

OLT-E/F

EPON OLT RELEASE 1.0

Network Management System Handbook

About this document

Overview

OLT-E/F optical access equipment is a large-scale carrier-grade OLT (Optical Line Terminal). It complies with **IEEE802.3-2005** and **Technical Requirements for Access Network—Ethernet Passive Optical Network (EPON)**; It provides broadband, voice, IPTV, CATV and various kinds of integrated services for subscribers.

Version

The document corresponds to product version as follows

Product name	Product version
OLT-E/F	V1.0

Intended Audience

This document is intended for:

- Installation debugging engineer
- Field maintenance engineer
- System maintenance engineer
- Data configuration engineer
- Application developer


Brief



This document describes the following about OLT-E/F

Chapter	Content
1 Overview	Introduce system structure, overall scheme and software hardware environment.
2 Quick Start	Introduce starting sequence, add device and using help.
3 Main Interface	Introduce main interface, main menu, toolbar, rolling log export bar and status bar.
4 System Management	Introduce system management, for example modify password, lock client, exit and db backup restore.
5 Equipment Management	Introduce basic processing of equipment.
6 Alarm Management	Introduce alarm processing..
7 Performance Management	Introduce real-time and history performance.
8 Security Management	Introduce security management method.
9 Topology Management	Introduce topology map management, physical topology and logical topology management.
10 OLT Detail	Introduce equipment control.
11 OLT Management	Introduce OLT configuration.
12 ONU Management	Introduce ONU configuration.
13 FAQ	Frequently asked questions.

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Class	Description
	Notice	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.

	Warning	Indicates a hazard with a medium or low level of risk, which if not avoided, could result in minor or moderate injury.
	Note	Provides additional information to emphasize or supplement important points of the main text.

Text Conventions

Symbol	Class	Description
/	or	One item is selected.
+	and	Two items or several items can be selected at the same time.
>	next	Multi-level menu is separated by ">".

Change History

Changes between document issues are cumulative. Therefore, the latest document issue contains all changes made in previous issues.

Version 1.0

This is the first official release.

Contents

1. Overview.....	1
1.1. Profile.....	2
1.2. System structure.....	2
1.3. Overall scheme.....	3
1.4. Software&hardware environment.....	4
2. Quick start.....	5
2.1. Starting sequence.....	6
2.2. Add device.....	6
2.3. Set the Trap Server.....	7
3. Main interface.....	9
3.1. Main interface.....	10
3.2. Main menu.....	10
3.3. Main toolbar.....	11
3.4. Rolling log bar.....	11
3.5. Status bar.....	11
4. System management.....	13
4.1. System management menu.....	14
4.2. Lock client.....	14
4.3. Modify password.....	15
4.4. Data dump.....	16
4.5. Db Backup and restore.....	16
4.6. Exit.....	17
5. Equipment management.....	19
5.1. Equipment management menu.....	20
5.2. NE query.....	20
5.3. Scan IPC.....	21
5.4. Review IPC.....	22
6. Alarm management.....	23

6.1.	Alarm management menu	24
6.2.	Alarm and event query.....	24
6.3.	Alarm process rule.....	26
6.4.	Alarm sound.....	27
6.5.	Email notify configure.....	28
6.6.	Alarm parameter configuration	29
7.	Performance management.....	31
7.1.	Performance management menu	32
7.2.	Performance running configuration	32
7.3.	Performance collect task management	33
7.4.	Performance task data query.....	34
8.	Security management.....	37
8.1.	Security management menu.....	38
8.2.	User management	38
8.3.	Role management.....	40
8.4.	Permission management	41
8.5.	Online user.....	42
8.6.	Operation log	42
9.	Topology management	45
9.1.	Topology map operation	46
9.2.	Topology toolbar.....	46
9.3.	Auto layout	46
9.4.	Change name	47
9.5.	Search and locate	48
9.6.	Save position	48
9.7.	Domain and group management.....	49
9.8.	Device scan.....	50
9.9.	Add devices.....	51
9.10.	Physical topology map.....	51
10.	OLT detail	53

10.1.	OLT basic information	54
10.2.	Card list	55
10.2.1.	Provision card.....	55
10.2.2.	Delete card	56
10.2.3.	Reset card	56
10.3.	ONU list.....	57
10.3.1.	Authorize ONU	58
10.3.2.	Delete ONU	59
10.3.3.	Reset ONU	60
10.3.4.	Register ONU	60
10.4.	Invalid ONU list	60
10.5.	Batch authorize ONU	61
10.6.	ONU authorization Mode	62
10.7.	MAC white list	63
10.8.	LOID white list.....	66
10.9.	MAC bind	69
10.10.	ONU replace	69
11.	OLT management.....	71
11.1.	Delete device	72
11.2.	View management	72
11.2.1.	Chassis view	72
11.2.2.	Devices physical map.....	73
11.2.3.	Move	74
11.3.	Sync management.....	75
11.3.1.	Sync device	75
11.3.2.	Alarm sync	76
11.3.3.	Category sync.....	76
11.4.	Configuration.....	77
11.4.1.	Uplink configure	77
11.4.1.1.	Uplink port configure	77

11.4.1.2.	RSTP enable	78
11.4.1.3.	Port RSTP	79
11.4.1.4.	Trunk port link aggregation	80
11.4.2.	PON isolate.....	81
11.4.3.	IGMP.....	82
11.4.4.	QOS management.....	87
11.4.5.	MAC management.....	91
11.4.6.	Smart grid Server config.....	93
11.4.7.	EMS access control.....	94
11.4.8.	Performance statistic switch	95
11.4.9.	Optical detect switch.....	97
11.4.10.	Alarm threshold management.....	97
11.4.11.	Alarm template management.....	100
11.4.12.	Outer VLAN	101
11.4.13.	QINQ template	102
11.4.14.	QINQ profile binding.....	103
11.4.15.	System ONU ACL function	104
11.4.16.	Template configuration	105
11.4.17.	PON-Uplink bind.....	106
11.5.	Control command.....	107
11.5.1.	Upgrade system software.....	107
11.5.2.	Backup software	108
11.5.3.	Batch upgrade ONU	110
11.5.4.	IGMP management.....	111
11.6.	Operation	112
11.6.1.	Save device config.....	112
11.6.2.	Sync device time.....	112
11.6.3.	Restart	113
11.6.4.	Reset backup card.....	113
11.6.5.	Clear flash.....	114

11.6.6.	Force switch.....	114
11.6.7.	Export configuration files	115
11.6.8.	Import configuration files	116
11.6.9.	Export log files	117
11.6.10.	NE rename	118
11.7.	State Callbacks	118
11.7.1.	Open Batch Configure Capability	118
11.7.2.	MAC table	119
11.7.3.	ONU type and software and hardware versions	120
11.7.4.	Check OLT link status	121
11.7.5.	Slot work state info	122
11.7.6.	RSTP	123
11.7.6.1.	RSTP Bridge	123
11.7.6.2.	RSTP port info.....	124
11.8.	View current/History alarm.....	125
11.9.	View real-time performance.....	127
11.10.	Ping NE	127
11.11.	Telnet NE.....	128
12.	ONU management	131
12.1.	ONU detail.....	132
12.2.	NE rename.....	132
12.3.	View management	133
12.3.1.	Chassis view.....	133
12.3.2.	Device physical map	134
12.3.3.	Move.....	134
12.4.	Sync device.....	135
12.5.	Configuration.....	136
12.5.1.	ONU port MAC number limit	136
12.5.2.	RSTP enable	137
12.5.3.	DBA parameters management.....	138

12.6.	Control command.....	139
12.6.1.	ONU performance reset	139
12.7.	Operation(O)	139
12.7.1.	Reregister ONU	139
12.7.2.	Reset ONU	140
12.7.3.	Delete ONU	140
12.7.4.	Device to linkup	141
12.8.	State Call backs	142
12.8.1.	ONU port MAC table	142
12.8.2.	Device information.....	143
12.8.3.	Capability information.....	144
12.8.3.1.	FEC function	144
12.8.4.	Link test	145
12.8.4.1.	POTS port outer test	145
12.8.4.2.	POTS port inner test	146
12.9.	Operation(N)	147
12.9.1.	FE port loop back	147
12.9.2.	FE port auto-negotiation.....	148
12.9.3.	User business configuration.....	149
13.	FAQ	151

Figures

Figure 1-1	System structure	3
Figure 1-2	General disposition	3
Figure 2-1	Login	6
Figure 2-2	Select protocol	7
Figure 3-1	The main interface	10
Figure 3-2	The main menu	10
Figure 3-3	The main menu	11
Figure 3-4	The rolling log bar	11
Figure 3-5	The status bar	11
Figure 4-1	System management menu	14
Figure 4-2	Lock client	14
Figure 4-3	Modify password	15
Figure 4-4	Data dump	16
Figure 4-5	Db backup and restore	17
Figure 4-6	Exit	18
Figure 5-1	Equipment management menu	20
Figure 5-2	NE Query	21
Figure 5-3	Scan IPC	21
Figure 5-4	Review IPC	22
Figure 6-1	Alarm management menu	24
Figure 6-2	Query alarm or event	25
Figure 6-3	Alarm rule	27
Figure 6-4	Alarm sound	28
Figure 6-5	Email notify config	29
Figure 6-6	Alarm parameter configuration	30
Figure 7-1	Performance management	32
Figure 7-2	Performance running configuration	33
Figure 7-3	Performance task management	34

Figure 7-4	Performance task result query	35
Figure 8-1	Security mgmt(S)	38
Figure 8-2	Create user	39
Figure 8-3	Role management.....	40
Figure 8-4	Permission management	41
Figure 8-5	Online user	42
Figure 8-6	Operation log	43
Figure 9-1	Toolbar	46
Figure 9-2	Auto layout	47
Figure 9-3	Change name	48
Figure 9-4	Search device	48
Figure 9-5	Create domain	49
Figure 9-6	Scan devices.....	50
Figure 9-7	Add devices.....	51
Figure 9-8	Physical topology map	52
Figure 10-1	Device detail	54
Figure 10-2	Provision card	55
Figure 10-3	Delete card	56
Figure 10-4	Reset card	56
Figure 10-5	ONU List	57
Figure 10-6	Add ONU.....	58
Figure 10-7	Successful authorizationn message.....	59
Figure 10-8	Failed Authorization fault message	59
Figure 10-9	Delete ONU	59
Figure 10-10	Delete successful message.....	59
Figure 10-11	Reset ONU	60
Figure 10-12	Register ONU	60
Figure 10-13	Invalid ONU list	61
Figure 10-14	Batch authorize	62
Figure 10-15	ONU authorized mode	63

Figure 10-16	Add white list.....	64
Figure 10-17	Batch Modify	65
Figure 10-18	MAC white list	66
Figure 10-19	Add LOID white.....	67
Figure 10-20	LOID Batch modify.....	68
Figure 10-21	LOID White list.....	68
Figure 10-22	MAC-LOID Bind.....	69
Figure 10-23	ONU Replace.....	70
Figure 10-24	Replace fault.....	70
Figure 11-1	Delete devices	72
Figure 11-2	Chassis view	73
Figure 11-3	Devices physical map.....	74
Figure 11-4	Move.....	75
Figure 11-5	Device sync	76
Figure 11-6	Alarm message.....	76
Figure 11-7	Category sync.....	77
Figure 11-8	Uplink port config.....	78
Figure 11-9	RSTP Enable	79
Figure 11-10	Port RSTP config.....	80
Figure 11-11	Trunk port link aggregation.....	81
Figure 11-12	PON port isolate	82
Figure 11-13	Global property	83
Figure 11-14	IGMP Auth template.....	83
Figure 11-15	FE Auth template	84
Figure 11-16	Group config	85
Figure 11-17	Prejoin.....	85
Figure 11-18	Cascade port	86
Figure 11-19	ONU Fast leave	86
Figure 11-20	Create QOS Template	87
Figure 11-21	QOS Template bind/unbind	88

Figure 11-22	Packets rate control	89
Figure 11-23	ONU Bandwidth	90
Figure 11-24	QOS priority	91
Figure 11-25	MAC Management.....	92
Figure 11-26	ONU Port mac number limit.....	93
Figure 11-27	Smart grid server config	94
Figure 11-28	EMS Access control.....	95
Figure 11-29	Card port statistic switch.....	96
Figure 11-30	ONU Port statistic switch	96
Figure 11-31	Optical detect switch.....	97
Figure 11-32	CPU usage threshold	98
Figure 11-33	Uplink port threshold.....	99
Figure 11-34	ONU Optical module threshold.....	99
Figure 11-35	Template management	100
Figure 11-36	Template bind/unbind	101
Figure 11-37	Outer vlan	102
Figure 11-38	Create QINQ template.....	103
Figure 11-39	QINQ Profile binding.....	104
Figure 11-40	System ONU ACL function	105
Figure 11-41	Template configuration	106
Figure 11-42	PON-Uplink Bind.....	107
Figure 11-43	Upgrade system software.....	108
Figure 11-44	Backup system software.....	109
Figure 11-45	Batch upgrade ONU	111
Figure 11-46	Flush IGMP configuration	111
Figure 11-47	Save current configuration.....	112
Figure 11-48	Update time	112
Figure 11-49	Restart device.....	113
Figure 11-50	Reset backup card.....	113
Figure 11-51	Clear flash.....	114

Figure 11-52	Force switch.....	114
Figure 11-53	Export configuration files	115
Figure 11-54	Import configuration files	116
Figure 11-55	Export log files	117
Figure 11-56	NE Rename	118
Figure 11-57	Batch configure capability.....	119
Figure 11-58	MAC Table	120
Figure 11-59	ONU Type and software and hardware versions	121
Figure 11-60	Check OLT link status.....	122
Figure 11-61	Slot work state info	123
Figure 11-62	RSTP Bridge.....	124
Figure 11-63	RSTP Port info.....	124
Figure 11-64	Reset alarm query condition.....	125
Figure 11-65	Alarm query list.....	126
Figure 11-66	Alarm statistics result.....	126
Figure 11-67	View real time performance.....	127
Figure 11-68	Ping NE.....	128
Figure 11-69	Telnet NE	129
Figure 12-1	ONU Detail.....	132
Figure 12-2	NE Rename	133
Figure 12-3	ONU Chassis view.....	134
Figure 12-4	ONU Device physical view	134
Figure 12-5	move onu	135
Figure 12-6	Sync device	136
Figure 12-7	ONU Port MAC num limit.....	137
Figure 12-8	RSTP Enable interface	137
Figure 12-9	DBA Parameters management interface.....	138
Figure 12-10	Clear ONU performance statistics.....	139
Figure 12-11	ONU reregister.....	140
Figure 12-12	Tips of reregister ONU.....	140

Figure 12-13	Tips of reset ONU	140
Figure 12-14	Delete ONU	141
Figure 12-15	Tips of delete ONU	141
Figure 12-16	Set device linkup.....	142
Figure 12-17	ONU Port MAC table	143
Figure 12-18	Device info	144
Figure 12-19	FEC Function.....	145
Figure 12-20	Pots port outer test	146
Figure 12-21	Pots port inner test.....	147
Figure 12-22	FE Loop Back	148
Figure 12-23	Force auto-negotiation.....	149
Figure 12-24	User business configuration	150

1. Overview

This chapter describes the overall of Network Management System. It mainly includes the following contents:

- Profile
- System structure
- Overall scheme
- Software&Hardware environment

1.1. Profile

The Network management system observes FCAPS standard and includes the capability for system management, topology management, equipment management, performance management, fault management, configuration management and so on. It supports real-time monitoring of network equipment and provides reliable safety validation. It optimizes for usability combined the actual application scenarios.

It includes Client, Server and SBI. Client and Server can be deployed separately and also be deployed in the same server.

1.2. System structure

- ✧ It is based on J2EE technology and has higher scalability.
- ✧ It includes Client, Server and SBI.
- ✧ Client is a graphic interface program for users operate network management software. You can install multiple sets of clients.
- ✧ Server is a center of back logic processing in network management system. Server gets equipment data from SBI, then store on database. Client gets all information of management by calling server API.
- ✧ SBI is a media between equipments which responsible for equipment interactive. It can be deployed separately with server and also can be deployed on the same server.

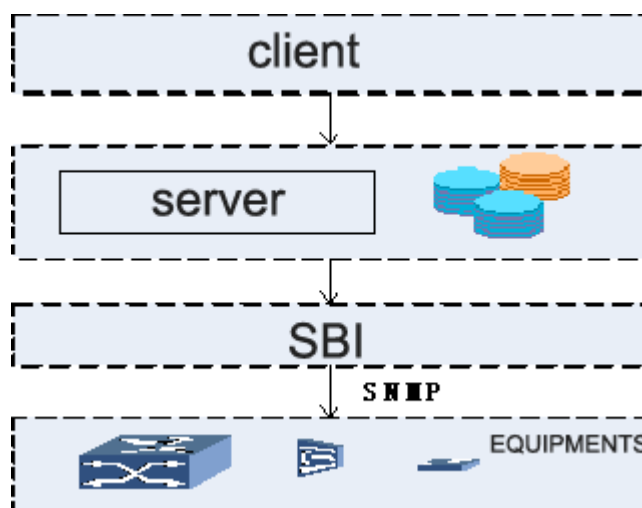


Figure 1-1 System structure

1.3. Overall scheme

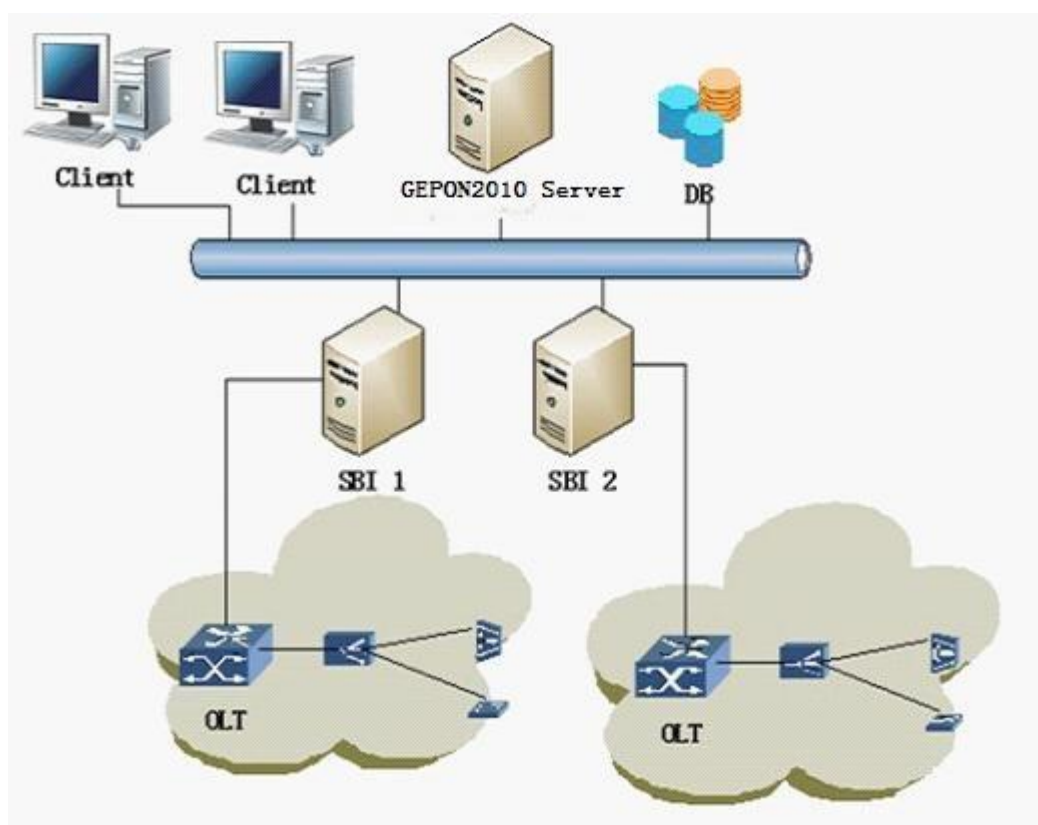


Figure 1-2 General disposition

1.4. Software&hardware environment

Network management server (include database and SBI)

CPU: basic frequency above 2GHz

Memory: 2G and above 2G

Disk: 20G disk space

Operating System: Windows2003/Windows XP Pro+SP2/+SP3

JRE: J2SE1.6.0_01 above

Network management server

CPU: Basic frequency above 2GHz

Memory: 1G and above 1G

Disk: 10G disk space

Video Card: 65000 color, resolving capability 1024*768 and above

Operating System: Windows2003/Windows XP Pro+SP2/+SP3

JRE: J2SE1.6.0_01 above

2. Quick start

This chapter describes the procedure for starting the Network Management System quickly. It mainly includes the following contents:

- Starting sequence
- Add device
- Set the TRAP server
- Using help

2.1. Starting sequence

1. Install Program
 - a. It will generate three programs automatically which are Client, Server and SBI when installation is complete.
2. Starting Server
 - a. Click the server. Listening port of the Server is TCP 5188.
 - b. System will start default database MYSQL and JMS server JORAM automatically in the background.
3. Starting SBI
 - a. Click the SBI. Listening port of the SBI is TCP 5189.
4. Starting Client
 - a. Click the Client, pop-up login window.
5. Login
 - a. Default username and password: root, root
 - b. Default port:5188
 - c. Server IP: IP address of the Server.

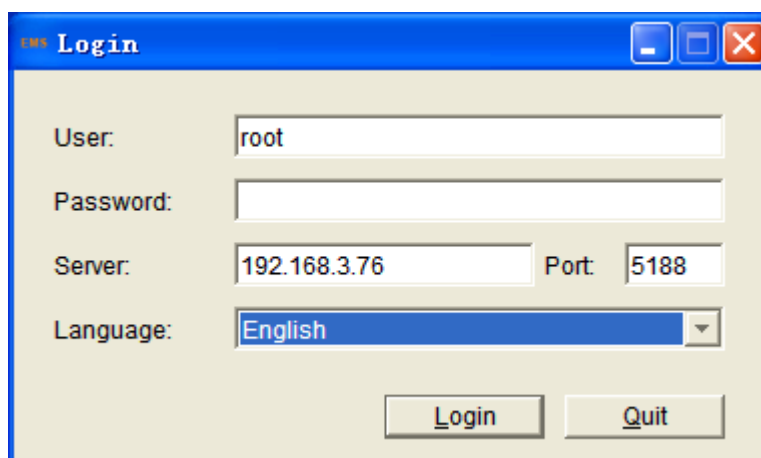


Figure 2-1 Login

2.2. Add device

Function

Add network element

Operating Procedure

1. At primary topological diagram, right-click any of the blanks, pop-up window and select “Add Device” .
2. Input the IP address of the OLT in the pop-up window.
3. Default protocol is SNMP, Read Community: ADSL, Write Community ADSL Port: 161, if it is not, please create a new protocol.
4. After adding device, there will be a device icon in the topological diagram.
Now, you can operate on this device.

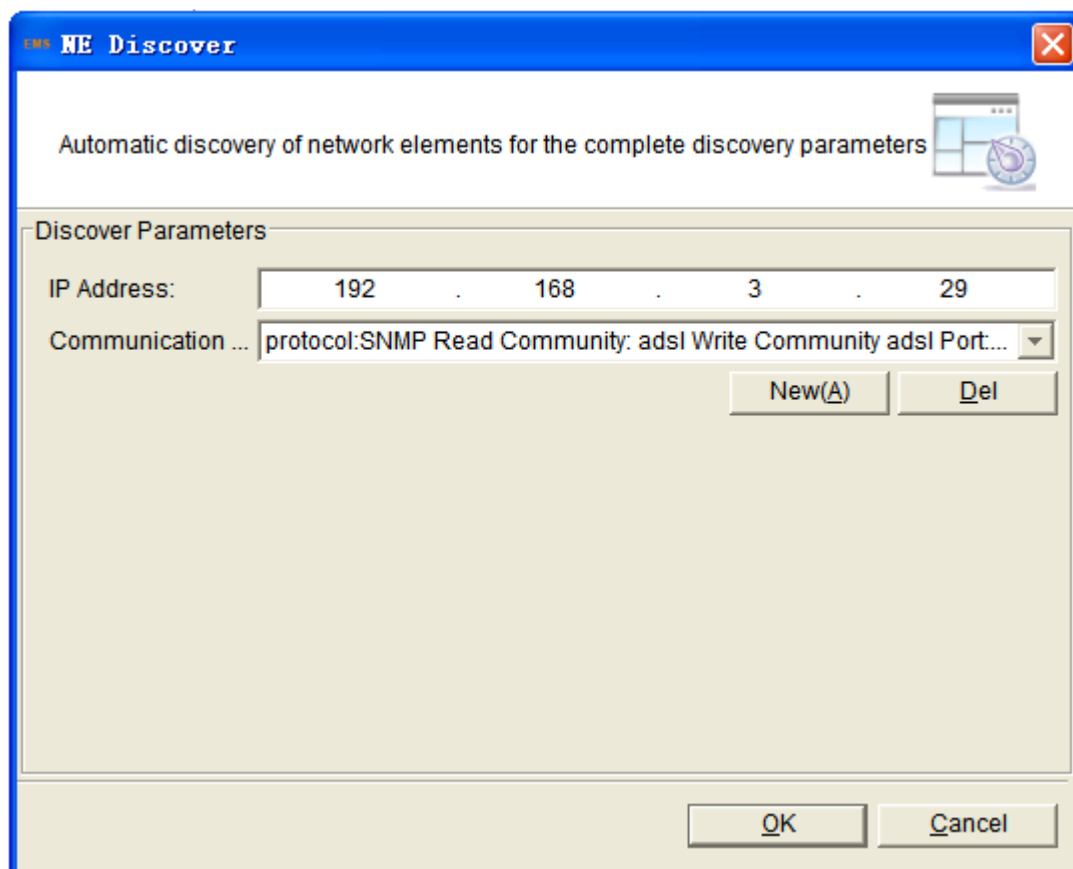


Figure 2-2 Select protocol

2.3. Set the Trap Server

Function

Set the Trap Server

Operating Procedure

1. In order to receive the alarm information, you must set the Trap Server of the OLT after adding device.
2. Only need set one of the receiving servers as IP address of network management. Choose a OLT, right-click and select “Device Detail”>“Add Default Trap Server” .
3. When your set up is completed, network management system can receive the trap of the device and translate into alarm.

Routine operation

1. Routine operations operated by clicking the main menu or right button.
2. Click the main menu “Equipment Mgmt”>“NE Query” to inquire OLT or ONU, and then execute “Query”, you can point device quickly, and then do further operation.
3. Input the name of device in the search bar which at the upper right of the main bar, you can also pointing device quickly.

3. Main interface

This chapter describes the main interface of the Network Management System. It mainly includes the following contents:

- Main interface
- Main menu
- Main toolbar
- Rolling log output bar
- Status bar

3.1. Main interface

After successfully logging, enter the network management interface. The interface is composed by "title bar", "menu bar", "toolbar", "The topological navigation tree", "topology", "the current alarm event" and "rolling log bar" etc. The bottom of the interface is composed by "status bar", "alarm flash tip" and "alarm sound tip".

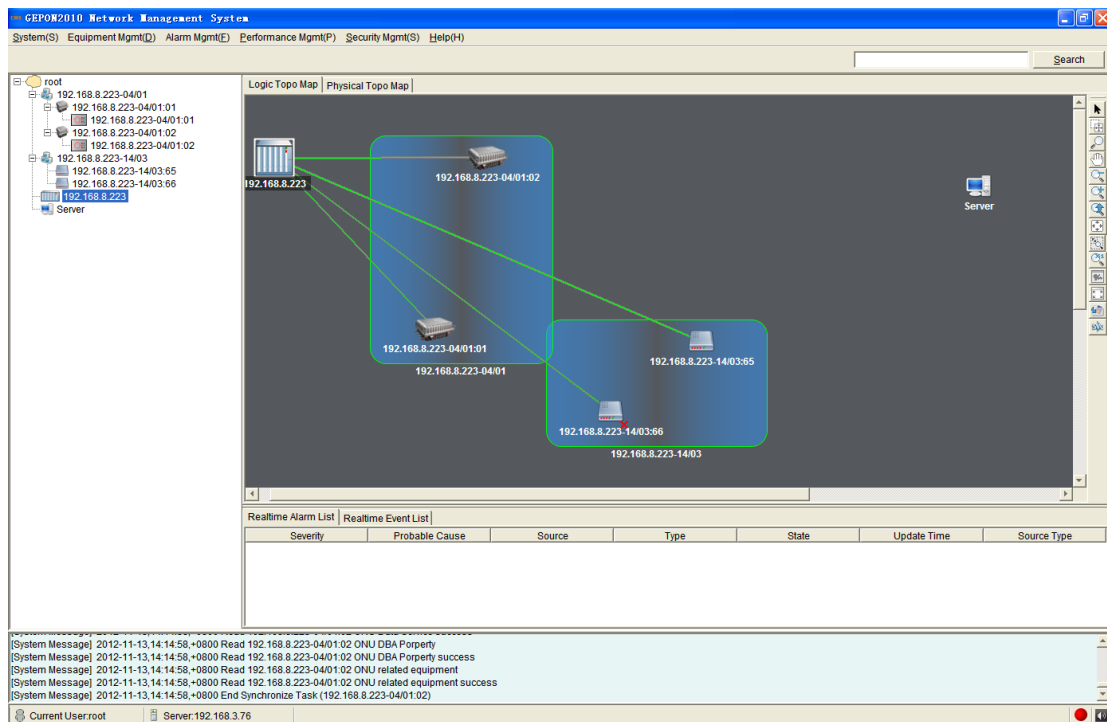


Figure 3-1 The main interface

3.2. Main menu

The main menu includes: System, Equipment Mgmt, Alarm Mgmt, Performance Mgmt, Security Mgmt and Help.

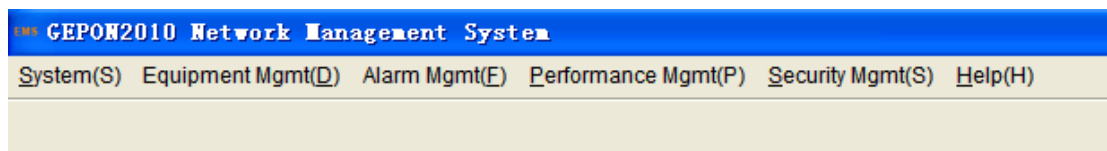


Figure 3-2 The main menu

3.3. Main toolbar

Toolbar includes: search box. In the search box you can input the keywords (IP, MAC address or name) to search.

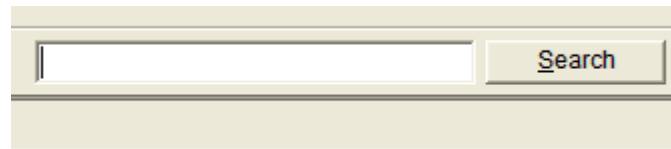


Figure 3-3 The main menu

3.4. Rolling log bar

Print the tip, warning and other information of the background . Also can remove the current logging .

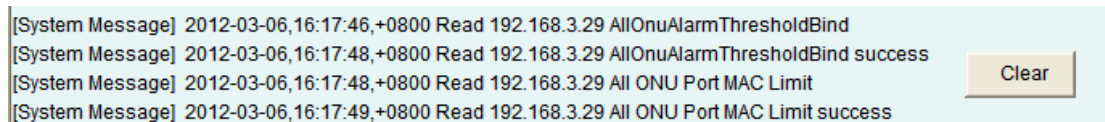


Figure 3-4 The rolling log bar

3.5. Status bar

The status bar includes state information, alarm light and sound alarm switch.

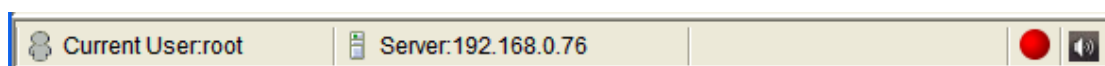


Figure 3-5 The status bar

Clicking "alarm light" can into the alarm query result dialog.

Clicking "sound alarm switch" can open and close sound alarm.

4. System management

This chapter describes system management function of Network Management System. It mainly includes the following contents:

- System management menu
- Lock client
- Modify password
- Data dump
- Db Backup and restore
- Exit

4.1. System management menu

Function

The "System(S)" contains lock client, modify password, data dump, db backup restore and exit.

Operating Procedure

Click "system(s)" in the main menu, pop-up system management menu list.

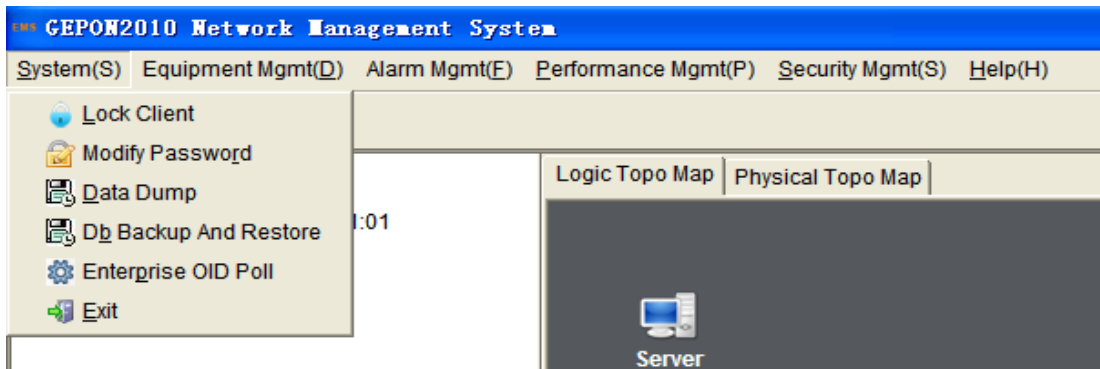


Figure 4-1 System management menu

4.2. Lock client

Function

When administrator need to leave the client computer but not wants to shut the client program, he/she can lock the client.

Operating Procedure

1. Click "system(s)">"Lock Client", pop-up client dialog.
2. Locked, others will not use client .The current user can input password to use when he/she back to the client.

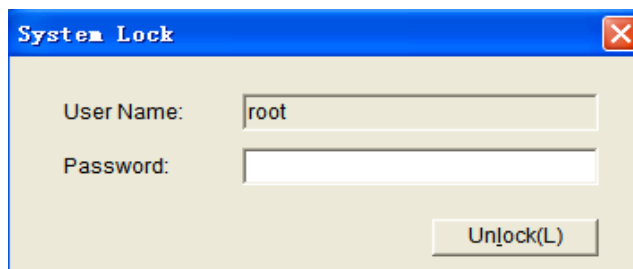


Figure 4-2 Lock client

4.3. Modify password

Function

Modify Password

Operating Procedure

1. Click "system(s)">"modify password", pop-up modify password dialog.
2. Input old password and the new password in the password box, click "OK".
3. The new password will take effect in the next login.

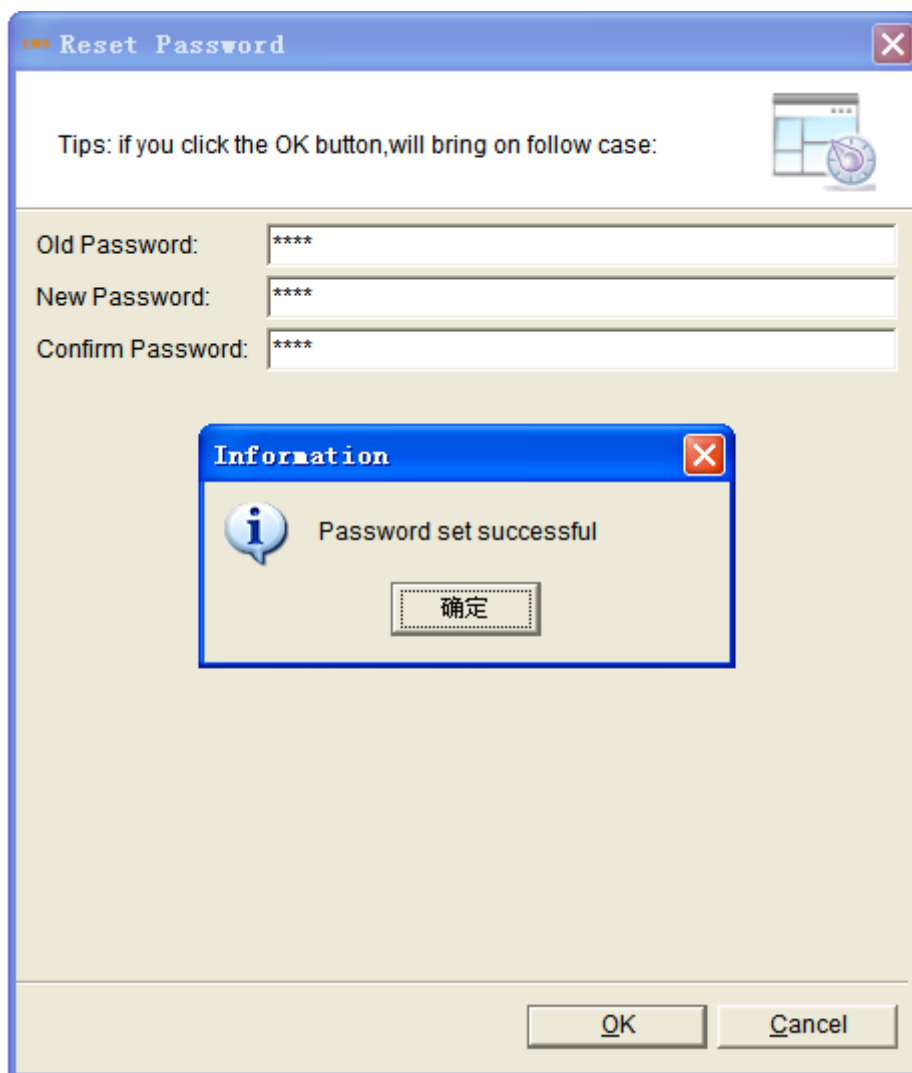


Figure 4-3 Modify password

4.4. Data dump

Function

Data dump is a program of copy & save data to the tape and another disk .You can set "data type, action, status, start time, file location" in data dump interface .

Operating Procedure

1. Click "system(s)">"data dump", pop-up data dump interface.
2. Choose "action, status, start time, file location", click "OK" .

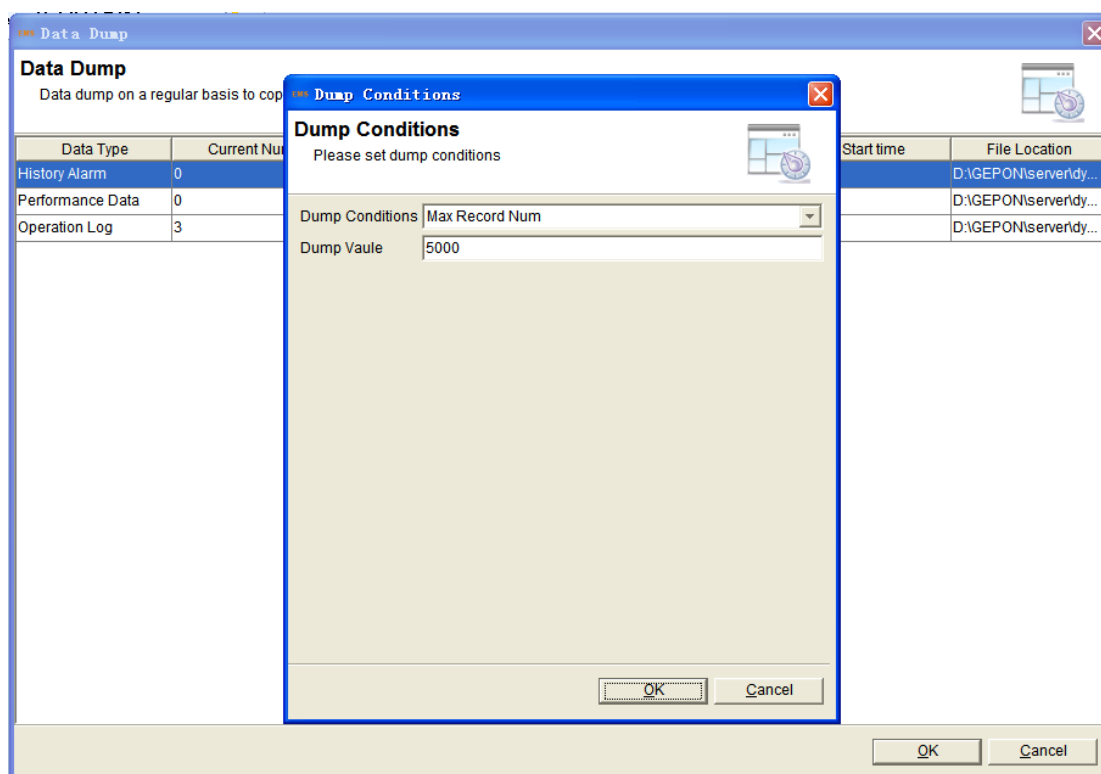


Figure 4-4 Data dump

4.5. Db Backup and restore

Function

User can restore previous backup database documents by "Db backup and restore".

Operating Procedure

1. Click "system(s)">"Db Backup And Restore", pop-up Db Backup And

Restore dialog.

2. Choose the database file which you need to restore, click "recovery". After restore successfully, the server must restart.

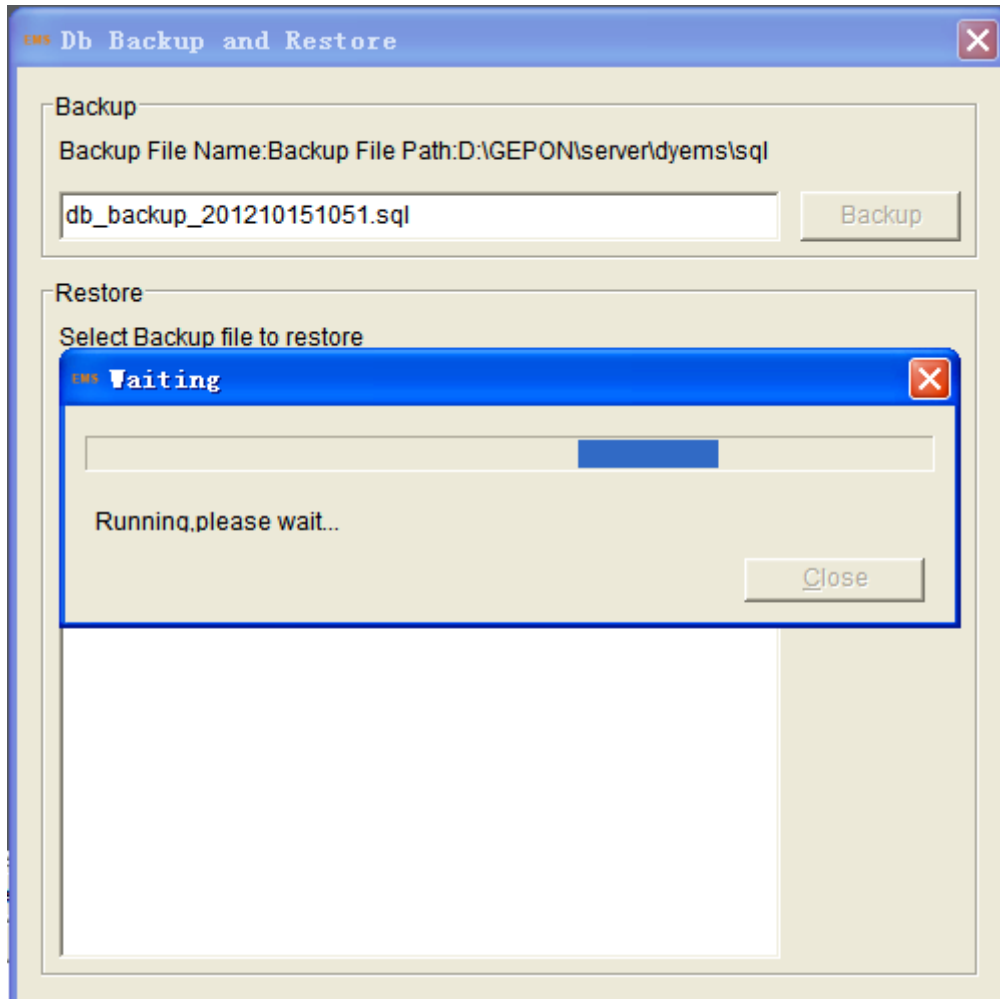


Figure 4-5 Db backup and restore

4.6. Exit

Function

Exit the network management system.

Operating Procedure

1. Click "system(s)">"exit", pop-up exit dialog..
2. Click "Yes" to exit.

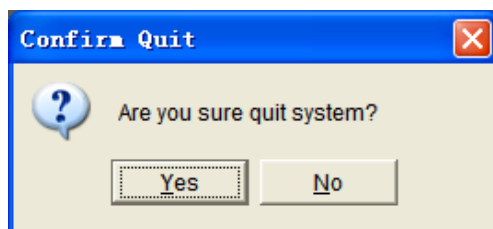


Figure 4-6 Exit

5. Equipment management

This chapter describes equipment management function of Network Management System. It mainly includes the following contents:

- NE query
- Scan IPC
- Review IPC

5.1. Equipment management menu

Function

The main menu (Equipment Mgmt. (D)) contains "NE query, scan IPC and review IPC".

Operating Procedure

Click "Equipment Mgmt. (D)" in the main menu pop-up equipment management menu list.

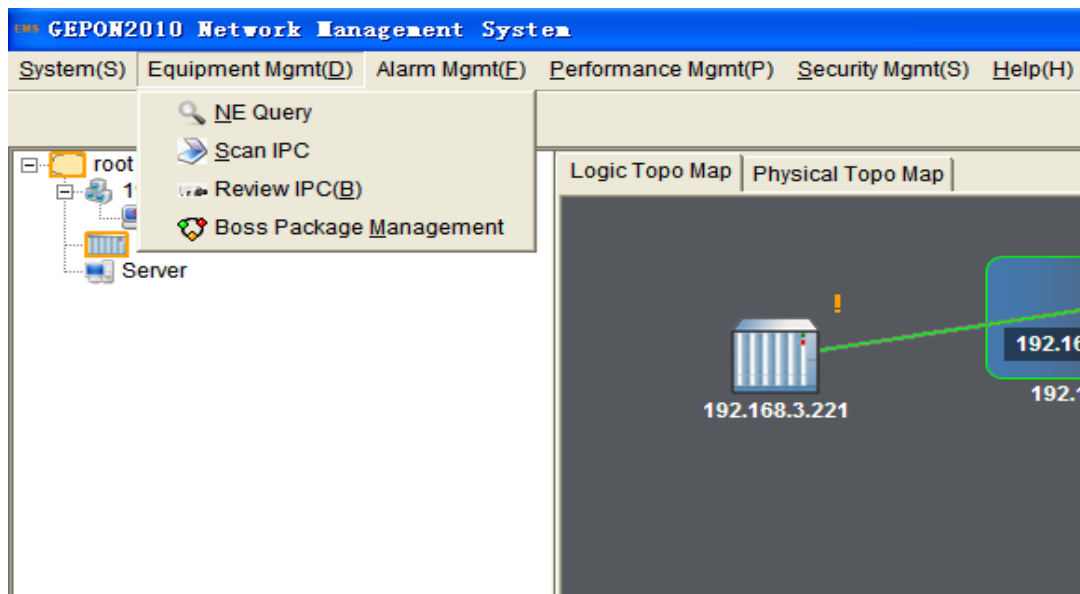


Figure 5-1 Equipment management menu

5.2. NE query

Function

Input corresponding query condition, query NE (network element).

Operating Procedure

1. Click "Equipment Mgmt. (D)">"NE Query", pop-up NE Query dialog.
2. You can look for NE according to domain, group, equipment type, name and the information of users.
3. Network elements are displayed through list .A serial of operation by right-click in the table.

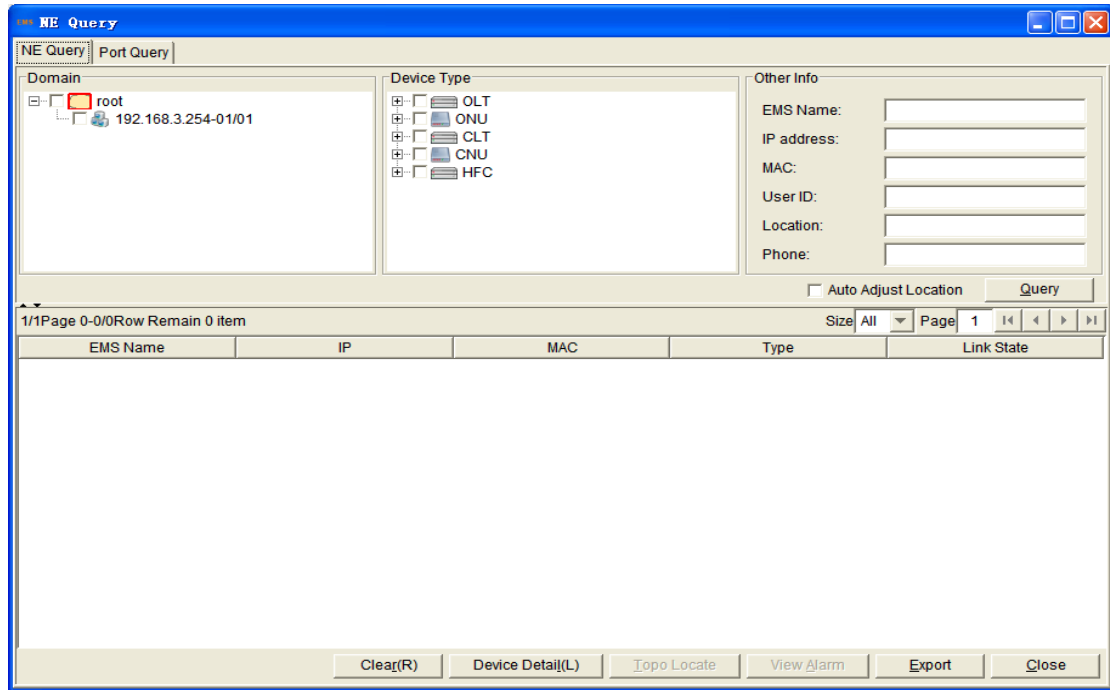


Figure 5-2 NE Query

5.3. Scan IPC

Function

Scan existing IPC in a certain range.

Operating Procedure

1. Click "Equipment Mgmt(D)">"Scan IPC", pop-up scan IPC dialog.
2. Input IP range; scan all IPC within this range.

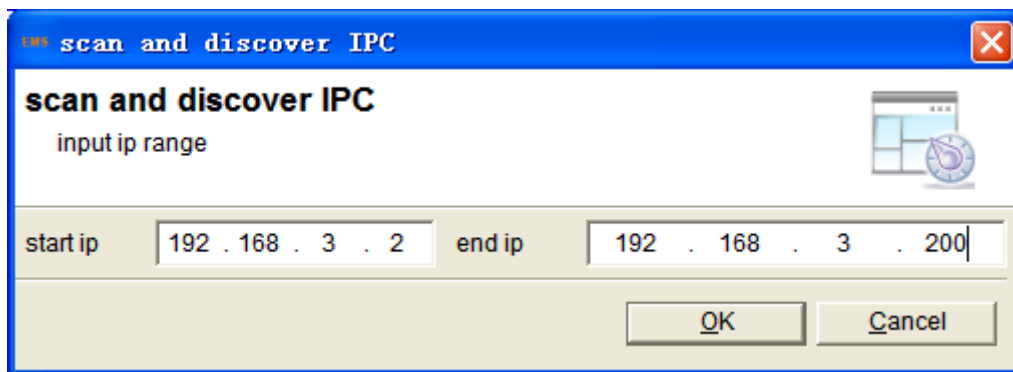


Figure 5-3 Scan IPC

5.4. Review IPC

Function

Review IPC

Operating Procedure

1. Click "Equipment Mgmt(D)">"Review IPC", pop-up review IPC dialog.

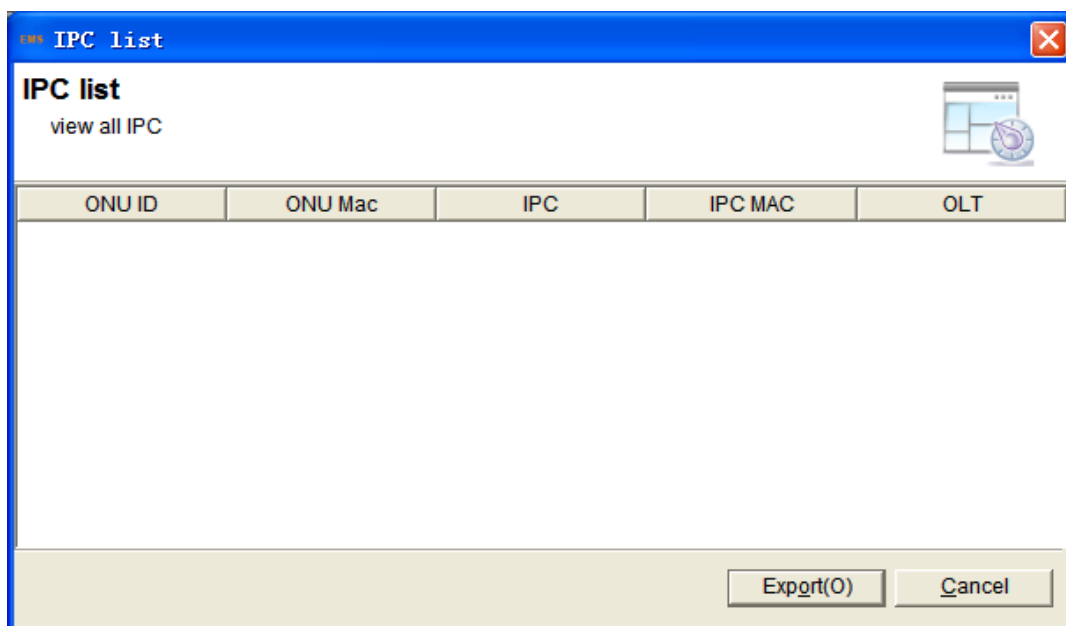


Figure 5-4 Review IPC

6. Alarm management

This chapter describes the alarm and event processing. It mainly includes the following contents:

- Alarm management menu
- Alarm and Event query
- Alarm process rule
- Alarm sound
- Email notify configure
- Alarm parameter configuration

6.1. Alarm management menu

Function

The main menu "alarm management" contains alarm management function which are alarm and event query, alarm process rule, alarm sound, email notify parameter configuration and alarm parameter configuration.

Operating Procedure

Click the main menu "alarm management", view the alarm management menu.

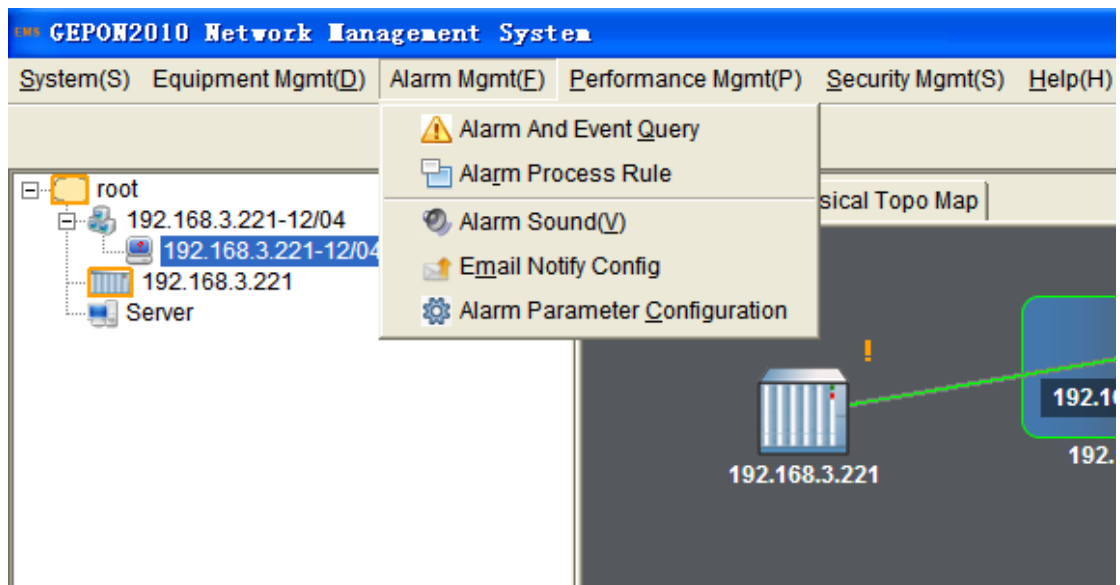


Figure 6-1 Alarm management menu

6.2. Alarm and event query

Function

Query alarm event, current alarm and history alarm.

Operating Procedure

1. Click the main menu "Alarm management ">"Alarm and Event query", pop-up the alarm and event query dialog.
2. User can input multiple combinations of conditions to query alarm or event.

**NOTE:**

In order to receive the alarm or event of the OLT, you must set the IP of network management server in the TRAP server list.

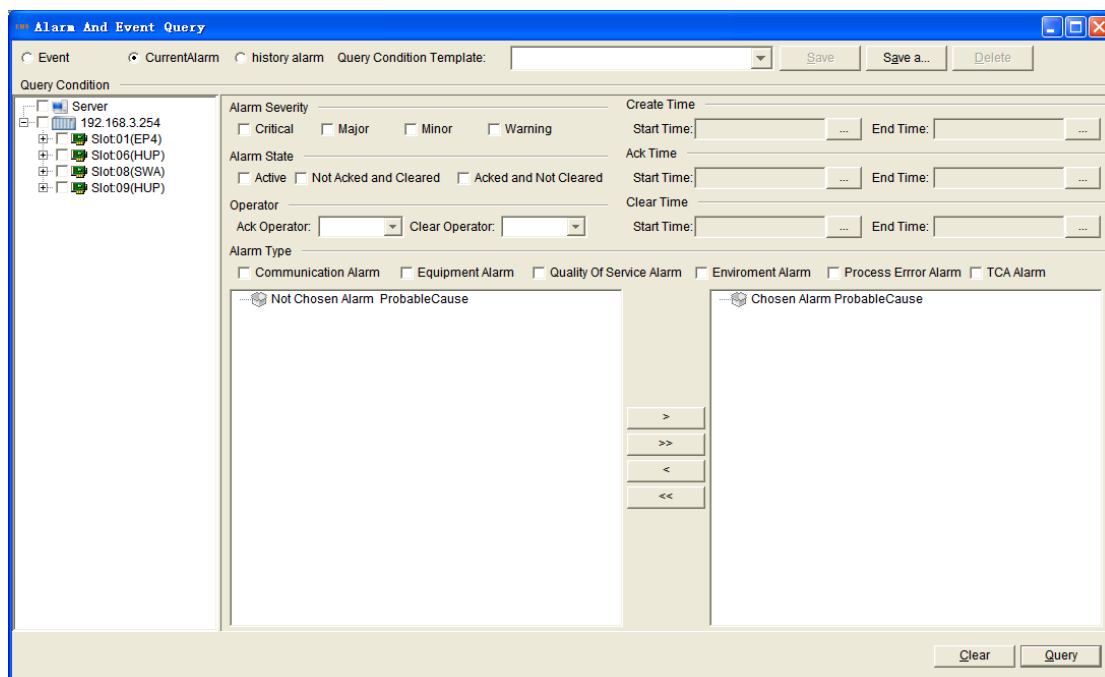
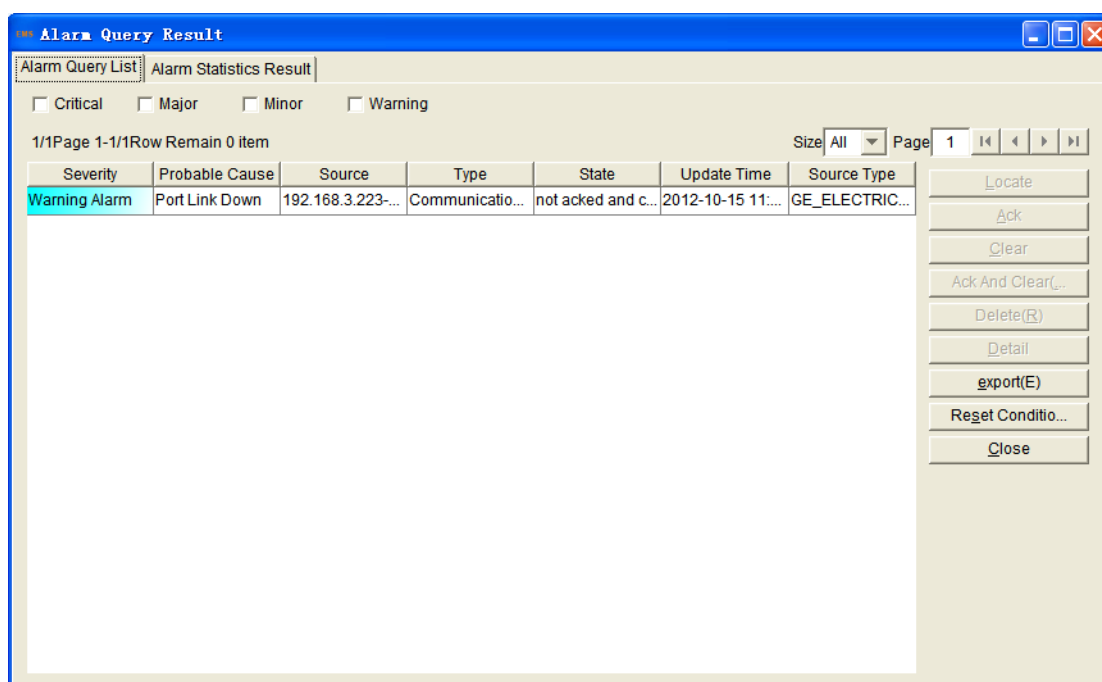
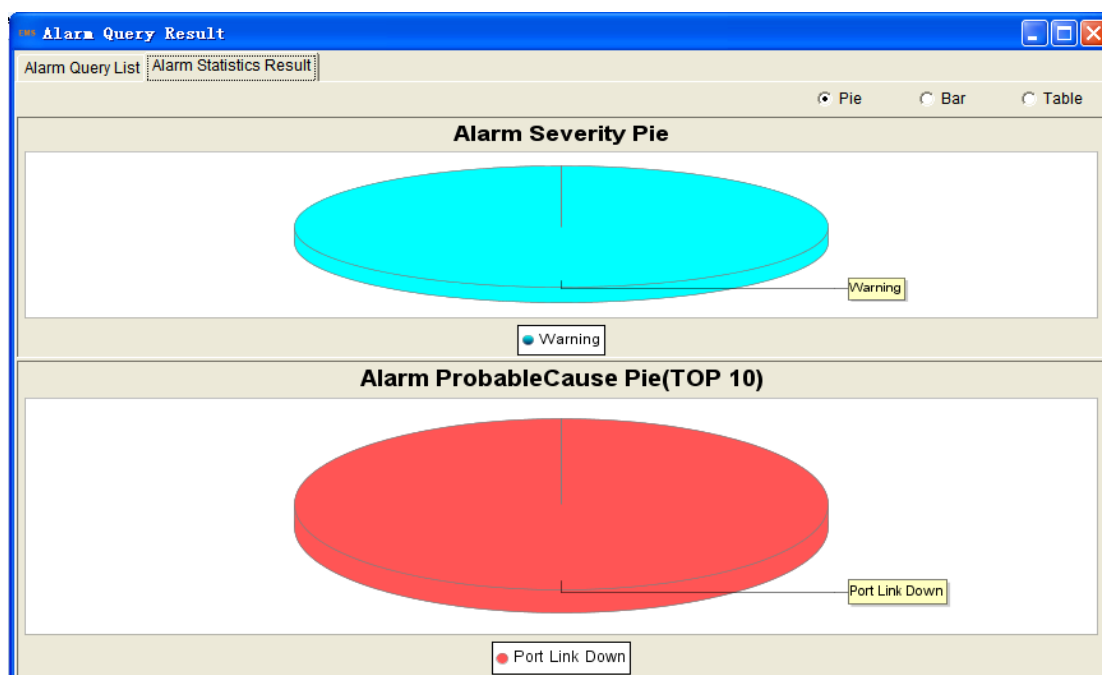


Figure 6-2 Query alarm or event

3. After input conditions, click “query” to go to the alarm query result window.
4. Show matching alarm records by list.
5. Click button or right-click menu to deal with alarm, for example confirm Alarm as below.



6. It can also show matching alarm records by pie chart as below.



6.3. Alarm process rule

Function

Configure alarm process rule. Alarm process rule include: alarm automatic clear, alarm automatic acknowledge, alarm shield and email send rule.

Operating Procedure

1. Click the main menu “Alarm management “>”Alarm process rule”, pop-up the alarm rule window.

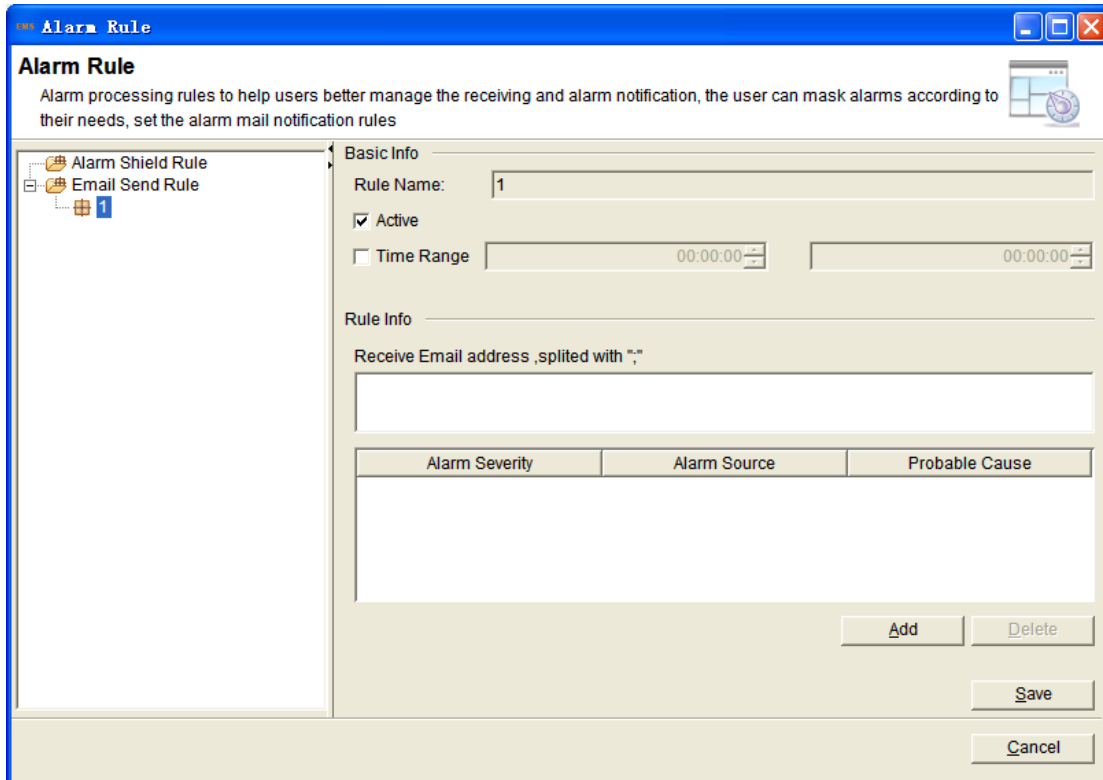


Figure 6-3 Alarm rule

2. User can add, modify and delete alarm rule. The server is effective immediately after applying rules.

6.4. Alarm sound

Function

Configure alarm sound.

Operating Procedure

1. Click the main menu “Alarm management “>”Alarm Sound”, pop-up the alarm sound configuration window.
2. Set the duration of alarm sound and every alarm level’s sound file.

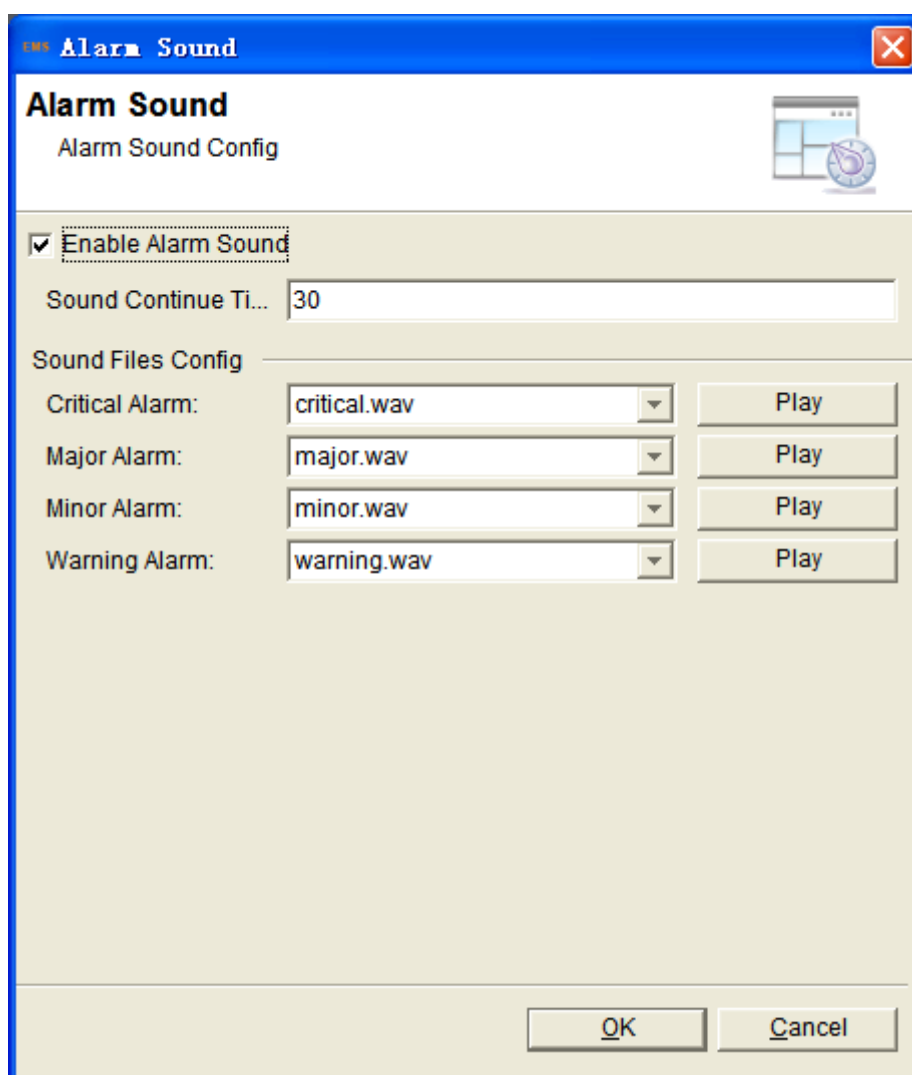


Figure 6-4 Alarm sound

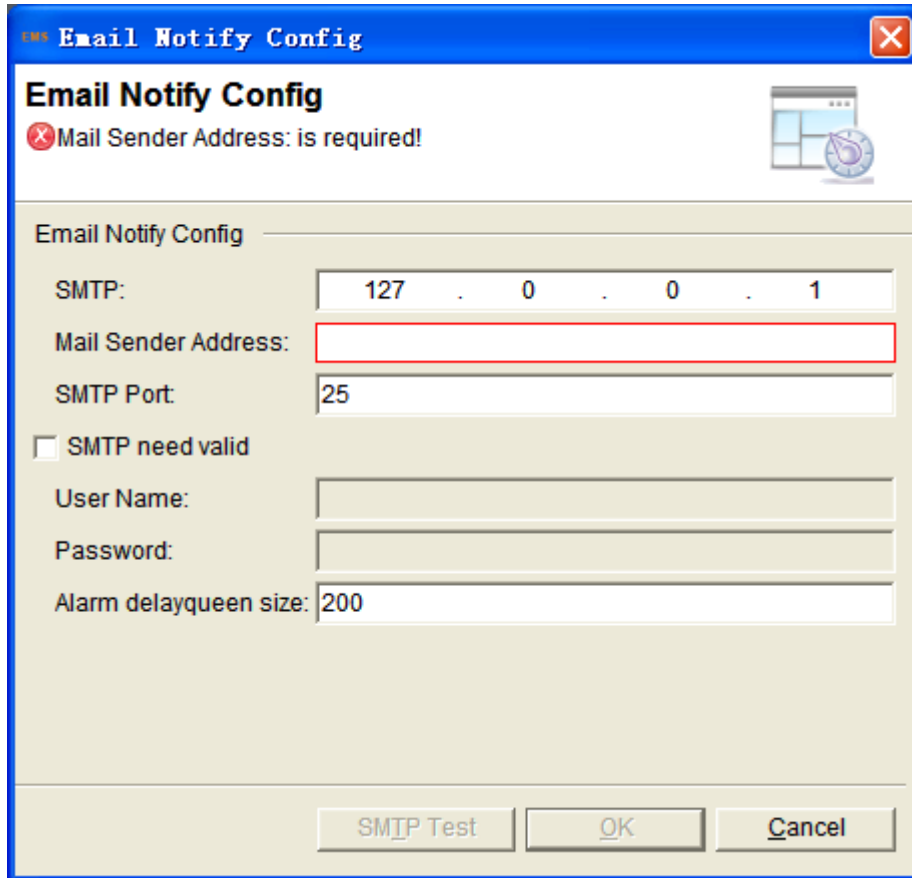
6.5. Email notify configure

Function

Configure Email.

Operating Procedure

Click the main menu “Alarm management “>”Email Notify Config”, pop-up the email notify configuration window. Configure the SMTP server parameter, queue parameter.



Email Notify Config

✖ Mail Sender Address: is required!

Email Notify Config

SMTP: 127 . 0 . 0 . 1

Mail Sender Address:

SMTP Port: 25

SMTP need valid

User Name:

Password:

Alarm delayqueen size: 200

SMTP Test OK Cancel

Figure 6-5 Email notify config

6.6. Alarm parameter configuration

Function

Configure alarm parameter, such as total alarm count, synchronous poll interval and link status interval.

Operating Procedure

Click the main menu “Alarm management “>”alarm parameter configuration”, pop-up the alarm parameter configuration window. Enter parameter’s value, click “OK”.

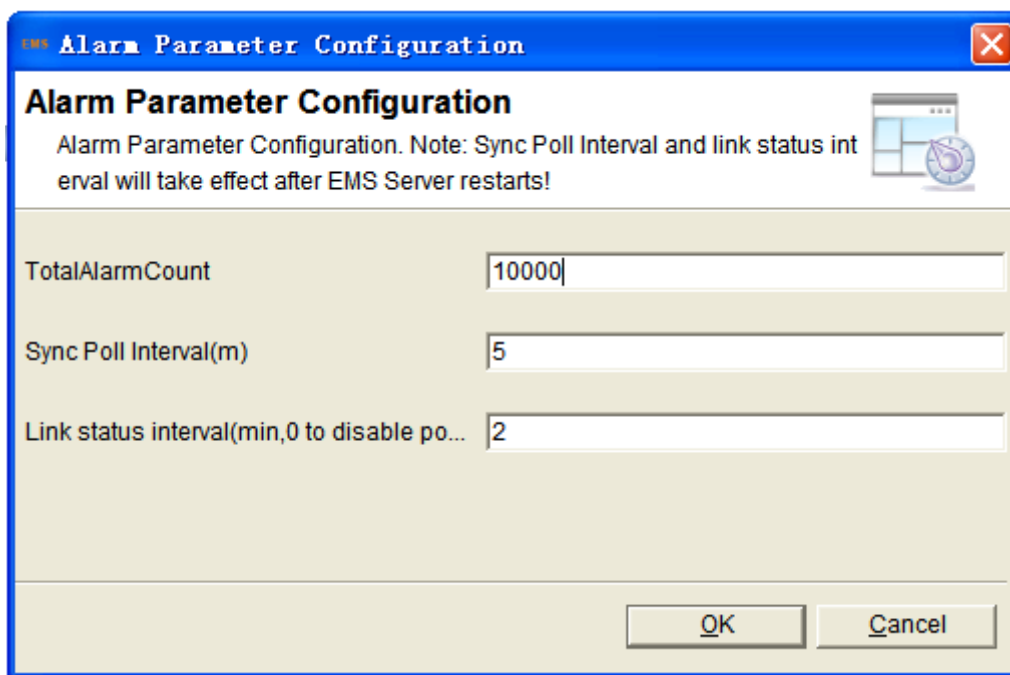


Figure 6-6 Alarm parameter configuration

7. Performance management

This chapter describes performance management function of Network Management System. It mainly includes the following contents:

- Performance management menu
- Performance running configuration
- Performance collect task management
- Performance task data query

7.1. Performance management menu

Function

The main menu (Performance Mgmt (P)) contains "performance running configuration, performance collect task management, performance task data query".

Operating Procedure

Click "Performance Mgmt (P)" in the main menu pop-up performance management menu.

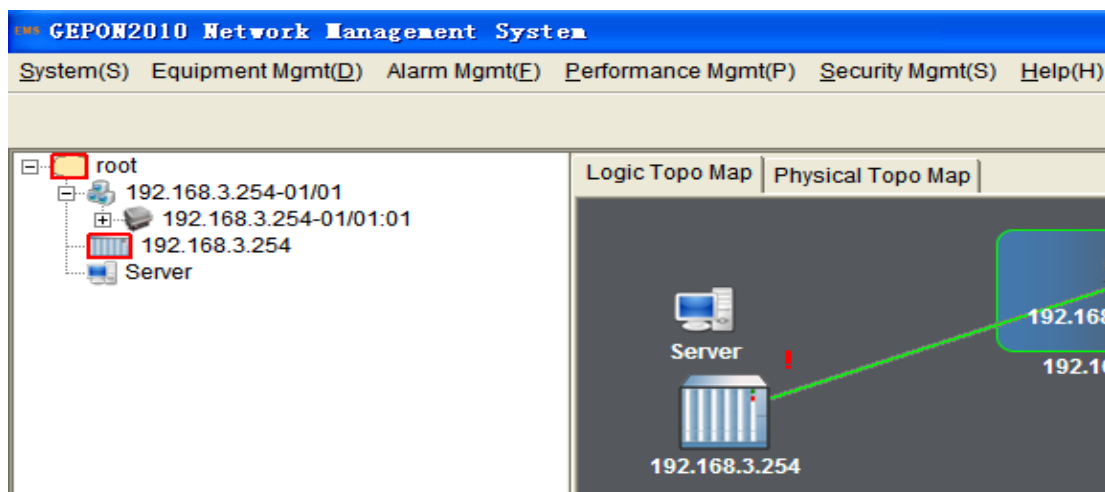


Figure 7-1 Performance management

7.2. Performance running configuration

Function

Set real-time performance task and history performance task running parameter.

Operating Procedure

1. Click "Performance Mgmt (P)">"performance running configuration(s)",
Pop-up performance running configuration interface.

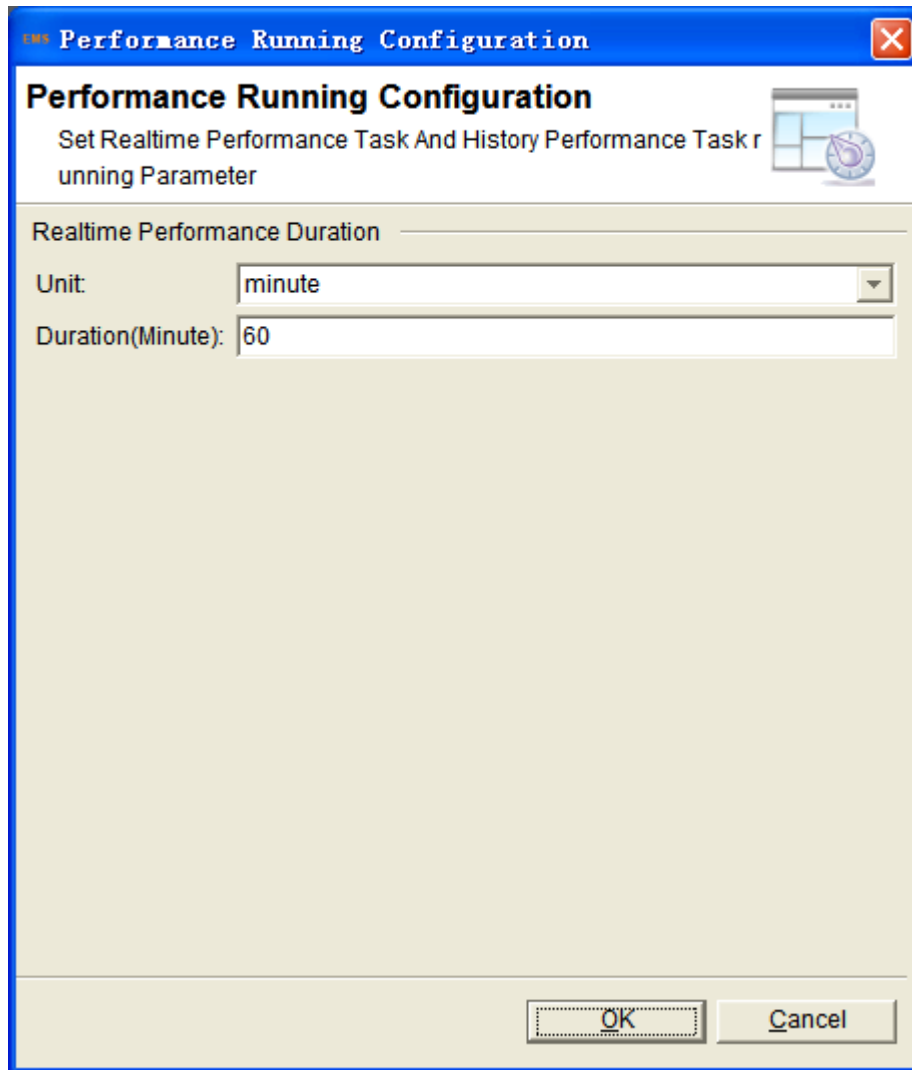


Figure 7-2 Performance running configuration

7.3. Performance collect task management

Function

Set task name, start time, end time, granularity, collect task performance.

Operating Procedure

1. Click "Performance Mgmt (P)">"performance collect task management ",
Pop up performance collect task management interface.
2. Set collect condition, click "Query".

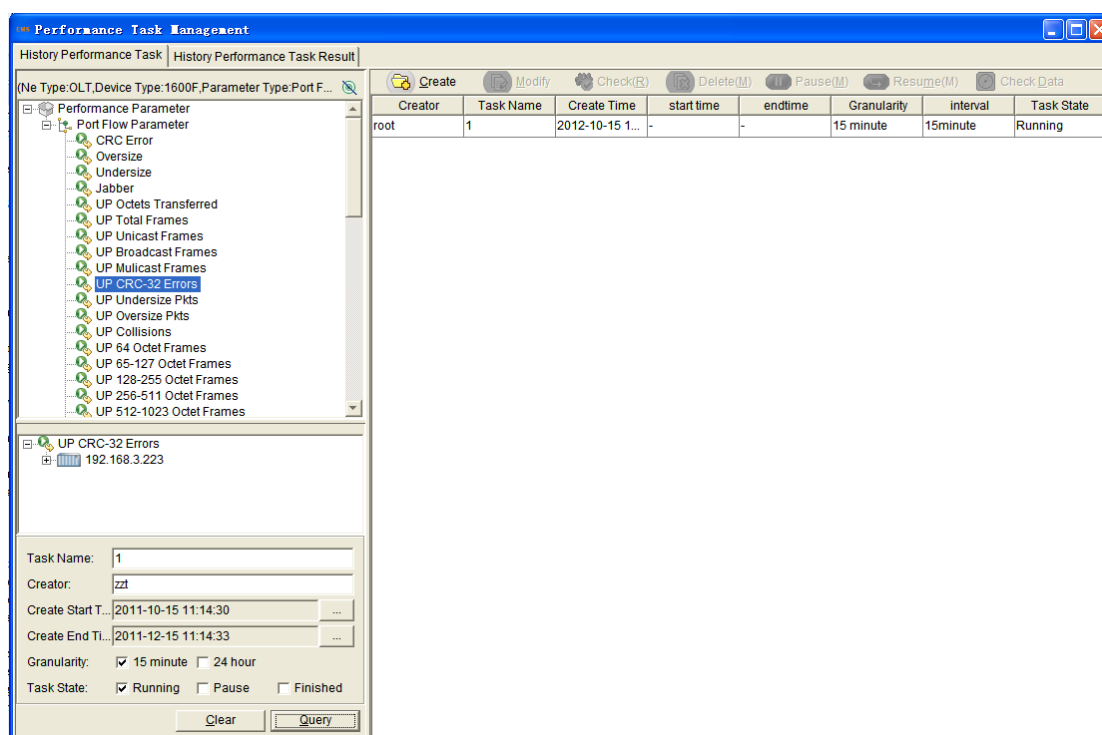


Figure 7-3 Performance task management

7.4. Performance task data query

Function

Query performance task result.

Operating Procedure

1. Click "Performance Mgmt (P)">"performance task data query ", Pop up performance task data query interface.
2. Set collect condition, click "Query", you will see the result.

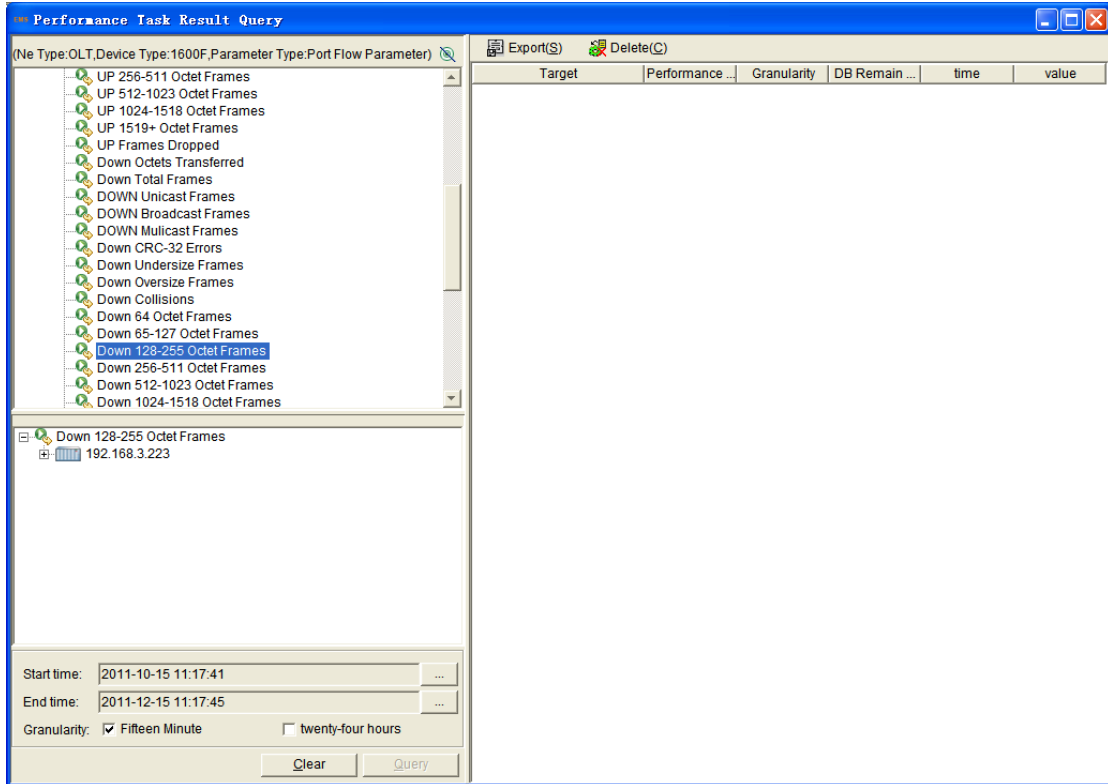


Figure 7-4 Performance task result query

8. Security management

This chapter describes security management function of Network Management System. It mainly includes the following contents:

- Security management menu
- User management
- Role management
- Permission management
- Online user
- Operation log

8.1. Security management menu

Function

The main menu (Security Mgmt(S)) contains "user mgmt, role mgmt, permission mgmt (A),online user(A),operation Log".

Operating Procedure

Click "Security Mgmt(S)" in the main menu pop-up security management menu list.

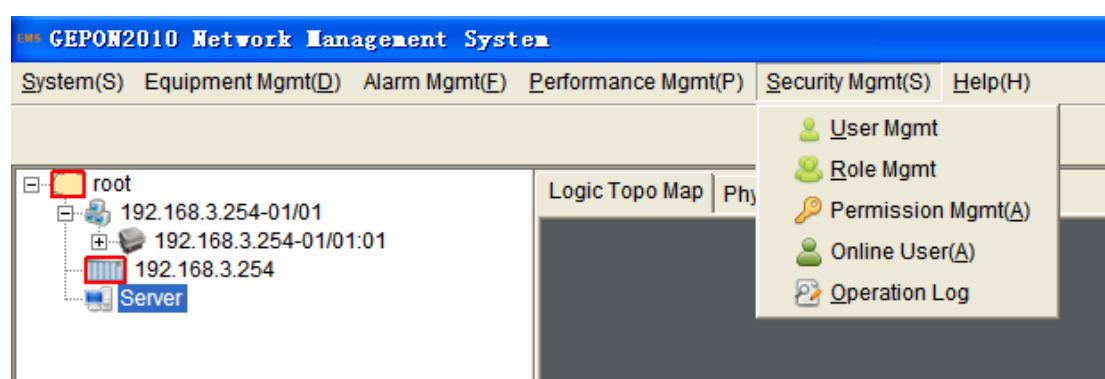


Figure 8-1 Security mgmt(S)

8.2. User management

Function

Manage user

Operating Procedure

1. Click "Security Mgmt(S)">"user mgmt ", pop-up user management interface.
2. It supports create, modify, delete, prohibit and prohibit(R).

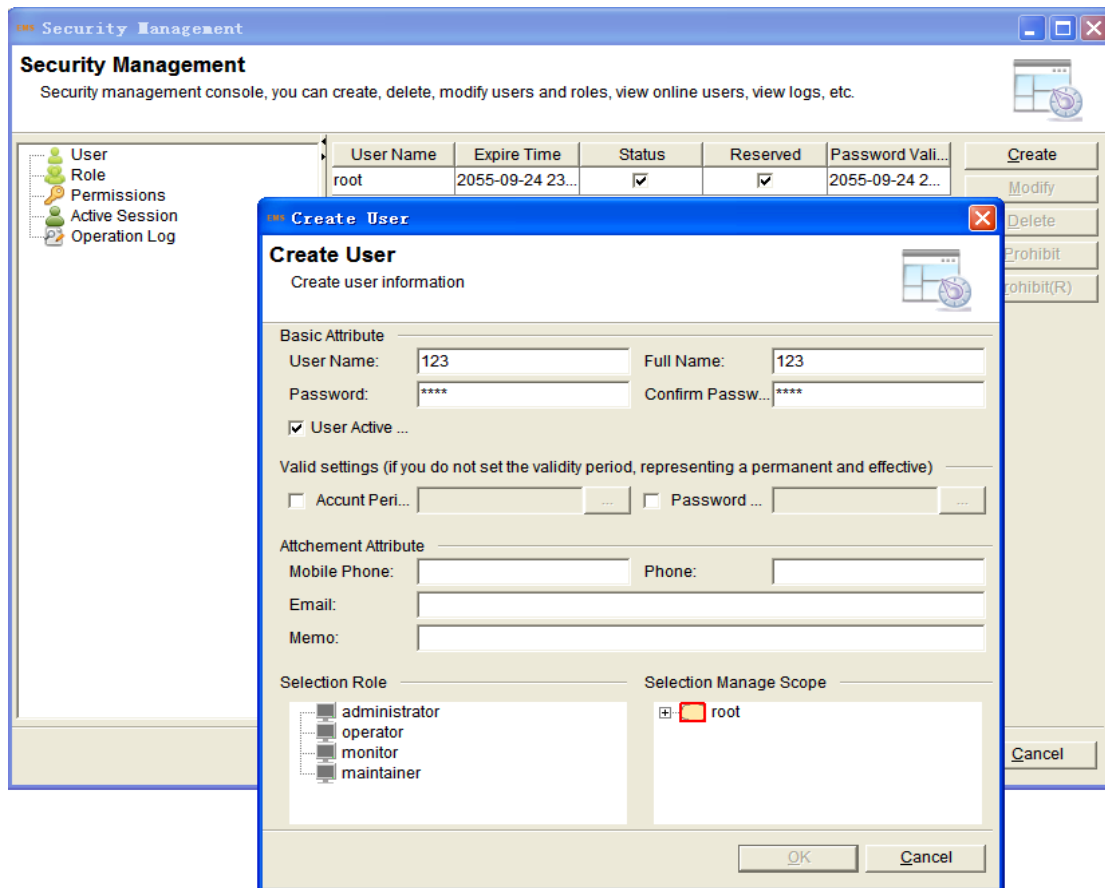


Figure 8-2 Create user

- ✧ User management is very important in security management.
Unauthenticated user is not able to use network management system.
- ✧ User information includes basic attributes, user active, valid settings, attachment attributes and selection role.

**Instruction:**

System default user is root, default password is root. Root has the maximum permission.

- ✧ Create and modify: set user basic attribute, role and selection manage scope (users have a root domain. All sub domains; group and network

element of root domain is visible).

- ✧ Delete: Built-in user and logged user can not be deleted.
- ✧ Prohibit: This operation will forbid selected user. The forbidden user will not log on to network management system.
- ✧ Prohibit(R): The forbidden user will back to normal.

8.3. Role management

Function

Role management is used for assigning right.

Operating Procedure

1. Click "Security Mgmt(S)">"role mgmt ",pop-up role management interface.
2. It supports create, modify and delete role.

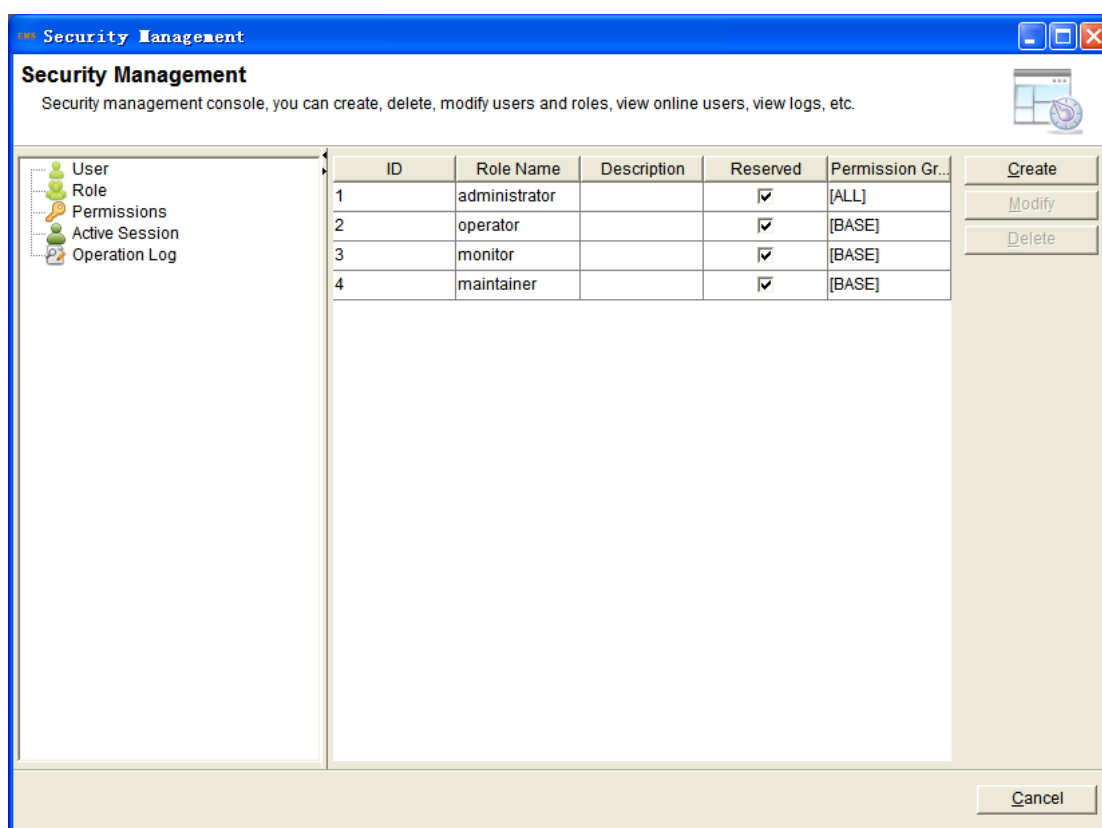


Figure 8-3 Role management

This system has 4 built-in roles:

- ✧ Administrator: It has maximum permission.

- ✧ Operator: Regular configuration.
- ✧ Monitor: Monitor role.
- ✧ Maintainer: Maintainer role..

It can assign permission to the role.

Built-in role can not be deleted.

8.4. Permission management

Function

Manage permission

Operating Procedure

1. Click "Security Mgmt(S)">"permission mgmt ", pop-up permission management interface.
2. It supports create, modify and delete permission.

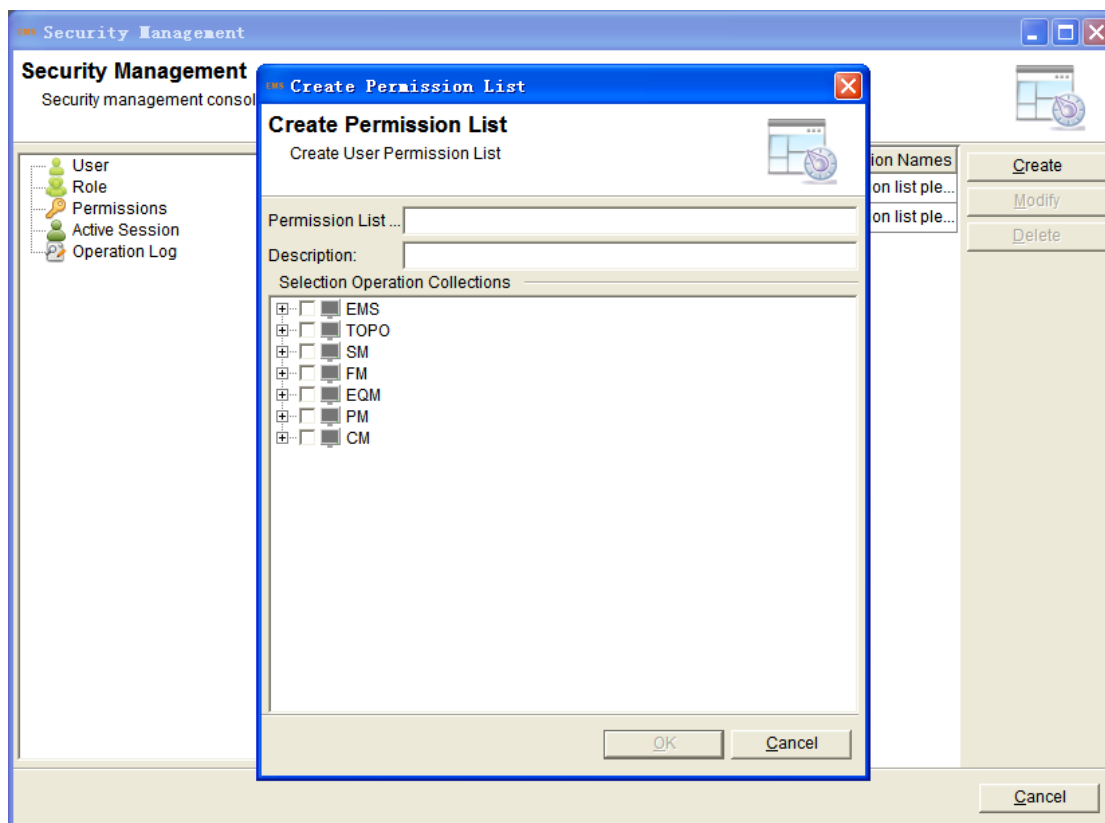


Figure 8-4 Permission management

This system has 2 built-in permissions:

- ✧ ALL: Include all permission.
- ✧ BASE: Minimum permission.

Built-in permission can not be deleted.

8.5. Online user

Function

Look over online user.

Operating Procedure

1. Click "Security Mgmt(S)">"online user(A) ",pop-up online user interface.

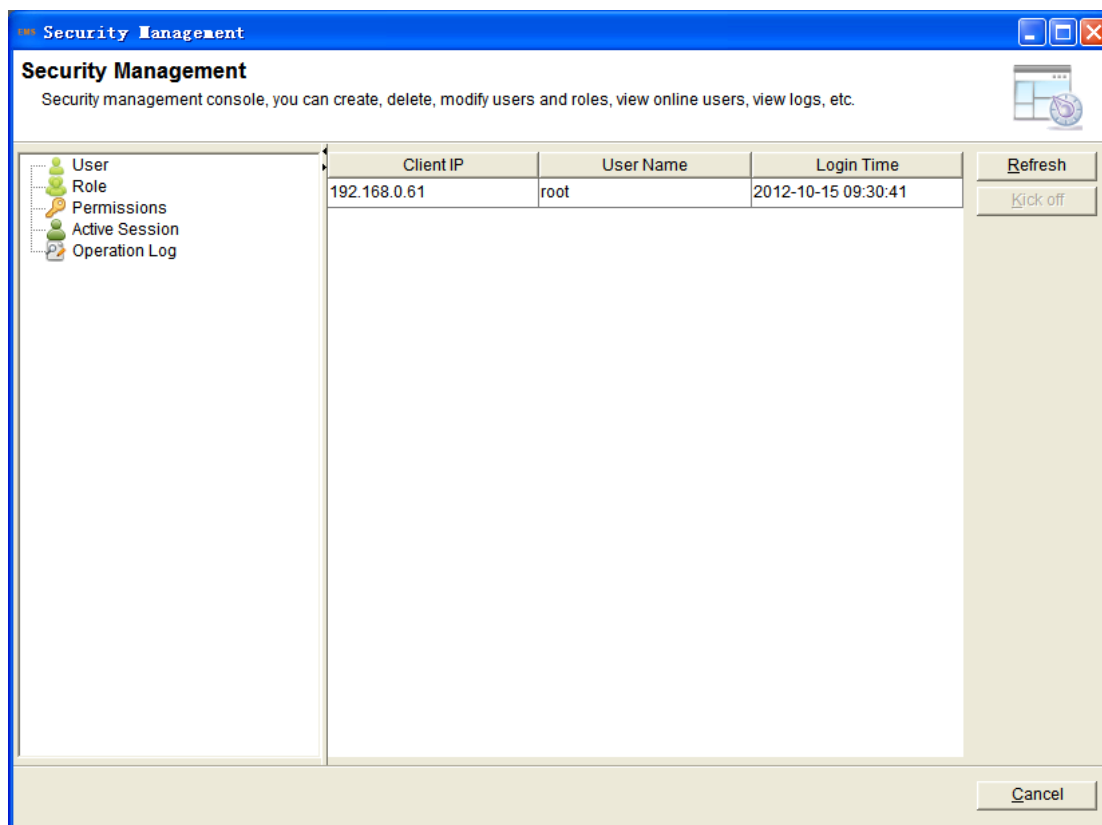


Figure 8-5 Online user

8.6. Operation log

Function

Look back operation log.

Operating Procedure

1. Click "Security Mgmt(S)">"operation log ", pop-up operation log interface.

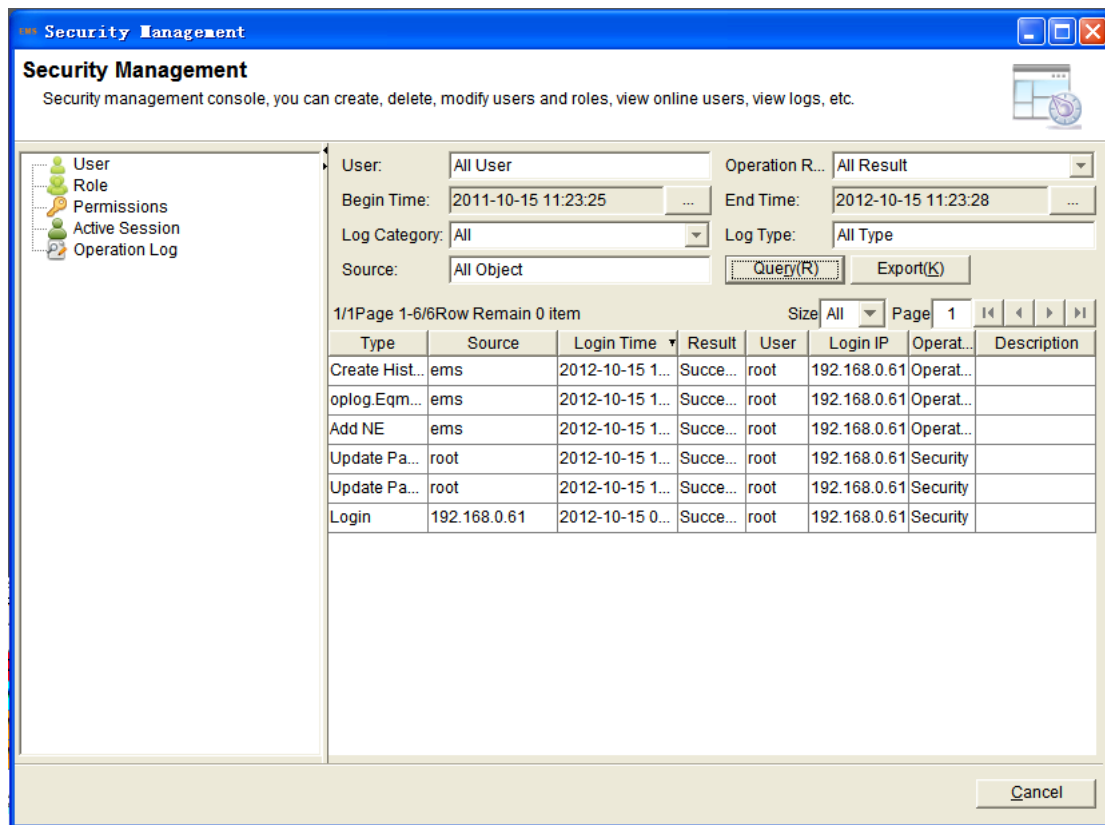


Figure 8-6 Operation log

9. Topology management

This chapter describes topology management function of Network Management System. It mainly includes the following contents:

- Topology map operation
- Topology toolbar
- Auto layout
- Change name
- Search and locate
- Save position
- Domain and group management
- Device scan
- Add devices
- Physical topology map

9.1. Topology map operation

Function

Topology map provides rich ways to display equipments, which is the entrance of operation and configuration.

It provides logic topology map and physical topology map.

Logic topo map: Grouped based on the geographical location of network equipment.

Physical topo map: display by physical connection mode "OLT-ODN-ONU".

Operating Procedure

The operation of topology map can be invoked by right-click menu or topological toolbar.

9.2. Topology toolbar



Figure 9-1 Toolbar

Topology toolbar located in the right of main interface. When the mouse moves to button, it will display corresponding function's tip.

9.3. Auto layout

Function

It provides auto arrange for the position of network element, domain and group.

Operating Procedure

1. Enter domain topology map, right click pop-up the menu.
2. Select "auto layout">"circular layout/tree layout/right side layout".
3. Recommend using "right side layout".

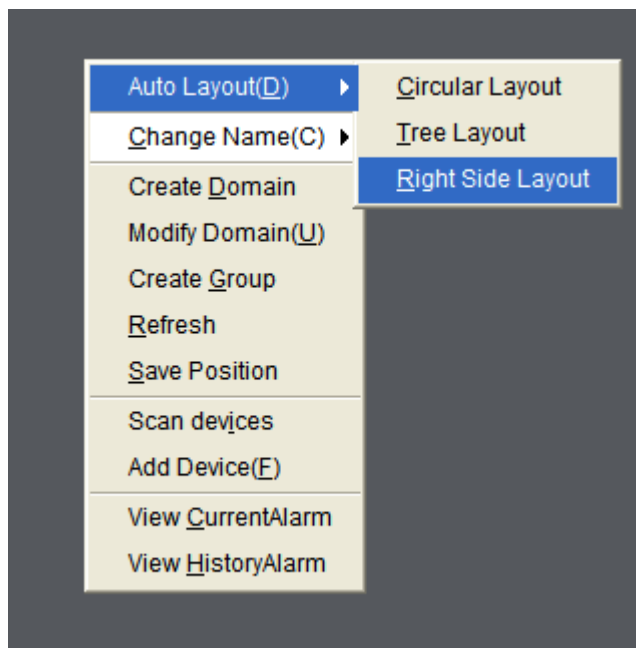


Figure 9-2 Auto layout

9.4. Change name

Function

The default display name is EMS name, but sometimes other name need to displayed.

Operating Procedure

1. Enter domain topology map, right click pop-up the menu.
2. Select "change name">"IP address/MAC address/EMS name/simple name/device name", you can choose it according you need.
 - ✧ EMS name: the description information of device.
 - ✧ Simple name: ONU number.
 - ✧ Device name: It is a internal identifying information and is used to debug.

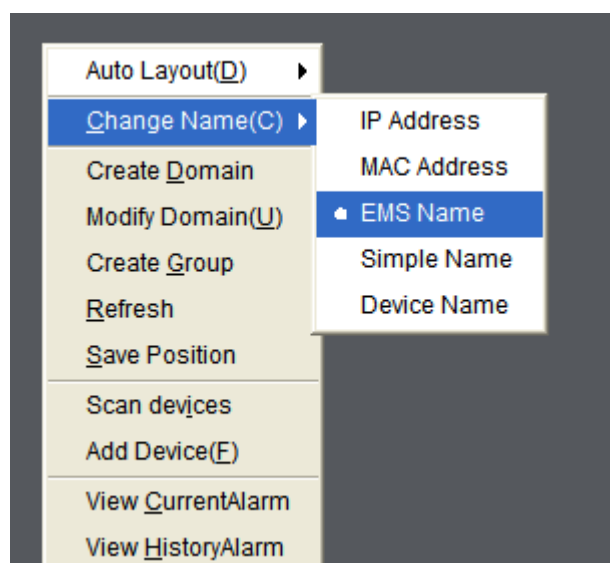


Figure 9-3 Change name

9.5. Search and locate

Function

Search and locate device

Operating Procedure

1. There is a search box in the top right corner of main interface. User can input EMS, IP, MAC information etc. click "search".
2. System support partial matching search.

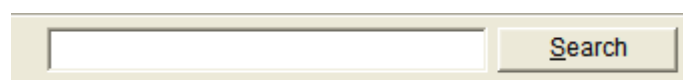


Figure 9-4 Search device

9.6. Save position

Function

Save network element, domain and group position.

Operating Procedure

1. Enter domain topology map, right click pop-up the menu.
2. Select and click "save position" can save current topology map position.

When you enter topology map next time, the elements will be displayed at

the position last saved.

9.7. Domain and group management

Function

In order to display network element in different areas, network management system group network element into domain and group.

Domain: It contains domain, network element, group and nests sub-domain unlimited.

Group : It only contains network elements, can not be nested.

Operating Procedure

1. Enter domain topology map, right click pop-up the menu.
2. Click "create domain", pop-up create sub domain interface.

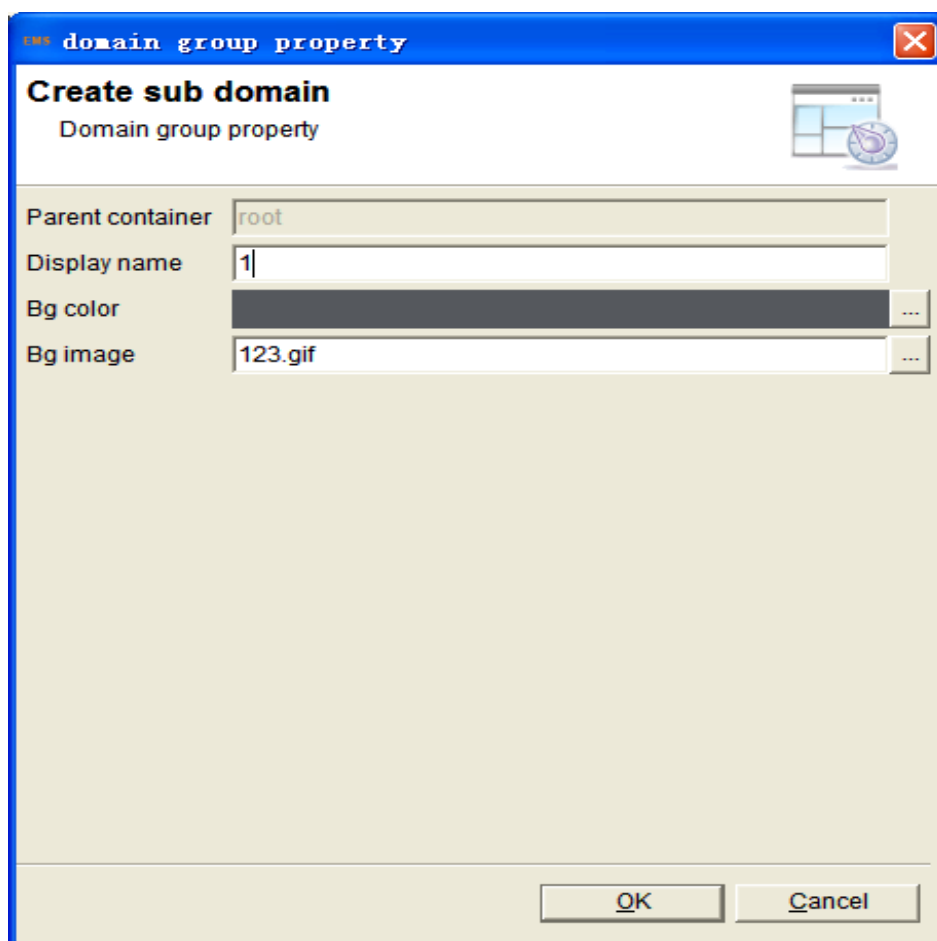


Figure 9-5 Create domain

- ✧ User inputs display name, selects "Bg color" and "Bg image".
- ✧ It can create and modify group.

9.8. Device scan

Function

Scan devices

Operating Procedure

1. Enter domain topology map, right click pop-up the menu.
2. Click "scan devices", pop-up scan devices interface.
3. Input start IP, end IP, device type then click "start to scan".

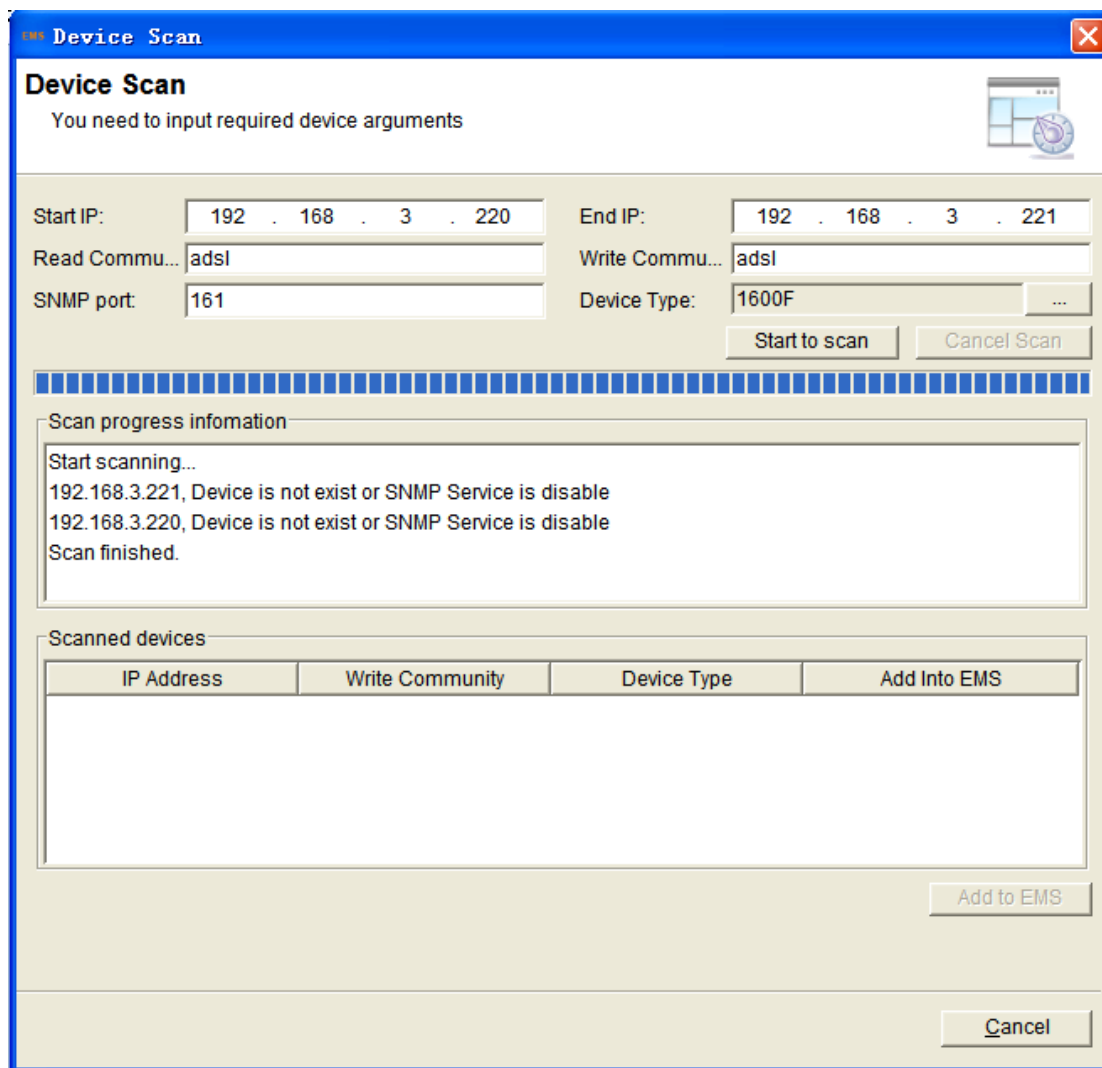


Figure 9-6 Scan devices

9.9. Add devices

Function

Add devices

Operating Procedure

1. Enter domain topology map, right click pop-up the menu.
2. Click "add devices" pop-up add devices interface.
3. Input IP address and communication parameter, and then click "OK".

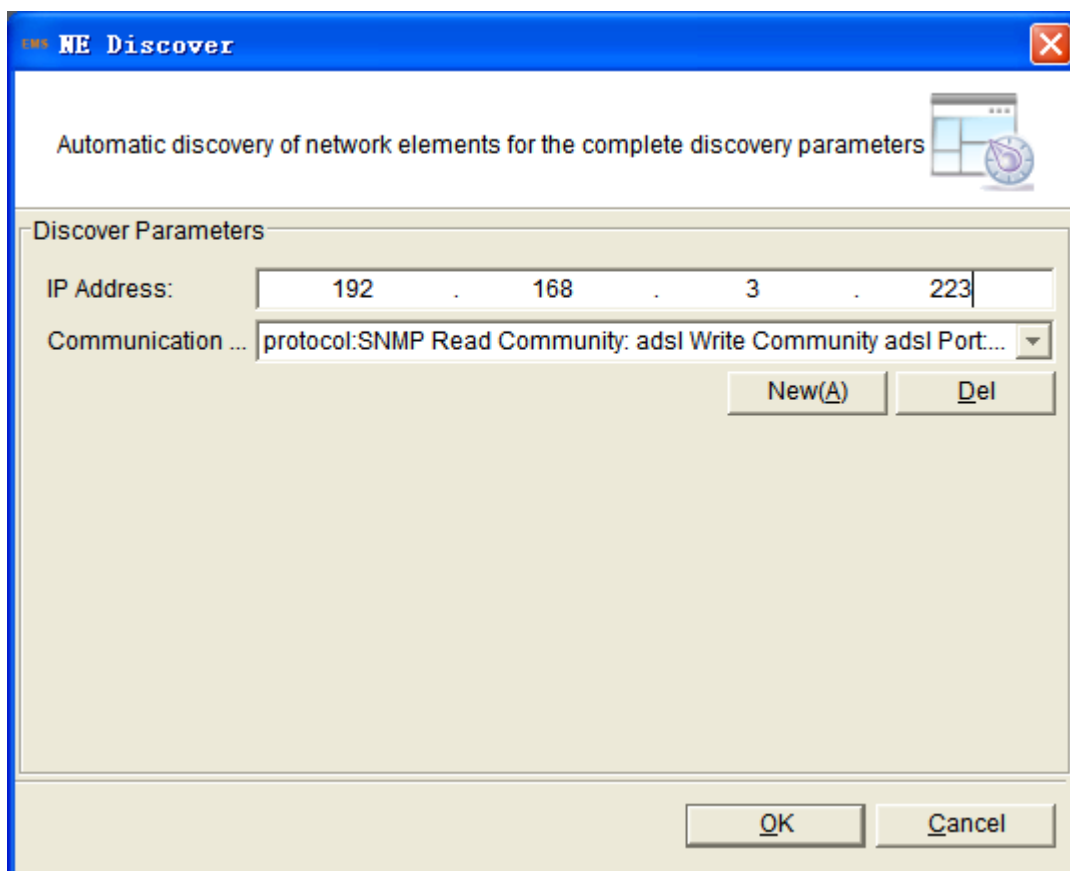


Figure 9-7 Add devices

9.10. Physical topology map

Function

Physical topology map displayed the connection of "OLT-ODN-ONU".

Operating Procedure

1. Enter domain topology map, select "OLT" then click "Physical topology map", pop-up Physical topology map interface.

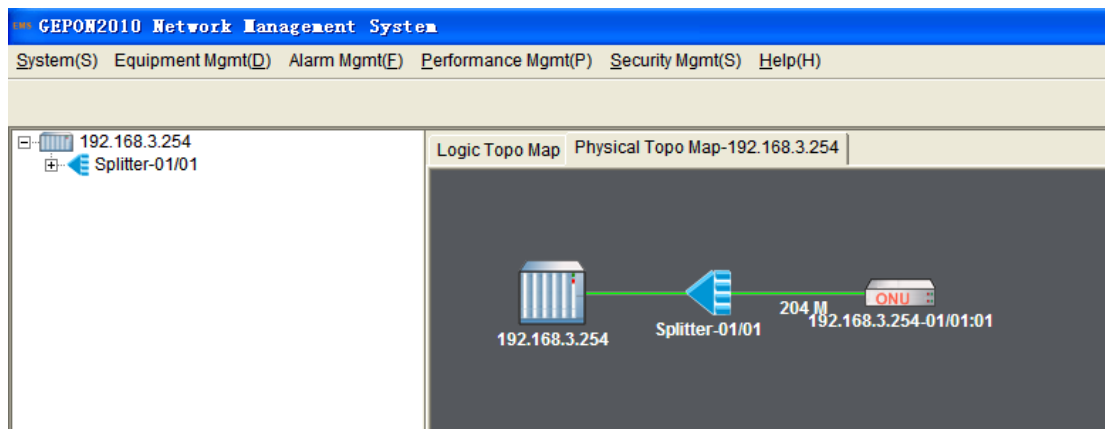


Figure 9-8 Physical topology map

10. OLT detail

This chapter describes the detail of the OLT .It mainly includes the following contents:

- OLT basic information
- Card List
- ONU List
- Invalid ONU List
- ONU Auth Mode
- MAC White List
- LOID White List
- MAC Bind
- ONU Replace

10.1. OLT basic information

Function

The device management console is the entrance of basic information and configuration, including basic information and basic operation of network element, card and port.

Operating Procedure

1. Select a OLT, click right-menu "Device Detail", pop-up device detail window.

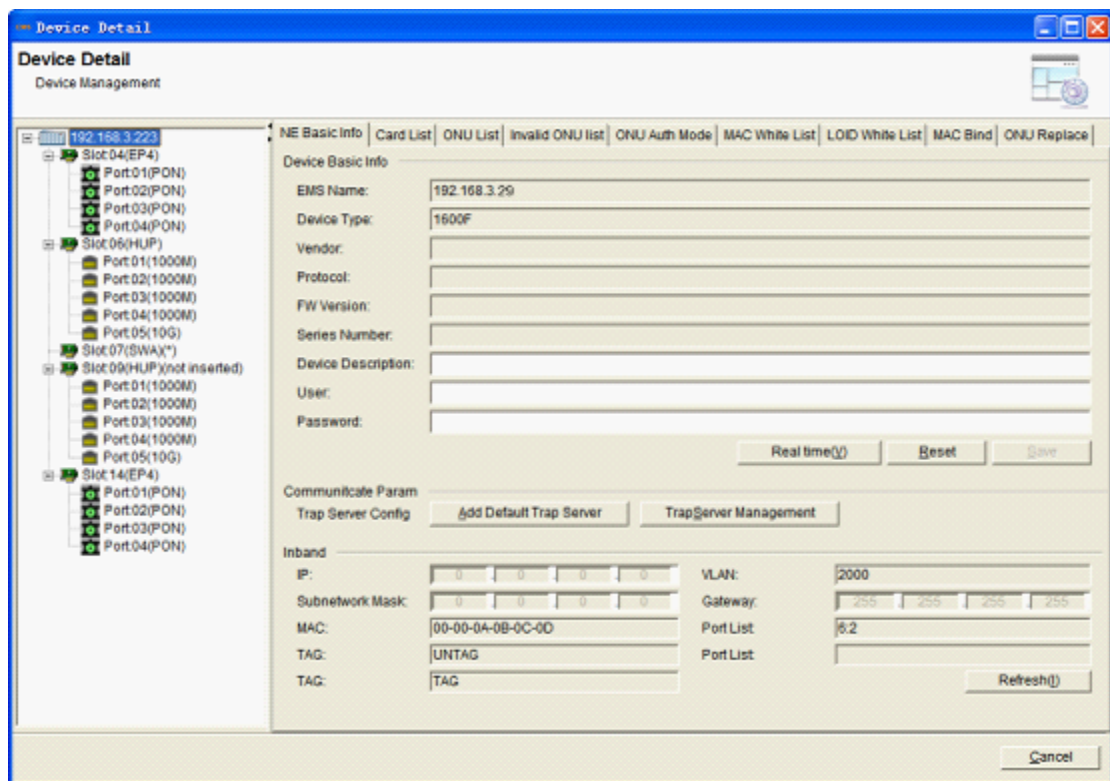


Figure 10-1 Device detail

- ✧ NE Basic Info: include basic information, TRAP servers list and In-band network management parameter.
- ✧ Card List: The slot, type, version and state of the card.
- ✧ ONU List: Authorized ONU list
- ✧ Invalid List: Unauthorized ONU list
- ✧ ONU Auth Mode: The authentication mode of ONU.
- ✧ MAC White List: MAC and LOID white list
- ✧ MAC Bind: Binding MAC and LOID. Only to match MAC and LOID, then the

ONU can be on-line.

- ✧ ONU Replace: Replace the old ONU with the new.

10.2. Card list

10.2.1. Provision card

Function

Add card into the card list.

Operating Procedure

1. Select a OLT, right-click menu "device detail", pop-up device detail window.
2. Select the card list tab; you will see all card lists.
3. Click "provision", pop-up provision card window.
4. Select slot and card type, there will be some notice information after click "OK".

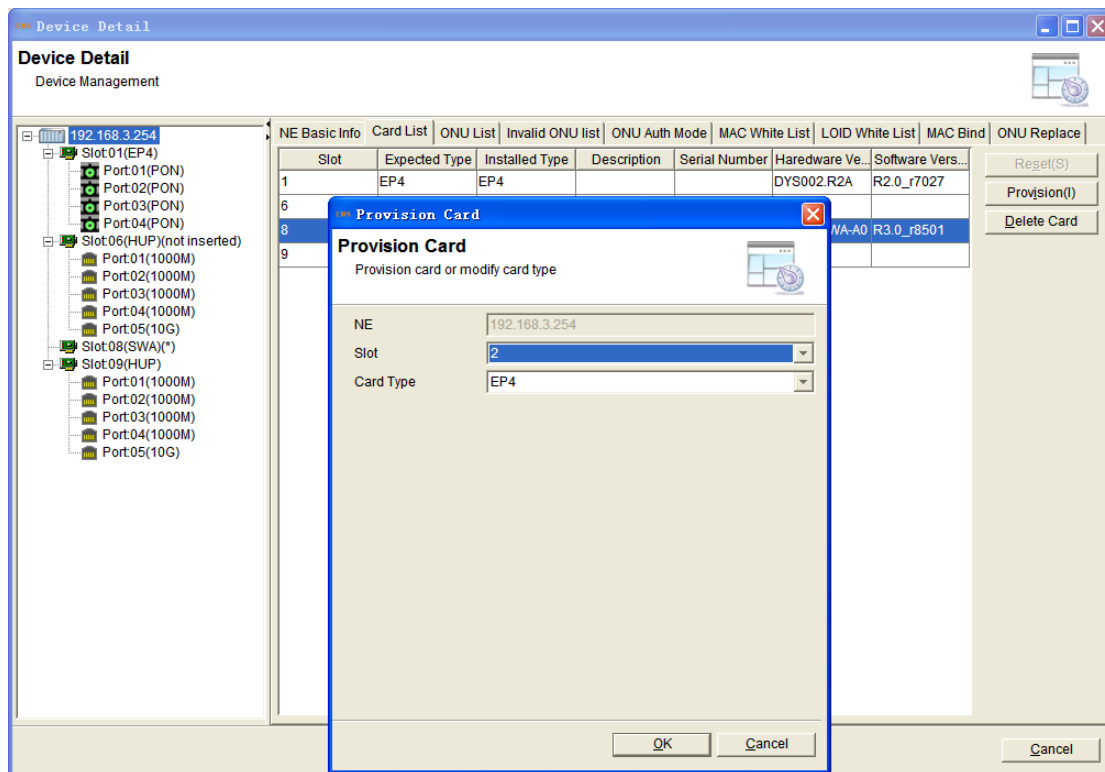


Figure 10-2 Provision card

10.2.2. Delete card

Function

Delete card from the network management system.

Operating Procedure

1. Select an OLT, right-click menu "device detail", pop-up device detail window.
2. Select the card list tab; you will see all card lists.
3. Select one card, click "delete card" pop-up the delete card interface.

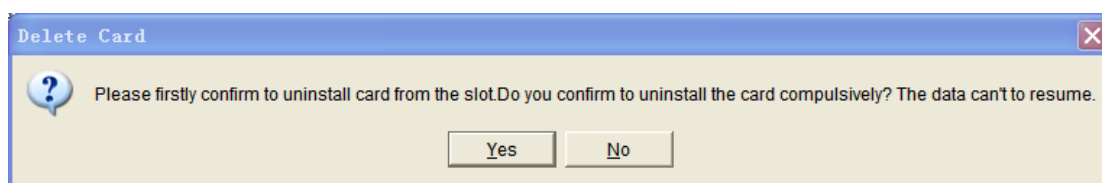


Figure 10-3 Delete card



CAUTION:

Delete card results in card and its configuration data lost.

10.2.3. Reset card

Function

Reset card can reset the card of the OLT.

Operating Procedure

1. Ditto "provision card", in the card list window, select one card, click "reset card", pop-up the reset card interface.

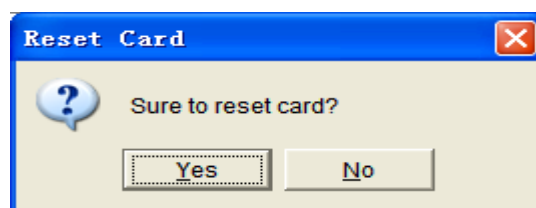


Figure 10-4 Reset card

**CAUTION:**

Card reset will result in the existing configuration data on the card is lost. Handle with care!

10.3. ONU list

Function

Manage and control device by authorization.

Operating Procedure

1. Select a OLT, right-click "device detail", pop-up the device detail window.
2. Select a PON card in the left navigation tree, click the tab "ONU List", show all ONU of the PON card.
3. The ONU list displays all ONUs which are authorized as below:

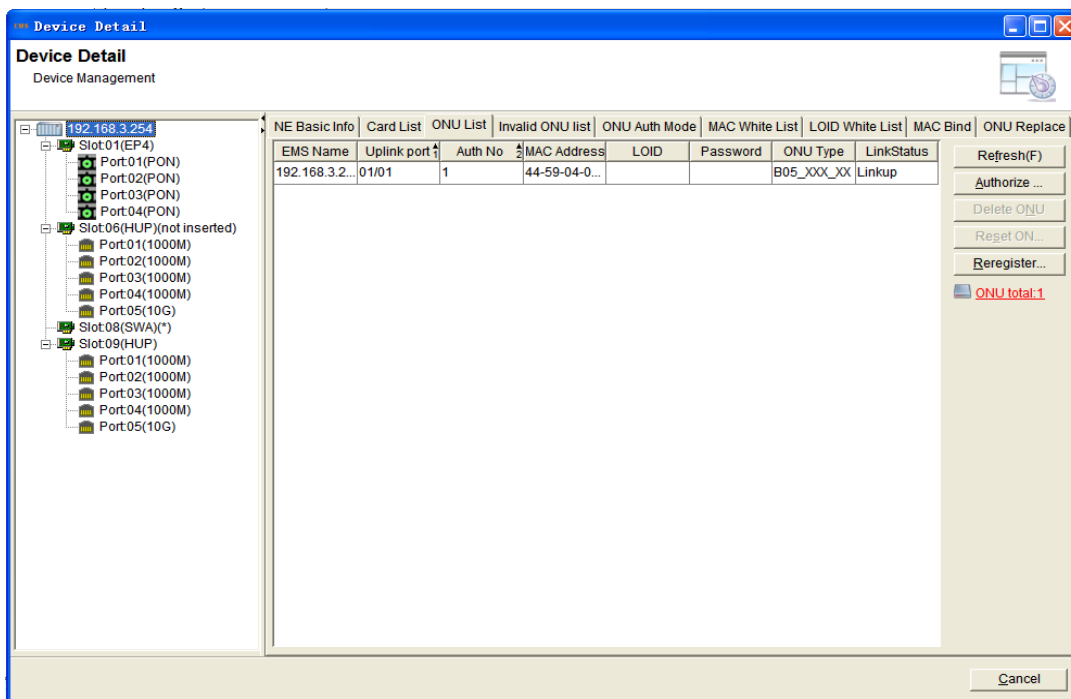


Figure 10-5 ONU List

10.3.1. Authorize ONU

Function

Manual authorize ONU

Operating Procedure

1. Fill in the parameter of the ONU authorization, manual authorize ONU. The system will list the current available ONU authorization number automatically to choose from.

Figure 10-6 Add ONU

2. The results of the authorization will real-time display in the message box. System will synchronize configuration of the ONU which is authorized successfully.

```
[System Message] 2012-03-12,10:11:00,+0800 Start Synchronize Task (192.168.3.29-12/02:35)
[System Message] 2012-03-12,10:11:00,+0800 Read 192.168.3.29-12/02:35 Onu General Porperty
[System Message] 2012-03-12,10:11:00,+0800 Read 192.168.3.29-12/02:35 Onu General Porperty success
[System Message] 2012-03-12,10:11:00,+0800 Read 192.168.3.29-12/02:35 ONU Slot Information
[System Message] 2012-03-12,10:11:00,+0800 Read 192.168.3.29-12/02:35 ONU Slot Information success
[System Message] 2012-03-12,10:11:00,+0800 Read 192.168.3.29-12/02:35 ONU Card Information
[System Message] 2012-03-12,10:11:00,+0800 Read 192.168.3.29-12/02:35 ONU Card Information success
```

Figure 10-7 Successful authorization message

- If the authorization is fail, the causes also will real-time display in the message box.

```
[System Message] 2012-03-12,10:10:33 ONU_ADD 12/02:36 44-59-04-00-96-7D fail
Exception: the mac of onu has been authorized:SLOT=13 AuthNo=35
```

Figure 10-8 Failed Authorization fault message

10.3.2. Delete ONU

Function

Delete ONU.

Operating Procedure

- Select one or more authorized ONUs; click "Delete ONU" as below.

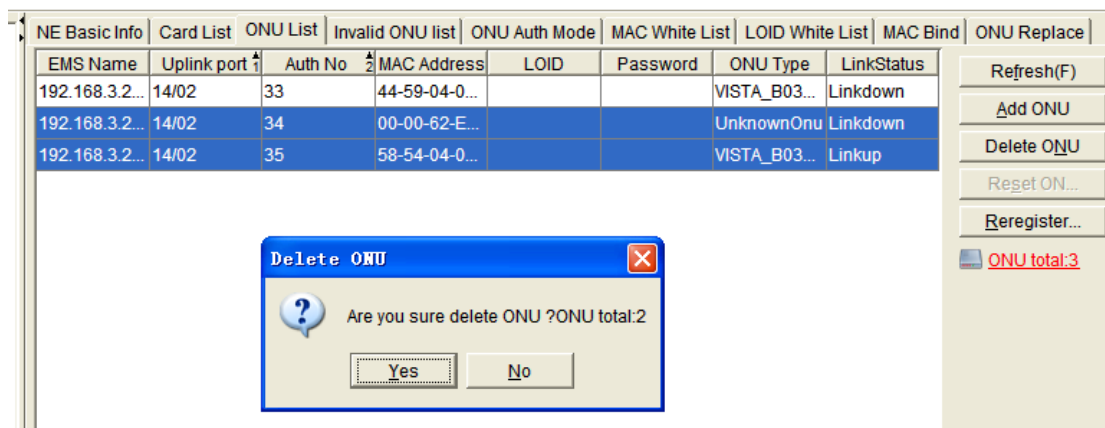


Figure 10-9 Delete ONU

- The results of the deleting ONU will real-time display in the message box. Network management System will delete ONU and real-time update in the topological diagram.

```
[System Message] 2012-03-12,09:51:34 ONU_DELETE 12/02:35 44-59-04-00-96-7D success
```

Figure 10-10 Delete successful message

10.3.3. Reset ONU

Function

Reset ONU.

Operating Procedure

1. Select one or more ONU, click "Reset ONU" ,the result will real-time display in the message box as below.

```
[System Message] 2012-03-12,11:32:24 ONU_RESET 192.168.3.29-12/02:34 success
```

Figure 10-11 Reset ONU

10.3.4. Register ONU

Function

Register ONU.

Operating Procedure

1. Select one or more ONU, click "Register ONU" , the result will real-time display in the message box as below.

```
[System Message] 2012-03-12,11:33:20 ONU_REGISTER 192.168.3.29-12/02:34 success
```

Figure 10-12 Register ONU

10.4. Invalid ONU list

Function

View invalid ONU.

Operating Procedure

1. Invalid ONU list display all of the ONU which are unauthorized. Select one PON card in the left navigation tree; click the tab "Invalid ONU List" as below.

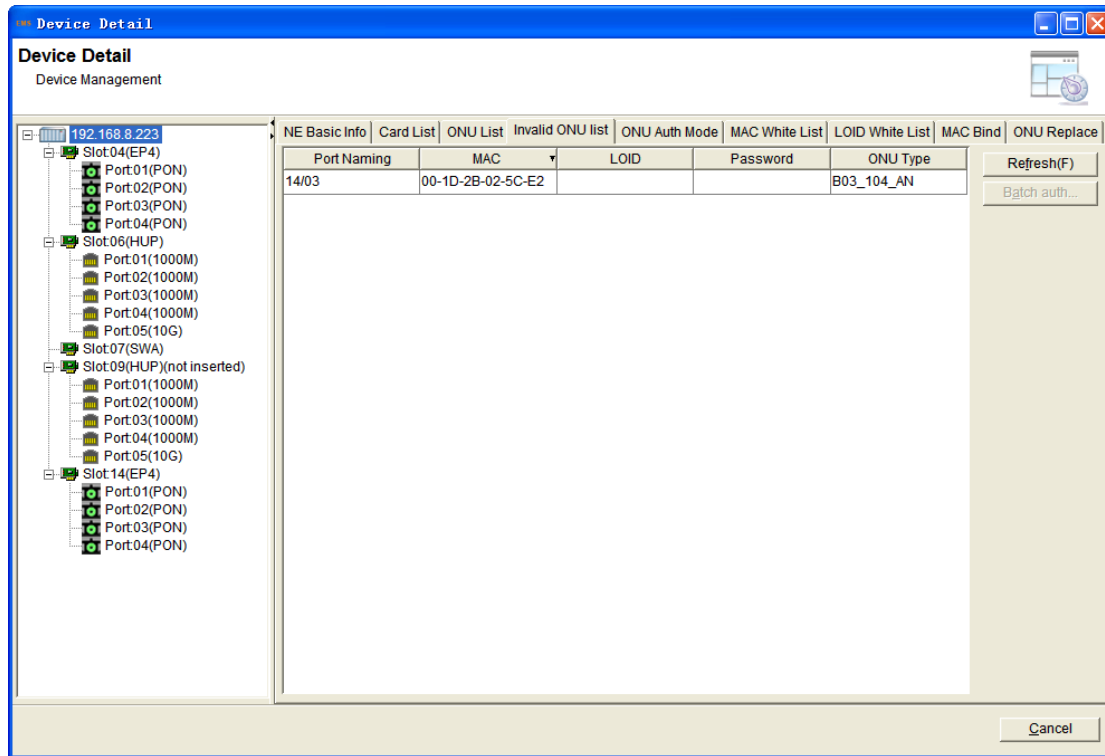


Figure 10-13 Invalid ONU list

10.5. Batch authorize ONU

Function

Batch authorize ONUs.

Operating Procedure

1. Select one or more ONUs in the invalid ONU list, and select authorization numbers, batch issued to the device. The device will authorize ONU after issue to the device.

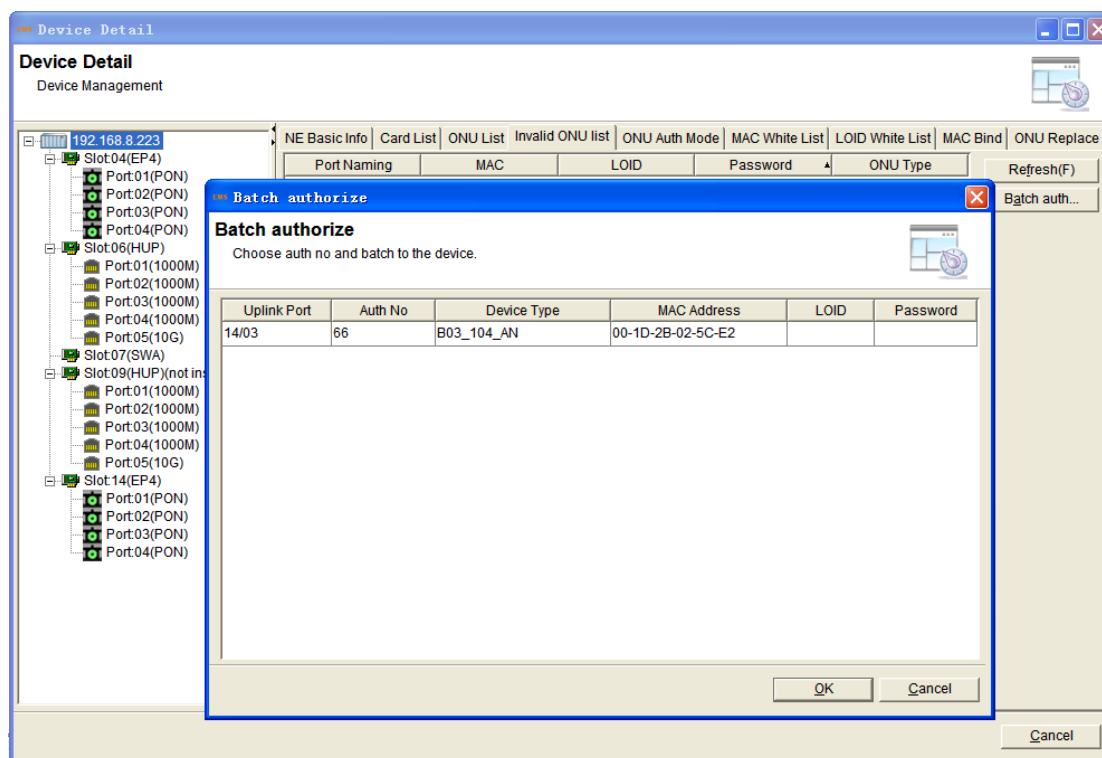


Figure 10-14 Batch authorize

10.6. ONU authorization Mode

Function

Select ONU authorization mode.

Operating Procedure

1. Configure authorization strategy and mode of each card.
2. Authorization strategy includes MAC, LOID, MAC+LOID and NONE.
3. Auto Authorization Mode includes Auto-Manual, Auto and Manual.

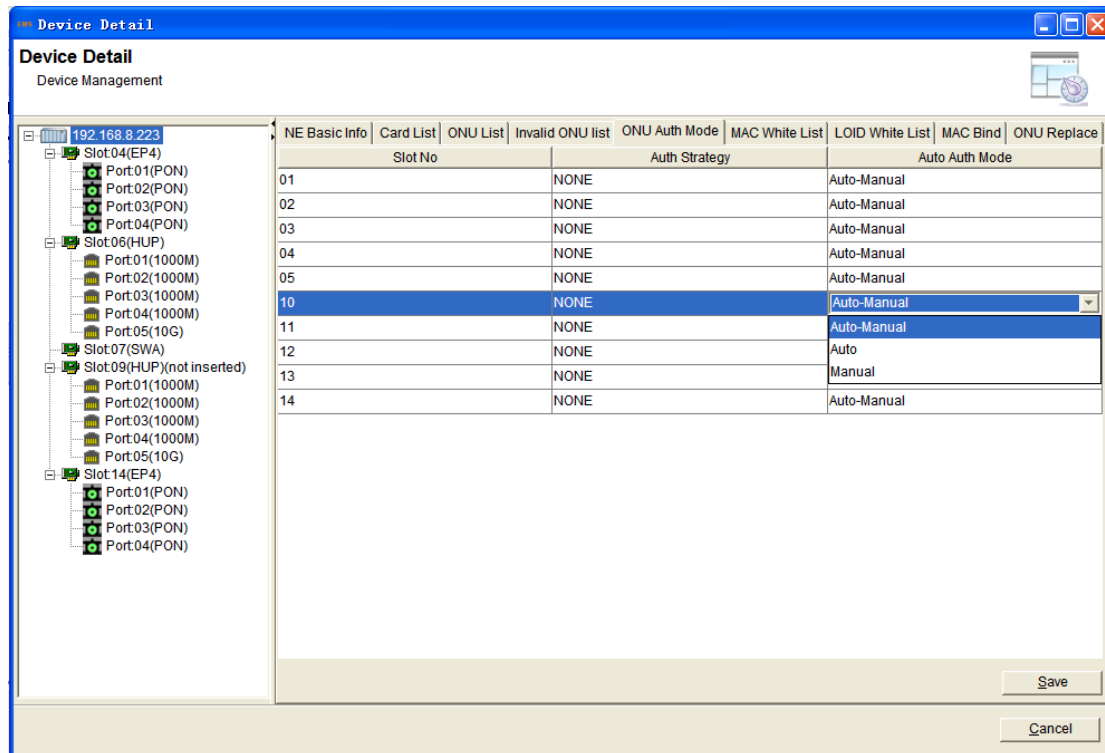


Figure 10-15 ONU authorized mode

10.7. MAC white list

Function

View the MAC White List.

Operating Procedure

1. Add new item to MAC White List: Click "Add ", fill in the number.

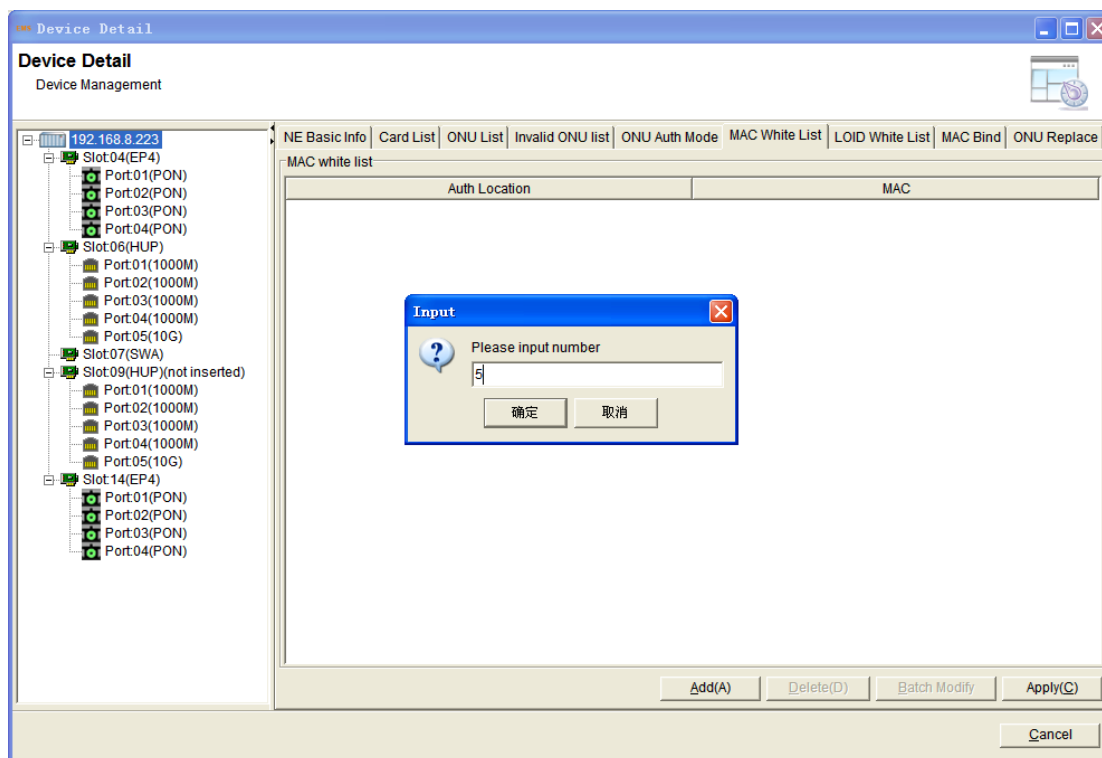


Figure 10-16 Add white list

2. Batch modifies MAC: Select the MAC you want to change, click Batch Modify. For example, MAC address begin with "44-59-04", end in "00", 44-59-04-00-01-00 begin to circulate and can be used in card 1.

Batch Modify

LOID

LOID

Modify LOID

Pre: Suf:

Start: Count:

Length: Interval:

Password

Modify Pass...

Pre: Suf:

Start: Count:

Length: Interval:

MAC

Modify MAC

Pre: Suf:

Start: Count:

Interval:

Auth Range

Auth Type: Auth Location:

OK Cancel

Figure 10-17 Batch Modify

3. You will see the MAC address batch modified. And you can also modify MAC in the table.

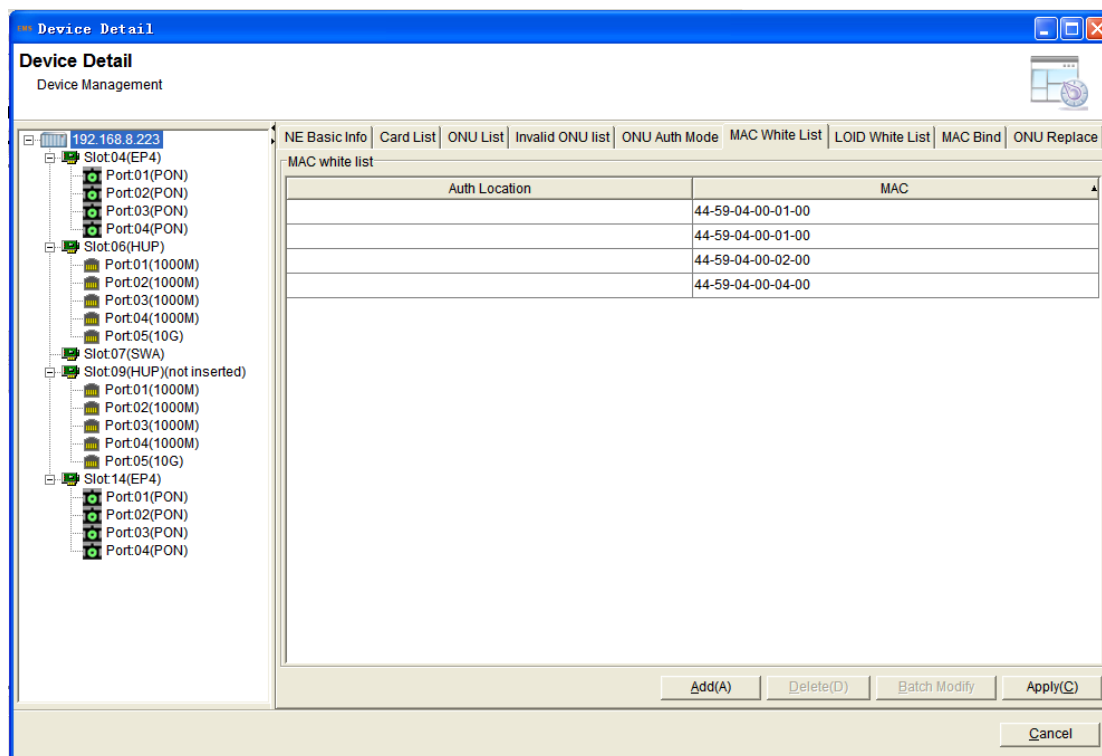


Figure 10-18 MAC white list

4. Delete: Select rows of the table, click delete button.

10.8. LOID white list

Function

View the LOID White List.

Operating Procedure

1. Add new entry to LOID White List: Click "Add ", fill in the number.

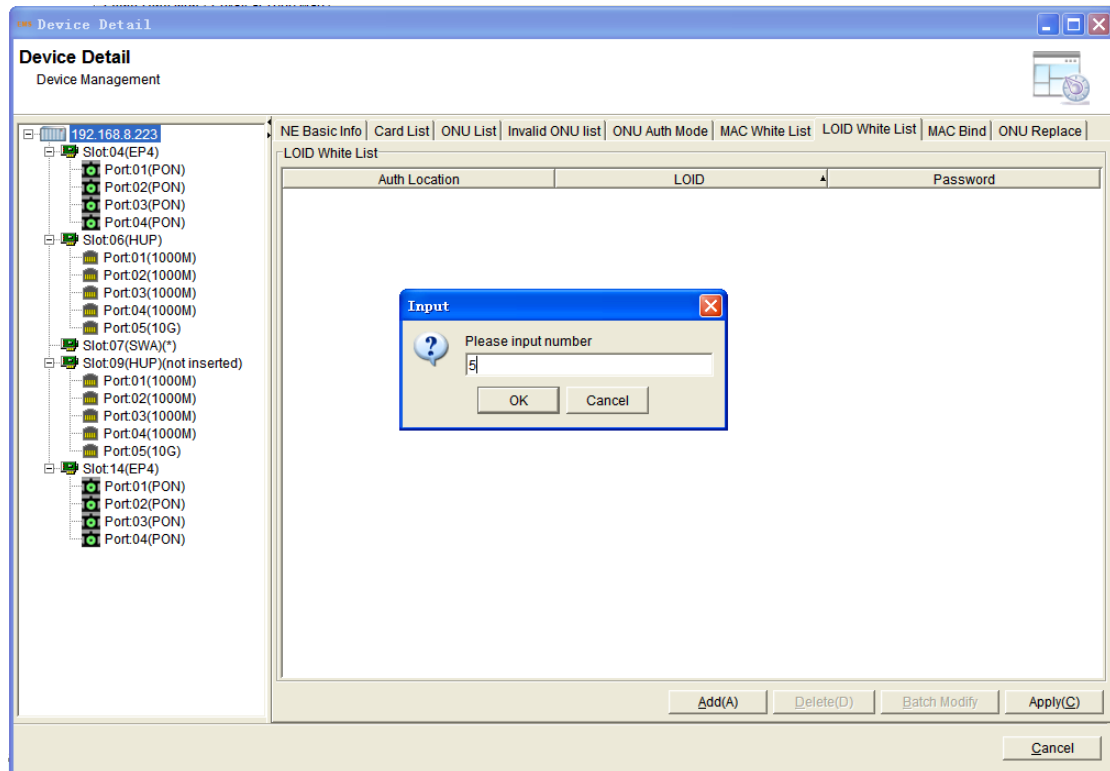


Figure 10-19 Add LOID white

2. Batch modify LOID+PASSWORD: Select the rows of the table, click "Batch Modify". For example, LOID begin with SN2010, end in 01. PASSWORD begin with PSW, 001 begin to circulate and can be used in 01/01 Port as below.

Figure 10-20 LOID Batch modify

3. You will see the LOID+PASSWORD batch modified. And you can also modify LOID and PASSWORD in the table.

NE Basic Info	Card List	ONU List	Invalid ONU list	ONU Auth Mode	MAC White List	LOID White List	MAC Bind	ONU Replace
LOID White List								
	Auth Location		LOID			Password		
	Slot1		SN2010101			PSW001		
	Slot1		SN2010201			PSW002		
	Slot1		SN2010301			PSW003		
	Slot1		SN2010401			PSW004		
	Slot1		SN2010501			PSW005		

Figure 10-21 LOID White list

4. Delete: Select rows of the table, click delete button.

10.9. MAC bind

Function

Bind MAC address

Operating Procedure

1. Add new MAC Binding: Fill in the MAC address and LOID, and then click “OK” .

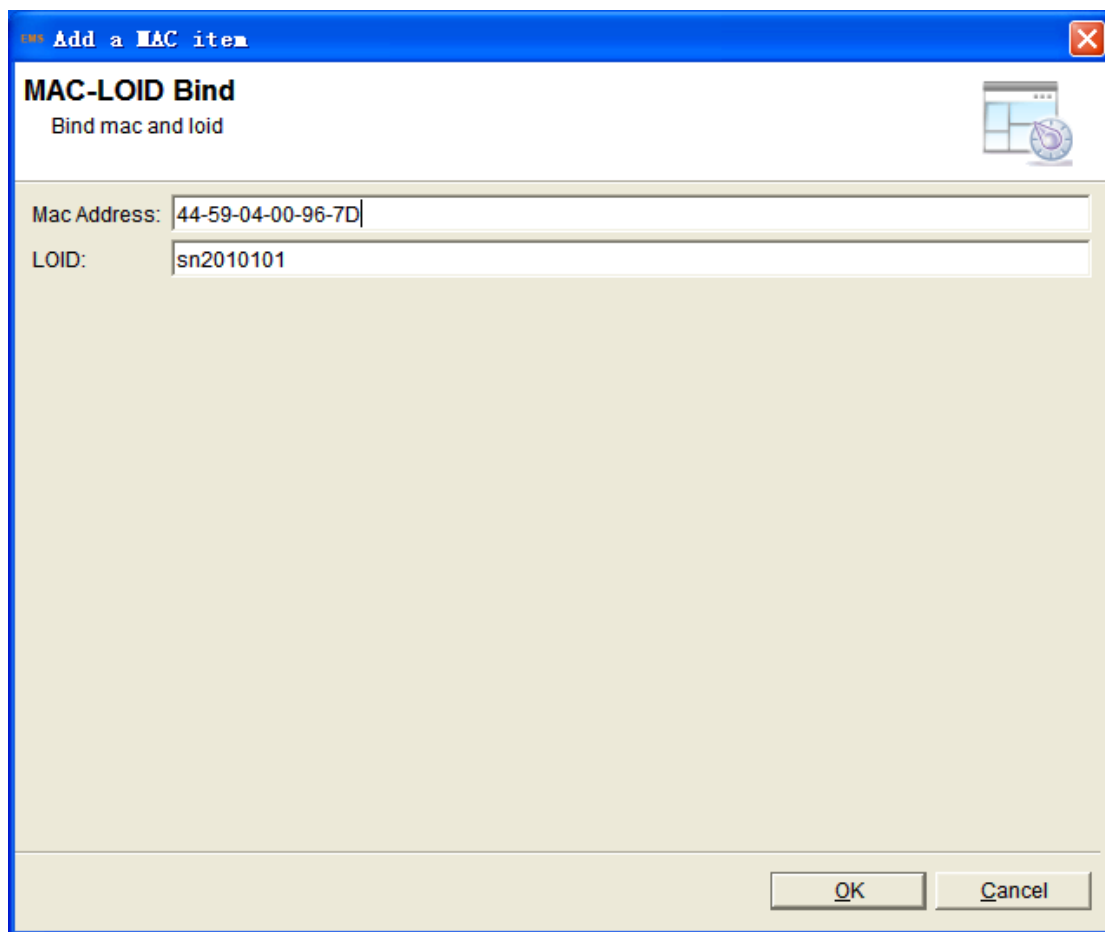


Figure 10-22 MAC-LOID Bind

2. Delete: Select the rows, click delete button.

10.10. ONU replace

Function

Replace ONU

Operating Procedure

1. Select "ONU Replace" tab in the main menu, fill in the old MAC and the new MAC.

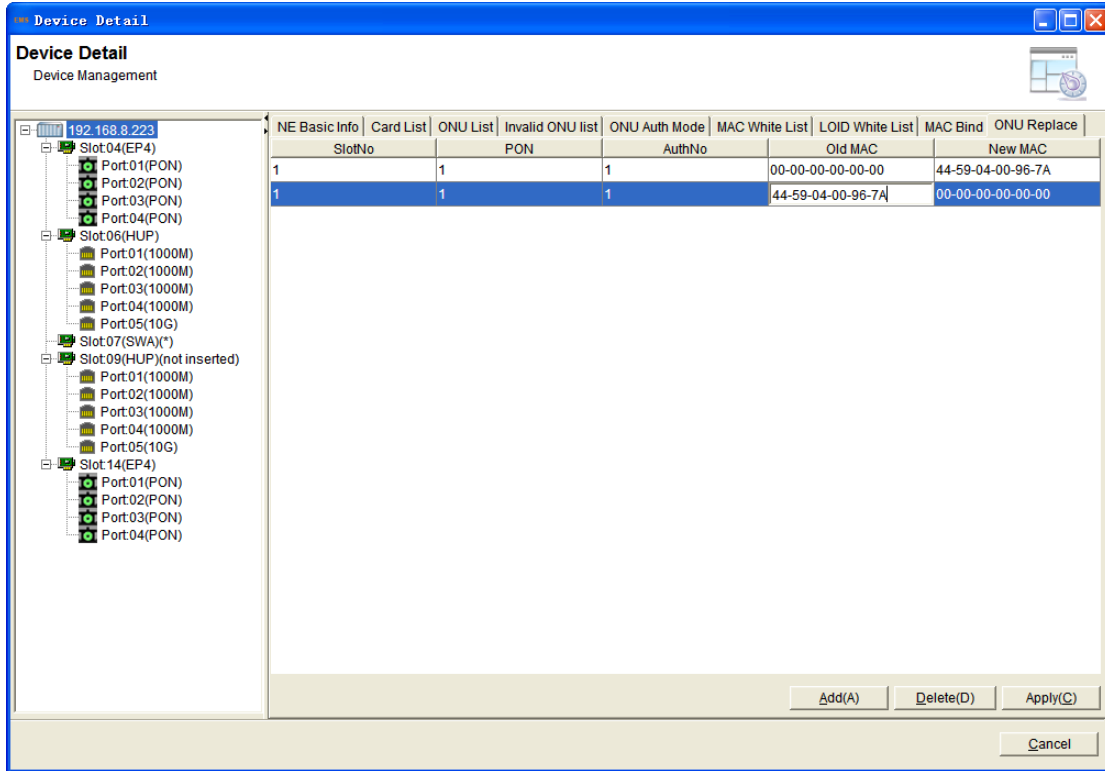


Figure 10-23 ONU Replace

2. Apply: Manual editing or delete rows of the table, click "Apply". Operator should pay attention to items related to the operation. For example, the ONU which replace MAC must be existed and MAC addresses be replaced cannot be same etc

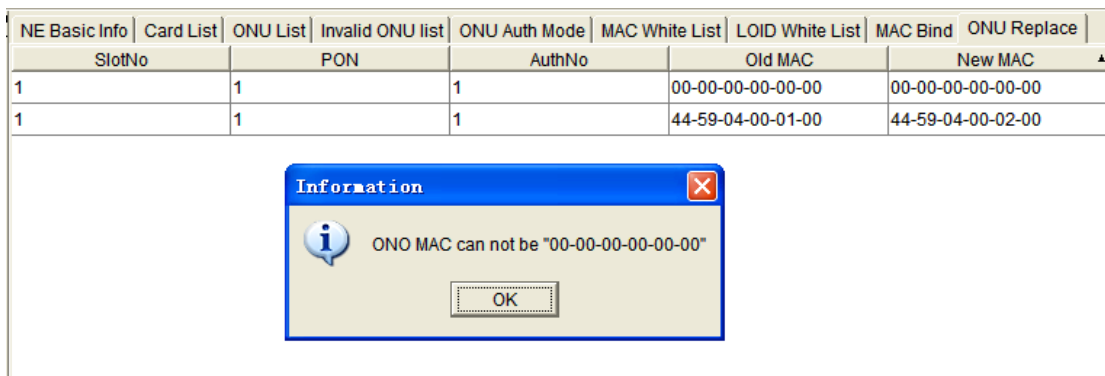


Figure 10-24 Replace fault

11. OLT management

This chapter describes the function of OLT management. It mainly includes the following contents:

- Delete device
- View management(O)
- Modify NE discover parameter
- Sync mgmt(S)
- Configuration(S)
- Control command(C)
- Operation(O)
- State callbacks
- View current alarm
- View history alarm
- View immediate performance
- View real time performance
- Ping NE
- Telnet NE

11.1. Delete device

Function

Delete needless NE in topology map.

Operating Procedure

1. Select NE which you want to delete, right click "delete devices".
2. Click "OK", the NE will be deleted.

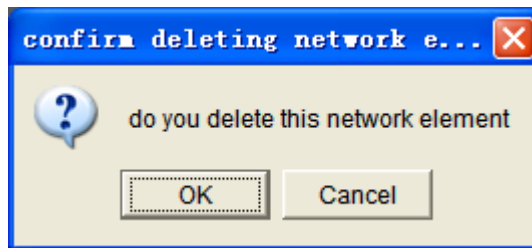


Figure 11-1 Delete devices

11.2. View management

11.2.1. Chassis view

Function

Chassis view can express card, port and status truly.

Operating Procedure

1. Right click OLT, select "view management (O)">"chassis view" pop-up chassis view interface.
2. There are three areas, object navigation tree, chassis view, properties.
 - ✧ Object navigation tree: Card and port management are displayed in the top left. When select object on the left side three, on the right side chassis view will also be selected.
 - ✧ Chassis view: A graphic to display position and status. The top is toolbar.
 - ✧ Properties: The basic information of object.

**NOTE:**

Double click can open chassis view.

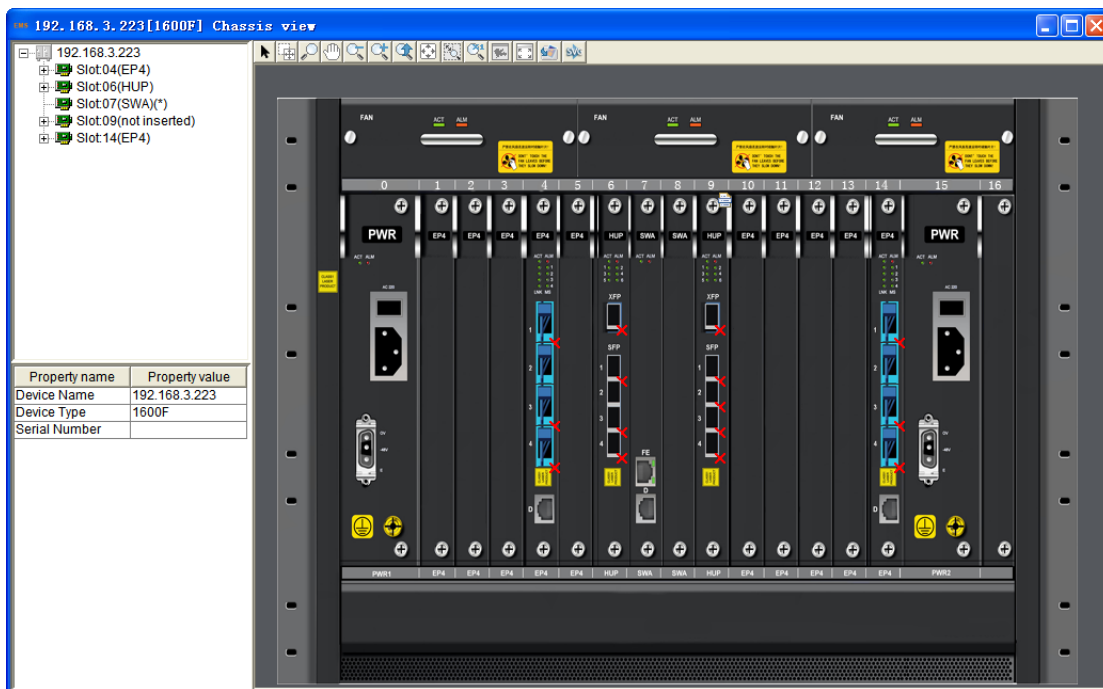


Figure 11-2 Chassis view

11.2.2. Devices physical map

Function

Physical topology map displayed the connection of "OLT-ODN-ONU"

Operating Procedure

1. Right click OLT, select "view management (O)">"devices physical map"
pop-up devices physical map interface.

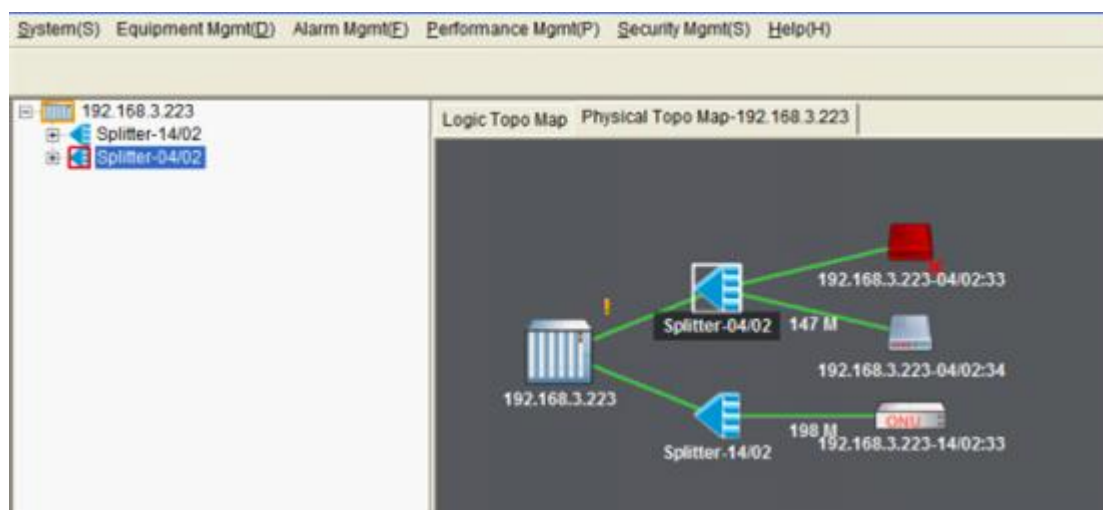


Figure 11-3 Devices physical map

11.2.3. Move

Function

Move NE, group and domain to another domain or group.

Operating Procedure

1. Right click OLT, select "view management (O)">"move to "pop-up "move....." interface.
2. Select new destination domain or group from left tree.

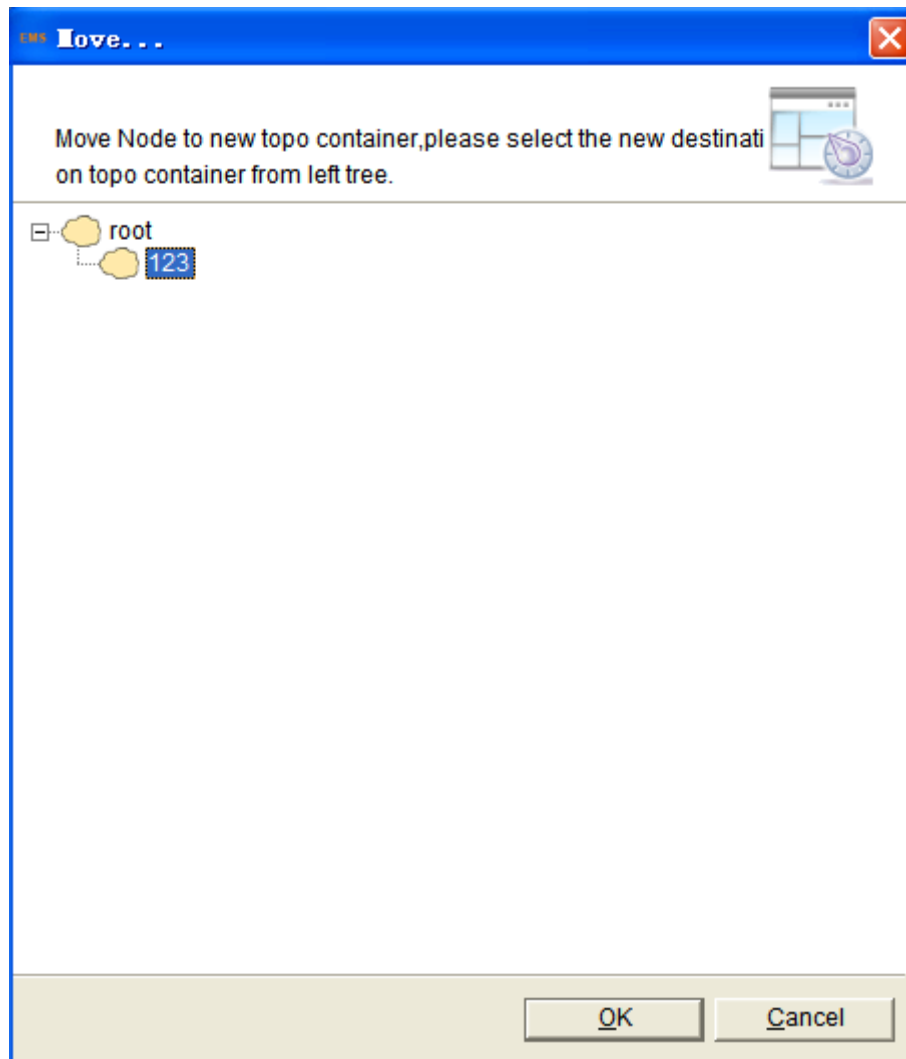


Figure 11-4 Move....

11.3. Sync management

11.3.1. Sync device

Function

Sync device ensure device configuration consistent with network management system configuration .When device configuration change, you can manual sync to ensure the information consistent.

Operating Procedure

1. Right click OLT, select "sync mgmt(S)">"sync device", it will launch

synchronous task.

2. Background sync information will be printed in rolling log column during sync. Once has error messages, it can find problem immediately.
3. It has whirling progress message in the top right corner of device during sync.

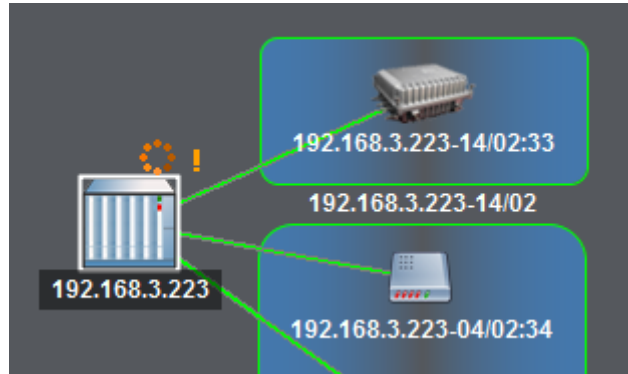


Figure 11-5 Device sync

4. If fail, it will has "!" to message in top right corner of device.

11.3.2. Alarm sync

Function

Alarm sync can promise show alarm message timely.

Operating Procedure

1. Right click OLT, select "sync mgmt(S)">"alarm sync".
2. If it has alarm now, alarm message will be displayed.

Realtme Alarm List		Realtme Event List				
Severity	ProbableCause	Source	Type	State	Update Time	Source Type
Major Alarm	Config have not saved	192.168.3.29-07	Equipment Alarm	not acked and not cleared	2012-03-07 14:26:15	SWA

Figure 11-6 Alarm message

11.3.3. Category sync

Function

Category sync is division synchronization each property parameter.

Operating Procedure

1. Right click OLT, select "sync mgmt(S)">"category sync".
2. Select one or more property parameters which need to synchronization, click "start (B)".

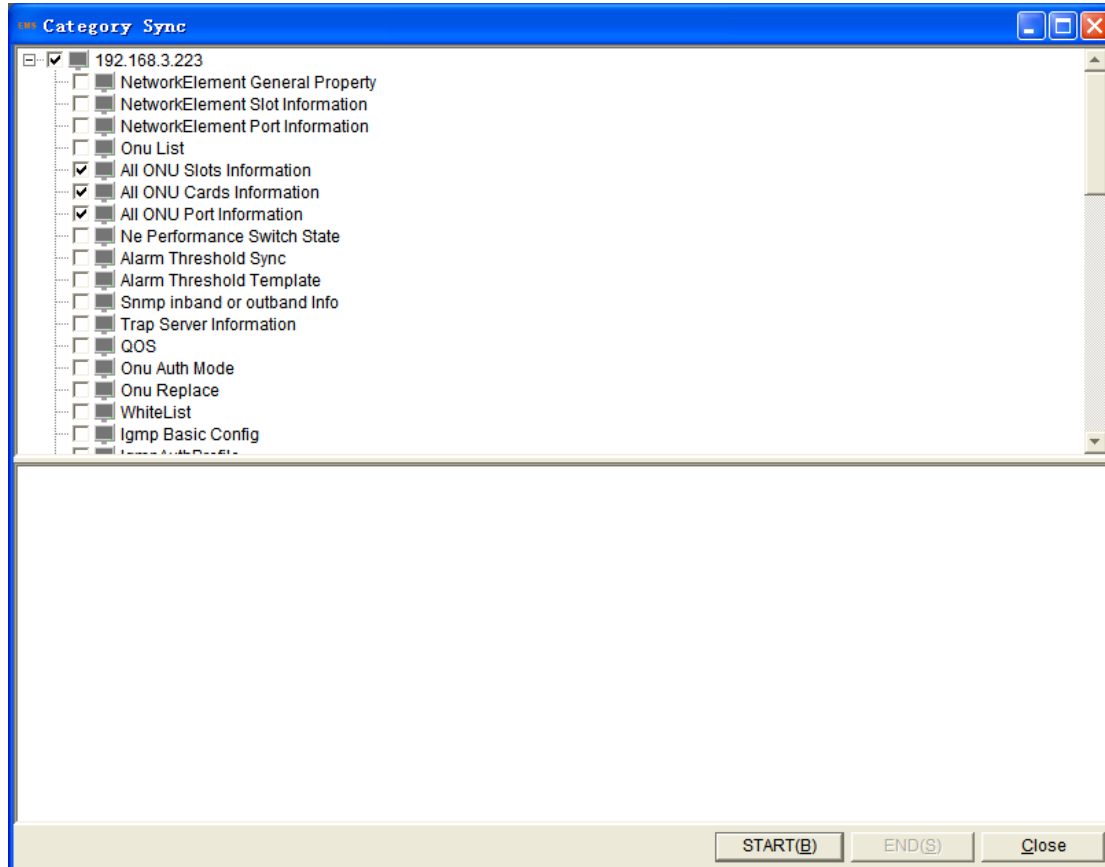


Figure 11-7 Category sync

11.4. Configuration

11.4.1. Uplink configure

11.4.1.1. Uplink port configure

Function

Configure uplink port parameter.

Operating Procedure

1. Right click OLT, select "configuration(C)">"uplink config(U)">"uplink port

config" enter port list interface.

2. Set admin state, port type, auto neg, FC, MAC learning, priority state and priority.
3. Click "Apply(C)"pop-up progress bar.
4. Click "Refresh" to look up current port configuration.

Name	Admin State	Run State	PortType	Auto Neg	Speed	Duplex	FC	MAC Learn	Priority State	Priority
06/01	ACTIVE	Link down	SGMII	Enable	10M	HD	Disable	Enable	Disable	0
06/02	ACTIVE	Link up	SGMII	Enable	100M	FD	Disable	Enable	Disable	0
06/03	ACTIVE	Link down	SGMII	Enable	10M	FD	Disable	Enable	Disable	0
06/04	ACTIVE	Link down	SGMII	Enable	10M	FD	Disable	Enable	Disable	0
06/05	ACTIVE	Link down	OPT	Enable	10G	FD	Disable	Enable	Disable	0
09/01	ACTIVE	Link down	SGMII	Enable	10M	FD	Disable	Enable	Disable	0
09/02	ACTIVE	Link down	SGMII	Enable	10M	FD	Disable	Enable	Disable	0
09/03	ACTIVE	Link down	SGMII	Enable	10M	FD	Disable	Enable	Disable	0
09/04	ACTIVE	Link down	SGMII	Enable	10M	FD	Disable	Enable	Disable	0
09/05	ACTIVE	Link down	OPT	Enable	10G	FD	Disable	Enable	Disable	0

Figure 11-8 Uplink port config

11.4.1.2. RSTP enable

Function

Opening or closing RSTP

Operating Procedure

1. Right click OLT, select "configuration(C)">"uplink config (U) ">"RSTP Enable" enter RSTP enable interface.
2. Select disable or enable in RSTP Switch column.

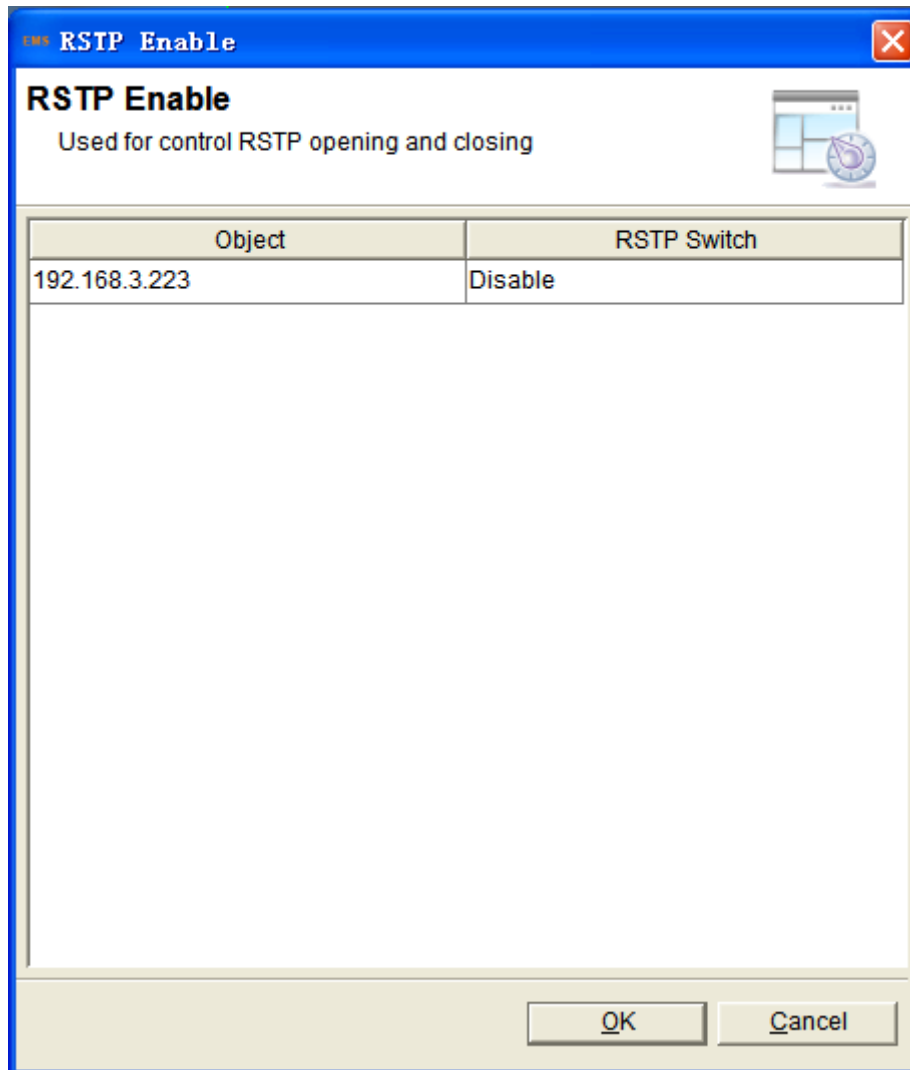


Figure 11-9 RSTP Enable

11.4.1.3. Port RSTP

Function

Port RSTP config

Operating Procedure

1. Right click OLT, select "configuration(C)">"uplink config (U)">"Port RSTP" enter port RSTP configuration interface.
2. Set port priority and port path cost. But keep in mind, you must ensure RSTP enable before the set.

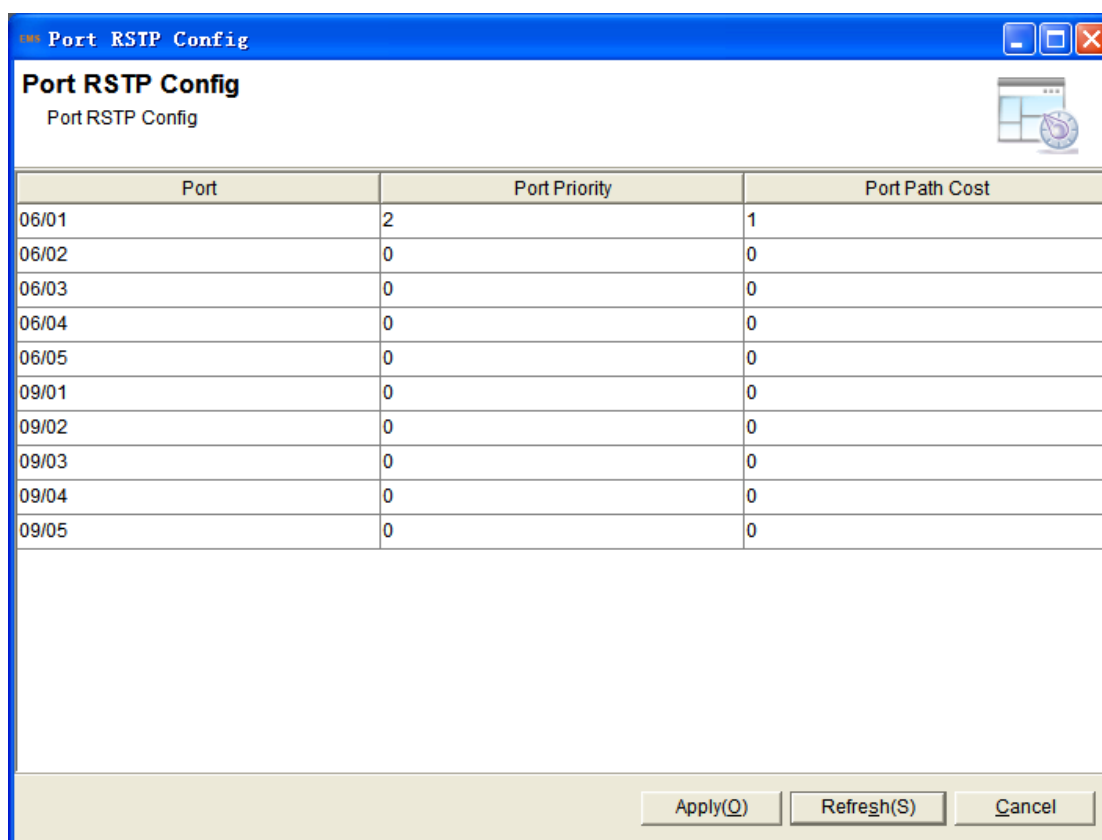


Figure 11-10 Port RSTP config

11.4.1.4. Trunk port link aggregation

Function

Configure trunk

Operating Procedure

1. Right click OLT, select "configuration(C)">"uplink config (U)">"trunk port link aggregation" enter config interface.
2. Click "add" to add a new trunk item and select this item.
3. Choose host port and member port from right windows.
4. Click "Apply(S)" save configuration.
5. Select a item, click "delete" can delete nuisance item.
6. You also can modify host port and member port.

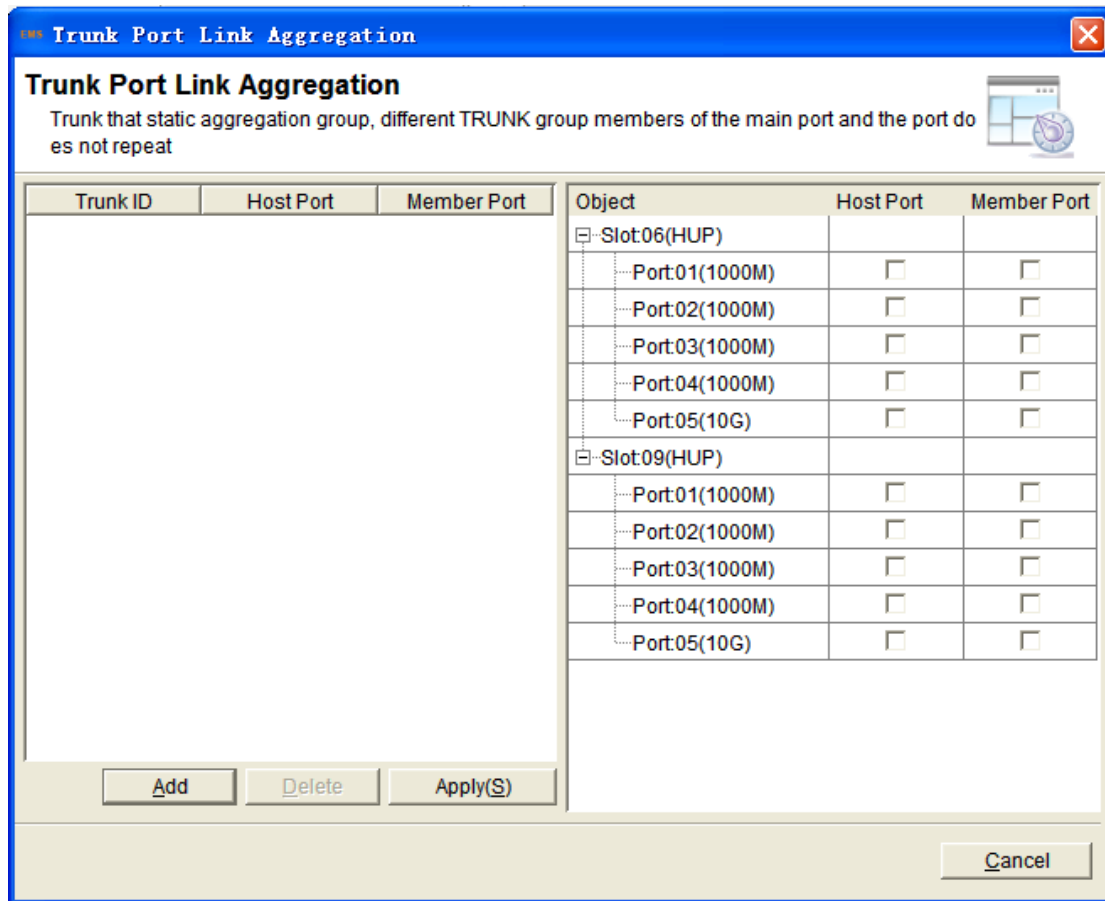


Figure 11-11 Trunk port link aggregation

11.4.2. PON isolate

Function

PON isolate is that the ports of the same PON card can not communicate with each other.

Operating Procedure

1. Right click OLT, select "configuration(C)">"PON isolate "enter PON port isolate config interface.
2. Select Slot NO, select enable status.

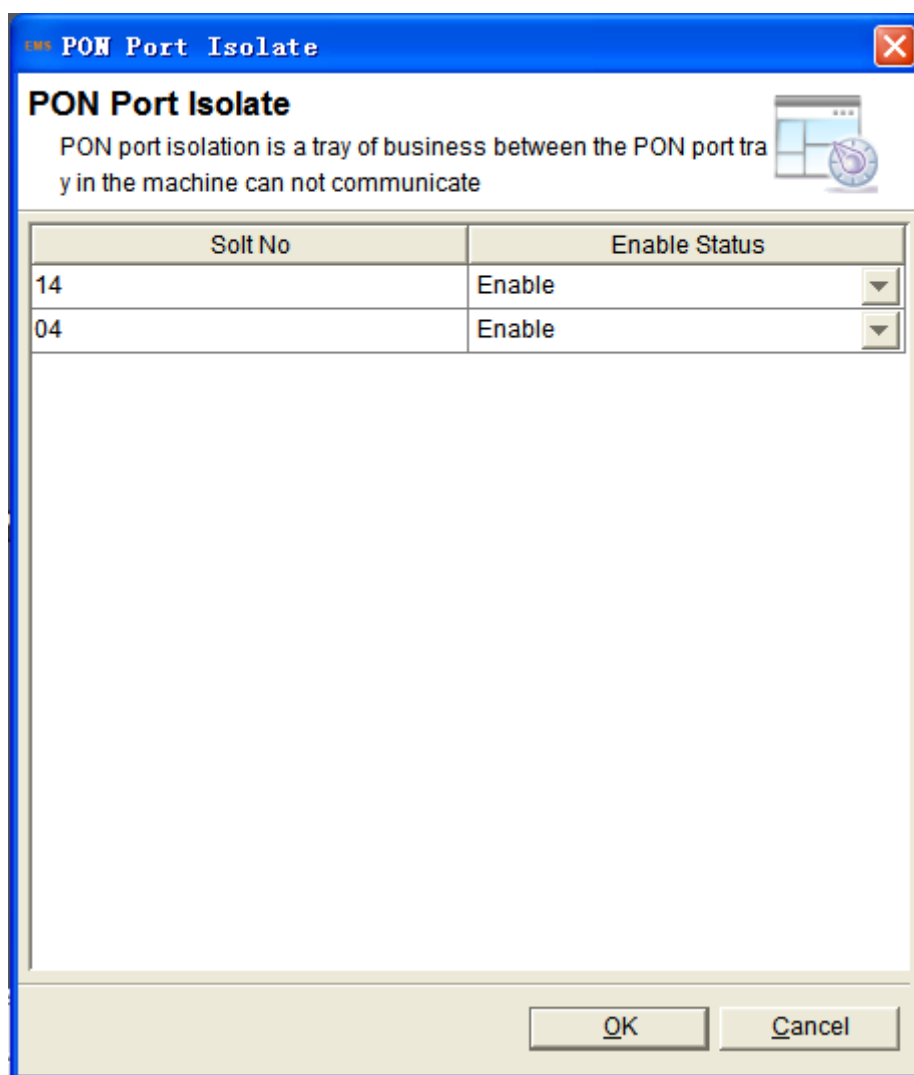


Figure 11-12 PON port isolate

11.4.3. IGMP

Function

Configure global parameter and auth.

Operating Procedure

1. Right click OLT, select "configuration(C)">"IGMP ">enter IGMP config interface.
2. Set IGMP protocol (PROXY, SNOOPING, DISABLE), Proxy IP and IGMP VLAN.

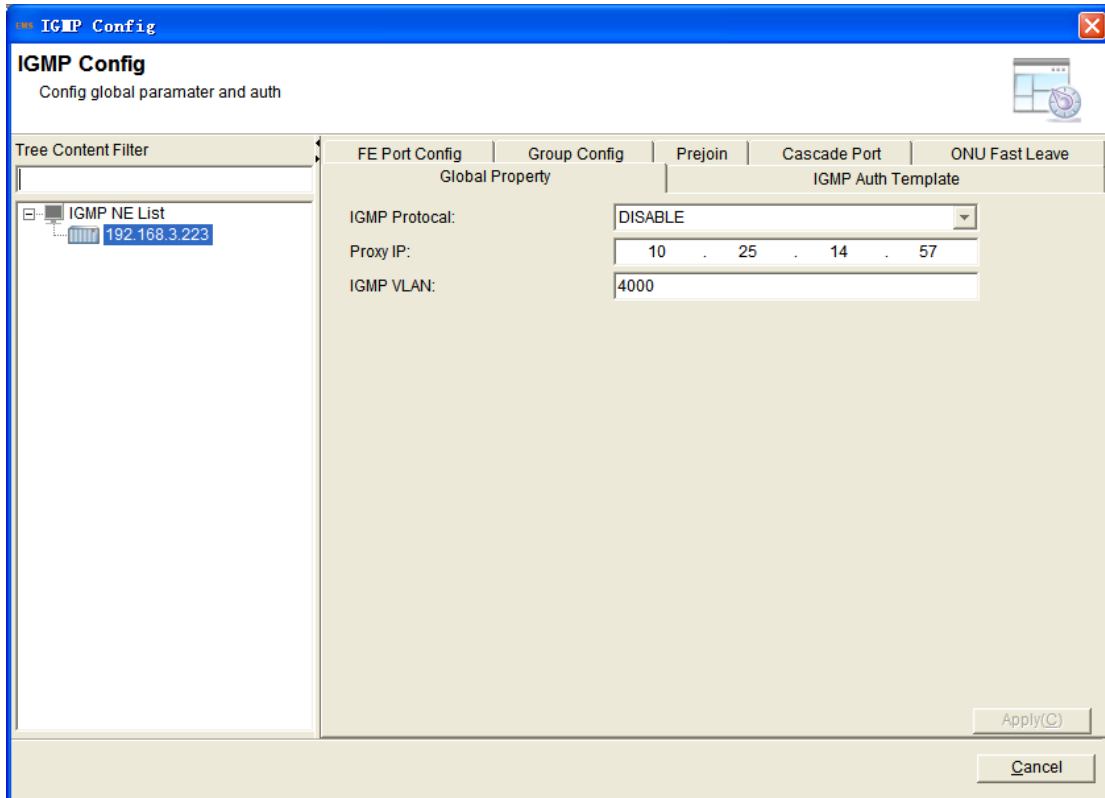


Figure 11-13 Global property

3. Select "IGMP Auth template", add a template and add IP, click "Apply".

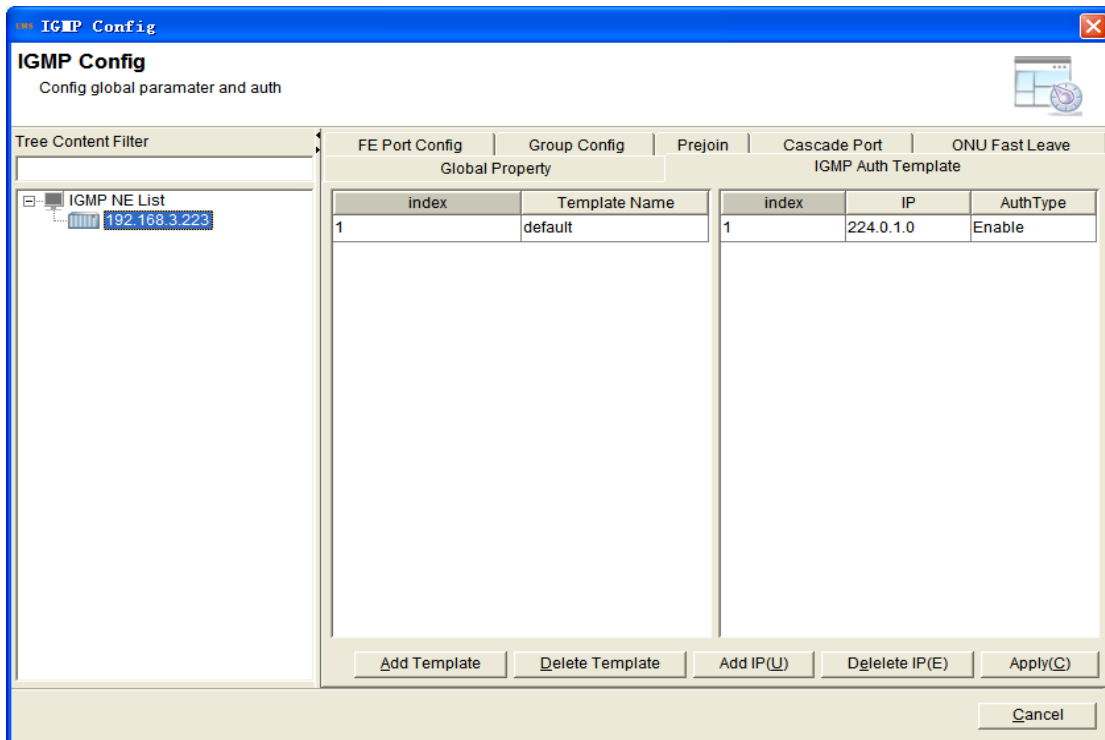


Figure 11-14 IGMP Auth template

4. Select "FE Auth template", click "add" can add FE port, choose template name.

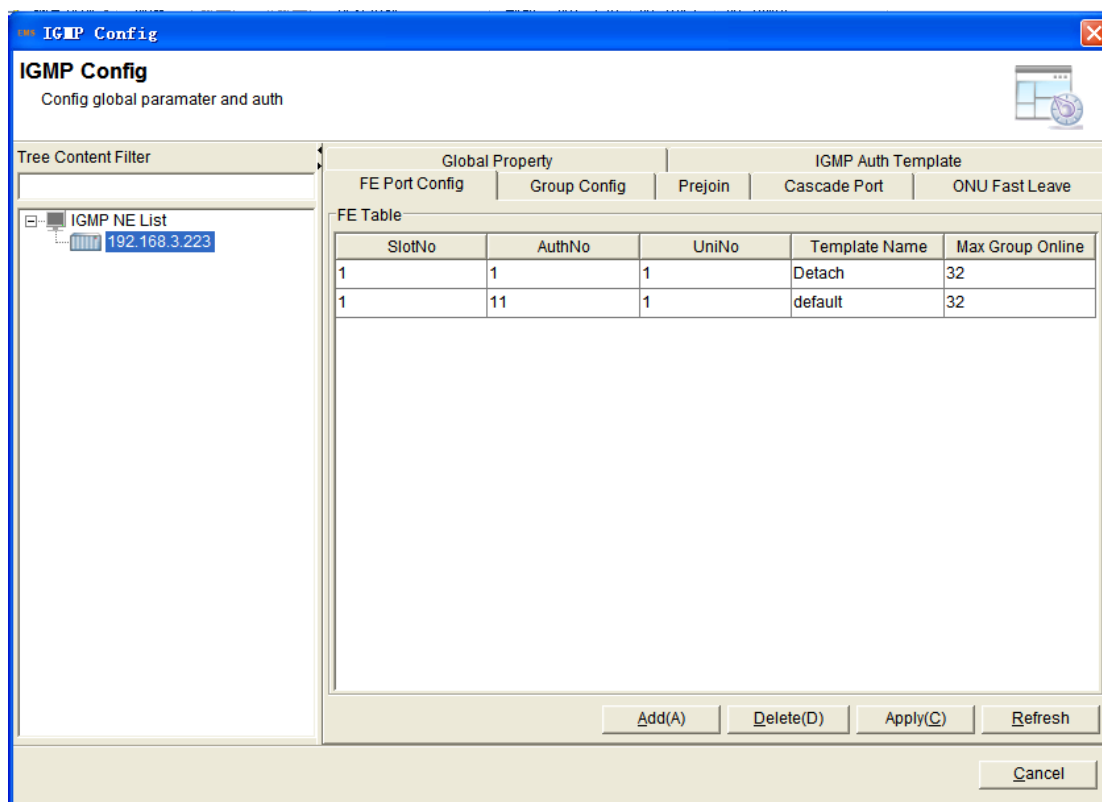


Figure 11-15 FE Auth template

5. Select "Group config", you can set vlan, leave delay and uplink vlan in this interface.

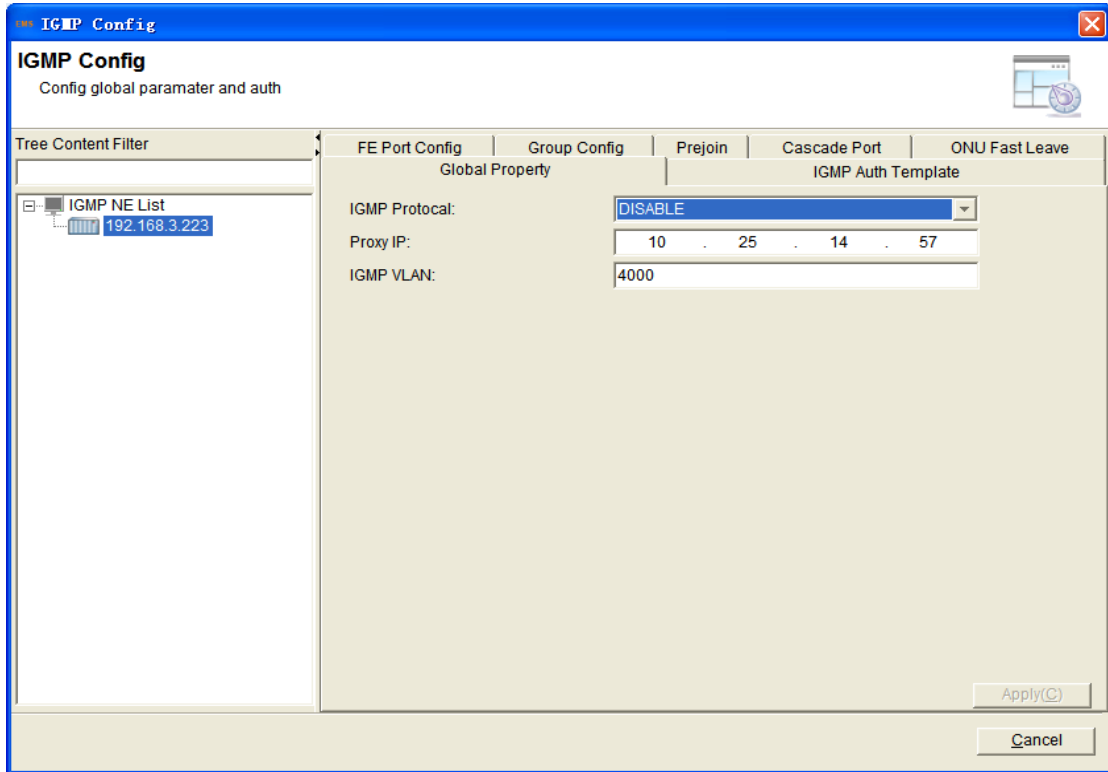


Figure 11-16 Group config

6. Select "Prejoin", set IP.

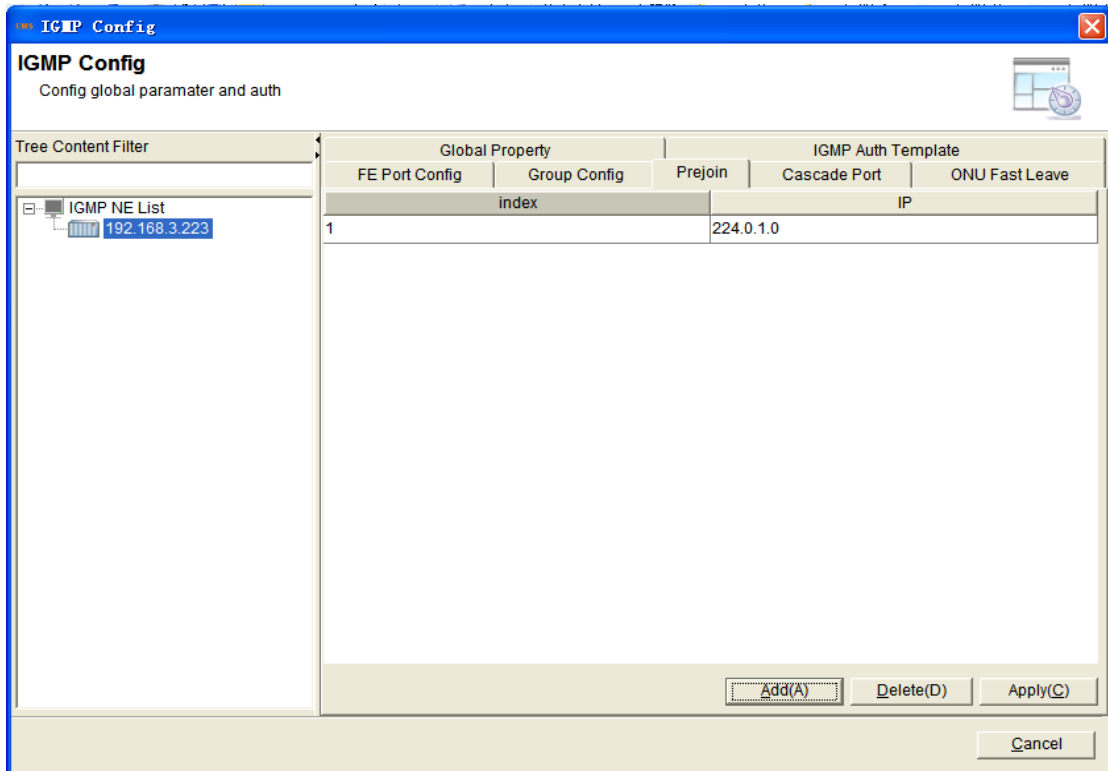


Figure 11-17 Prejoin

7. Select "cascade port", set cascade enable/disable.

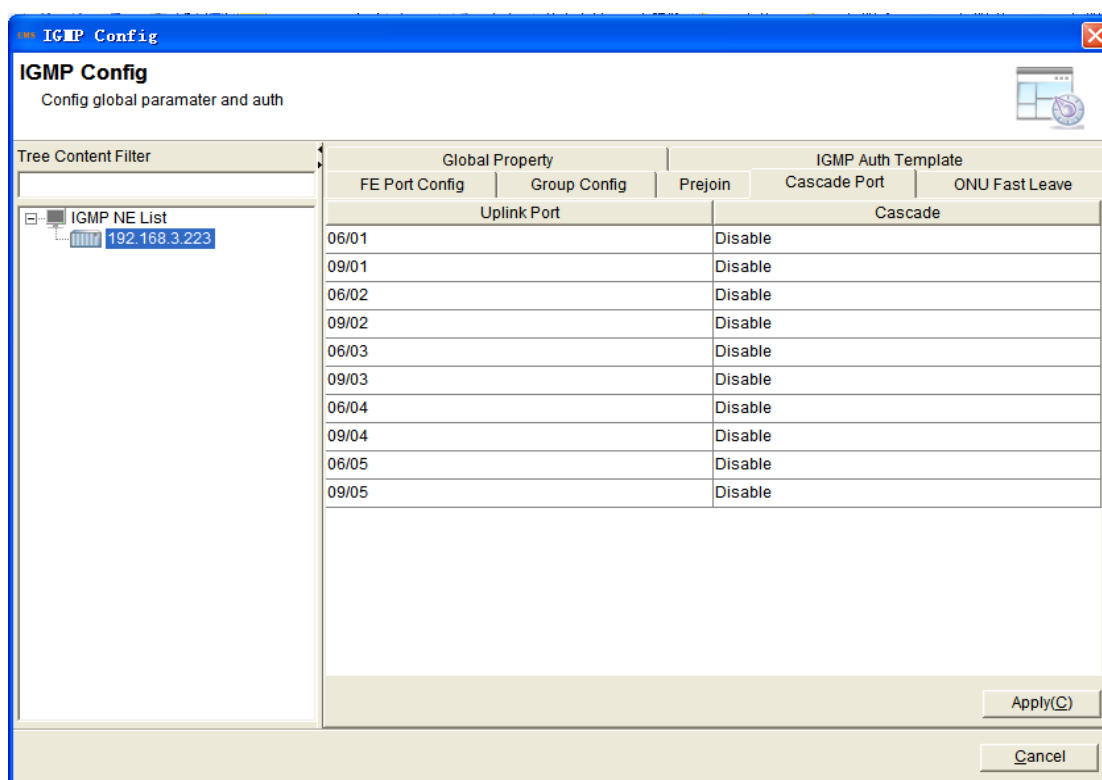


Figure 11-18 Cascade port

8. Select "ONU Fast leave", set fast leave enable/disable.

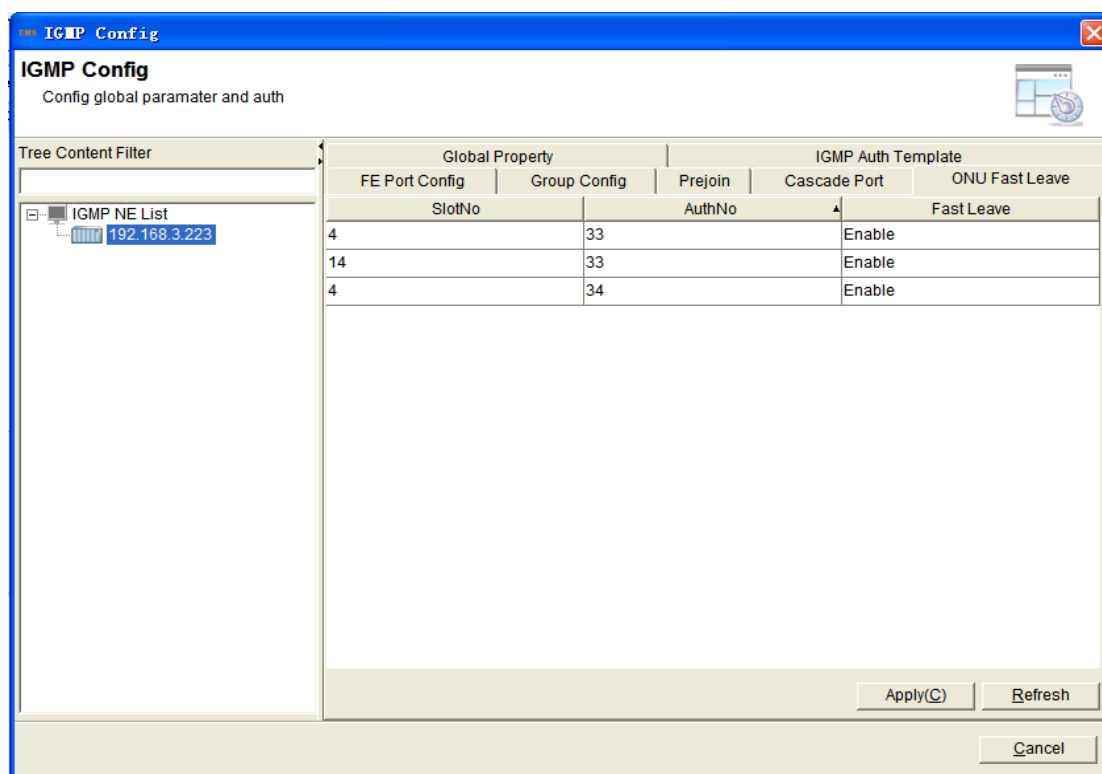


Figure 11-19 ONU Fast leave

11.4.4. QOS management

Function

QOS management includes QOS template management, QOS template bind/unbind, packets rate control, ONU bandwidth and QOS priority.

Operating Procedure

1. Right click OLT, select "configuration(C)">"QOS management "enter QOS config interface.
2. Click "add" create QOS Template, input template name, VLAN ID, source IP, source IP Mask, Dest IP, Dest IP mask, source mac, Dest mac, priority, Ethernet type, protocol type, TCP/UDP SRC port, TCP/UDP DES port, TOS,CMD, rate limit, queue, tos value, flow port, new port and new port tag. Click "OK", create successfully.

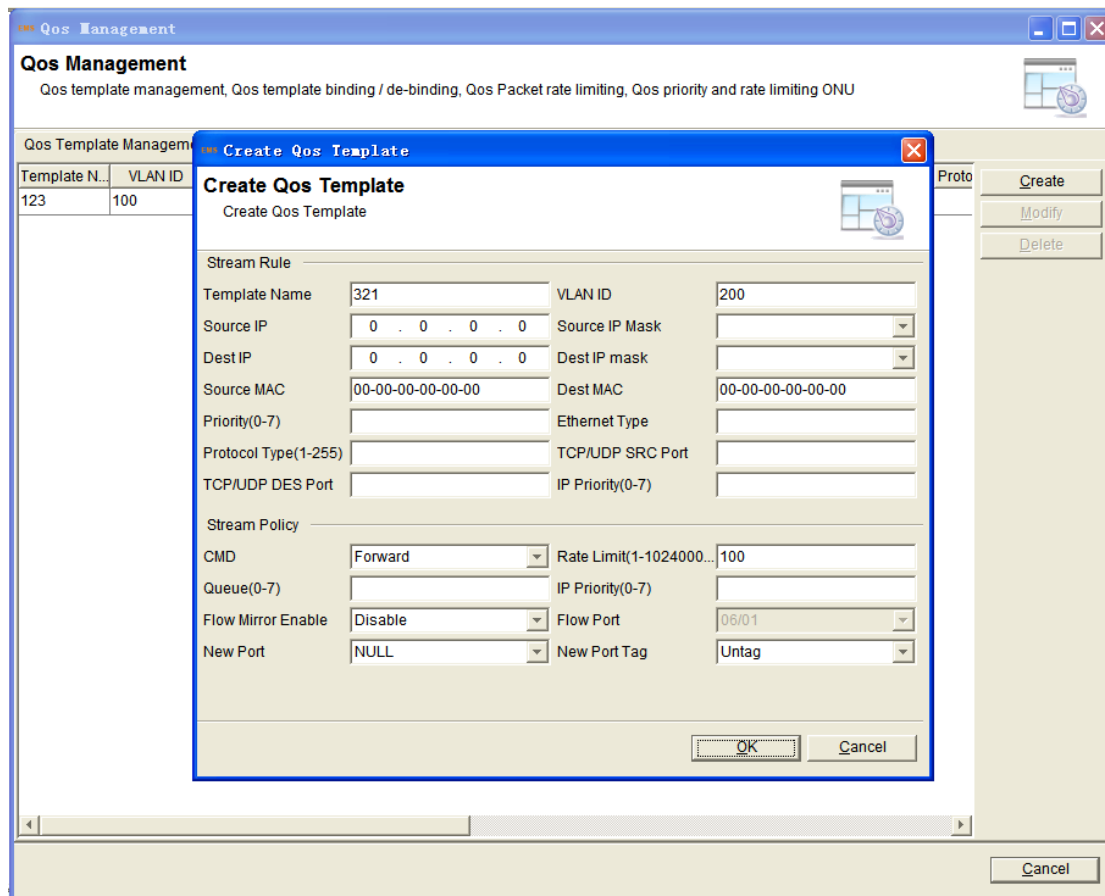


Figure 11-20 Create QOS Template

- Click "QOS Template bind/unbind" in top option. Select destination port and QOS template from left tree and right QOS template list. Click "save", bind the port to the QOS template.

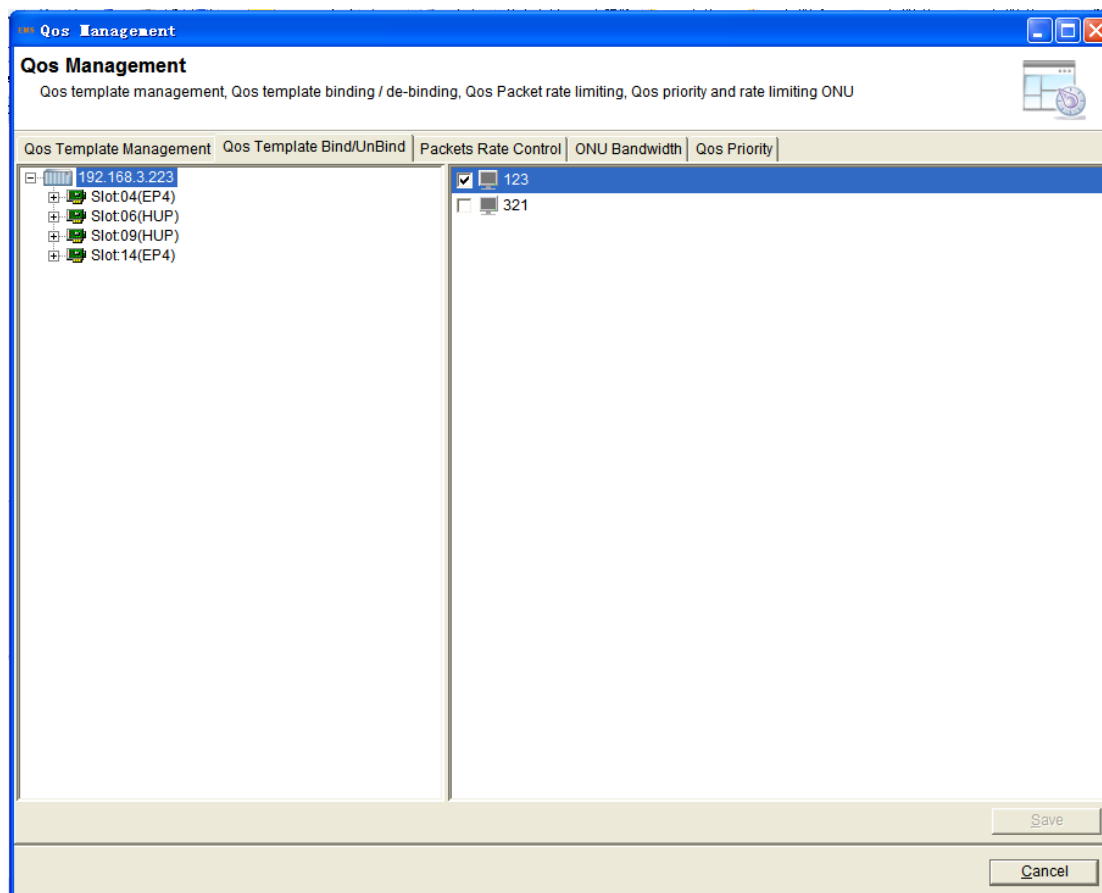


Figure 11-21 QOS Template bind/unbind

- Click "packets rate control" in top option, set each packet state and speed.

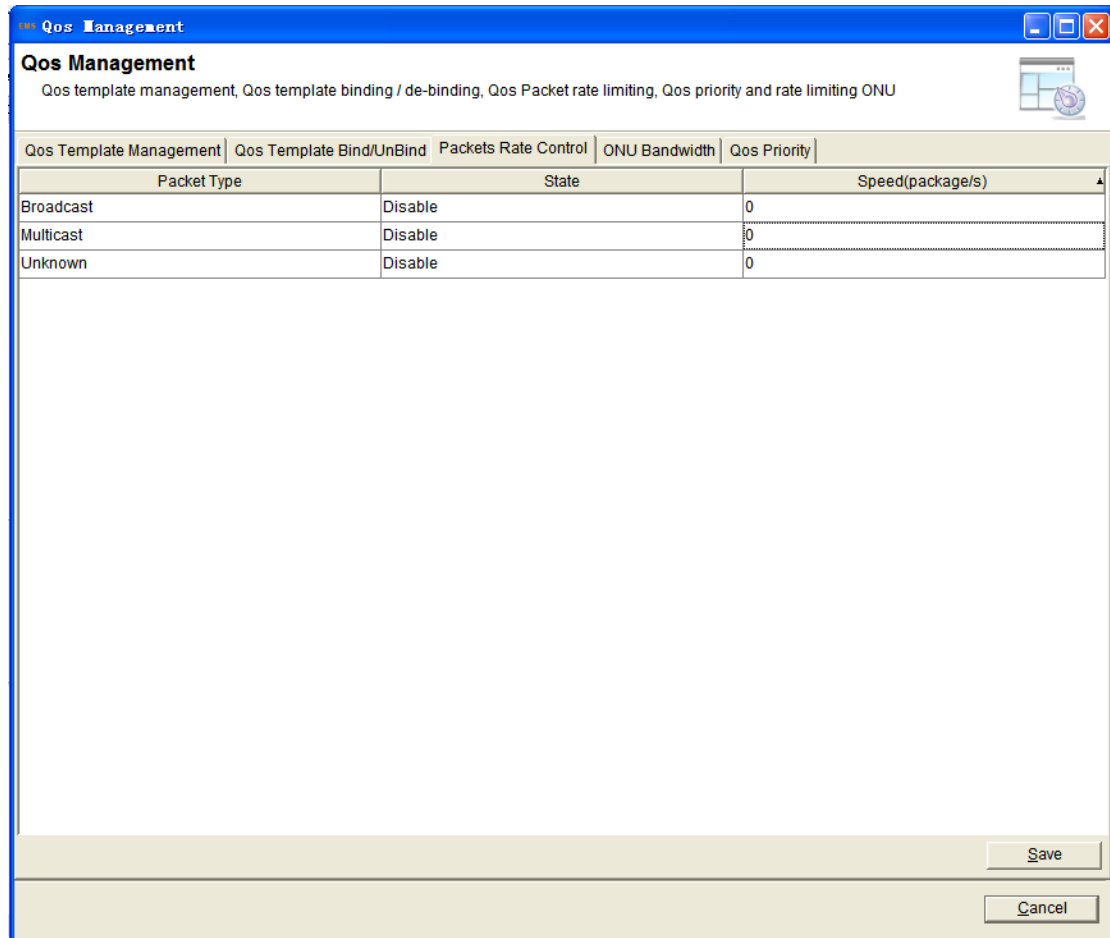


Figure 11-22 Packets rate control

5. Click "ONU Bandwidth" in top option, set its up stream bandwidth, down stream bandwidth, up stream assured and up stream fixed bandwidth.

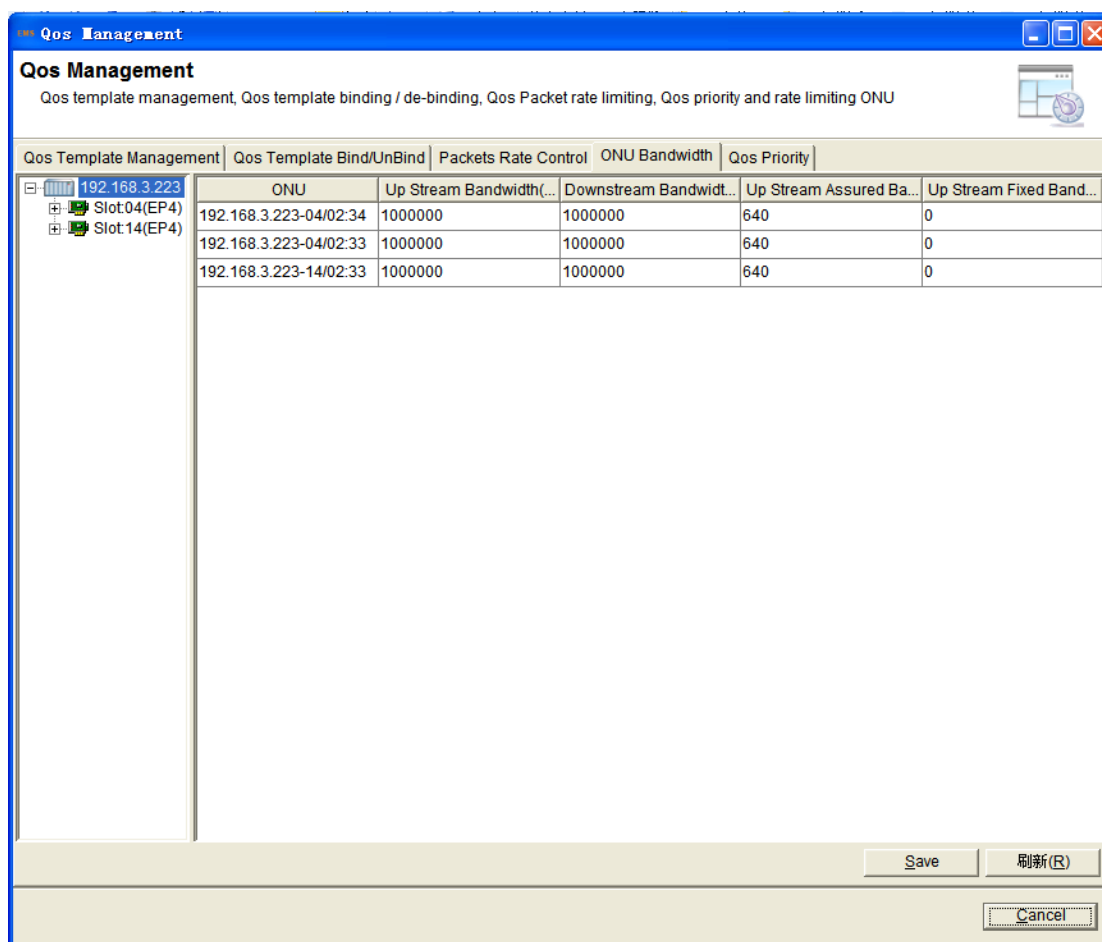


Figure 11-23 ONU Bandwidth

- Click "QOS priority" in top option, choose QOS priority mode from weight, strict and rotate.

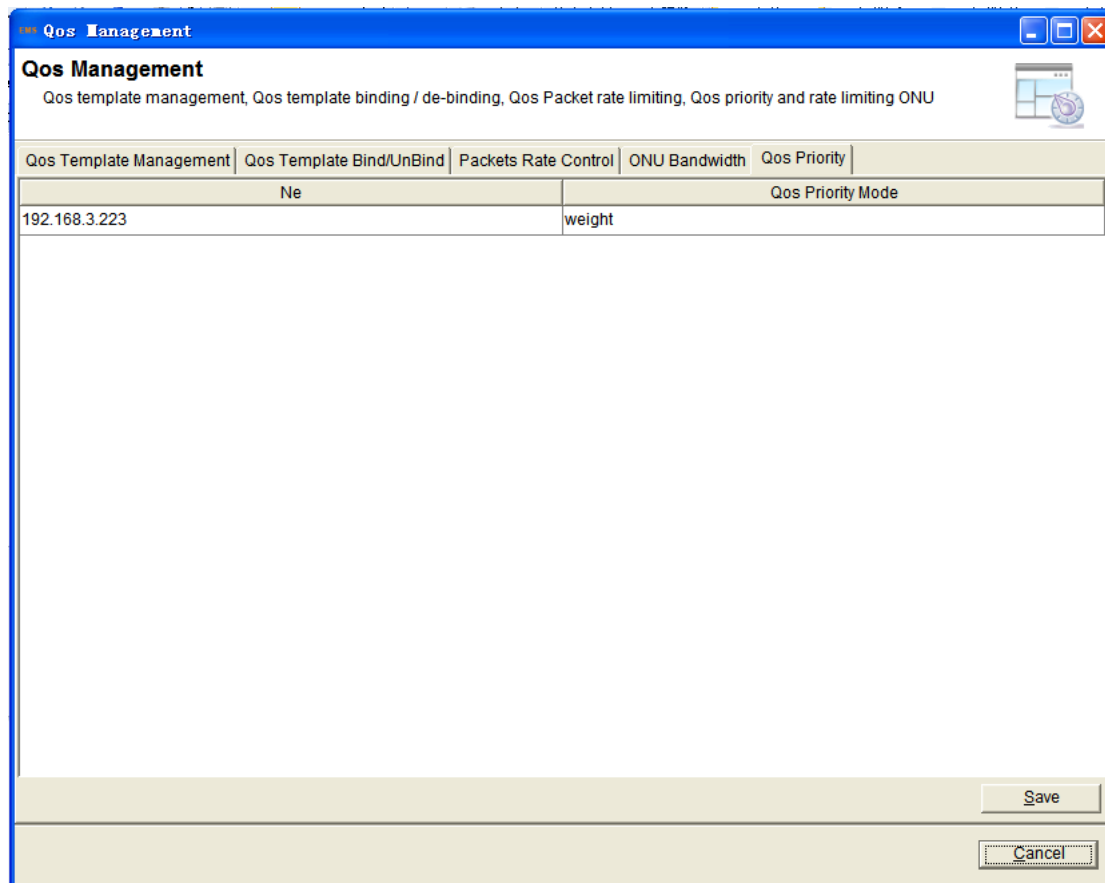


Figure 11-24 QOS priority

11.4.5. MAC management

Function

MAC management

Operating Procedure

1. Right click OLT, select "configuration(C)">"MAC Management ">enter MAC management interface.
2. Set aging time 0~300s.
3. Click "ONU Port MAC Number Limit", set MAC limit.

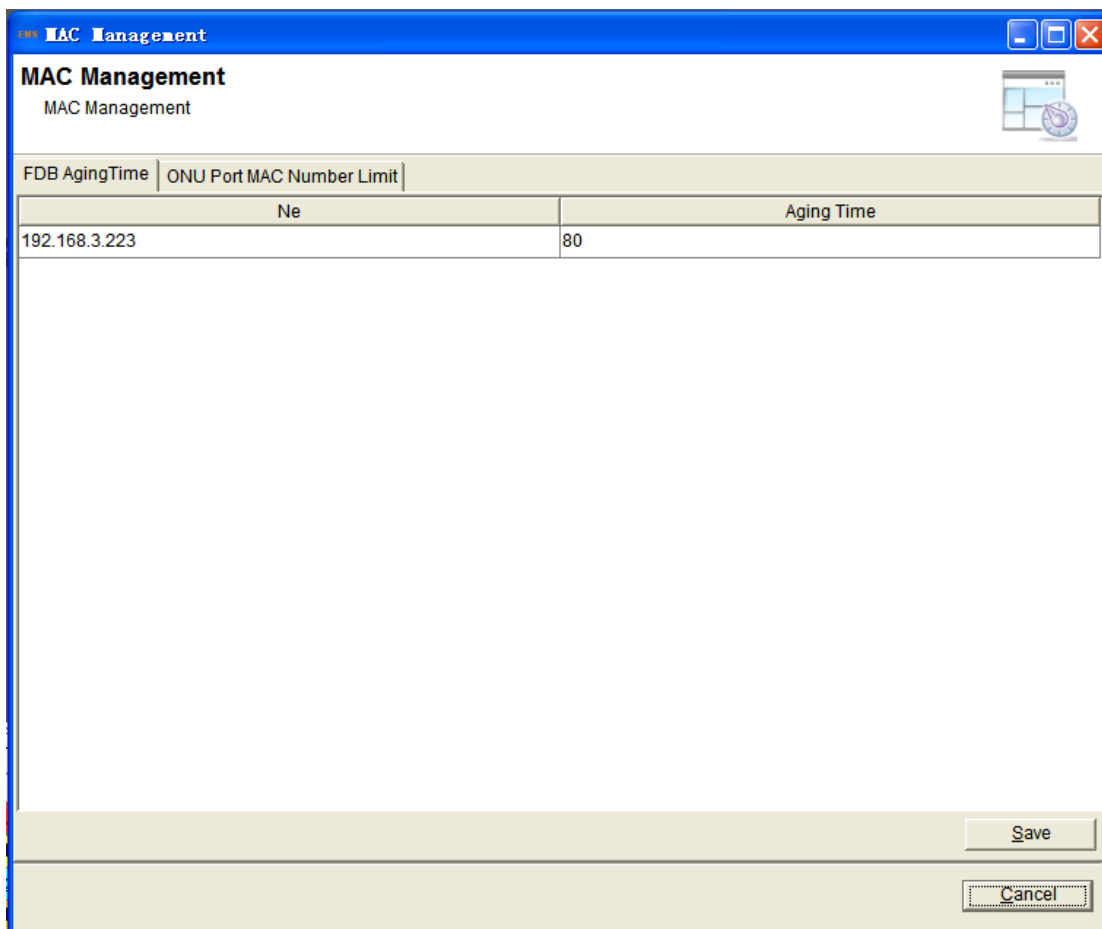


Figure 11-25 MAC Management

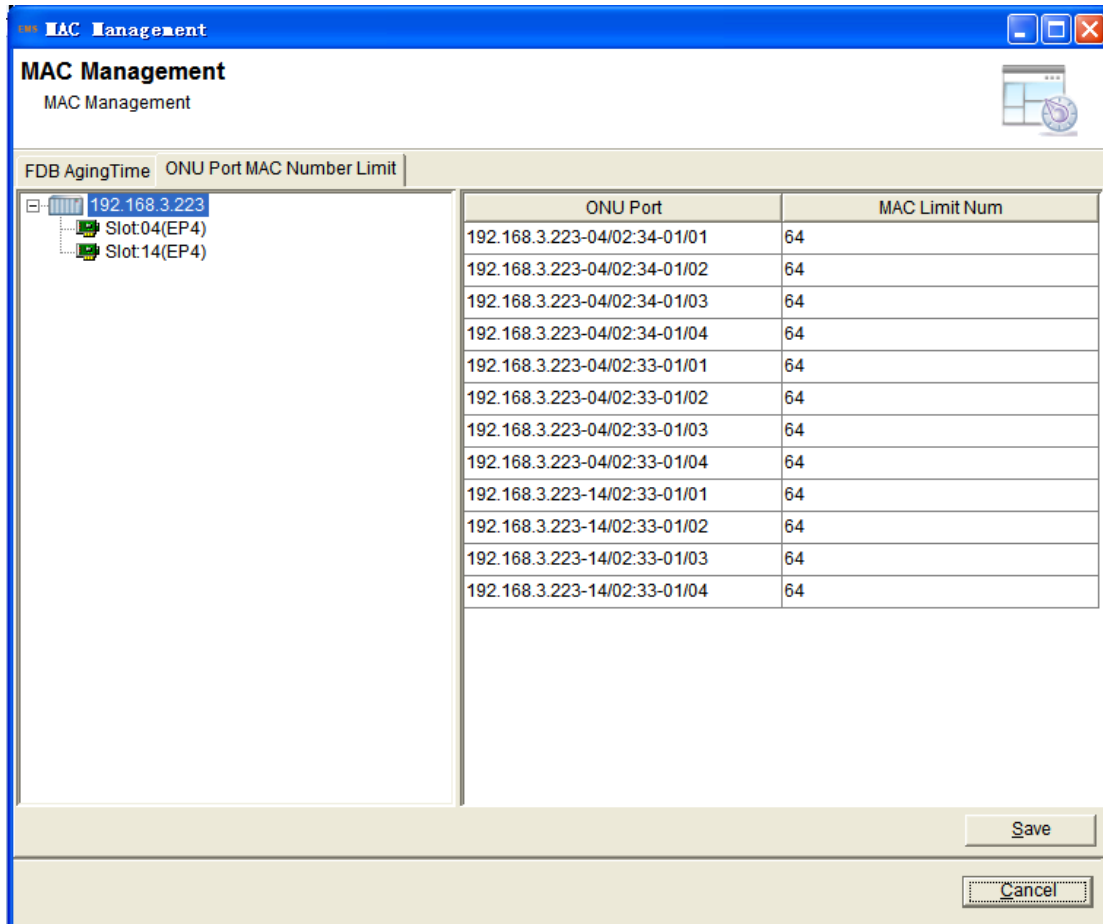


Figure 11-26 ONU Port mac number limit

**CAUTION:**

Set aging time to zero which should be caution with .Otherwise the business of ONU will not self-healing after cyclization remove.

11.4.6. Smart grid Server config

Function

Smart grid server config includes smart grid server name, connect IP and

connect port.

Operating Procedure

1. Right click OLT, select "configuration(C)">"Smart Grid Server Config "enter configuration interface.
2. Click "add", add a new item, input smart grid server name, connect IP and connect port. Click "Apply to Equipment (U)", the configuration is completed.
3. Select some Connect ID, click "Delete" can delete the item.
4. Click "Refresh", look up current configuration.

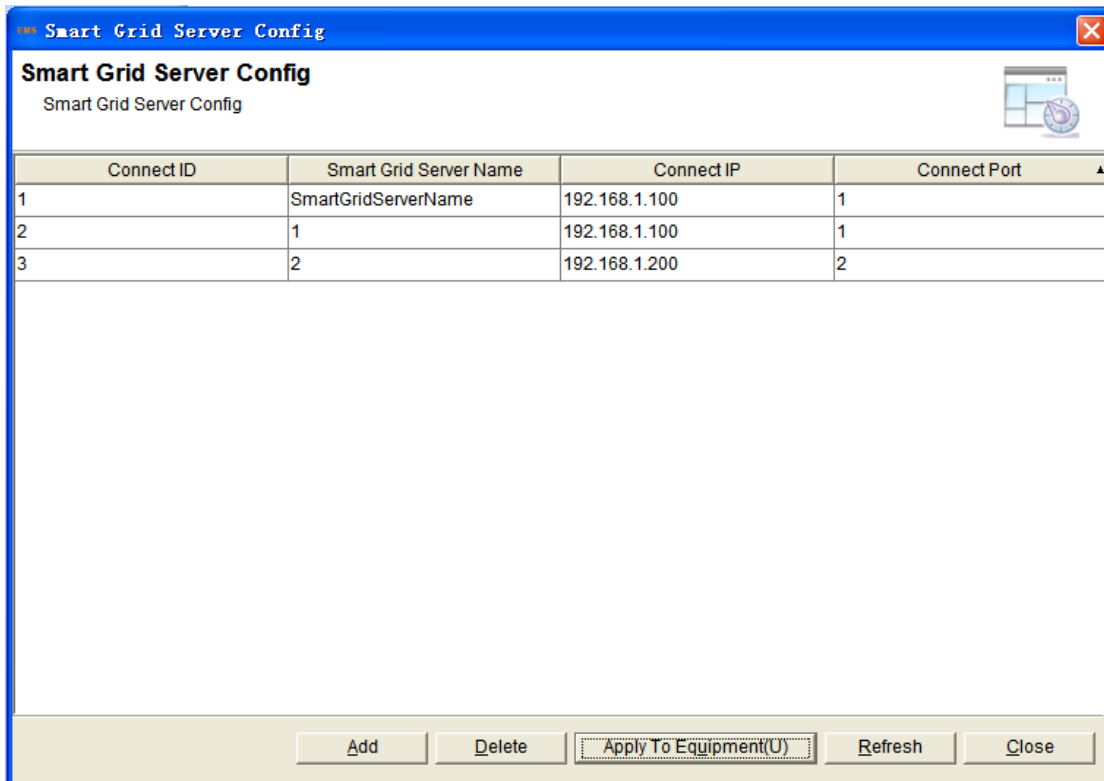


Figure 11-27 Smart grid server config

11.4.7. EMS access control

Function

Control network management access rights.

Operating Procedure

1. Right click OLT, select "configuration(C)">"EMS access control" enter config interface.

2. Click "add", add a new item, input EMS IP, Network Mask and Enable.
3. Click "apply", configuration completed.

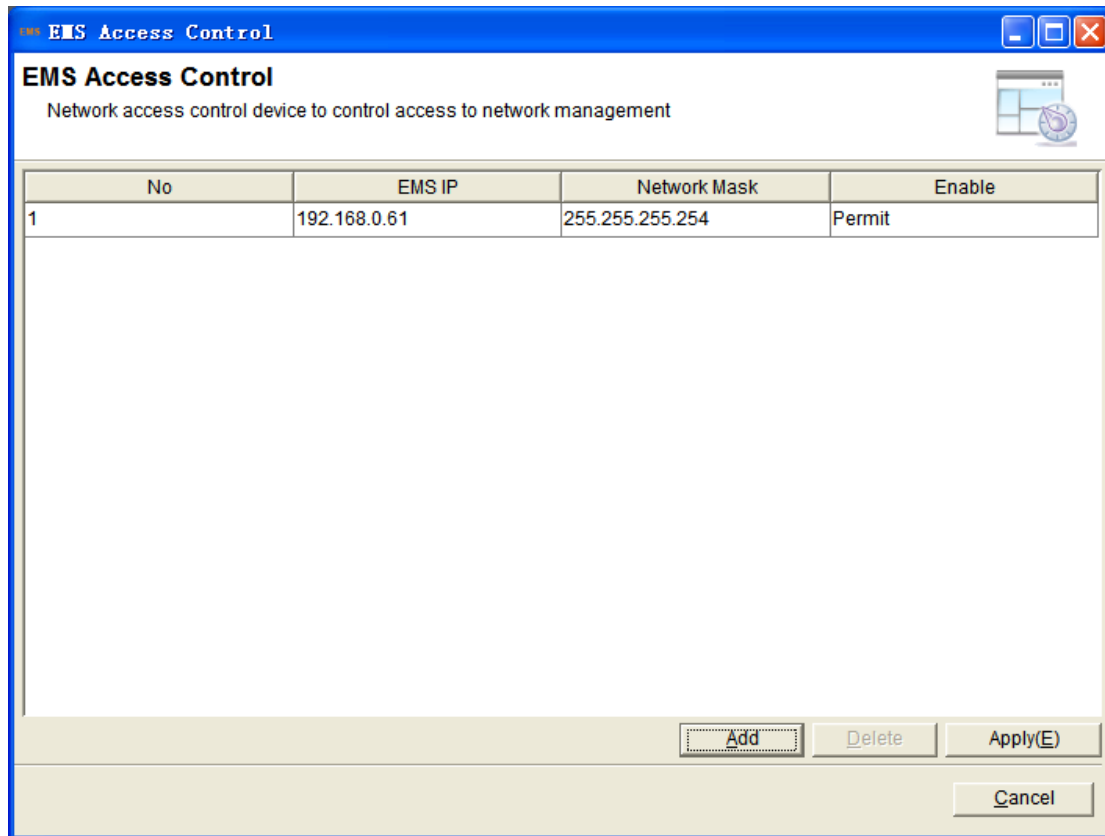


Figure 11-28 EMS Access control

11.4.8. Performance statistic switch

Function

Set performance statistic switch of OLT cards and ONU.

Operating Procedure

1. Right click OLT, select "configuration(C)">"performance statistic switch" enter performance statistic switch management interface.
2. Set OLT cards statistic switch enable.
3. Click "ONU port statistic switch", set enable.
4. Click "save", save configuration.

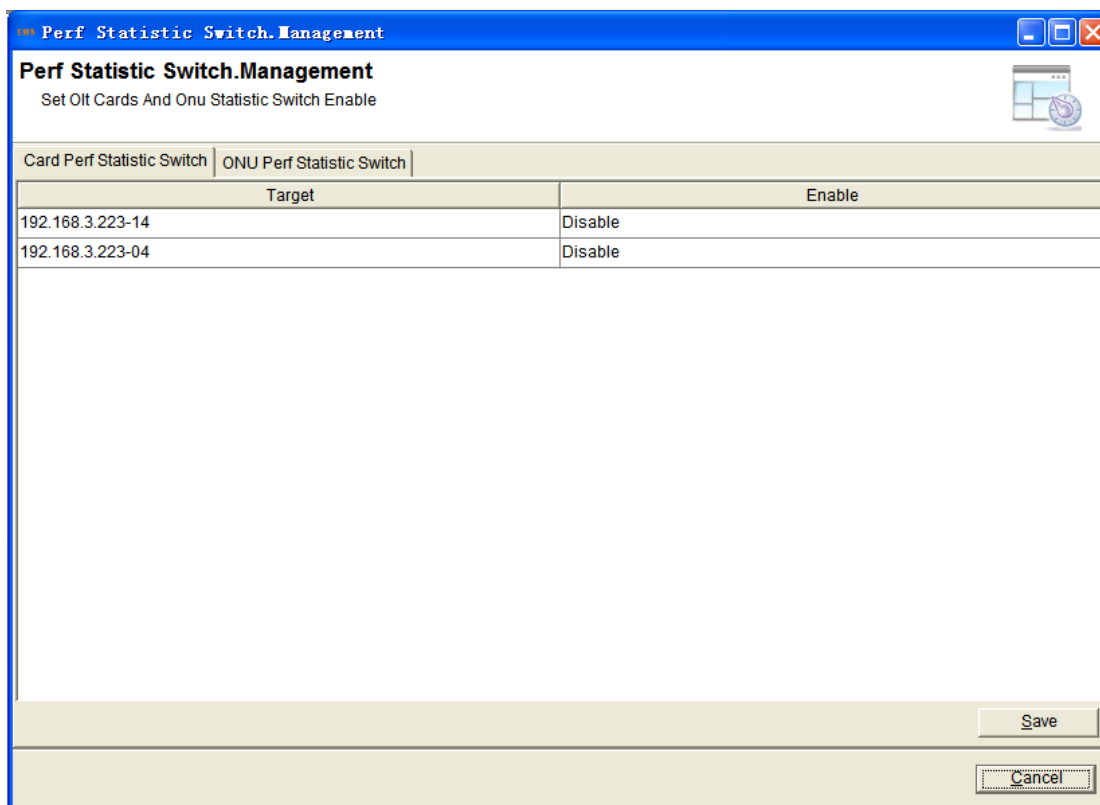


Figure 11-29 Card port statistic switch

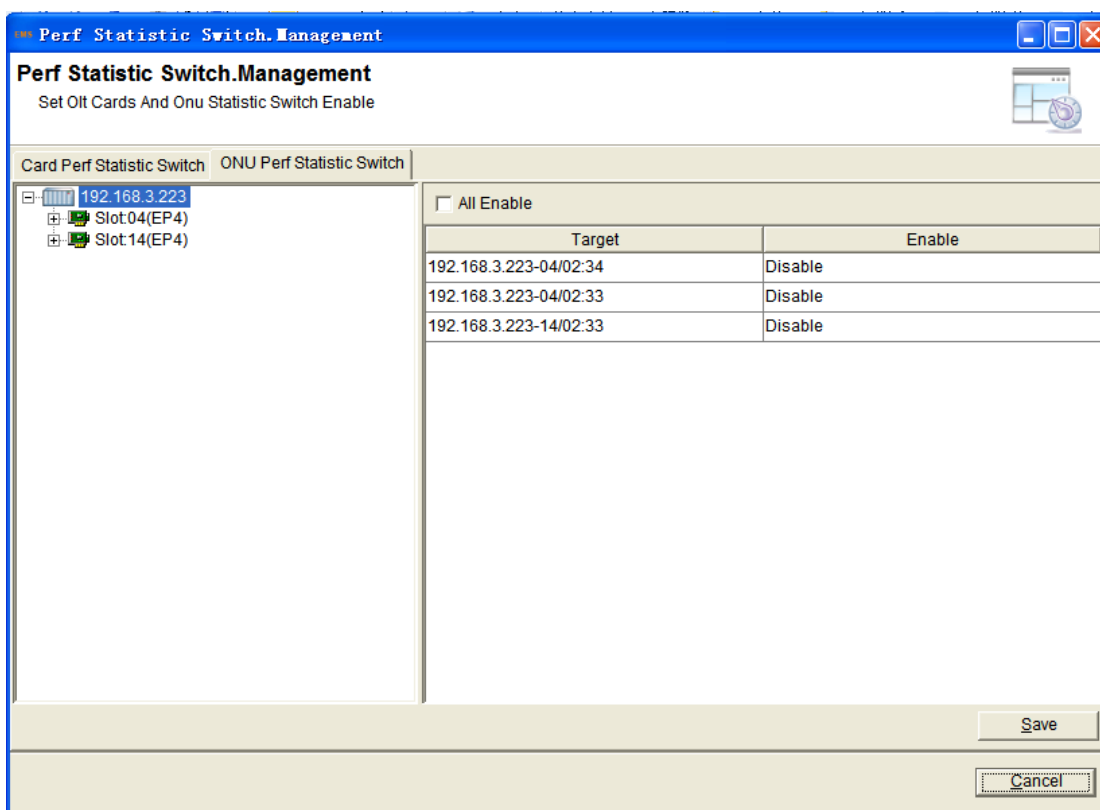


Figure 11-30 ONU Port statistic switch

11.4.9. Optical detect switch

Function

Optical detect enabled.

Operating Procedure

1. Right click OLT, select "configuration(C)">"optical detect switch" enter optical detect switch management interface.
2. Choose "enable" in enable status list.
3. Click "save", save configuration.

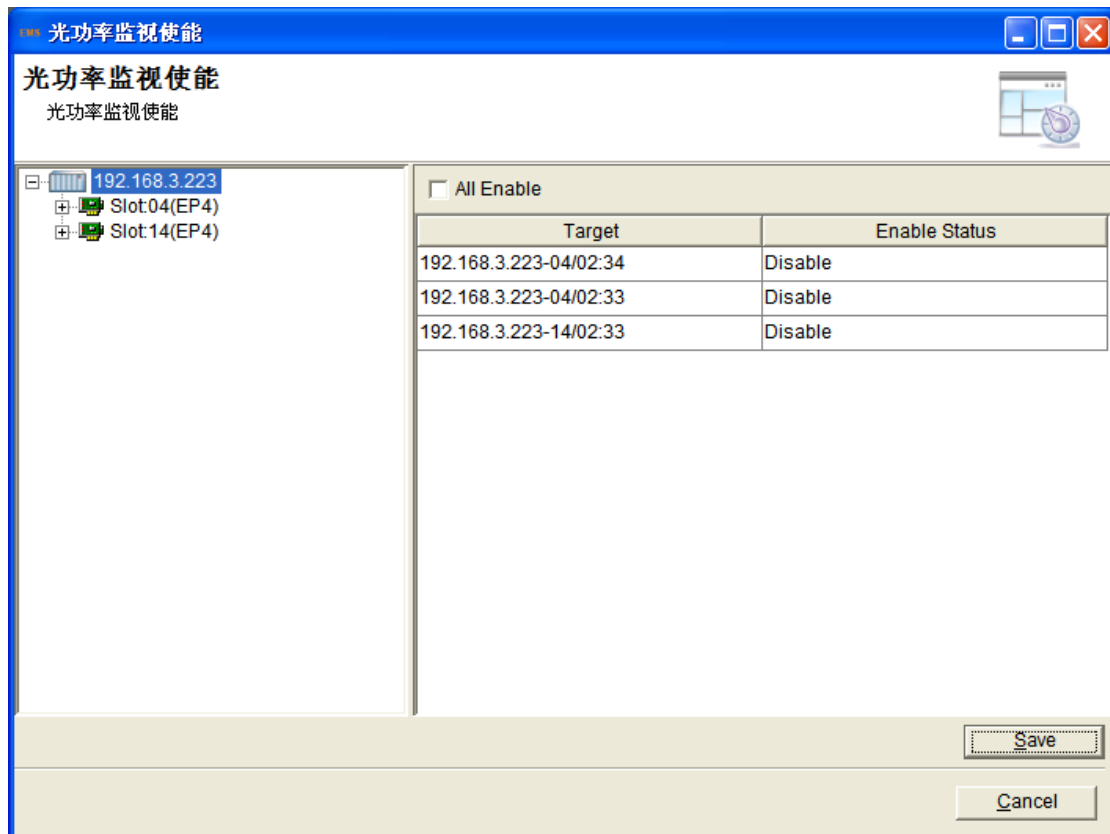


Figure 11-31 Optical detect switch

11.4.10. Alarm threshold management

Function

Set alarm threshold .If reached threshold, system will make alarms.

Operating Procedure

1. Right click OLT, select "configuration(C)">"alarm threshold management" enter alarm threshold management interface.
2. In the interface, you can set the CPU usage threshold, the uplink port, ONU optical module and ONU FE port threshold. However, if you should set to ONU FE port, you must be open the switch in the ONU performance.
3. Click "save", save configuration.

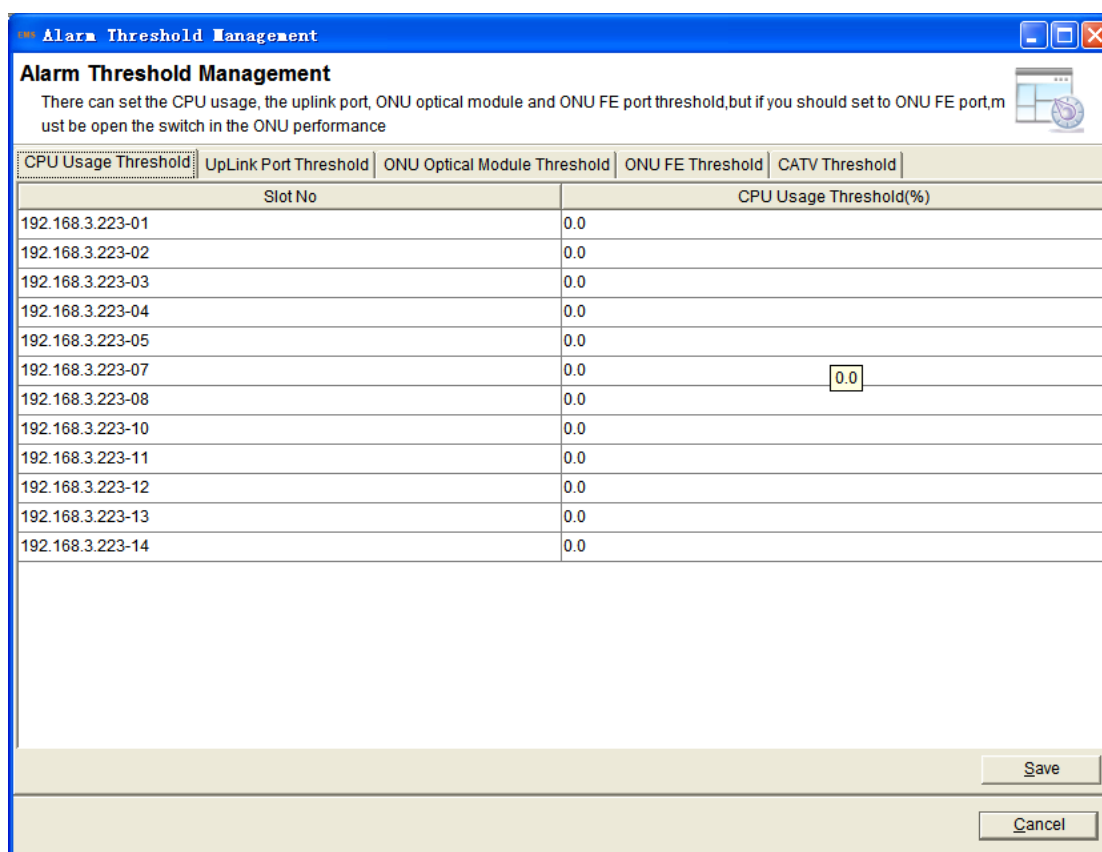


Figure 11-32 CPU usage threshold

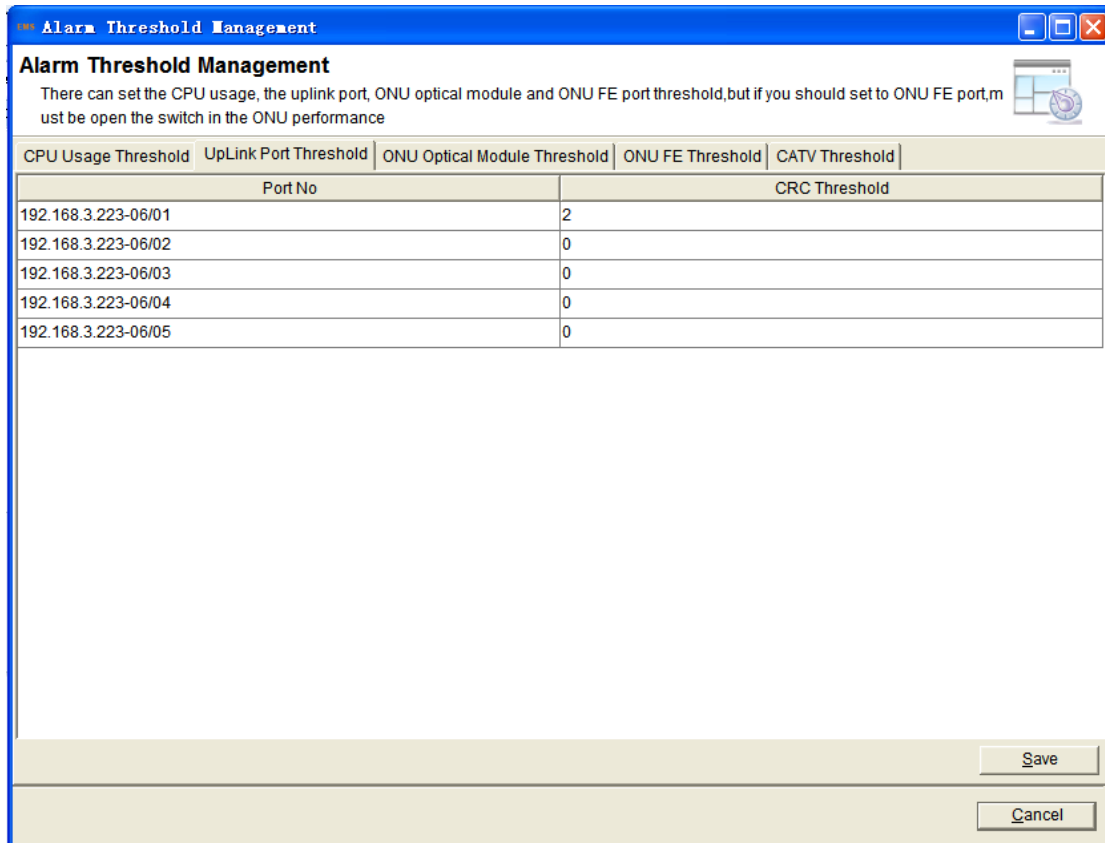


Figure 11-33 Uplink port threshold

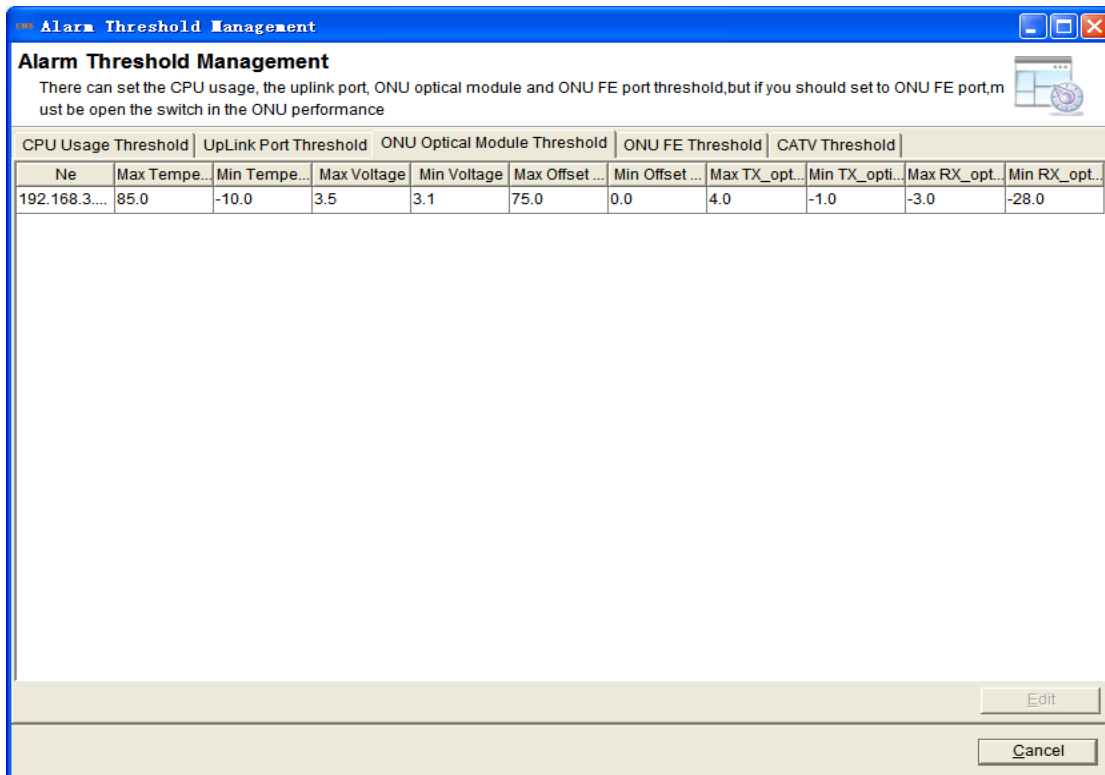


Figure 11-34 ONU Optical module threshold

11.4.11. Alarm template management

Function

Create alarm template and binding/unbinding ports.

Operating Procedure

1. Right click OLT, select "configuration(C)">"alarm template management" enter alarm template management interface.
2. Click "add", add a alarm template. Set template name, object layer, object type, alarm code, alarm enable, report threshold and clear threshold.
3. Select a template, click "edit" can modify this template, click "delete" can delete this template, click "refresh" look for current alarm template.
4. Click "template bind/unbind" enter port bind interface.
5. Select port to bind, click "apply to equipment".

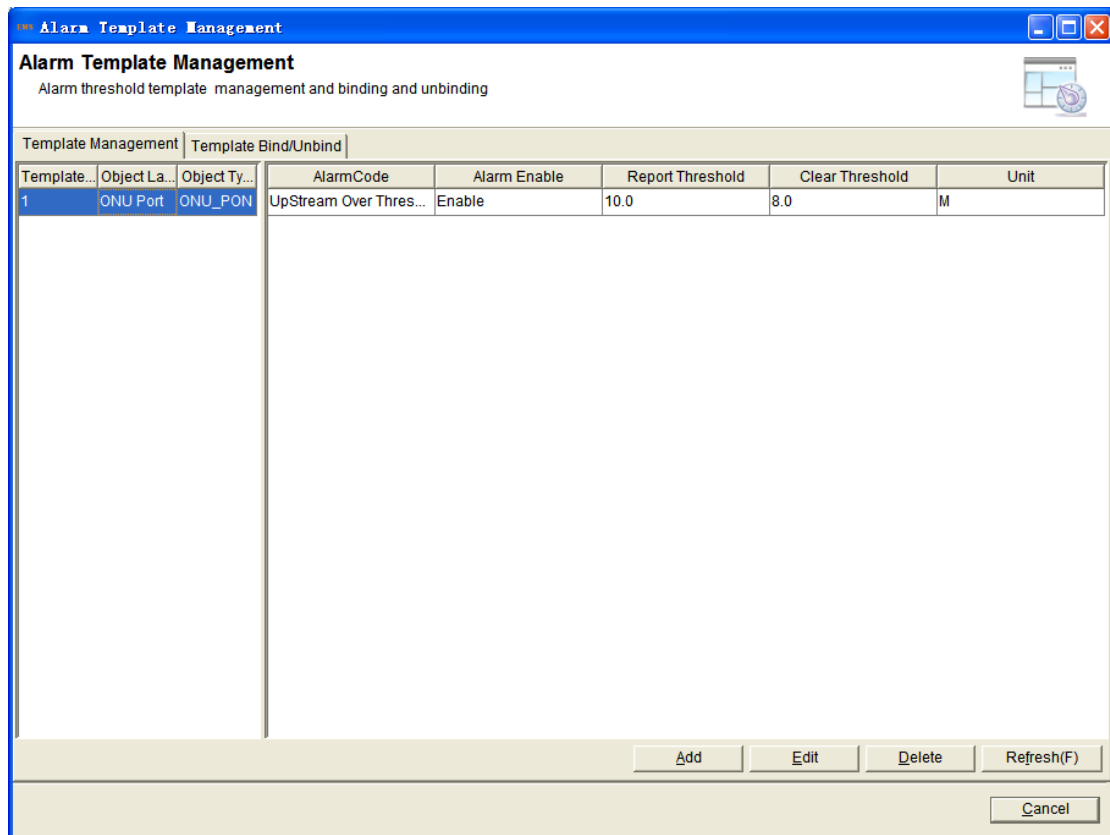


Figure 11-35 Template management

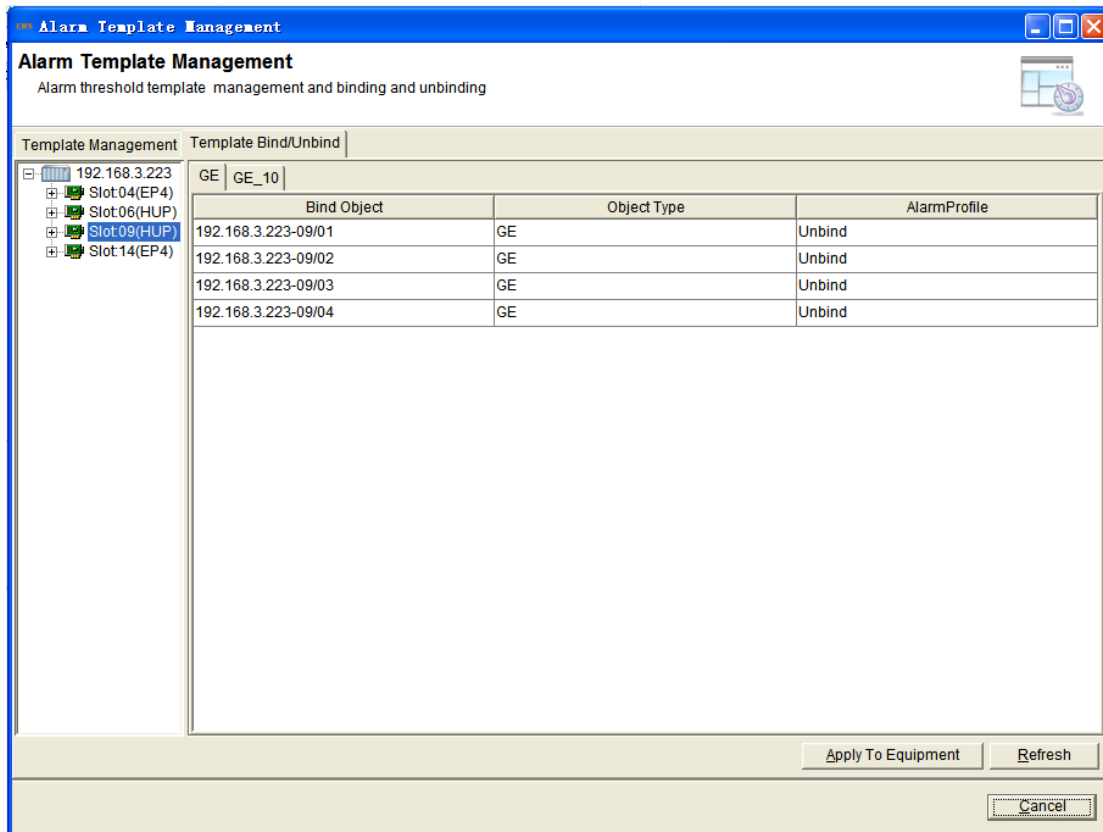


Figure 11-36 Template bind/unbind

11.4.12. Outer VLAN

Function

Configure outer VLAN

Operating Procedure

1. Right click OLT, select "configuration(C)">"Outer Vlan" enter outer vlan board configuration interface.
2. Click "add", add a group data.
3. Click "business type"; choose business type from pull-down box.
4. Double-click "business name", input name in the box.
5. Double-click "start vlan", input start vlan ID in the box.
6. Double-click "end vlan", input end vlan ID in the box. End vlan is equal or greater than start vlan. If the starting and ending vlan is different, so must for TAG.

7. Click "uplink port or trunk group", choose uplink port or trunk group from pull-down box.
8. Click "TAG/UNTAG", choose tag/untag from pull-down box.
9. Click "save", save configuration.
10. Select a group data, click "delete", and delete this group data.

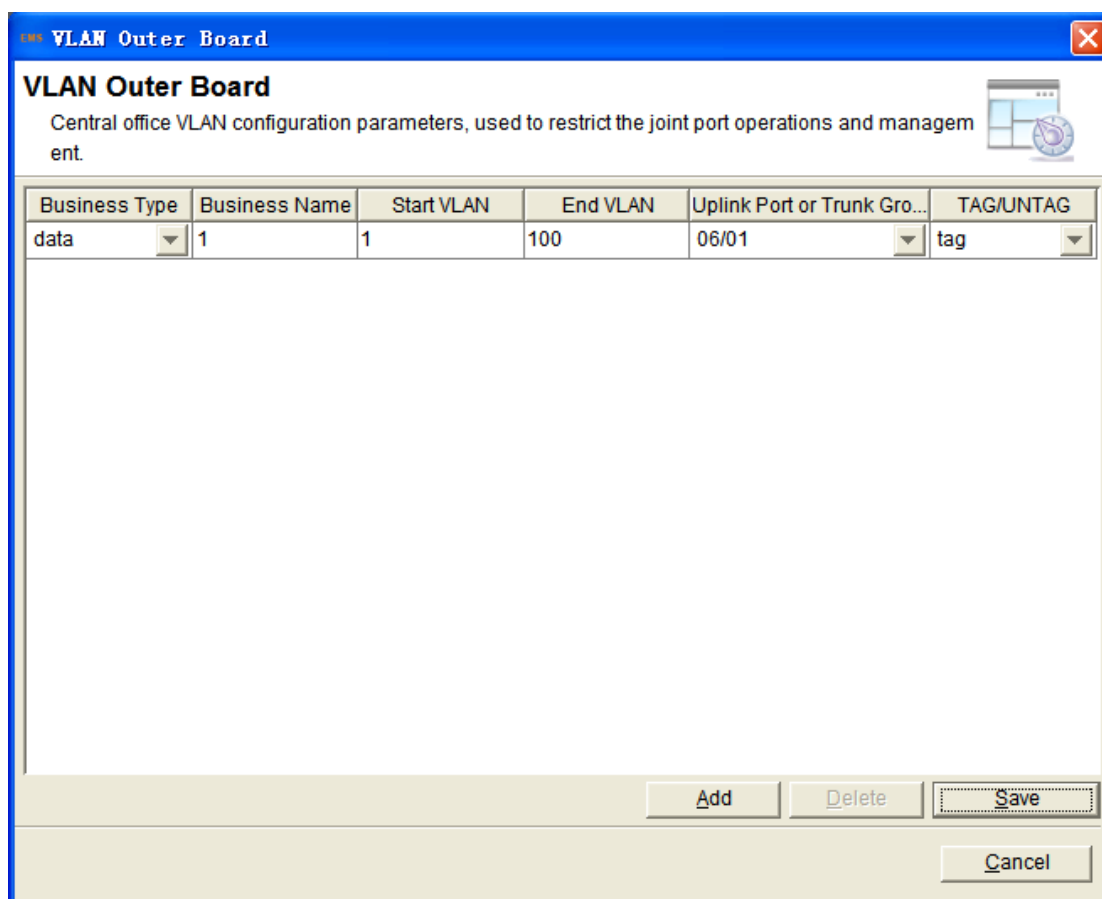


Figure 11-37 Outer vlan

11.4.13. QINQ template

Function

Create QINQ template

Operating Procedure

1. Right click OLT, select "configuration(C)">"QINQ template" enter QINQ template configuration interface.
2. Click "add", create a QINQ template, input template name, business name,

svlan ID, svlan TPID and svlan COS. Click "...create rule domain type, set rule type, operator and rule domain value.

3. Click "apply", the template will be sent to equipment.
4. Select a template, click "delete", and delete this template.

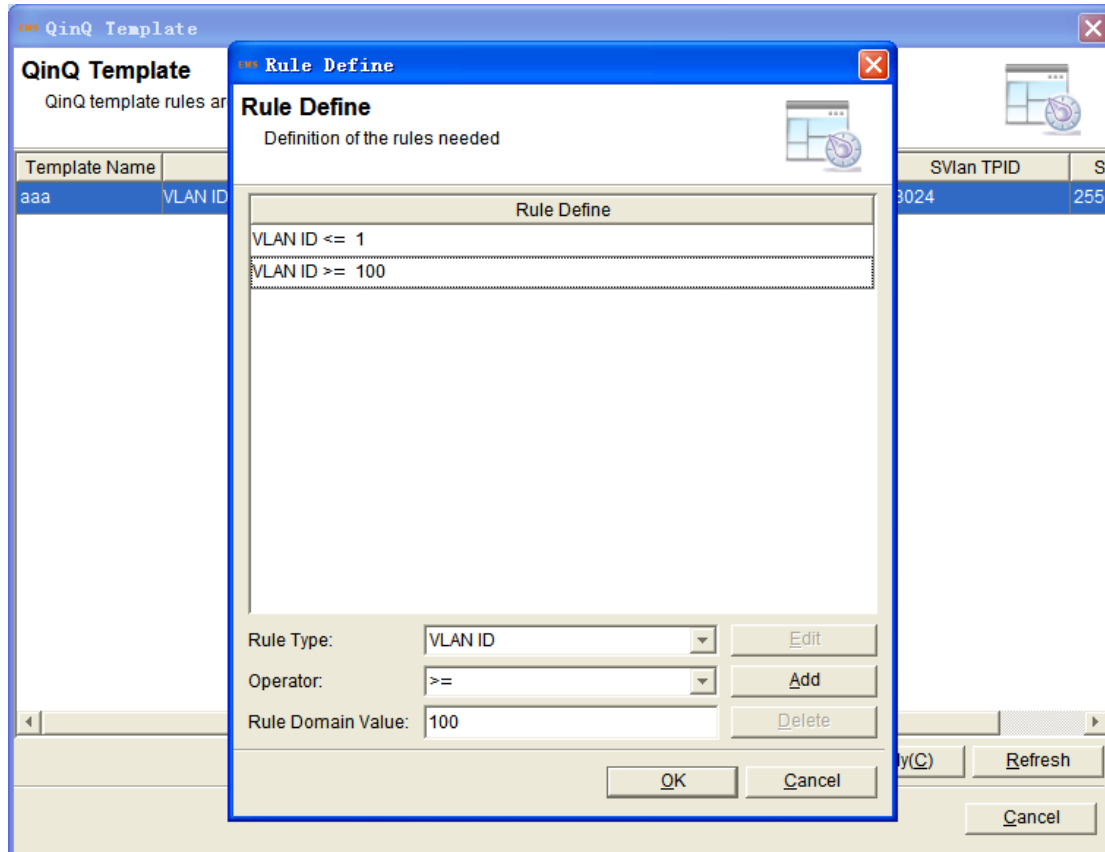


Figure 11-38 Create QINQ template

11.4.14. QINQ profile binding

Function

Bind QINQ profile to ports.

Operating Procedure

1. Right click OLT, select "configuration(C)">"QINQ profile binding "enter QINQ profile binding interface.
2. Choose profile name and ports, click "apply".
3. Select a profile; click "clear" can clear it.

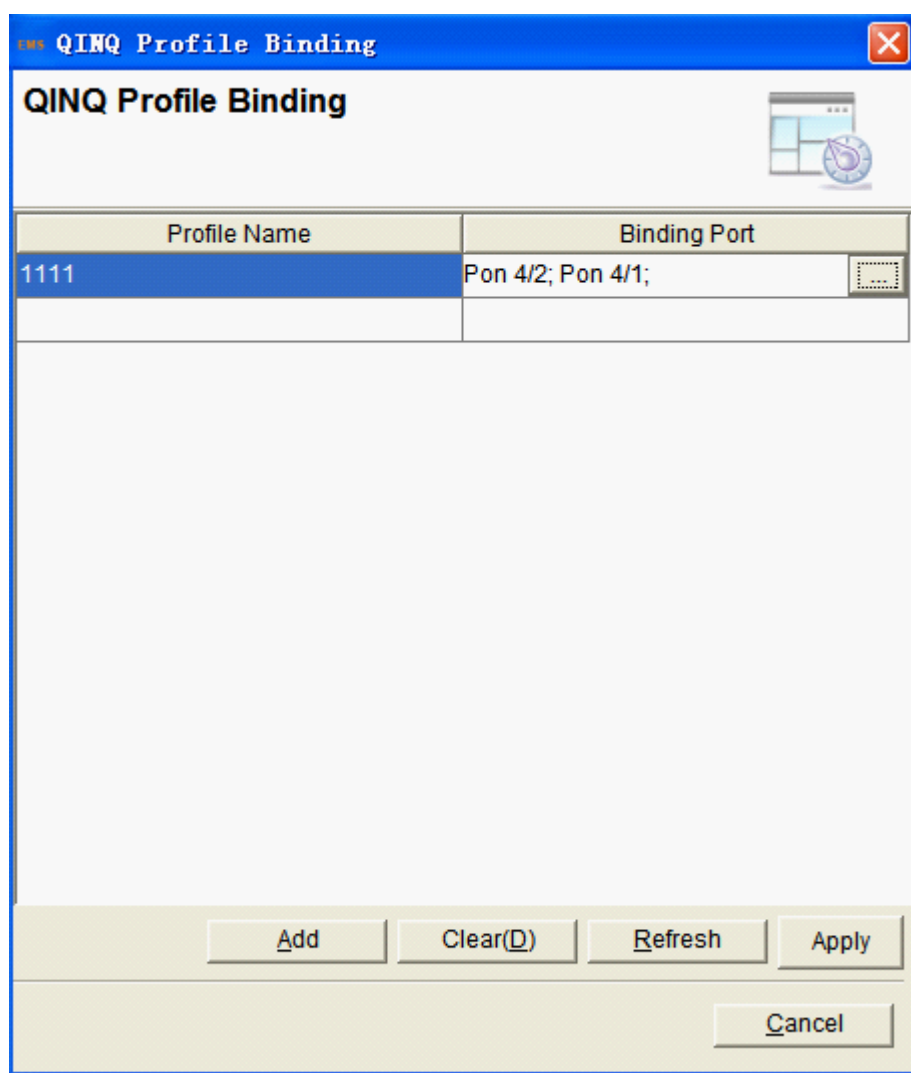


Figure 11-39 QINQ Profile binding

11.4.15. System ONU ACL function

Function

Configure the FE port ACL rules.

Operating Procedure

1. Right click OLT, select "configuration(C)">"system ONU ACL function "enter system ONU ACL function interface.
2. Choose rule action and create rule domain type.
3. Click "add/delete", add/delete ACL rule.

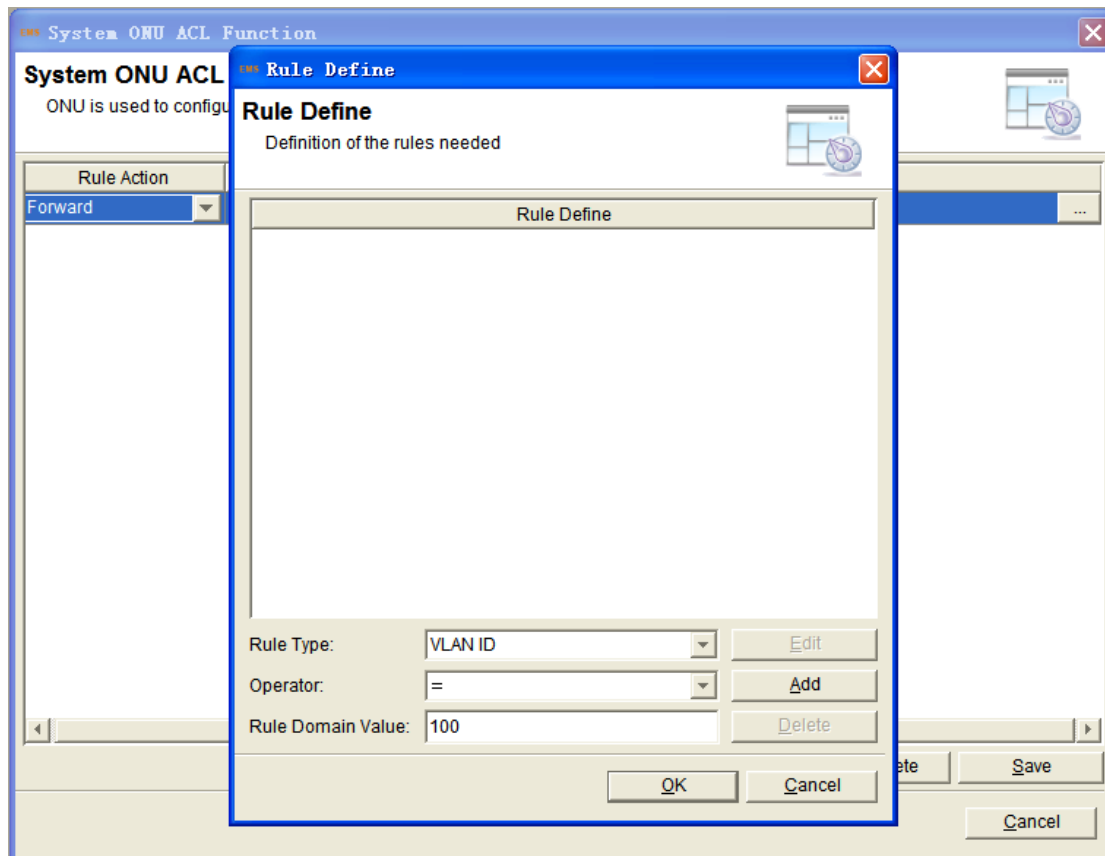


Figure 11-40 System ONU ACL function

11.4.16. Template configuration

Function

Configure all kinds of template.

Operating Procedure

1. Right click OLT, select "configuration(C)">"Template configuration "enter template configuration interface.
2. Select object which you need to create template in the left tree content filter.
3. You can click "Add, Refresh, Delete, Apply" button to create, modify, delete, view template.

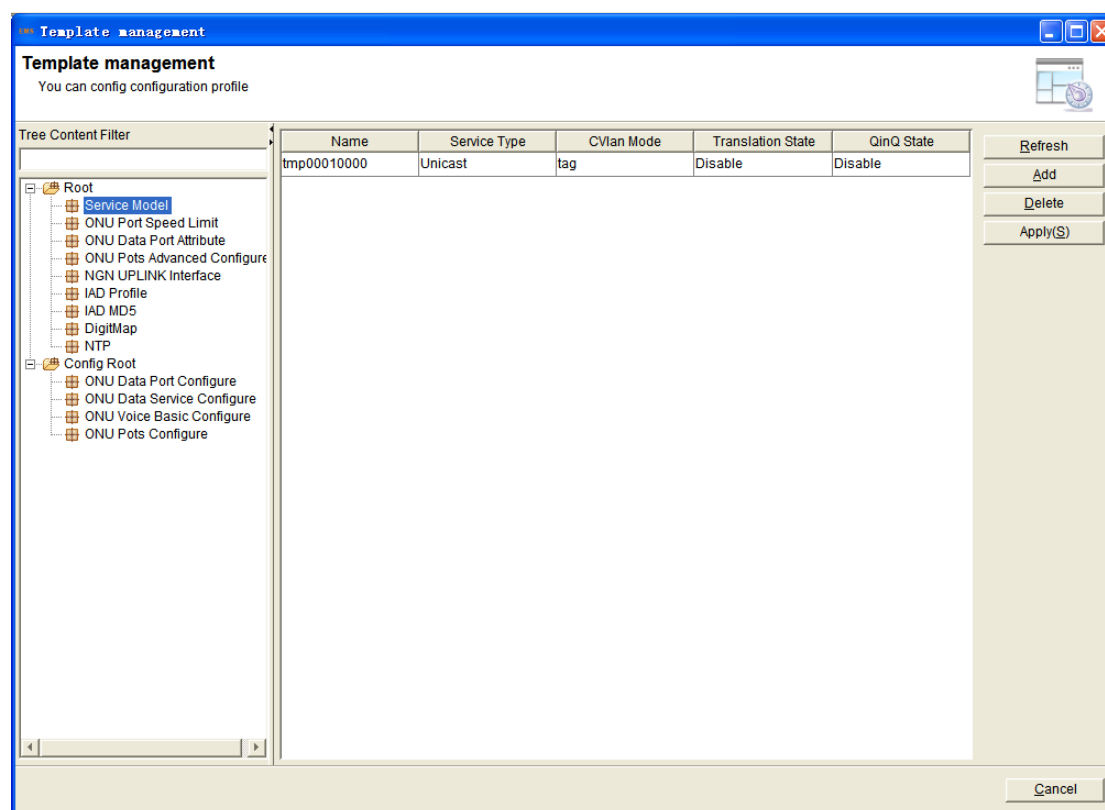


Figure 11-41 Template configuration

11.4.17. PON-Uplink bind

Function

Bind PON-uplink

Operating Procedure

1. Right click OLT, select "configuration(C)">"PON-Uplink Bind "enter
PON-Uplink Bind interface.
2. Click "add", add a new item.
3. Select uplink port and PON in pull-down box.
4. Click "apply", save configuration.

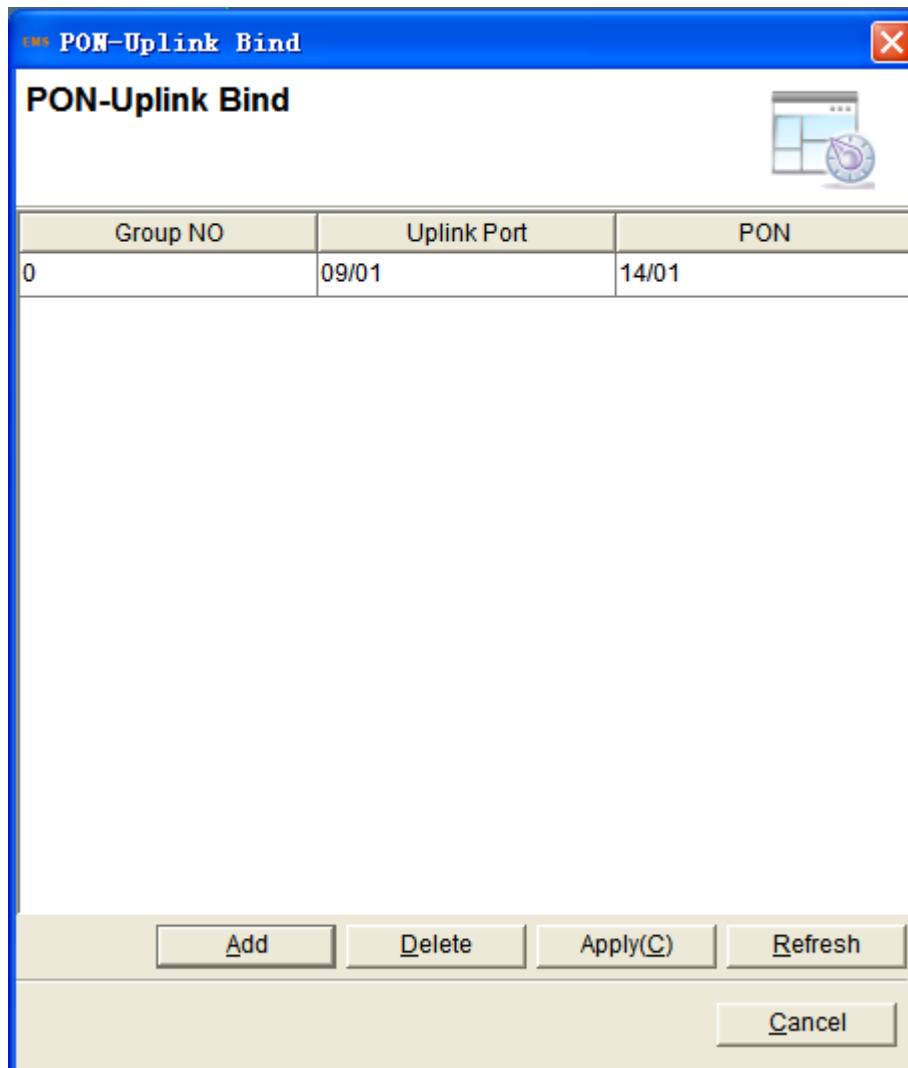


Figure 11-42 PON-Uplink Bind

11.5. Control command

11.5.1. Upgrade system software

Function

Upgrade system software

Operating Procedure

1. Right click OLT, select "Control Command(C)">"Upgrade system software"
"enter Upgrade system software interface.
2. Click "Down File type", select "Down File type" in pull-down box.

3. Click "slot no", select slot no in pull-down box.
4. Input FTP server IP in FTP server IP box.
5. Input FTP user name in user name box.
6. Input FTP password in password box.
7. Input file name in file name box.
8. Before upgrade ,running ftp server and configuring its user name, password and home directory.

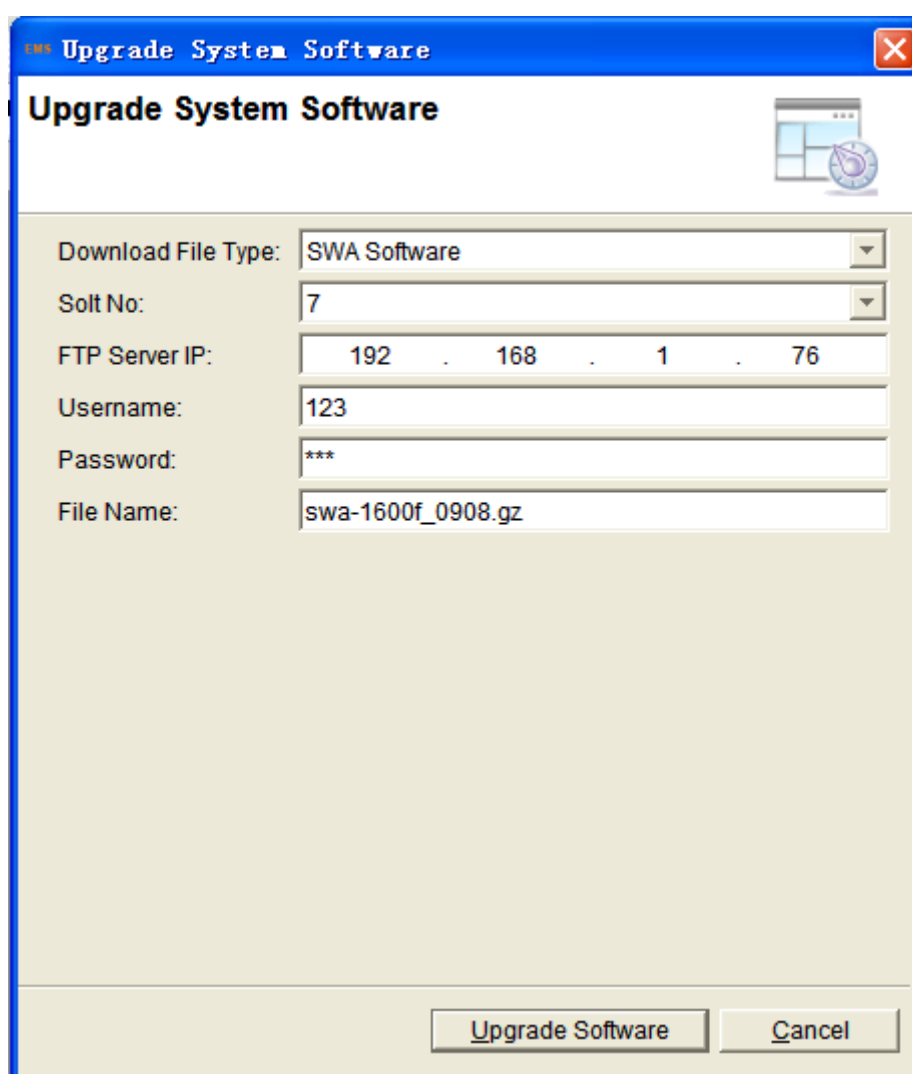


Figure 11-43 Upgrade system software

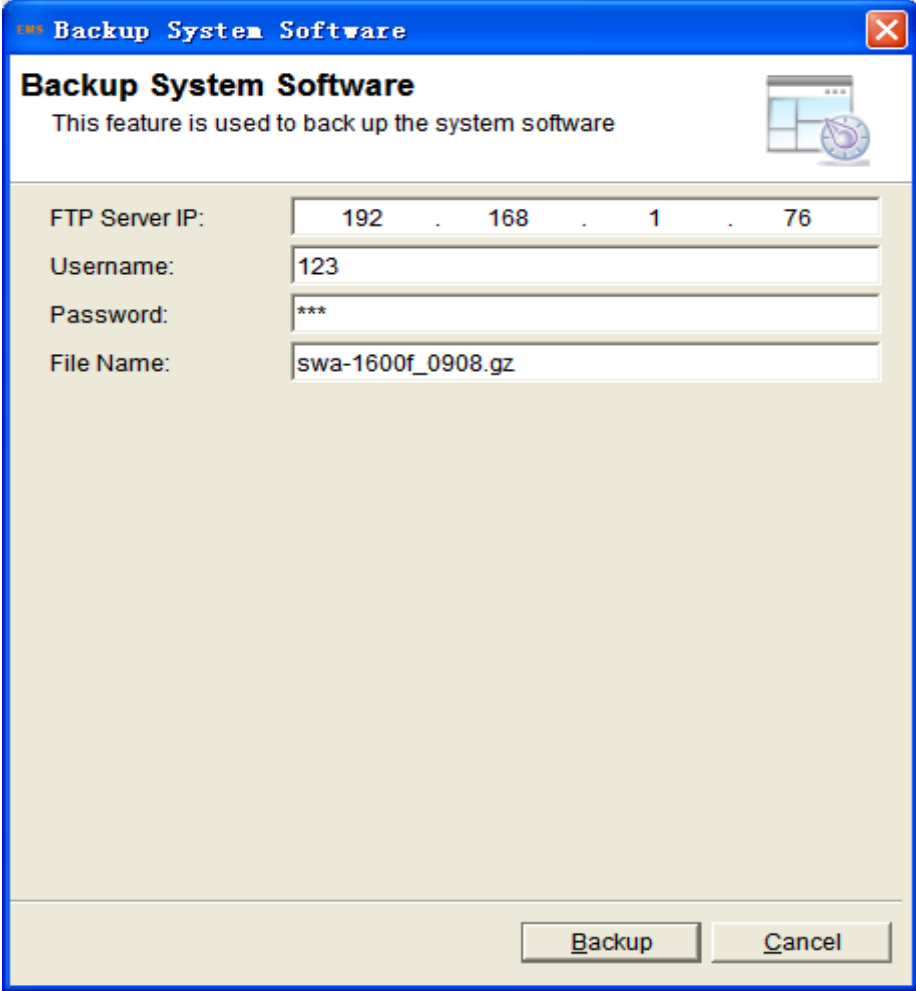
11.5.2. Backup software

Function

Backup system software

Operating Procedure

1. Right click OLT, select "Control Command(C)">"backup software "enter backup software interface.
2. Input FTP server IP in FTP server IP box.
3. Input FTP user name in user name box.
4. Input FTP password in password box.
5. Input file name in file name box.
6. Click "backup", backup system software.
7. Before backup, running ftp server and configuring its user name, password and home directory.



Field	Value
FTP Server IP:	192 . 168 . 1 . 76
Username:	123
Password:	***
File Name:	swa-1600f_0908.gz

Figure 11-44 Backup system software

11.5.3. Batch upgrade ONU

Function

Batch upgrade ONU

Operating Procedure

1. Right click OLT, select "Control Command(C)">"batch upgrade ONU "enter batch upgrade ONU interface.
2. Input FTP server IP in FTP server IP box.
3. Input FTP user name in user name box.
4. Input FTP password in password box.
5. Input file name in file name box.
6. Choose "slot no" in pull-down box.
7. Check one or several ONU in left bottom tree.
8. Click "upgrade", upgrade ONU software.
9. Before upgrade, running ftp server and configuring its user name, password and home directory.

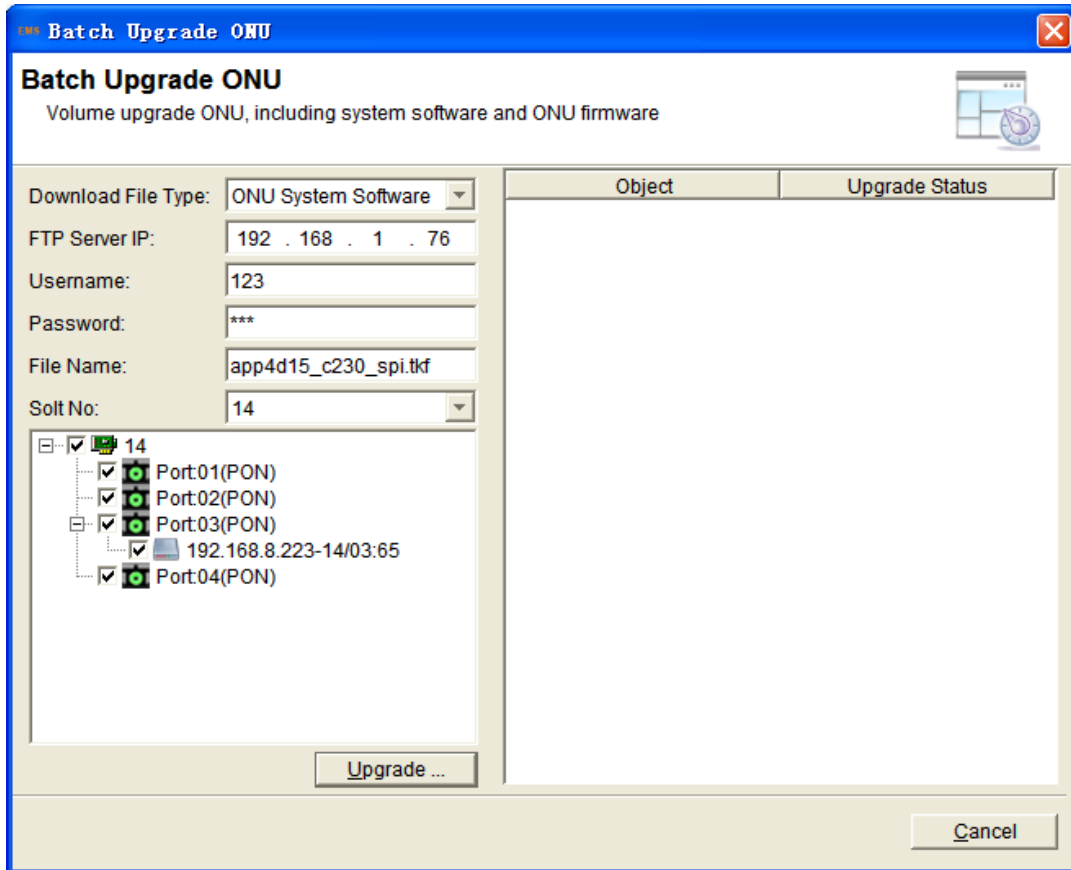


Figure 11-45 Batch upgrade ONU

11.5.4. IGMP management

Function

Flush IGMP configuration.

Operating Procedure

1. Right click OLT, select "Control Command(C)">"IGMP management ">"flush IGMP configuration" pop-up flush IGMP configuration interface.
2. Click "OK" or "cancel".

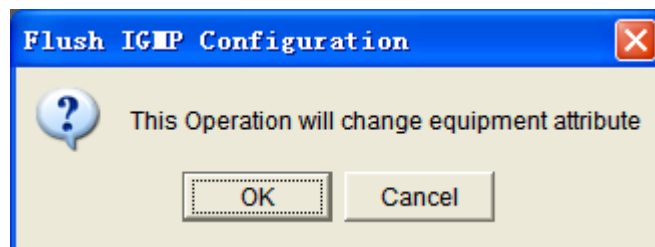


Figure 11-46 Flush IGMP configuration

11.6. Operation

11.6.1. Save device config

Function

Save current configuration

Operating Procedure

1. Right click OLT, select "Operation (O)">"save device config "pop-up save device interface.
2. Click "Yes", save current configuration.

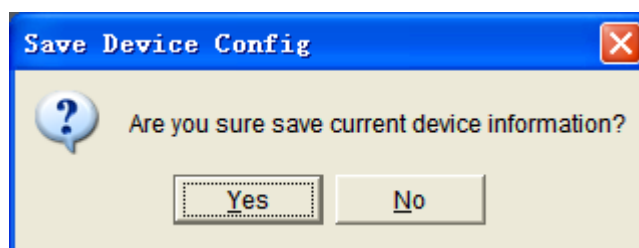


Figure 11-47 Save current configuration

11.6.2. Sync device time

Function

Sync device time

Operating Procedure

1. Right click OLT, select "Operation (O)">"sync device time "pop-up update time interface.
2. Click "Yes", update time. The effect can be verified by the time of the equipment real time information.

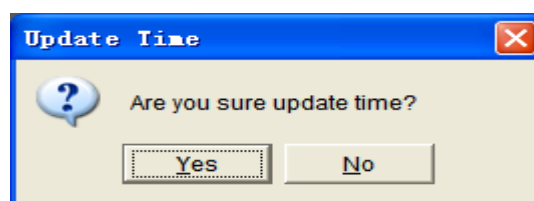


Figure 11-48 Update time

11.6.3. Restart

Function

Restart device

Operating Procedure

1. Right click OLT, select "Operation (O)">"restart "pop-up the tip interface of restart.
2. Click "Yes", restart device.

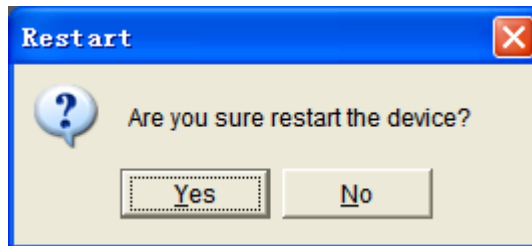


Figure 11-49 Restart device

11.6.4. Reset backup card

Function

Reset backup card

Operating Procedure

1. Right click OLT, select "Operation (O)">"reset backup card" pop-up the tip interface of reset backup unit.
2. Click "Yes", reset backup unit.

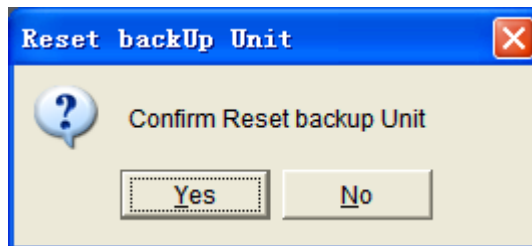


Figure 11-50 Reset backup card

11.6.5. Clear flash

Function

Clear flash

Operating Procedure

1. Right click OLT, select "Operation (O)">"clear flash" pop-up the tip interface of clear flash.
2. Click "Yes", clear flash.

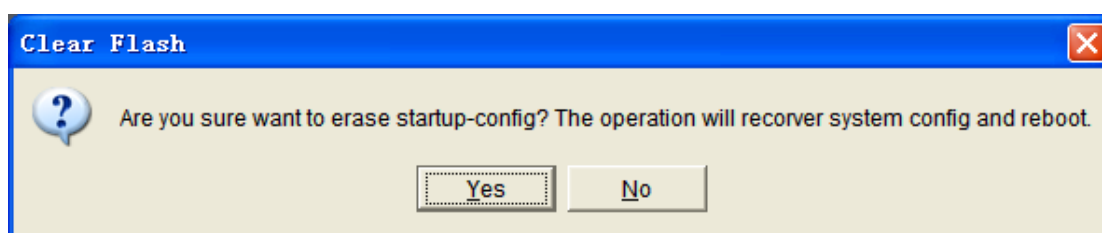


Figure 11-51 Clear flash

11.6.6. Force switch

Function

Force switch

Operating Procedure

1. Right click OLT, select "Operation (O)">"force switch" pop-up the tip interface of force switch.
2. The switch interval must be more than two minutes.
3. Click "Yes", force switch.

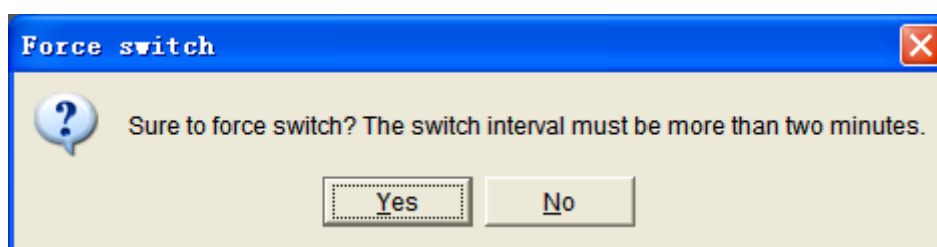


Figure 11-52 Force switch

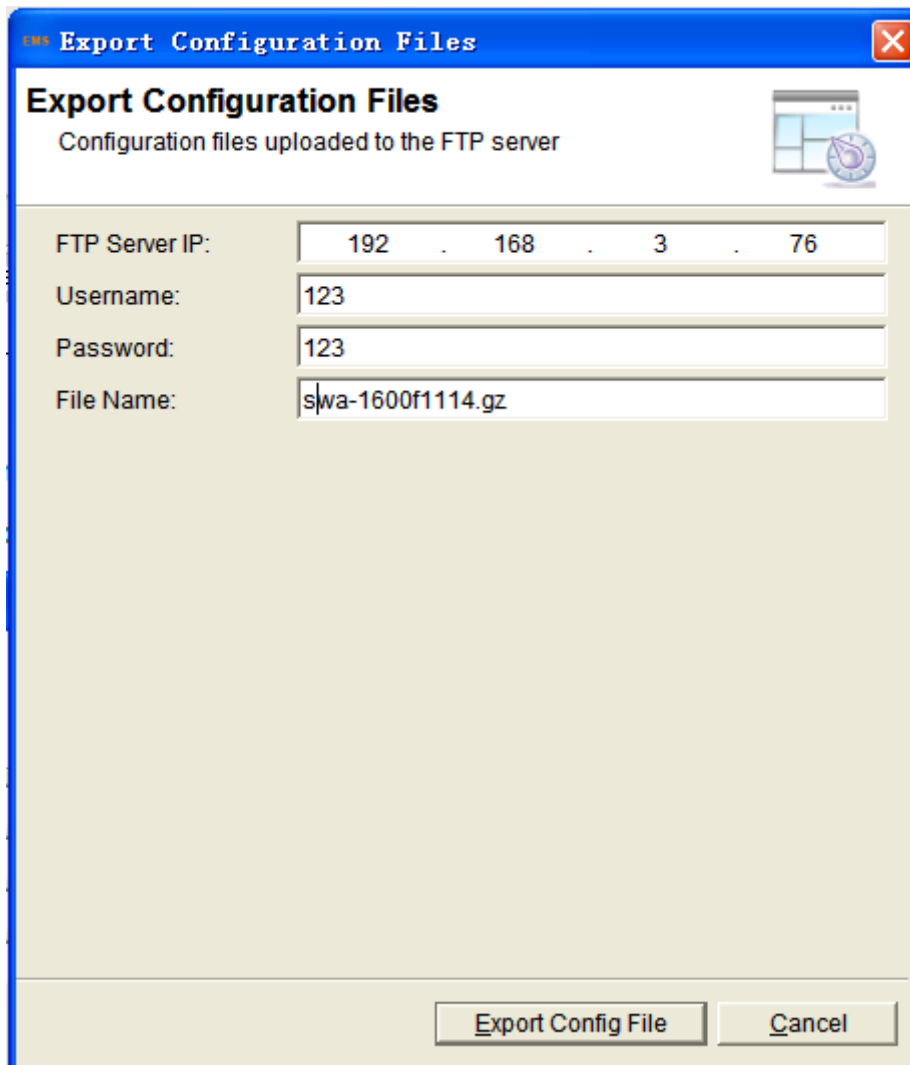
11.6.7. Export configuration files

Function

Export configuration files.

Operating Procedure

1. Right click OLT, select "Operation (O)">"export configuration files" pop-up export configuration files interface.
2. Input FTP Server IP, user name, password and file name.
3. Click "export configuration files", pop-up the tip of success.



Export Configuration Files
Configuration files uploaded to the FTP server

FTP Server IP: 192 . 168 . 3 . 76

Username: 123

Password: 123

File Name: s|wa-1600f1114.gz

Export Config File Cancel

Figure 11-53 Export configuration files

11.6.8. Import configuration files

Function

Import configuration files.

Operating Procedure

1. Right click OLT, select "Operation (O)">"import configuration files "pop-up import configuration files interface.
2. Input FTP Server IP, user name, password and file name.
3. Click "import configuration files", pop-up the tip of success.

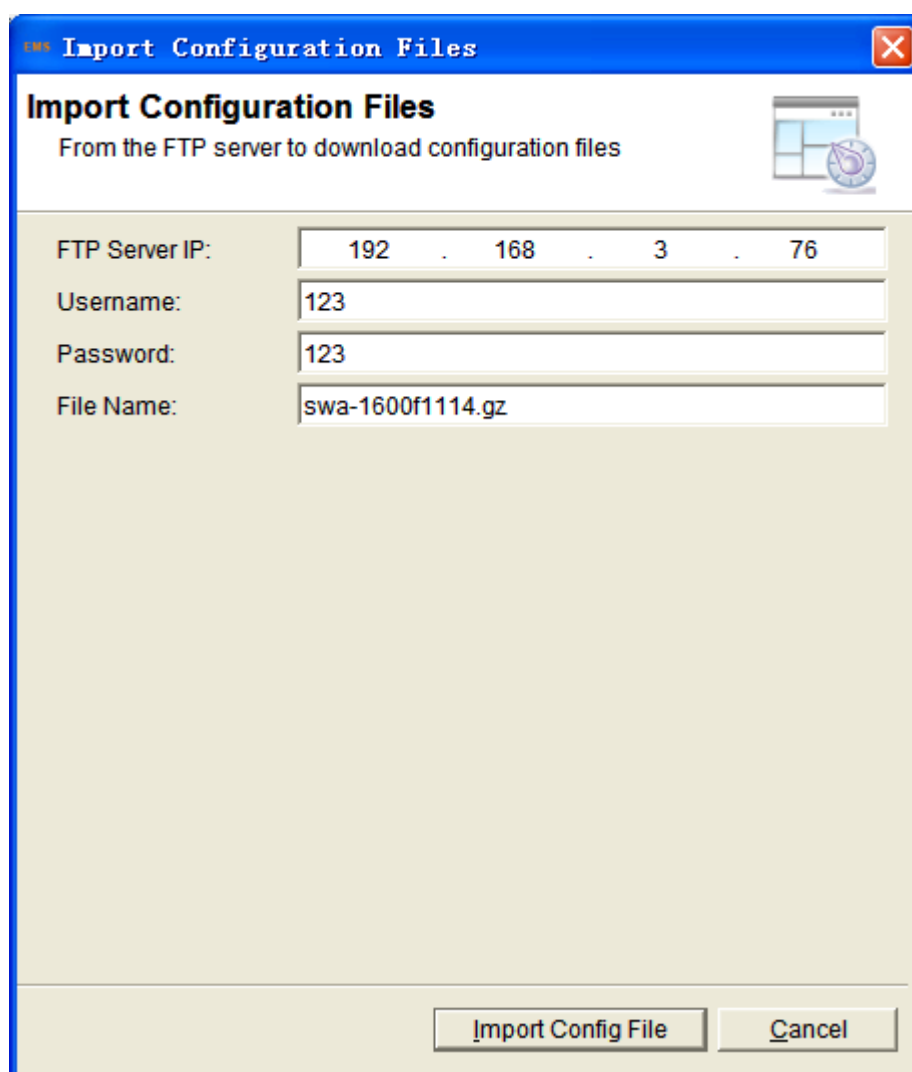


Figure 11-54 Import configuration files

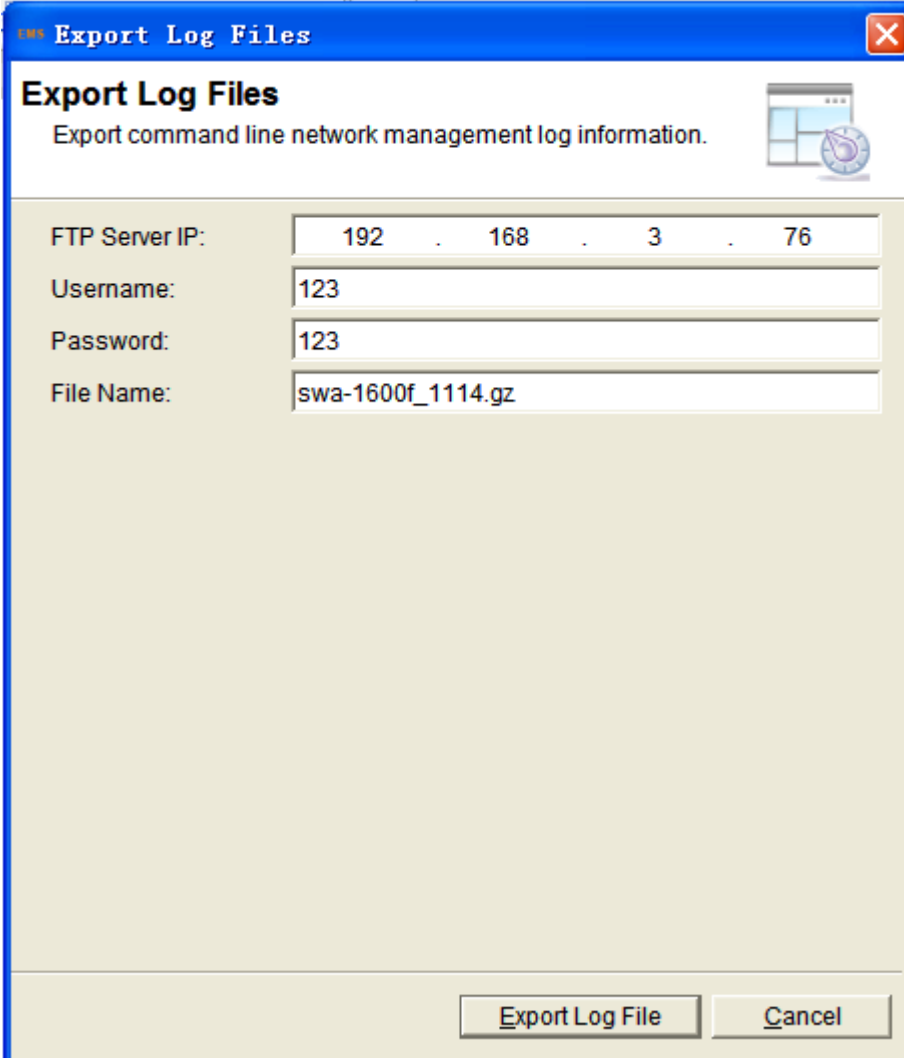
11.6.9. Export log files

Function

Export log files.

Operating Procedure

1. Right click OLT, select "Operation (O)">"export log files" pop-up export log files interface.
2. Input FTP Server IP, user name, password, slot NO and file name.
3. Click "export log files", pop-up the tip of success.



Export Log Files
Export command line network management log information.

FTP Server IP: 192 . 168 . 3 . 76

Username: 123

Password: 123

File Name: swa-1600f_1114.gz

Export Log File Cancel

Figure 11-55 Export log files

11.6.10. NE rename

Function

Network elements rename

Operating Procedure

1. Right click OLT, select "Operation (O)">"NE rename" pop-up input name interface.
2. Input new name, click "OK".

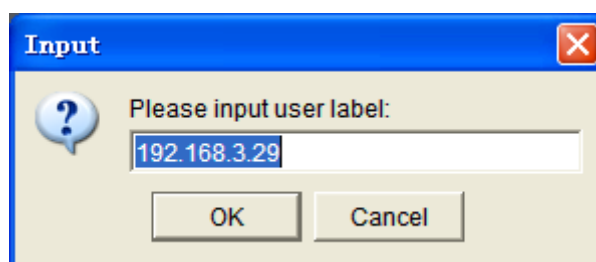


Figure 11-56 NE Rename

11.7. State Callbacks

11.7.1. Open Batch Configure Capability

Function

Introduce batch configure capability.

Operating Procedure

1. Right click OLT, select "State Callbacks">" open batch configure capability".
View batch command and template.

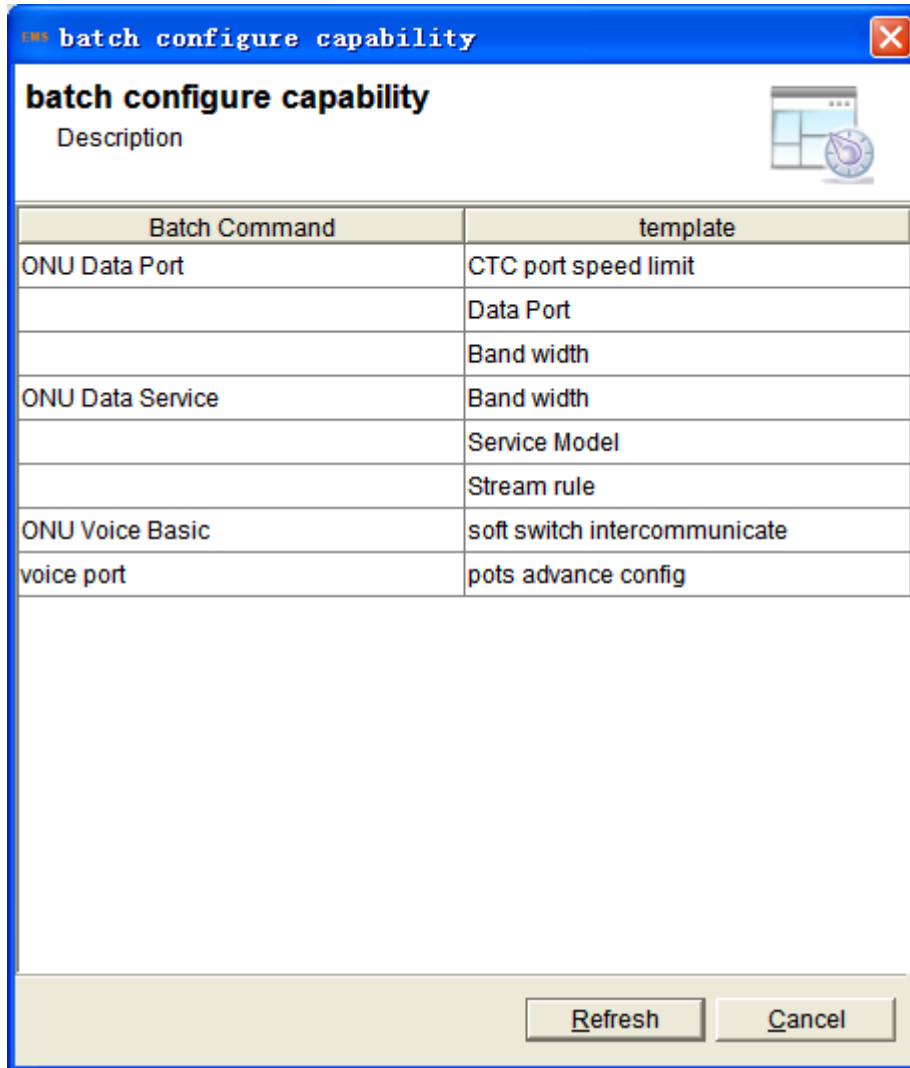


Figure 11-57 Batch configure capability

11.7.2. MAC table

Function

View ONU MAC table

Operating Procedure

1. Right click OLT, select "State Callbacks">"MAC table".
2. Select slot No, view MAC table and VLAN ID.

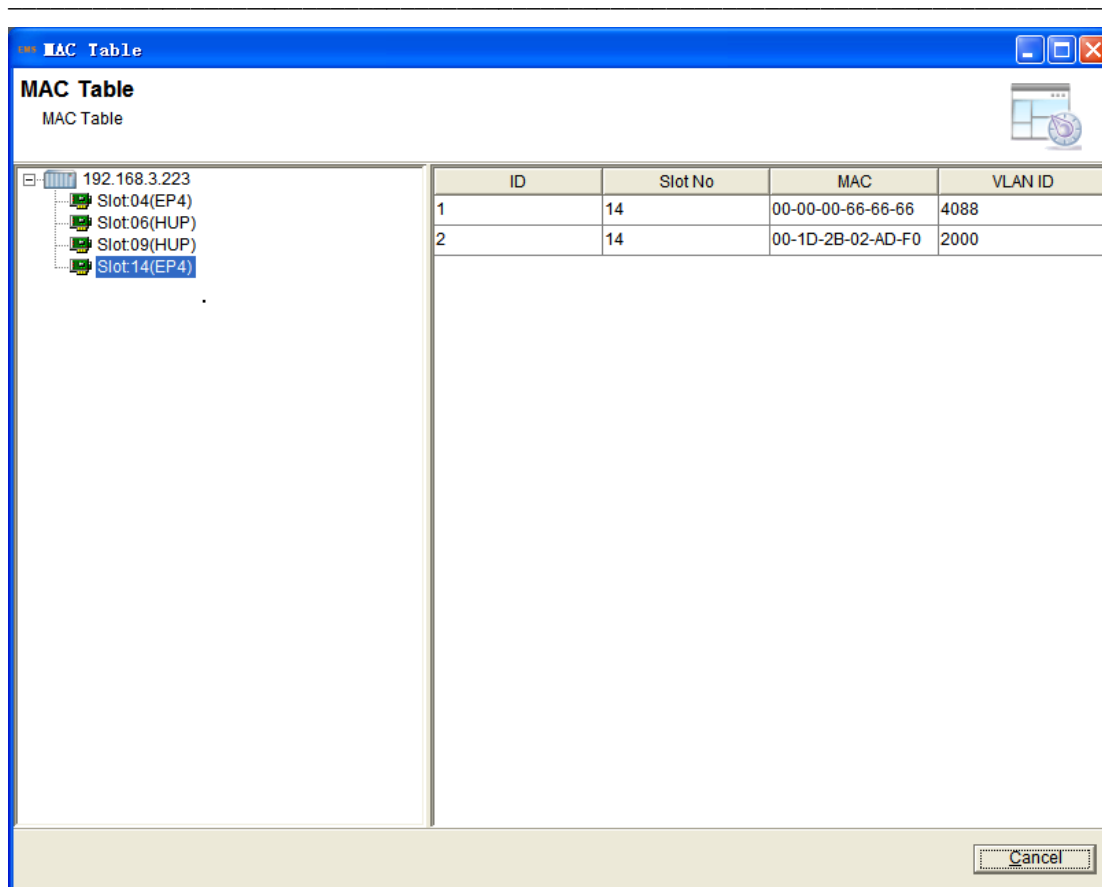


Figure 11-58 MAC Table

11.7.3. ONU type and software and hardware versions

Function

View ONU type and software and hardware versions.

Operating Procedure

1. Right click OLT, select "State Callbacks">"ONU type and software and hardware version".
2. Select slot no, view the ONU type and software and hardware versions.

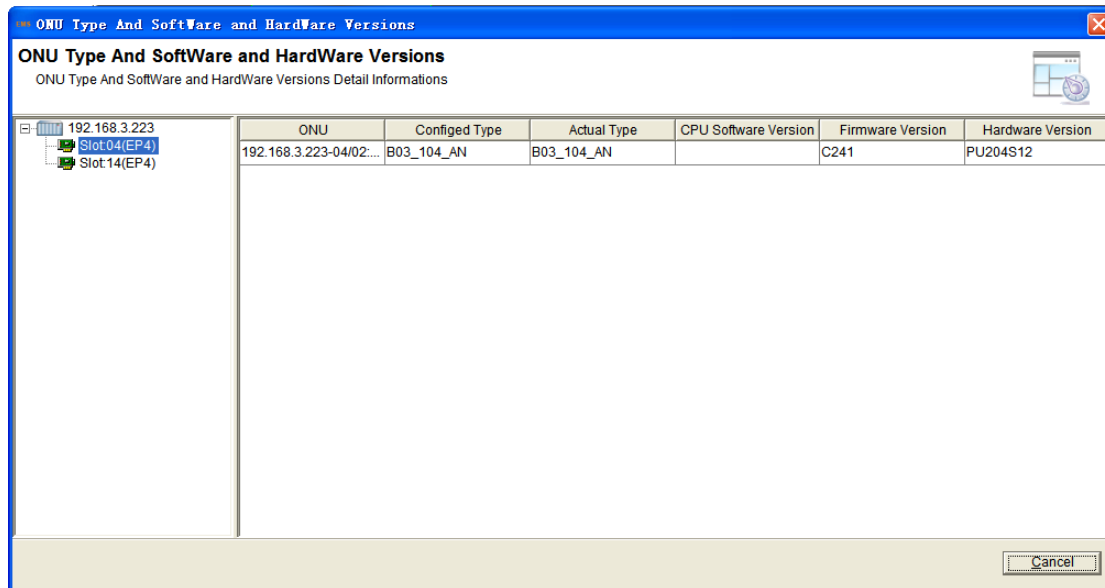


Figure 11-59 ONU Type and software and hardware versions

11.7.4. Check OLT link status

Function

Check OLT link status.

Operating Procedure

1. Right click OLT, select "State Callbacks">"check OLT link status", check OLT link status.

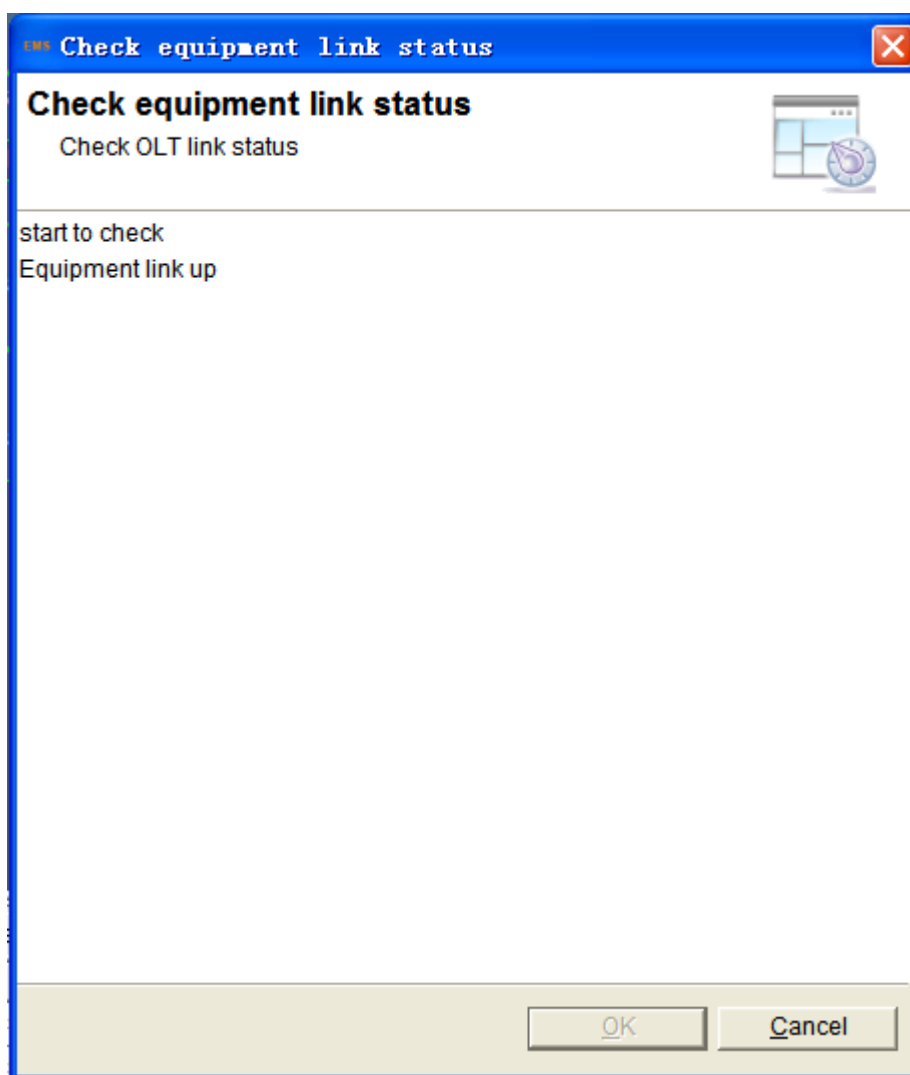


Figure 11-60 Check OLT link status

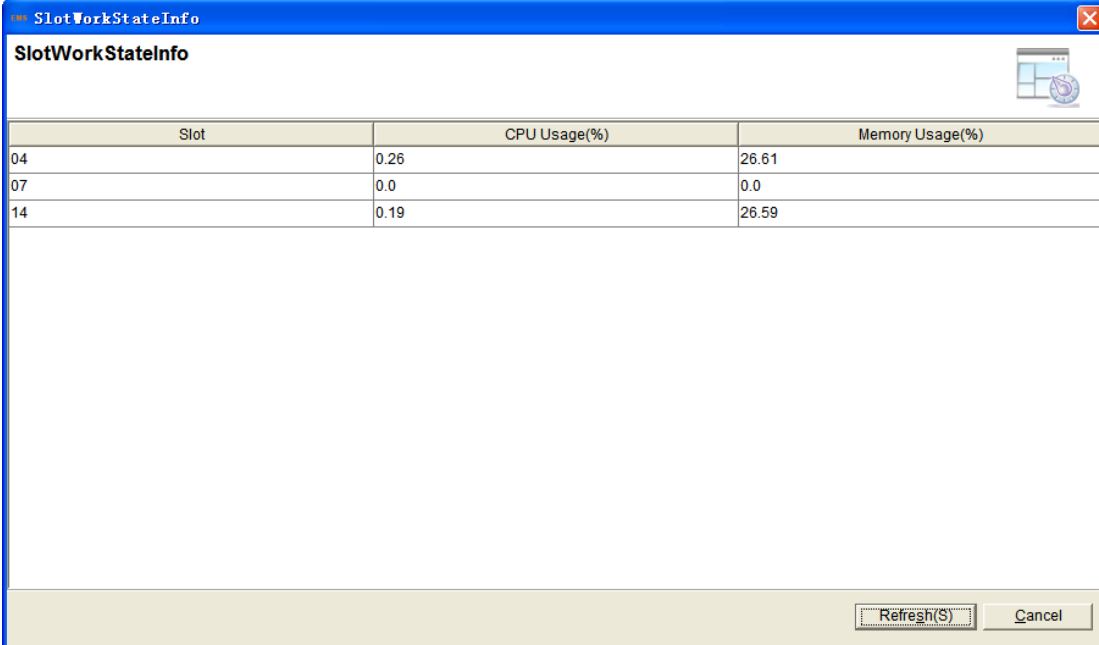
11.7.5. Slot work state info

Function

View slot work state information.

Operating Procedure

1. Right click OLT, select "State Callbacks">"slot work state info".
2. View CPU usage and memory usage.



The screenshot shows a window titled "SlotWorkStateInfo" with a table of data. The table has three columns: "Slot", "CPU Usage(%)", and "Memory Usage(%)". The data is as follows:

Slot	CPU Usage(%)	Memory Usage(%)
04	0.26	26.61
07	0.0	0.0
14	0.19	26.59

At the bottom right of the window, there are two buttons: "Refresh(S)" and "Cancel".

Figure 11-61 Slot work state info

11.7.6. RSTP

11.7.6.1. RSTP Bridge

Function

View RSTP Bridge

Operating Procedure

1. Right click OLT, select "State Callbacks">"RSTP">"RSTP bridge".

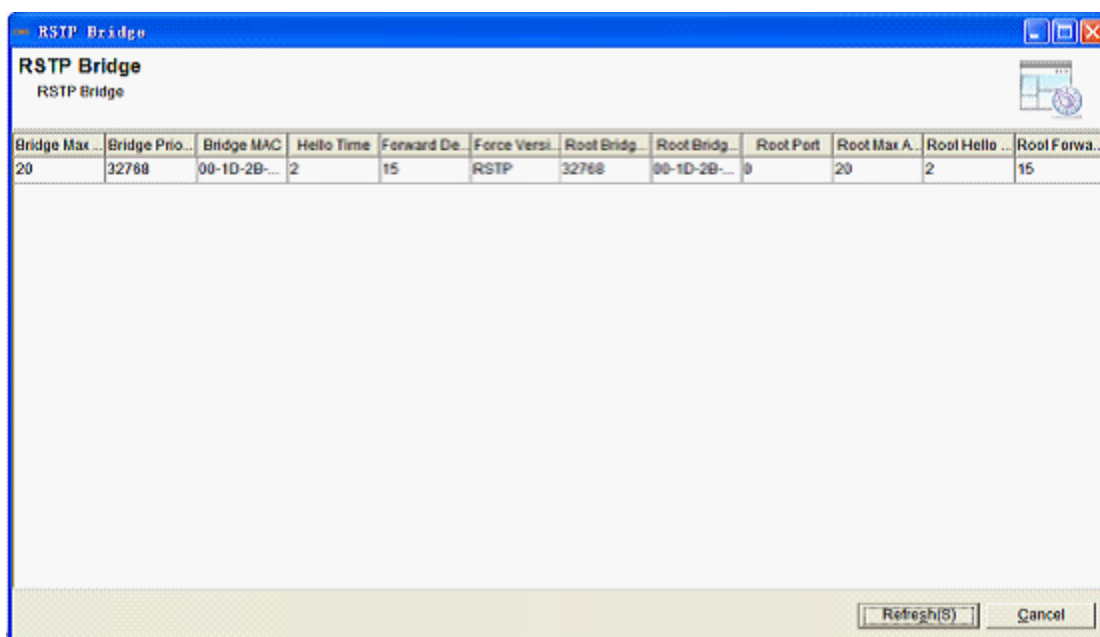


Figure 11-62 RSTP Bridge

11.7.6.2. RSTP port info

Function

View RSTP port info

Operating Procedure

1. Right click OLT, select "State Callbacks">"RSTP">"RSTP port info".

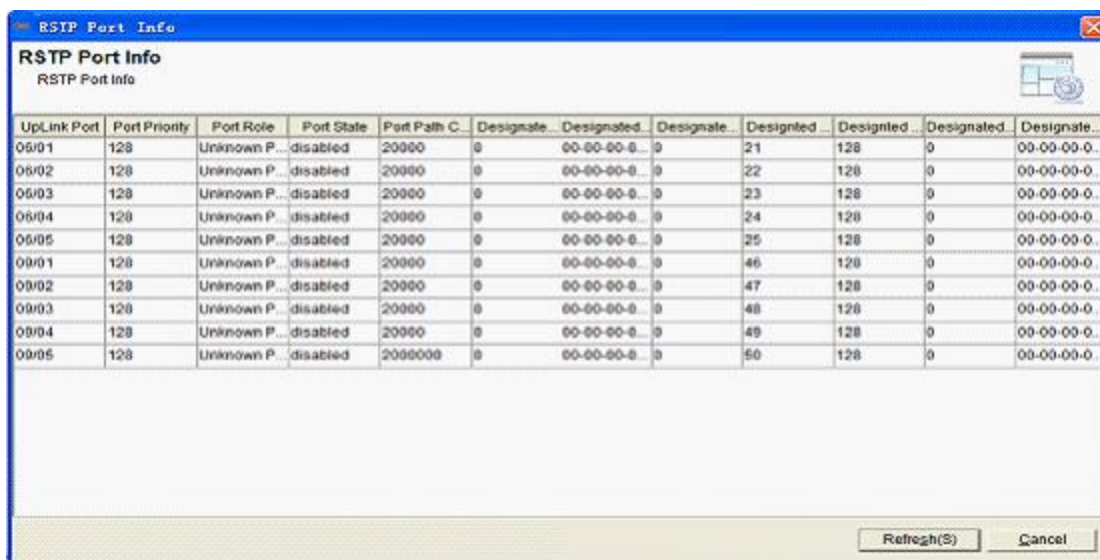


Figure 11-63 RSTP Port info

11.8. View current/History alarm

Function

Input query condition, query current/history alarm.

Operating Procedure

1. Right click OLT, select "view current alarm "or" view history alarm", pop-up alarm query interface.
2. Click "reset condition" set query condition.
3. Click "query", pop-up alarm query result.
4. Alarm query result is displayed by alarm query list and alarm statistics result.

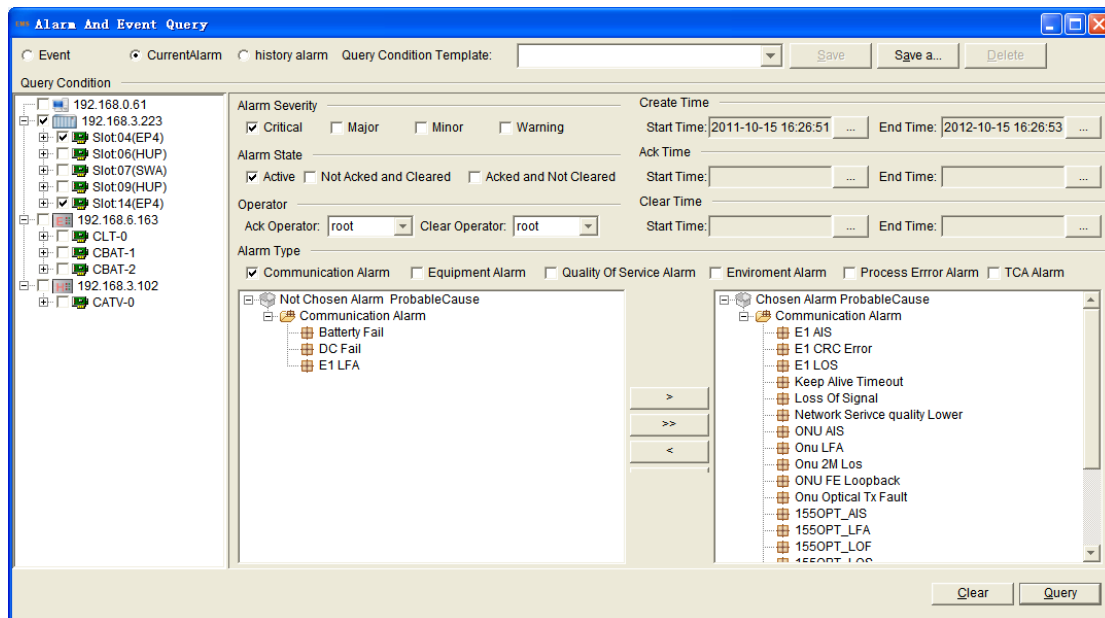


Figure 11-64 Reset alarm query condition

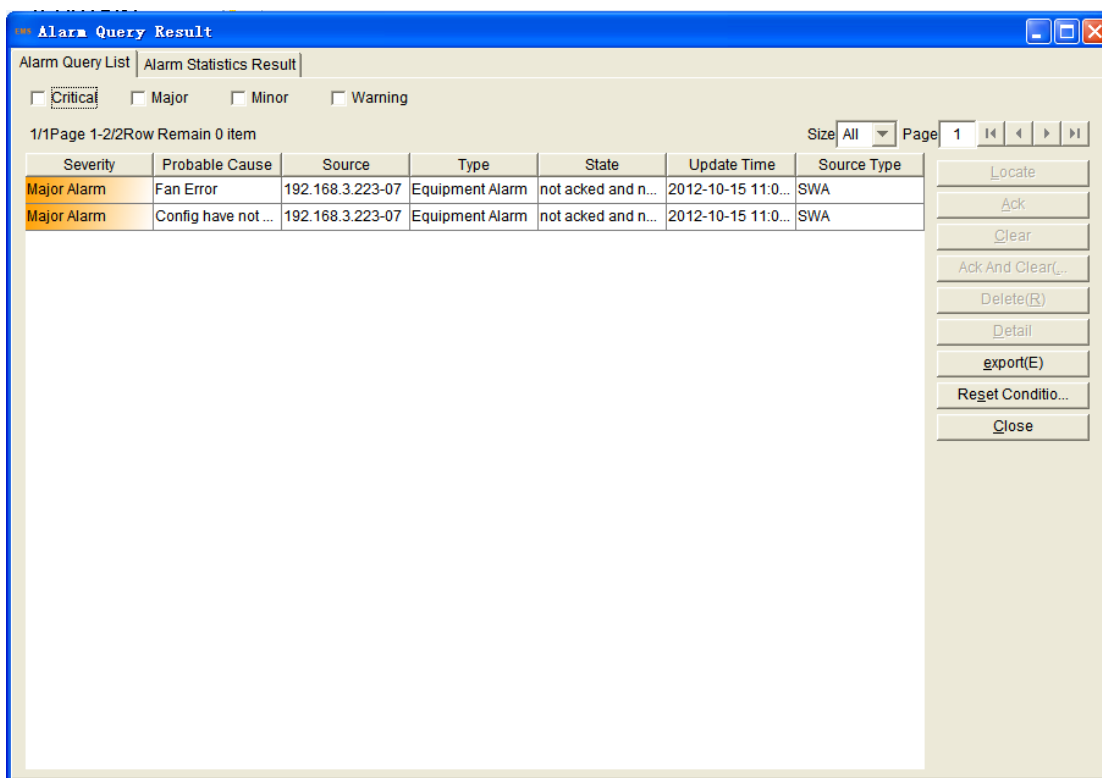


Figure 11-65 Alarm query list

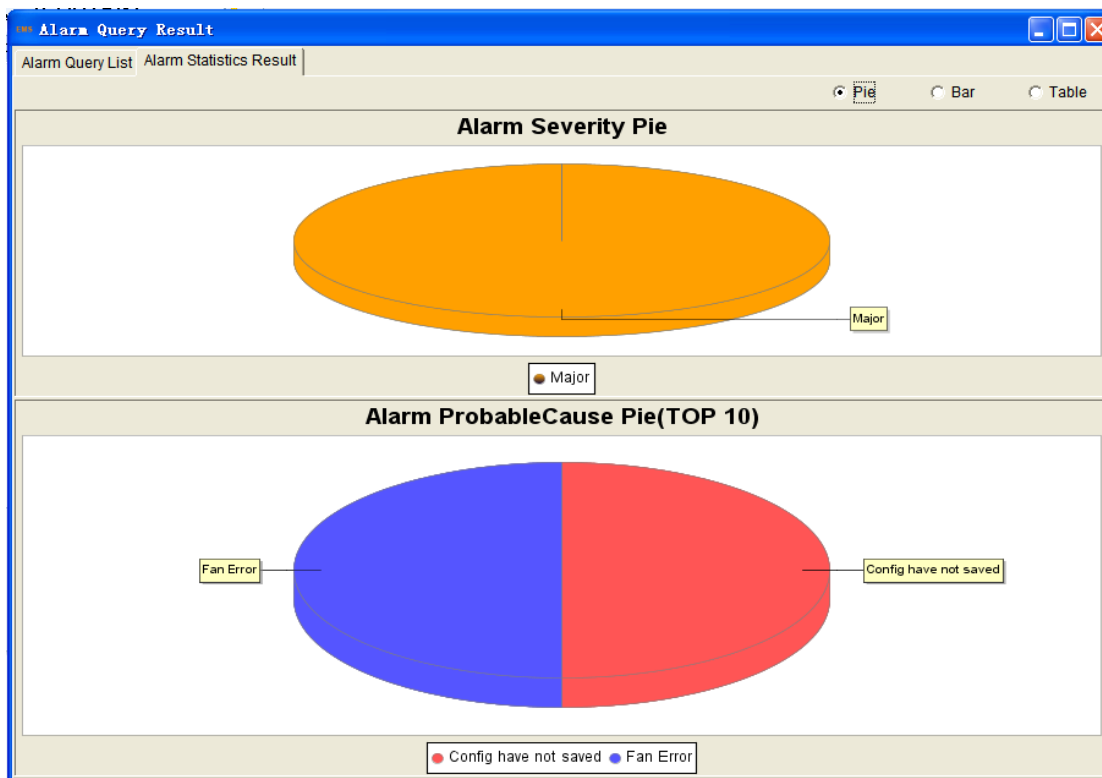


Figure 11-66 Alarm statistics result

11.9. View real-time performance

Function

View real time performance

Operating Procedure

1. Right click OLT, select "view real time performance" pop-up view real time performance interface.
2. Select destination ports and performance parameter.
3. Set interval time and group by.....
4. Clicking "Add" button start to gather real time performance.
5. Choose expression of you like from right box.

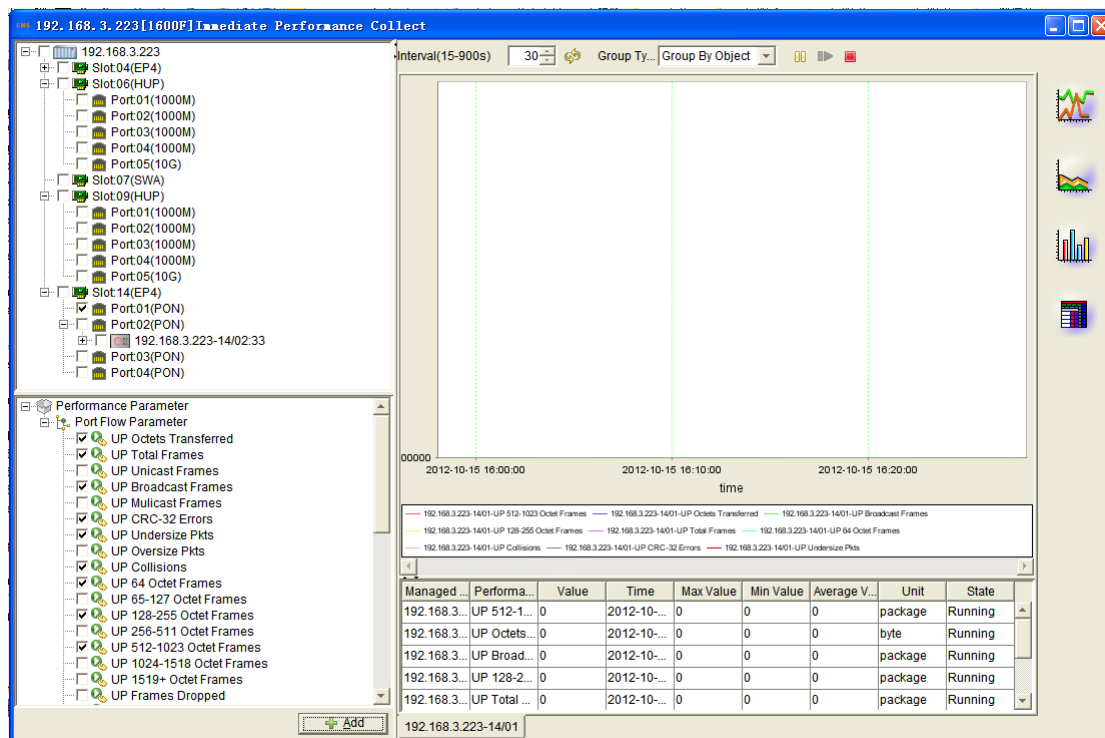


Figure 11-67 View real time performance

11.10. Ping NE

Function

Test to see if the link between equipment and network management system is

working well.

Operating Procedure

1. Right click OLT, select "ping NE" pop-up ping NE interface.

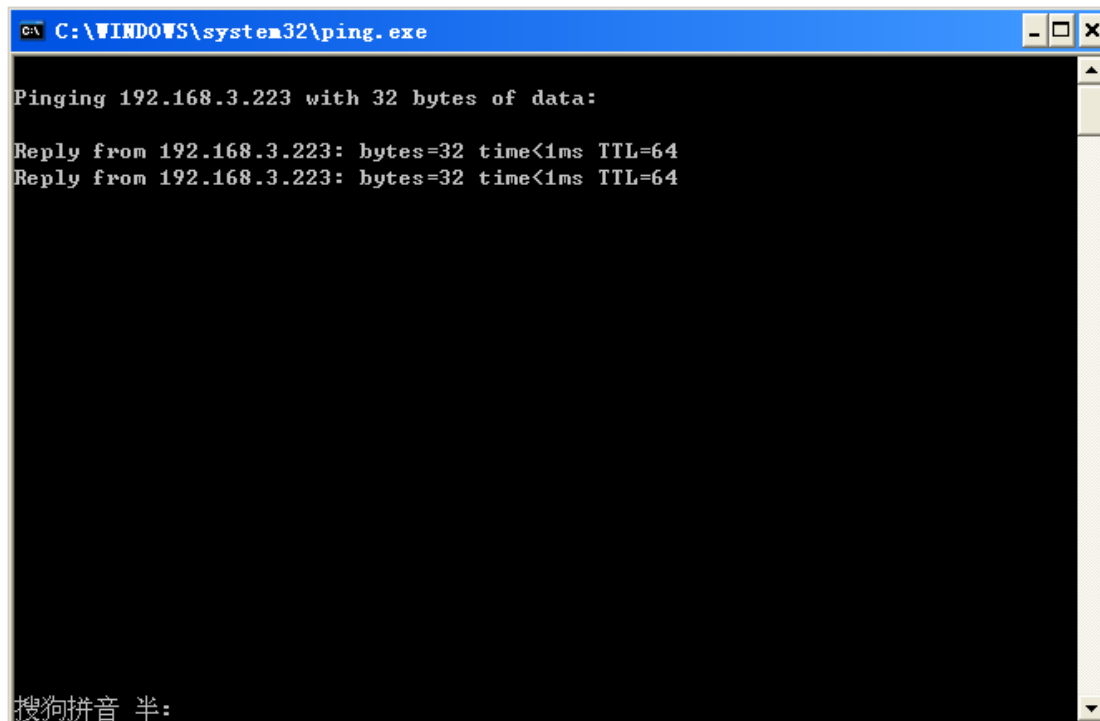


Figure 11-68 Ping NE

11.11. Telnet NE

Function

Telnet

Operating Procedure

1. Right click OLT, select "telnet NE" pop-up telnet interface.
2. You can use command to configure in the interface.

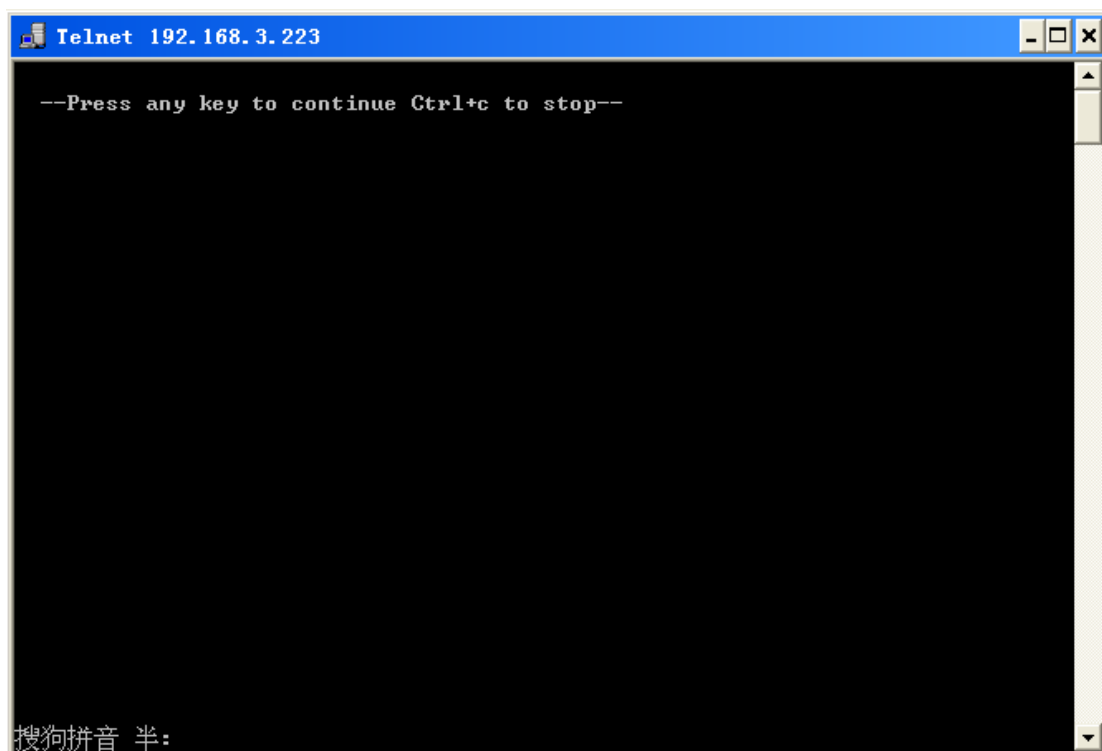


Figure 11-69 Telnet NE

12. ONU management

This chapter describes the function of ONU management. It mainly includes the following contents:

- ONU detail
- NE rename
- View management
- Sync device
- Configuration
- Operation
- Control command
- Real time info
- Operation
- User business configuration

12.1. ONU detail

Function

ONU detail is used to manage and control ONU. It mainly includes ONU basic info, ONU user info and ONU port list.

Operating Procedure

1. Right click ONU, select "ONU detail" enter ONU detail interface.
2. Clicking "ONU basic info", "ONU user info", "ONU port list" in turn to set.

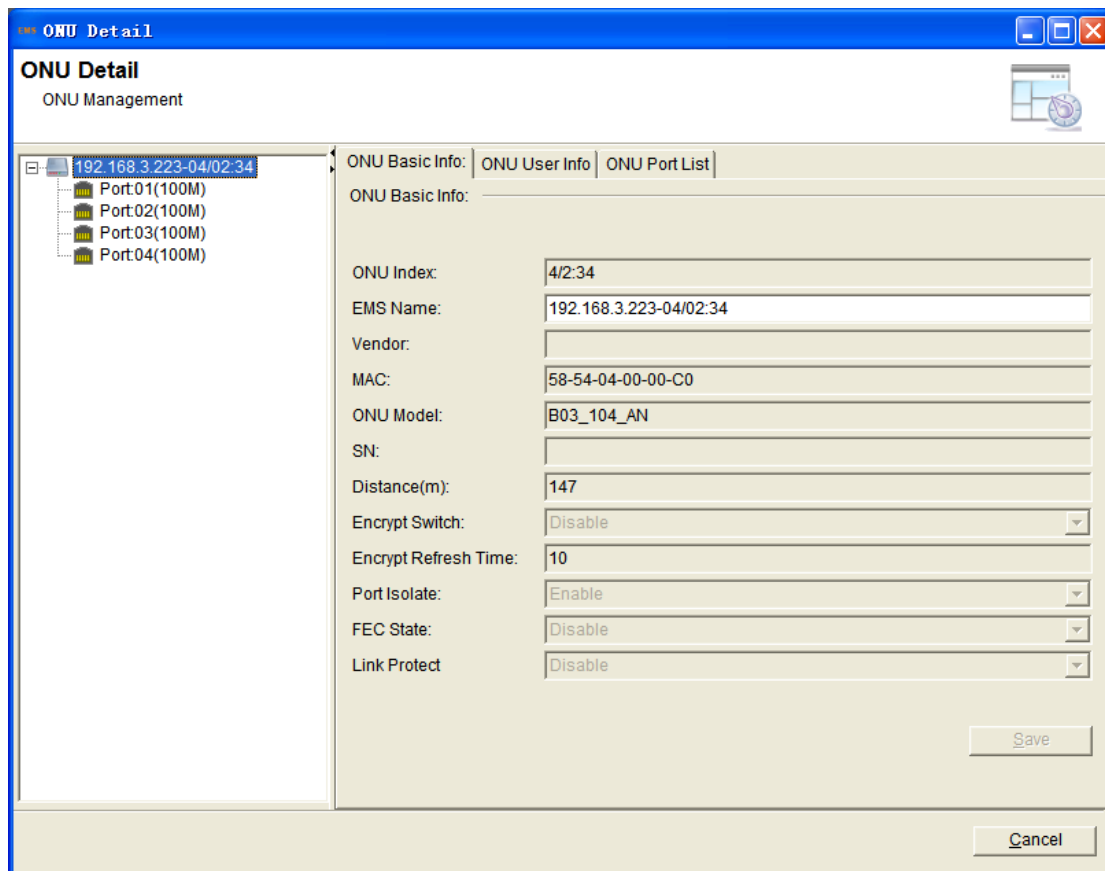


Figure 12-1 ONU Detail

12.2. NE rename

Function

Set user label of ONU.

Operating Procedure

1. Right click ONU, select "NE rename" enter rename interface.

- Input user label and click "OK" to complete setup.

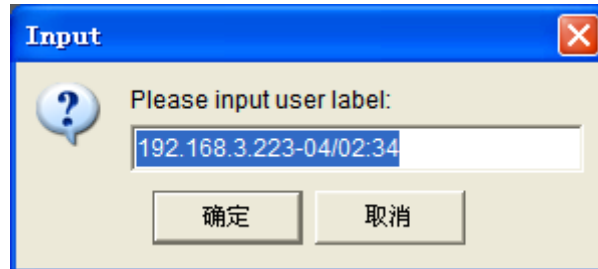


Figure 12-2 NE Rename

12.3. View management

12.3.1. Chassis view

Function

Chassis view Intuitive shows port position and state information of the ONU.

Operating Procedure

- Right click ONU, select "View management">"chassis view" enter chassis view interface.

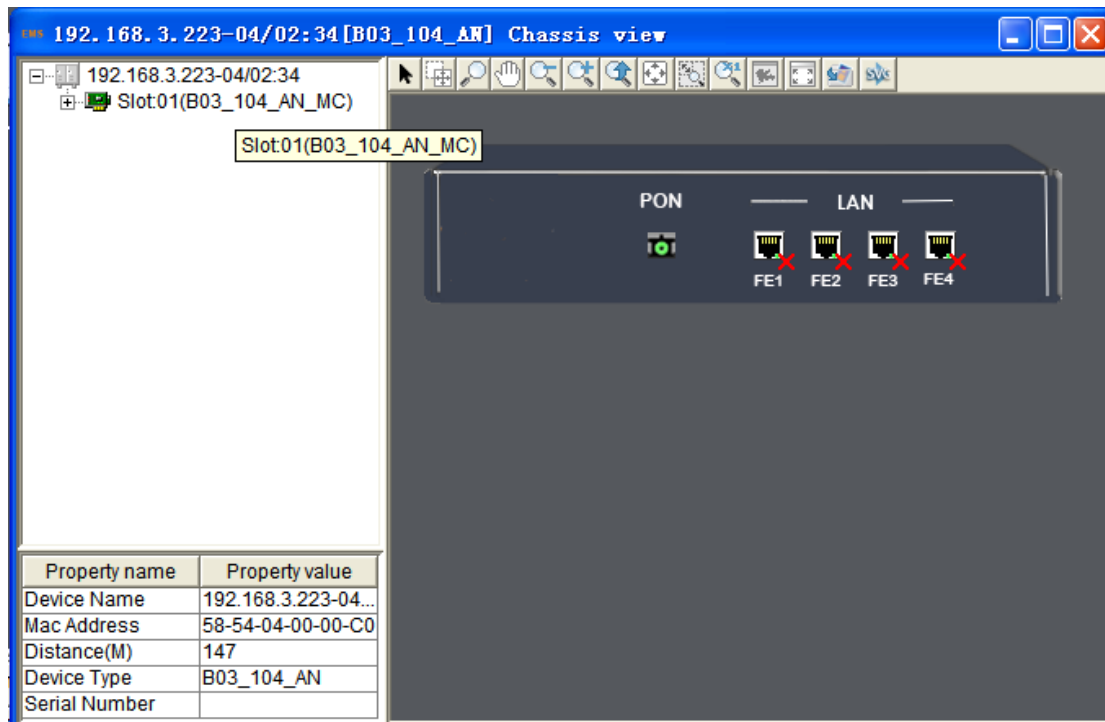


Figure 12-3 ONU Chassis view

12.3.2. Device physical map

Function

Device physical map shows how devices be connected with each other.

Operating Procedure

1. Right click ONU, select "view management" >"device physical view" enter device physical view interface.
2. Can use toolbar, right-click menu to manage device physical map

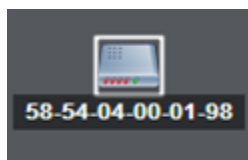


Figure 12-4 ONU Device physical view

12.3.3. Move...

Function

Move network element, domain or group into other domain or group.

Operating Procedure

1. Right click ONU, select "view management" >"Move To..."enter move... interface.
2. Select network element which you need, click "OK" to move where you want.

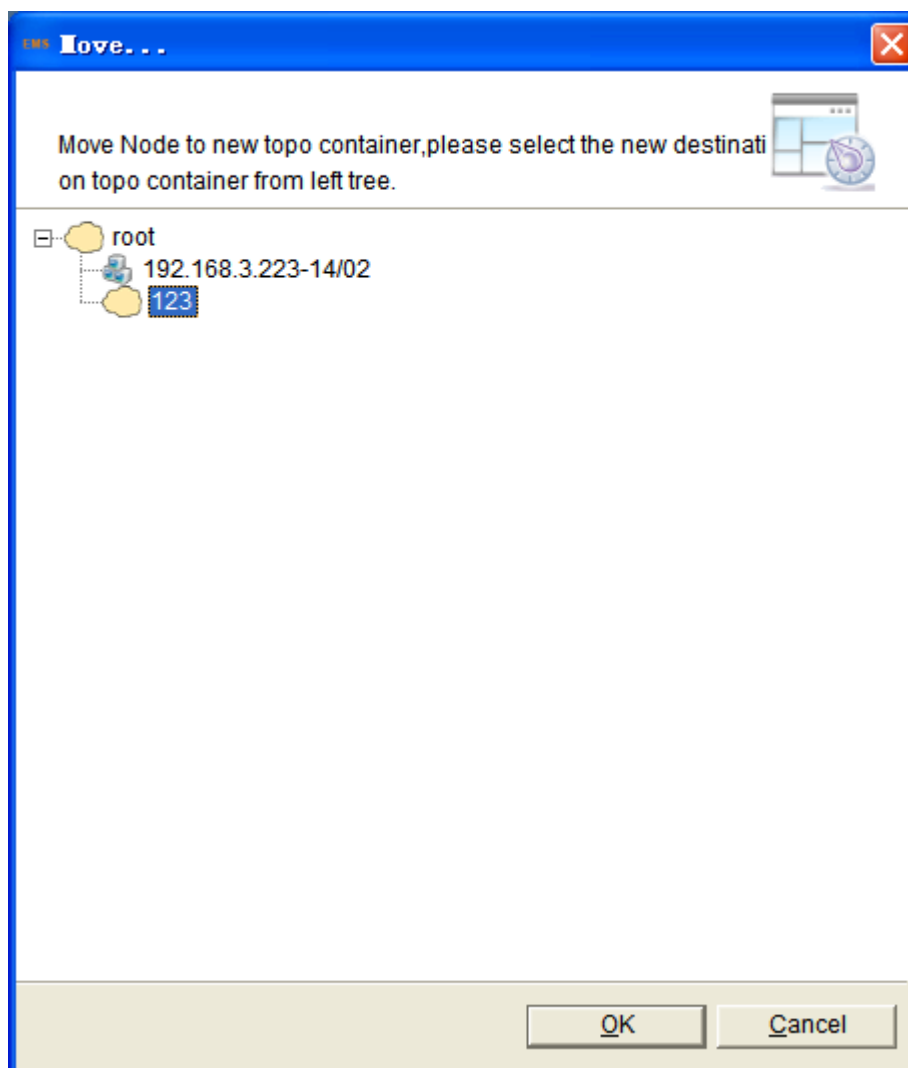


Figure 12-5 move onu

12.4. Sync device

Function

Sync device can ensure configuration of equipment and configuration of network management. When the configuration changes, we can manually sync it.

Operating Procedure

1. Right click ONU, select "sync device" enter synch state.
2. In the process of synchronous, background synchronization information will be printed in the rolling log interface. Once getting an error message, it will show problem immediately.

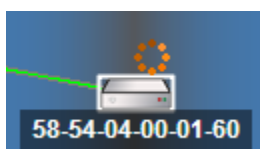


Figure 12-6 Sync device

3. If synchronous failure, device would have "!" Warning users on top right corner.

12.5. Configuration

12.5.1. ONU port MAC number limit

Function

Set ONU port MAC number limit

Operating Procedure

1. Right click ONU, select "configuration">"ONU port MAC num limit" enter ONU port MAC number list interface.

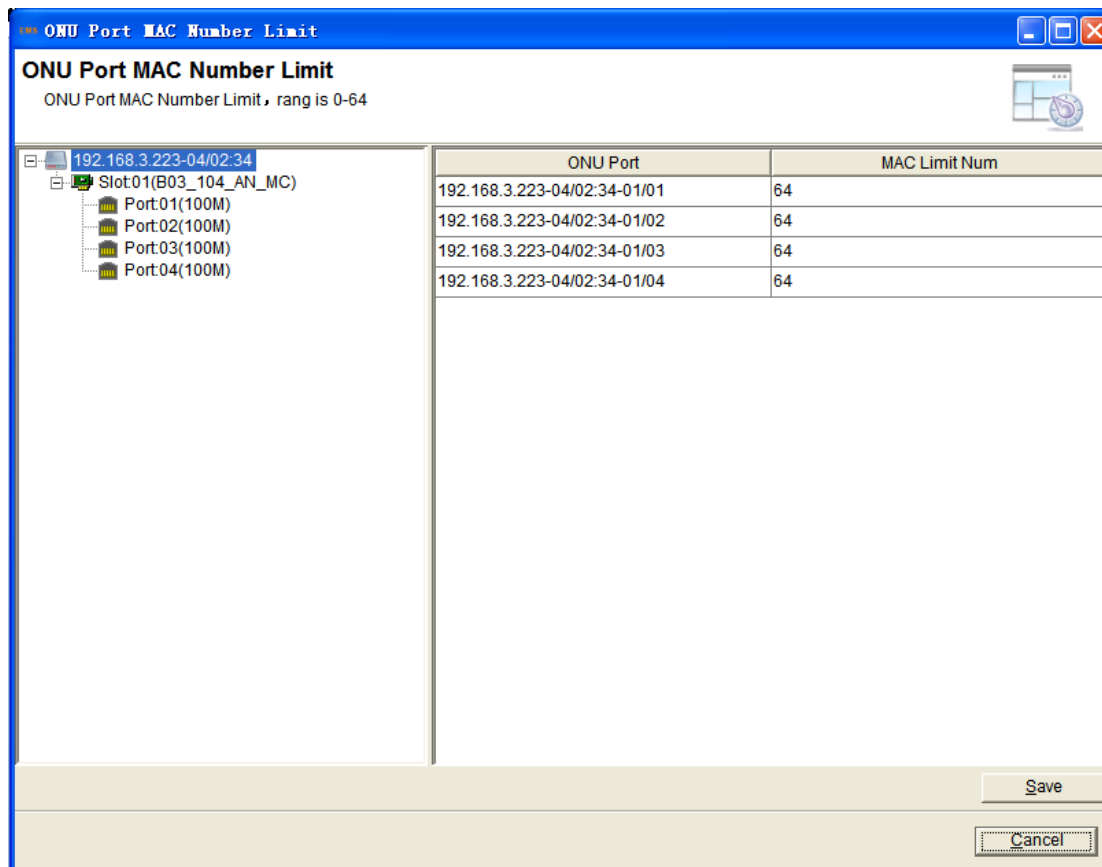


Figure 12-7 ONU Port MAC num limit

12.5.2. RSTP enable

Function

Used for control RSTP opening or closing

Operating Procedure

1. Right click ONU, select "configuration">"RSTP enable" enter RSTP enable interface.
2. Set RSTP enable

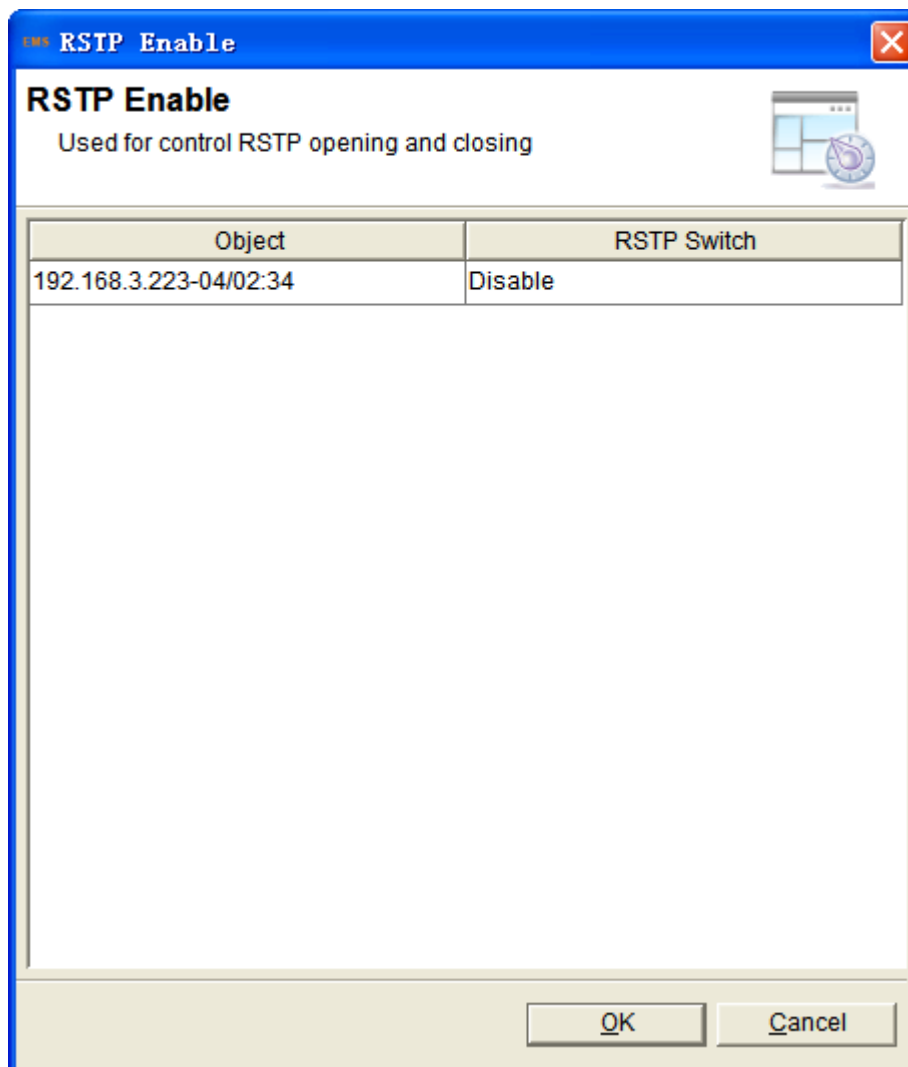


Figure 12-8 RSTP Enable interface

12.5.3. DBA parameters management

Function

Set DBA parameters of the ONU

Operating Procedure

1. Right click ONU, select "configuration">"DBA parameters management", enter DBA parameters interface.
2. You can add or delete according to the actual needs of the items. And then click "save", "refresh" in turn to complete.

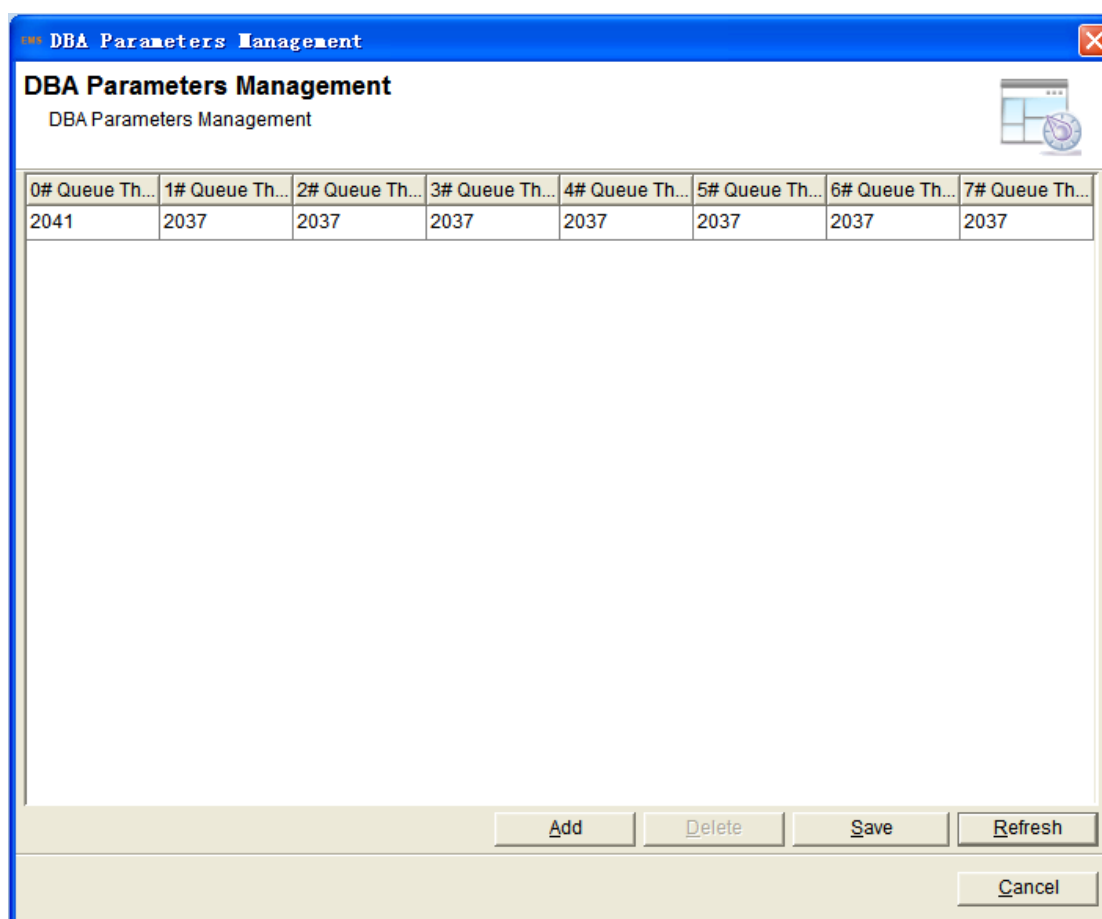


Figure 12-9 DBA Parameters management interface

12.6. Control command

12.6.1. ONU performance reset

Function

Reset ONU performance statistics

Operating Procedure

1. Right click ONU, select "control command">"ONU performance" enter ONU performance reset interface.
2. Click "OK" button to execute operation.

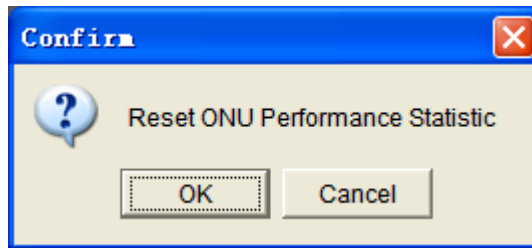


Figure 12-10 Clear ONU performance statistics

12.7. Operation(O)

12.7.1. Reregister ONU

Function

Reregister ONU

Operating Procedure

1. Right click ONU, select "operation (o)">"reregister ONU" to register ONU interface.

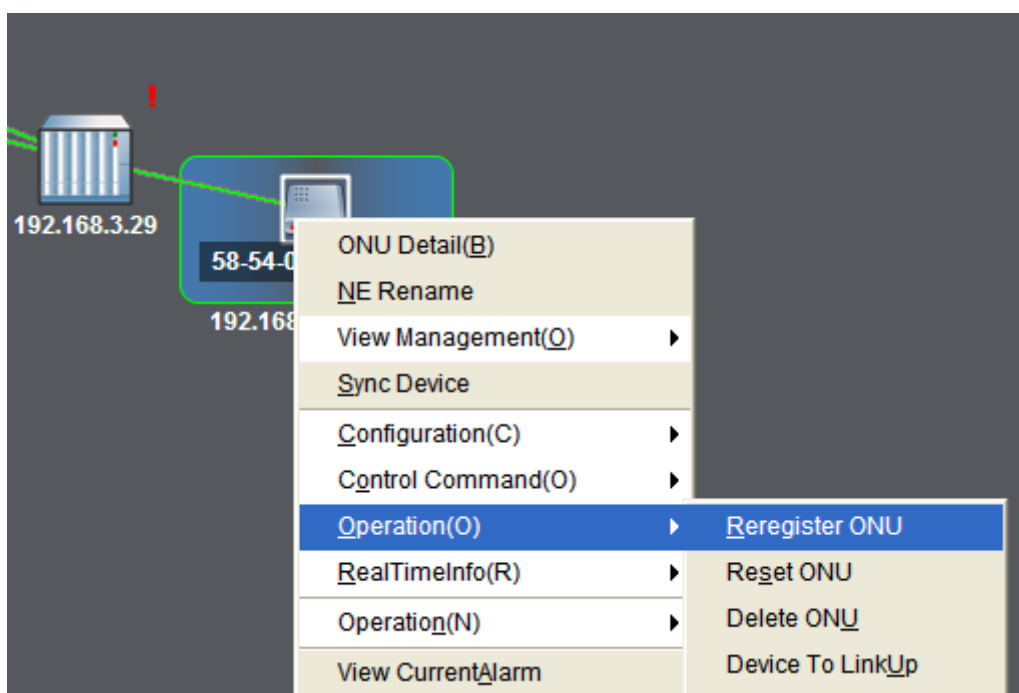


Figure 12-11 ONU reregister

2. When ONU reregister successful, rolling log bar will print the message of process.

[System Message] 2012-03-16,09:57:41 ONU_REGISTER 192.168.3.29-14/02:33 success

Figure 12-12 Tips of reregister ONU

12.7.2. Reset ONU

Function

Reset ONU

Operating Procedure

1. Right click ONU, select "operation (o)">"reset ONU" to reset ONU.

[System Message] 2012-03-16,10:00:10 ONU_RESET 192.168.3.29-12/03:65 success

Figure 12-13 Tips of reset ONU

12.7.3. Delete ONU

Function

Delete ONU

Operating Procedure

1. Right click ONU, select "Operation (O)">"delete ONU" to delete ONU.

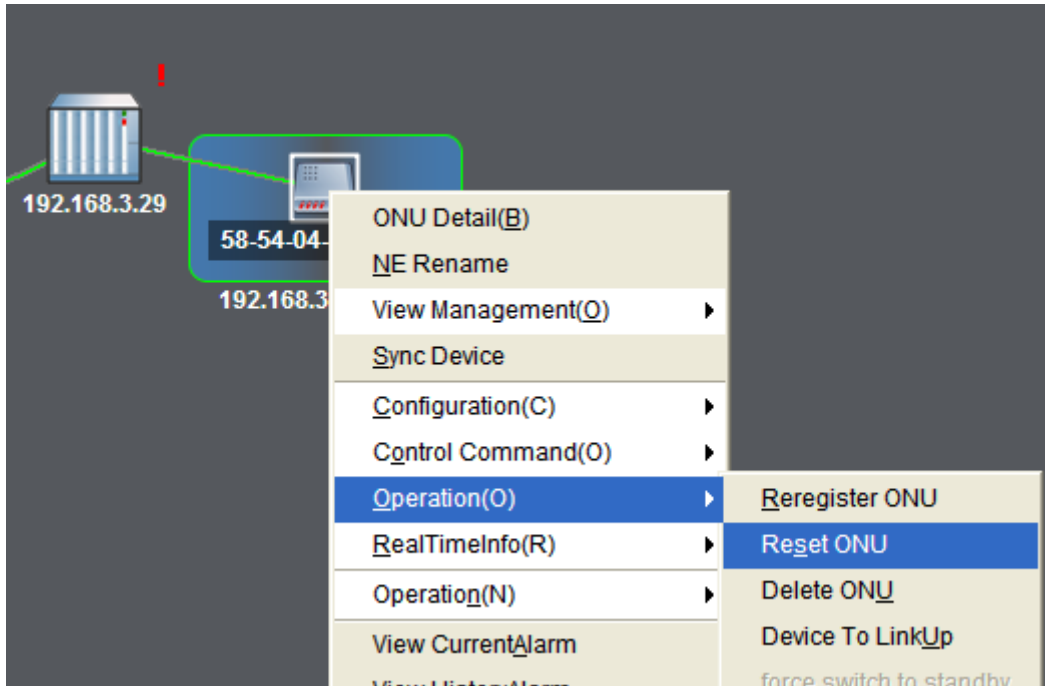


Figure 12-14 Delete ONU

2. The result of delete operation will be displayed in rolling log bar as the same time, for successful authorized ONU, network management will delete ONU and updated status in the logic topo map, as below.

```
[System Message] 2012-03-16,10:01:49 ONU_DELETE 14/02:33 58-54-04-00-01-98 success
```

Figure 12-15 Tips of delete ONU

12.7.4. Device to linkup**Function**

Set device linkup

Operating Procedure

1. Right click ONU, select "Operation (O)">"device to linkup" to set device linkup.

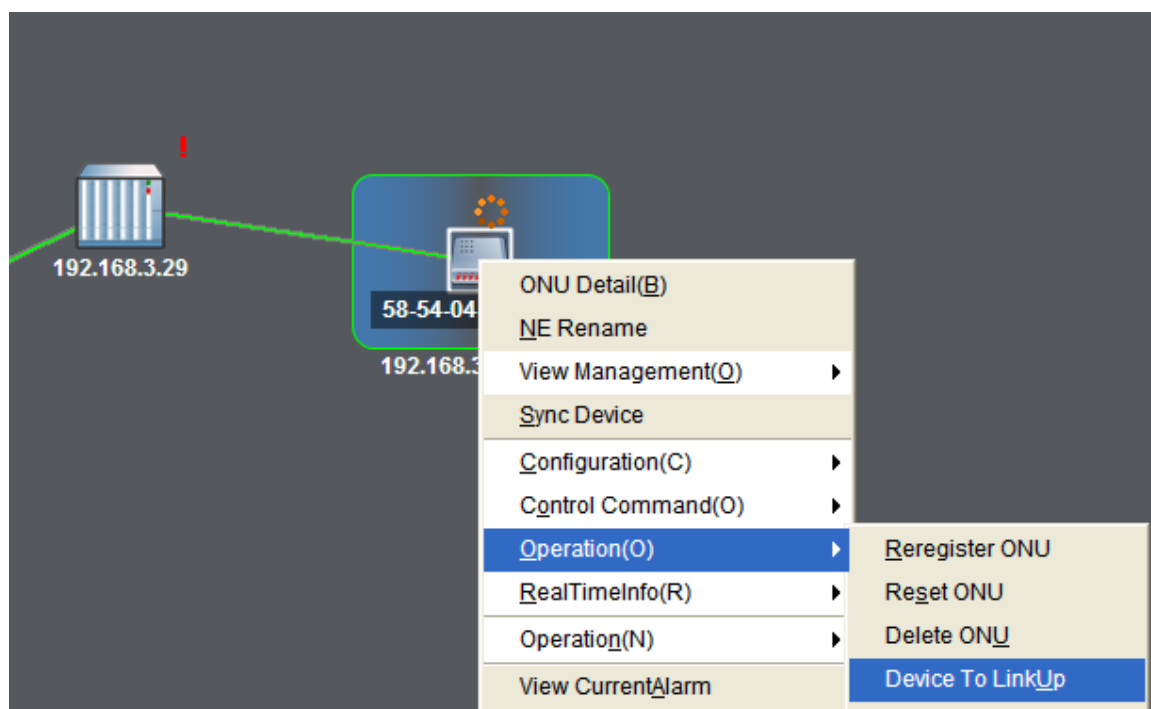


Figure 12-16 Set device linkup

12.8. State Call backs

12.8.1. ONU port MAC table

Function

View ONU port MAC table

Operating Procedure

1. Right click ONU, select "real time info">"ONU port MAC table" enter ONU MAC table list interface.
2. Choose port from left tree. Click to view.

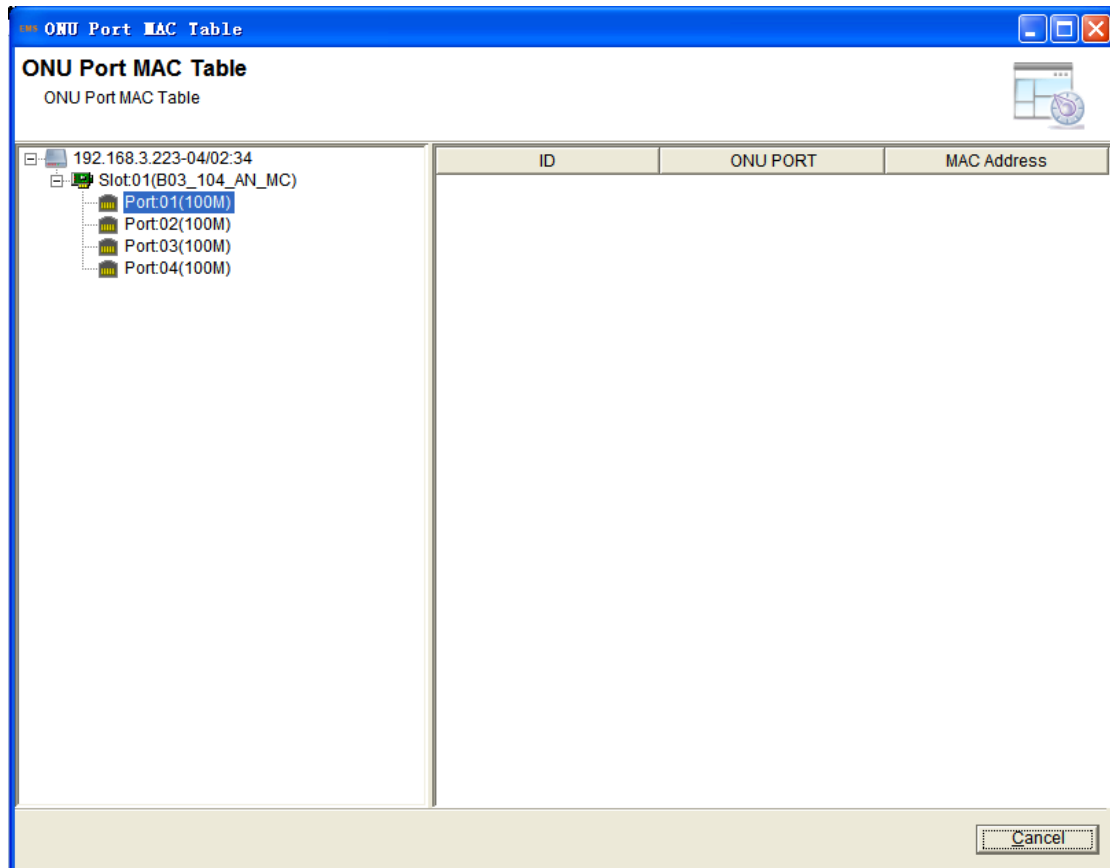


Figure 12-17 ONU Port MAC table

12.8.2. Device information

Function

Display device information

Operating Procedure

1. Right click ONU, select "real time info">"device information", enter device information.

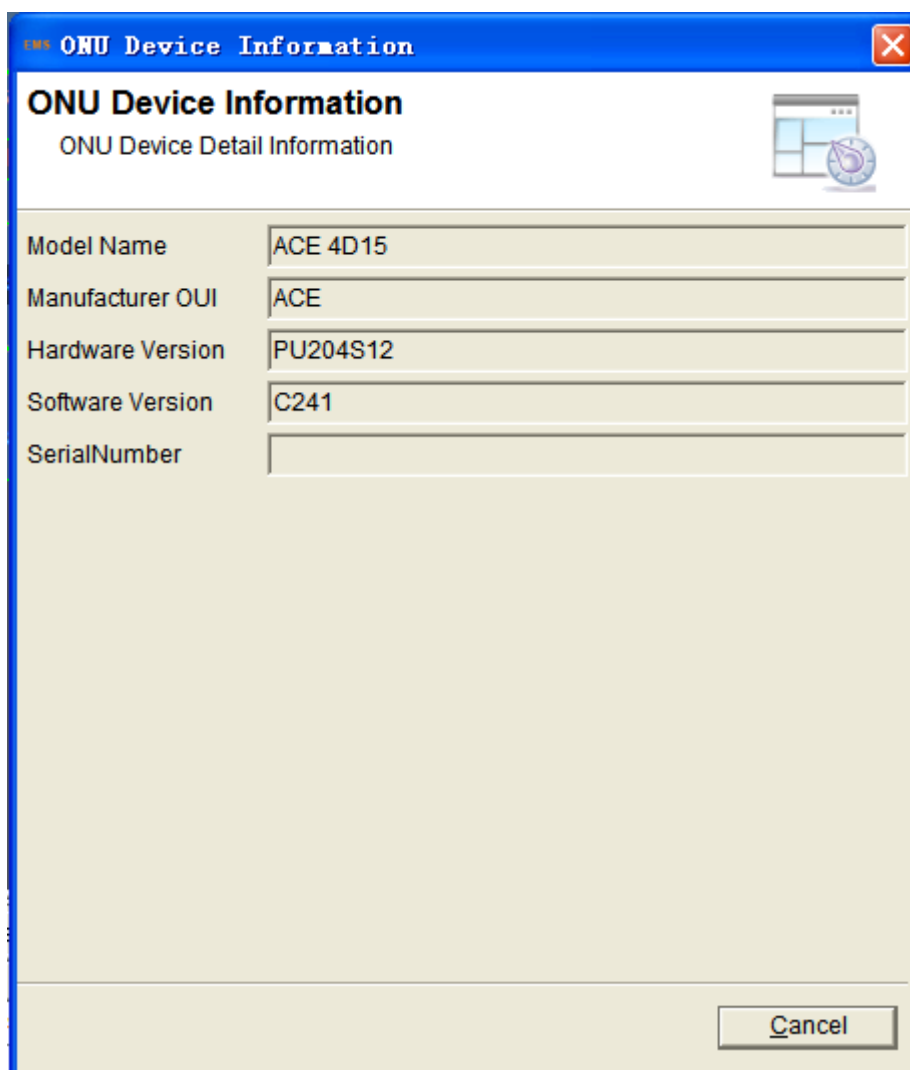


Figure 12-18 Device info

12.8.3. Capability information

12.8.3.1. FEC function

Function

Set FEC function query.

Operating Procedure

1. Right click ONU, select "real time info">"capability">"FEC function" enter FEC function interface.

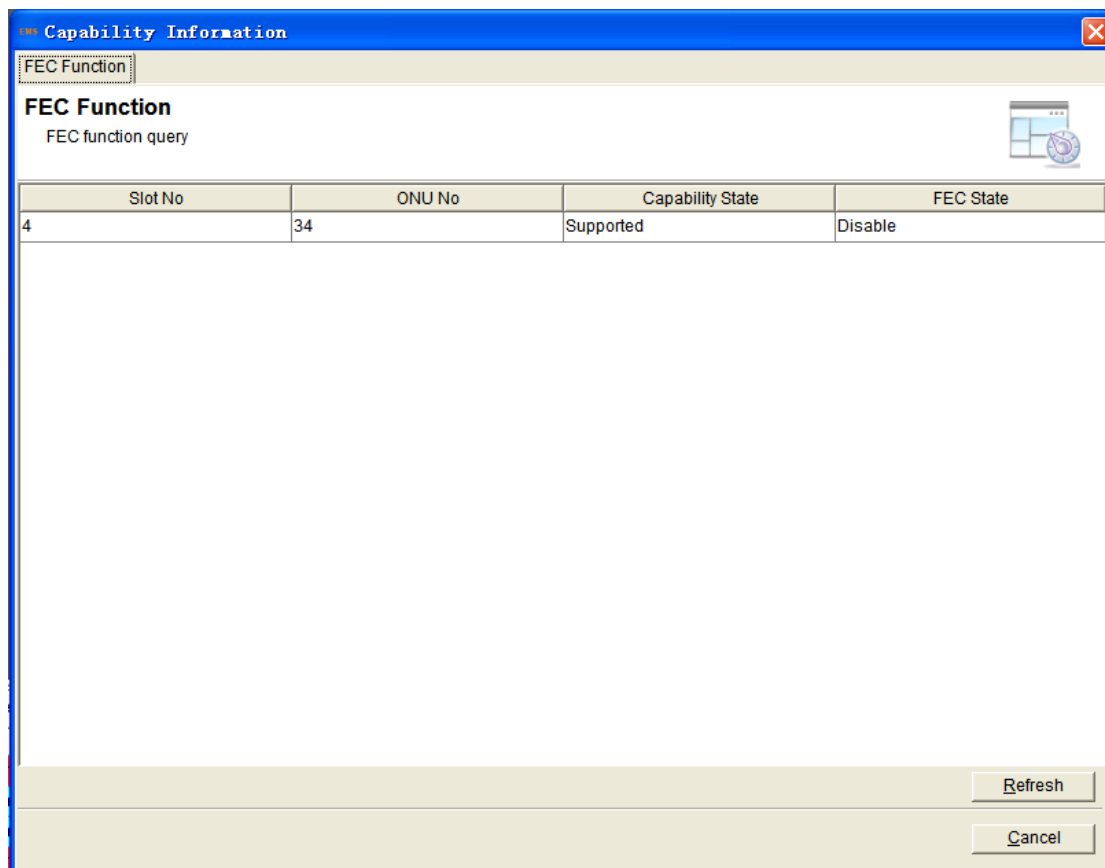


Figure 12-19 FEC Function

12.8.4. Link test

12.8.4.1. POTS port outer test

Function

ONU external line status query language can be used in fault diagnosis.

Operating Procedure

1. Right click ONU, select "real time info">"link test ">"pots port outer test" enter pots port outer test interface.
2. You can set test type is forced/not forced.

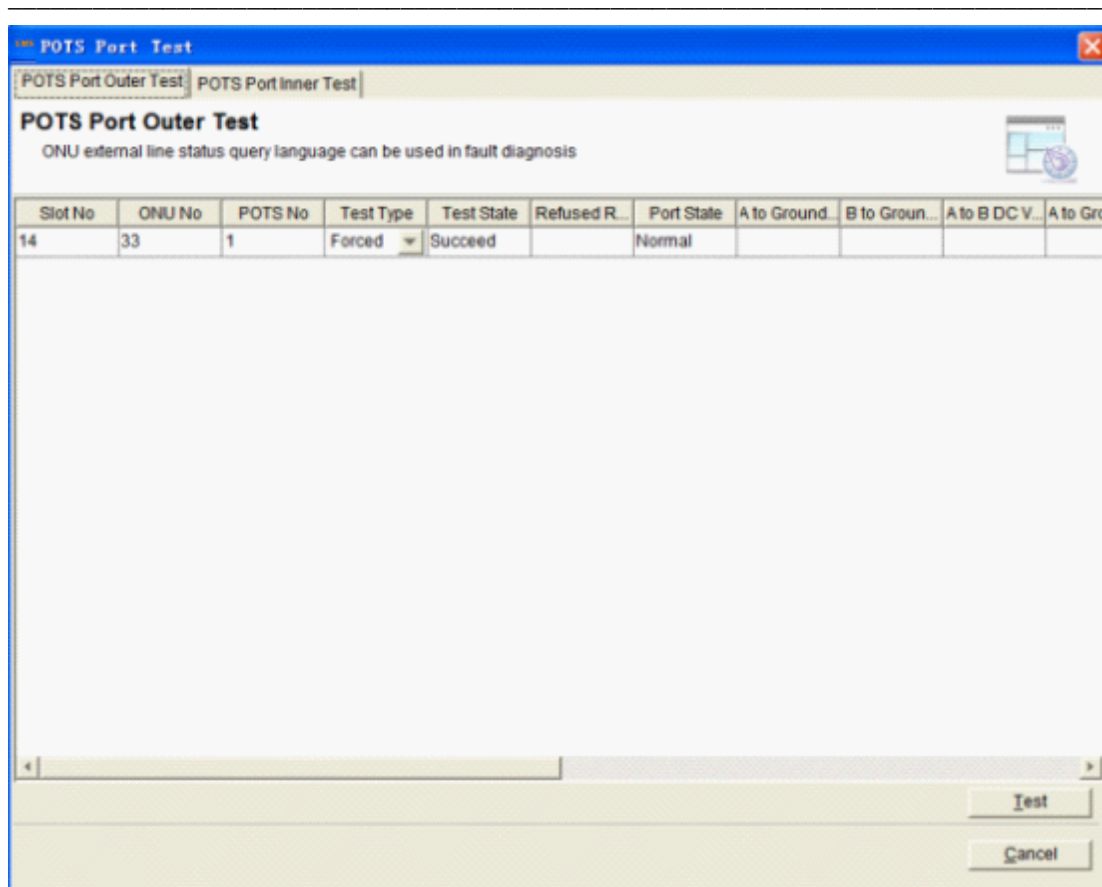


Figure 12-20 Pots port outer test

12.8.4.2. POTS port inner test

Function

ONU internal language line status query can be used in fault diagnosis.

Operating Procedure

1. Right click ONU, select "real time info">"link test ">"pots port inner test" enter pots port inner test interface.
2. You can set test type is forced/not forced.

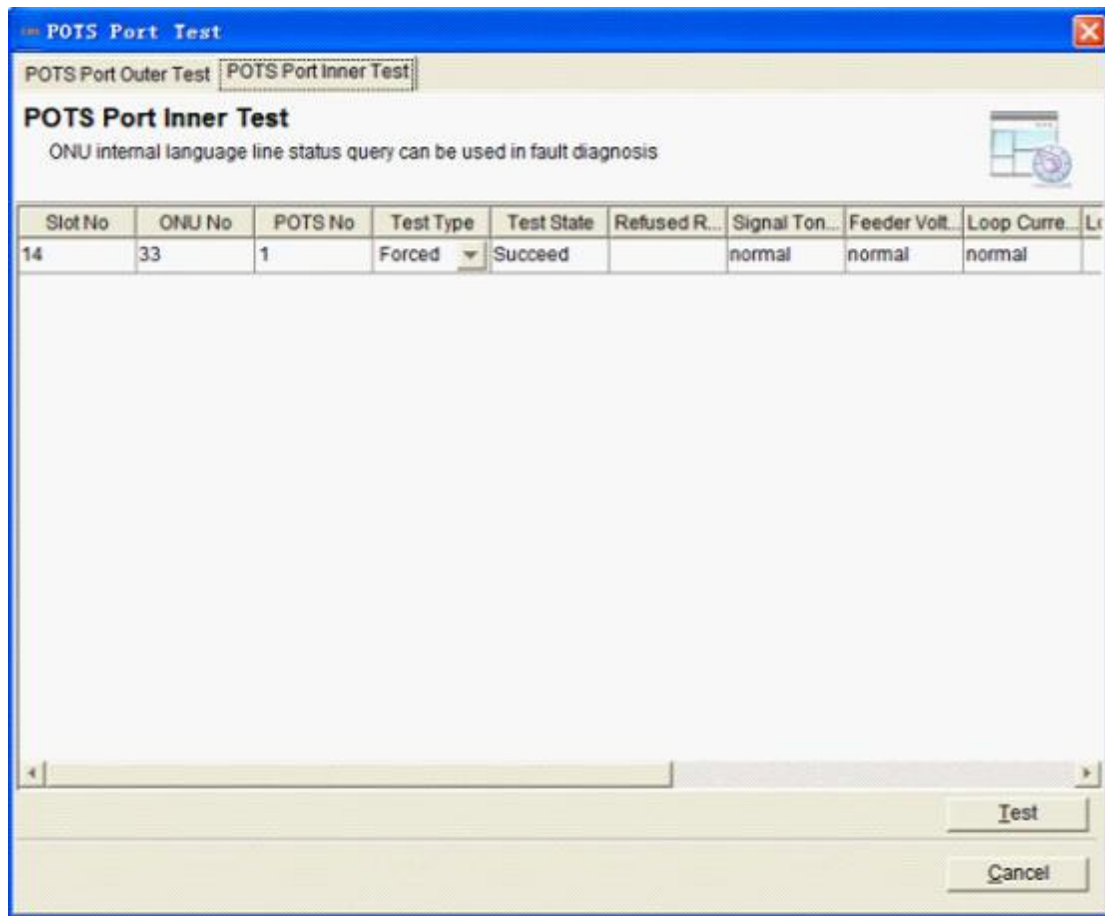


Figure 12-21 Pots port inner test

12.9. Operation(N)

12.9.1. FE port loop back

Function

FTTH ONU on the specified port type of loop back operation, loop back direction of the designated port for the ONU to the OLT side.

Operating Procedure

1. Right click ONU, select "real time info">"FE Port Loop Back", enter the interface and set the port No.

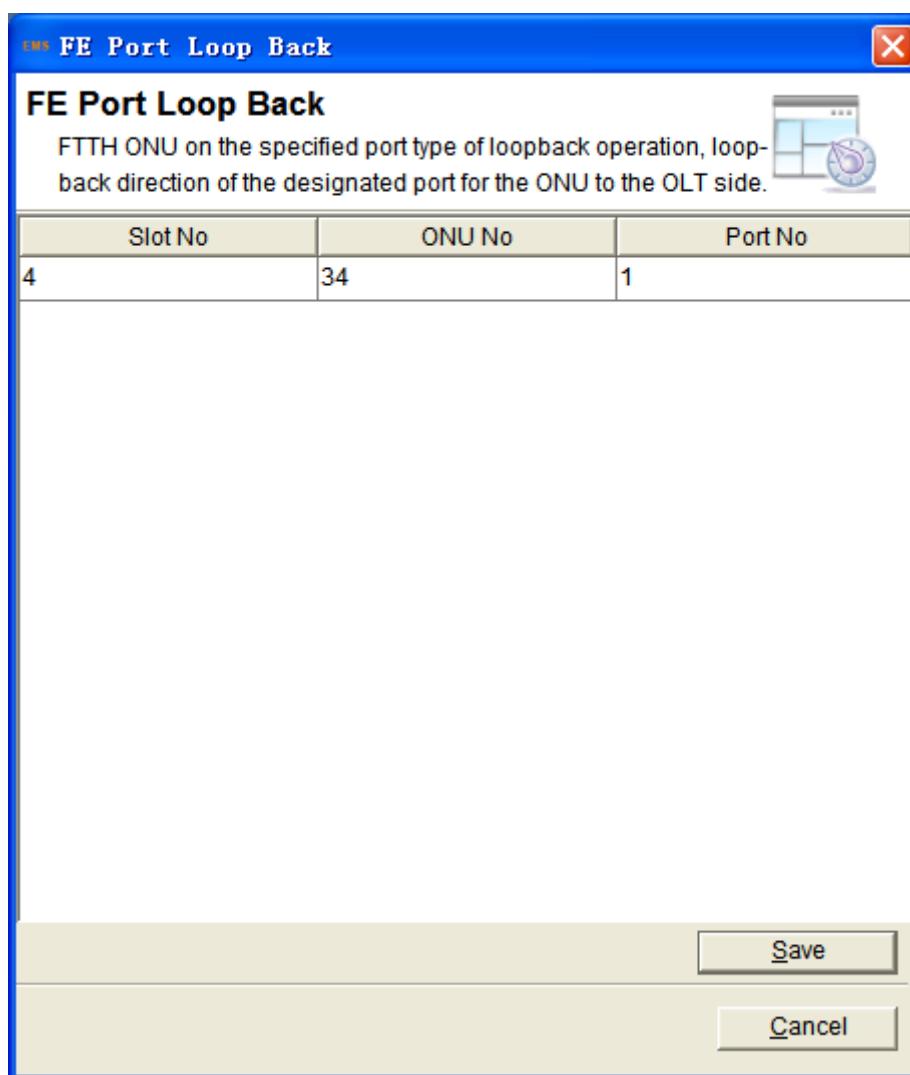


Figure 12-22 FE Loop Back

12.9.2. FE port auto-negotiation

Function

Force FE port auto-negotiation.

Operating Procedure

1. Right click ONU, select "real time info">"FE Port Auto-negotiation", enter the interface, and set the port No.

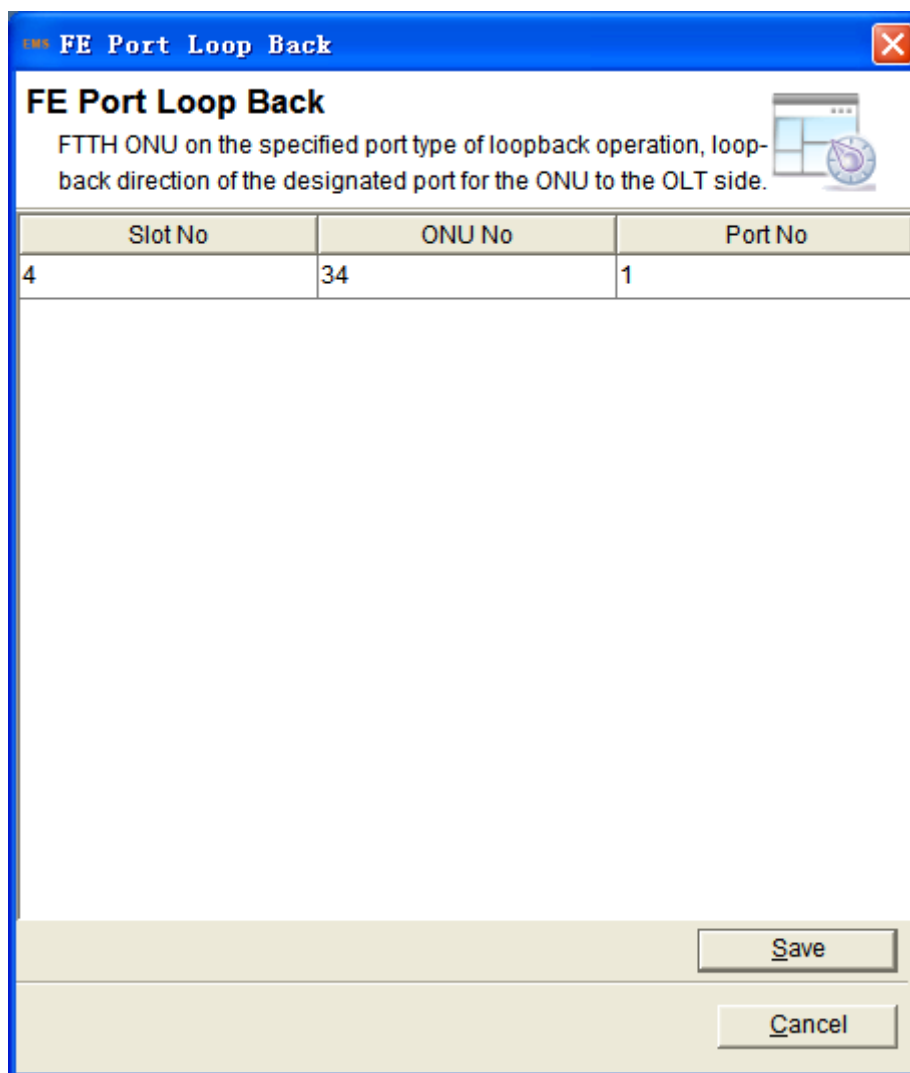


Figure 12-23 Force auto-negotiation

12.9.3. User business configuration

Function

Set user business configuration.

Operating Procedure

1. Right click ONU, select "real time info">"user business configuration" enter the interface.
2. Configure ONU business parameters, such as port information, flow control, vlan and port bind.
3. Set parameters, click "save configuration" to complete.

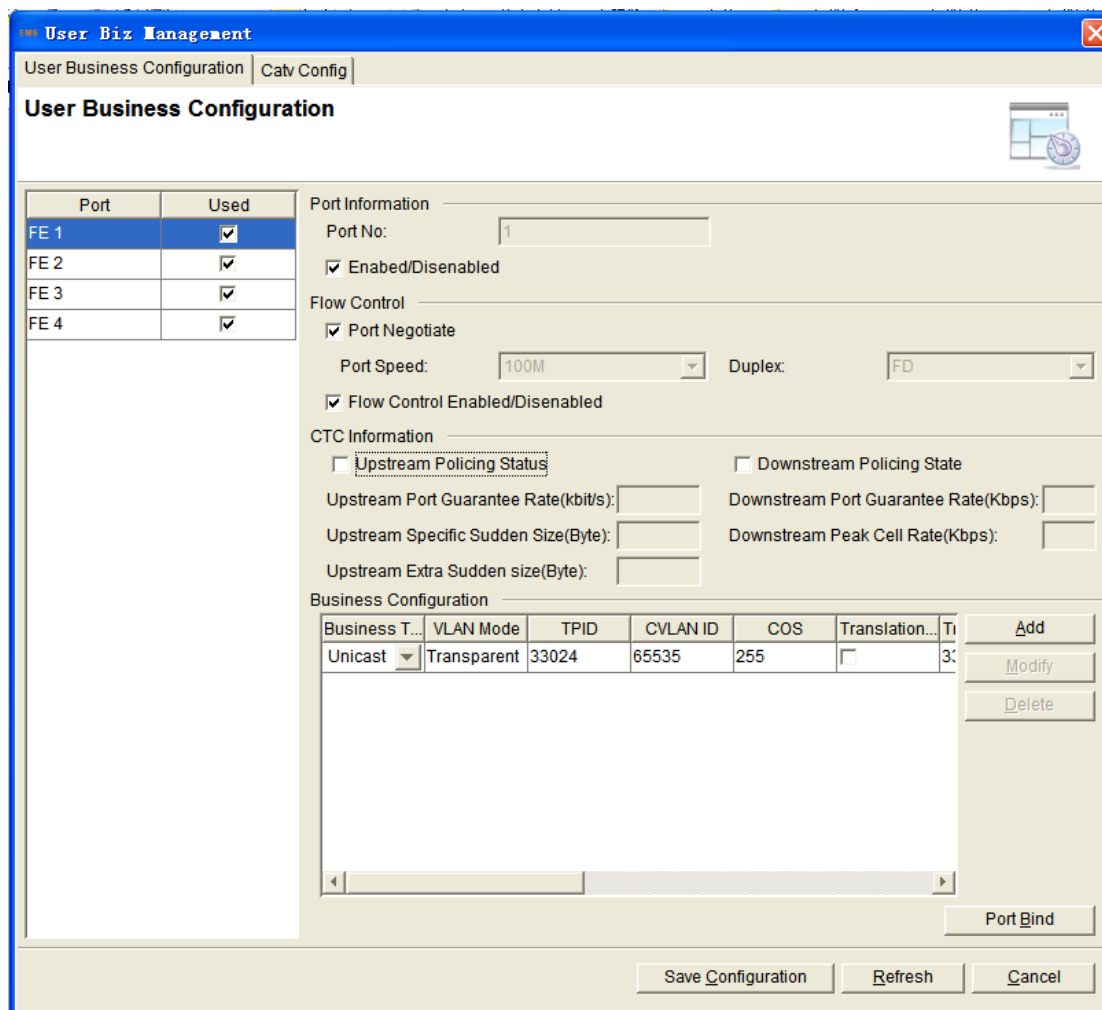


Figure 12-24 User business configuration

13. FAQ

This chapter describes FAQ in operation.

Q1: What are the default user, password and port number of the Server?

A: The default user and password is root, port number is 5188.

Q2: What processes network management system include?

A: Client includes javaw, SBI includes javaw, and Server includes javaw, mysqld and java (joram).

Q3: What about preconditions of normal operating network management system?

A: Device and network management network is reachable, you can use ping and telnet to verify. At the same time you must be sure the SNMP agent on device is turned on and the SNMP Community is configured correctly.

Q4: What are the possible reasons if the network management Server can not start?

A: Possible reasons are the following:

- ✧ The Server has not been installed successfully.
- ✧ Operating System is too old or too new. Recommendations for the use of Windows XP operating system.
- ✧ The Server service port is occupied by other software.