



# Model OTOHP-NMS Network Management System



## Software User Guide

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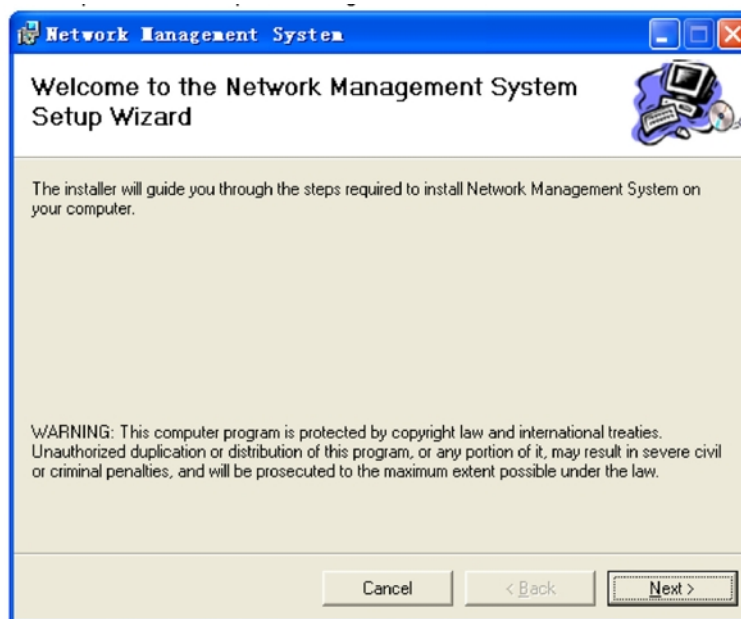
# INSTALLATION

## System Requirements

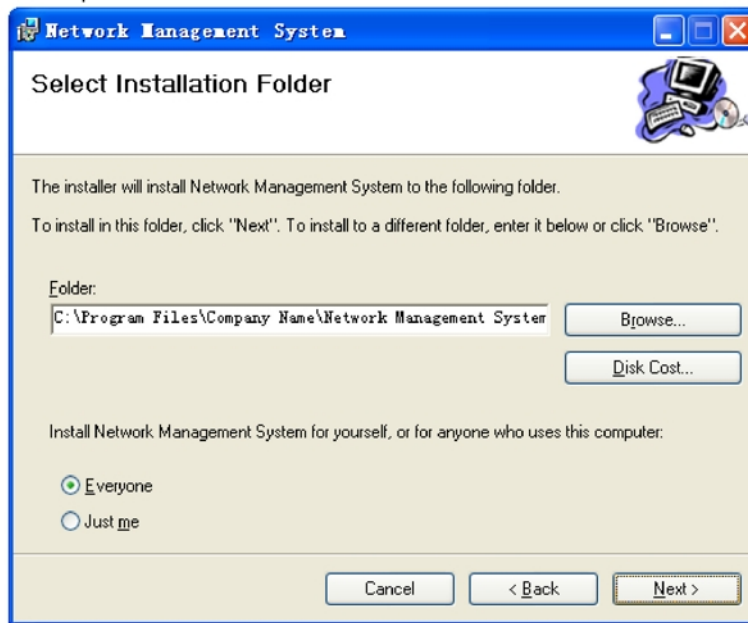
- Supported Operating Systems: Windows 7; Windows Server 2008; Windows Vista; Windows Server 2003; Windows XP
- Processor: 400 MHz Pentium processor or equivalent (Minimum); 1GHz Pentium processor or equivalent (Recommended)
- RAM: 96Mb (Minimum); 256Mb (Recommended)
- Hard Disk: Up to 500Mb of available space may be required
- Display: 800 x 600, 256 colors (Minimum); 1024 x 768 high color, 32-bit (Recommended)

## Installing the Software

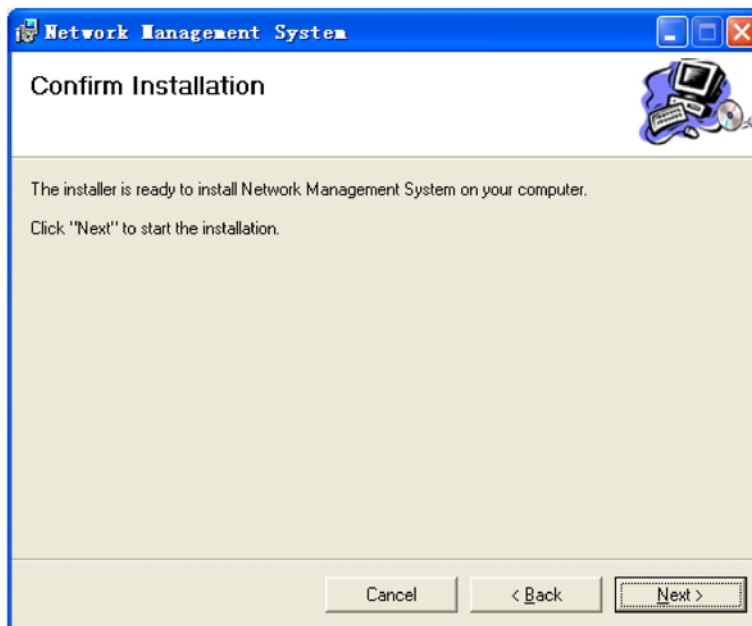
- 1) Launch “setup.exe” to begin the installation. Click “Next” to go to the next step.



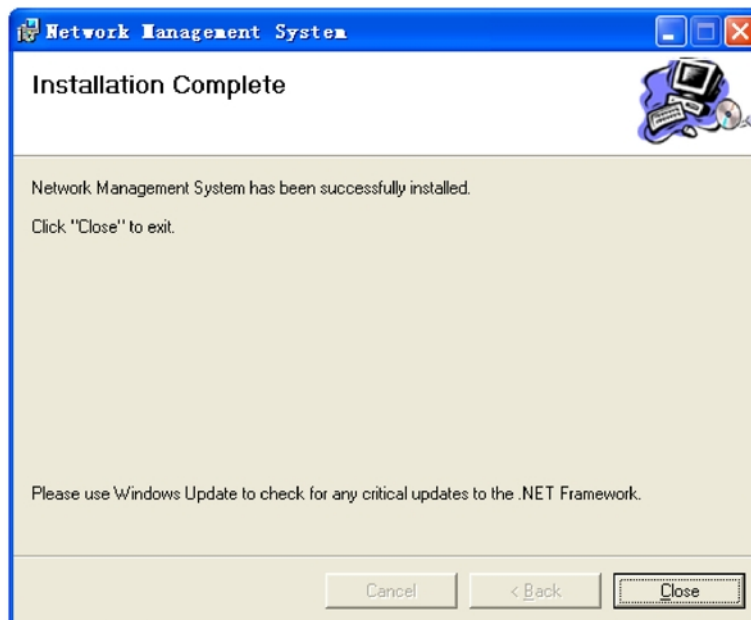
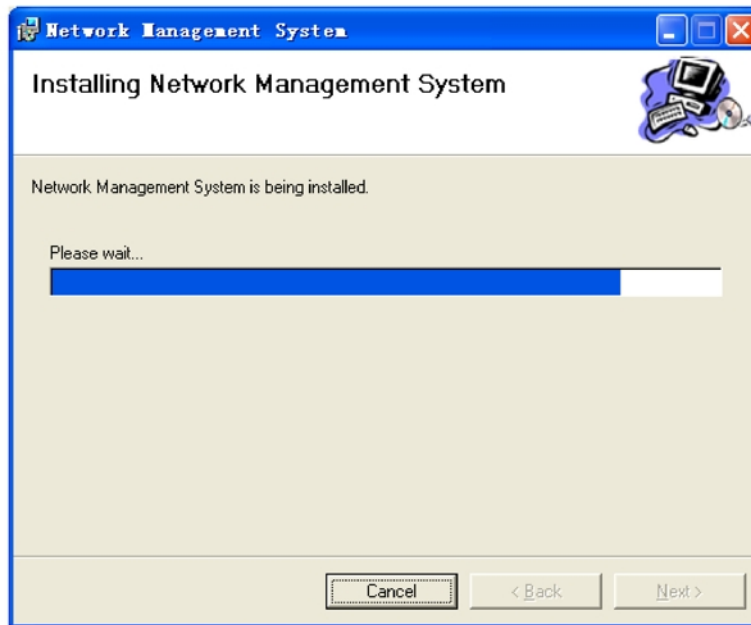
- 2) Select the desired folder where the software will be installed. To install in default folder, click “Next.” To install to a different folder, enter the name of the folder or click “Browse” and navigate to the desired folder.



- 3) Click "Next" to confirm the installation settings. The software will begin to install.



- 4) When the "Installation Complete" screen appears, click close to exit the installation. The software is now ready to be configured.



## GETTING STARTED

### Start the Program

Select “start” -> “Programs” -> Network Management System, or click desktop shortcut.



**Desktop Shortcut**

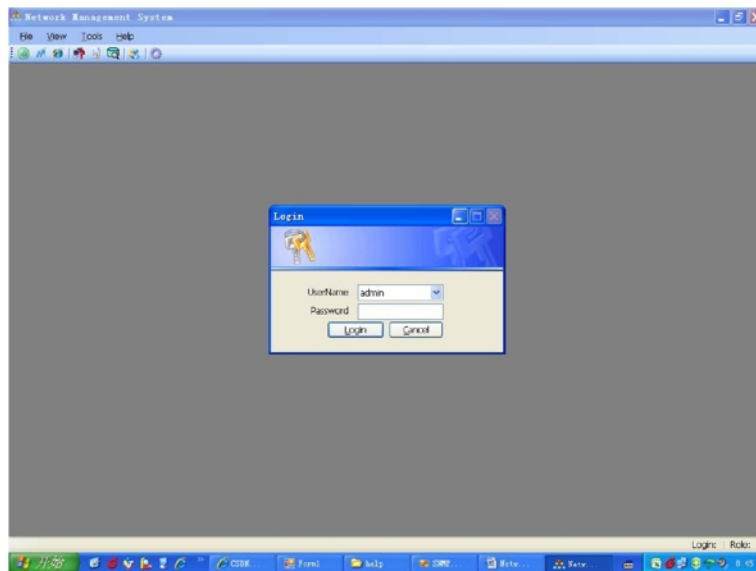
### Language Selection

Select the preferred language for the program. The default language is English. Select “Never show this dialog again” to remember the selection. The software will launch using this language.



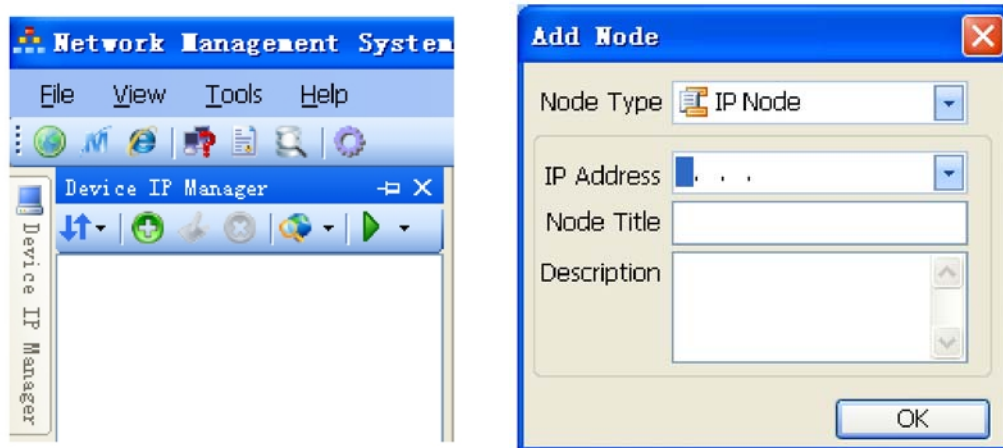
## Setting the Login Information

The program requires a username and password to be used. By default, the username is “admin” and the password is also “admin”.

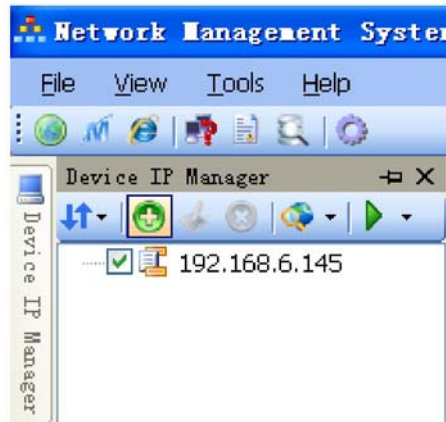


## Adding a Device to the IP Manager

Click the green “+” button on the tool bar to open the “Add A Node” window. Type in the IP address of the device to be added as well as a title and brief description of the device. Click “OK” to continue



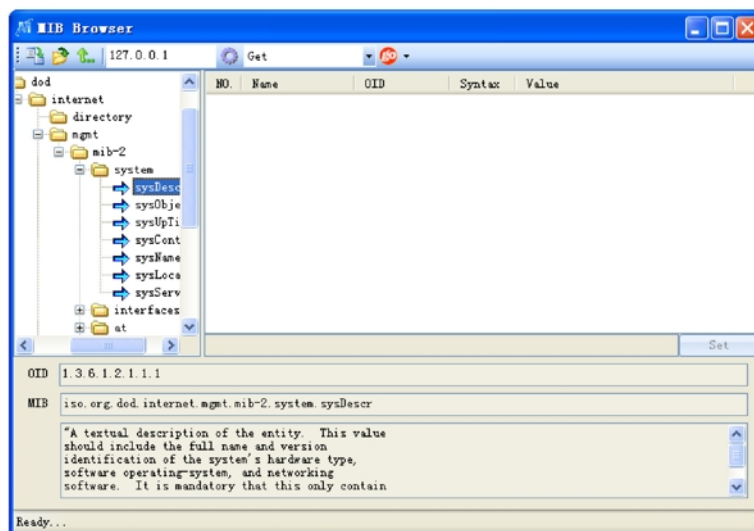
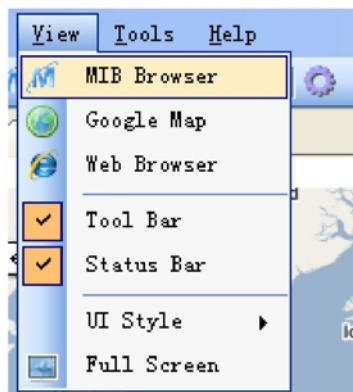
Click on the green arrow on the right side of the tool bar to poll the newly added device.



## MENUS AND WINDOWS

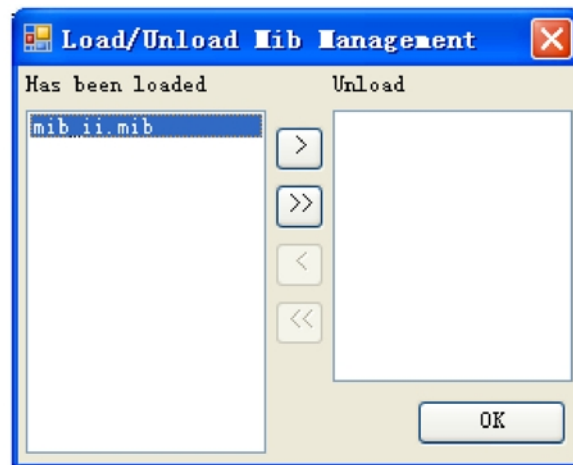
### View the MIB Browser

The MIB browser allows the user to load or unload an MIB file. The software supports SNMP v1, v2c and v3 protocols and can send the following SNMP commands: get, getnext, set, walk, getbulk.

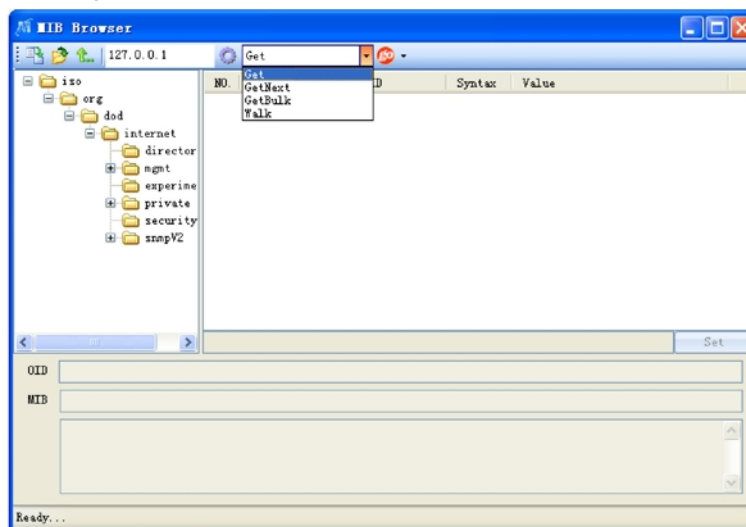


## Loading/Unloading MIB Files

To load a single MIB file, use the  icon on the MIB browser window. To select more than one MIB file, use the  icon to browse to the directory that contains the MIB files. Use the  icon to unload MIB files from the system.

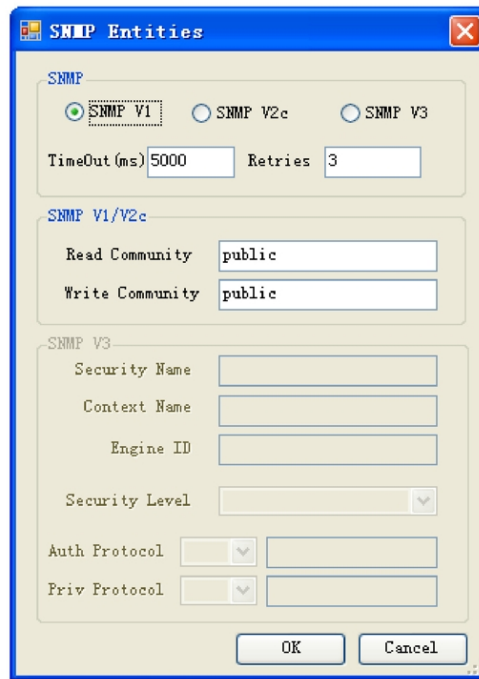


The list of files on the left shows the MIB files that have been uploaded. The list of files on the right side shows the files that are not loaded. Use the left arrow and right arrow to select the file(s) you wish to load/unload. Press “OK” to confirm the action. You may also select a node of the MIB tree. Use the drop down menu to select one of commands. Click “go” to send your command.



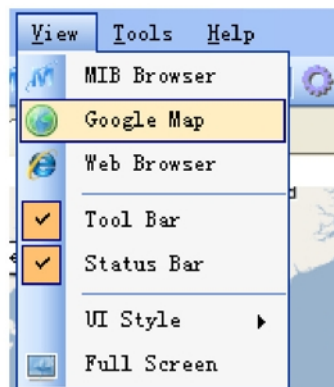
## Setting SNMP Parameters

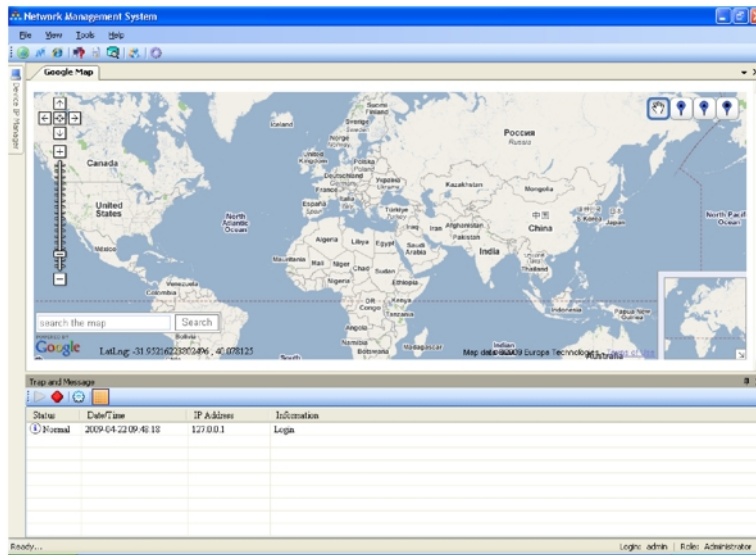
Use the  icon to access the screen that allows you to set the SNMP parameters.



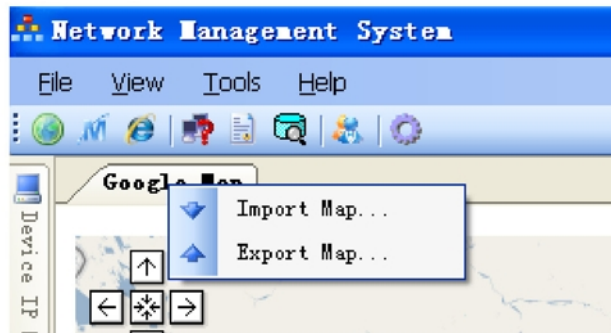
## Google Map

The Google Map is available from the View drop down menu. This feature allows the user to view the location of all the devices that have been added to the interface.



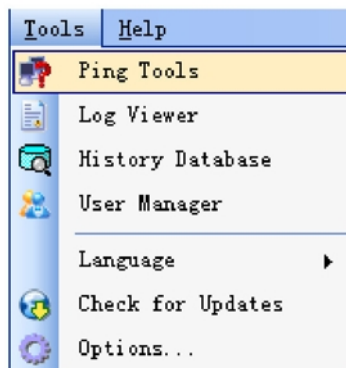


Use the Google Map Import/Export feature to import a new map or export the existing map.

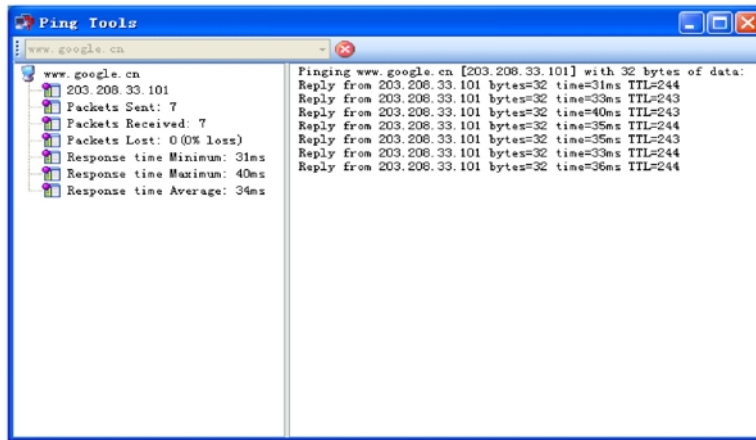


## Ping Tool

The ping tool is accessed from the Tools menu. The Ping tool functions like a Windows “ping.exe” command. It is used to verify that the computer can connect to other host devices.

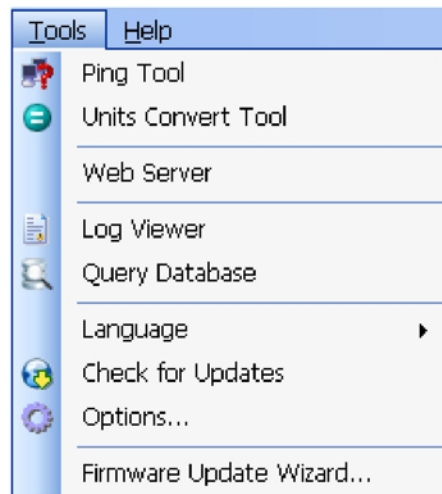


Enter the IP address or domain of the device you wish to ping then click “go” to ping the device. Use the  icon to stop the ping.



## Log Viewer Tool

The Log View Tool allows the user to view log message while the program is running. Log entries are grouped by date.



To view log content: double click the date node on the left side, the log content will be shown on the right side. To delete a log: select the log content that you want to delete, then select delete from context menu command. To filter the log content, right click on the column header.

Log Viewer

Type of Log: SystemLog

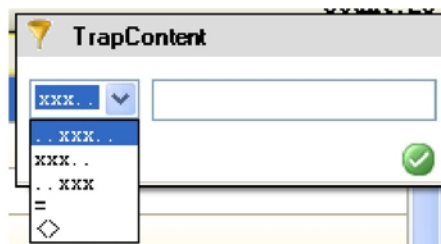
Right click column header to filter.

Count: 15

| ID  | DateTime            | Content      |
|-----|---------------------|--------------|
| 221 | 2010-06-03 08:35:19 | admin Login  |
| 222 | 2010-06-03 08:36:45 | admin Logout |
| 223 | 2010-06-03 08:38:12 | admin Login  |
| 224 | 2010-06-03 08:48:26 | admin Logout |
| 225 | 2010-06-03 09:25:56 | admin Login  |
| 226 | 2010-06-03 09:26:43 | admin Logout |
| 227 | 2010-06-03 09:28:12 | admin Login  |
| 228 | 2010-06-03 09:28:41 | admin Logout |
| 229 | 2010-06-03 09:34:16 | admin Login  |
| 230 | 2010-06-03 09:34:55 | admin Logout |
| 231 | 2010-06-03 09:36:53 | admin Login  |
| 232 | 2010-06-03 09:41:07 | admin Logout |
| 233 | 2010-06-03 09:41:32 | admin Login  |
| 234 | 2010-06-03 09:42:09 | admin Logout |
| 235 | 2010-06-03 13:32:36 | admin Login  |

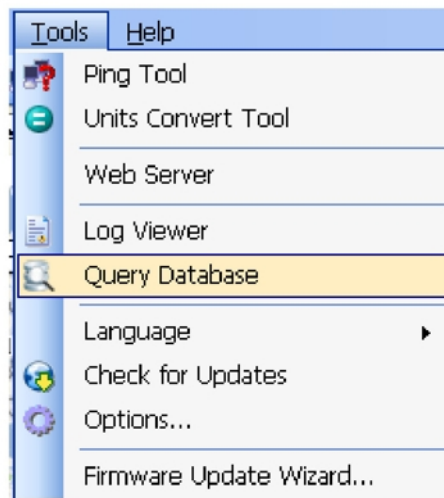
TrapLog

2010-05-20



## Query Database Tool

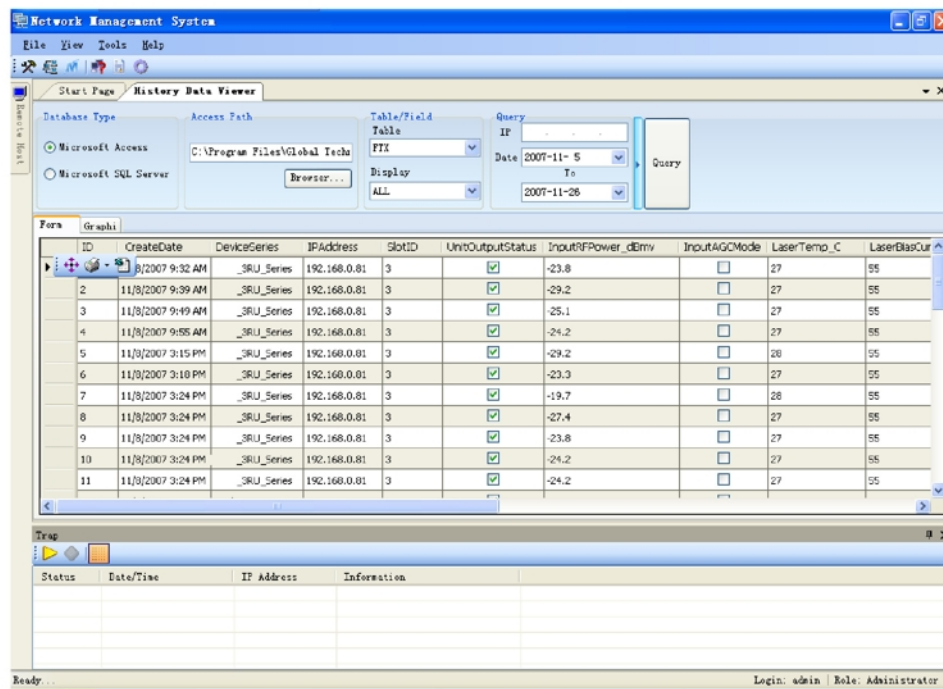
This tool allows the user to query data from the database. Data can then be exported an Excel spreadsheet or printed.



To perform a Simple Query, follow the steps below.

- 1) Select database type (Microsoft Access or Microsoft SQL Server);
- 2) Fill in the necessary database parameters, including the file path, SQL server name, login user name and password, and select the catalog;
- 3) Select the name of the table that you wish to query;
- 4) Select "Field" to display;
- 5) Enter the desired conditions to query your data quickly.

6) Click “Query”.

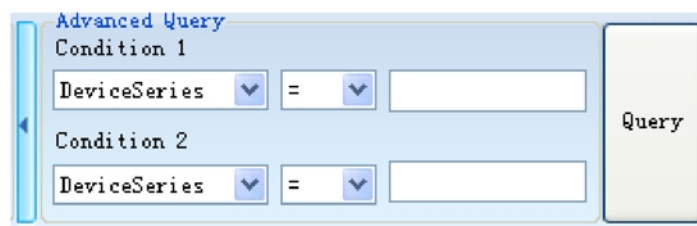


To perform an Advanced Query, follow the steps below.

1) Perform a Simple Query by following step1 to step5 above;

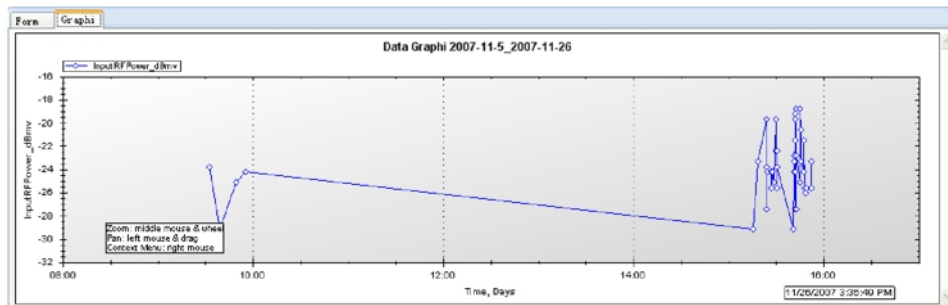


2) Click the split button to get more conditions.

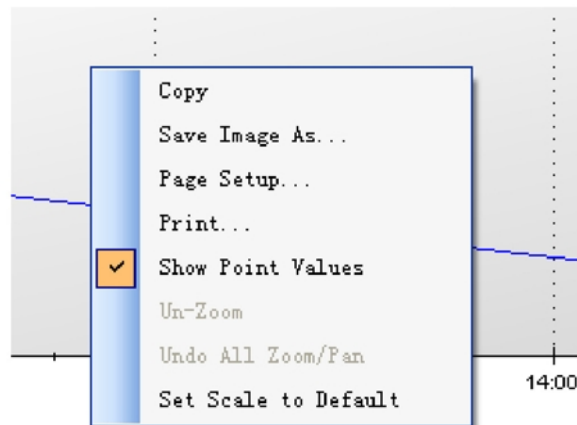


The Print/Export: Float toolbar  can be used to print and export.

The “Graphic” tab on the “Query Database” screen can be used to view a graphical representation of the data.

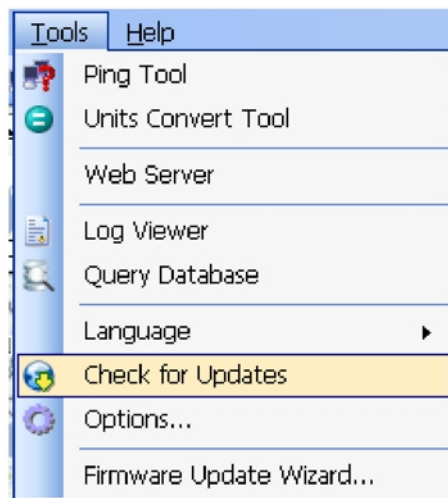


To view point values on the chart, move the mouse over the point you wish to view and right click to display the point values.

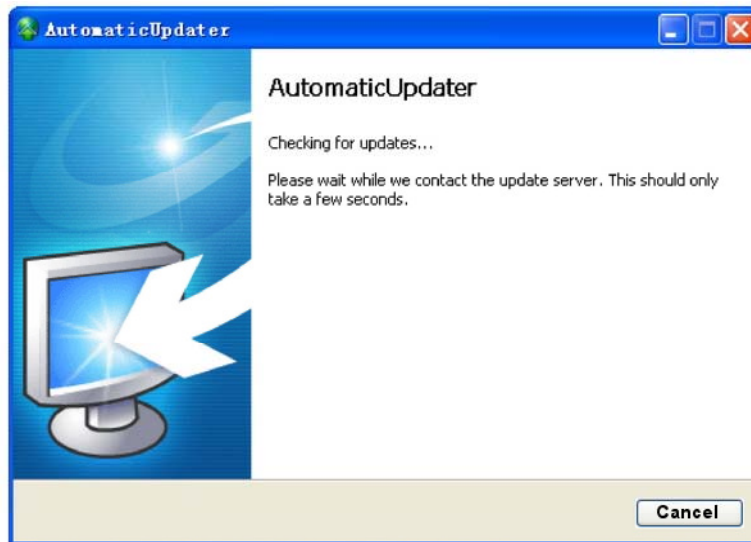


### Check for Updates Tool

Use the Check for Updates to see if there is a new version of this program and to update your program to a new version.

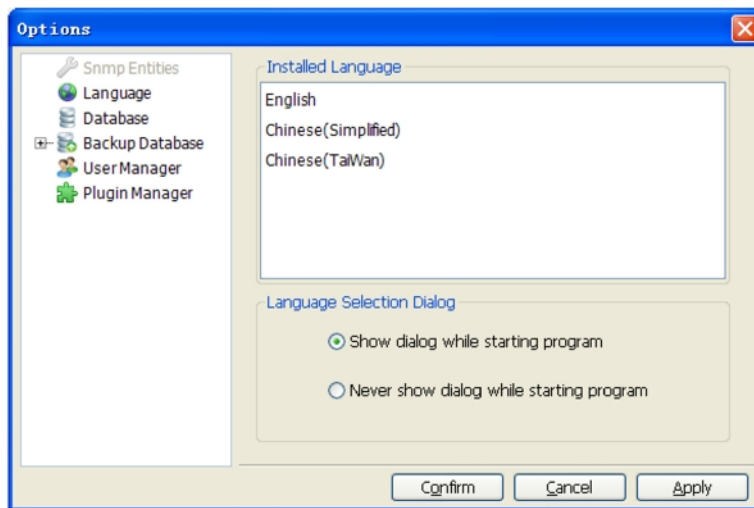


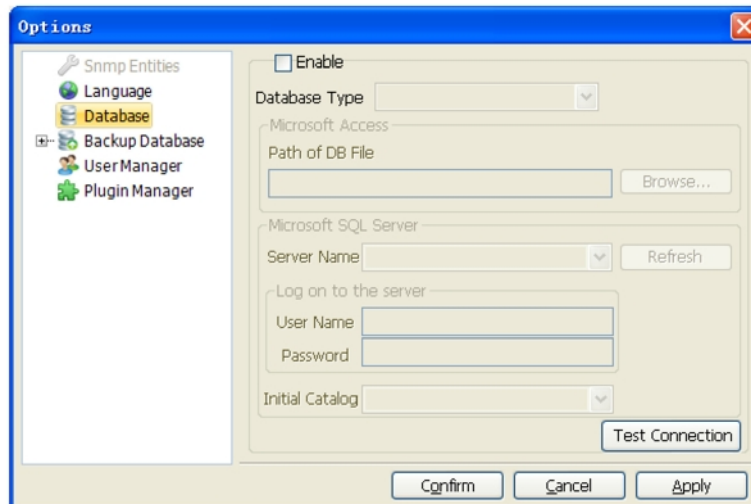
The computer must be connected to the Internet in order to use the Check for Updates tool.



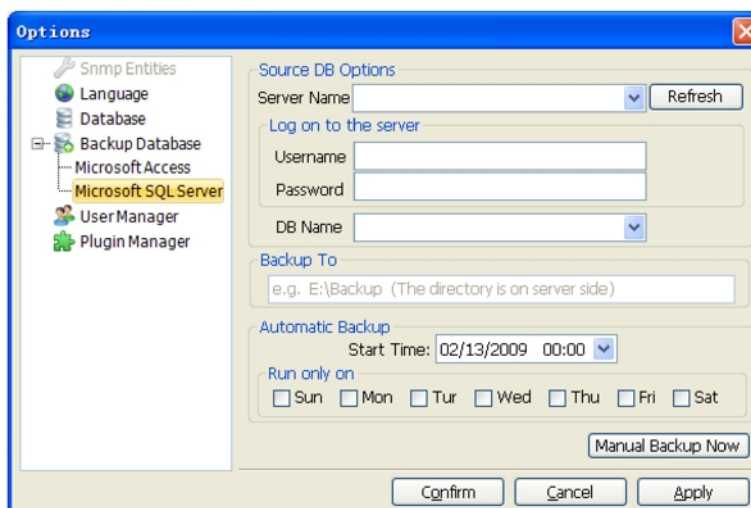
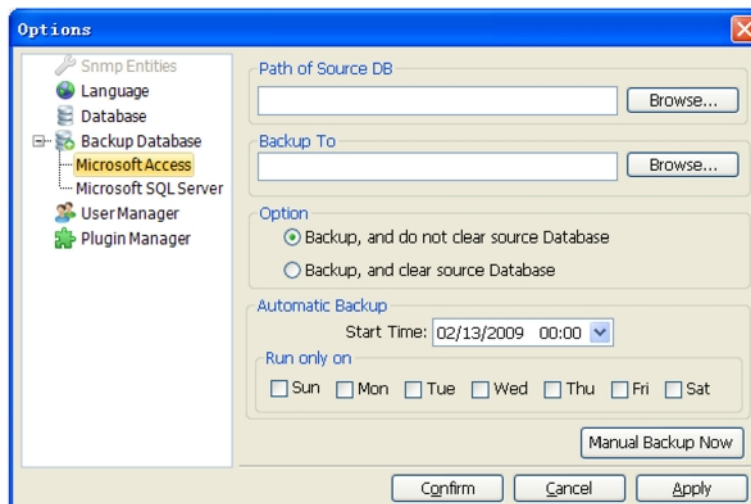
## Options Tools

The options menu allows the user to set a variety of system options, including SNMP entities, language, database settings, backup database parameters, users, plug-ins, personal web server and firmware update wizard.



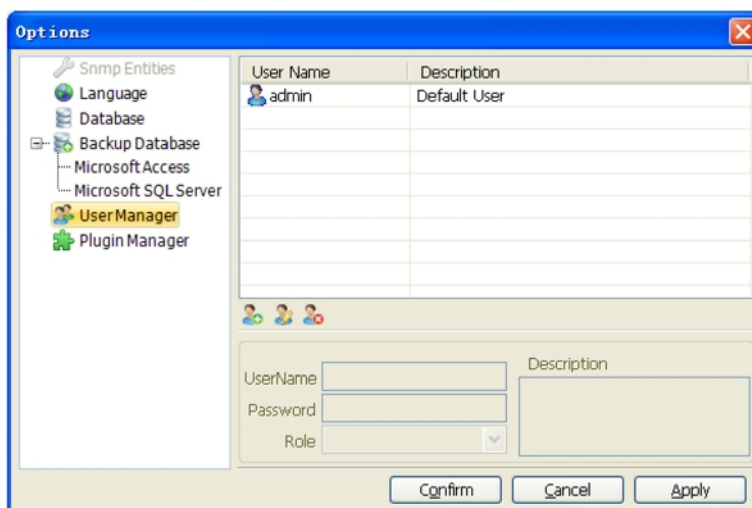


NOTE: When “Enable” is selected, the program will use the database to record data. When this box is unselected, the program will not record data to the database.



## User Manager

The User Manager is available from the options menu. It allows the operator to add and remove authorized users to the interface.

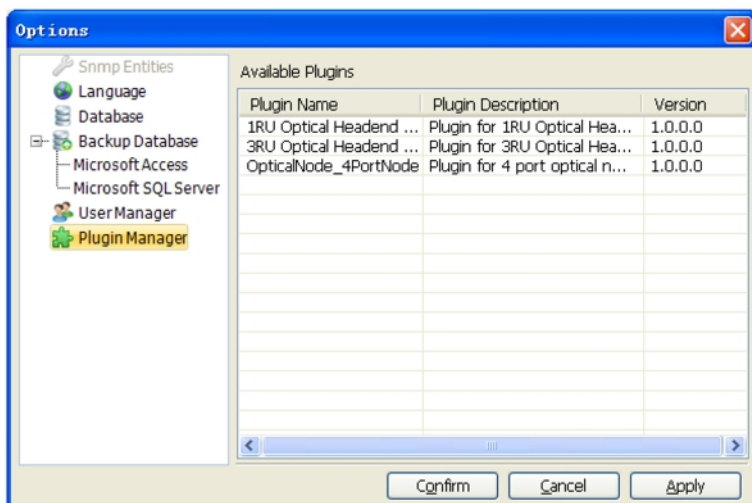


Two types of users may be specified, the Administrator and Constrained. The administrator users have full access to all of the settings in the software. Constrained users have limited access to these features operation. Actions include:

- Add a new user: Enter a Username and Password that is between 5 and 20 characters (only administrator users can perform this action).
- Edit a user: constrained users only can edit themselves while administrators can edit all users.
- Delete a user (only administrator users can do this action).

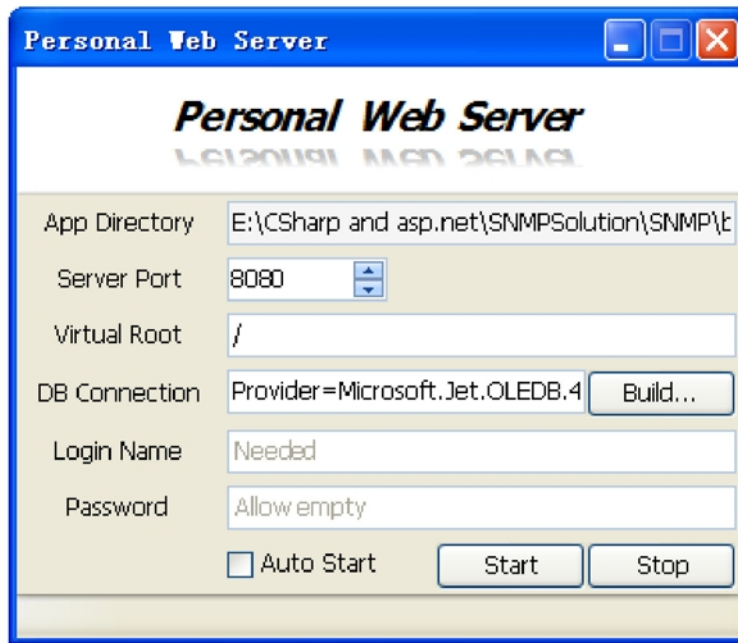
## Plug-in Manager

Allows the user to manage plug-ins for the software.



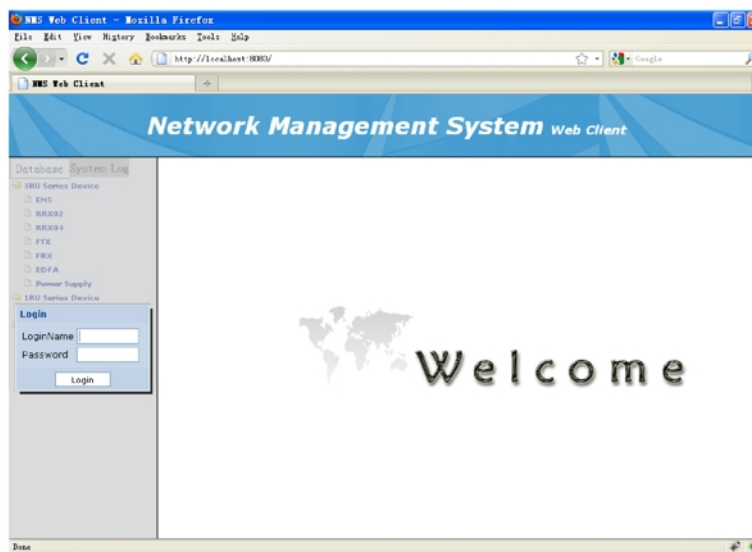
## Personal Web Server

The Personal Web Server tool allows the user to view the database and system log files from a remote location.



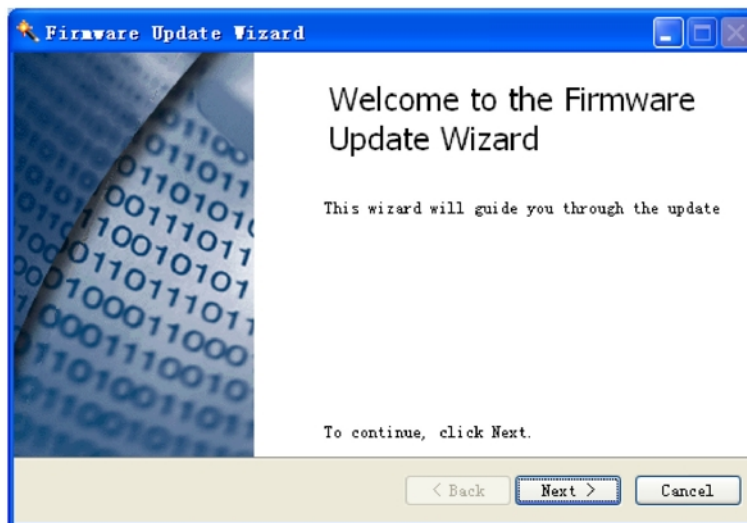
The web server settings are as follows:

- 1) Server Port, setup the port (>1024) which is unused.
- 2) Virtual Root, keep it by default.
- 3) DB Connection, determines which database will be viewed.
- 4) Login Name/Password, Authenticate the user for remote login.
- 5) Auto Start, if it is checked, the server will start automatically when the program starts.



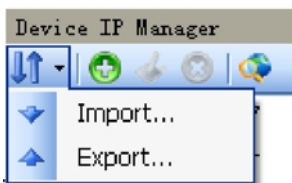
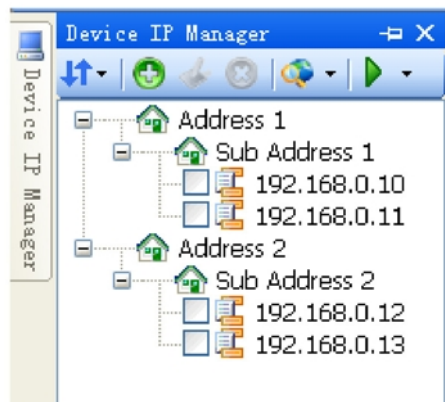
## Firmware Update Wizard

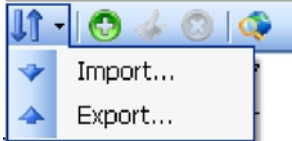
The Firmware Update Wizard guides the user through the firmware update process. Note that different devices may have different wizards.



## DEVICE IP MANAGER

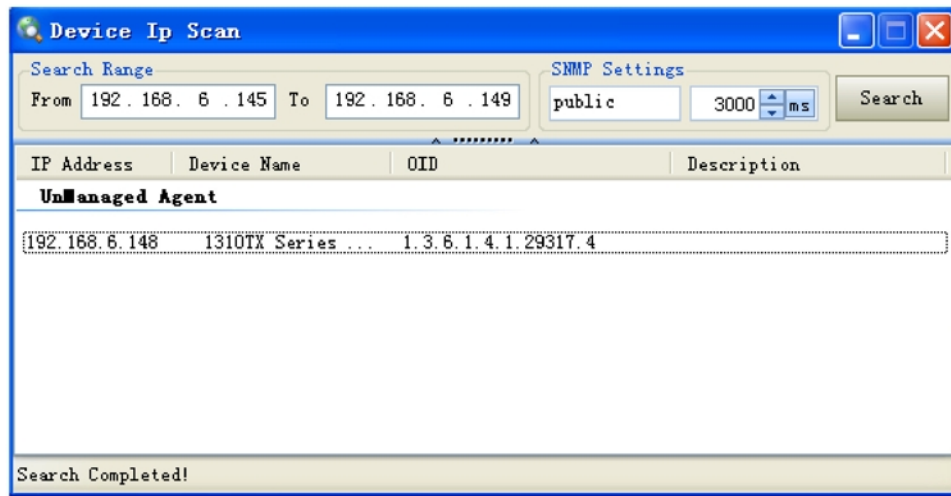
The Device IP Manager allows the user to manage the various IP addresses being monitored by the OTOHP-NMS.



Select  to import IP addresses into the system or export them to a new file format.

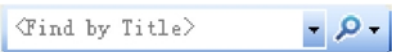
Use the  icons to add, edit, or delete IP addresses.

Use the  icon to search for a device that is within a specified range of IP addresses.



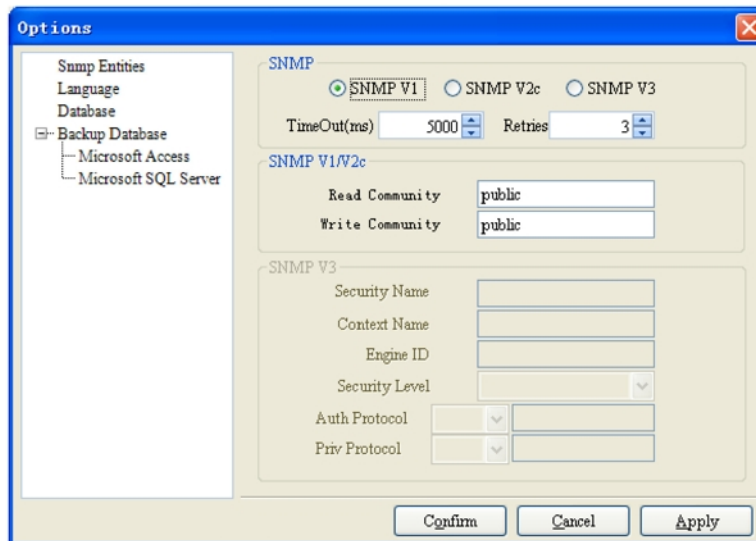
The result will be group by:

- i. Managed Agent, means that devices are managing now.
- ii. Unmanaged Agent means that devices are not managed yet.
- iii. Unknown Agent means that the program cannot manage these devices.

The devices can also be searched for in the node tree view. Use  to search for a device using the IP address. Use  to search for a device using the device node title.

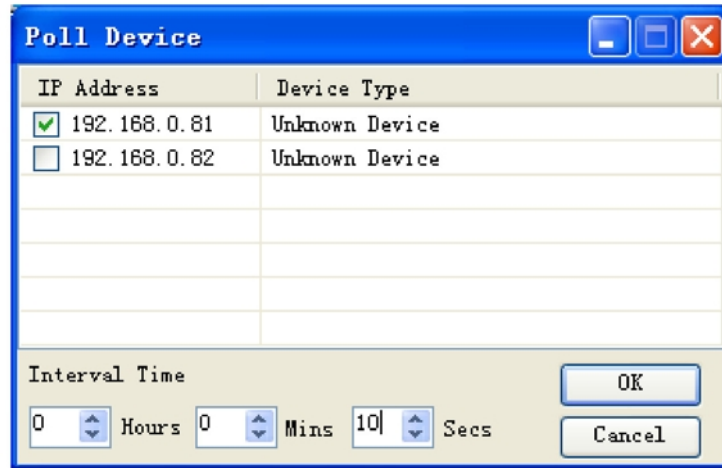
## SNMP Entities Setup

Right click the selected IP node, select “SNMP Entities” menu.(note that different IP addresses may have different settings).



## Polling Queue

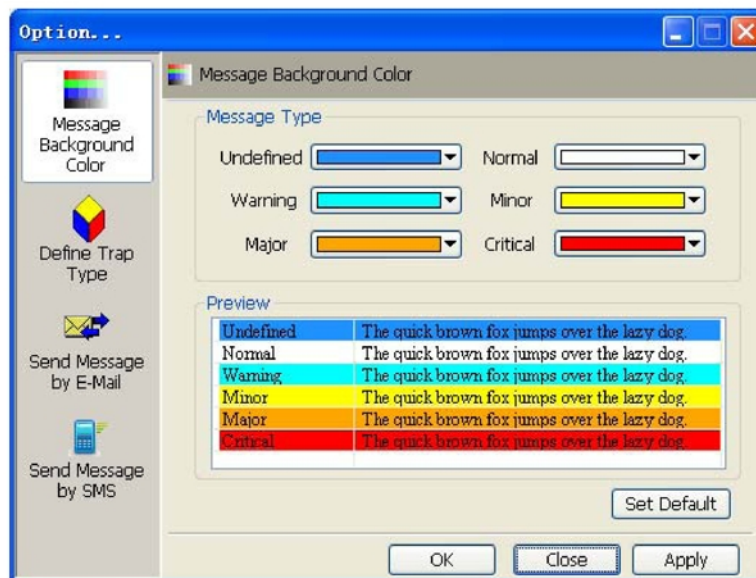
Right click on device IP manager window and select “Polling Config” menu.



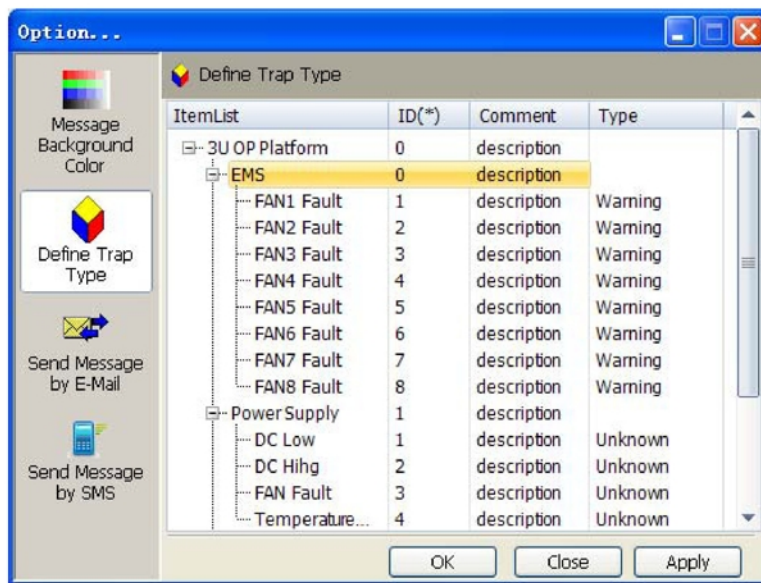
Select the IP(s) to add in polling queue. Set the polling interval time. Click “OK” to confirm the operation.

## Receive Trap

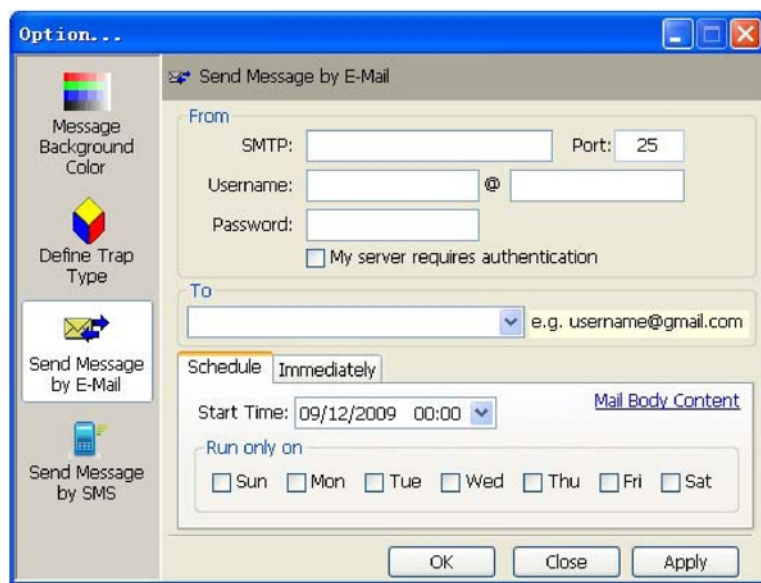
The program listens to port 162 to receive trap messages. Use the  icon to start the receive trap. (Make sure no other programs are using port 162.) Use the  icon to stop the receive trap. The  icon can be used to show or hide the grid. Use the  icon to open the options window. This window allows the user to define message background colors for different message types; define different message types; setup Email parameters; and setup SMS parameters. The window below shows how to define message background colors.



The screen shot below shows the screen to define the trap type. (Make sure that there is different ID in the same node.)



The screen below shows the parameters for setting up email messages from the system.



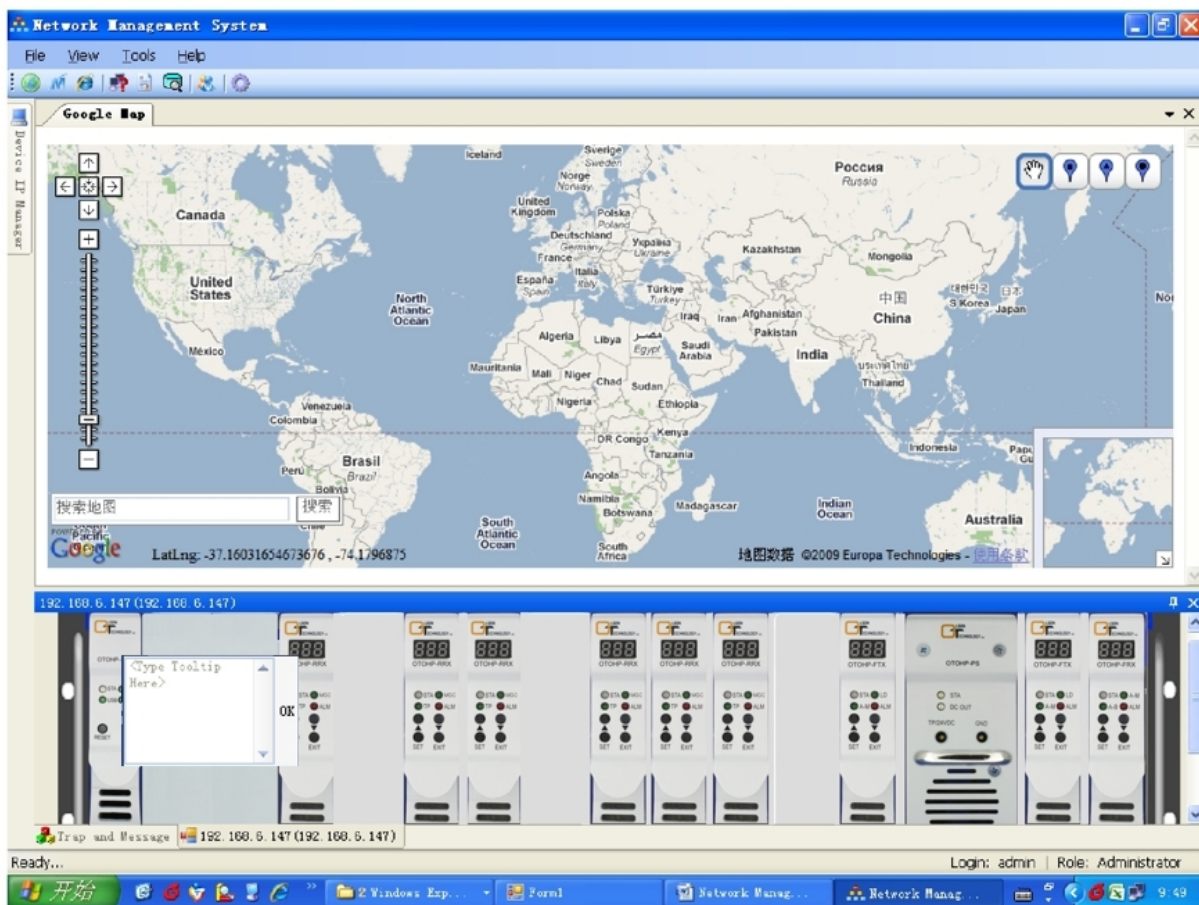
The screen below shows the parameters for setting up SMS messages from the system.



## 3RU SERIES DEVICE

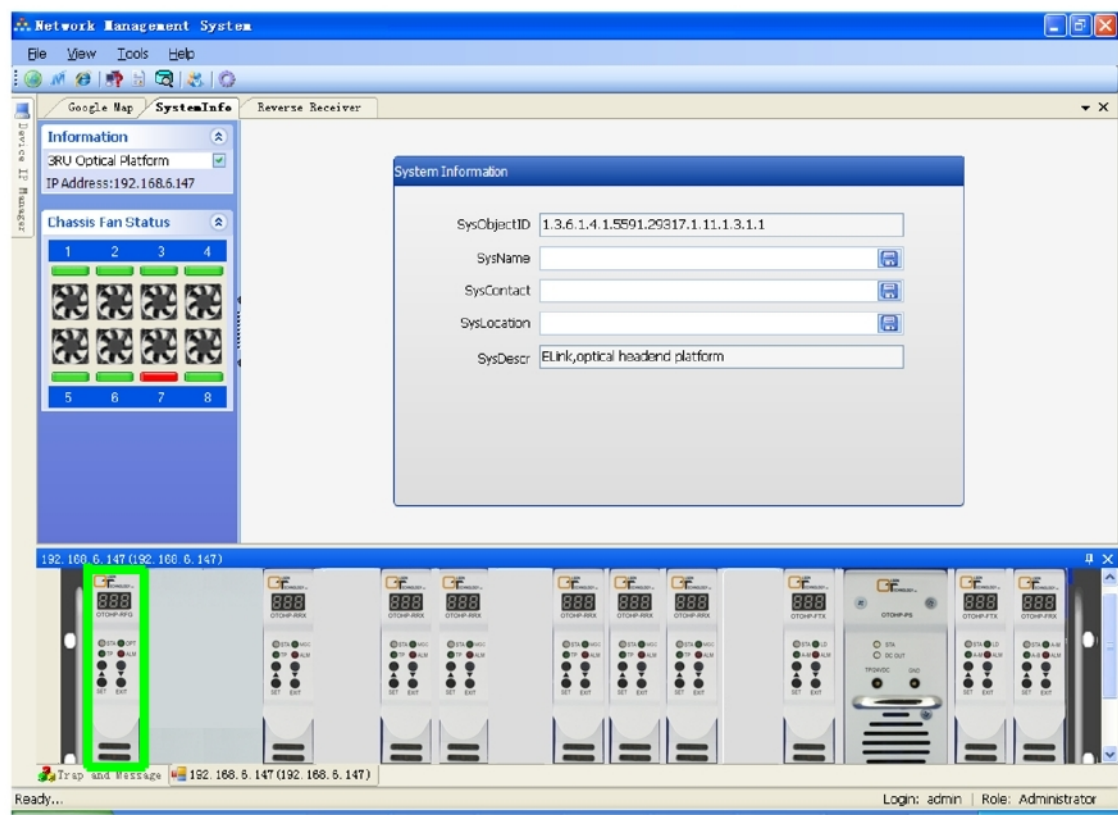
### Adding Tool Tips

Right click the device in any slot, and then add your tool tip.



# OTOHP-NMS Network Management System Module

This screen displays 3RU device information and chassis fan state.

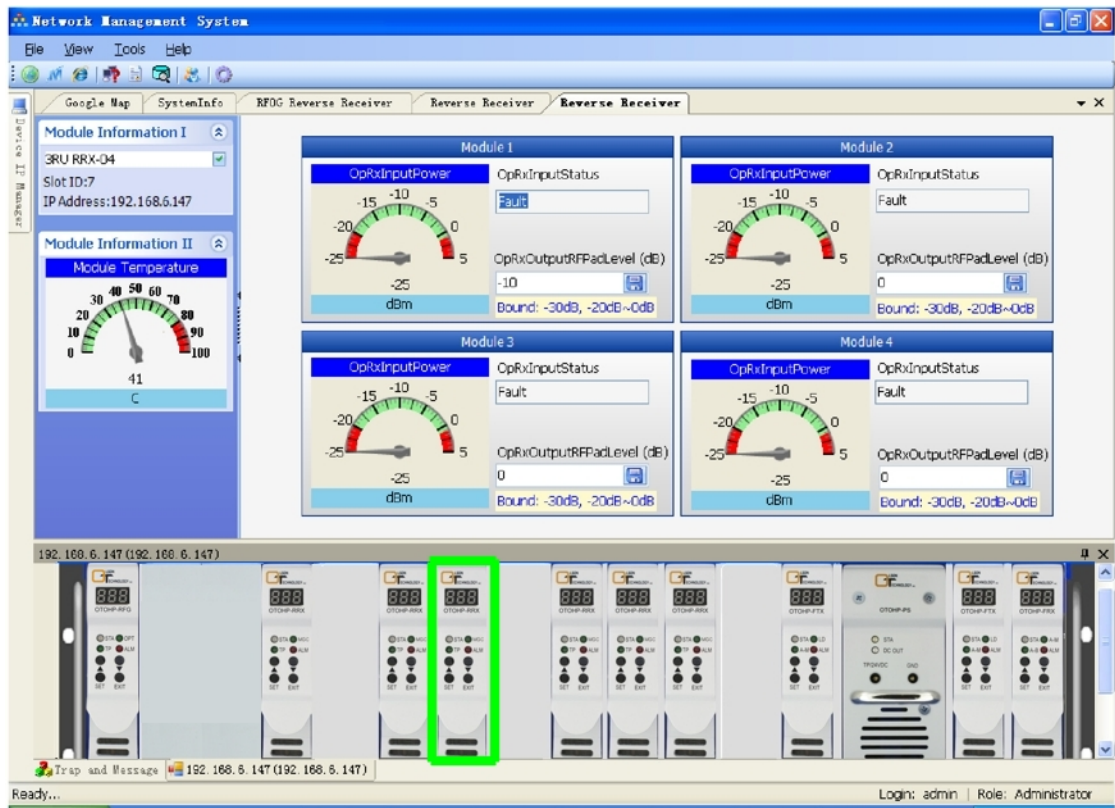


Alarm codes are displayed in trap and message form as shown below. Administrator access is required in order to change the system name, system contact, and system location.

| Code | Description   |
|------|---------------|
| 001  | Fan 1 Failure |
| 002  | Fan 2 Failure |
| 003  | Fan 3 Failure |
| 004  | Fan 4 Failure |
| 005  | Fan 5 Failure |
| 006  | Fan 6 Failure |
| 007  | Fan 7 Failure |
| 008  | Fan 8 Failure |

# OTOHP-RRX-04 Quad Reverse Return Path Receiver Module

This screen displays the status of the OTOHP-RRX-04 module(s).



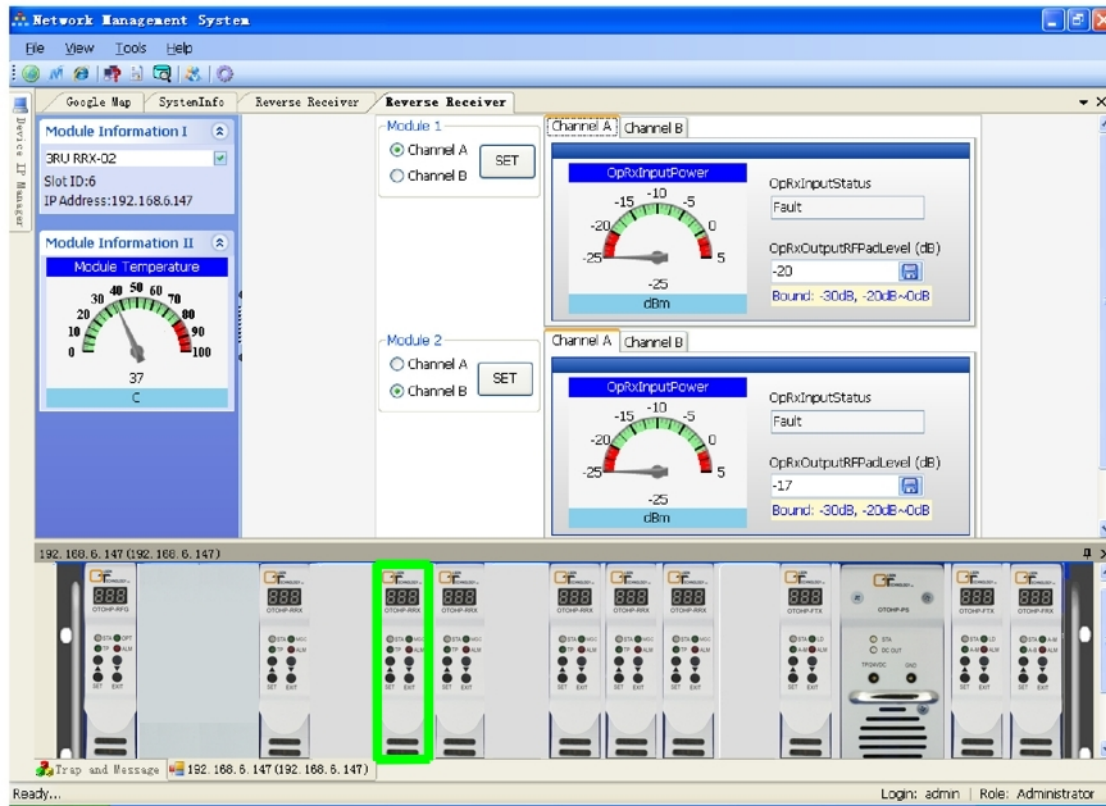
Alarm codes are displayed in trap and message form as shown below. Administrator access is required in order to change the RF pad level.

| Code | Description                                           |
|------|-------------------------------------------------------|
| 001  | Module 1 Input Optical Power Low (less than -20dBm)   |
| 002  | Module 1 Input Optical Power High (greater than 1dBm) |
| 003  | Module 2 Input Optical Power Low (less than -20dBm)   |
| 004  | Module 2 Input Optical Power High (greater than 1dBm) |
| 005  | Module 3 Input Optical Power Low (less than -20dBm)   |
| 006  | Module 3 Input Optical Power High (greater than 1dBm) |
| 007  | Module 4 Input Optical Power Low (less than -20dBm)   |
| 008  | Module 4 Input Optical Power High (greater than 1dBm) |
| 009  | Module Temperature High (greater than 80°C)           |

When the value is out the range of meter, double click the meter to change scale. When the window is closed, the system will save the new scale settings as the default.

## OTOHP-RRX-02 Dual Reverse Return Path Receiver Module

This screen displays the status of the OTOHP-RRX-02 module(s).



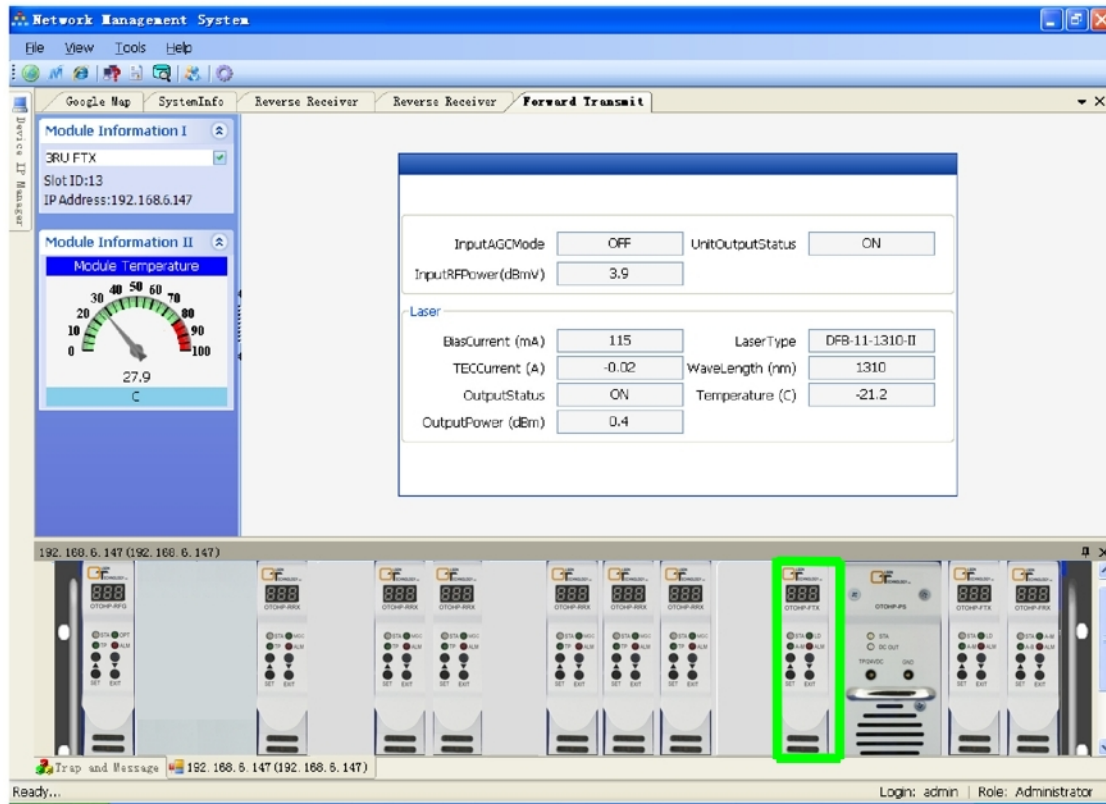
Alarm codes are displayed in trap and message form as shown below. Administrator access is required in order to change the RF pad level.

| Code | Description                                           |
|------|-------------------------------------------------------|
| 001  | Module 1 Input Optical Power Low (less than -20dBm)   |
| 002  | Module 1 Input Optical Power High (greater than 1dBm) |
| 003  | Module 2 Input Optical Power Low (less than -20dBm)   |
| 004  | Module 2 Input Optical Power High (greater than 1dBm) |
| 005  | Module 3 Input Optical Power Low (less than -20dBm)   |
| 006  | Module 3 Input Optical Power High (greater than 1dBm) |
| 007  | Module 4 Input Optical Power Low (less than -20dBm)   |
| 008  | Module 4 Input Optical Power High (greater than 1dBm) |
| 009  | Module Temperature High (greater than 80°C)           |

When the value is out the range of meter, double click the meter to change scale. When the window is closed, the system will save the new scale settings as the default.

## OTOHP-FTX Forward Path CATV Transmitter Module

This screen displays the status of the OTOHP-FTX module(s).



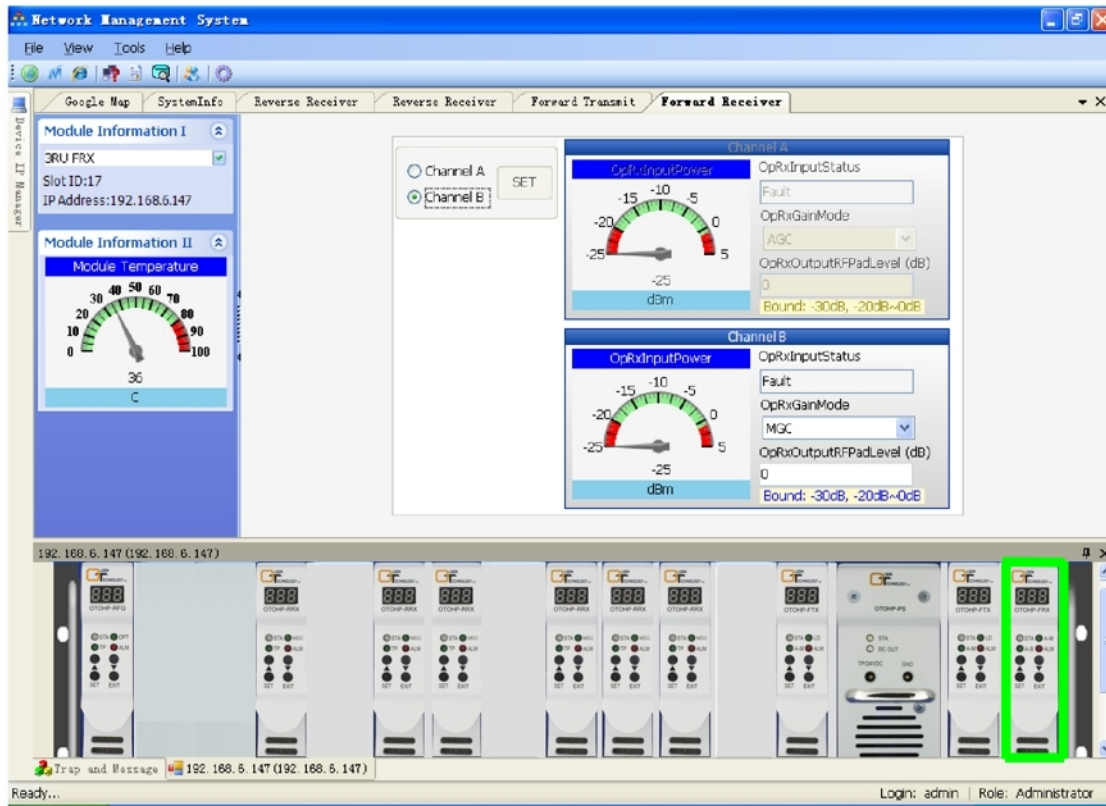
Alarm codes are displayed in trap and message form as shown below. The user is not allowed to change any of these parameters remotely.

| Code | Description                                            |
|------|--------------------------------------------------------|
| 001  | Output Optical Power Low (less than 30% of normal)     |
| 002  | Output Optical Power High (greater than 30% of normal) |
| 003  | LD Bias Current High (greater than 100mA)              |
| 004  | LD Temperature High (greater than 30°C)                |
| 005  | RF Input Low (less than 7dBm)                          |
| 006  | Module Temperature High (greater than 80°C)            |
| 007  | TEC Current High (greater than 1A)                     |
| 008  | RF Input High (greater than 7dBm)                      |

When the value is out the range of meter, double click the meter to change scale. When the window is closed, the system will save the new scale settings as the default.

## OTOHP-FRX Forward Path Receiver Module

This screen displays the status of the OTOHP-FRX module(s).



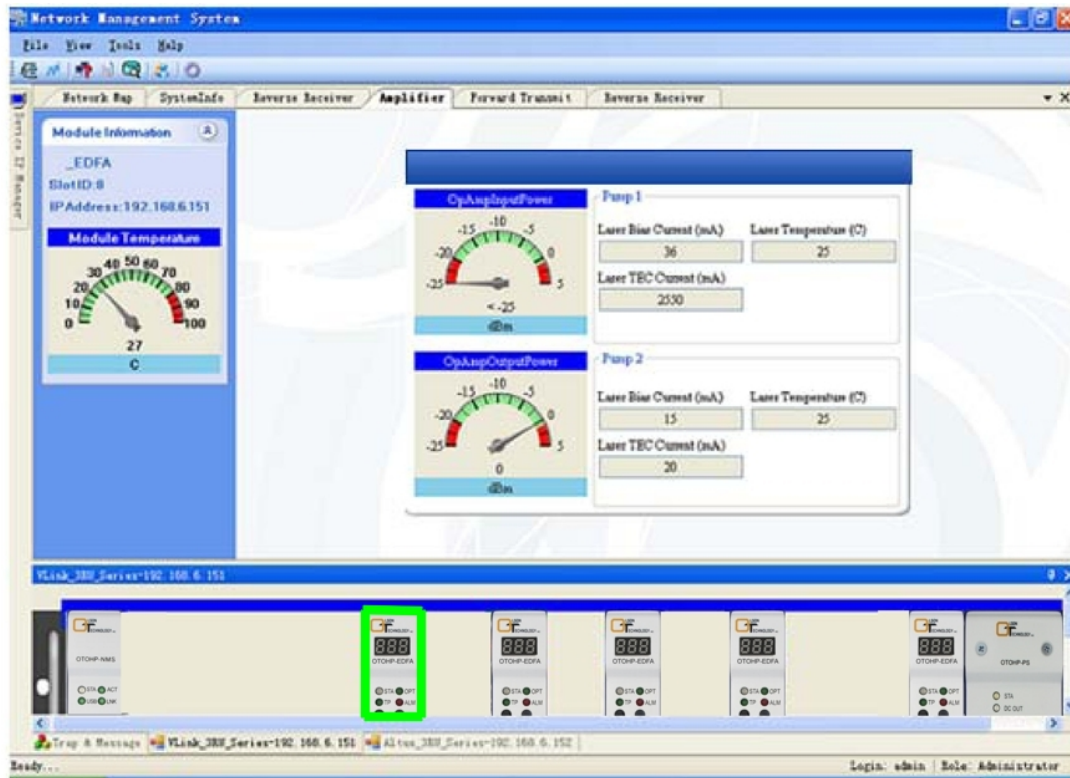
Alarm codes are displayed in trap and message form as shown below. Administrator access is required to switch channels or change the Gain mode.

| Code | Description                       |
|------|-----------------------------------|
| 001  | Module 1 Input Optical Power Low  |
| 002  | Module 1 Input Optical Power High |
| 003  | Module 2 Input Optical Power Low  |
| 004  | Module 2 Input Optical Power High |
| 005  | Module Temperature High           |

When the value is out the range of meter, double click the meter to change scale. When the window is closed, the system will save the new scale settings as the default.

## OTOHP-EDFA Module

This screen displays the status of the OTOHP-EDFA module(s).



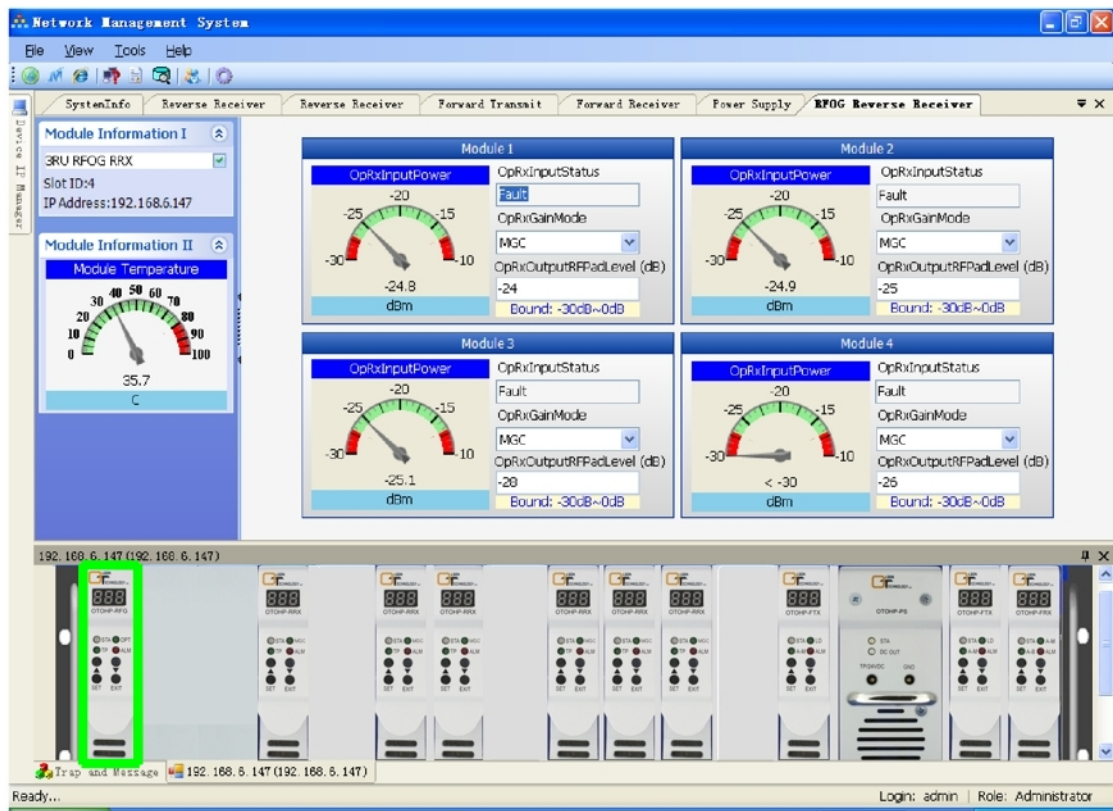
Alarm codes are displayed in trap and message form as shown below. The user is not allowed to change any of these parameters remotely.

| Code | Description               |
|------|---------------------------|
| 001  | Input Optical Power Low   |
| 002  | Input Optical Power High  |
| 003  | Output Optical Power Low  |
| 004  | Output Optical Power High |
| 005  | Pump-1 Drive Current High |
| 006  | Pump-2 Drive Current High |
| 007  | Pump-1 TEC Current High   |
| 008  | Pump-2 TEC Current High   |
| 009  | Pump-1 Temperature High   |
| 010  | Pump-2 Temperature High   |
| 011  | Module Temperature High   |
| 012  | Communication Error       |

When the value is out the range of meter, double click the meter to change scale. When the window is closed, the system will save the new scale settings as the default.

OTOHP-RFG Quad RFoG Receiver Module

This screen displays the status of the OTOHP-RFG module(s).



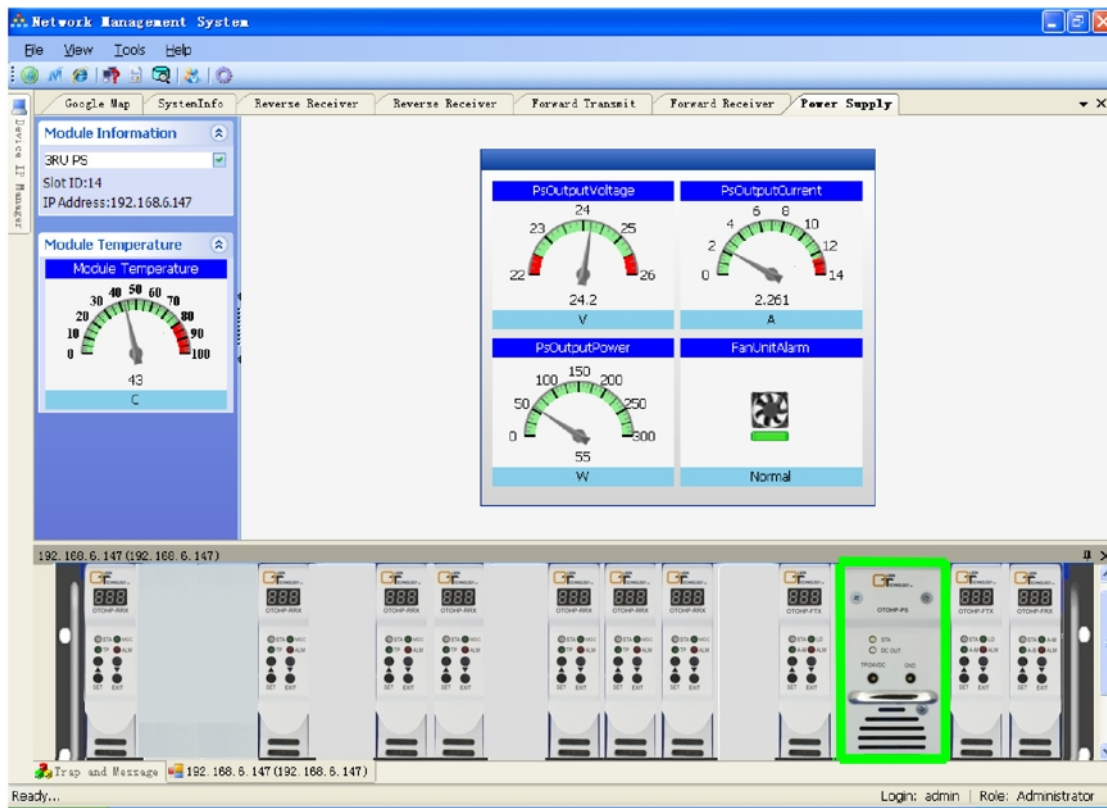
Alarm codes are displayed in trap and message form as shown below. Administrator access is required in order to change the RF pad level and the Gain type (AGC/MGC).

| Code | Description                       |
|------|-----------------------------------|
| 001  | Module 1 Input Optical Power Low  |
| 002  | Module 1 Input Optical Power High |
| 003  | Module 2 Input Optical Power Low  |
| 004  | Module 2 Input Optical Power High |
| 005  | Module 3 Input Optical Power Low  |
| 006  | Module 3 Input Optical Power High |
| 007  | Module 4 Input Optical Power Low  |
| 008  | Module 4 Input Optical Power High |
| 009  | Module Temperature High           |

When the value is out the range of meter, double click the meter to change scale. When the window is closed, the system will save the new scale settings as the default.

## OTOHP-PS Power Supply Module

This screen displays the status of the OTOHP-PS power supply module(s).



Alarm codes are displayed in trap and message form as shown below. The user is not allowed to change any of these parameters remotely.

| Code | Description                               |
|------|-------------------------------------------|
| 001  | DC Out Low (less than 22.8V)              |
| 002  | DC Out High (great than 25.2V)            |
| 003  | Fan Alarm                                 |
| 004  | Module Temperature High (great than 85°C) |

When the value is out the range of meter, double click the meter to change scale. When the window is closed, the system will save the new scale settings as the default.

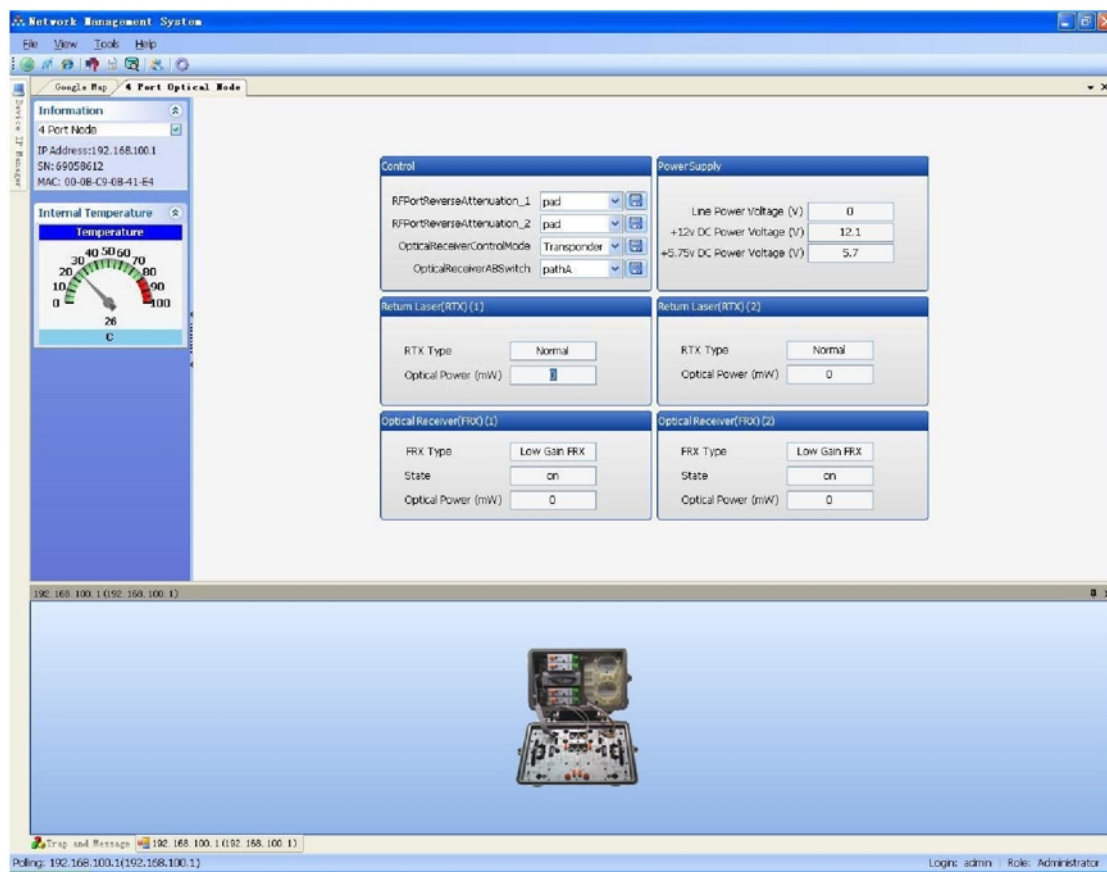
## 1RU SERIES DEVICE

### 1RU Transmitter



The laser region displays the laser parameters (on/off control). The RF region allows the user to set AGC/MGC control and sets/displays the gain value. The alarm list display the list of active alarms for the device. The user may also set the device name, contact, and device location.

## Four-Port Optical Node

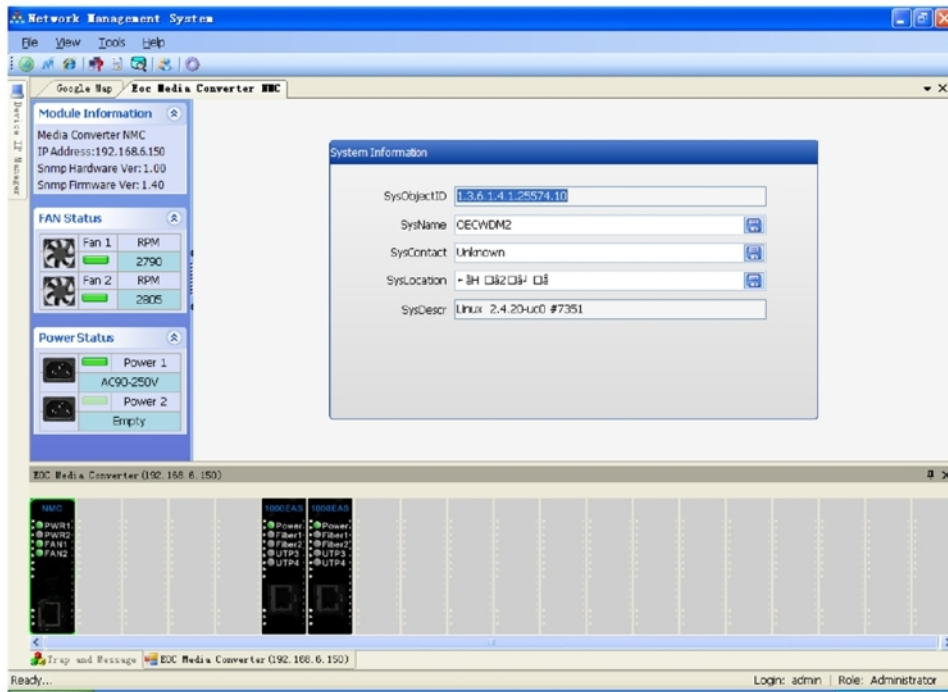


Note: When the state of RTX and FRX changes to disabled, there is no 4-port optical node installed.

## EOC MEDIA CONVERTERS

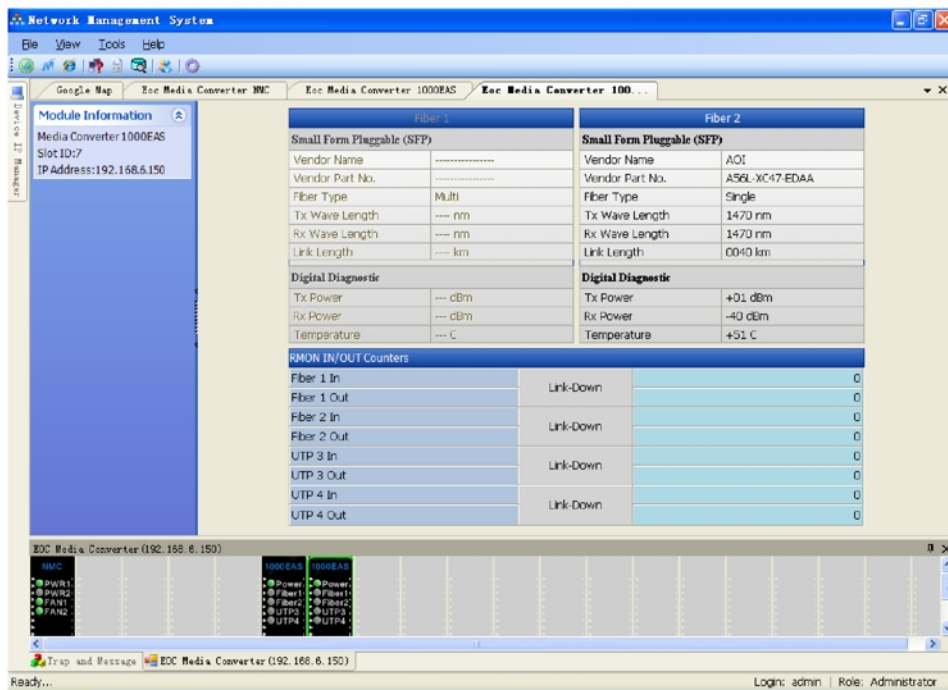
### NMC

Displays the device IP address, hardware version, firmware version, fan status and RPM (revolutions per minute), and power status.



### 1000EAS

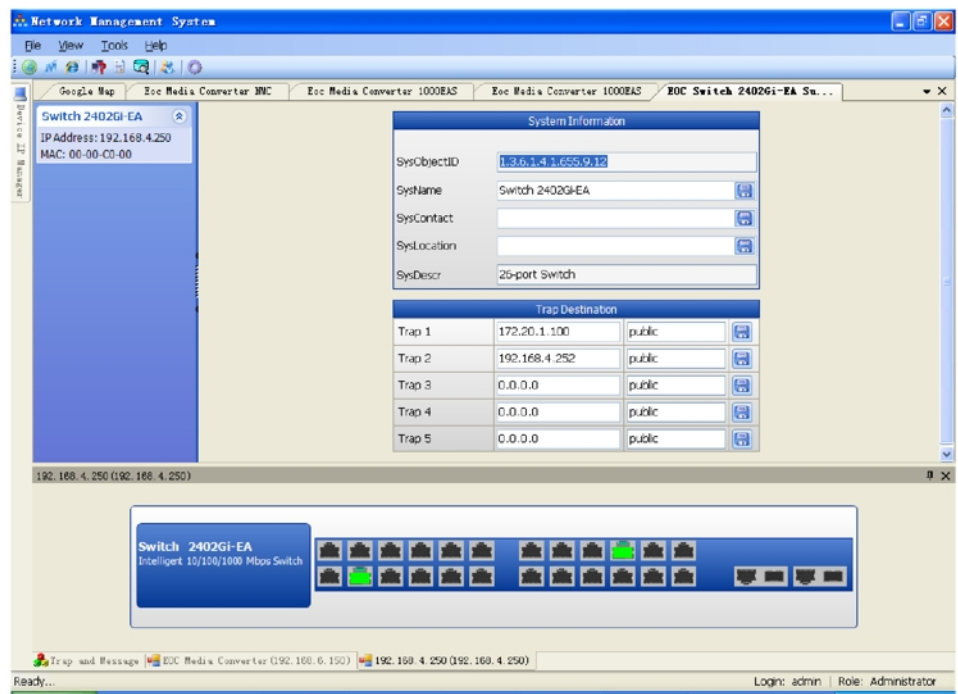
Display the SFP (Small Form Pluggable) module parameters and ports RMON IN/OUT counters.



# EOC SWITCH

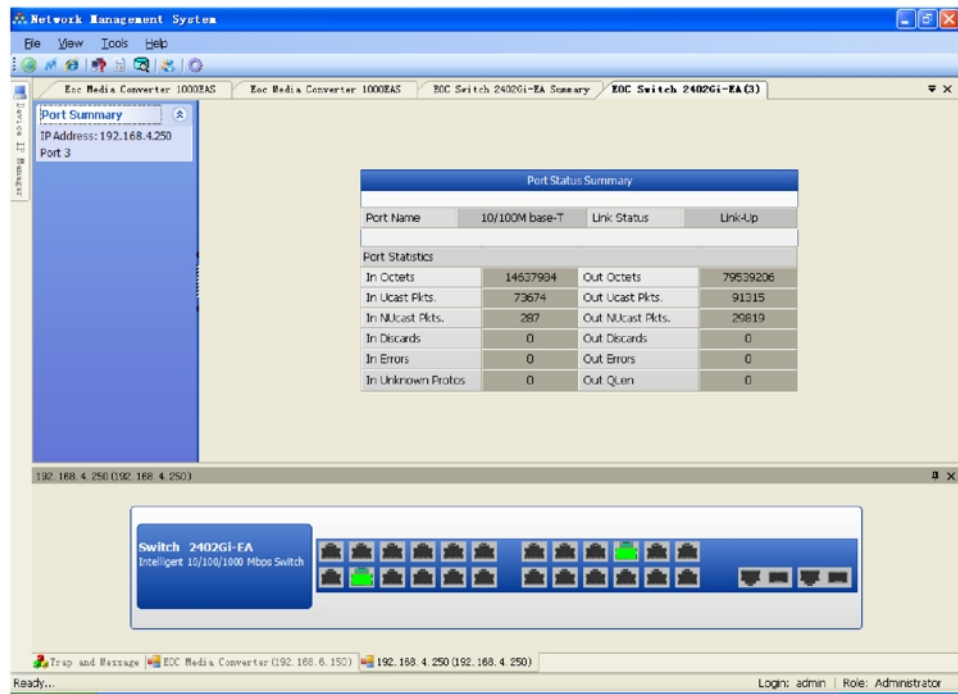
## Chassis

Displays the device MAC and trap destination.



## Ports

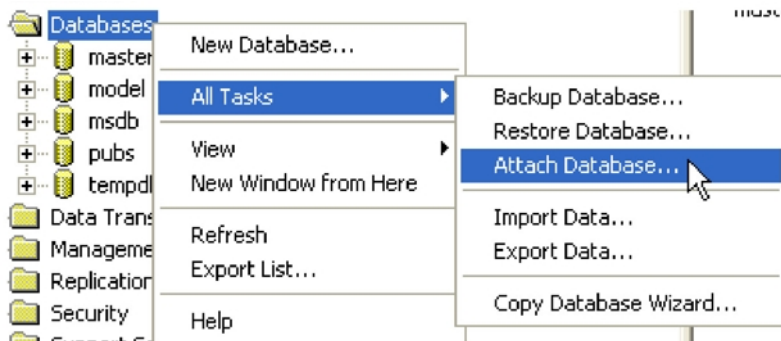
Displays the selected port status.



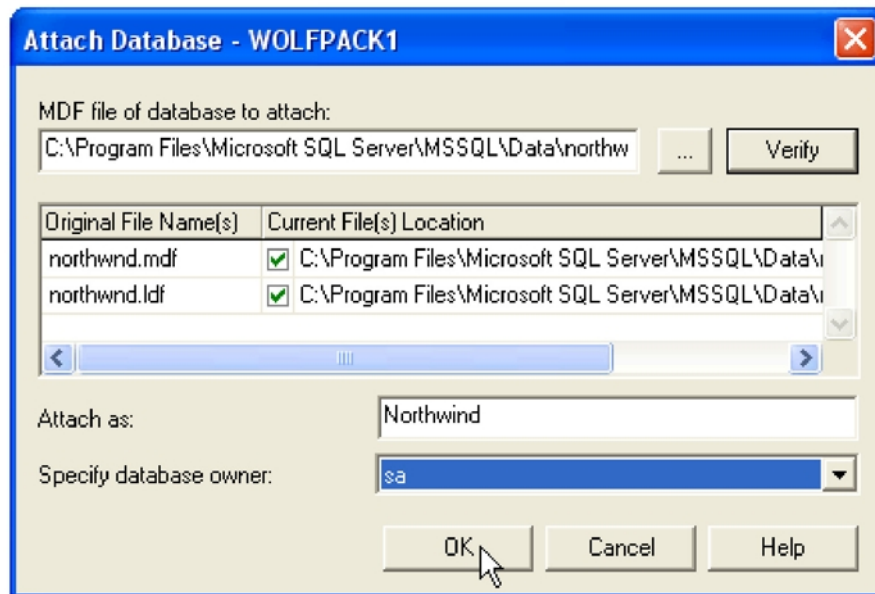
## ATTACHING A DATABASE FILE TO SQL SERVER

### SQL Server 2000

- 1) In Enterprise Manager. Right click on the database and select “All Tasks” – “Attach database.”



- 2) The “Attach Database” screen pops up. Hit the ellipses button to search for the .mdf (primary data file) of the database to attach. Once selected, all files belonging to the database will appear. Choose the name of the database to attach as, specify the database owner then click the “OK” button. You will receive a notification that the database has been attached successfully. Click “OK” to continue.



### SQL Server 2005

- 1) Open the SQL Server Management Studio and connect to the desired server.
- 2) Right-click on “Databases” and select “Attach.”
- 3) Click the “Add” button and select the database file to be attached.
- 4) Click “Ok.”

