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Chapter I Remote database connection

The network management software support remote connection to database, so you need to open remote connection to database before run the software. The concrete steps as follows:

Step One: Open SQL Server Management Studio and login database by using windows authentication. Then right click”Properties”(see Fig.1.1).

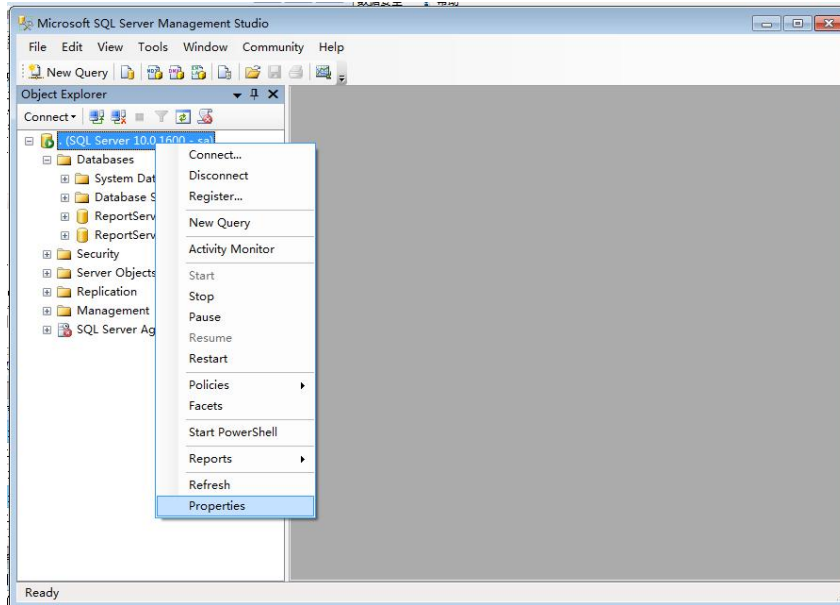


Fig.1.1

Step Two: Choose “Security” on the left, then choose SQL Server and Windows Authentication mode to enable mixed login mode.

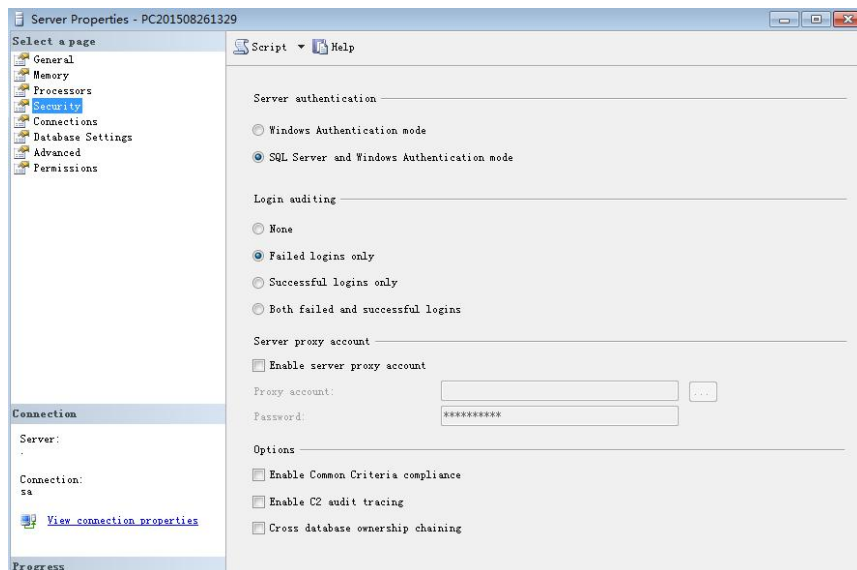


Fig.1.2

Step Three: Choose “Connections” on the left, check“Allow remote connections

to this server”, click confirm button(see Fig.1.3).

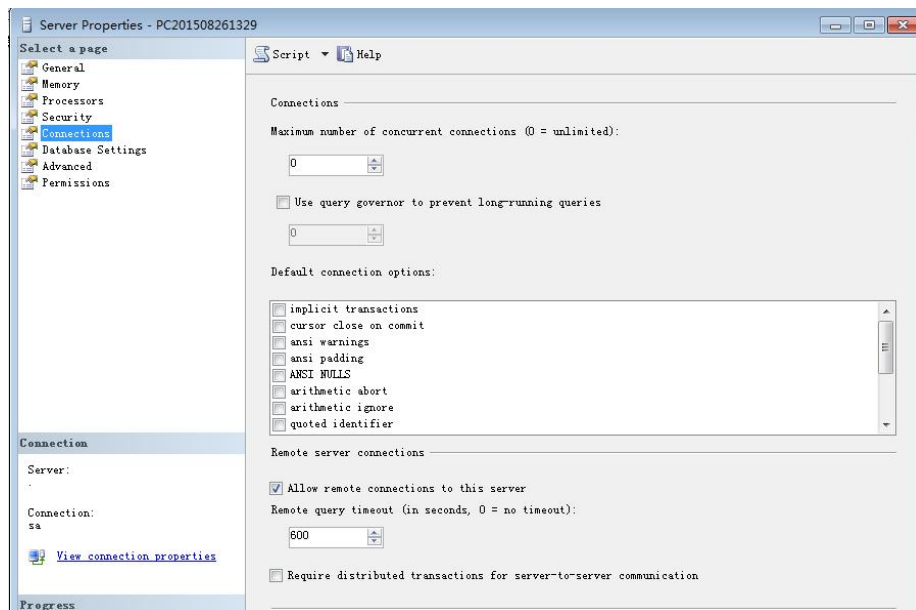


Fig.1.3

Step Four: Spread”Security”->”Logins”->”sa”,then right click”sa” and choose “Properties”(see Fig.1.4).

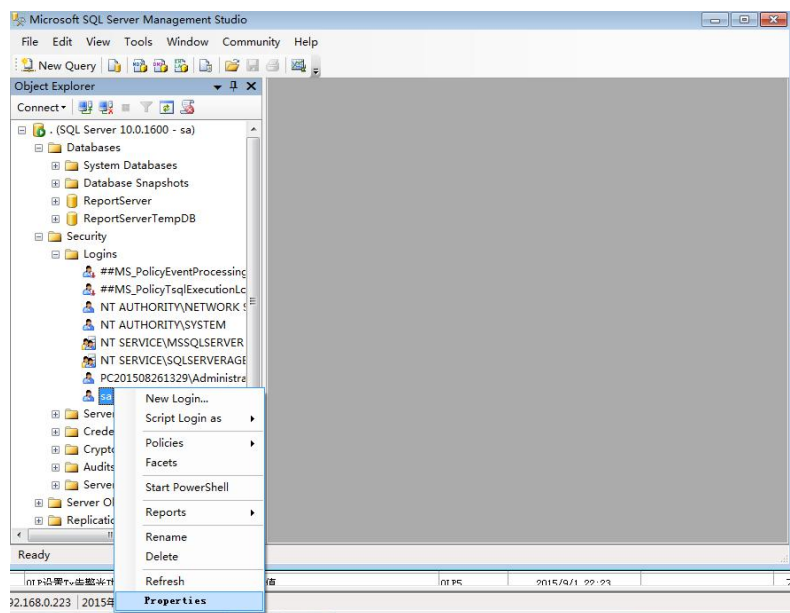


Fig.1.4

Step Five: Choose General on the left , choose “SQL Server authentication” on the right and set password(see Fig.1.5).

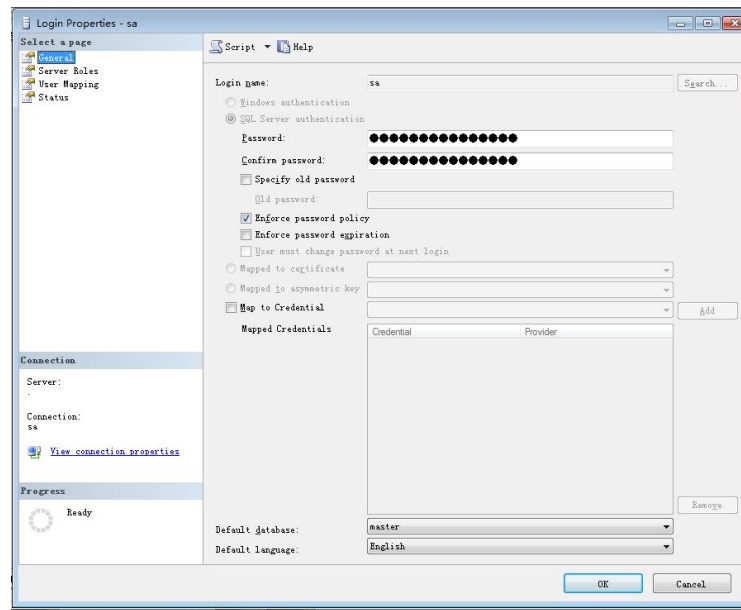


Fig.1.5

Step Six: Choose “Status” on the left, choose “Enabled” on the right and click confirm button(see Fig.1.6).

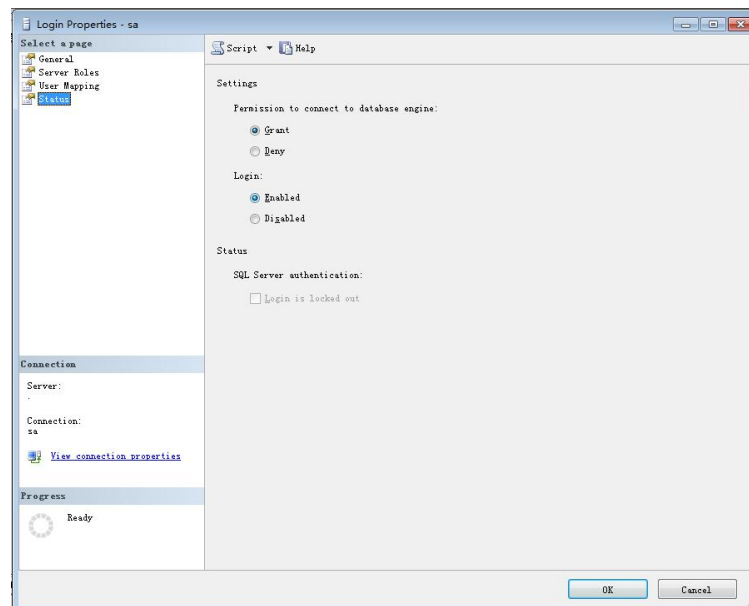


Fig.1.6

Step Seven: Right click database, choose “Facets”(see Fig1.7).

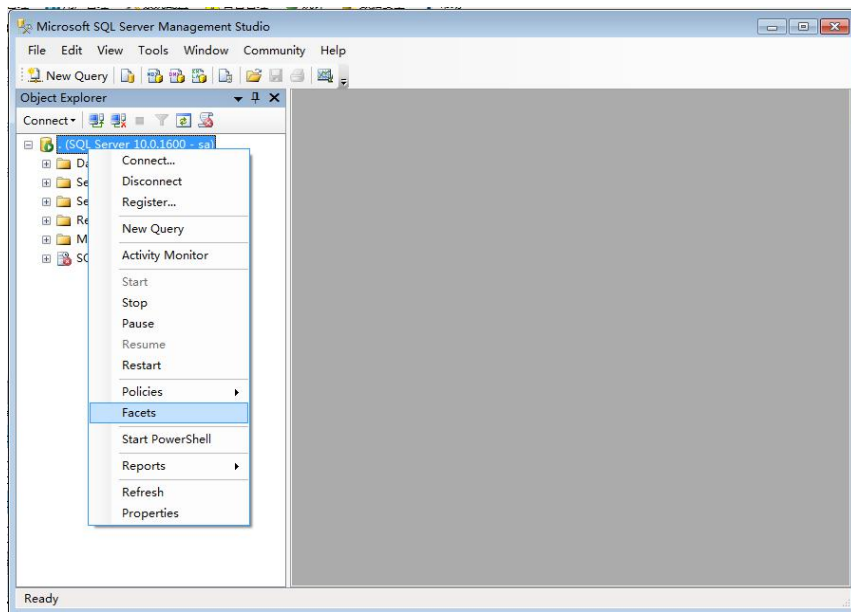


Fig.1.7

Step Eight: Choose “Server Configuration” from the drop-down box of facet and the properties of “RemoteAccessEnabled” is set as “true”, then click OK button(Fig.1.8).

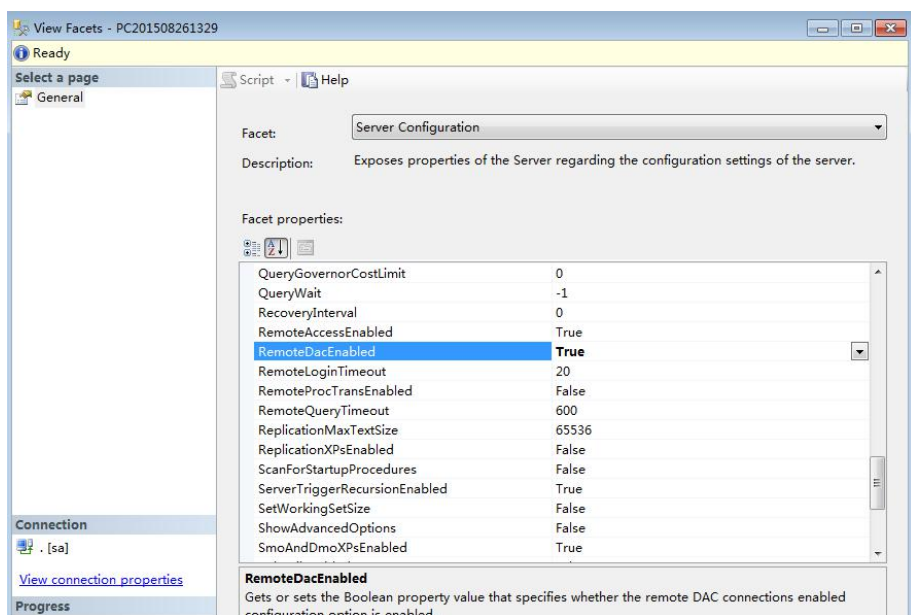


Fig.1.8

Step Nine: Open SQL Server Configuration Manager (see Fig.1.9).

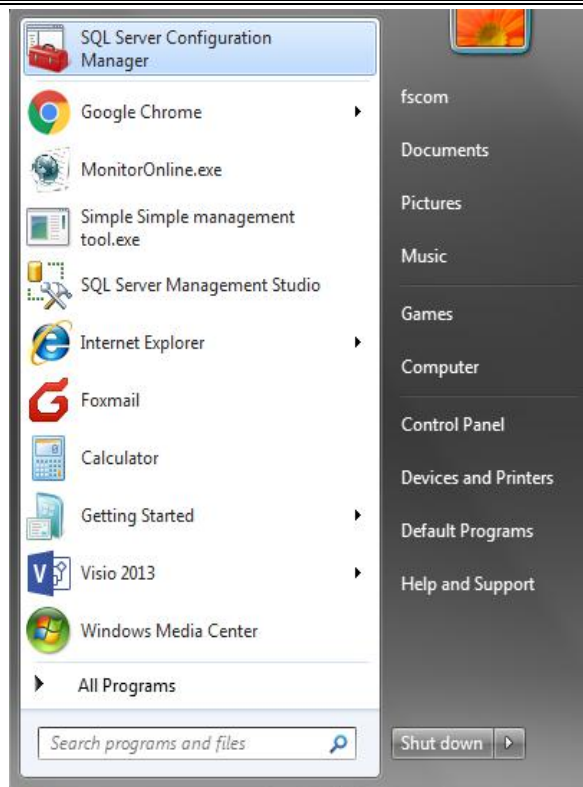


Fig.1.9

Step Ten: Choose “SQL Server Services” on the left, You must make sure the “SQL Server” and “SQL Server Browser” are running on the right(see Fig.1.10).

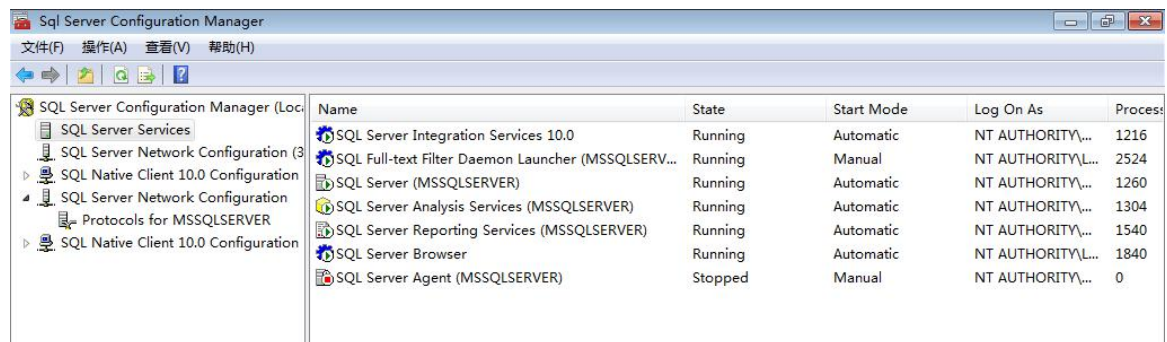


Fig.1.10

Step Eleven: Choose Protols for MSSQLSERVER under the node of SQL Server Network Configuration on the left. The status of TCP/IP default is Disabled(see Fig.1.11). You can set status of TCP/IP as Enable by right click(see Fig1.12) or open TCP/IP 属性 interface by double click, then modify to”yes”(see Fig1.13).

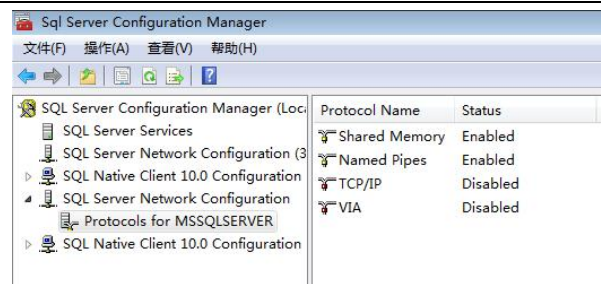


Fig.1.11

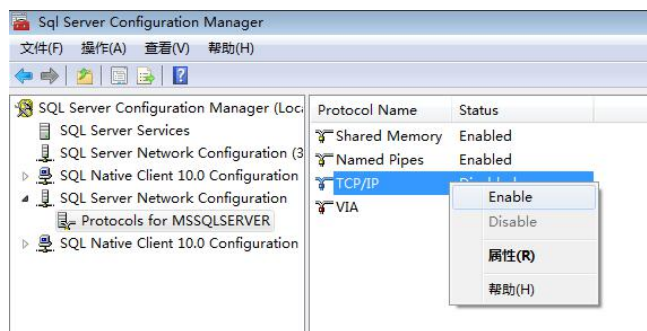


Fig.1.12

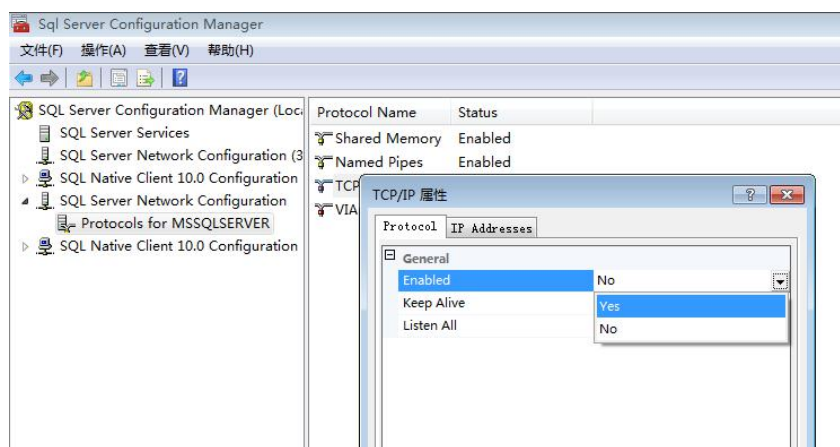


Fig.1.13

Step Twelve: Choose a tab control of IP address ,then set port of TCP as 1433 and set IP address as local ip(see Fig.1.14).

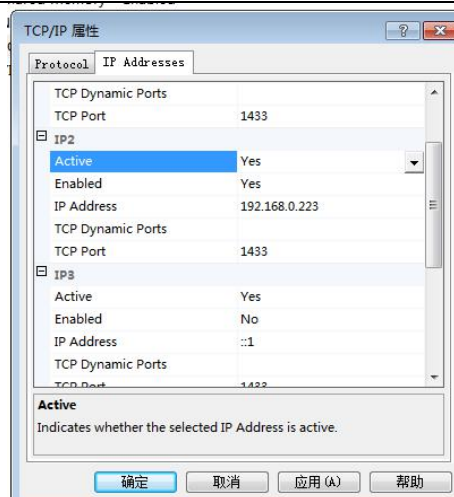


Fig.1.13

Step Thirteen: Set TCP/IP of Client Protocols as “Enable”.

Step Fourteen: Open firewall.

Step Fifteen: Add SQLServr.exe to Allowed Programs, the concrete steps as follows:

(1) Open control panel(see Fig.1.14)

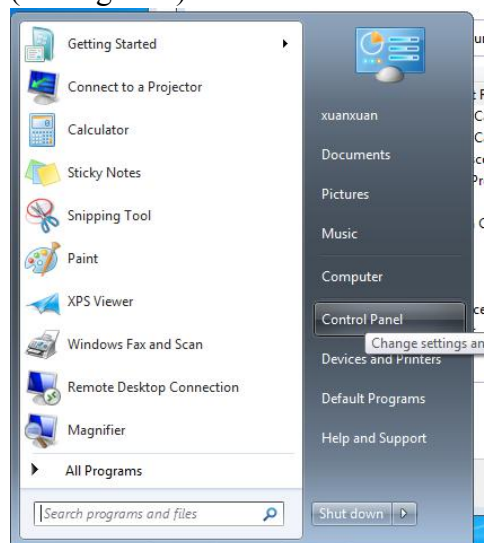


Fig.1.14

(2) View network status and tasks(see Fig.1.15).

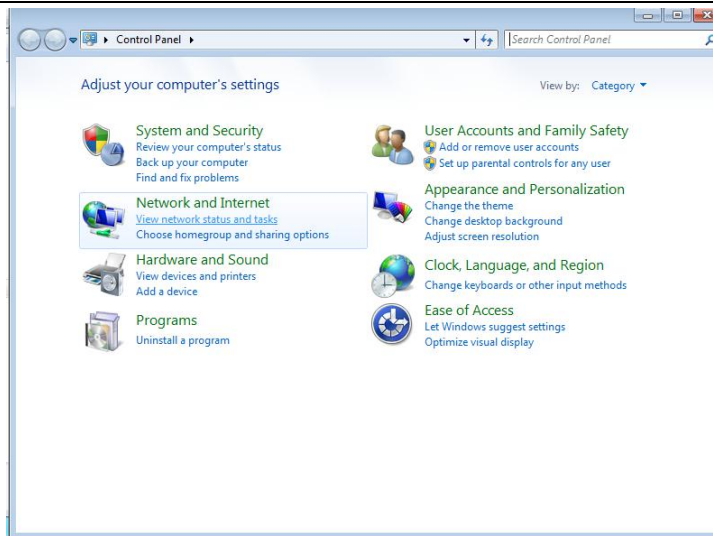


Fig.1.15

(3) Click Windows Firewall(see Fig.1.16).

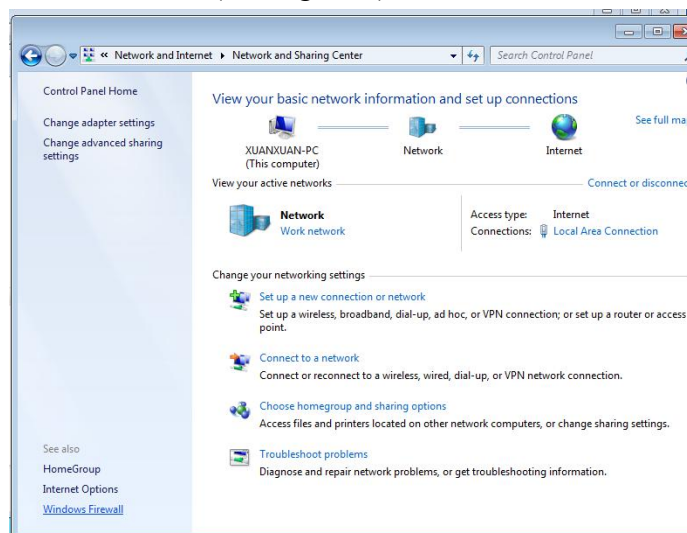


Fig.1.16

(4) Click Allow a program or feature through Windows Firewall(see Fig.1.17).

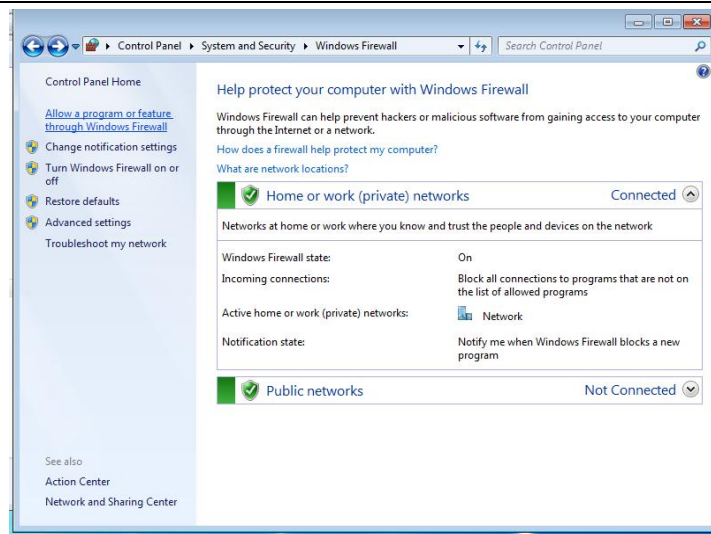


Fig.1.17

(5) Click Changes settings button and Allow another program button (see Fig.1.18).

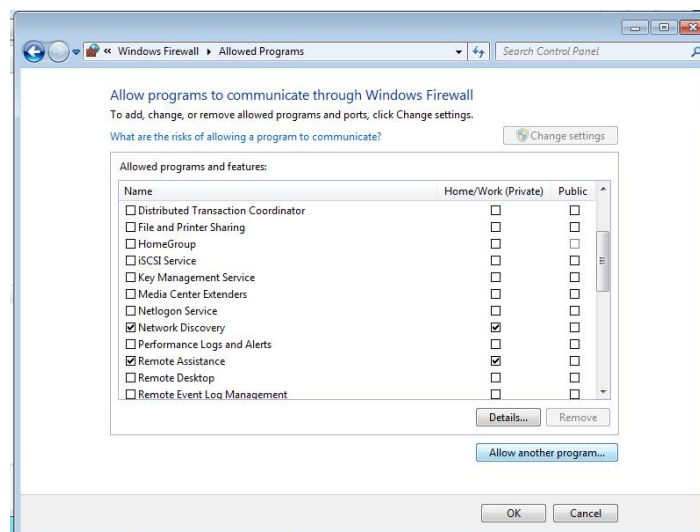


Fig.1.18

(6) Click Browse and open Program Files folder in C(see Fig.1.19).

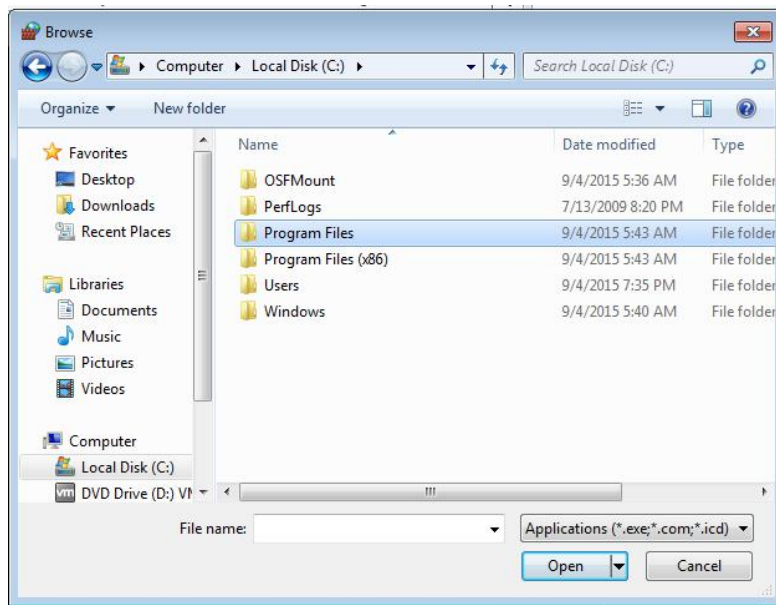


Fig.1.19

(7) Open Microsoft SQL Server folder(see Fig.1.20).

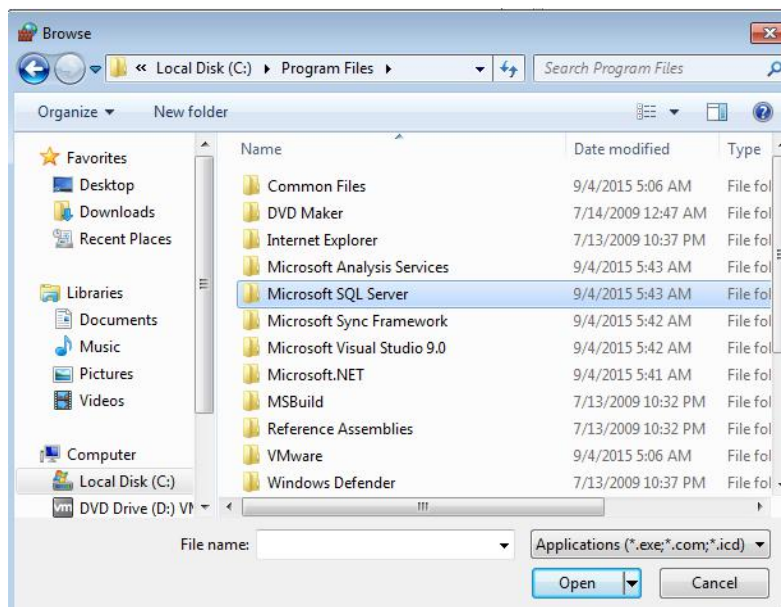


Fig.1.20

(8) Open MSSQL10.MSSQLSERVER folder(see Fig.1.21).

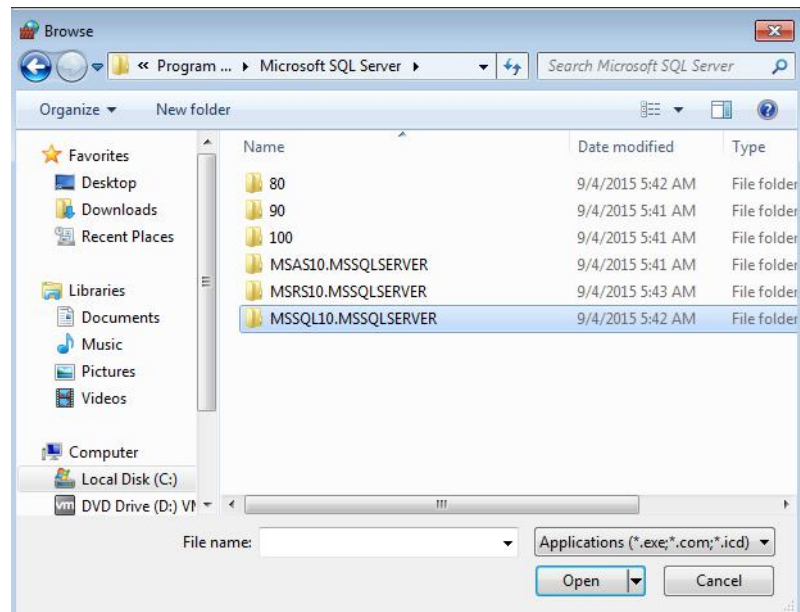


Fig.1.21

(9) Open MSSQL folder(see Fig.1.22).

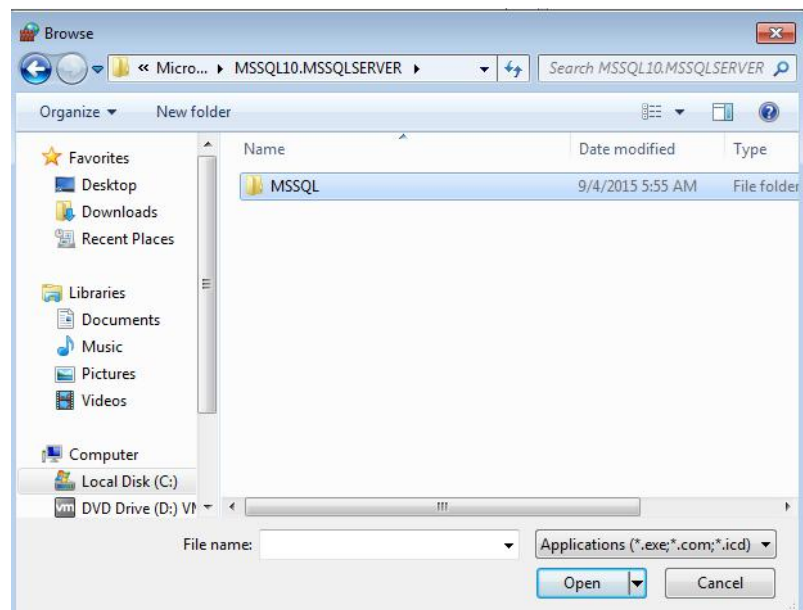


Fig.1.22

(10) Open Binn folder(see Fig.1.23).

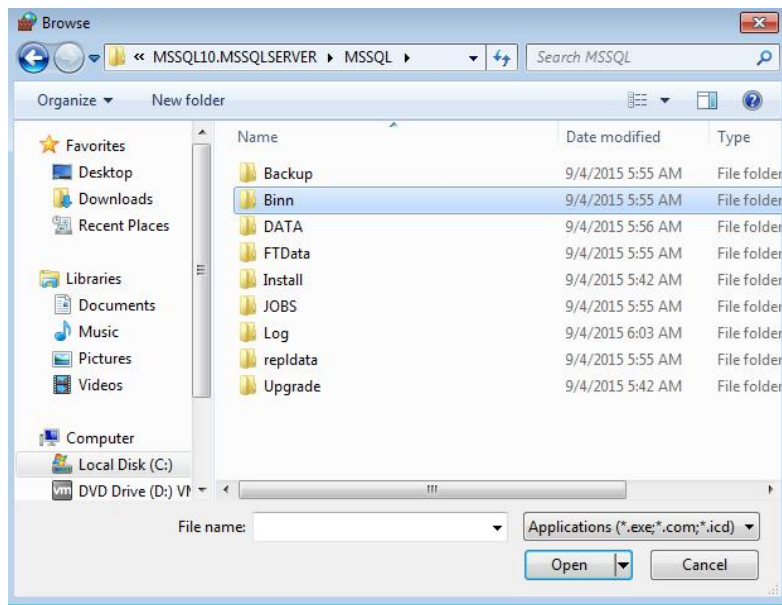


Fig.1.23

(12) Double sqlserver (see Fig.1.24).

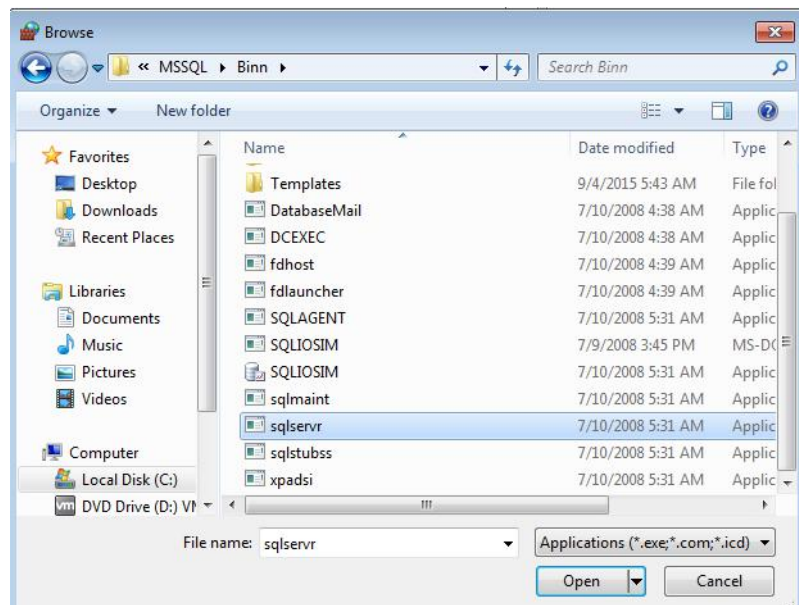


Fig.1.24

(12) Click Add button to add sqlserver to Allow Programs (see Fig.1.25).

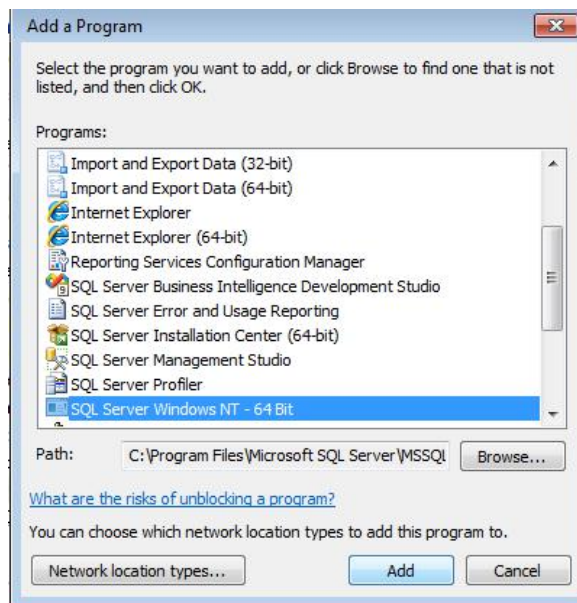


Fig.1.25

Chapter II MonitorOnline Overview

2.1 Install MonitorOnline

Double-click MonitorOnline.exe or MonitorOnline.msi of MonitorOnline.exe folder to install MonitorOnline. Please proceed to the next step until the installation is successful, as shown in Fig.2.1

名称	修改日期	类型	大小
 MonitorOnline.exe	17/04/13 15:51	应用程序	527 KB
 MonitorOnline.msi	17/04/13 15:51	Windows Install...	12,726 KB

Fig.2.1

The Shortcut is created after installing MonitorOnline, as shown in Fig.2.2.



Fig.2.2

2.2 Connect database

Step 1: Double-click Fig.2.2 will popup Fig.2.3 and click OK will popup the interface of database connection as shown in Fig.2.4.



Fig.2.3

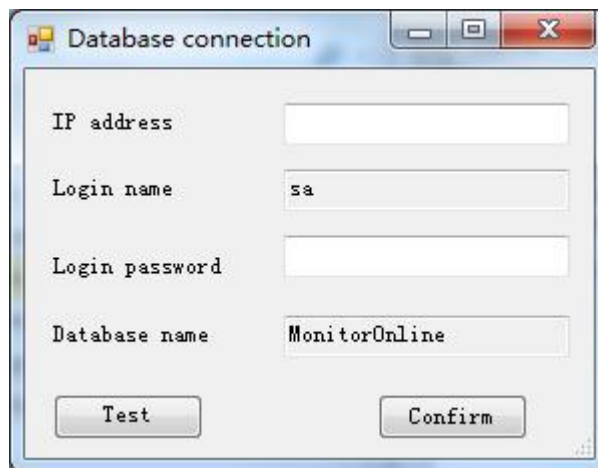


Fig.2.4 Database connection

Step 2: Input IP address(Computer IP of install databse), Login name(The defaultis sa) and Login password (Set password of install datase)of database, and click Test button In Fig.2.4, if the database is existence and connection success, then popup the dialog of database connection success, as shown in Fig.2.5. Please transfer Step 3. But if the database is non-existent and connection is failure, and then will popup an interface of database creation (see Fig.2.8). Please transfer Step 5.

Step 3: Click confirm button in Fig.2.5, then MAC address verification interface will be popued, as shown in Fig.2.6.

Step 4: Click Confirm button in Fig.2.6, if the input device IP is online, then popup Login interface (see Fig.2.7).Input correct login account and password and click conrifu button, then will popup MonitorOnline interface (see Fig.2.10).



Fig. 2.5

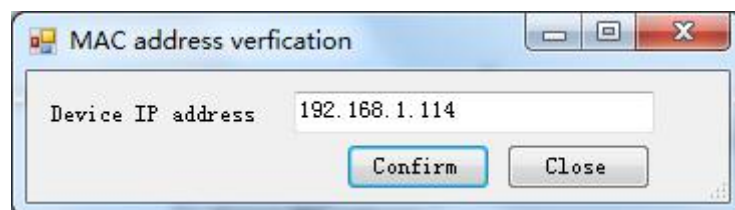


Fig.2.6 MAC address verification interface

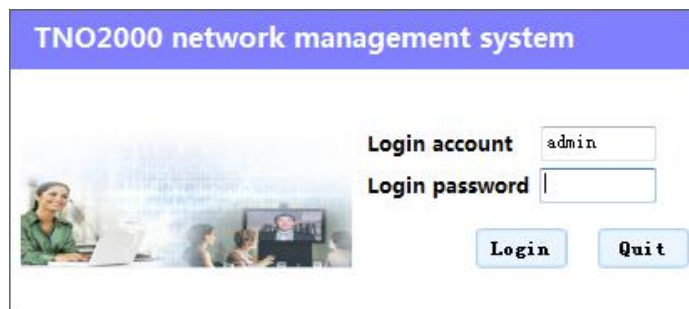


Fig.2.7

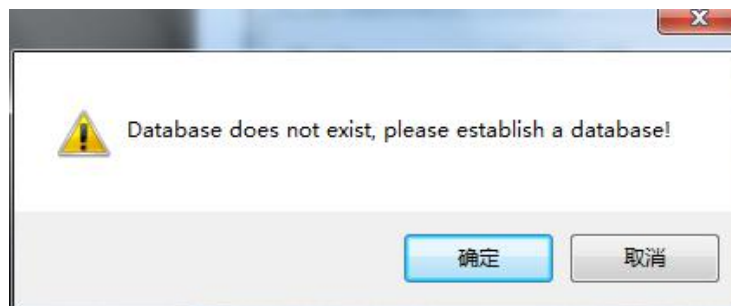


Fig.2.8

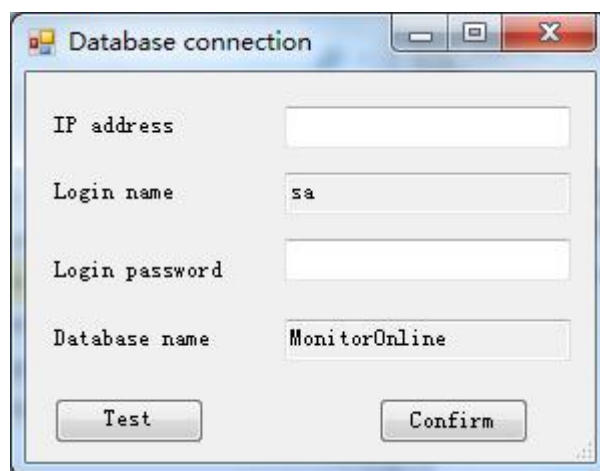


Fig.2.9

Step 5: Please click confirm button in Fig.2.8, then popup the interface of database configuration as shown in Fig.2.9.

Step 6: Input IP address(Computer IP of install databse), Login name(The defaultis sa) and Login password (Set password of install datase)of database, and click Create button In Fig.2.9 to create databse, After creating database, then will popup the interface of create success as shown in Fig.2.10.



Fig.2.10

Click Confirm button in Fig.2.10, then popup the interface of database connection as shown in Fig.2.4. The other steps are the same as Step2.

Note:

1. The initial login account and initial password of network management software all is admin.

2.2 MonitorOnline interface instruction

MonitorOnline interface is as shown in Fig.2.7:

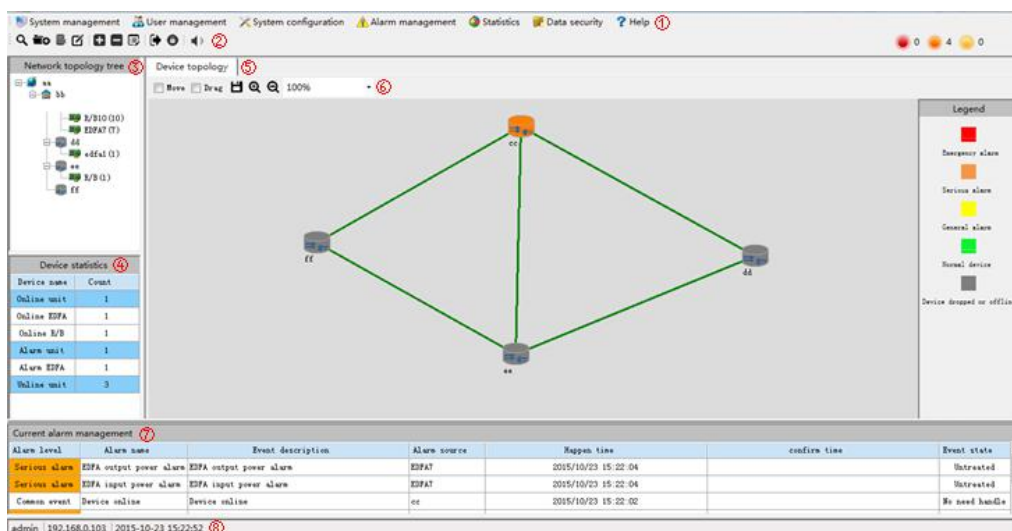


Fig.2.11 MonitorOnline interface

①Menu Bar: Submenus of menu bar will be explained in following content.












②Toolbar:



: Search unit, by click the icon, we can search all units of a local area network (see 3.1.3 Search unit).



: Add unit, by click the icon, we can add unit (see 3.1.4 Add Unit).

-
-  : Delete unit, by click the icon, we can delete selected unit.
 -  : Edit unit, by click the icon, we can edit some information of unit.
 -  : Add board, by click the icon, we can add a board to a unit.
 -  : Delete board, by click the icon, we can delete a board from a unit.
 -  : Edit board, by click the icon, we can edit some information of unit.
 -  : Exit system, by click the icon, we can close network management system.
 -  : Lock system, by click the icon, we can lock the current user.
 -  : close/open alarm sound, by click the icon, we can close or open alarm sound.
 -  0 : The number of emergency alarm.
 -  0 : The number of serious alarm.
 -  0 : The number of general alarm.

③ Net Topology Tree:

See 5.1.

④ Device Statistics



The numbers of online units, alarm units, offline units and business boards are presented in real time.

⑤ View Display Area



Current alarm management interface, historical alarm management interface, history interface, operation records interface and graphic topology opened from menu bar are presented in view display area.

⑥ Topological map


The icons of topological map explain in turns:

-  Move : After selecting the check box, we can drag a selected unit icon.
-  Drag : After selecting the check box, we can drag all unit icons of the topological

map.

-  : Save topological map, by click the icon, we can save the topological map.
-  : Enlarge icon, by click the icon, we can enlarge all the icons of topological

map.

-  : Shrink icon, by click the icon, we can shrink all the icons of topological map.

⑦ Current alarm interface

We can view, confirm, delete, view device for current alarm information.

Explain: Current alarm interface only present the top five of current alarm.

⑧ Status Bar:

-
- (1) Presenting login account of current system.
 - (2) Presenting local ip.
 - (3) Presenting local time.

Chapter III System Configuration

3.1 System Configuration

Click system configuration of menu bar, then popup system configuration interface. You can have this following operations of add city, add room, search unit, add unit, edit and delete in Fig.3.1.

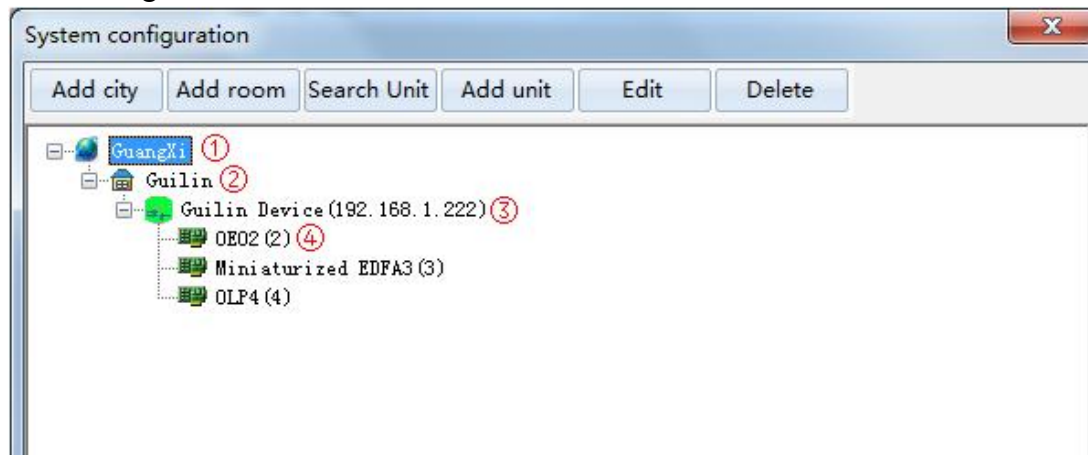


Fig.3.1 System configuration

Explain: ① represent city; ②represent room; ③represent device; ④ represent board

3.1.1 Add City

Click add city button in Fig.3.1 and popup add city interface(see Fig.3.2). You can add city by inputting city code and city description in Fig.3.2.

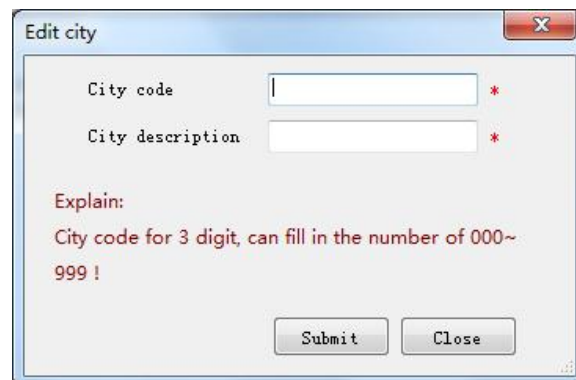


Fig.3.2 Add city

Explain:

The city code and city description must satisfy instructions, at the same time, city code and city description cannot be same with other city.

3.1.2 Add Room

Click add room button in Fig.3.1 and popup an interface of add room(see Fig.3.3). You can add room by inputting room code and room description in Fig.3.3.

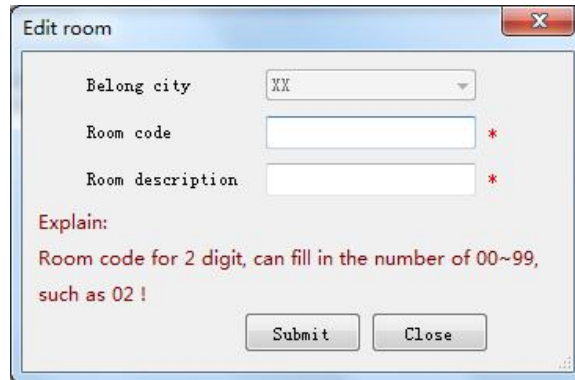


Fig.3.3 Add room

Explain:

The room code and room description must satisfy instructions, at the same time, room code and room description cannot be same with other room.

3.1.3 Add Unit

Click add unit button in Fig.3.1 and popup an interface of add unit(see Fig.3.4). You can add unit by inputting basic information of unit in Fig.3.4. At the same time, the software will refresh card number and card type of added unit.

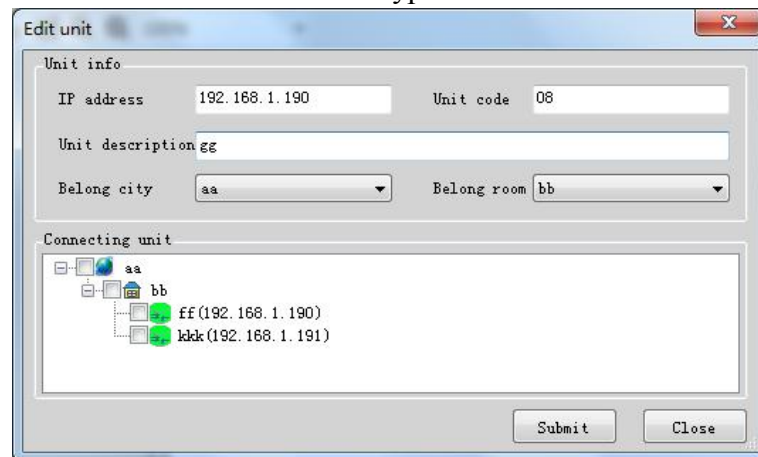


Fig.3.4 Add Unit

3.1.4 Modify

You can modify information and feature of city, room, unit and board card in Fig.3.1.(take board card for expmple).Click pre modified board card and click Edit button as shown in Fig.3.5, then popup a interface of edit board.

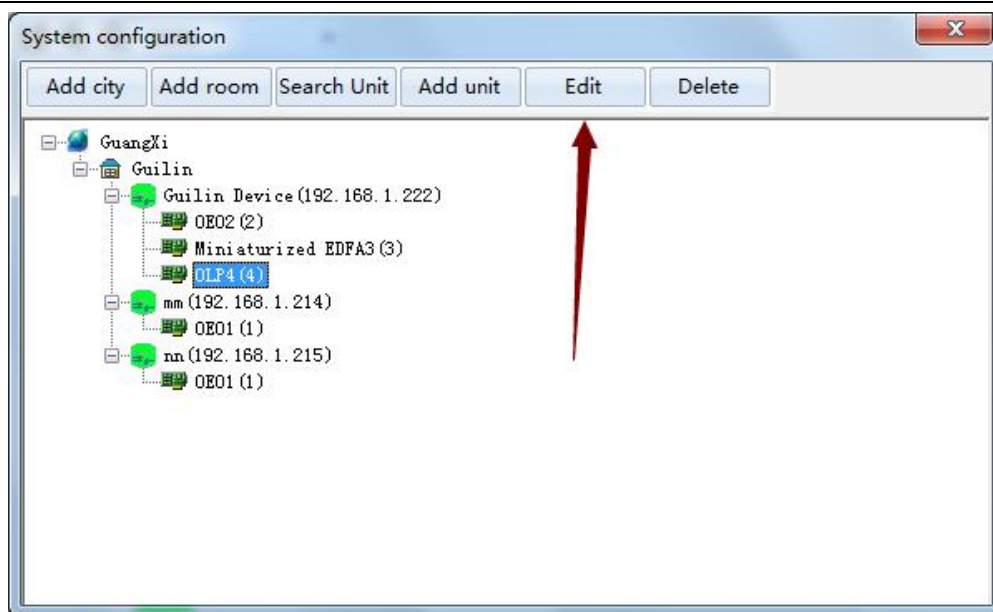


Fig.3.5

The Fig.3.6 is the interface of OLP board editing, and can modify topological information, basic information in Fig.3.6. Here focus on the edition of topological information.

Connect board	None selected	None selected	None selected	None selected
TXEDFA	None selected	None selected	None selected	None selected
T1EDFA	None selected	None selected	None selected	None selected
T2EDFA	None selected	None selected	None selected	None selected
RXEDFA	None selected	None selected	None selected	None selected
R1EDFA	None selected	None selected	None selected	None selected
R2EDFA	None selected	None selected	None selected	None selected

Fig.3.6 Edit board of OLP

You can modify description of main route and second route, add connect board, TXEDFA, T1EDFA, T2EDFA, RXEDFA, R1EDFA, R2EDFA in Fig.3.6.

TXEDFA: The added EDFA of TX end.

T1EDFA: The added EDFA of T1 end.

T2EDFA: The added EDFA of T2 end.

RXEDFA: The added EDFA of RX end.

R1EDFA: The added EDFA of R1 end.

R2EDFA: The added EDFA of R2 end.

The Fig.3.7 is the interface of OEO board editing, and can modify basic information, wavelength and rate of optical module.

Port	Wavelength	nm	Rate	Gb/s	Service notes
Port A1					
Port A2					
Port B1					
Port B2					
Port C1					
Port C2					
Port D1					
Port D2					

Fig.3.7 Edit board of OEO

The Fig.3.8 is the interface of EDFA board editing, and can modify basic information, Reference input value, Reference output value, Up even board and Down even board.

Fig.3.8 Edit board of EDFA

Up even board: The connect board of front end for EDFA of Fig.3.8.

Down even board: The connect board of back end for EDFA of Fig.38.

Reference input value: The value is warning threshold of input for EDFA, when input value is low than reference input value, the monitorOnline software will has an early warning about input.

Reference output value: The value is warning threshold of output for EDFA, when output value is low than reference input value, the monitorOnline software will has an early warning about output.

3.1.5 Delete

You can delete city, room, unit and board card in Fig.3.1.(take unit for expmple). Click pre deleted unit and popup a dialog(see Fig.3.9). You can delete unit by clicking OK button in Fig.3.9.

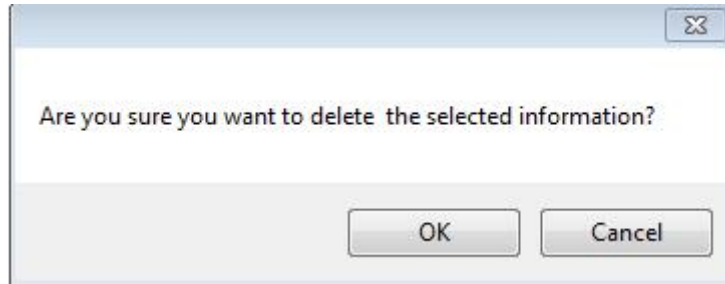
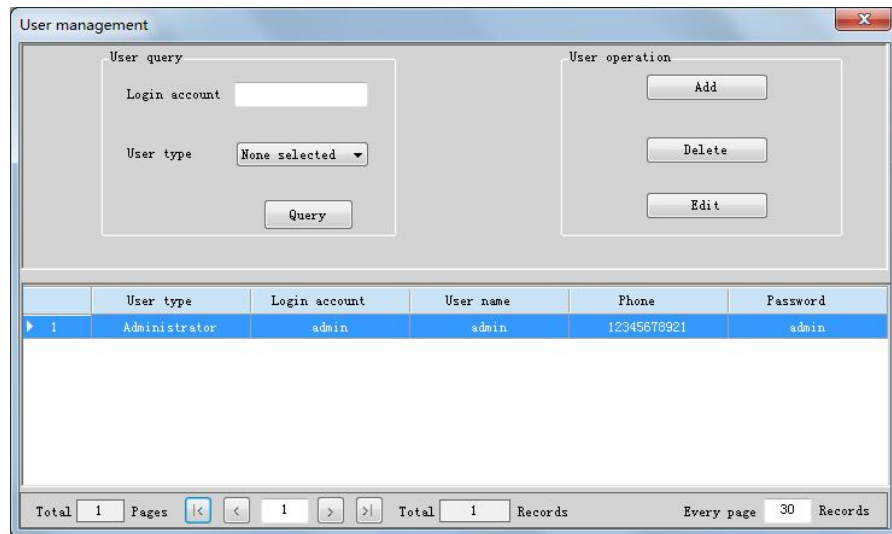


Fig.3.9

Chapter IV User Configuration

4.1 User management

Click user management of menu bar, then popup an interface of user management (see Fig.4.1). You can have this following operations of add user, eddit user , delete user and query user in Fig.4.1.



The 'User management' window contains two main sections: 'User query' and 'User operation'. The 'User query' section has a 'Login account' text box, a 'User type' dropdown menu (currently showing 'None selected'), and a 'Query' button. The 'User operation' section has three buttons: 'Add', 'Delete', and 'Edit'. Below these sections is a table with the following data:

	User type	Login account	User name	Phone	Password
1	Administrator	admin	admin	12345678921	admin

At the bottom of the window is a pagination bar showing 'Total 1', 'Pages 1', and 'Every page 30 Records'.

Fig.4.1 User management

4.1.1 Add user

Click add button in Fig.4.1, then popup interface of user adding (see Fig.4.2). You can add user by choosing user type, login account, user name and phone number in Fig.4.2.



The 'User editing' window is a form for adding or editing a user. It contains the following fields: 'User type' (dropdown menu, currently 'None selected'), 'Login account' (text box), 'Password' (text box), 'User name' (text box), and 'Phone' (text box). Each field has a red asterisk (*) next to it, indicating it is required. At the bottom are 'Confirm' and 'Cancel' buttons.

Fig.4.2 Add user

4.1.2 Edit user

Click edit button in Fig.4.1, then popup an interface of user editing (see Fig.4.3). You can edit user type, login account, user name and phone number in Fig.4.3.

A screenshot of a 'User editing' dialog box. It has a title bar with a close button (X). The dialog contains five input fields: 'User type' is a dropdown menu showing 'Administrator' with a red asterisk; 'Login account' is a text box with 'admin' and a red asterisk; 'Password' is a text box with 'admin' and a red asterisk; 'User name' is a text box with 'admin' and a red asterisk; and 'Phone' is a text box with '12345678921'. At the bottom are 'Confirm' and 'Cancel' buttons.

Fig.4.3 User edit

4.1.3 Delete user

Click delete button in Fig.4.1, then popup a dialog (see Fig. 4.4) and click Ok button to delete user.

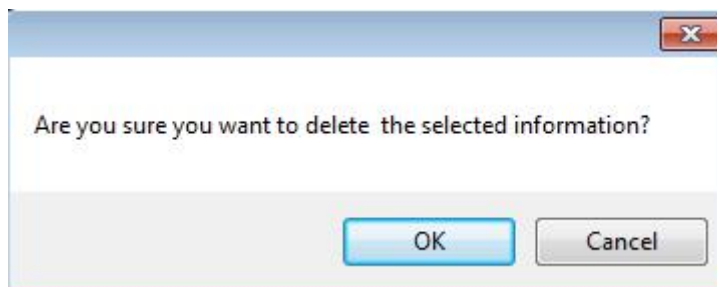
A screenshot of a confirmation dialog box. It has a title bar with a close button (X). The main text asks 'Are you sure you want to delete the selected information?'. At the bottom are 'OK' and 'Cancel' buttons.

Fig.4.4 User delete

Explain:

The user of login account is admin cannot be deleted and modified.

4.1.4 Query user

You can query user in Fig4.1 and the query condition includes:

(1) User information: Type in a login account(see Fig.4.5) and can see all login account information contain input login account by clicking qurey button.

The 'User management' window displays a 'User query' section with a 'Login account' field containing 'aa' and a 'User type' dropdown menu set to 'None selected'. A 'Query' button is located below these fields. To the right, the 'User operation' section contains 'Add', 'Delete', and 'Edit' buttons. Below the query section is a table with the following data:

	User type	Login account	User name	Phone	Password
▶ 1	Operator	aa	aa		admin

At the bottom, a pagination bar shows 'Total 1 Pages', navigation buttons, '1' in a box, and 'Total 1 Records'. On the right, it shows 'Every page 30 Records'.

Fig.4.5 Login account query

(2) User type: Click user type(see Fig.4.6) to view user information by selecting administrator, operator, browse.

The 'User management' window displays the 'User query' section with an empty 'Login account' field and a 'User type' dropdown menu set to 'Administrator'. A 'Query' button is located below these fields. To the right, the 'User operation' section contains 'Add', 'Delete', and 'Edit' buttons. Below the query section is a table with the following data:

	User type	Login account	User name	Phone	Password
▶ 1	Administrator	admin	admin	12345678921	admin

At the bottom, a pagination bar shows 'Total 1 Pages', navigation buttons, '1' in a box, and 'Total 1 Records'. On the right, it shows 'Every page 30 Records'.

Fig.4.6 User type query

4.2 System management

System management menu items includes modify password, switch user, lock system, exit system(see Fig.4.7).

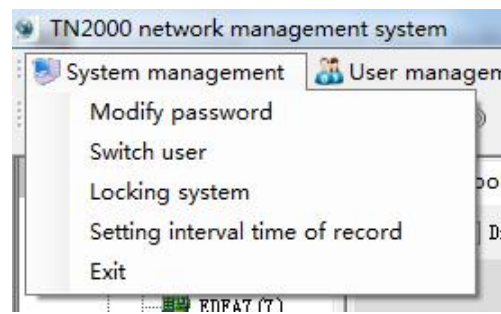


Fig.4.7 System management

4.2.1 Modify password

Click modify password in Fig.4.7, then popup a dialog of modify password(see Fig.4.8). Type in old password and new password to modify current user password by clicking submit button.

The image shows a 'Change password' dialog box. It contains the following fields and controls:

- 'Login account' field with the value 'admin'.
- 'User name' field with the value 'admin'.
- 'Old password' field (empty).
- 'New password' field (empty).
- 'Confirm new password' field (empty).
- 'Confirm' button.
- 'Cancel' button.

Each password field has a red asterisk (*) to its right, indicating a required field.

Fig.4.8 Modify password

4.2.2 Switch user

Click switch user in Fig.4.7, then popup an interface of switch user(see Fig.4.9). Type in login account and password to switch login account by clicking login button.

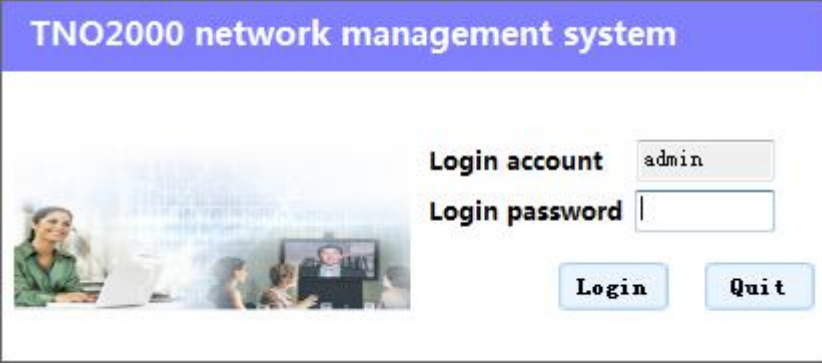


The interface features a blue header with the text "TNO2000 network management system". Below the header is a light blue background image showing a woman at a laptop. To the right of the image, there are two labels: "Login account" and "Login password". The "Login account" label is next to a text box containing the word "admin". The "Login password" label is next to an empty text box. Below these text boxes are two buttons: "Login" and "Quit".

Fig.4.9 Switch user

4.2.3 Login system

Click lock system in Fig.4.7, then popup an interface of lock system(see Fig.4.10). Type in login account and password before lock system to unlock the system.



The interface is identical to Fig.4.9, with a blue header "TNO2000 network management system" and a background image of a woman at a laptop. It includes "Login account" and "Login password" labels with corresponding text boxes. The "Login account" box contains "admin", and the "Login password" box is empty. Below the text boxes are "Login" and "Quit" buttons.

Fig.4.10 Lock system

4.2.4 Setting interval time of record

Click system setting in Fig.4.7, then popup an interface of set history interval(see Fig.4.11). You can set history interval of EDFA in Fig4.11. The detail things about history of EDFA will be explained in Chapter VII.



The dialog box has a title bar that says "Setting interval time of record" with a red close button (X) on the right. Inside the dialog, there is a label "EDFARecord inter" followed by a text box containing the number "60". To the right of the text box is a small up/down arrow button and the word "Seconds". At the bottom of the dialog are two buttons: "Submit" and "Close".

Fig.4.11 Set history interval of EDFA

4.2.5 Exit system

Click exit system in Fig.4.7, then exit current system.

Chapter V System Monitoring

5.1 Network topology tree

Network topology tree on the left of main interface(see Fig.5.1). You can see all city, room, unit and board of all network in network topology tree. Double click board icon to open an interface of chassis monitoring(see Fig.5.3).

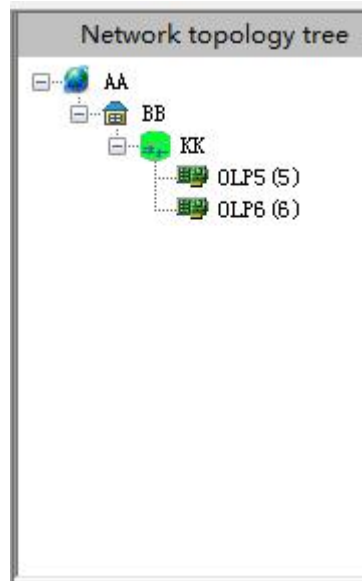


Fig.5.1 Network topology tree

5.2 Equipment topology

Equipment topology is in view display area of main interface(see Fig.5.2). You can see all state of equipment (means normal, means offline, means emergency alarm, means serious alarm, means general alarm). Double click unit icon of equipment topology to open an interface of chassis monitoring (see Fig.5.3).

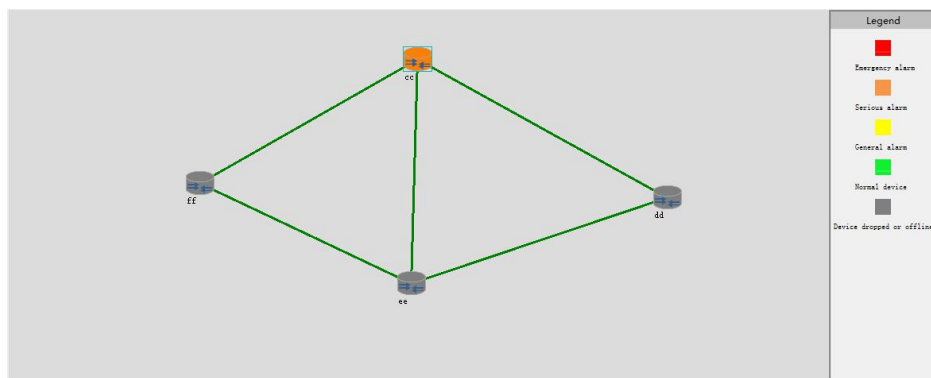


Fig.5.2 Equipment topology

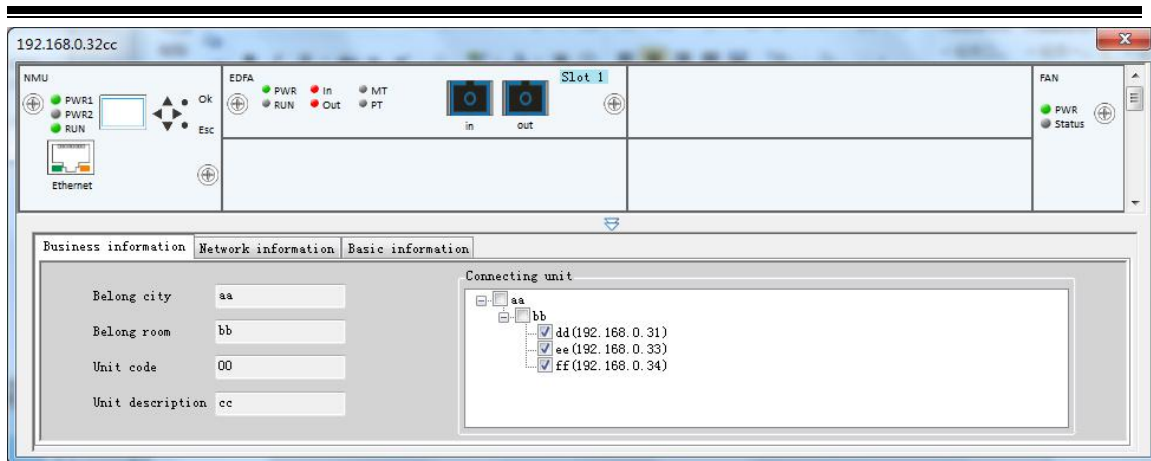


Fig.5.3 Equipment monitoring

In Fig.5.3, we can see Business information, Network information and Basic information about NMU.

We will explain monitoring information of business card.

EDFA card:

Double-click EDFA board, then popup an interface of board monitoring (see Fig.5.4).

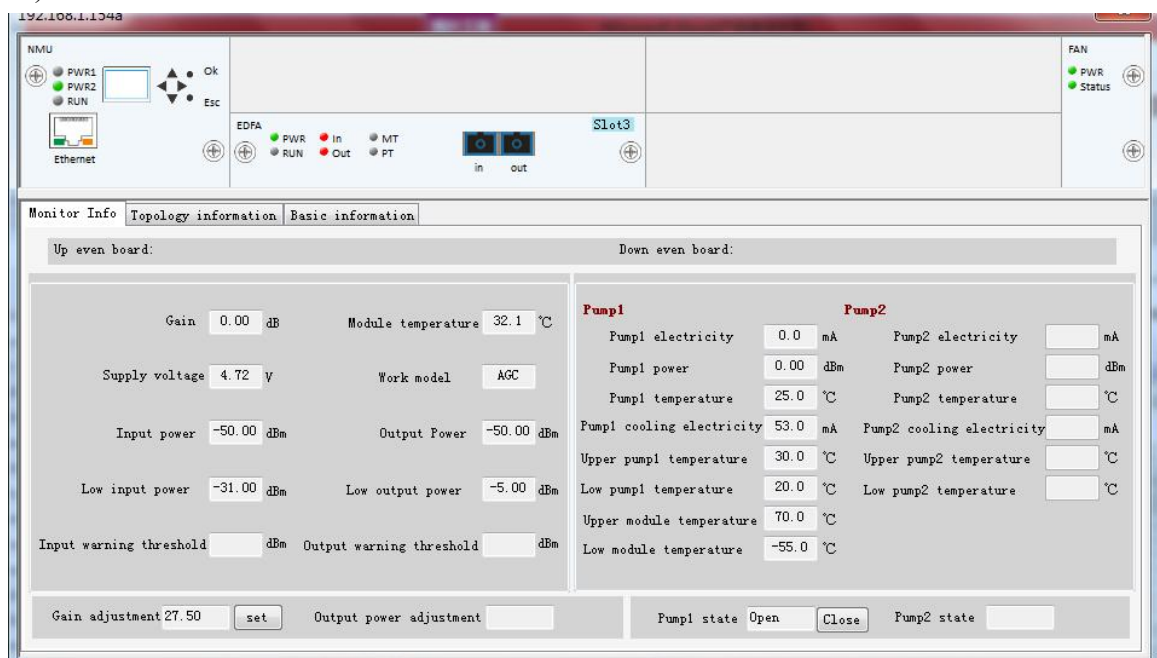


Fig.5.4 OLP board monitoring

You can see monitor information, topology information, basic information of EDFA in Fig 5.4.

Note:

1. The changed Gain cannot be greater than original Gain;
2. The changed Gain cannot be less than original Gain;

OEO card:
Double-click OEO board, then popup an interface of board monitoring (see Fig.5.5).

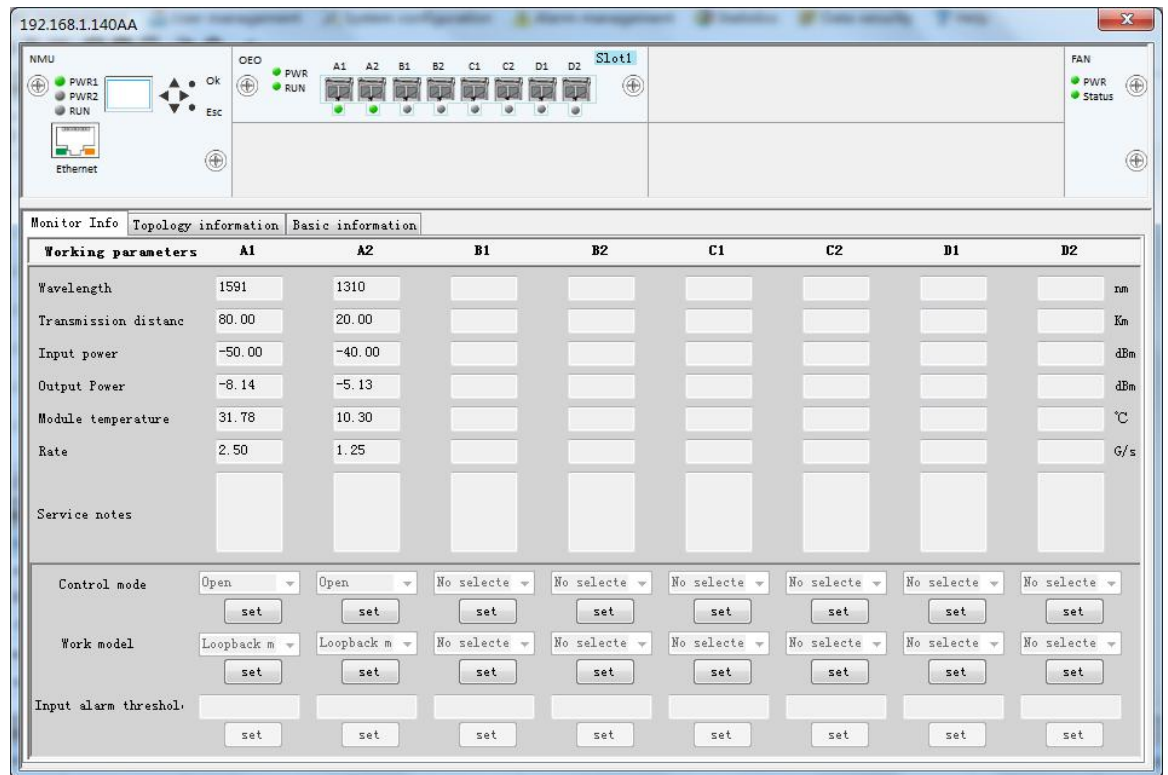


Fig.5.5 OEO board monitoring

You can see monitor information, topology information, basic information of OEO in Fig 5.5.

Chapter VI Alarm

6.1 Current alarm management

The alarm management of menu bar includes current alarm management, historical alarm management, alarm configuration. The interface of current alarm management is as shown in Fig.6.1.

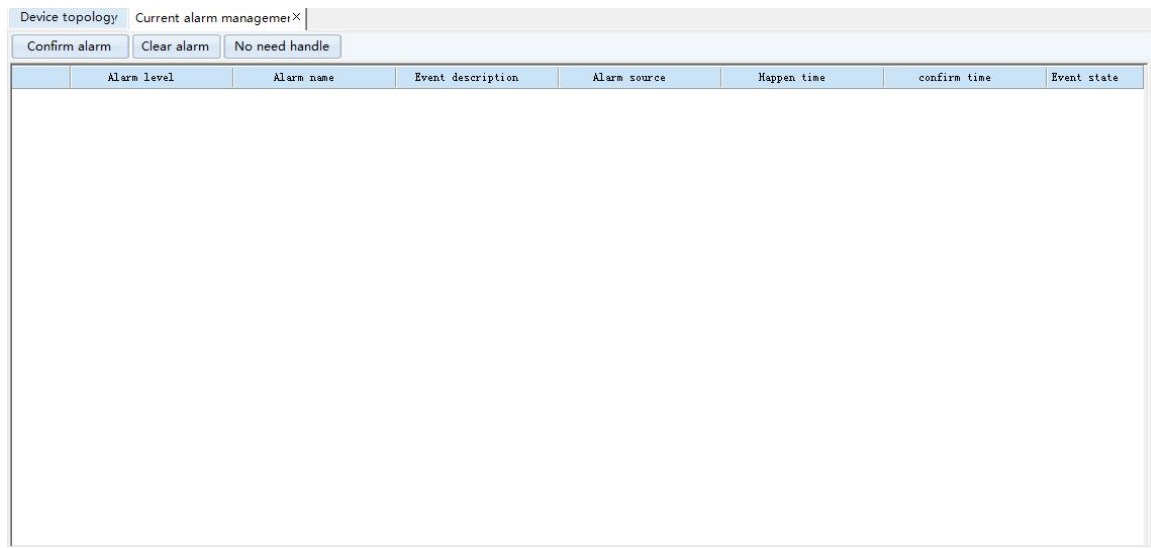


Fig.6.1 Current alarm management

Explain:

Current alarm information must be confirmed before be cleared. Current alarm information that have been cleared will be moved to historical alarm management.

You can inform alarm, clear alarm and no need handle in Fig.6.1. You can inform alarm, clear alarm, no need handle and view alarm equipment by click the selected alarm(see Fig.6.2).

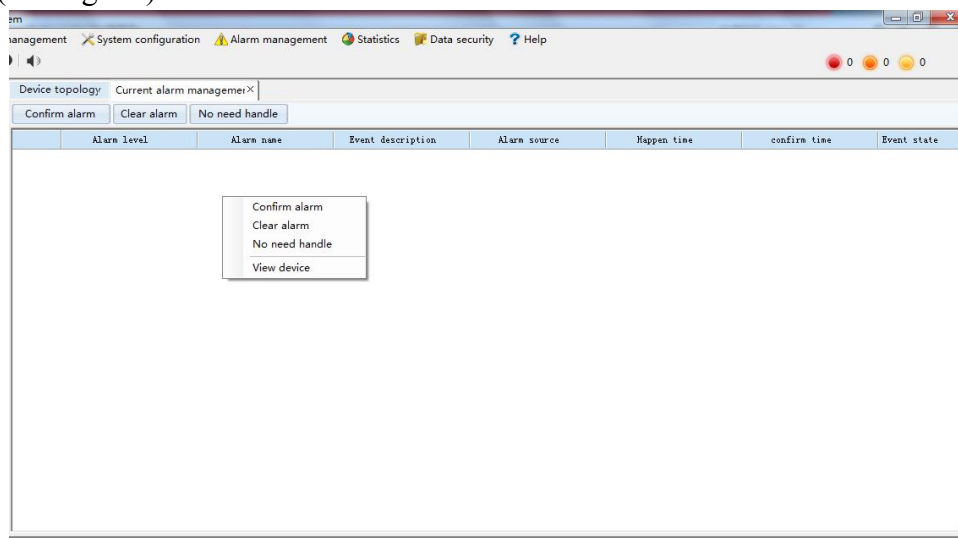
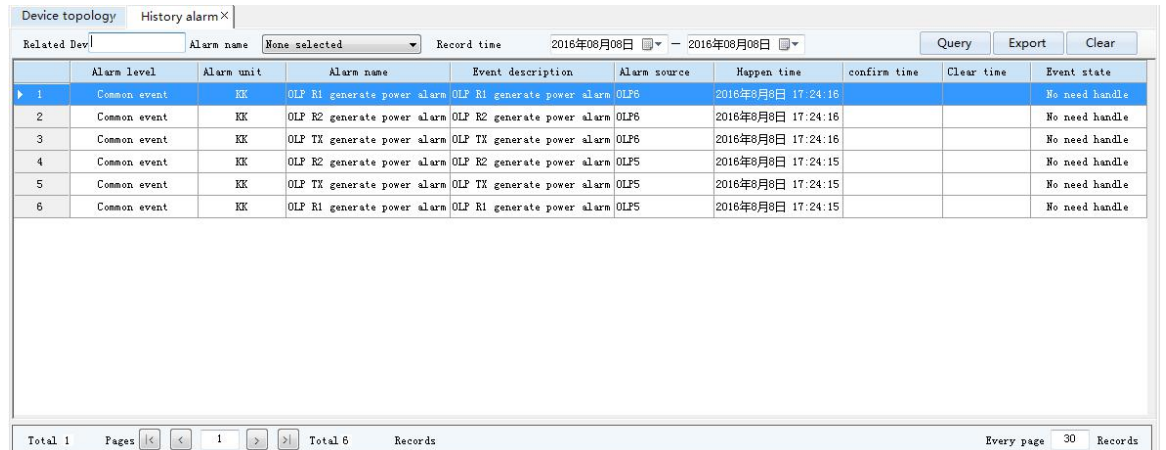


Fig.6.2 Current alarm management

6.2 Historical alarm management

The interface of historical alarm management is as shown in Fig.6.3.

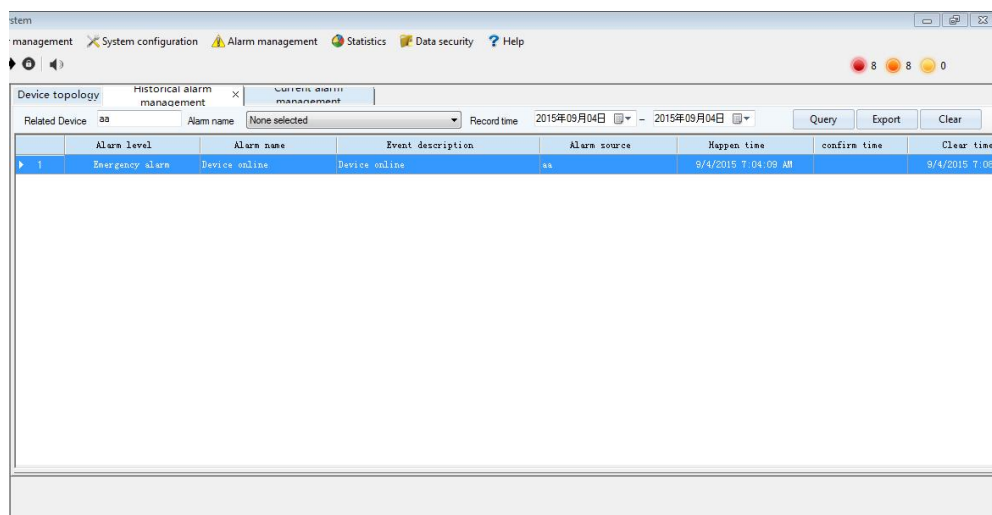


Alarm level	Alarm unit	Alarm name	Event description	Alarm source	Happen time	confirm time	Clear time	Event state
Common event	KK	OLP R1 generate power alarm	OLP R1 generate power alarm	OLP6	2016年8月8日 17:24:16			No need handle
Common event	KK	OLP R2 generate power alarm	OLP R2 generate power alarm	OLP6	2016年8月8日 17:24:16			No need handle
Common event	KK	OLP TX generate power alarm	OLP TX generate power alarm	OLP6	2016年8月8日 17:24:16			No need handle
Common event	KK	OLP R2 generate power alarm	OLP R2 generate power alarm	OLP5	2016年8月8日 17:24:15			No need handle
Common event	KK	OLP TX generate power alarm	OLP TX generate power alarm	OLP5	2016年8月8日 17:24:15			No need handle
Common event	KK	OLP R1 generate power alarm	OLP R1 generate power alarm	OLP5	2016年8月8日 17:24:15			No need handle

Fig.6.3 Histroical alarm management

You can query, clear and export for historical alarm information. The query condition includes:

(1) Related equipment: Type in the name of associated equipment and click query button, then you can see the all alarm information of equipment contains the input associated equipment (see Fig.6.4).



Alarm level	Alarm name	Event description	Alarm source	Happen time	confirm time	Clear time
Emergency alarm	Device online	Device online	aa	9/4/2015 7:04:09 AM		9/4/2015 7:08

Fig.6.4 Historical alarm(associated equipment)

(2) Alarm name: Choose a certain kind of alarm type and click query button, then you can see the all alarm information about the selected alarm name(see Fig.6.5).

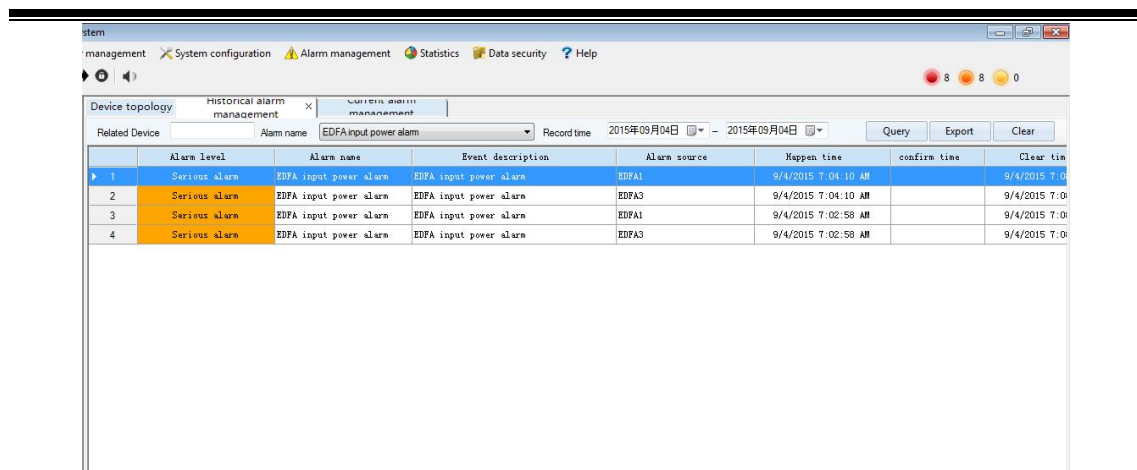


Fig.6.5 Historical alarm(alarm name)

(2) Record time: Choose start date and end date and click query button, then you can see all alarm information of select time quantum (see Fig.6.6).

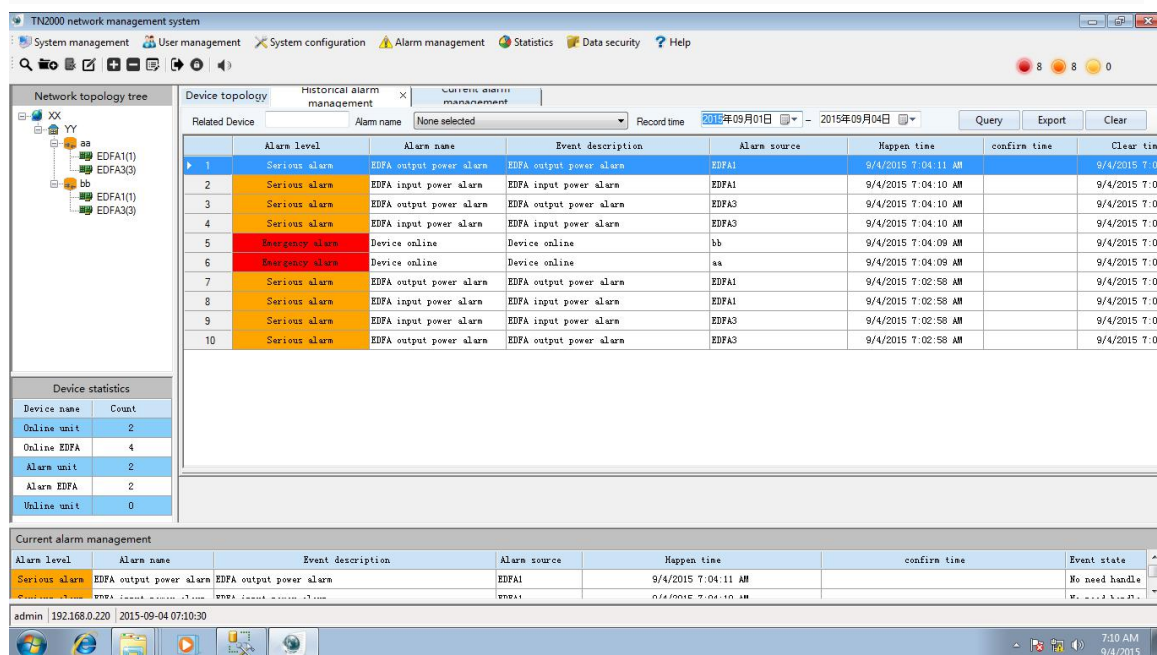


Fig.6.6 Historical alarm(record time)

6.3 Alarm configuration

Choose event level of every event type and click submit button in Fig6.7, then you can configure event level of every event type and choose event level of email pushing.

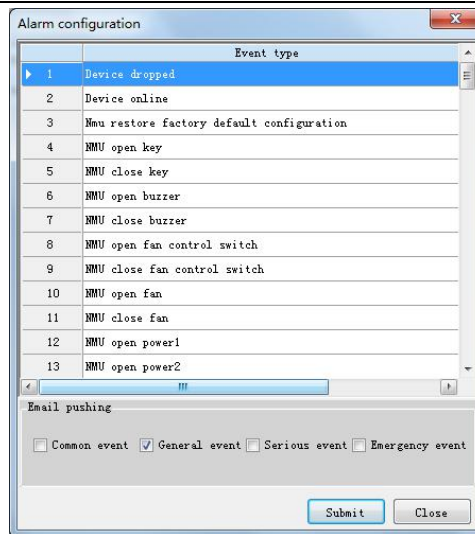


Fig.6.7 Alarm configuration

Chapter VII Statistics

7.1 History

The statistics of menu bar includes history sub-menu and operation record sub-menu. The history interface of EDFA is as shown in Fig.7.1.

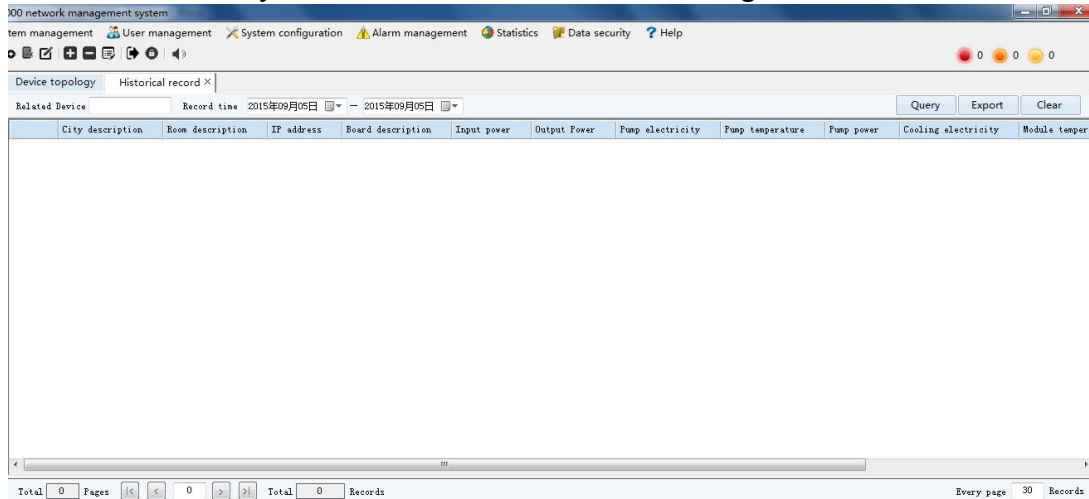


Fig.7.1History(associated equipment)

You can query, export and clear for history in Fig.7.1. The query condition includes:

(1) Related equipment: Type in the name of associated equipment and click query button, then you can see the history of contains the input associated equipment(see Fig.7.2).

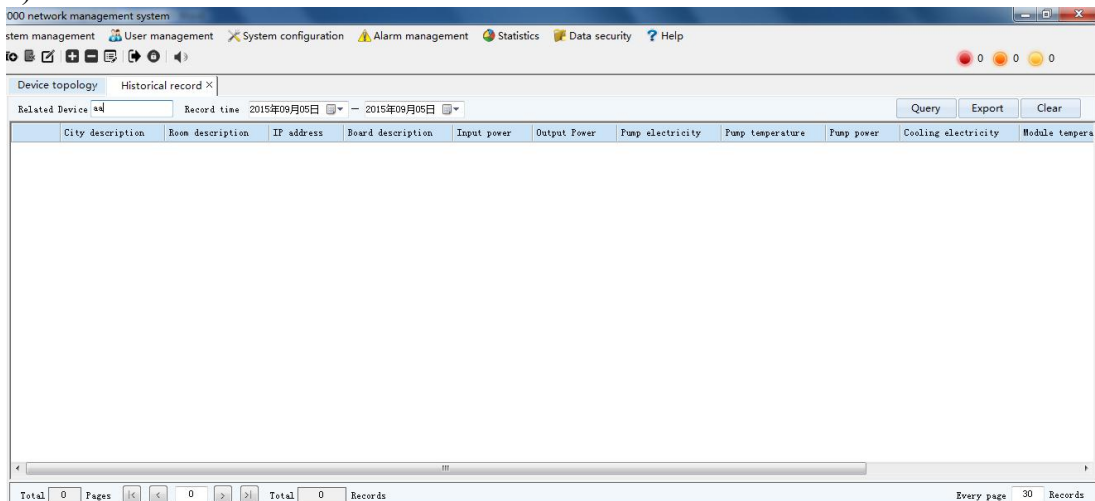


Fig.7.2History(Related equipment)

(2) Record time: Choose start date and end date and click query button, then you can see all history of select time quantum(see Fig.7.3).

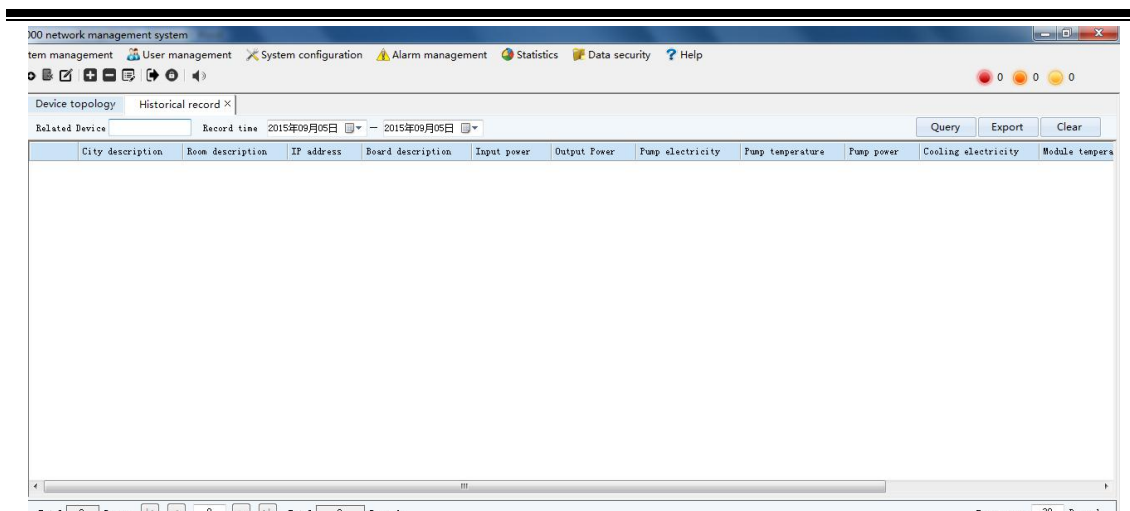


Fig.7.3History(Record time)

7.2 Operation record

The operation record interface of EDFA is as shown in Fig.7.4. You can query operation record according to associated equipment and record time. At the same time, you can export, query and clear operation record.

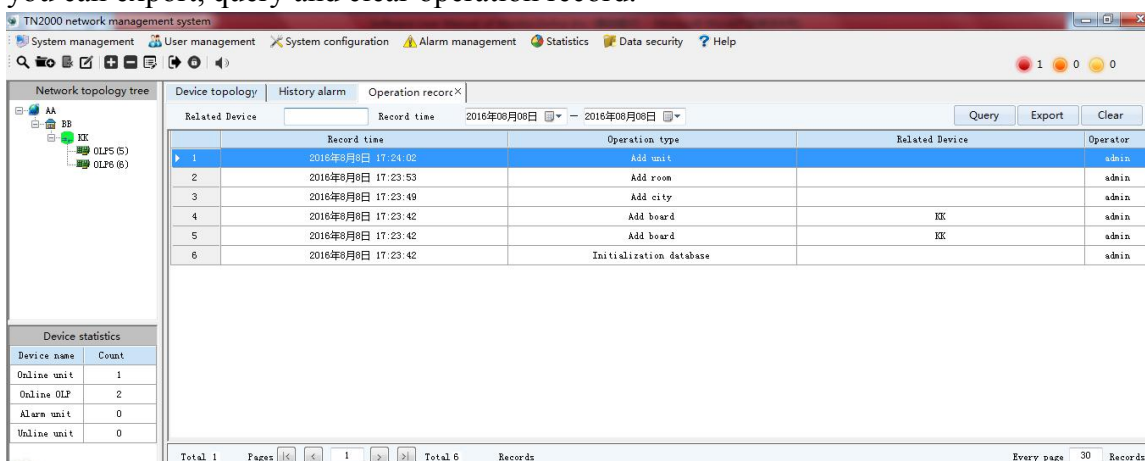


Fig.7.4 Operation record

Chapter VIII Login mode and description about equipment

8.1 Network management software.

Login mode and instructions of Network management software has been described in the first seven chapter.

Note: Don't more than two software client.

8.2 SNMP

The community of SNMP:

The write community: private

The read community:public