right. Below the title bar, there are three input fields: 'Input oldpassword:', 'Input newpassword:', and 'Input newpassword again:'. At the bottom of the dialog, there are two buttons: 'Save' (in blue) and 'Close' (in grey).

Input the old password, then input new password twice(The amount of characters is over 6.) and click **Save**.

## 11.4 Log Out

Click **Log out** to exit the system. Return to the login interface.