

Industrial Ethernet Products Management Utility

Open-Vision v3.0

User's Manual

**Version 1.0
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ORing Industrial Networking Corp.

4F., NO.3, Lane 235, Baociao Rd.Sindian City,
Taipei County 23145 Taiwan, R.O.C.

Tel: + 886 2 2918 3036

Fax: + 886 2 2918 3084

Website: www.oring-networking.com

E-mail: support@oring-networking.com



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Getting to Know Your Switch

1.1 About the Open-Vision v3.0

Open-Vision v3.0 is ORing Industrial Networking Corp in 2010 year newly issued the powerful software utility, his function surmounts. Open-Vision v3.0 includes four utilities "Commander"、"Topology view"、"Host monitor"、MIB Brower, With Open-Vision v3.0 Commander, user can set parameters to multiple switches at the same time. provides a powerful interface for users to manage all switches in the network.

Open-Vision v3.0 is not only a powerful utility for users to configure but also a useful utility for monitoring. Users can monitor switches' status via Host monitor. When the monitored switches fail, the failure information will be displayed on Host monitoring interface.



Open-Vision v3.0

1.2 Install Java machine

Please make sure if your computer if install JRE (if not , Please download Java Runtime Environment (JRE) 6 Update 3 from SUN

<http://java.sun.com/javase/downloads/index.jsp>.



1.3 System requirements

Minimum System Requirements

- Pentium IV or above (2.0 MHZ or above)
- VGA Monitor with 1024 x 768 resolution
- WINDOWS NT, 2K, 2K3, XP
- 512 MB RAM (1 GB recommended)
- Java 2 Runtime Environment version 1.5
- Internet Explorer 6.0 or higher

Supported Network Protocols

- TCP / IP
- UDP
- SNMP

Operating System

Windows

- NT
- 2000
- 2003
- XP
- Vista
- Windows 7

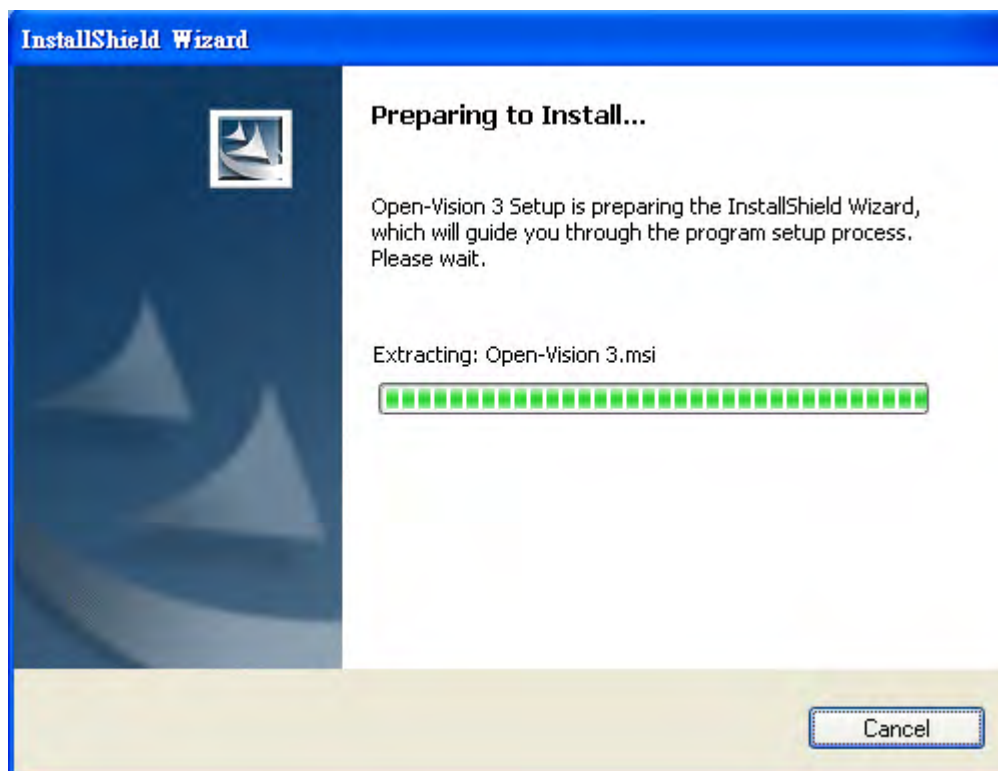
1.4 Prepare to install Open-Vision

Before using Open-Vision, users need to install the utility first.
Double click Open-Vision.exe, started the install process.



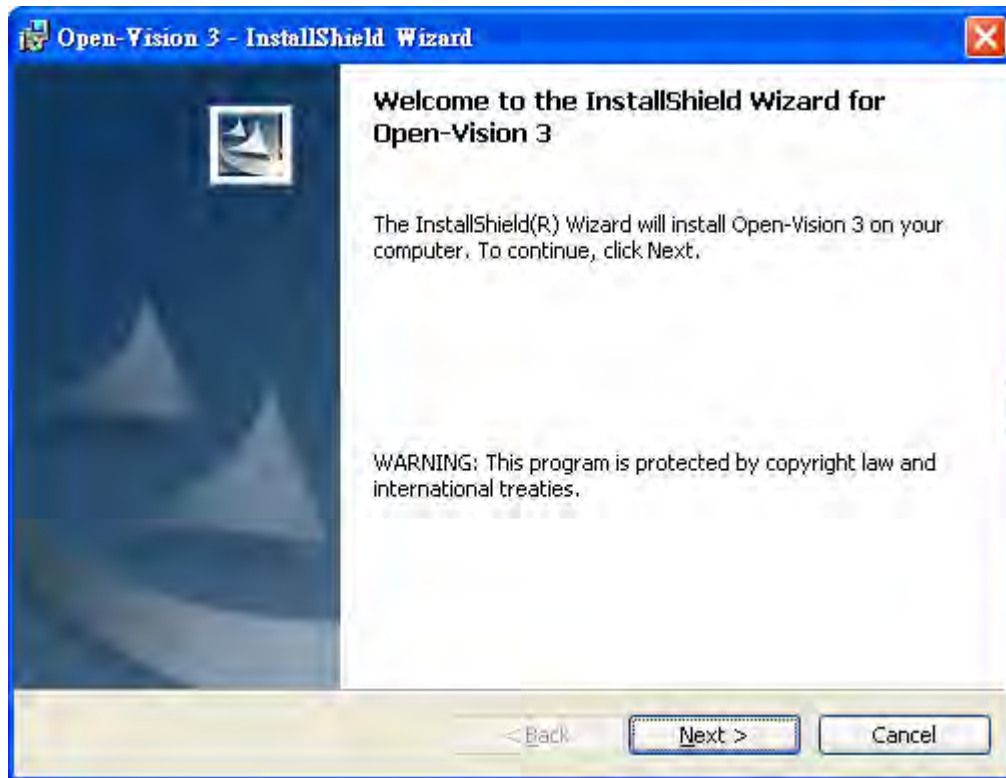
Step 1

After execution of Open-Vision v3.0.exe, the Operation System start to install Open-Vision v3.0



Step 2

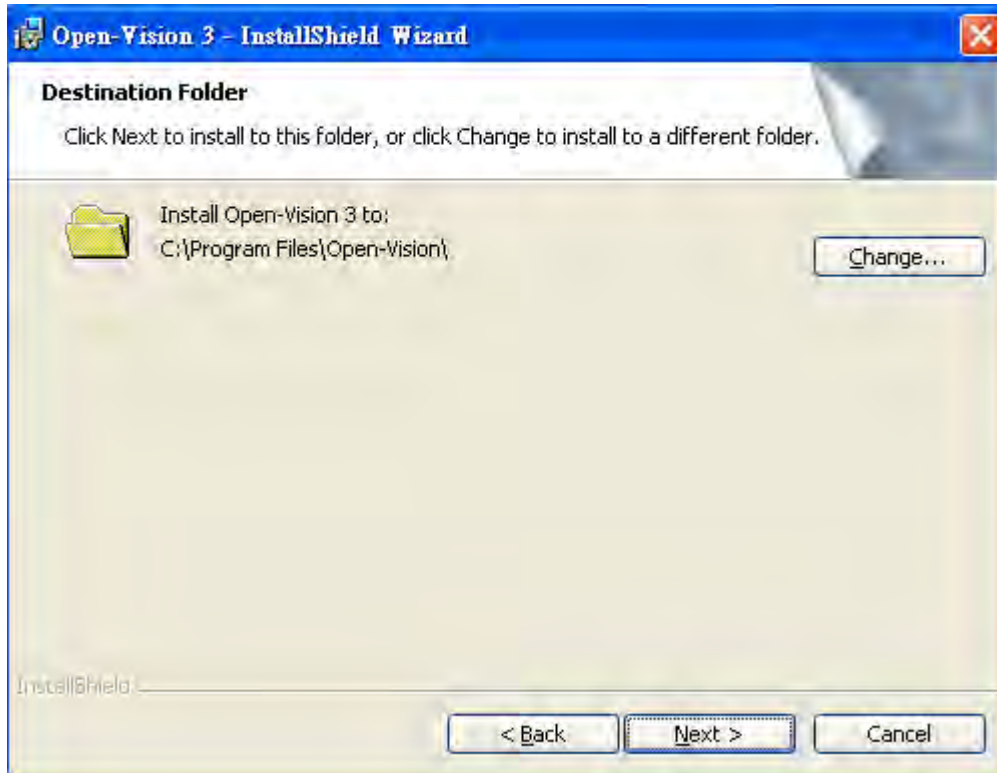
Click [Next] to continue setup process.




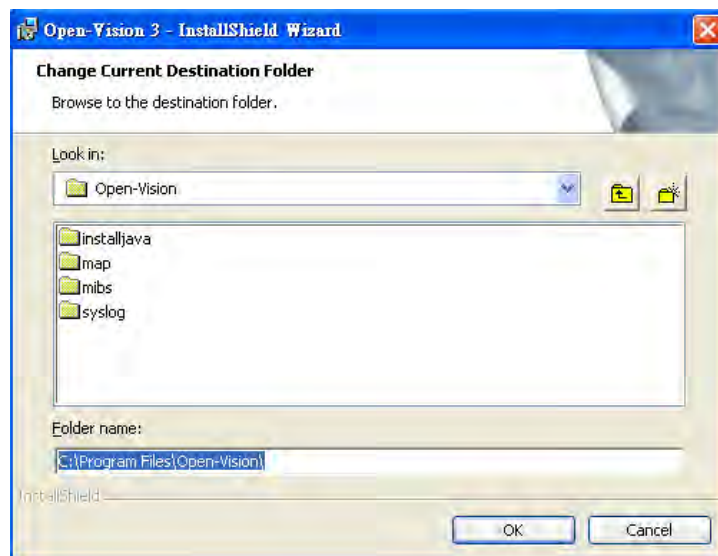
Step 3

Users are able to change the path that they want to install in.

Click  to change the path.

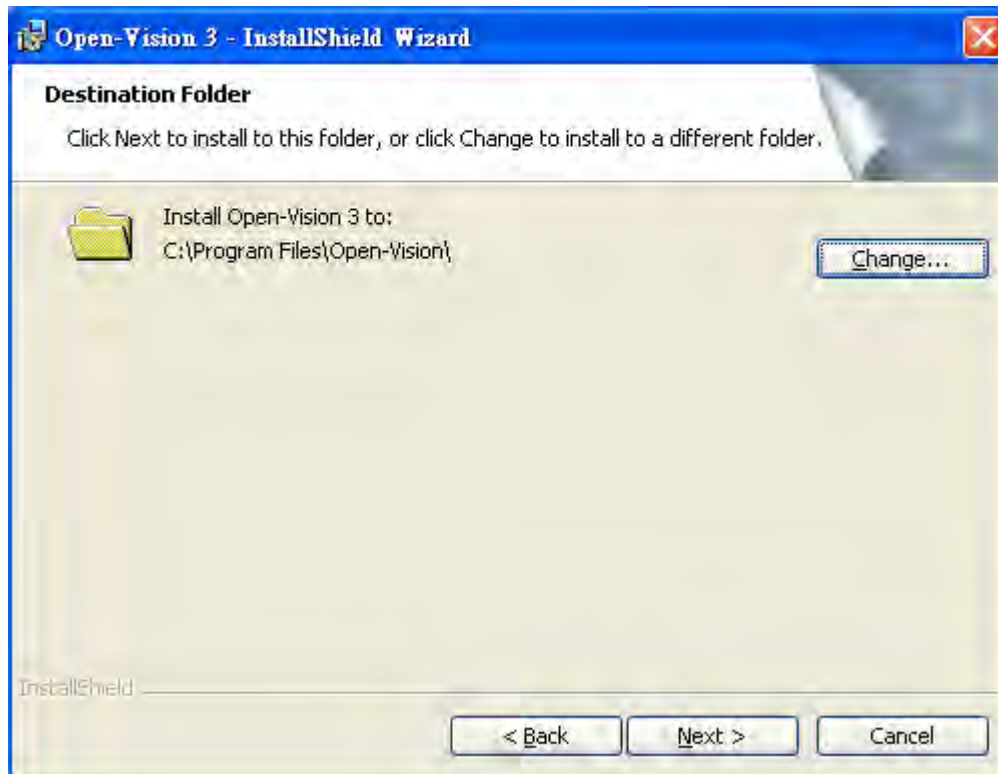


When click , users can configure the path that they want to install from the pop-up windows.



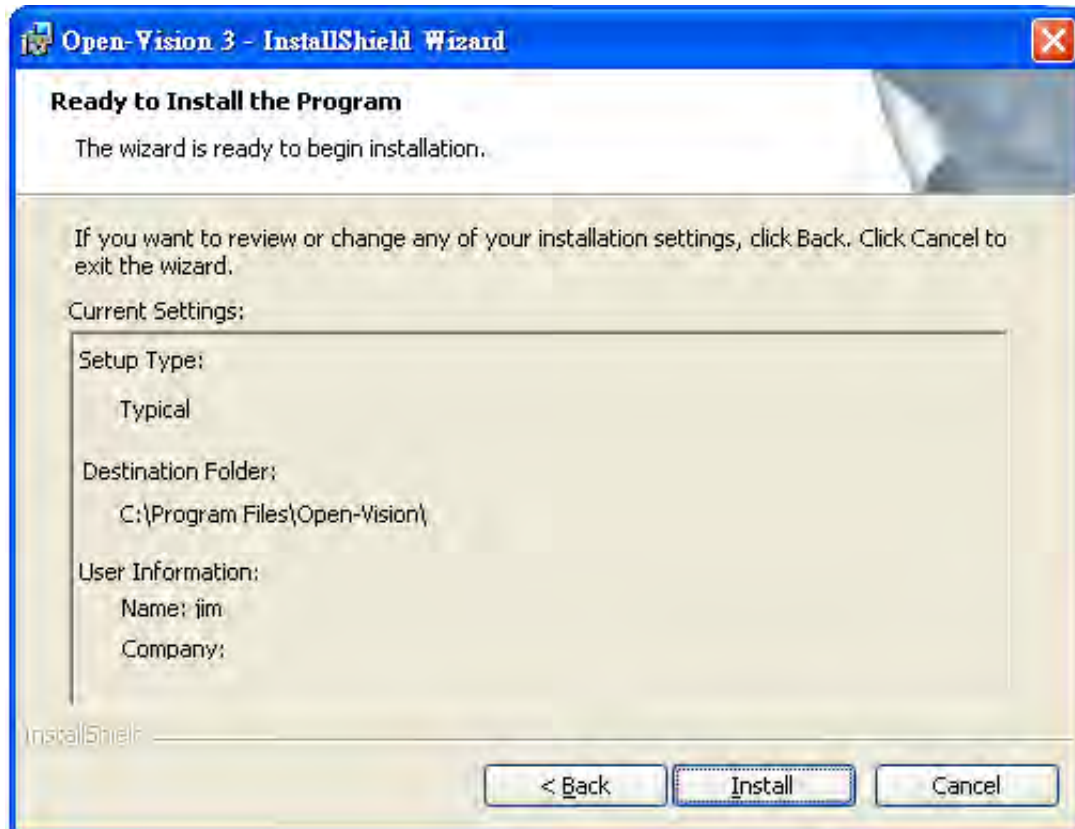
Step 4

Completed the path, and then click [Next]



Step 5

Please double check the installing information of this page. If everything is correct, then click “Install.”



Step 6

When the Installation process is finished, click “Finish” to complete the Installing process.



Apply Open-Vision Commander to Switch Connection

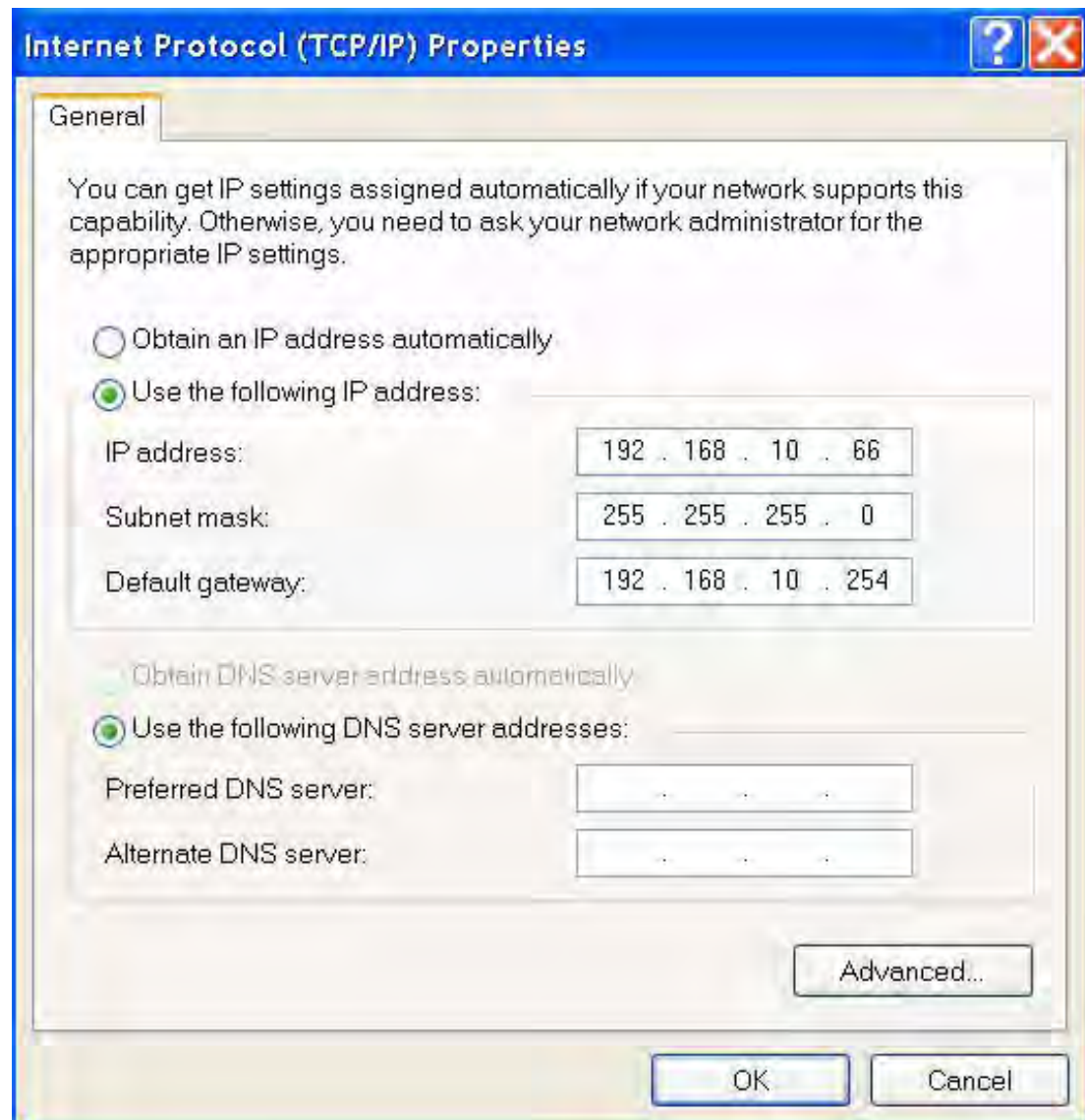
2.1 Getting start to use Open-Vision Commander

Select 「**Start**」 → 「**All Programs**」 → 「**Open-Vision**」 → 「**commander**」 to execute Open-Vision v3.0



2.2 Make sure PC's Network setting

First of all, double check the configuration of the PC's IP address, Subnet mask, Default gateway...etc., and make sure the PC is connected to Default Gateway and the switch you wish to connect properly.



2.3 How to discover different IP domain device?

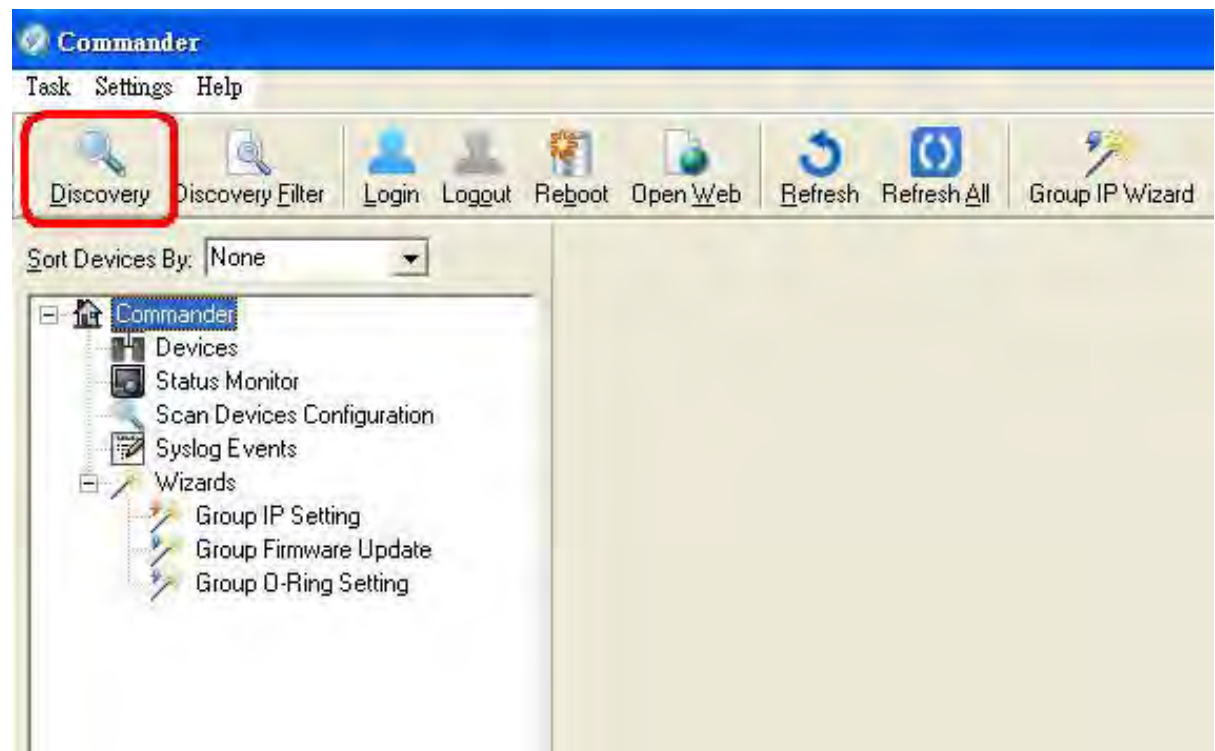
2.3.1 In the same broadcast domain

When the monitored PC and the managed switches are within the same broadcast domain, as illustrated by Figure 1-1,

Figure 1-1



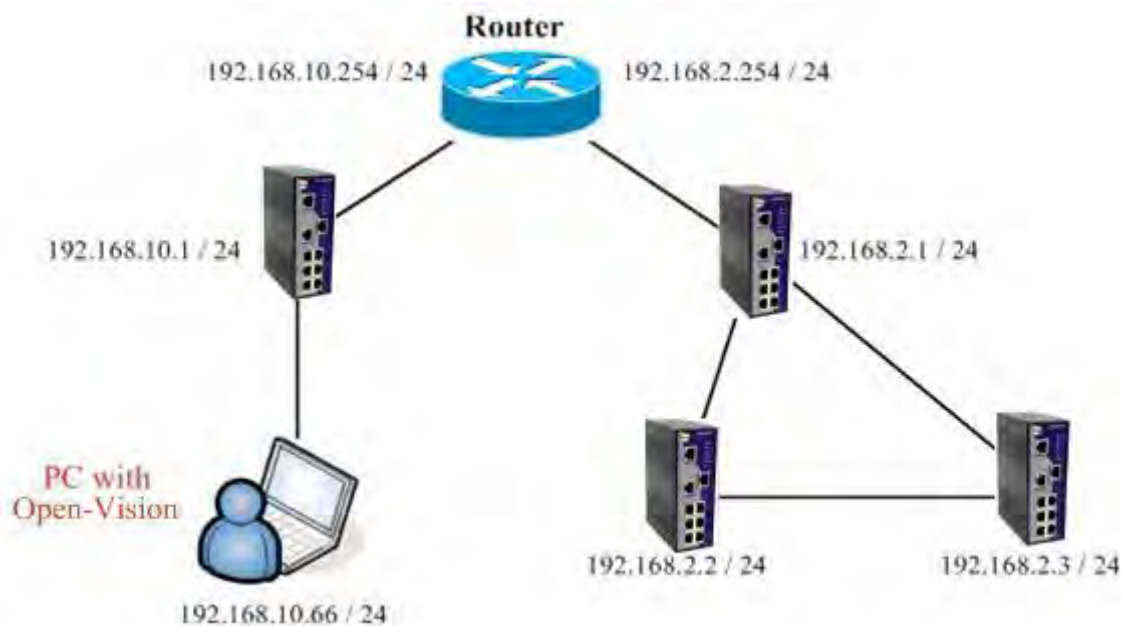
Click 「Discovery」 directly on the Open-Vision to search the switches.



2.3.2 In the different broadcast domain

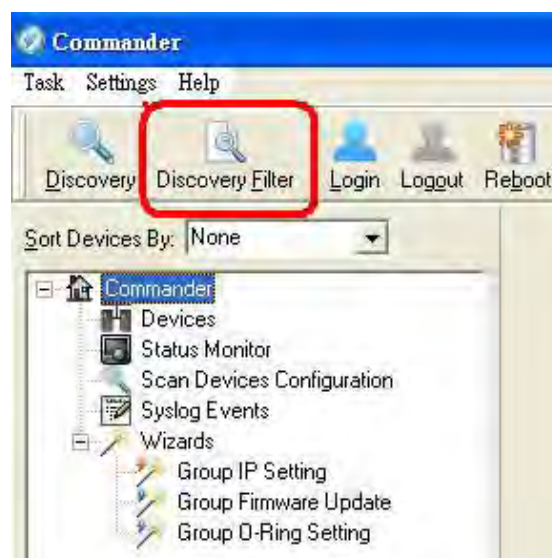
If the monitored PC and the managed switches are in different broadcast domain, as illustrated by Figure 2-2, then users need to use the advanced search function to search the switches.

Figure 2-2

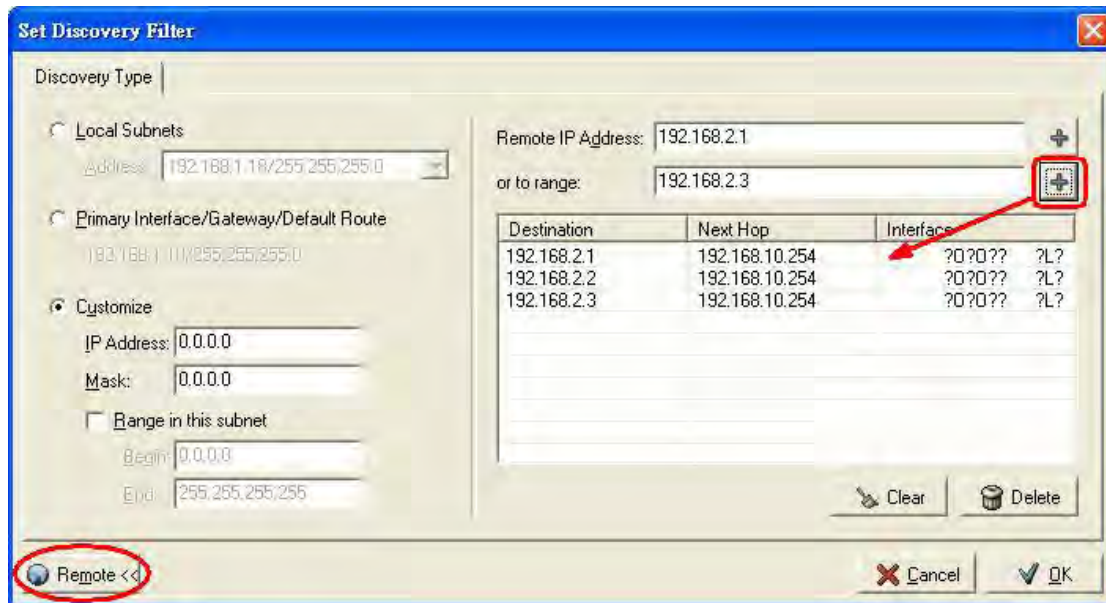



Make sure the PC is connected to Default Gateway and the switch you wish to connect properly.

If the Network is proper, open Open-Vision, and click “Discovery Filter.”



Select "Remote" and a window open up as shown below.



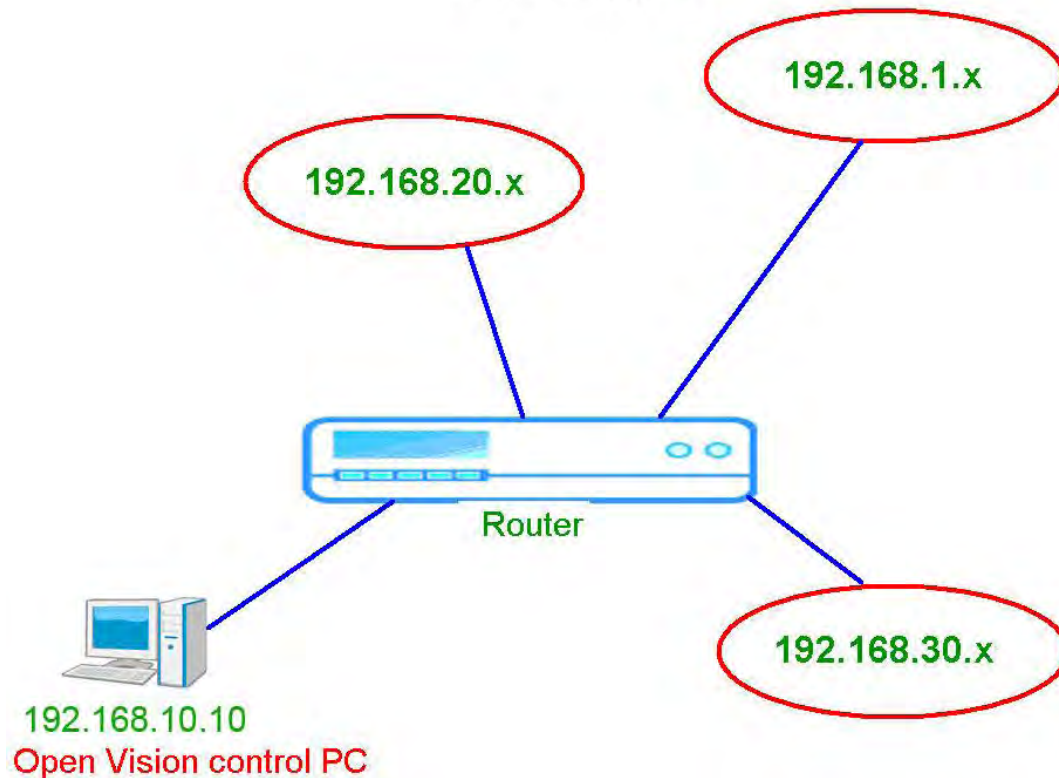
Insert the Switch IP Address range you wish to search and click , the IP address will be added automatically as shown in the diagram above. Click "ok" to start the searching of switch.

And the switches in different network will be found by Open-Vision.

Use the example:

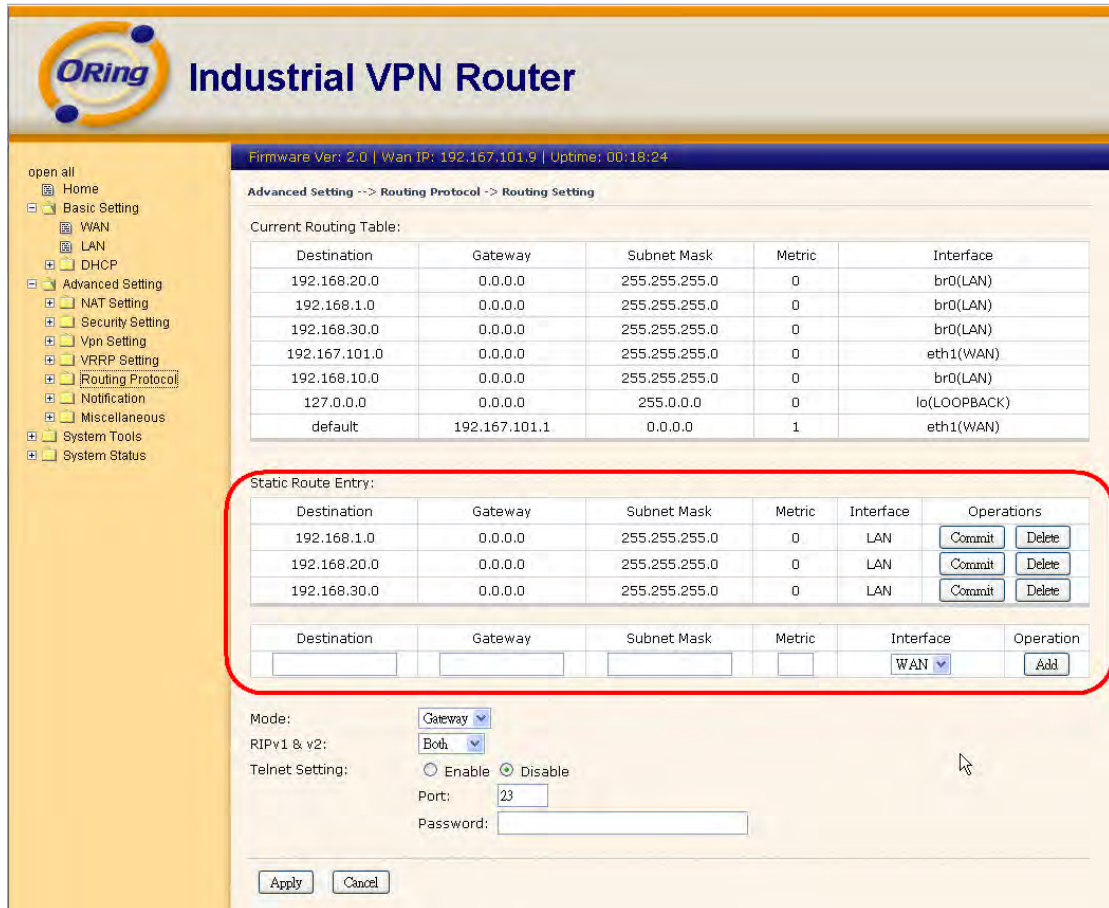
Use open vision tool , through Router controls different Domain IP ORing Switch.

Topology 2



We must set up Routing Protocol in Router, add we wanted control domain (192.168.1 x, 192.168.20 x, 192.168.30 x) ,Set up finish, Control PC will start routing, after router will finish routing, " Control PC" Can connect as 192.168.1.x, 192.168.20.x, 192.168.30.x, three different domain, open vision too can at the same time management three different domain ORing switch .

- 1、 Config router default Routing function , Add 192.168.1.0 、 192.168.20.0 、 192.168.30.0, three kinds of different domain



ORing Industrial VPN Router

Firmware Ver: 2.0 | Wan IP: 192.167.101.9 | Uptime: 00:18:24

Advanced Setting --> Routing Protocol --> Routing Setting

Current Routing Table:

Destination	Gateway	Subnet Mask	Metric	Interface
192.168.20.0	0.0.0.0	255.255.255.0	0	br0(LAN)
192.168.1.0	0.0.0.0	255.255.255.0	0	br0(LAN)
192.168.30.0	0.0.0.0	255.255.255.0	0	br0(LAN)
192.167.101.0	0.0.0.0	255.255.255.0	0	eth1(WAN)
192.168.10.0	0.0.0.0	255.255.255.0	0	br0(LAN)
127.0.0.0	0.0.0.0	255.0.0.0	0	lo(LOOPBACK)
default	192.167.101.1	0.0.0.0	1	eth1(WAN)

Static Route Entry:

Destination	Gateway	Subnet Mask	Metric	Interface	Operations
192.168.1.0	0.0.0.0	255.255.255.0	0	LAN	Commit Delete
192.168.20.0	0.0.0.0	255.255.255.0	0	LAN	Commit Delete
192.168.30.0	0.0.0.0	255.255.255.0	0	LAN	Commit Delete

Destination	Gateway	Subnet Mask	Metric	Interface	Operation
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	WAN	Add

Mode:

RIPv1 & v2:

Telnet Setting: ☐ Enable ☒ Disable

Port:

Password:

[Apply](#) [Cancel](#)

- 2、 Use Ping order, " Ping" ORing Switch of three kinds of different Domain, can all join normal Link, Routing succeeds,

Command : `C:\Ping 192.168.1.10 -t`

```
C:\Documents and Settings\Administrator>ping 192.168.2.10 -t

Pinging 192.168.1.10 with 32 bytes of data:

Reply from 192.168.1.10: bytes=32 time=3ms TTL=29
Reply from 192.168.1.10: bytes=32 time=3ms TTL=29
Reply from 192.168.1.10: bytes=32 time=3ms TTL=29
Reply from 192.168.1.10: bytes=32 time=3ms TTL=29
Reply from 192.168.1.10: bytes=32 time=3ms TTL=29
Reply from 192.168.1.10: bytes=32 time=3ms TTL=29
Reply from 192.168.1.10: bytes=32 time=3ms TTL=29
Reply from 192.168.1.10: bytes=32 time=3ms TTL=29
```

Command : C:\Ping 192.168.20.20 -t

```
C:\Documents and Settings\Administrator>ping 192.168.20.20 -t

Pinging 192.168.20.20 with 32 bytes of data:

Reply from 192.168.20.20: bytes=32 time=9ms TTL=29
Reply from 192.168.20.20: bytes=32 time=3ms TTL=29
Reply from 192.168.20.20: bytes=32 time=3ms TTL=29
Reply from 192.168.20.20: bytes=32 time=3ms TTL=29
Reply from 192.168.20.20: bytes=32 time=3ms TTL=29
Reply from 192.168.20.20: bytes=32 time=3ms TTL=29
Reply from 192.168.20.20: bytes=32 time=3ms TTL=29
Reply from 192.168.20.20: bytes=32 time=3ms TTL=29
```

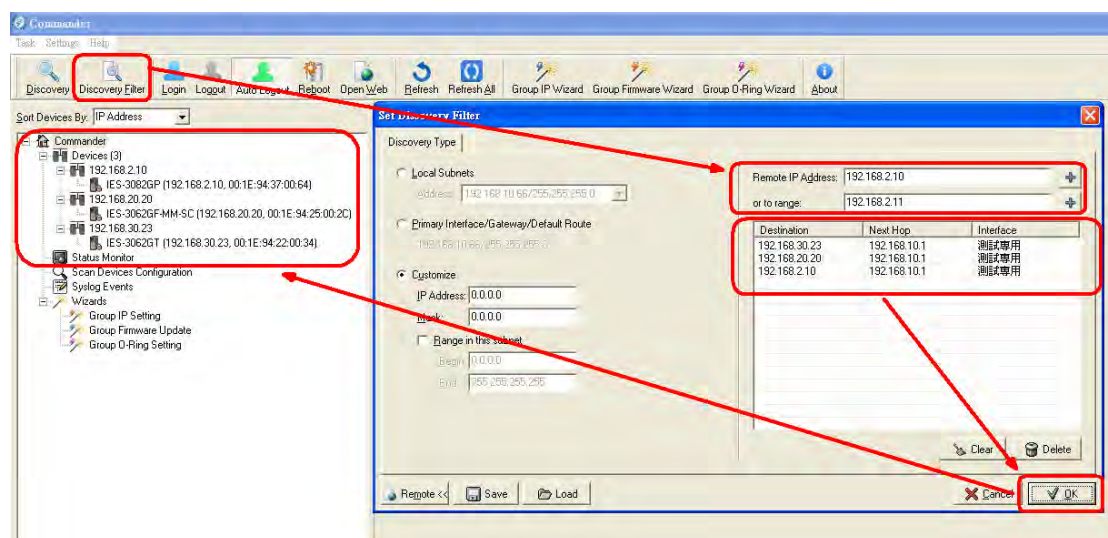
Command : C:\Ping 192.168.20.20 -t

```
C:\Documents and Settings\Administrator>ping 192.168.30.23 -t

Pinging 192.168.30.23 with 32 bytes of data:

Reply from 192.168.30.23: bytes=32 time=10ms TTL=29
Reply from 192.168.30.23: bytes=32 time=3ms TTL=29
Reply from 192.168.30.23: bytes=32 time=3ms TTL=29
Reply from 192.168.30.23: bytes=32 time=3ms TTL=29
Reply from 192.168.30.23: bytes=32 time=3ms TTL=29
Reply from 192.168.30.23: bytes=32 time=3ms TTL=29
Reply from 192.168.30.23: bytes=32 time=3ms TTL=29
Reply from 192.168.30.23: bytes=32 time=3ms TTL=29
```

- 3、 Start open vision, uses Discovery Filter Function, input wanted to scan Domain, as picture shows Scanned and finished, pushed OK, Open Vision and succeeded in detecting and examined to three kinds of different Domain " ORing switch"



2.4 Open-Vision Main interface

The Open-Vision main interface shows as below:

System Bar

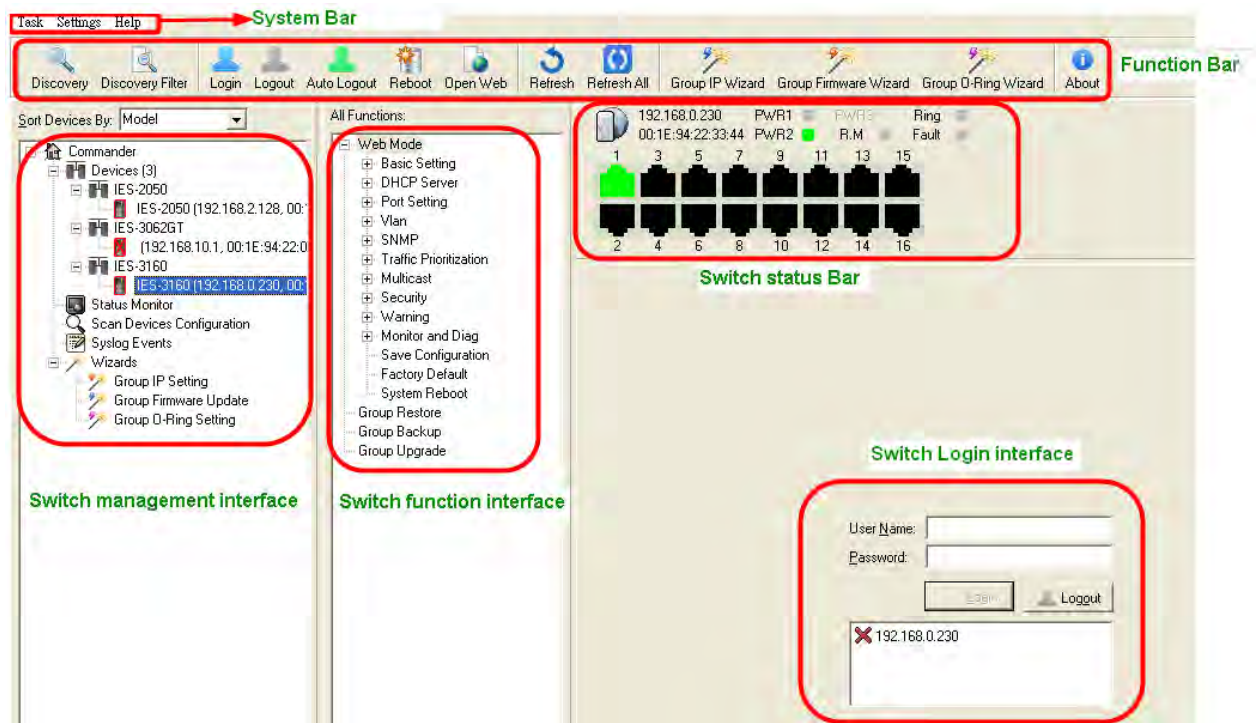
Function Bar

Switch Management Interface

Switch Function Interface

Switch Status Interface

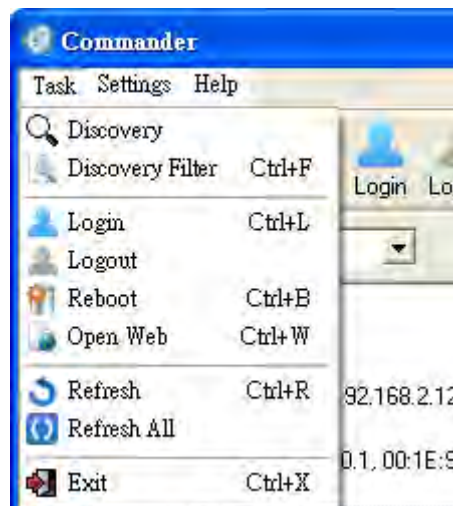
Switch Configuration Interface



System Bar

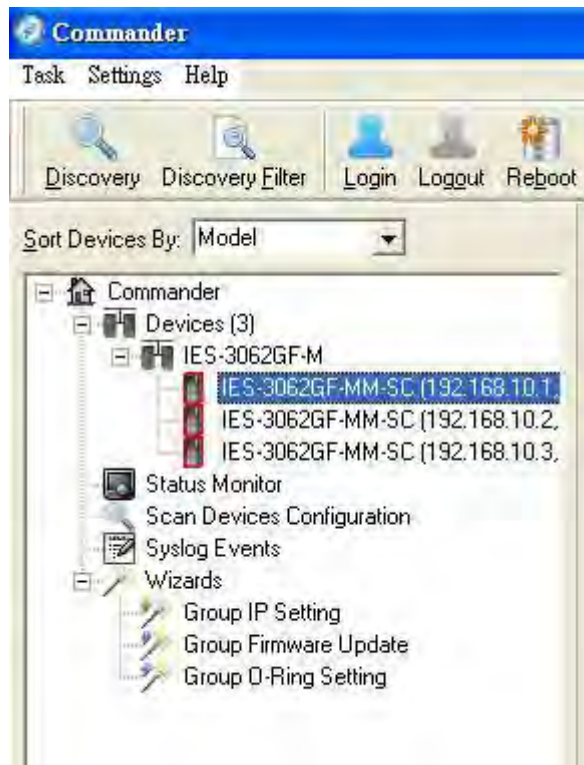
3.1 Task

User can select task to show Open-Vision tasks menu.



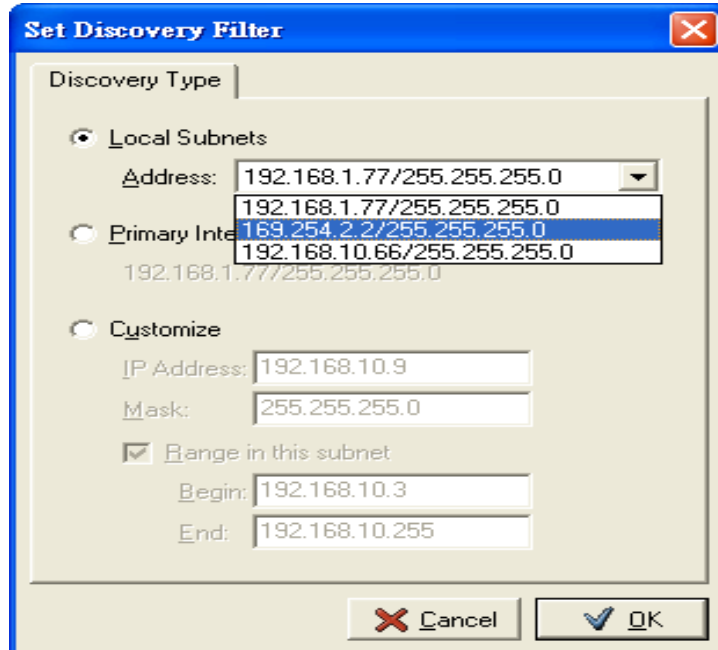
Task	Hotkey	Description
Discovery	Ctrl + D	Click Discovery or Ctrl + D to discover the switches on the same subnet. Open-Vision will display all discovered switches on the management interface. Open-Vision discovers switched depend on discovery filter shows as next task. Note: all switches can be the same IP address. Open-Vision can discover and change IP by the Group IP Setting function.

Discovering switches displayed on management interface.



Task	Hotkey	Description
Discovery Filter	Ctrl + F	<ul style="list-style-type: none"> Local Subnets: Open-Vision will only discover all switches connect to the specific IP of NIC that user select. Primary Interface/Gateway/Default Route: Open-Vision will select a primary interface to discover switches. Customize: Set up the subnet to filter, user also can define a smaller rage in the subnet to filter. When use Remote function, users are able to use specific IP addresses to discover switches.

- Local Subnets: Open-Vision will only discover all switches connect to the specific IP of NIC that user select.



Set Discovery Filter

Discovery Type

☒ Local Subnets

Address: 192.168.1.77/255.255.255.0

☐ Primary Interface

☐ Customize

IP Address: 192.168.10.9

Mask: 255.255.255.0

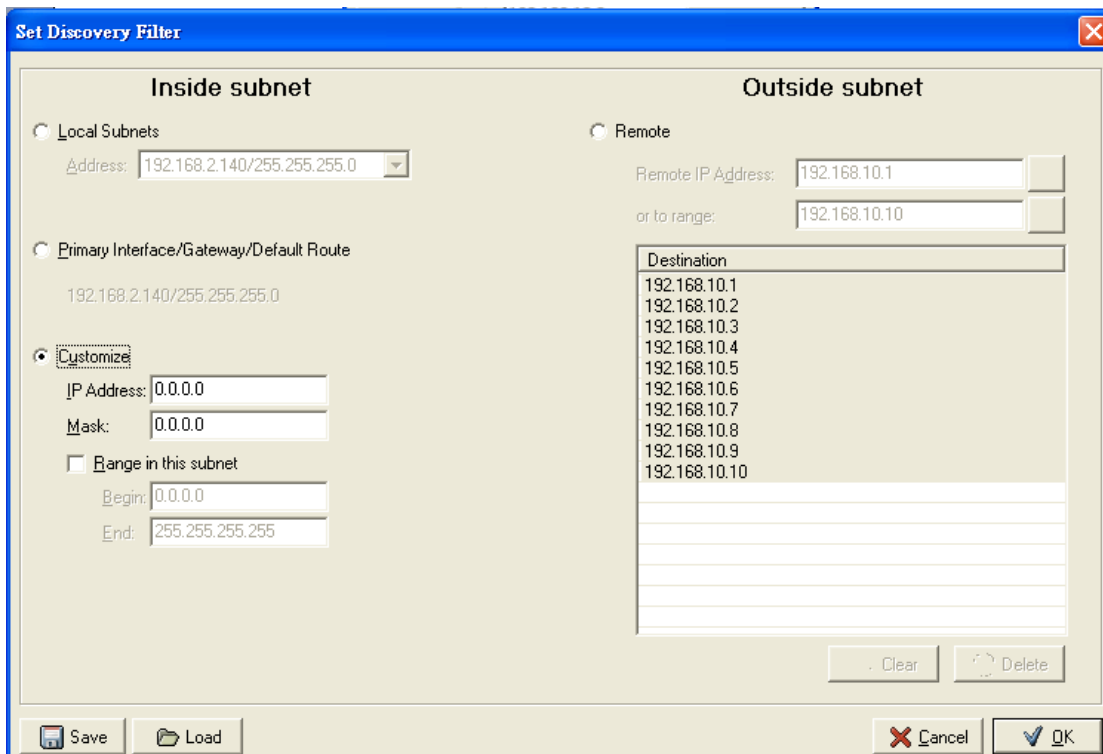
☒ Range in this subnet

Begin: 192.168.10.3

End: 192.168.10.255

Cancel OK

- Primary Interface/Gateway/Default Route: Open-Vision will select a primary interface to discover switches.



Set Discovery Filter

Inside subnet

☒ Local Subnets

Address: 192.168.2.140/255.255.255.0

☐ Primary Interface/Gateway/Default Route

192.168.2.140/255.255.255.0

☒ Customize

IP Address: 0.0.0.0

Mask: 0.0.0.0

☐ Range in this subnet

Begin: 0.0.0.0

End: 255.255.255.255

Outside subnet

☐ Remote

Remote IP Address: 192.168.10.1

or to range: 192.168.10.10

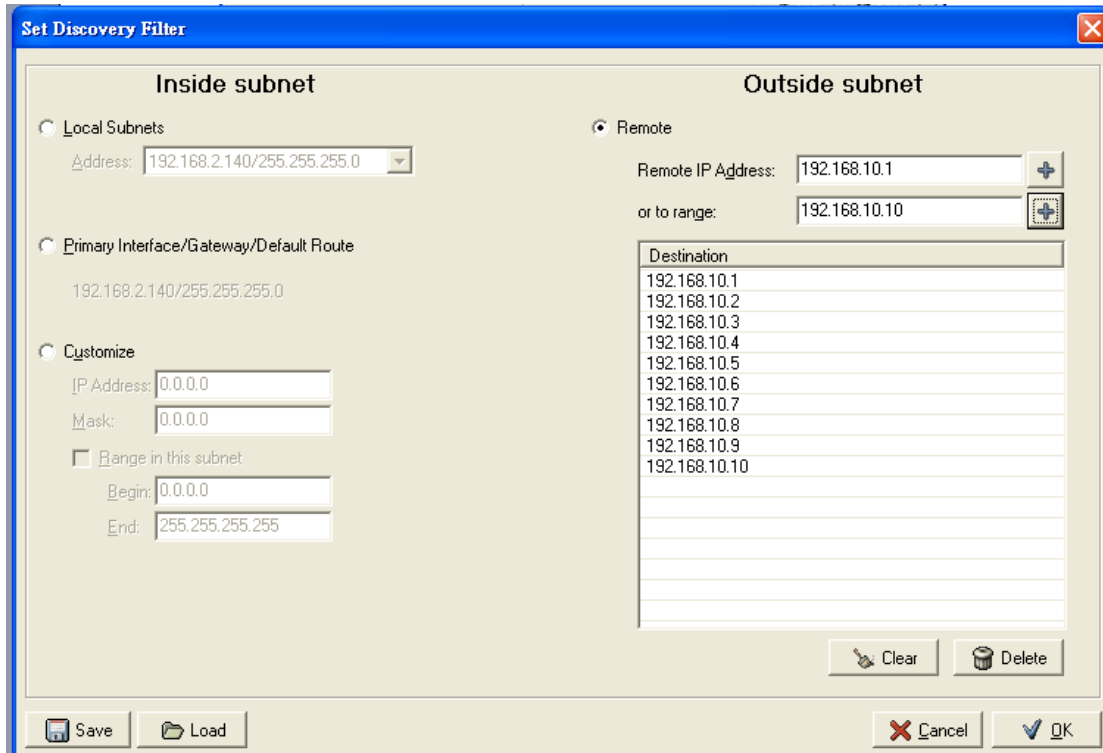
Destination

192.168.10.1
192.168.10.2
192.168.10.3
192.168.10.4
192.168.10.5
192.168.10.6
192.168.10.7
192.168.10.8
192.168.10.9
192.168.10.10

Clear Delete

Save Load Cancel OK

Customize: Set up the subnet to filter, user also can define a smaller range in the subnet to filter. When use Remote function, users are able to use specific IP addresses to discover switches.



The 'Set Discovery Filter' dialog box is divided into two main sections: 'Inside subnet' and 'Outside subnet'.



Inside subnet:

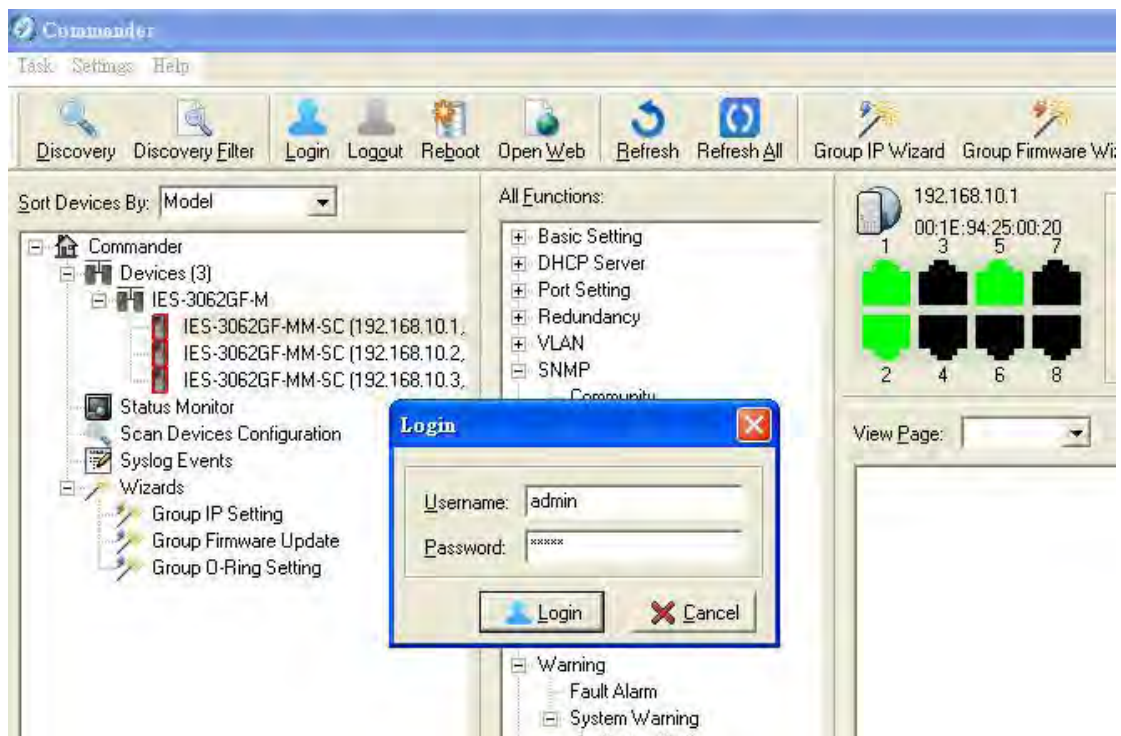
- Local Subnets:** A radio button option with a dropdown menu showing '192.168.2.140/255.255.255.0'.
- Primary Interface/Gateway/Default Route:** A radio button option with a text field showing '192.168.2.140/255.255.255.0'.
- Customize:** A radio button option with fields for 'IP Address' (0.0.0.0), 'Mask' (0.0.0.0), and a checkbox for 'Range in this subnet'. Below this checkbox are 'Begin' (0.0.0.0) and 'End' (255.255.255.255) fields.

Outside subnet:



- Remote:** A radio button option with fields for 'Remote IP Address' (192.168.10.1) and 'or to range' (192.168.10.10), each with a '+' button.
- Destination:** A list box containing a range of IP addresses from 192.168.10.1 to 192.168.10.10.
- Buttons:** 'Clear' and 'Delete' buttons are located below the list box.

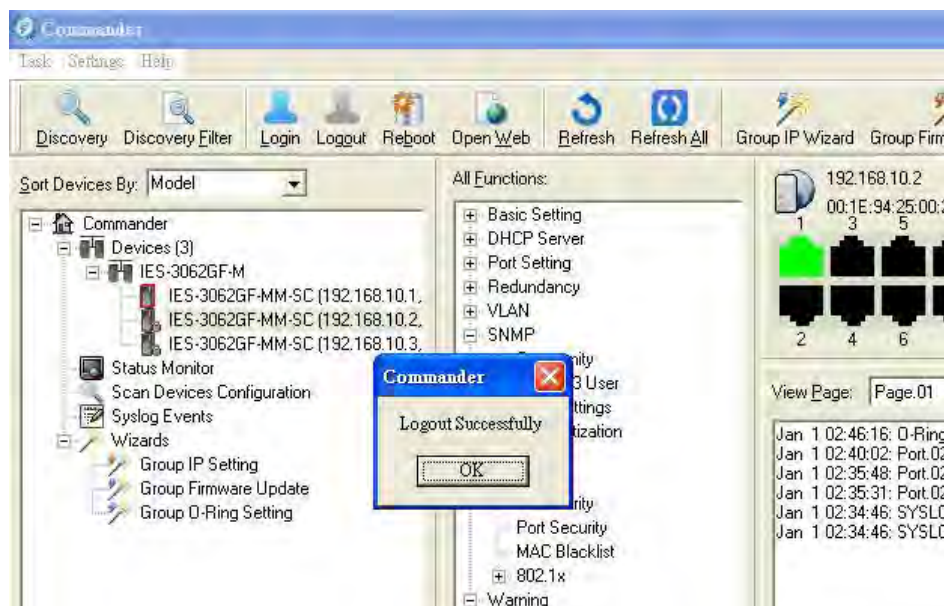
Footer: 'Save' and 'Load' buttons are on the left, and 'Cancel' and 'OK' buttons are on the right.

Task	Hotkey	Description
Login	Ctrl + L	Select switch to login to configure. Open-Vision can login to multiple switches that user selected. Enter account and password to login (the same with web management). Note: When user login and idle about 300 seconds, Open-Vision will logout automatically. When login success, the switch icon will change from  to  .

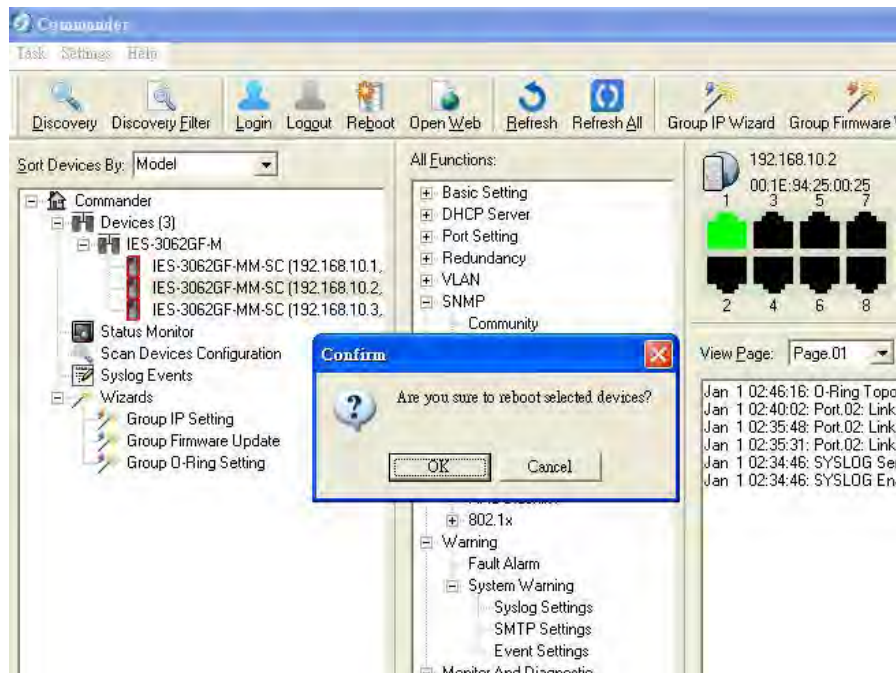


Login Interface

Task	Hotkey	Description
Logout	N/A	Select switch to logout. Open-Vision can logout from multiple switches that user selected. When logout success, the switch icon will change from  to  .



Task	Hotkey	Description
Reboot	Ctrl + B	Select switch to reboot. Open-Vision can reboot multiple switches that user selected. When user click reboot, a dialog window will be displayed on screen for confirming.



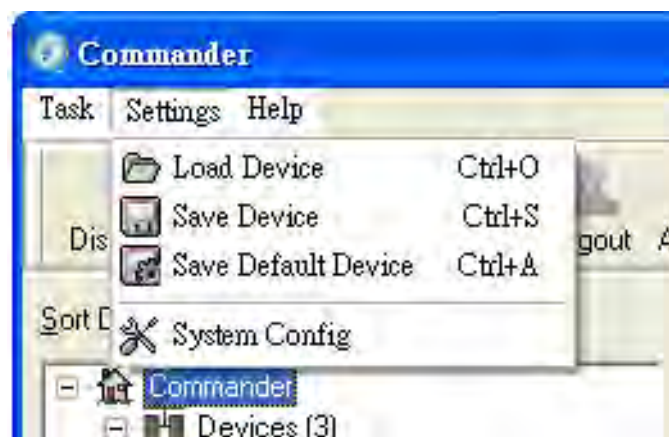
Task	Hotkey	Description
Open Web	Ctrl + W	Select switch to open web UI management. Open-Vision will open browser of your OS automatically.



Task	Description
Refresh	Refresh the specific switch function management interface and switch configuration interface.
Refresh All	Refresh all switch function management interfaces and switch configuration interfaces

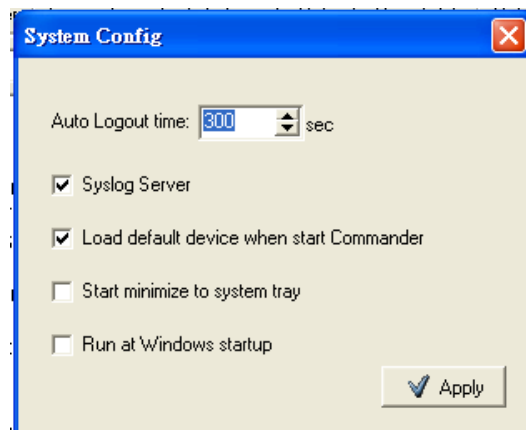
3.2 Settings

Task	Description
Load Device	Users are able to re-load the IP address list.
Save Device	Users are able to save the IP address list on the Discovery Filter/Remote page.
Save Default Device	Users can now "Device" is set to default values. Future start "Commander" of these devices will be displayed directly, without re-discovery.(need enable system config→ Load default device when start commander)



Task	Description
System Config	<p>Auto Logout time : User can setting auto logout time.</p> <p>Syslog server : Enable or disable commander syslog server.</p> <p>Load default device when start commander : Commander starts, automatically read the last used device information (required the first use of <u>setting</u> → <u>save default device</u> save using configuration.)</p>

	<p>Start minimize to system tray: Open the commander, the automatic down to windows taskbar.</p> <p>Run at Windows startup: When WINDOWS starts automatically start Open vision-Commander</p>
--	---



3.3 Help

Label	Hotkey	Description
About	F1	Show Open-Vision version information.






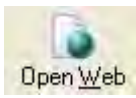








Function Bar

4.1 Icons Introduction

There are many icons on function bar. The functions of the icons are the same with Tasks that we introduce in previous chapter.



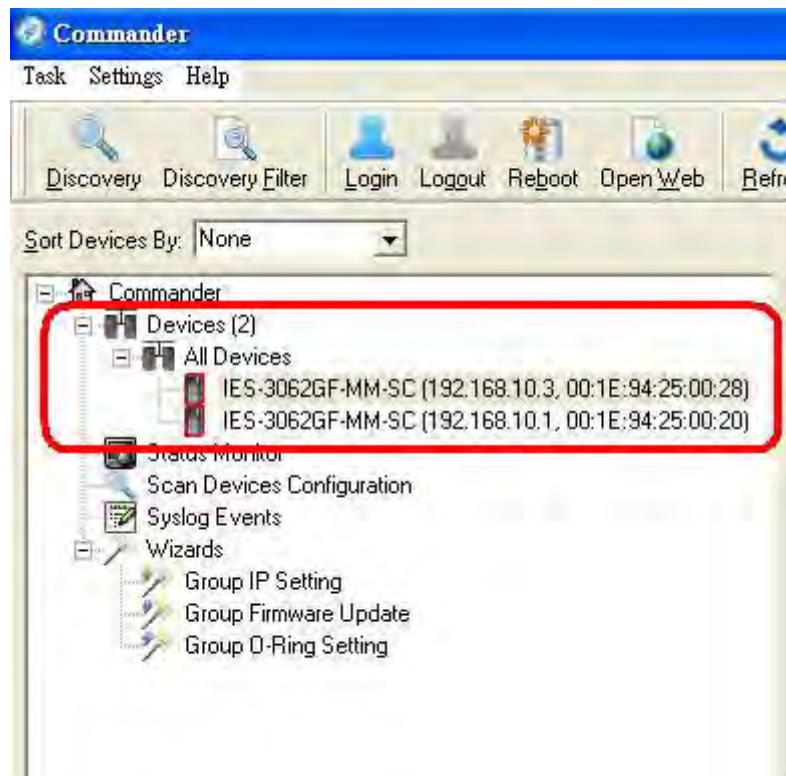
Icon	Description
	Same with task "Discovery".
	Same with task "Discovery Filter".
	Same with task "Login".
	Same with task "Logout".
	Same with task "Reboot".
	Same with task "Open Web".
	Same with task "Refresh".
	Same with task "Refresh All".
	One of Open-Vision powerful functions. Open-Vision Group IP Wizard can configure multiple switches' IP Address. The function will be introduced more detail in Switch Management Interface chapter.

	One of Open-Vision powerful functions. Open-Vision Group IP Wizard can update multiple switches' firmware. The function will be introduced more detail in Switch Management Interface chapter.
	One of Open-Vision powerful functions. Open-Vision Group O-Ring Wizard can setting multiple switches' O-Ring Function. The function will be introduced more detail in Switch Management Interface chapter.
	Same with task "about".

Switch Management Interface

5.1 Devices

User can see and manage all discovered switches by the device function.
User can select wanted switch to execute tasks.

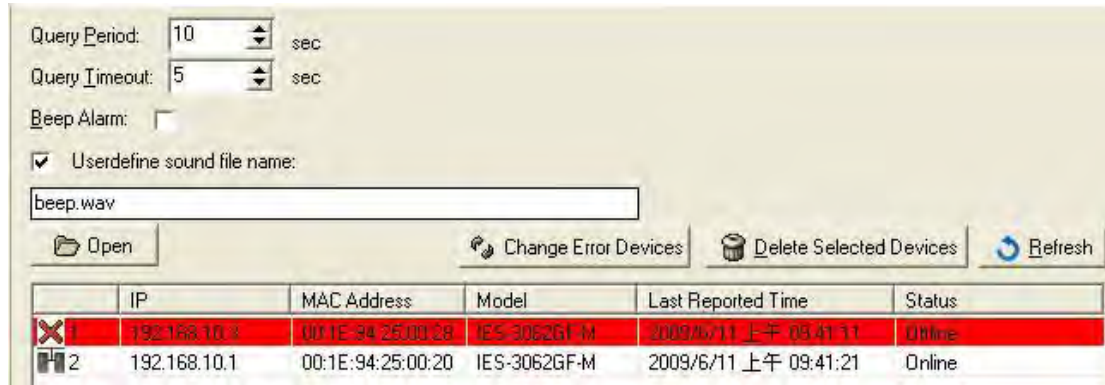


Switch Management Interface

Label	Description
Devices	Show the amount of discovered switches.
All Devices	Show all discovered switches' detail information.

5.2 Status Monitor

Status Monitor provides user to monitor multi switches in a page. Through the color changes, user can know something happened to switches, then tack action to repair the situation.

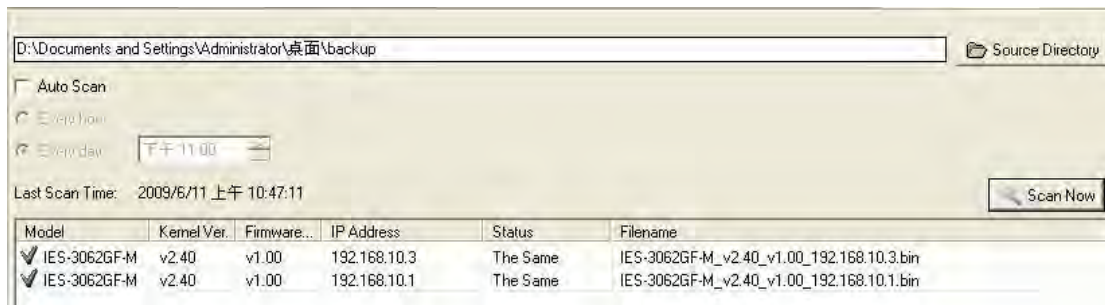


Status Monitor Interface

Label	Description
Query Period	The period that Open-Vision will send a packet to device to query status.
Query Timeout	Set the timeout period. After the period, Open-Vision does not receive reply from device, warning message will be displayed.
Beep Alarm	Mark the blank for beep alarm. Open-Vision will let your PC make sound to inform user that some events happen.
Change error Devices	When switch breaks down, Our can direct change switch, then push " change error Devices " , commander utility will upgrade breaks down switch that information , Let new switch replace bad switch
Delete Selected Devices	When the devices does not exist, we can utilize " delete selected Devices " to delete in list not existing the device information
Refresh	Refresh the status.
IP	Show the IP Address of discovered switch.
MAC Address	Show the MAC Address of discovered switch.
Model	Show the Model name of discovered switch.
Last Reported Time	Show the last time that Open-Vision receives report from switch.
Status	Show switch online/offline and show events alarm.
Open	The user can oneself define ALARM sound file.(MP3, WAV)

5.3 Scan Devices Configuration

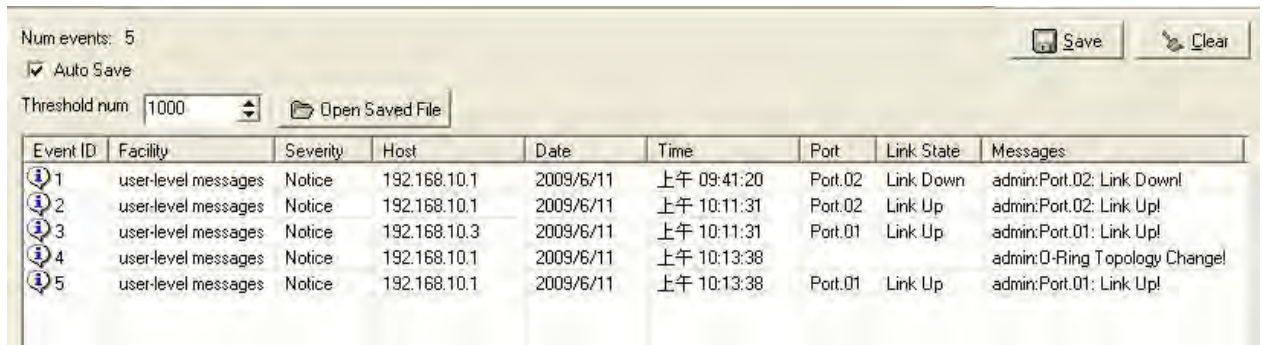
"Scan Devices Configuration" function, can scan config to compare device config with backup config · Guarantee the exactness of device cofnig. Avoid the artificial establishment mistake.



Label	Description
Source Directory	Show the amount of discovered switches.
Auto Scan	Show all discovered switches' detail information.
Every hour	Enable, every hour will automatic scan device config
Every day	Enable, the time to appoint every day, will automatic scan device config
Scan Now	Star Scan devices configuration function
Model	Show device model name
Kernel Ver	Show device firmware kernel ver
Firmware Ver	Show device firmware ver
IP Address	Show device the IP Address
Status	Show device config check status
Filename	Show device config filename

5.4 Syslog Events

Commander utility has a built-in syslog server. User does not need to use other syslog software. In syslog event window, the events will be record and user can know what event happened to the switches.



The screenshot shows the Syslog events interface. At the top, it displays 'Num events: 5' and 'Auto Save' is checked. Below this is a 'Threshold num' set to '1000' and an 'Open Saved File' button. On the right, there are 'Save' and 'Clear' buttons. The main part of the interface is a table with the following data:

Event ID	Facility	Severity	Host	Date	Time	Port	Link State	Messages
1	user-level messages	Notice	192.168.10.1	2009/6/11	上午 09:41:20	Port.02	Link Down	admin:Port.02: Link Down!
2	user-level messages	Notice	192.168.10.1	2009/6/11	上午 10:11:31	Port.02	Link Up	admin:Port.02: Link Up!
3	user-level messages	Notice	192.168.10.3	2009/6/11	上午 10:11:31	Port.01	Link Up	admin:Port.01: Link Up!
4	user-level messages	Notice	192.168.10.1	2009/6/11	上午 10:13:38			admin:O-Ring Topology Change!
5	user-level messages	Notice	192.168.10.1	2009/6/11	上午 10:13:38	Port.01	Link Up	admin:Port.01: Link Up!

Syslog events Interface

Label	Description
Auto Save	According to threshold number setting , carry out save movement, when system log exceeds the threshold number , commander utility will auto save system log file to excel file.
Threshold num	When LOG achieve this number will be automatically saved
Save	Save system log info to excel file
clear	Clear all system log
Event ID	The number of the happened event.
Facility	Class of the event.
Severity	Show the event urgent degree.
Host	Show the event source address.
Date	Show the date of the happened event.
Time	Show detail time of the happened event.
Port	Show connect port
Link state	Show link status
Messages	Show switch status

5.5 Wizards

A friendly UI of Open-Vision to help user to set IP address or update firmware of a group of switch. The wizard lets users step by step to do the jobs. It is very convenient for network administrator to save time for configuring IP and updating firmware. Besides saving time, it can also reduce the mistakes made by user.



Wizard Interface

5.6 Group IP Setting Wizard

Group IP Setting Wizard helps you walk through whole IP address configure process of a group of devices. A few steps would be taken during this process:



Group IP Setting Wizard Interface

STEP: 1. Select one or more devices to be configured.



Group IP Setting Wizard

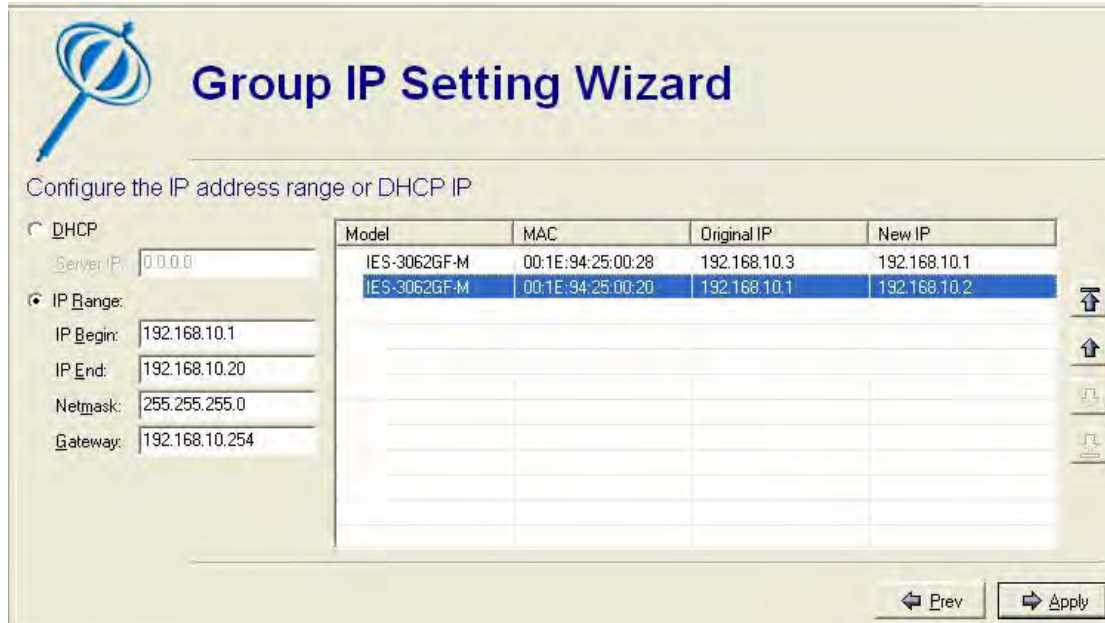
Select one or more devices to be configured.

Model	MAC	IP
IES-3062GF-M	00:1E:94:25:00:20	192.168.10.1

Model	MAC	IP
IES-3062GF-M	00:1E:94:25:00:28	192.168.10.3

Navigation buttons: [Up], [Down], [Left], [Right], [Prev], [Next]

STEP: 2. Configure the IP address range or DHCP IP address



Group IP Setting Wizard

Configure the IP address range or DHCP IP

☐ DHCP

Server IP: 0.0.0.0

☒ IP Range:

IP Begin: 192.168.10.1

IP End: 192.168.10.20

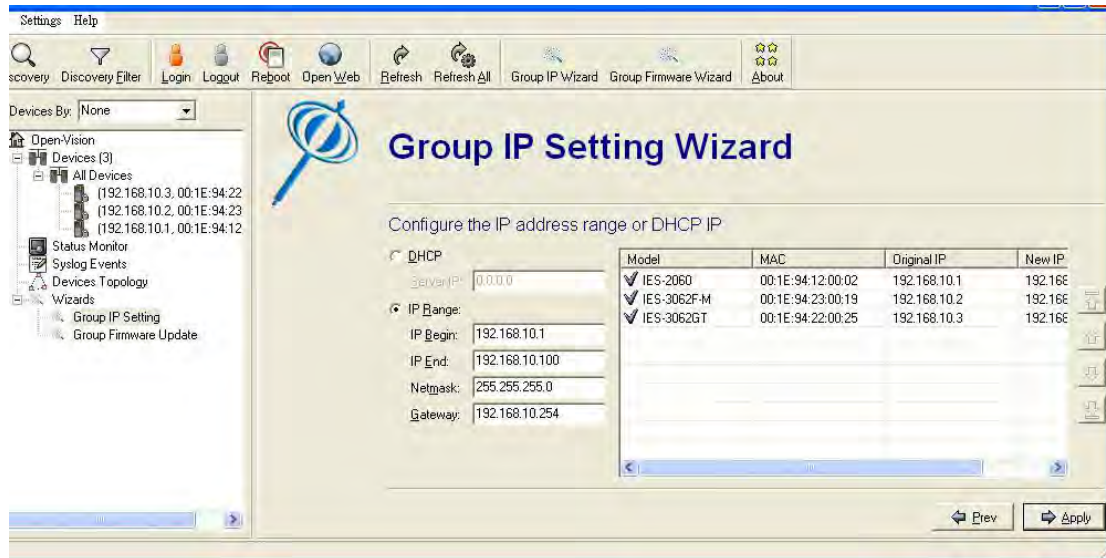
Netmask: 255.255.255.0

Gateway: 192.168.10.254

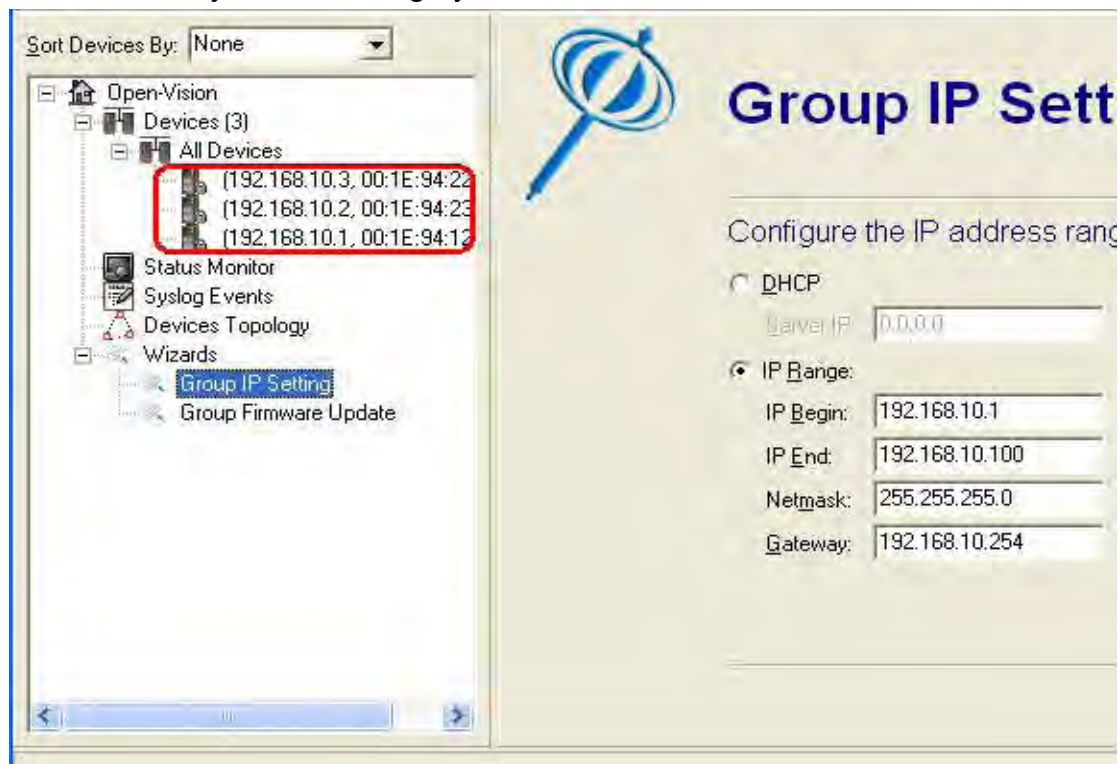
Model	MAC	Original IP	New IP
IES-3062GF-M	00:1E:94:25:00:28	192.168.10.3	192.168.10.1
IES-3062GF-M	00:1E:94:25:00:20	192.168.10.1	192.168.10.2

Navigation buttons: [Up], [Down], [Left], [Right], [Prev], [Apply]

STEP: 3. Apply settings



STEP: 4. Verify the IP Setting by wizard.



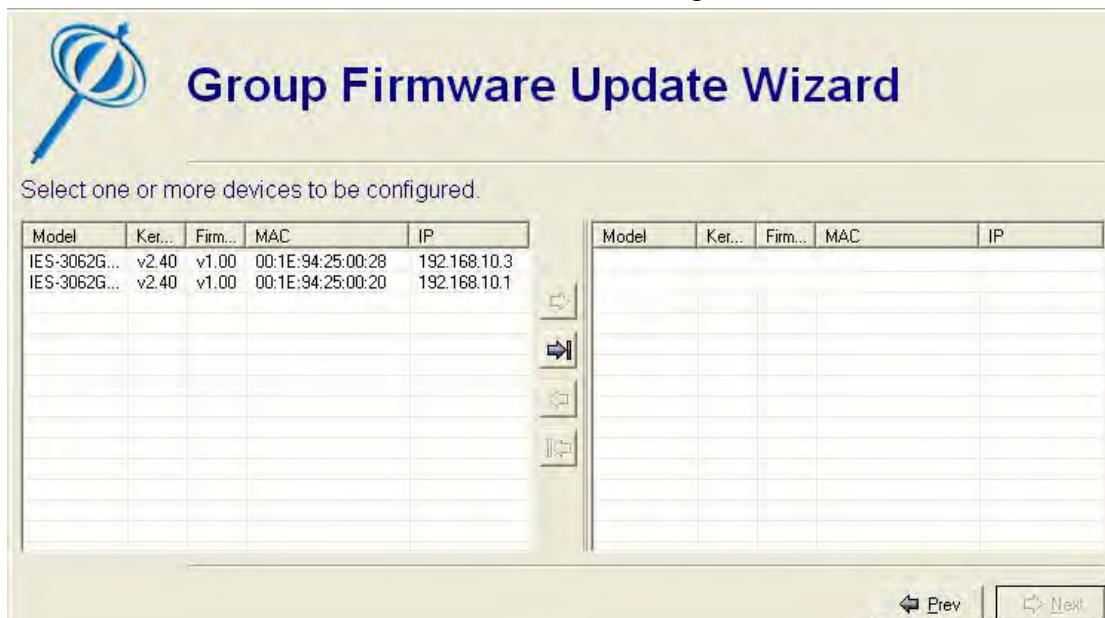
5.7 Group Firmware Update Wizard

This wizard helps you to update firmware for a group of devices.

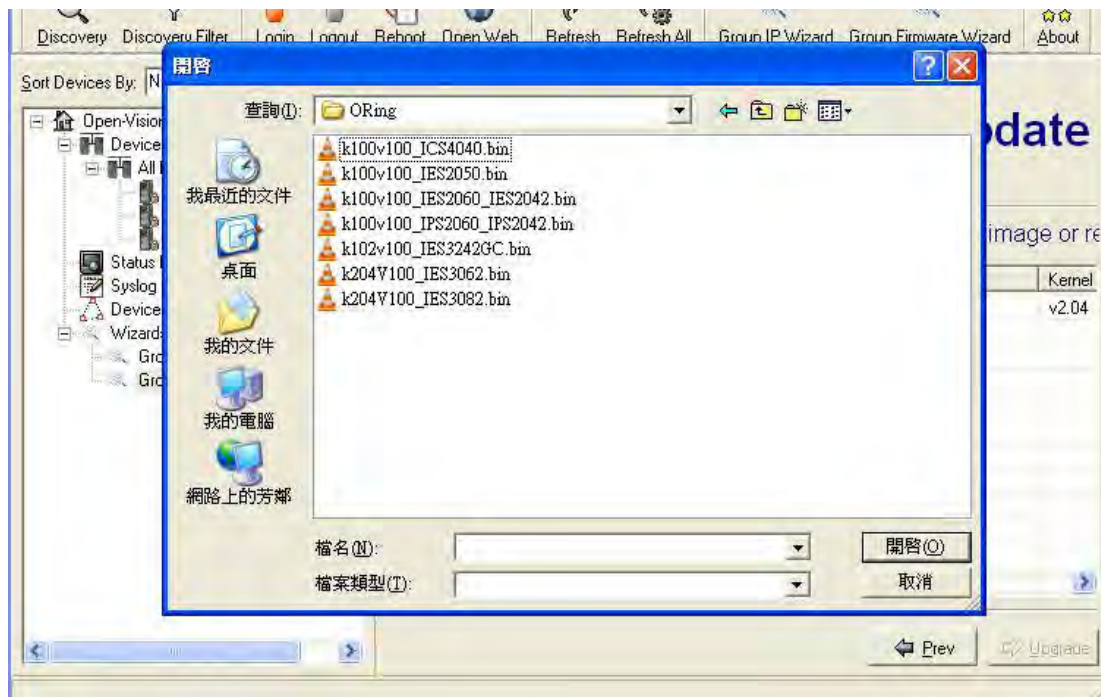


Group Firmware Update Wizard Interface

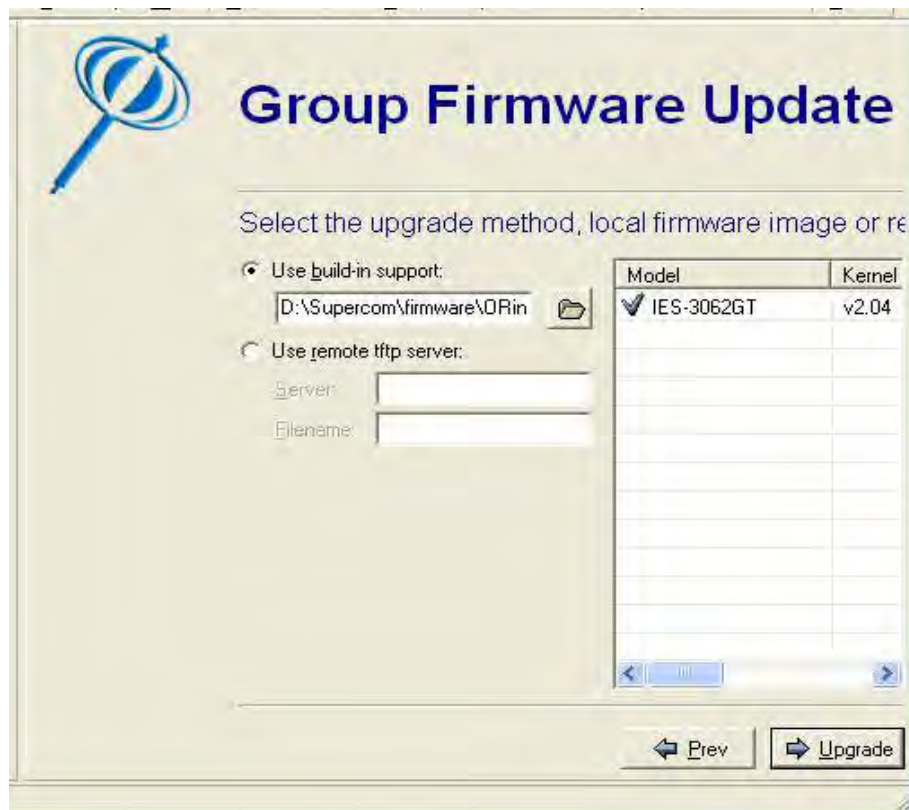
STEP: 1. Select one or more devices to be configured.



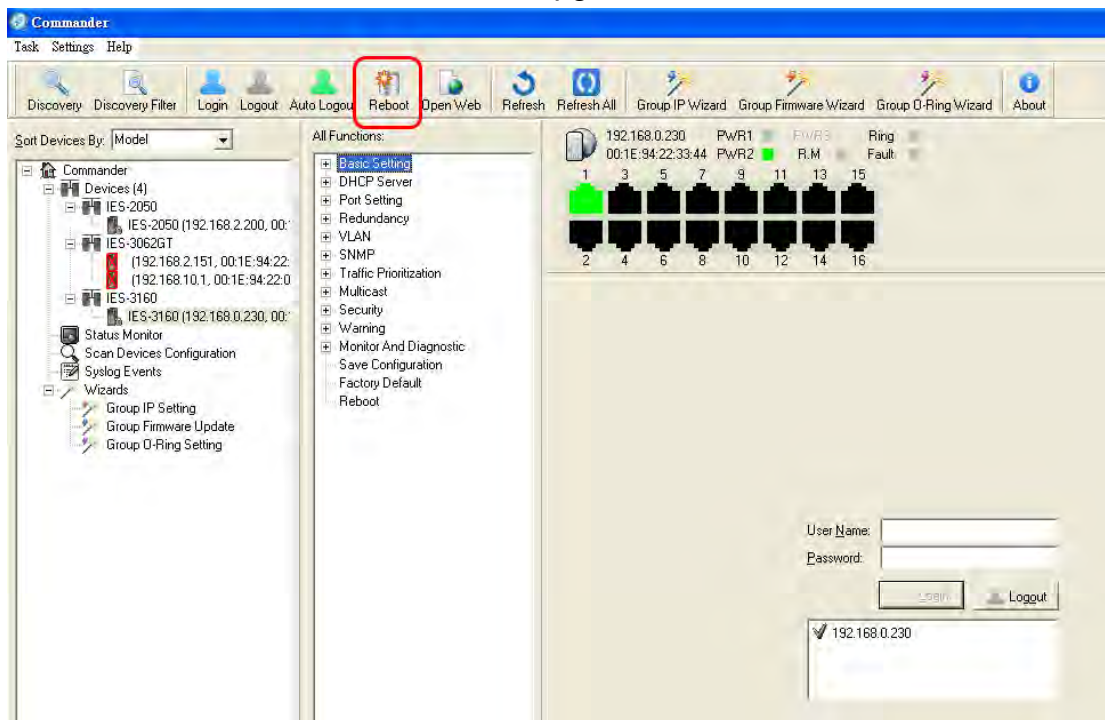
STEP: 2. Select the upgrade method, local firmware image or remote tftp server.



STEP: 3. Apply to upgrade selected firmware



STEP: 4. Reboot the switch that was upgraded firmware.



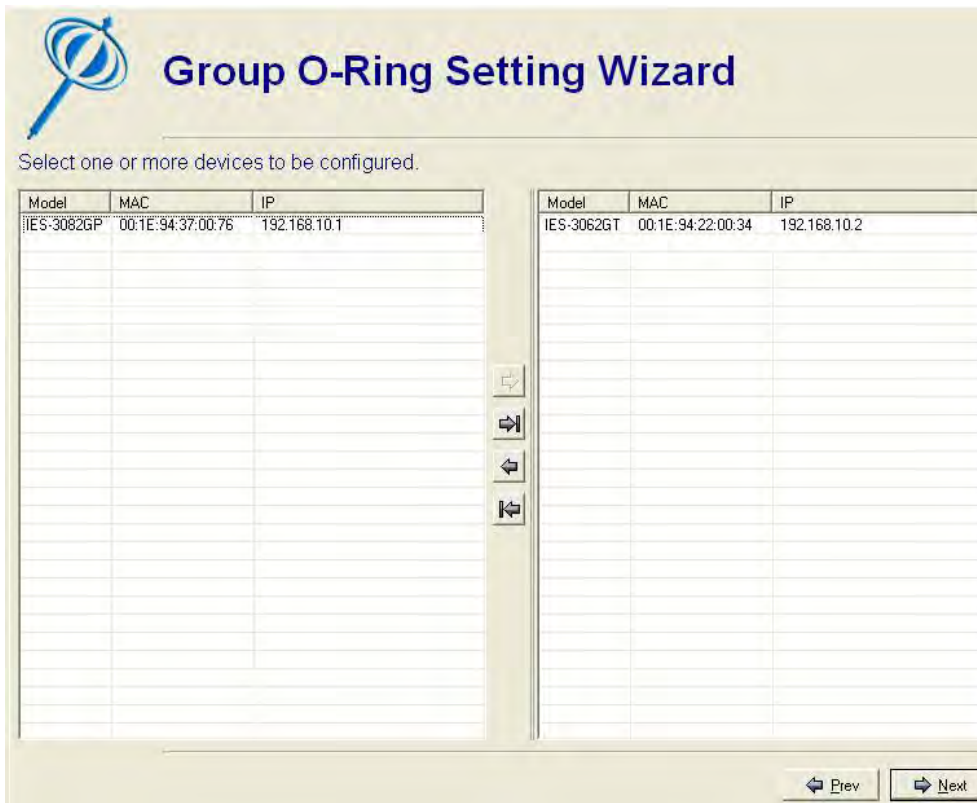
5.8 Group O-Ring Setting Wizard

This wizard helps you to most easy setting O-Ring for a group of devices.



Group O-Ring Setting Wizard Interface

STEP: 1. Select one or more devices to be configured.



Group O-Ring Setting Wizard

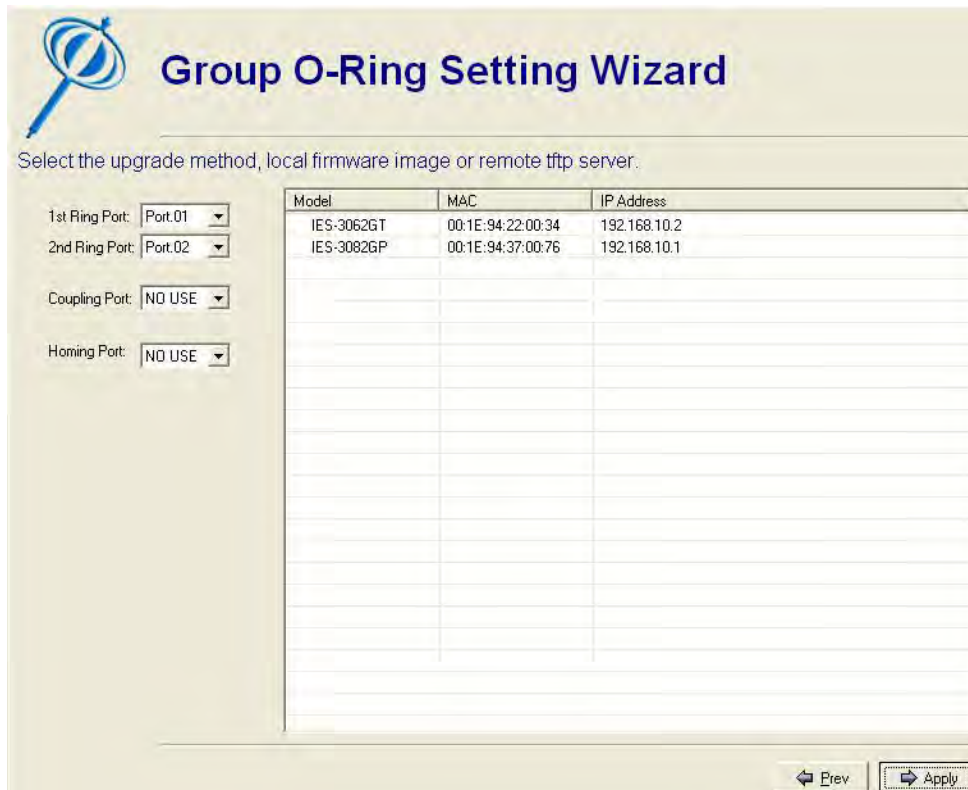
Select one or more devices to be configured.

Model	MAC	IP
IES-3082GP	00:1E:94:37:00:76	192.168.10.1

Model	MAC	IP
IES-3062GT	00:1E:94:22:00:34	192.168.10.2

Navigation buttons: Prev, Next

STEP: 2. Select want to carry out Ring Function to port number



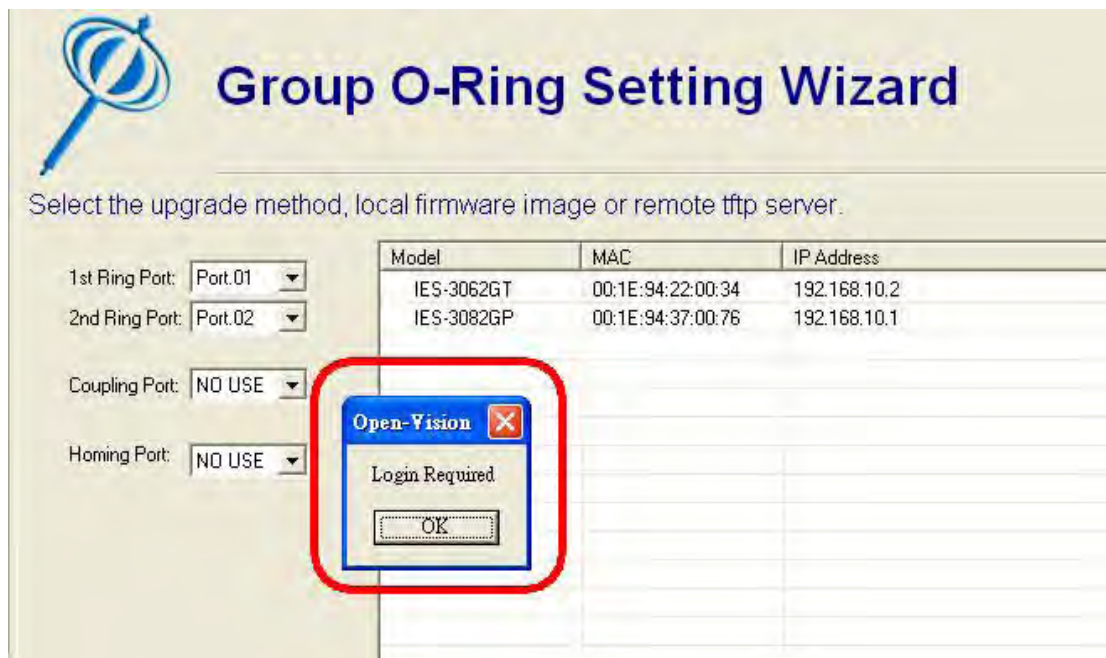
Group O-Ring Setting Wizard

Select the upgrade method, local firmware image or remote tftp server.

1st Ring Port: Port.01
 2nd Ring Port: Port.02
 Coupling Port: NO USE
 Homing Port: NO USE

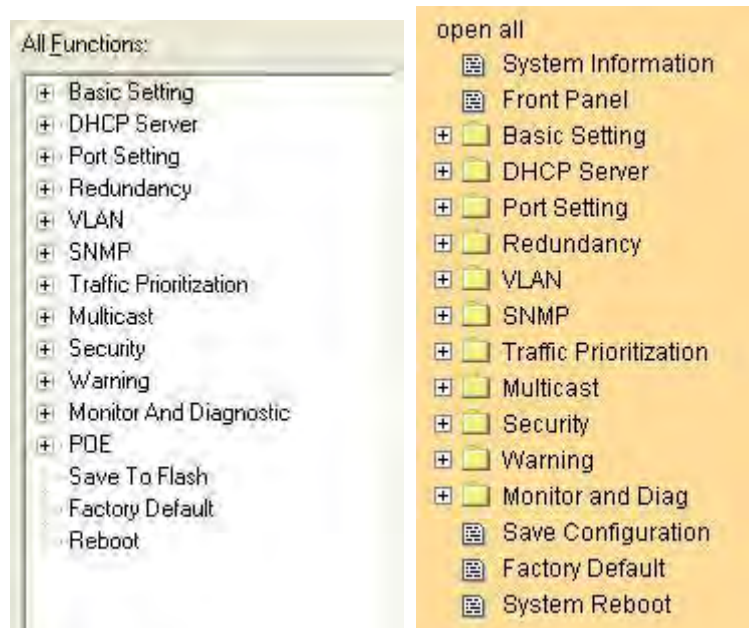
Model	MAC	IP Address
IES-3062GT	00:1E:94:22:00:34	192.168.10.2
IES-3082GP	00:1E:94:37:00:76	192.168.10.1

Navigation buttons: Prev, Apply

STEP: 3. O-Ring Function sets up successfully

Switch Function Interface

The function interface is the same with function tree on web UI. That means: all functions can be configure on web; they can also configured by Open-Vision.



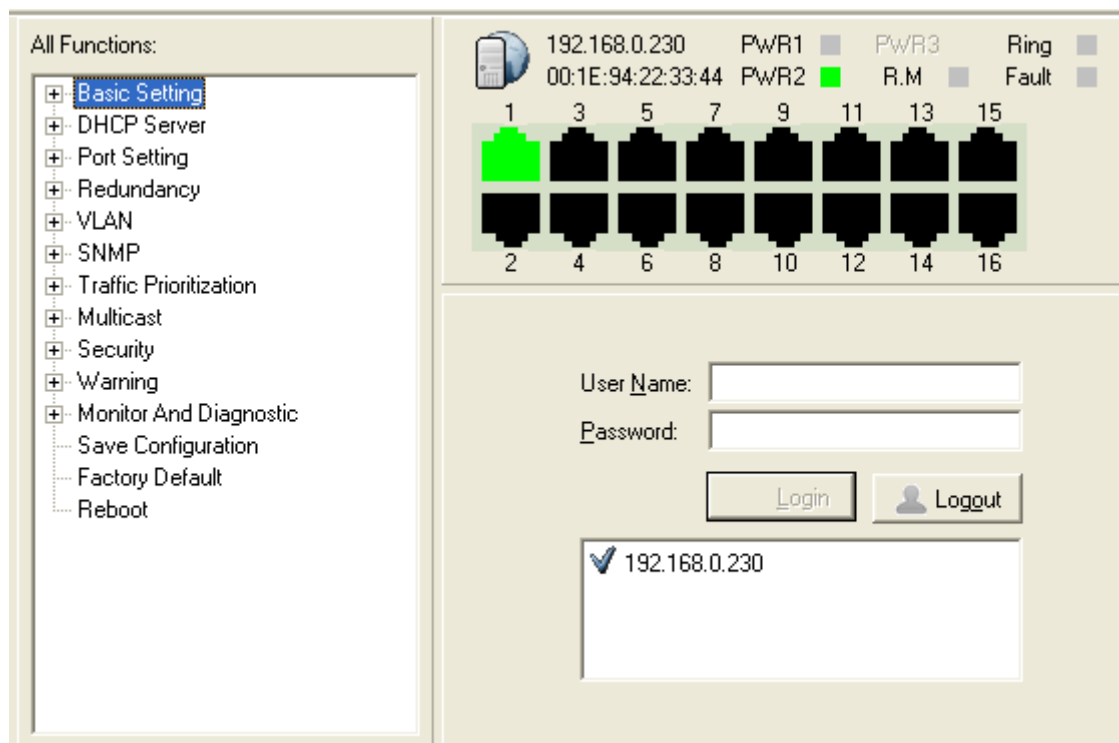
Functions Interface and Tree on Open-Vision and WEB

6.1 Basic Setting

6.1.1 System login

System Login

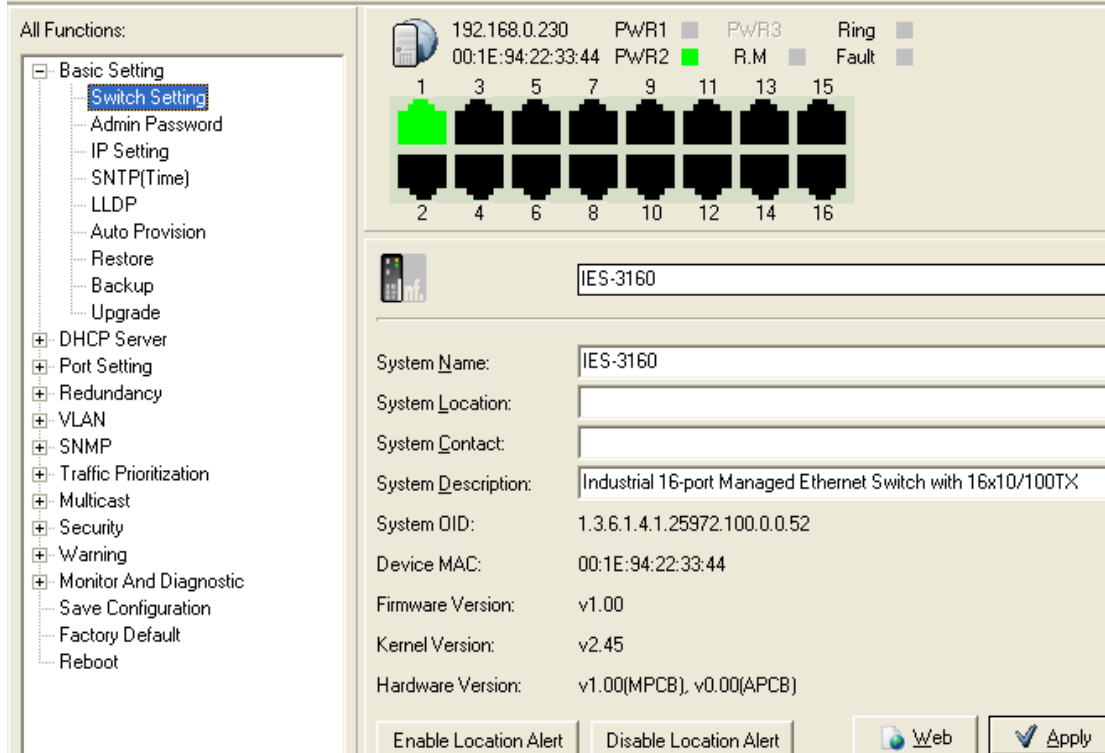
1. Launch the Open-Vision
2. To get into Basics
3. The login screen appears.
4. Key in the username and password. The default username and password is “**admin**”.
5. Click “**Enter**” or “**Login**” button, then the main interface of the Web-based management appears.



WEB Login screen

6.2 Basics & Port Configuration

6.2.1 Switch setting



The screenshot shows the 'Switch Setting' interface. On the left is a tree view under 'All Functions' with 'Basic Setting' expanded and 'Switch Setting' selected. The main area displays switch information: IP (192.168.0.230), MAC (00:1E:94:22:33:44), and power status (PWR1, PWR2, PWR3). Below this is a 16-port port status grid. The bottom section contains fields for System Name, System Location, System Contact, System Description, System OID, Device MAC, Firmware Version, Kernel Version, and Hardware Version. At the bottom are buttons for 'Enable Location Alert', 'Disable Location Alert', 'Web', and 'Apply'.

Switch setting interface

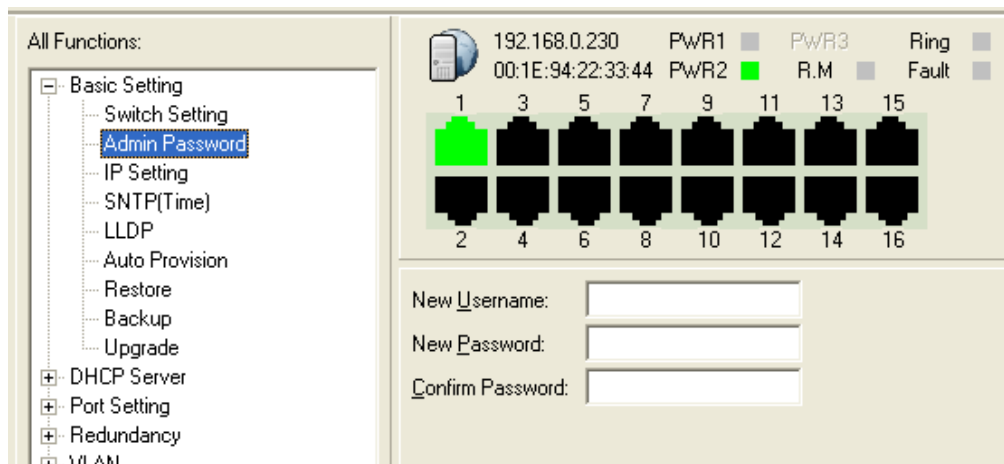
The following table describes the labels in this screen.

Label	Description
System Name	Assign the name of switch. The maximum length is 64 bytes
System Description	Display the description of switch.
System Location	Assign the switch physical location. The maximum length is 64 bytes
System Contact	Enter the name of contact person or organization
Firmware Version	Display the switch's firmware version
Kernel Version	Display the kernel software version

MAC Address	Display the unique hardware address assigned by manufacturer (default)
Enable Location Alert	Click Enable Location Alert, PWR1, PWR2 and PWR3 LEDs of the switch will start to flash together
disable Location Alert	Click Disable Location Alert, the LEDs will stop flashing

6.2.2 Admin Password

Change Open-Vision management login username and password for the management security issue



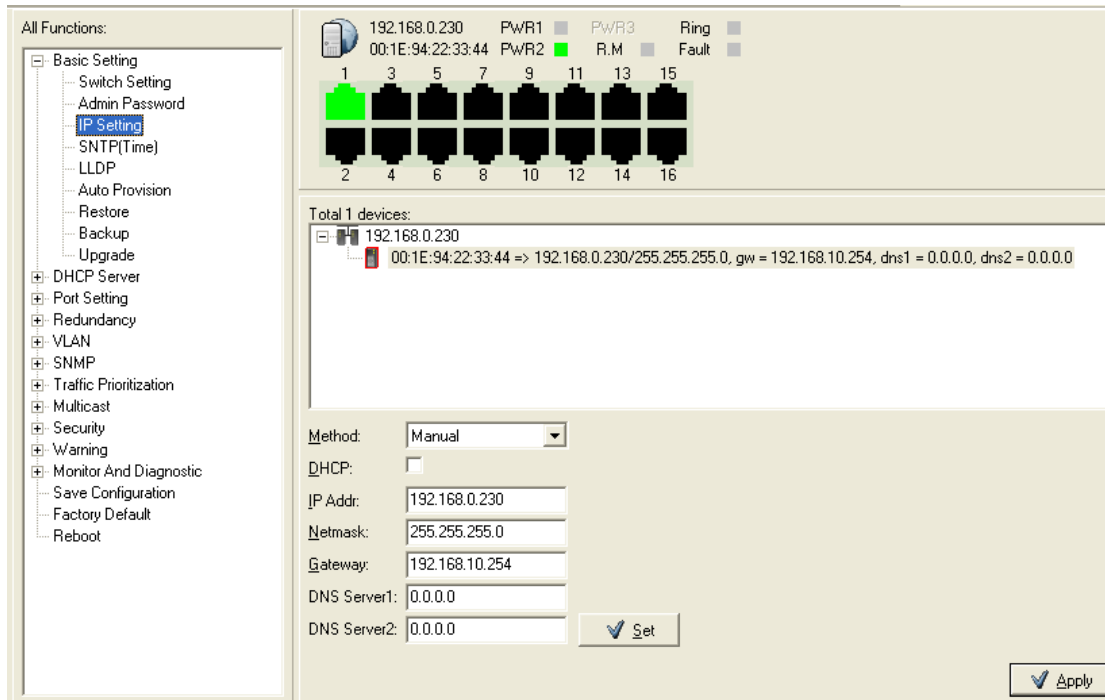
Admin Password interface

The following table describes the labels in this screen.

Label	Description
User name	Key in the new username(The default is “ admin ”)
New Password	Key in the new password(The default is “ admin ”)
Confirm password	Re-type the new password.
Apply	Click “ Apply ” to set the configurations.

IP configuration

You can configure the IP Settings and DHCP client function through IP configuration.



IP Configuration interface

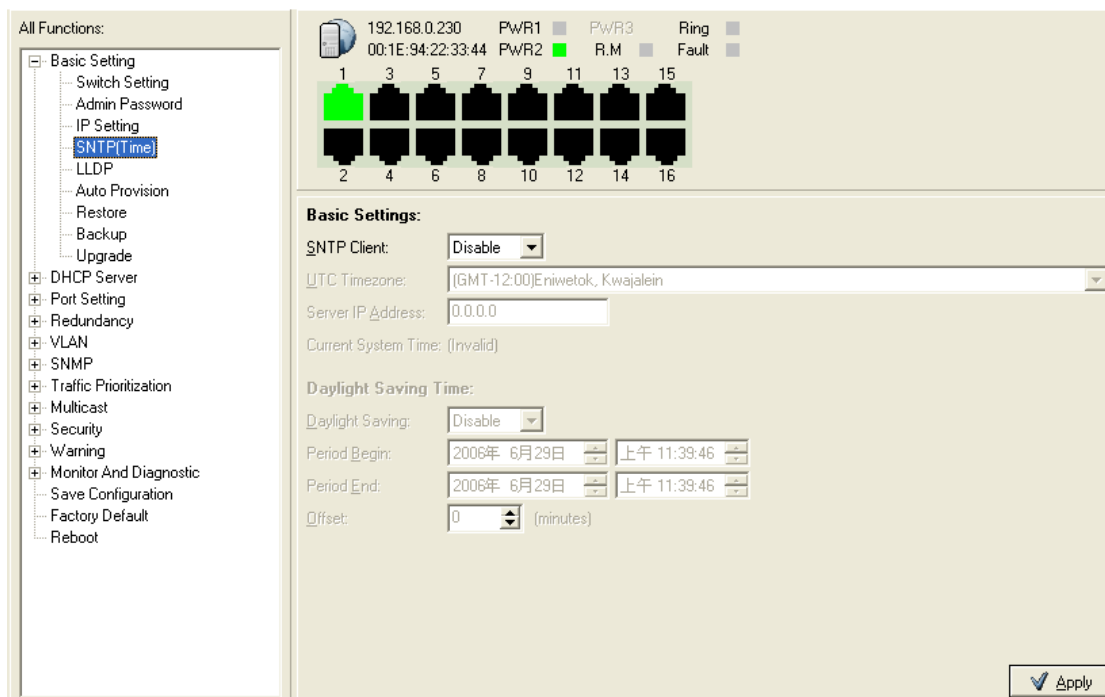
The following table describes the labels in this screen.

Label	Description
DHCP Client	To enable or disable the DHCP client function. When DHCP client function is enabling, the switch will be assigned the IP address from the network DHCP server. The default IP address will be replaced by the IP address which the DHCP server has assigned. After clicking “ Apply ” button, a popup dialog show up to inform the you when the DHCP client is enabling. The current IP will lose and you should find a new IP on the DHCP server.
IP Address	Assign the IP address that the network is using. If DHCP client function is enabling, you do not need to assign the IP address. The network DHCP server will assign the IP address for the switch and it will be display in this column. The default IP is 192.168.10.1

Subnet Mask	Assign the subnet mask of the IP address. If DHCP client function is enabling, you do not need to assign the subnet mask
Gateway	Assign the network gateway for the switch. The default gateway is 192.168.10.254
DNS1	Assign the primary DNS IP address
DNS2	Assign the secondary DNS IP address
Apply	Click “ Apply ” to set the configurations.

SNTP Configuration

The SNTP (Simple Network Time Protocol) settings allow you to synchronize switch clocks in the Internet.



The screenshot shows the SNTP Configuration interface. On the left is a tree view of 'All Functions' with 'SNTP(Time)' selected. The main area displays the 'Basic Settings' for SNTP. At the top, there's a status bar showing IP (192.168.0.230), MAC (00:1E:94:22:33:44), and power status (PWR1, PWR2, PWR3). Below this is a 4x4 grid of port status icons, with port 1 highlighted in green. The 'Basic Settings' section includes:

- SNTP Client:** A dropdown menu set to 'Disable'.
- UTC Timezone:** A dropdown menu set to '(GMT-12:00)Eniwetok, Kwajalein'.
- Server IP Address:** A text field containing '0.0.0.0'.
- Current System Time:** Displays '(Invalid)'.
- Daylight Saving Time:** A dropdown menu set to 'Disable'.
- Daylight Saving:** A section with 'Period Begin' and 'Period End' date and time pickers, both set to '2006年 6月29日 上午 11:39:46'.
- Offset:** A spinner box set to '0' with '(minutes)' next to it.

 An 'Apply' button is located at the bottom right of the settings area.

SNTP Configuration interface

The following table describes the labels in this screen.

Label	Description
SNTP Client	Enable or disable SNTP function to get the time from the SNTP server.



Daylight Saving Time	Enable or disable daylight saving time function. When daylight saving time is enabling, you need to configure the daylight saving time period.
UTC Time zone	Set the switch location time zone. The following table lists the different location time zone for your reference.

Local Time Zone	Conversion from UTC	Time at 12:00 UTC
November Time Zone	- 1 hour	11 am
Oscar Time Zone	-2 hours	10 am
ADT - Atlantic Daylight	-3 hours	9 am
AST - Atlantic Standard EDT - Eastern Daylight	-4 hours	8 am
EST - Eastern Standard CDT - Central Daylight	-5 hours	7 am
CST - Central Standard MDT - Mountain Daylight	-6 hours	6 am
MST - Mountain Standard PDT - Pacific Daylight	-7 hours	5 am
PST - Pacific Standard ADT - Alaskan Daylight	-8 hours	4 am
ALA - Alaskan Standard	-9 hours	3 am
HAW - Hawaiian Standard	-10 hours	2 am
Nome, Alaska	-11 hours	1 am

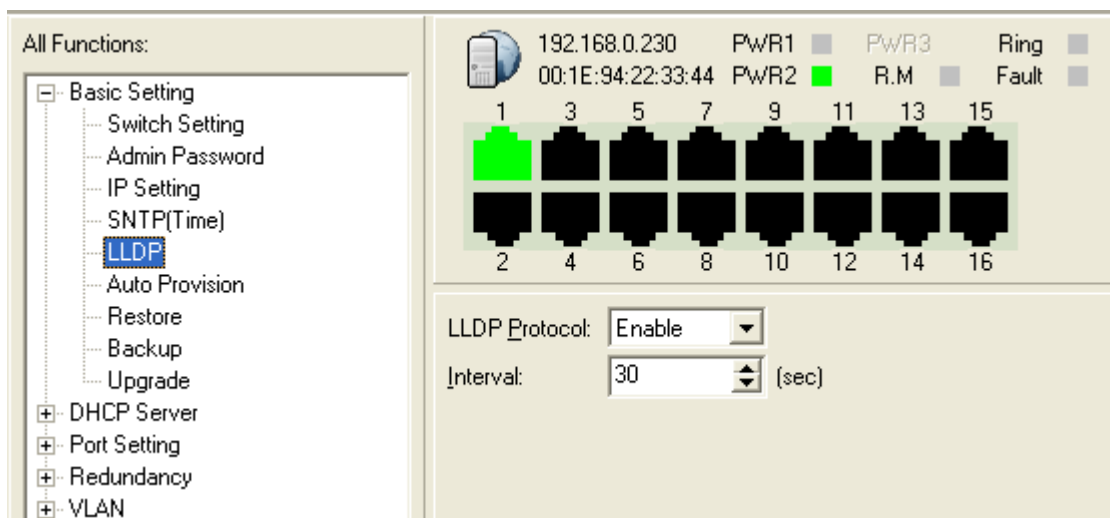


CET - Central European FWT - French Winter MET - Middle European MEWT - Middle European Winter SWT - Swedish Winter	+1 hour	1 pm
EET - Eastern European, USSR Zone 1	+2 hours	2 pm
BT - Baghdad, USSR Zone 2	+3 hours	3 pm
ZP4 - USSR Zone 3	+4 hours	4 pm
ZP5 - USSR Zone 4	+5 hours	5 pm
Local Time Zone	Conversion from UTC	Time at 12:00 UTC
ZP6 - USSR Zone 5	+6 hours	6 pm
WAST - West Australian Standard	+7 hours	7 pm
CCT - China Coast, USSR Zone 7	+8 hours	8 pm
JST - Japan Standard, USSR Zone 8	+9 hours	9 pm
EAST - East Australian Standard GST Guam Standard, USSR Zone 9	+10 hours	10 pm
IDLE - International Date Line NZST - New Zealand Standard NZT - New Zealand	+12 hours	Midnight

Label	Description
SNTP Sever IP Address	Set the SNTP server IP address.
Daylight Saving Period	Set up the Daylight Saving beginning time and Daylight Saving ending time. Both will be different each year.
Daylight Saving Offset	Set up the offset time.
Switch Timer	Display the switch current time.
Apply	Click "Apply" to set the configurations.

LLDP

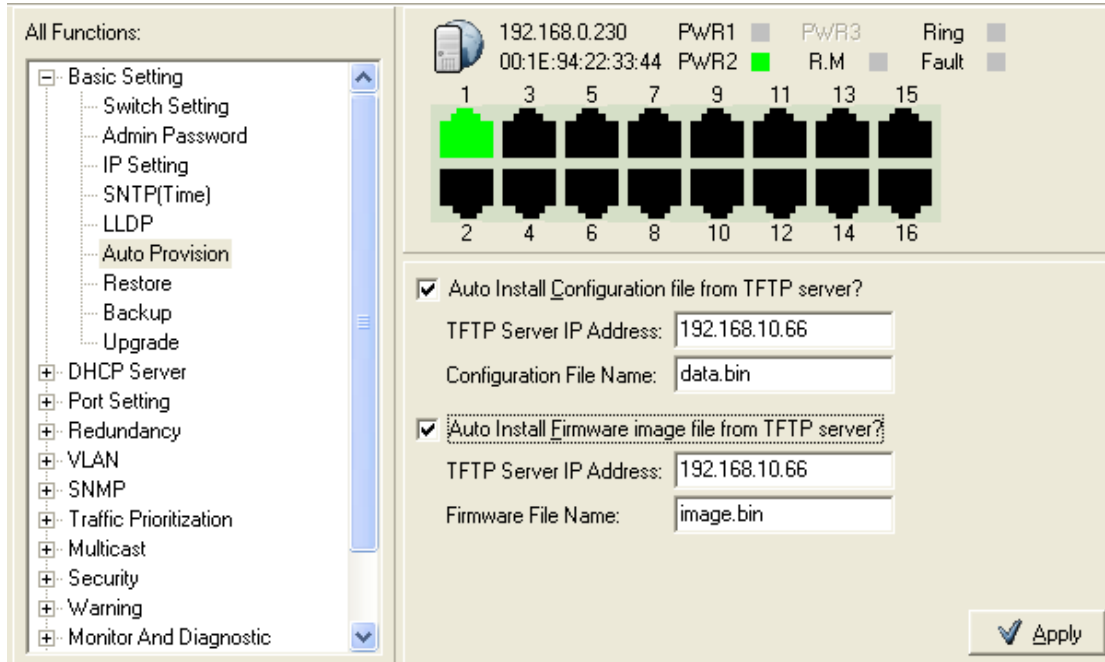
LLDP (Link Layer Discovery Protocol) function allows the switch to advertise its information to other nodes on the network and store the information it discovers



LLDP Configuration Interface

Auto Provision

Auto Provision allows you to update the switch firmware automatically. You can put firmware or configuration file on TFTP server. When you reboot the switch, it will upgrade automatically. Before updating, make sure you have your TFTP server ready and the firmware image and configuration file is on the TFTP server.



The screenshot shows the 'Auto Provision' configuration window. On the left is a tree view of 'All Functions' with 'Auto Provision' selected. The main area displays the following information:

- IP Address: 192.168.0.230
- MAC Address: 00:1E:94:22:33:44
- Power Status: PwR1 (grey), PwR2 (green), PwR3 (grey)
- Ring Status: Ring (grey), R.M (grey), Fault (grey)
- Port Status: A 2x8 grid of port icons. Port 1 is green, and all other ports (2-16) are black.

Below the status information are two checked options for auto-installation from a TFTP server:

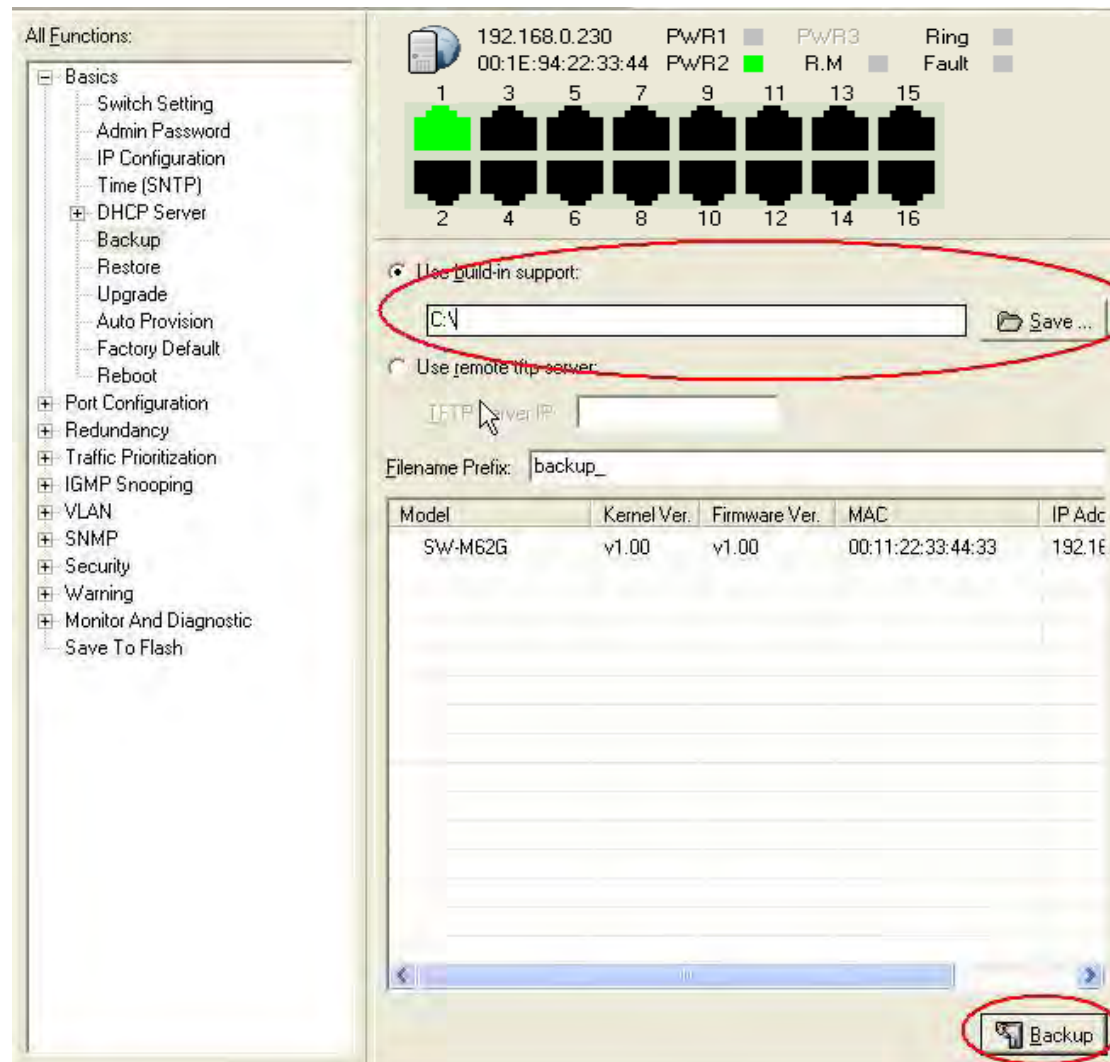
- ☒ Auto Install Configuration file from TFTP server?
 - TFTP Server IP Address: 192.168.10.66
 - Configuration File Name: data.bin
- ☒ Auto Install Firmware image file from TFTP server?
 - TFTP Server IP Address: 192.168.10.66
 - Firmware File Name: image.bin

An 'Apply' button is located at the bottom right.

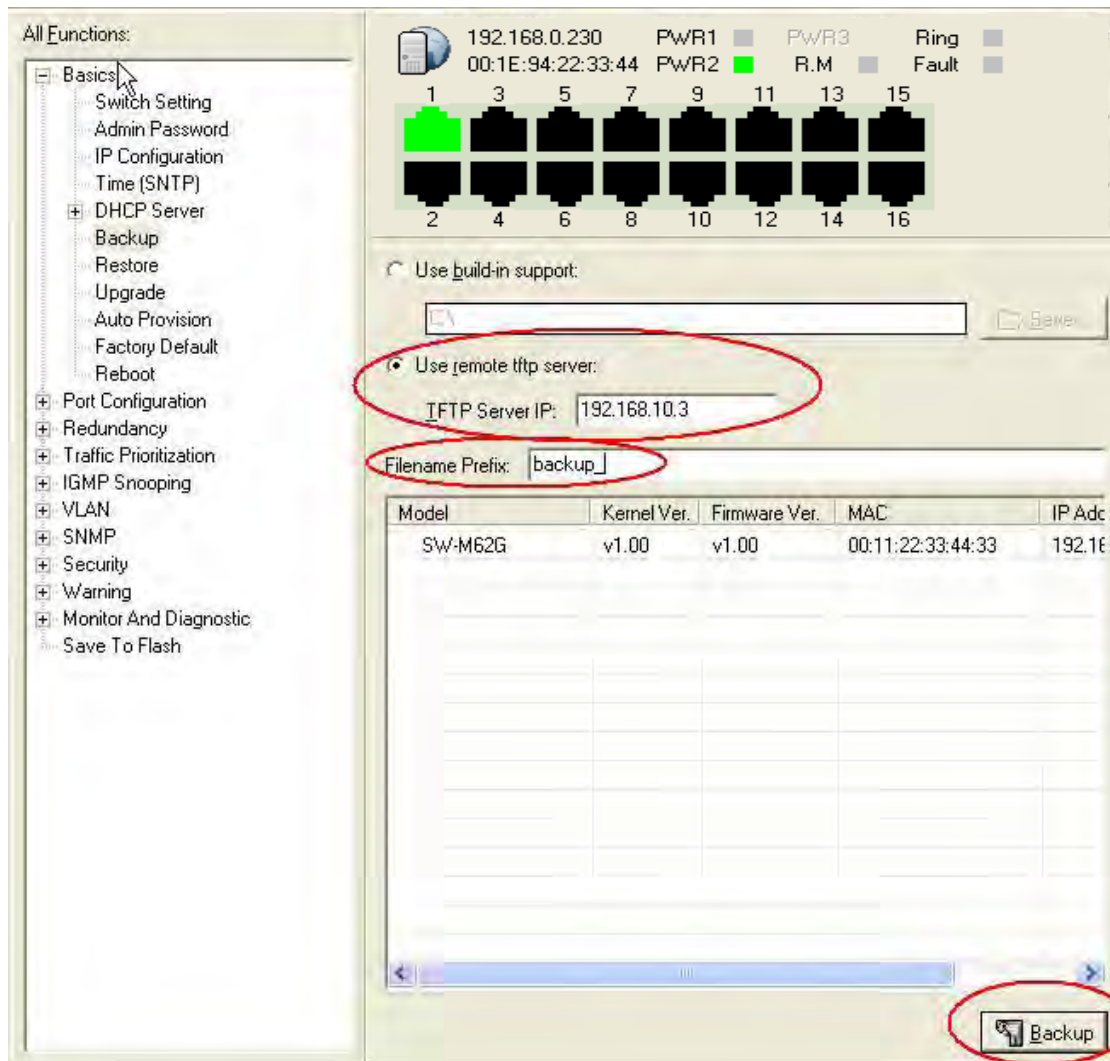
Auto Provision interface

Backup & Restore

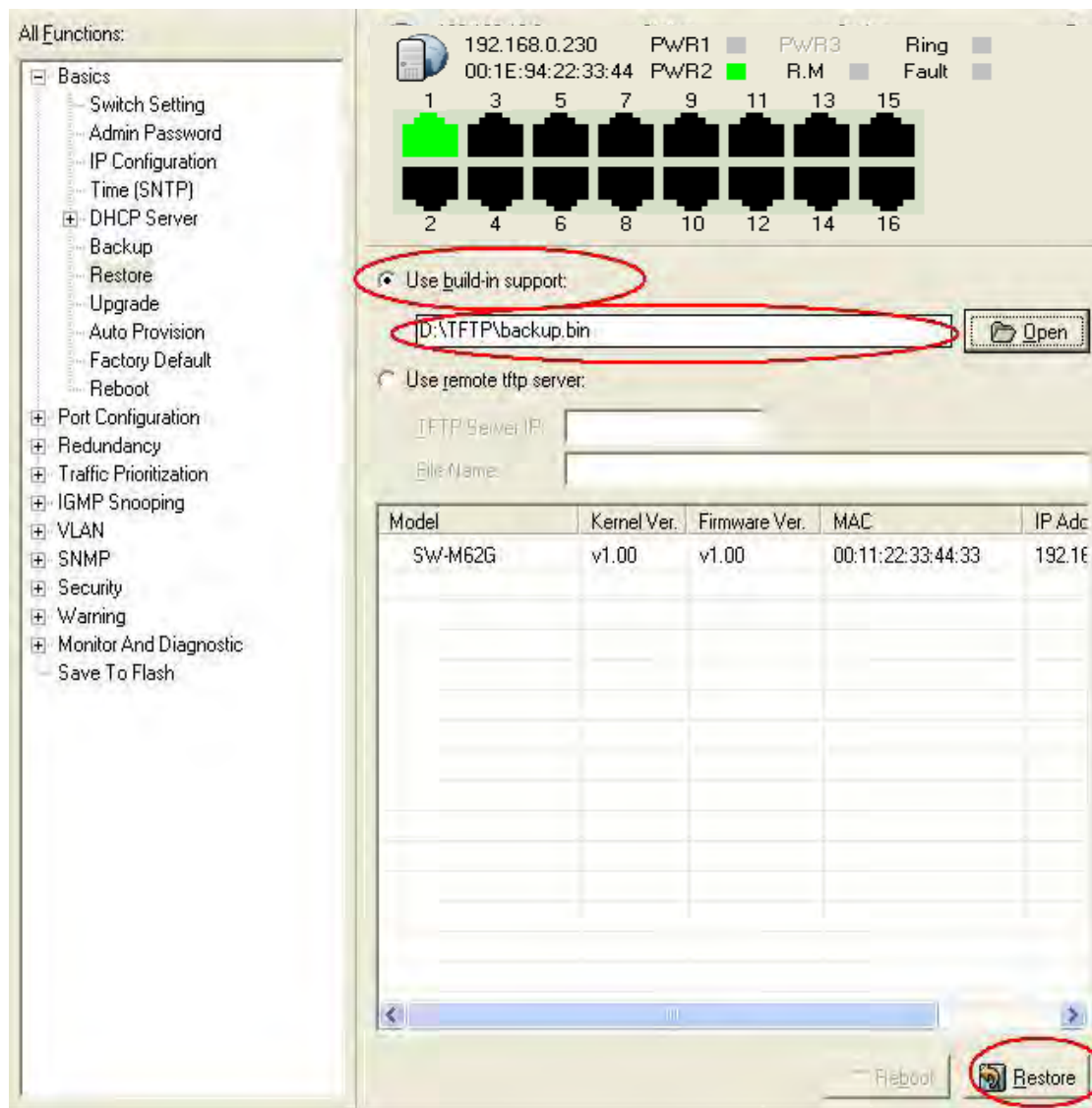
You can save current EEPROM value from the switch to TFTP server, then go to the TFTP restore configuration page to restore the EEPROM value.



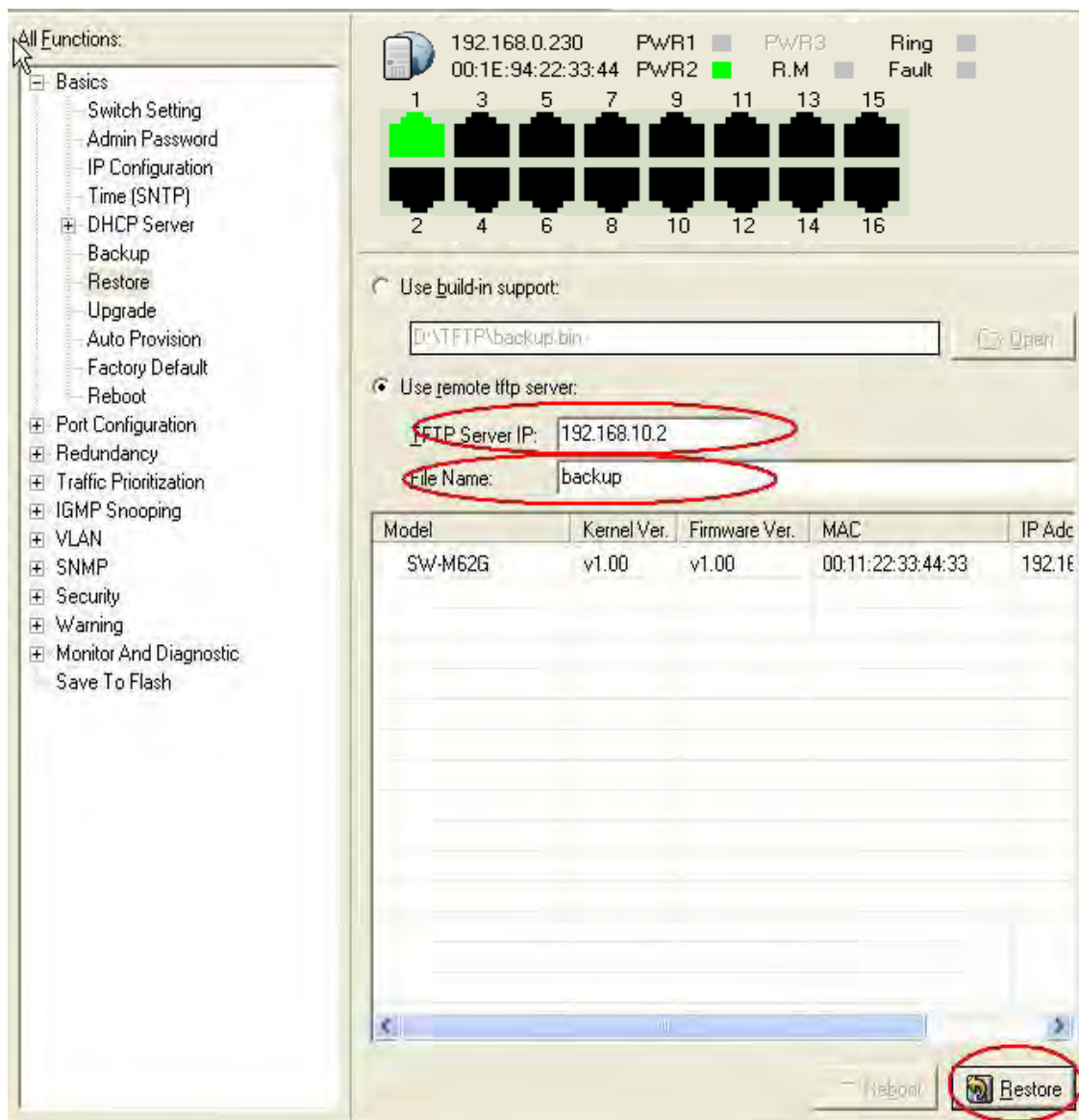
Use build-in support Backup



Use remote tftp server Backup



Use build-in support Restore



Use remote tftp server Restore

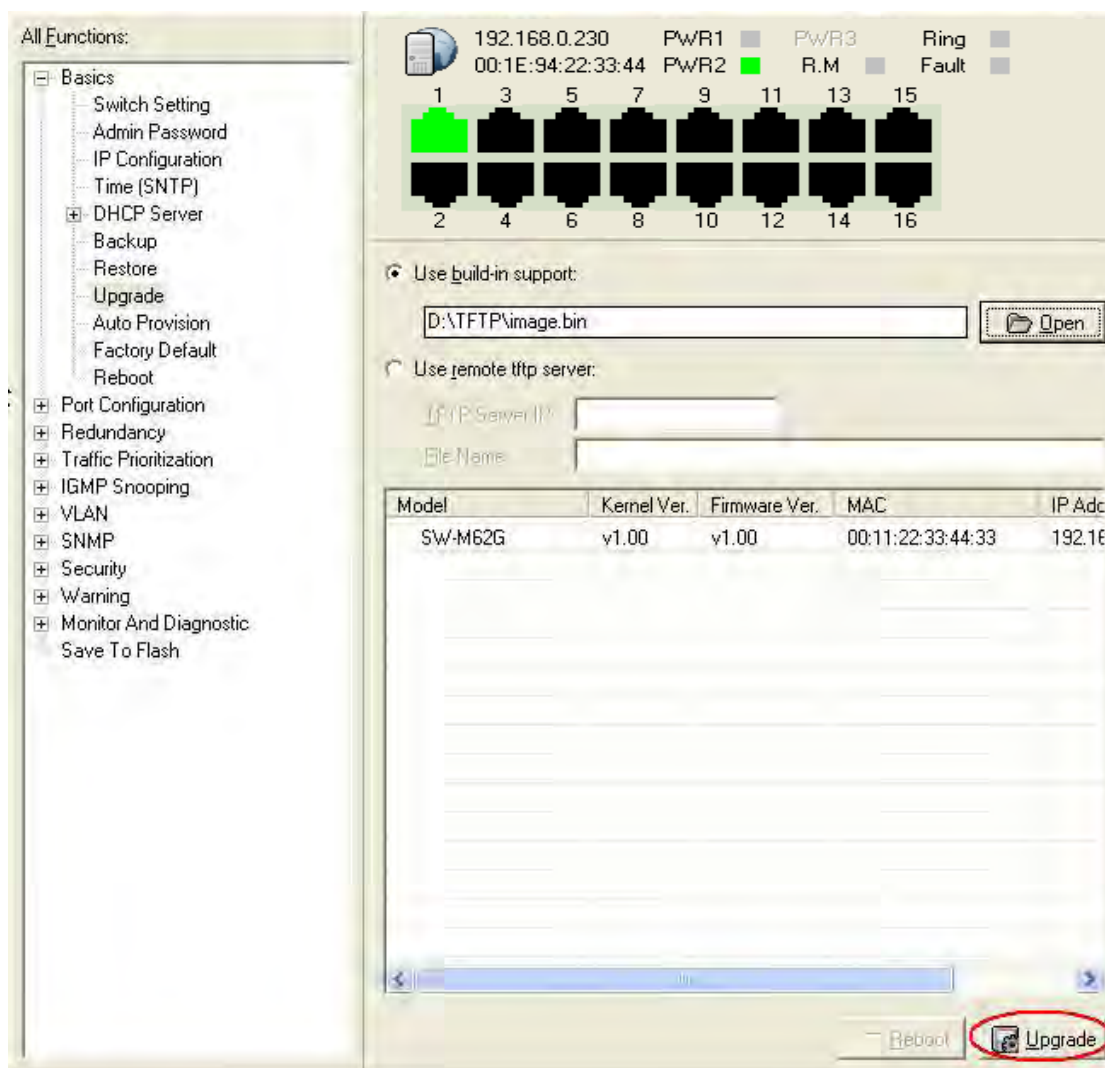
The following table describes the labels in this screen.

Label	Description
TFTP Server IP Address	Fill in the TFTP server IP
Restore File Name	Fill the file name.
Restore	Click “ restore ” to restore the configurations.
Restore File Name	Fill the file name.

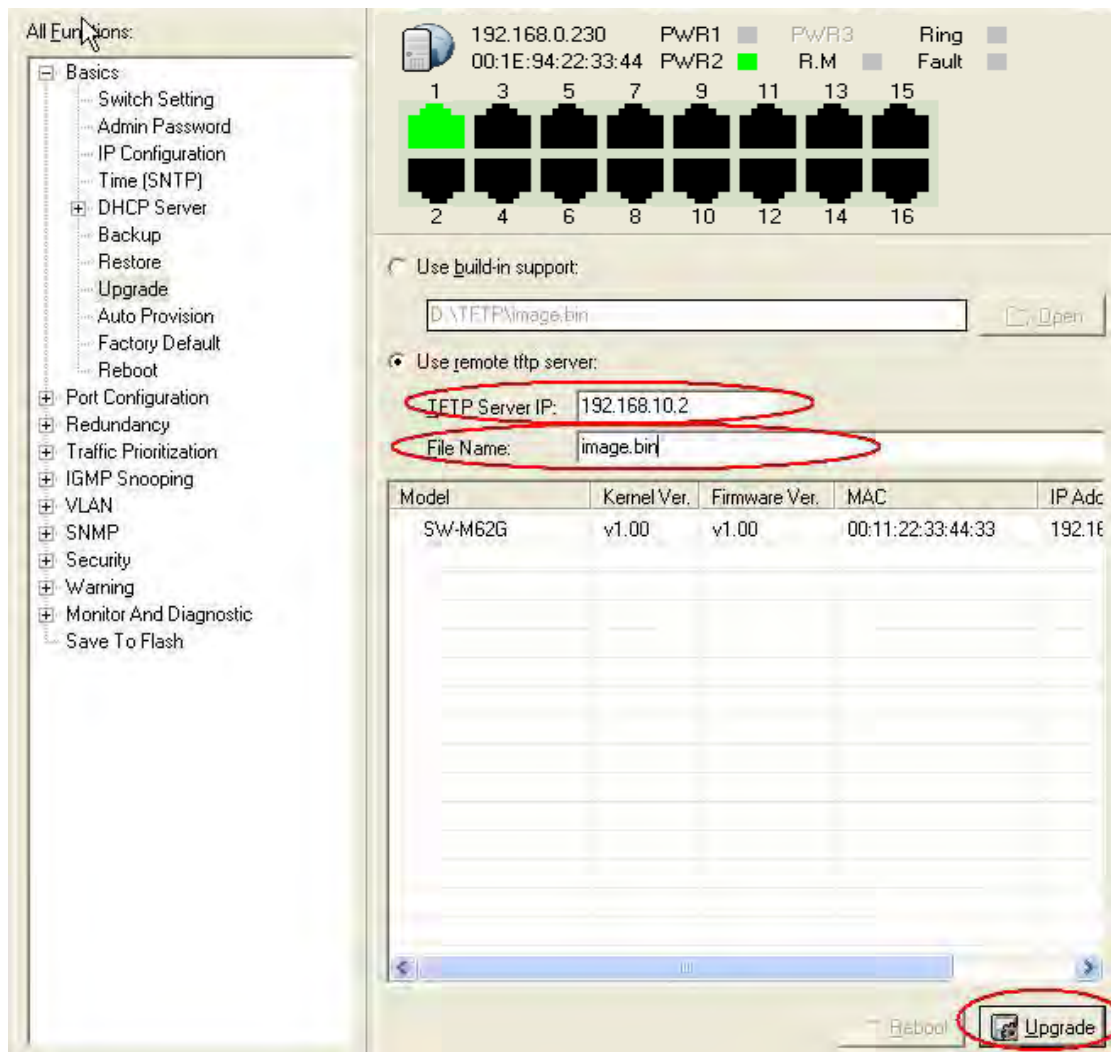
Restore	Click " restore " to restore the configurations.
Backup	Click " backup " to backup the configurations.

Upgrade Firmware

Upgrade Firmware allows you to update the switch firmware. Before updating, make sure you have your TFTP server ready and the firmware image is on the TFTP server.



Use build-in support Upgrade

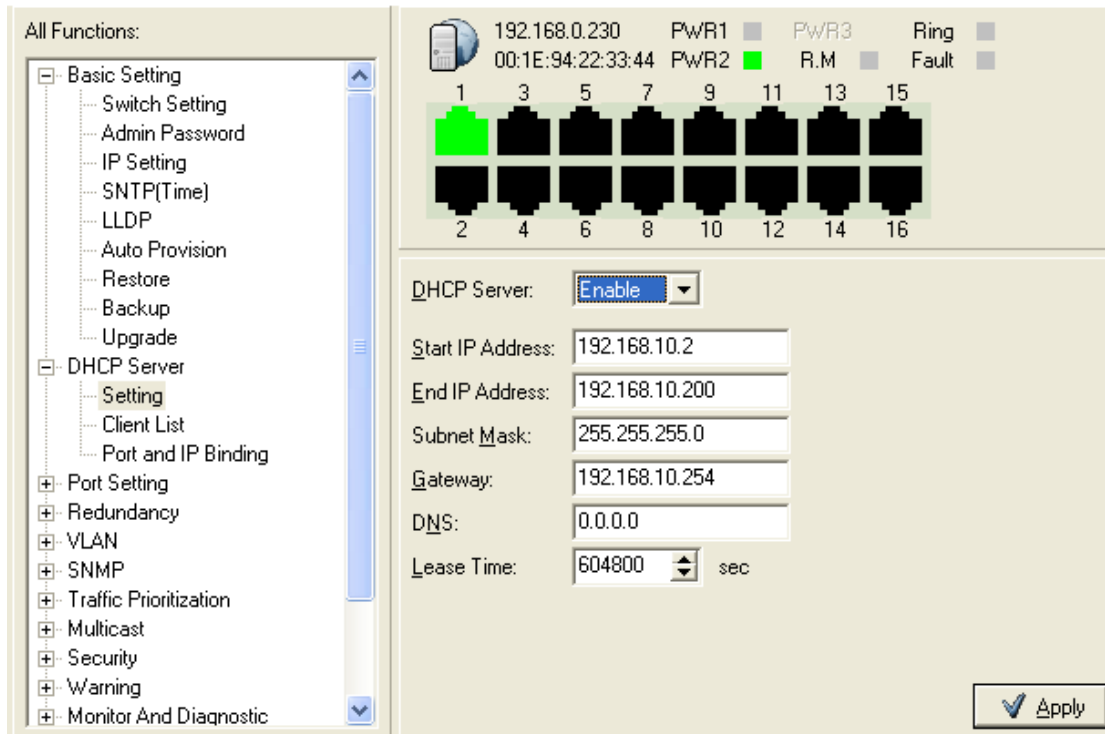


Use remote tftp server Upgrade

DHCP Server

DHCP Server – Configuration

The system provides with DHCP server function. Enable the DHCP server function, the switch system will be a DHCP server.



The screenshot shows the DHCP Server Configuration interface. On the left is a tree view under 'All Functions:' with categories like Basic Setting, DHCP Server, Port Setting, Redundancy, VLAN, SNMP, Traffic Prioritization, Multicast, Security, Warning, and Monitor And Diagnostic. The 'DHCP Server' category is expanded, showing 'Setting', 'Client List', and 'Port and IP Binding'. The 'Setting' sub-item is selected. The main area displays the DHCP Server configuration. At the top, there's a status bar showing IP 192.168.0.230, MAC 00:1E:94:22:33:44, and power status for PWR1, PWR2, PWR3, R.M, and Fault. Below this is a 2x8 grid of port status icons, with port 1 highlighted in green. The configuration fields include: 'DHCP Server' set to 'Enable', 'Start IP Address' 192.168.10.2, 'End IP Address' 192.168.10.200, 'Subnet Mask' 255.255.255.0, 'Gateway' 192.168.10.254, 'DNS' 0.0.0.0, and 'Lease Time' 604800 sec. An 'Apply' button is at the bottom right.

DHCP Server Configuration interface

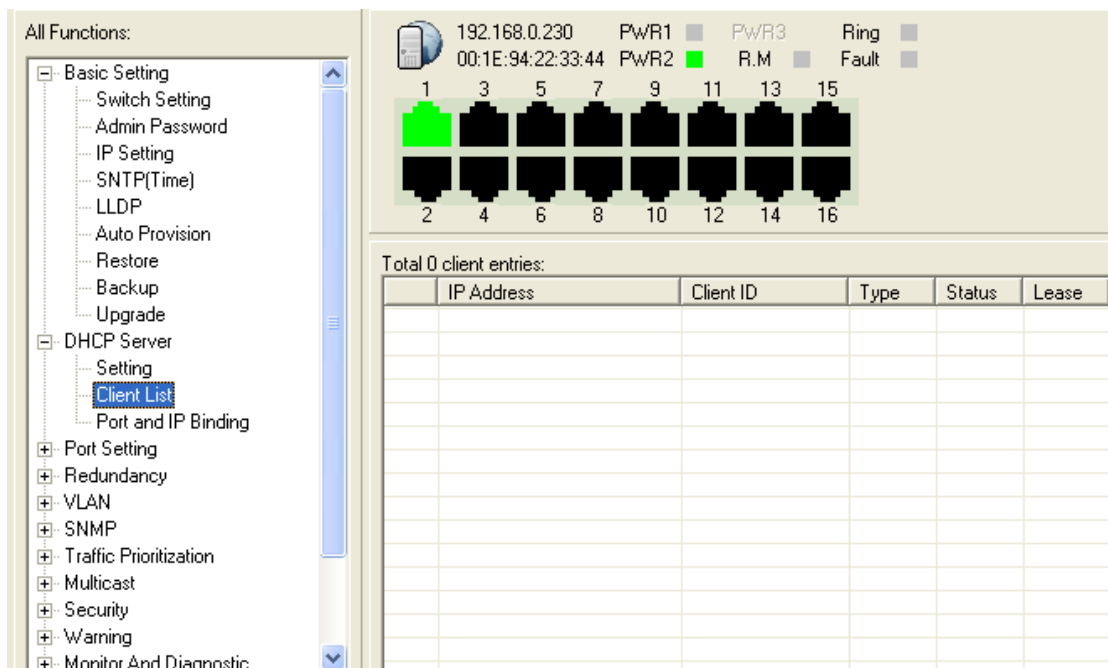
The following table describes the labels in this screen.

Label	Description
DHCP Server	Enable or Disable the DHCP Server function. Enable – the switch will be the DHCP server on your local network
Start IP Address	The dynamic IP assign range. Low IP address is the beginning of the dynamic IP assigns range. For example: dynamic IP assign range is from 192.168.1.100 to 192.168.1.200. 192.168.1.100 will be the Start IP address.
End IP Address	The dynamic IP assign range. High IP address is the end of the dynamic IP assigns range. For example: dynamic IP assign range is from 192.168.1.100 to 192.168.1.200. 192.168.1.200 will be the End IP address

Subnet Mask	The dynamic IP assign range subnet mask
Gateway	The gateway in your network.
DNS	Domain Name Server IP Address in your network.
Lease Time (Hour)	It is the period that system will reset the assigned dynamic IP to ensure the IP address is in used.
Apply	Click " Apply " to set the configurations.

DHCP Server – Client Entries

When the DHCP server function is activated, the system will collect the DHCP client information and display in here.

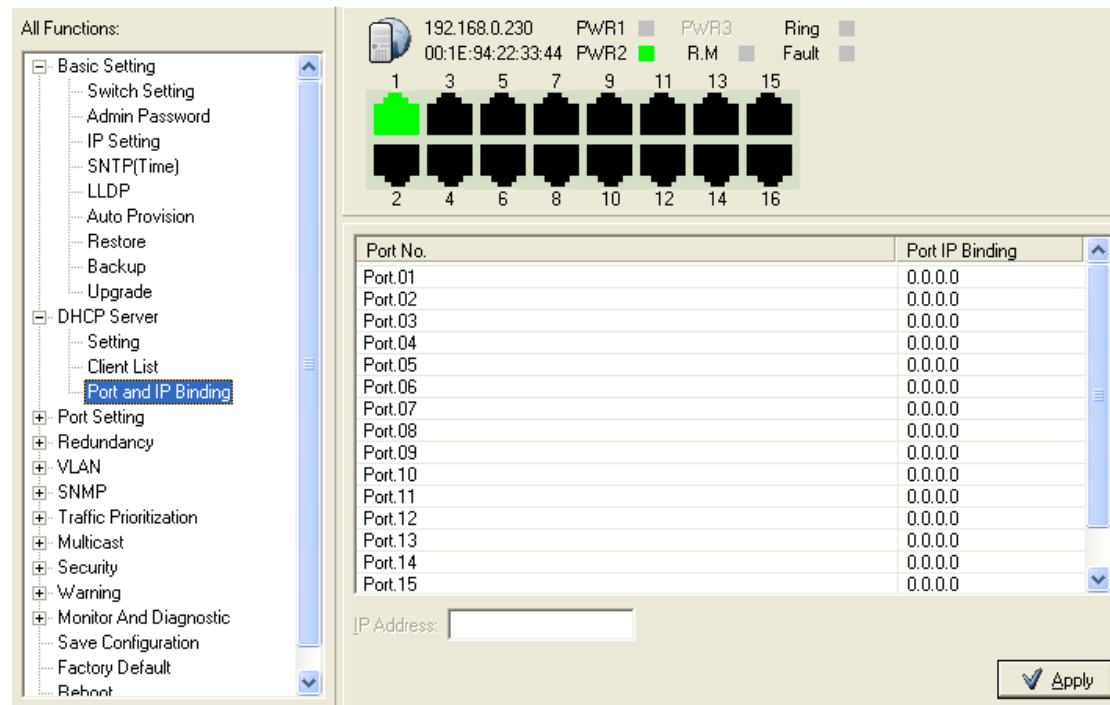


The screenshot shows the DHCP Server Client Entries interface. On the left, a sidebar lists 'All Functions' with categories like Basic Setting, DHCP Server, and others. The 'DHCP Server' category is expanded, and 'Client List' is selected. The main area displays a network diagram with 16 ports (1-16) and a table titled 'Total 0 client entries' with columns for IP Address, Client ID, Type, Status, and Lease.

DHCP Server Client Entries interface

DHCP Server – Port and IP bindings

You can assign the specific IP address which is in the assigned dynamic IP range to the specific port. When the device is connecting to the port and asks for dynamic IP assigning, the system will assign the IP address that has been assigned before in the connected device.



All Functions:

- Basic Setting
 - Switch Setting
 - Admin Password
 - IP Setting
 - SNTP(Time)
 - LLDP
 - Auto Provision
 - Restore
 - Backup
 - Upgrade
- DHCP Server
 - Setting
 - Client List
 - Port and IP Binding**
- Port Setting
- Redundancy
- VLAN
- SNMP
- Traffic Prioritization
- Multicast
- Security
- Warning
- Monitor And Diagnostic
- Save Configuration
- Factory Default
- Reboot

192.168.0.230 PWR1 PWR3 Ring
00:1E:94:22:33:44 PWR2 R.M Fault

Port No.	Port IP Binding
Port.01	0.0.0.0
Port.02	0.0.0.0
Port.03	0.0.0.0
Port.04	0.0.0.0
Port.05	0.0.0.0
Port.06	0.0.0.0
Port.07	0.0.0.0
Port.08	0.0.0.0
Port.09	0.0.0.0
Port.10	0.0.0.0
Port.11	0.0.0.0
Port.12	0.0.0.0
Port.13	0.0.0.0
Port.14	0.0.0.0
Port.15	0.0.0.0

IP Address:

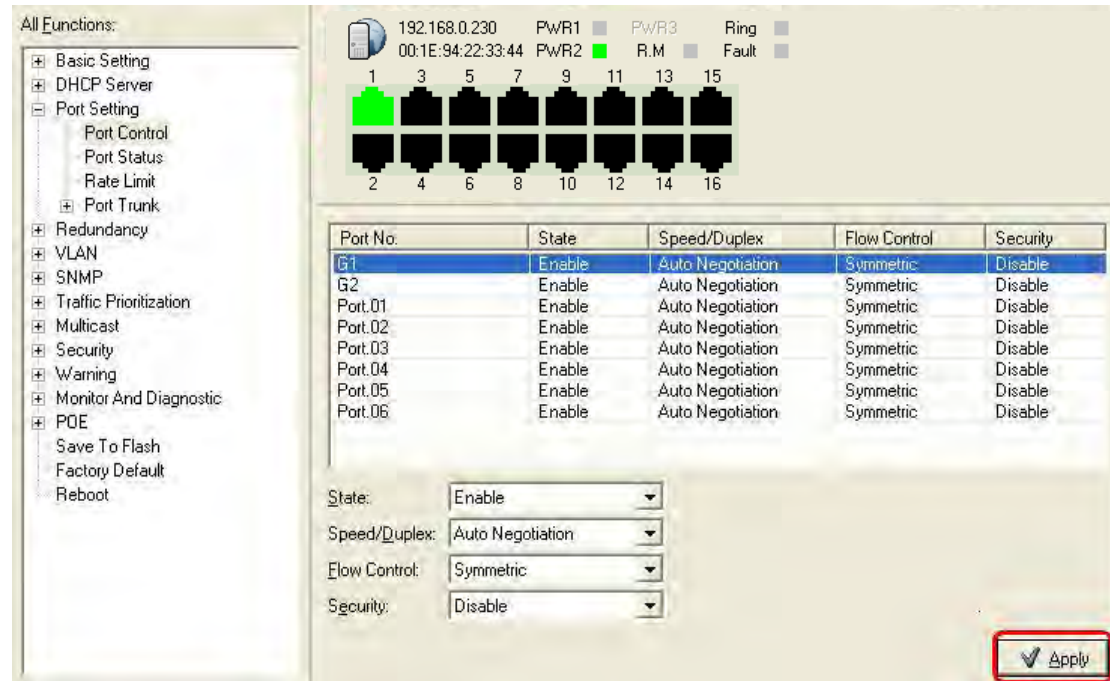
Apply

DHCP Server Port and IP Binding interface

6.3 Port Configuration

6.3.1 Port Control

By this function, you can set the state, speed/duplex, flow control, and security of the port.



Port Control interface

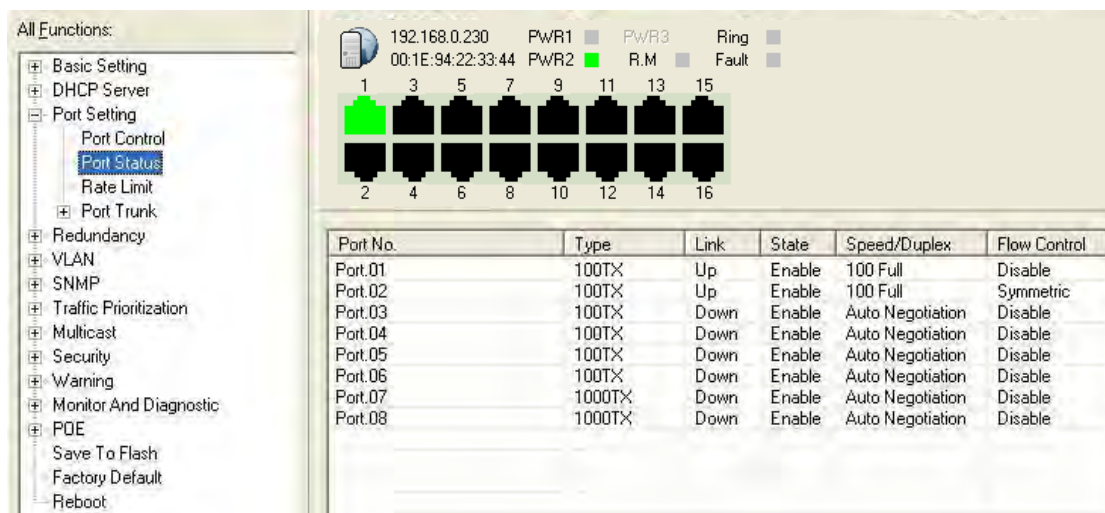
The following table describes the labels in this screen.

Label	Description
Port NO.	Port number for setting.
State	Enable or Disable Port Control function
Speed/Duplex	You can set Autonegotiation,100 full ,100 half,10 full,10 half mode.
Flow Control	Support symmetric and asymmetric mode to avoid packet loss when congestion occurred.

Security	Support port security function. When enable the function, the port will STOP learning MAC address dynamically.
Apply	Click “ Apply ” to set the configurations.

6.3.2 Port Status

The following information provides the current port status information



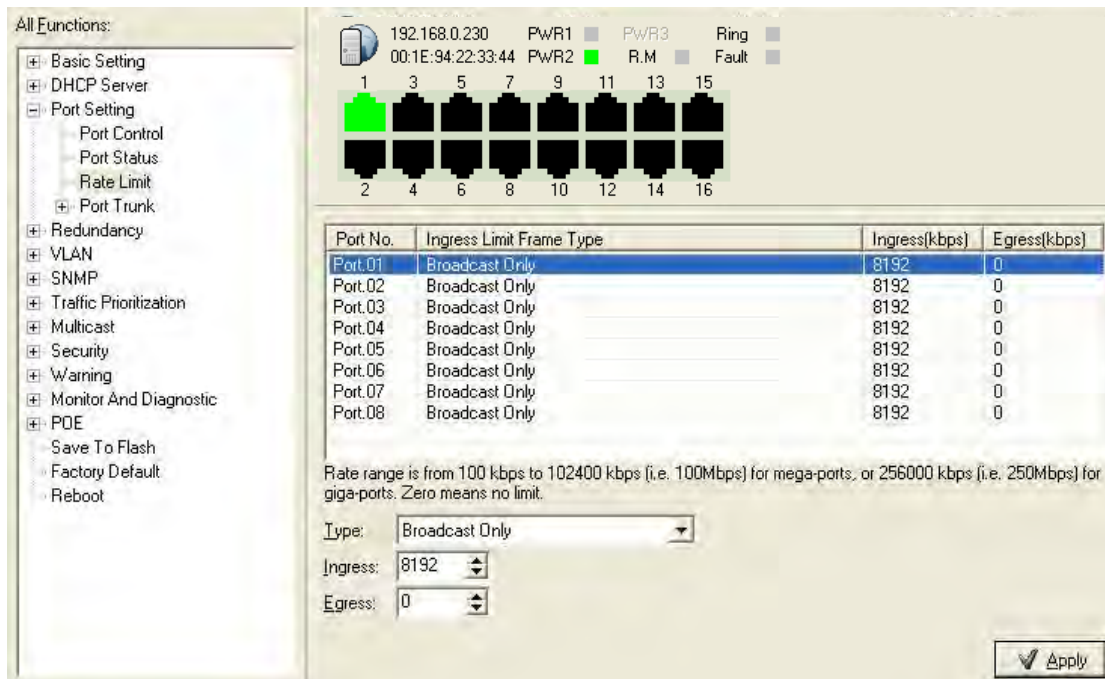
The screenshot shows the 'Port Status' interface. On the left is a tree view with 'Port Status' selected. The main area displays a 4x4 grid of port status icons (1-16). Below the grid is a table with the following data:

Port No.	Type	Link	State	Speed/Duplex	Flow Control
Port.01	100TX	Up	Enable	100 Full	Disable
Port.02	100TX	Up	Enable	100 Full	Symmetric
Port.03	100TX	Down	Enable	Auto Negotiation	Disable
Port.04	100TX	Down	Enable	Auto Negotiation	Disable
Port.05	100TX	Down	Enable	Auto Negotiation	Disable
Port.06	100TX	Down	Enable	Auto Negotiation	Disable
Port.07	100TX	Down	Enable	Auto Negotiation	Disable
Port.08	100TX	Down	Enable	Auto Negotiation	Disable

Port Status interface

6.3.3 Rate Limit

By this function, You can limit traffic of all ports, including broadcast, multicast and flooded unicast. You can also set “Ingress” or “Egress” to limit traffic received or transmitted bandwidth.



Rate Limit interface

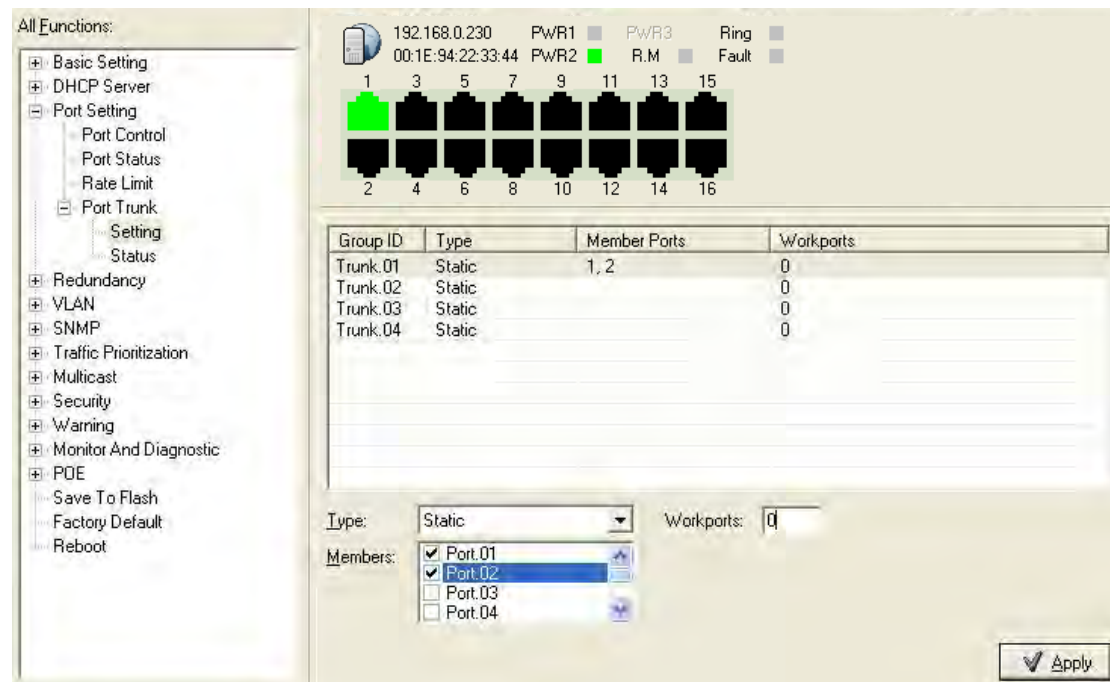
The following table describes the labels in this screen.

Label	Description
Ingress Limit Frame Type	You can set "all", "Broadcast only", "Broadcast/Multicast" or "Broadcast/Multicast/Flooded Unicast" mode.
Ingress	The switch port received traffic.
Egress	The switch port transmitted traffic.
Apply	Click " Apply " to set the configurations.

Port Trunk

Port Trunk – Setting

You can select static trunk or 802.3ad LACP to combine several physical link with a logical link to increase the bandwidth



Port Trunk - Setting interface

The following table describes the labels in this screen.

Label	Description
Group ID	Select port to join a trunk group.
Type	Support static trunk and 802.3ad LACP
Apply	Click “ Apply ” to set the configurations.

Port Trunk – Status

All Functions:

- Basic Setting
- DHCP Server
- Port Setting
 - Port Control
 - Port Status
 - Rate Limit
 - Port Trunk
 - Setting
 - Status
- Redundancy
- VLAN
- SNMP
- Traffic Prioritization
- Multicast
- Security
- Warning
- Monitor And Diagnostic
- PDE
 - Save To Flash
 - Factory Default
 - Reboot

192.168.0.230 PwR1 ☐ PwR3 ☐
 00:1E:94:22:33:44 PwR2 ☒ R.M ☐ Ring ☐
 Fault ☐

1 3 5 7 9 11 13 15
 2 4 6 8 10 12 14 16

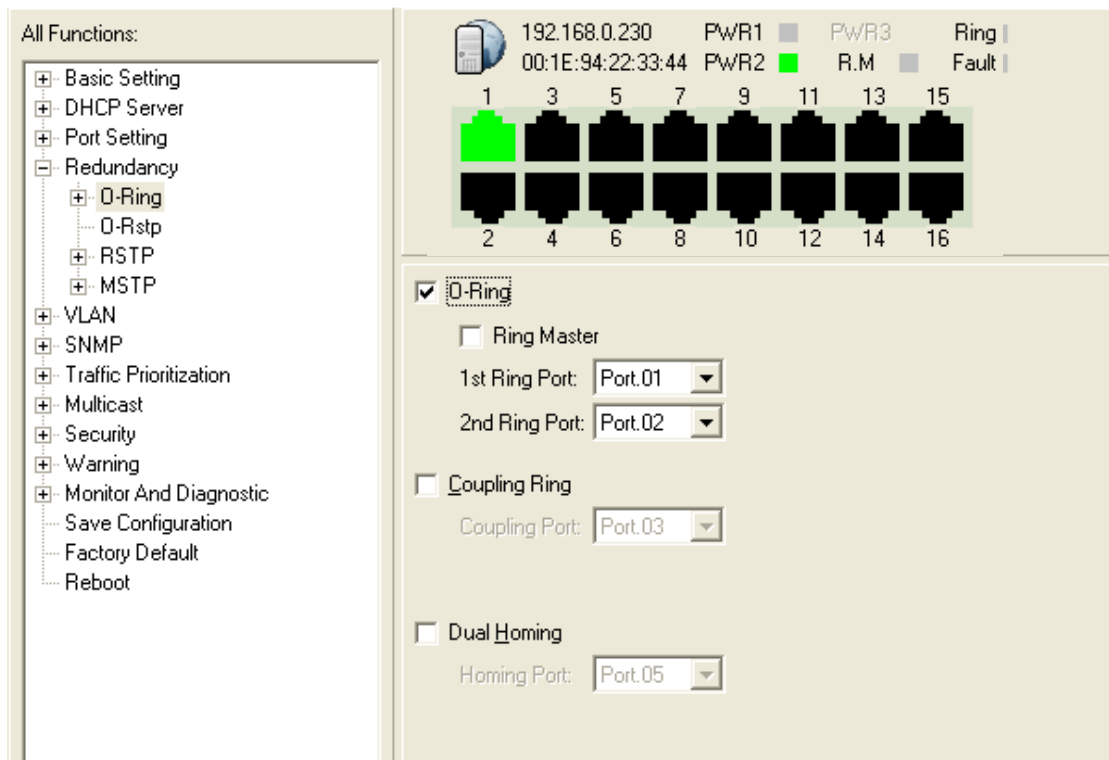
Group ID	Type	Member Ports
Trunk.01	Static	5, 6
Trunk.02	802.3ad LACP	3, 4
Trunk.03	Static	
Trunk.04	Static	

Port Trunk - Status interface

6.4 Redundancy

6.4.1 O-Ring

O-Ring is the most powerful Ring in the world. The recovery time of O-Ring is less than 10 mS. It can reduce unexpected damage caused by network topology change. O-Ring Supports 3 Ring topology: O-Ring, Coupling Ring and Dual Homing.



O-Ring interface

The following table describes the labels in this screen.

Label	Description
O-Ring	Mark to enable Ring.
Ring Master	There should be one and only one Ring Master in a ring. However if there are two or more switches which set Ring Master to enable, the switch with the lowest MAC address will be the actual Ring Master and others will be Backup Masters.
1st Ring Port	The primary port, when this switch is Ring Master.



2nd Ring Port	The backup port, when this switch is Ring Master.
Coupling Ring	Mark to enable Coupling Ring. Coupling Ring can be used to divide a big ring into two smaller rings to avoid effecting all switches when network topology change. It is a good application for connecting two Rings.
Label	Description
Coupling Port	Link to Coupling Port of the switch in another ring. Coupling Ring need four switch to build an active and a backup link. Set a port as coupling port. The coupled four ports of four switches will be run at active/backup mode.
Control Port	Link to Control Port of the switch in the same ring. Control Port used to transmit control signals.
Dual Homing	Mark to enable Dual Homing. By selecting Dual Homing mode, O-Ring will be connected to normal switches through two RSTP links (ex: backbone Switch). The two links work as active/backup mode, and connect each O-Ring to the normal switches in RSTP mode.
Apply	Click " Apply " to set the configurations.

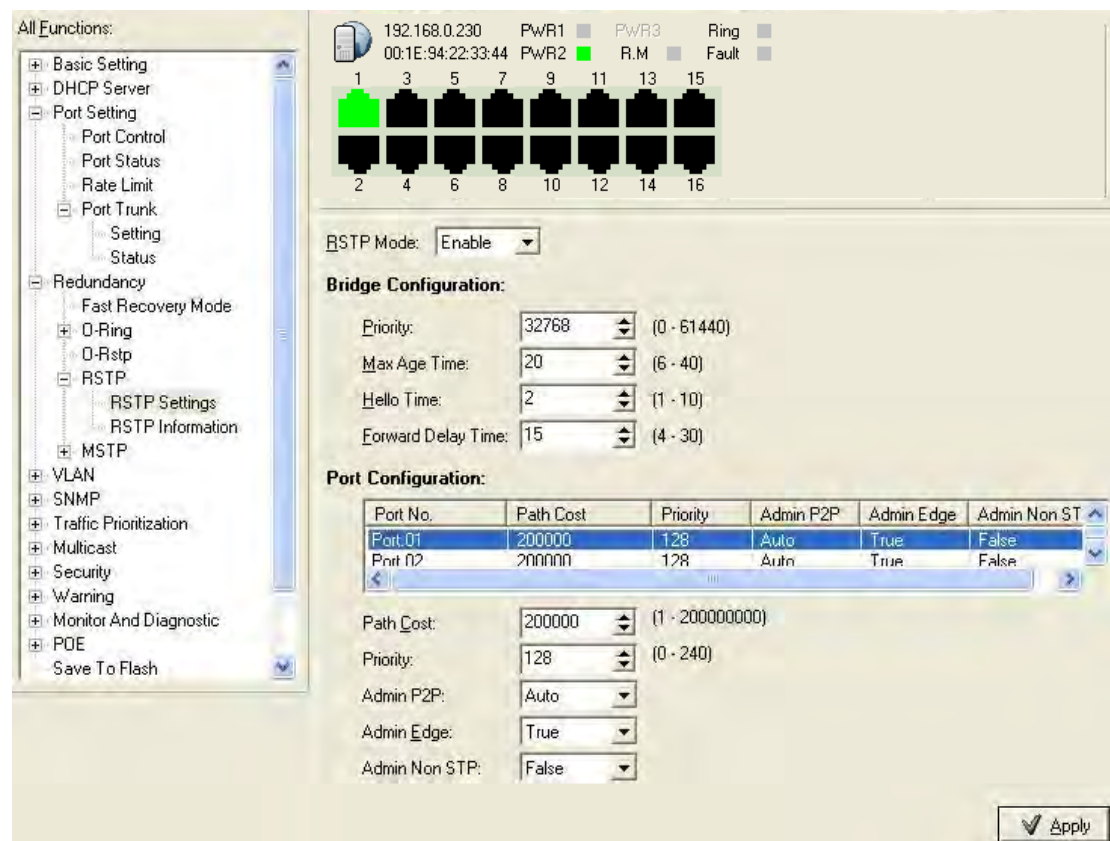
Note: We don't suggest you to set one switch as a Ring Master and a Coupling Ring at the same time due to heavy load.

6.4.2 RSTP

The Rapid Spanning Tree Protocol (RSTP) is an evolution of the Spanning Tree Protocol. It provides faster spanning tree convergence after a topology change. The system also supports STP and the system will auto detect the connected device that is running STP or RSTP protocol.

RSTP setting

You can enable/disable RSTP function, and set parameters for each port.



The screenshot shows the RSTP Setting interface. On the left is a tree view of configuration options. The main area displays the RSTP Mode set to 'Enable'. Below this is the Bridge Configuration section with fields for Priority (32768), Max Age Time (20), Hello Time (2), and Forward Delay Time (15). The Port Configuration section includes a table with columns: Port No., Path Cost, Priority, Admin P2P, Admin Edge, and Admin Non ST. The table lists Port 01 and Port 02. Below the table are individual configuration fields for each port, including Path Cost, Priority, Admin P2P, Admin Edge, and Admin Non ST. An 'Apply' button is at the bottom right.

Port No.	Path Cost	Priority	Admin P2P	Admin Edge	Admin Non ST
Port 01	200000	128	Auto	True	False
Port 02	200000	128	Auto	True	False

RSTP Setting interface

The following table describes the labels in this screen.

Label	Description
RSTP mode	You must enable or disable RSTP function before configuring the related parameters.
Priority (0-61440)	A value used to identify the root bridge. The bridge

	with the lowest value has the highest priority and is selected as the root. If the value changes, You must reboot the switch. The value must be multiple of 4096 according to the protocol standard rule.
Max Age (6-40)	The number of seconds a bridge waits without receiving Spanning-tree Protocol configuration messages before attempting a reconfiguration. Enter a value between 6 through 40.
Hello Time (1-10)	The time that controls switch sends out the BPDU packet to check RSTP current status. Enter a value between 1 through 10.
Forwarding Delay Time (4-30)	The number of seconds a port waits before changing from its Rapid Spanning-Tree Protocol learning and listening states to the forwarding state. Enter a value between 4 through 30.
Path Cost (1-200000000)	The cost of the path to the other bridge from this transmitting bridge at the specified port. Enter a number 1 through 200000000.
Priority (0-240)	Decide which port should be blocked by priority in LAN. Enter a number 0 through 240. The value of priority must be the multiple of 16
Admin P2P	Some of the rapid state transactions that are possible within RSTP are dependent upon whether the port concerned can only be connected to exactly one other bridge (i.e. It is served by a point-to-point LAN segment), or it can be connected to two or more bridges (i.e. It is served by a shared medium LAN segment). This function allows the P2P status of the link to be manipulated administratively. True means P2P enabling. False means P2P disabling.

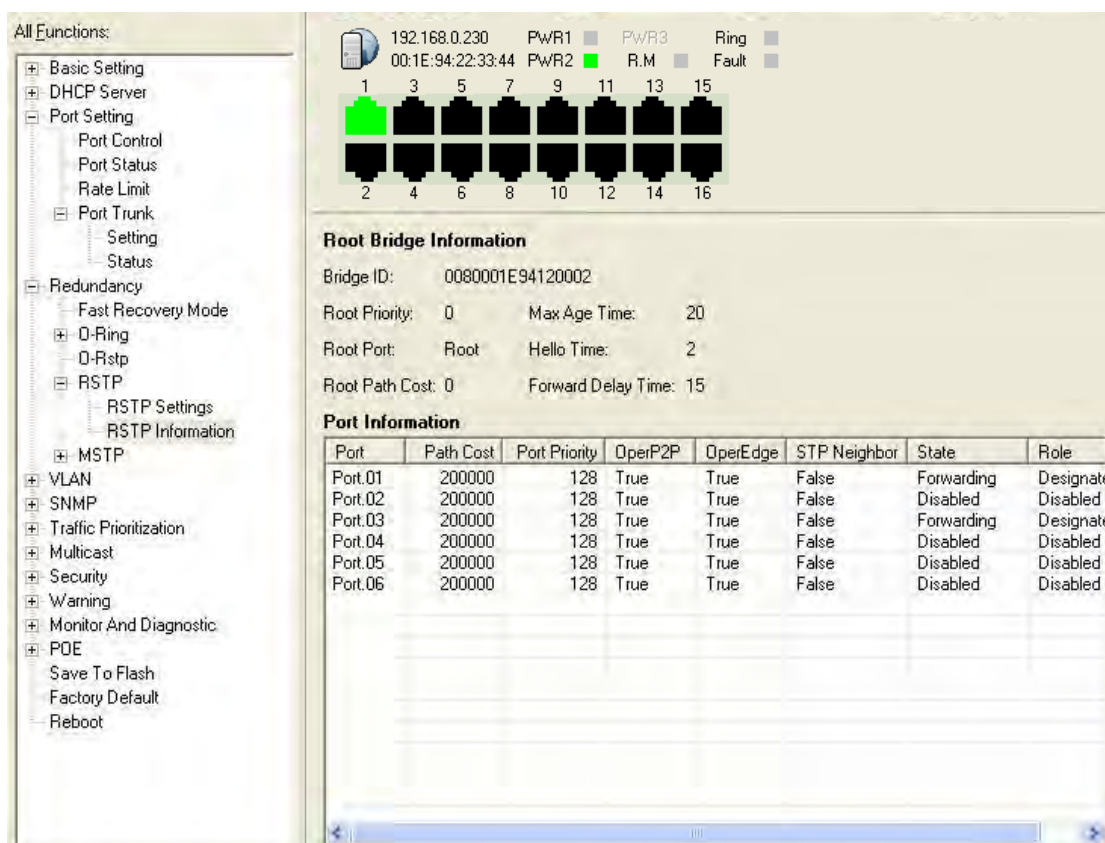
Admin Edge	The port directly connected to end stations, and it cannot create bridging loop in the network. To configure the port as an edge port, set the port to "True" .
Admin Non STP	The port includes the STP mathematic calculation. True is not including STP mathematic calculation. False is including the STP mathematic calculation.
Apply	Click "Apply" to set the configurations.

NOTE: Follow the rule to configure the MAX Age, Hello Time, and Forward Delay Time.

$2 \times (\text{Forward Delay Time value} - 1) \geq \text{Max Age value} \geq 2 \times (\text{Hello Time value} + 1)$

RSTP Information

Show RSTP algorithm result at this table.



Root Bridge Information

Bridge ID: 0080001E94120002

Root Priority: 0 Max Age Time: 20

Root Port: Root Hello Time: 2

Root Path Cost: 0 Forward Delay Time: 15

Port Information

Port	Path Cost	Port Priority	OperP2P	OperEdge	STP Neighbor	State	Role
Port.01	200000	128	True	True	False	Forwarding	Designate
Port.02	200000	128	True	True	False	Disabled	Disabled
Port.03	200000	128	True	True	False	Forwarding	Designate
Port.04	200000	128	True	True	False	Disabled	Disabled
Port.05	200000	128	True	True	False	Disabled	Disabled
Port.06	200000	128	True	True	False	Disabled	Disabled

RSTP Information interface

6.5 VLAN

A Virtual LAN (VLAN) is a logical network grouping that limits the broadcast domain, which allows you to isolate network traffic. Only the members of the VLAN will receive traffic from the same members of VLAN. Basically, creating a VLAN from a switch is logically equivalent of reconnecting a group of network devices to another Layer 2 switch. However, all the network devices are still plugged into the same switch physically.

The switch supports port-based and 802.1Q (tagged-based) VLAN. The default configuration of VLAN operation mode is at “**802.1Q**”.

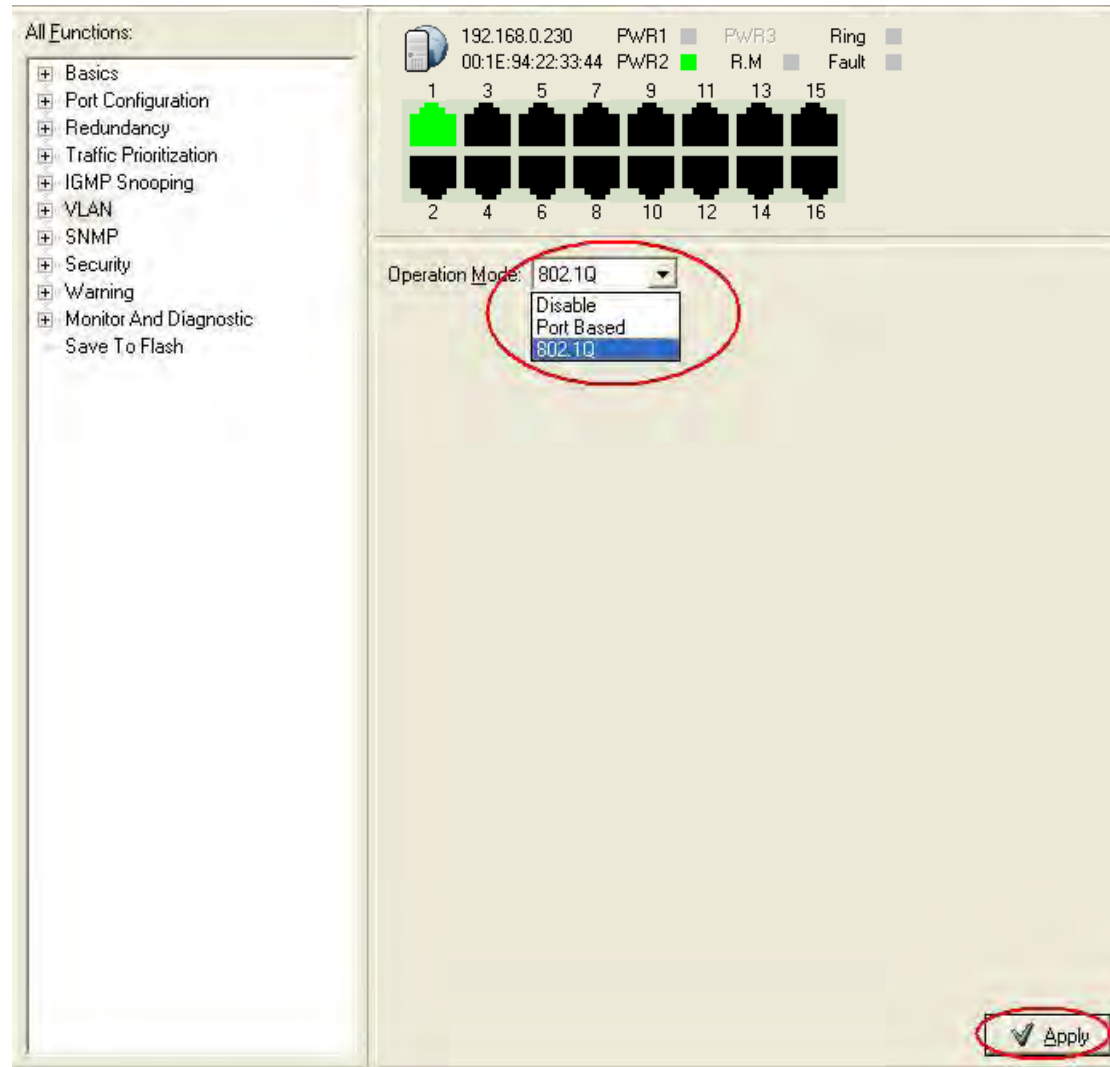
VLAN Configuration – 802.1Q

Tagged-based VLAN is an IEEE 802.1Q specification standard, and it is possible to create a VLAN across devices from different switch vendors. IEEE 802.1Q VLAN uses a technique to insert a “tag” into the Ethernet frames. Tag contains a VLAN Identifier (VID) that indicates the VLAN numbers.

You can create Tag-based VLAN, and enable or disable GVRP protocol. There are 256 VLAN groups to provide configure. Enable 802.1Q VLAN, the all ports on the switch belong to default VLAN, VID is 1. The default VLAN cannot be deleted.

GVRP allows automatic VLAN configuration between the switch and nodes. If the switch is connected to a device with GVRP enabled, you can send a GVRP request by using the VID of a VLAN defined on the switch; the switch will automatically add that device to the existing VLAN.

VLAN Configuration



The screenshot shows the VLAN Configuration interface. On the left is a sidebar with a tree view under 'All Functions:' containing: Basics, Port Configuration, Redundancy, Traffic Prioritization, IGMP Snooping, VLAN, SNMP, Security, Warning, Monitor And Diagnostic, and Save To Flash. The main area displays network status at the top: IP 192.168.0.230, MAC 00:1E:94:22:33:44, PWR1 (grey), PWR2 (green), PWR3 (grey), R.M (grey), Ring (grey), and Fault (grey). Below this is a 4x4 grid of 16 port status icons, numbered 1 to 16. Port 1 is green, while others are black. The 'Operation Mode' dropdown is open, showing options: Disable, Port Based, and 802.1Q (highlighted in blue). A red circle highlights the dropdown menu. At the bottom right, there is an 'Apply' button with a checkmark icon, also circled in red.

VLAN Configuration – 802.1Q interface

The following table describes the labels in this screen.

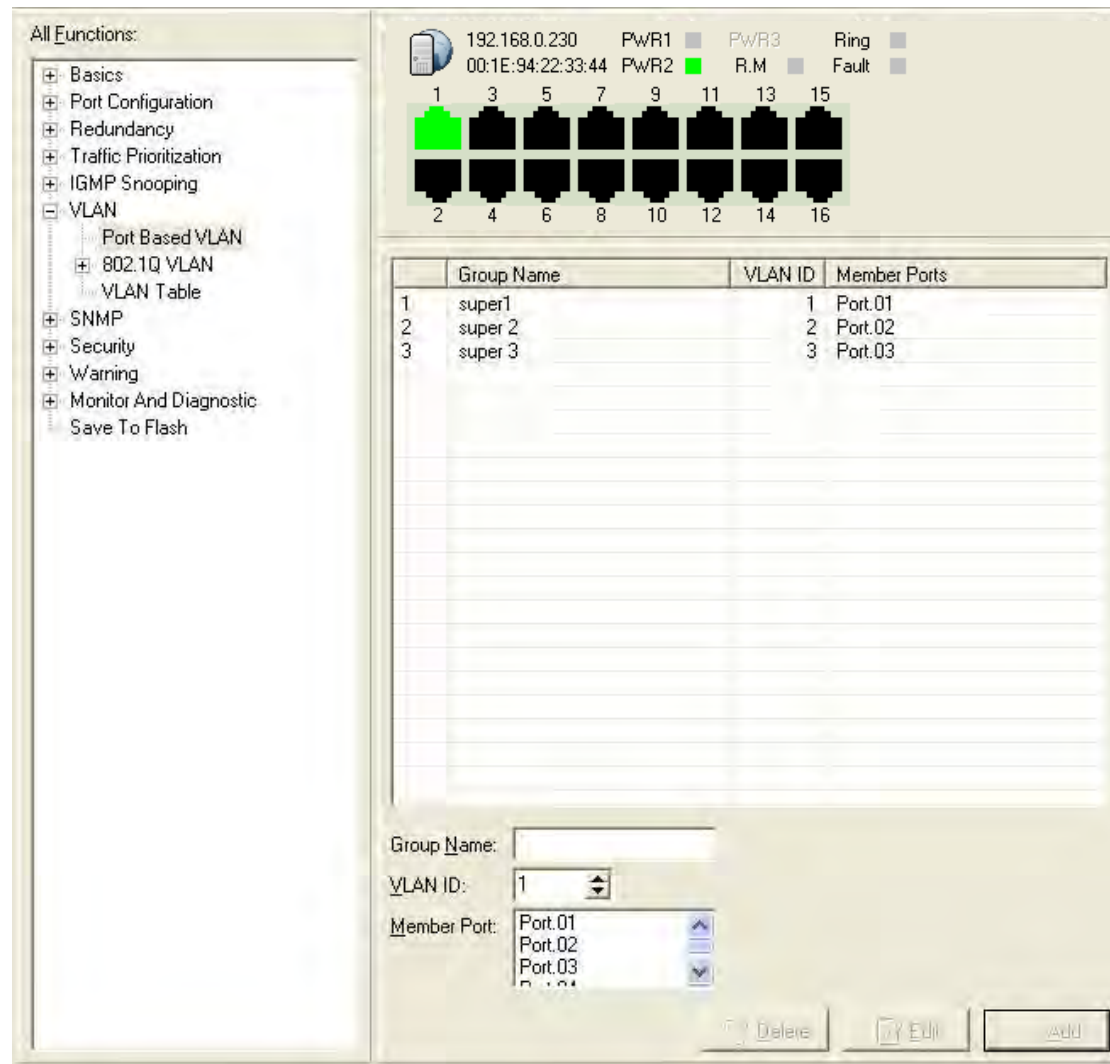
Label	Description
VLAN Operation Mode	Configure VLAN Operation Mode: disable, Port Base,802.1Q
GVRP Mode	Enable/Disable GVRP function.
Management VLAN ID	Management VLAN can provide network administrator a secure VLAN to management Switch. Only the devices in the management



	VLAN can access the switch.
Link type	<p>There are 3 types of link type:</p> <p>Access Link: single switch only, allows you to group ports by setting the same VID.</p> <p>Trunk Link: extended application of Access Link, allows you to group ports by setting the same VID with 2 or more switches.</p> <p>Hybrid Link: Both Access Link and Trunk Link are available.</p>
Untagged VID	Set the port default VLAN ID for untagged devices that connect to the port. The range is 1 to 4094.
Tagged VIDs	Set the tagged VIDs to carry different VLAN frames to other switch.
Apply	Click " Apply " to set the configurations.

VLAN Configuration – Port Based

Packets can go among only members of the same VLAN group. Note all unselected ports are treated as belonging to another single VLAN. If the port-based VLAN enabled, the VLAN-tagging is ignored.



Group Name	VLAN ID	Member Ports
1 super1	1	Port.01
2 super 2	2	Port.02
3 super 3	3	Port.03

VLAN Configuration – Port Base interface

The following table describes the labels in this screen.

Label	Description
Add	Click “add” to enter VLAN add interface.
Edit	Edit exist VLAN



Delete	Delete exist VLAN
Help	Show help file.

The following table describes the labels in this screen.

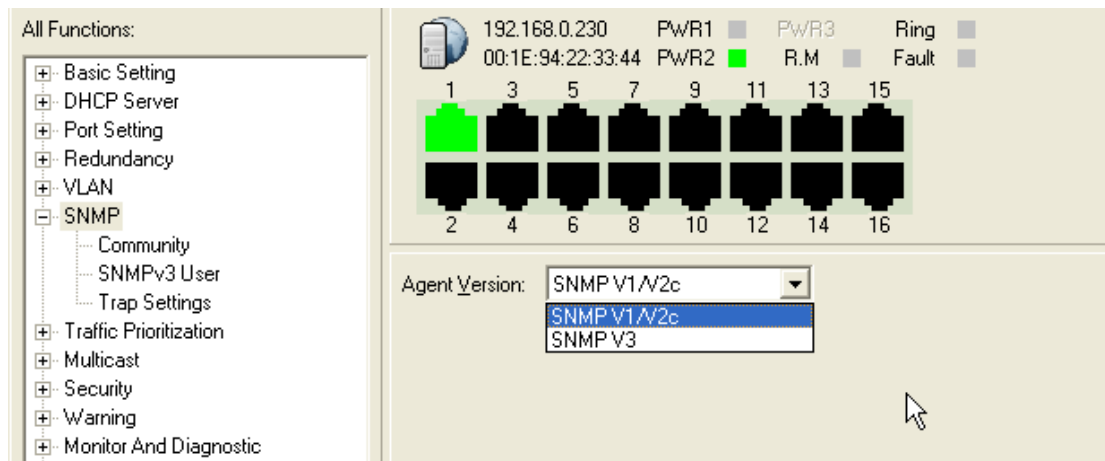
Label	Description
Group Name	VLAN name.
VLAN ID	Specify the VLAN ID
Add	Select port to join the VLAN group.
Remove	Remove port of the VLAN group
Apply	Click " Apply " to set the configurations.
Help	Show help file.

6.6 SNMP Configuration

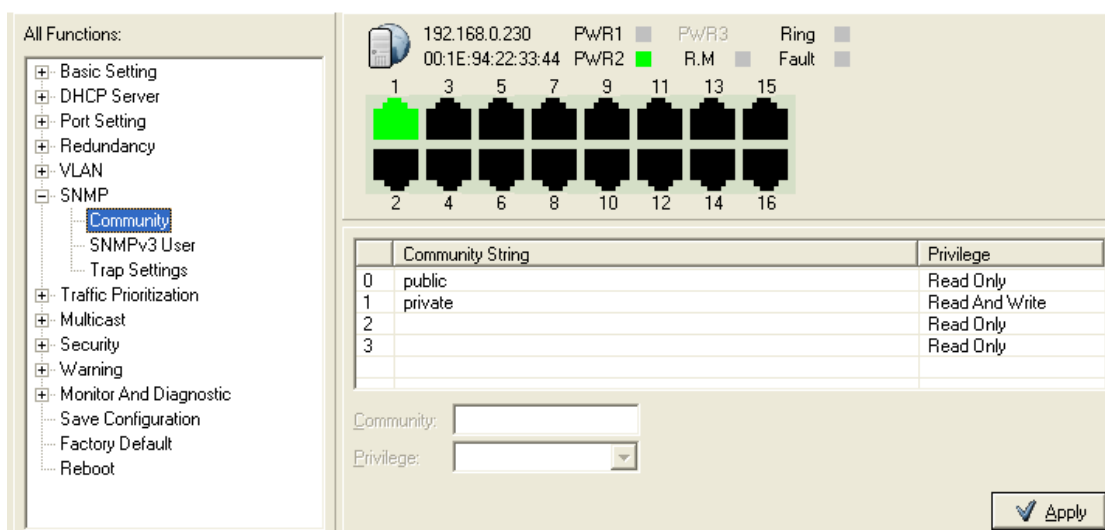
Simple Network Management Protocol (SNMP) is the protocol developed to manage nodes (servers, workstations, routers, switches and hubs etc.) on an IP network. SNMP enables network administrators to manage network performance, find and solve network problems, and plan for network growth. Network management systems learn of problems by receiving traps or change notices from network devices implementing SNMP.

SNMP –Agent Setting

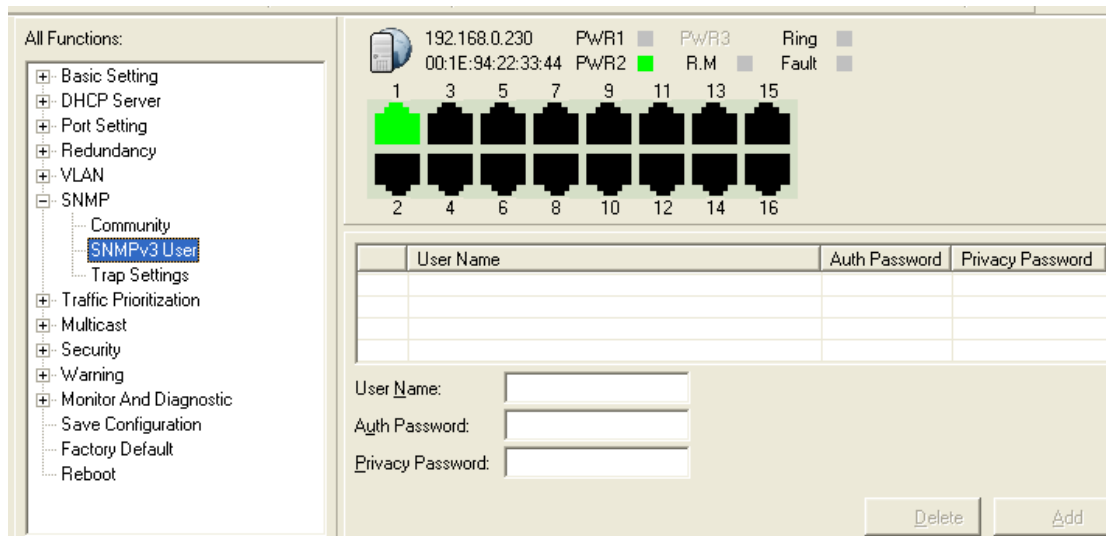
You can set SNMP agent related information by Agent Setting Function.



SNMP Agent Setting interface



SNMP Community Interface



SNMP v3 User Interface

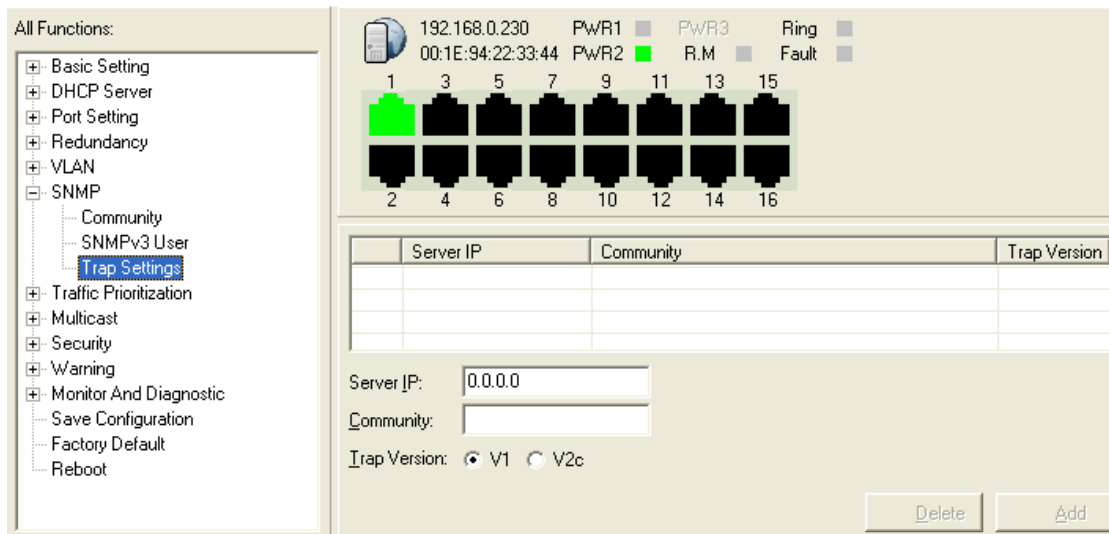
The following table describes the labels in this screen.

Label	Description
SNMP agent Version	Three SNMP versions are supported such as SNMP V1/SNMP V2c, and SNMP V3. SNMP V1/SNMP V2c agent use a community string match for authentication, that means SNMP servers access objects with read-only or read/write permissions with the community default string public/private. SNMP V3 requires an authentication level of MD5 or DES to encrypt data to enhance data security.
SNMP V1/V2c Community	SNMP Community should be set for SNMP V1/V2c. Four sets of "Community String/Privilege" are supported. Each Community String is maximum 32 characters. Keep empty to remove this Community string.
SNMPv3User	If SNMP V3 agent is selected, the SNMPv3 you profiled should be set for authentication. The Username is necessary. The Auth Password is encrypted by MD5 and the Privacy Password which is encrypted by DES. There are maximum 8 sets of SNMPv3 User and maximum 16 characters in

	<p>username, and password.</p> <p>When SNMP V3 agent is selected, you can:</p> <ol style="list-style-type: none"> 1. Input SNMPv3 username only. 2. Input SNMPv3 username and Auth Password. 3. Input SNMPv3 username, Auth Password and Privacy Password, which can be different with Auth Password. <p>To remove a current user profile:</p> <ol style="list-style-type: none"> 1. Input SNMPv3 user name you want to remove. 2. Click "Remove" button
Current SNMPv3 User Profile	Show all SNMPv3 user profiles.
Apply	Click " Apply " to set the configurations.
Help	Show help file.

SNMP –Trap Setting

A trap manager is a management station that receives traps, the system alerts generated by the switch. If no trap manager is defined, no traps will issue. Create a trap manager by entering the IP address of the station and a community string. To define management stations as trap manager and enter SNMP community strings and selects the SNMP version.



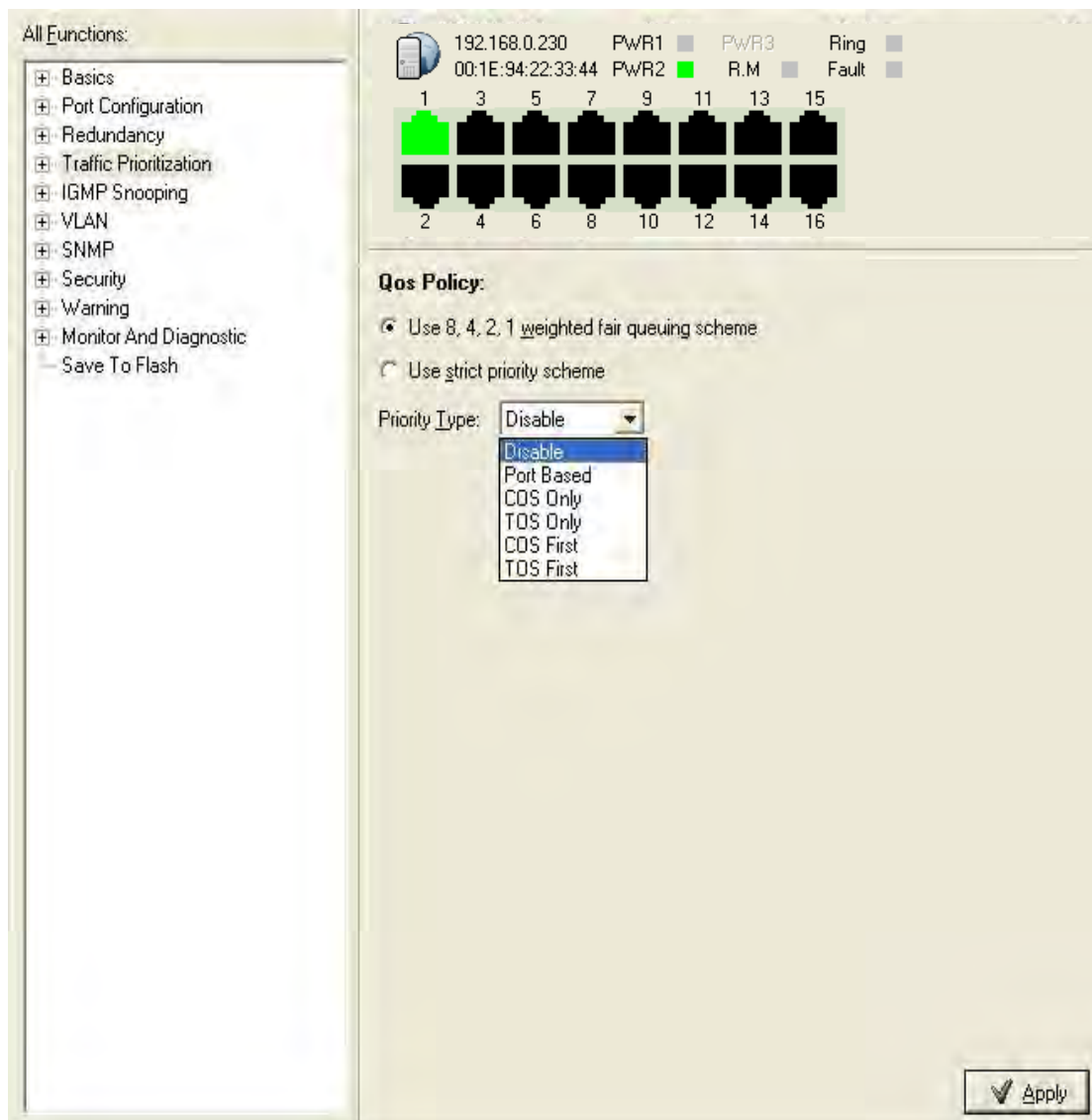
SNMP Trap Setting Interface

The following table describes the labels in this screen.

Label	Description
Server IP	The server IP address to receive Trap
Community	Community for authentication
Trap Version	Trap Version supports V1 and V2c.
Add	Add trap server profile.
Remove	Remove trap server profile.
Help	Show help file.

6.7 Traffic Prioritization

Traffic Prioritization includes 3 modes: port base, 802.1p/COS, and TOS/DSCP. By traffic prioritization function, you can classify the traffic into four classes for differential network application. SW-M series support 4 priority queues.



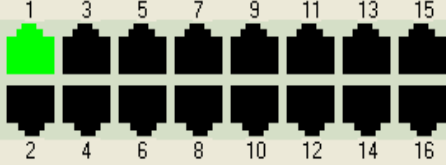
Qos Policy Interface



Port Based Priority Interface

All Functions:

- Basics
- Port Configuration
- Redundancy
- Traffic Prioritization
 - Port Based Priority
 - COS Settings
 - TOS Settings
- IGMP Snooping
- VLAN
- SNMP
- Security
- Warning
- Monitor And Diagnostic
 - Save To Flash

192.168.0.230 PwR1 PwR3 Ring
00:1E:94:22:33:44 PwR2 R.M Fault


COS/802.1p:

Priority	Mapping
Priority.00	Low
Priority.01	Lowest
Priority.02	Lowest
Priority.03	Low
Priority.04	Middle
Priority.05	Middle
Priority.06	High
Priority.07	High

Mapping: Lowest

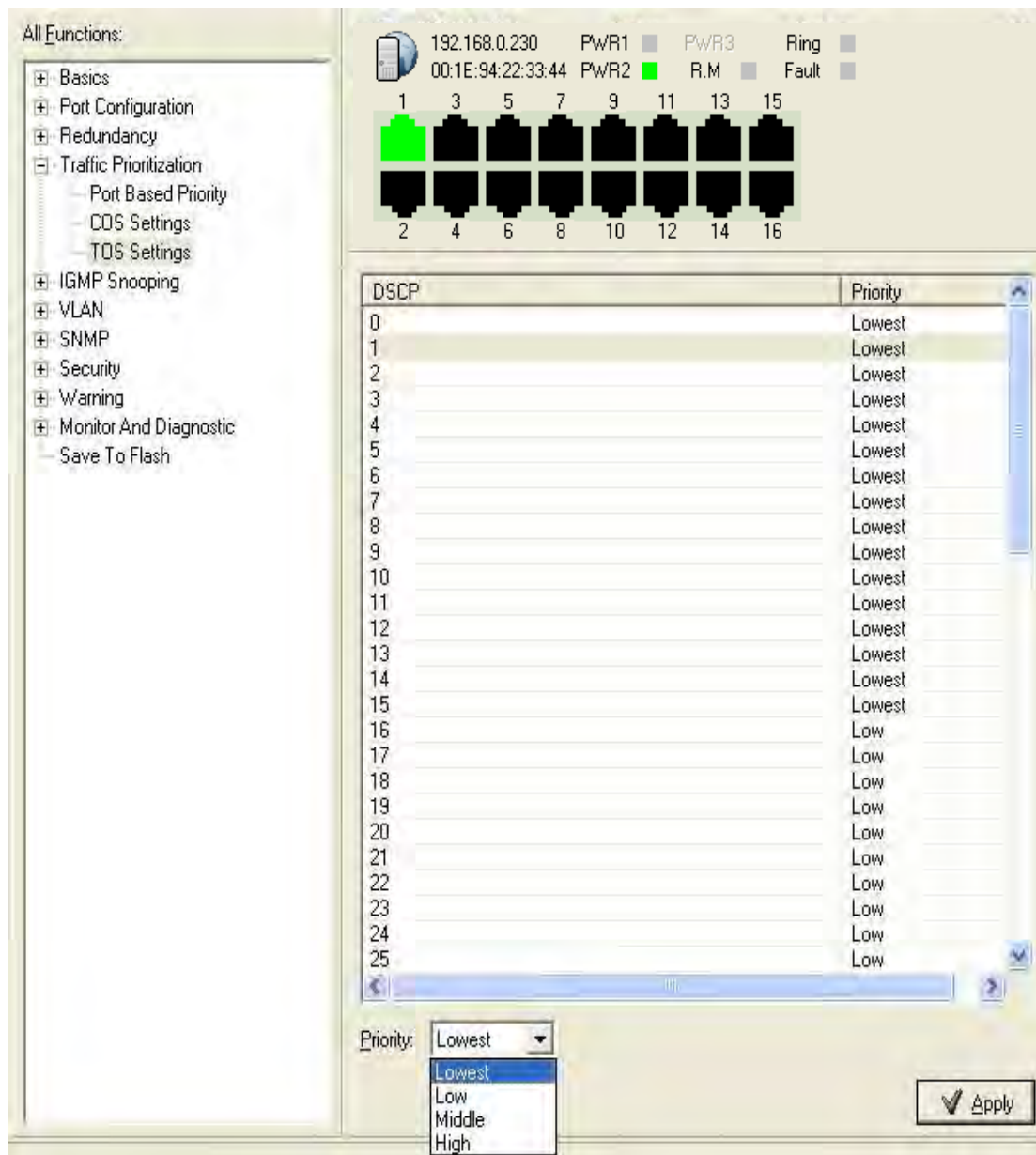
COS Port Default:

Port No.	Priority
Port.01	Priority.00
Port.02	Priority.00
Port.03	Priority.00
Port.04	Priority.00
Port.05	Priority.00
Port.06	Priority.00
Port.07	Priority.00
Port.08	Priority.00

Priority: Priority.00

Apply

COS Setting Interface



TOS Setting Interface

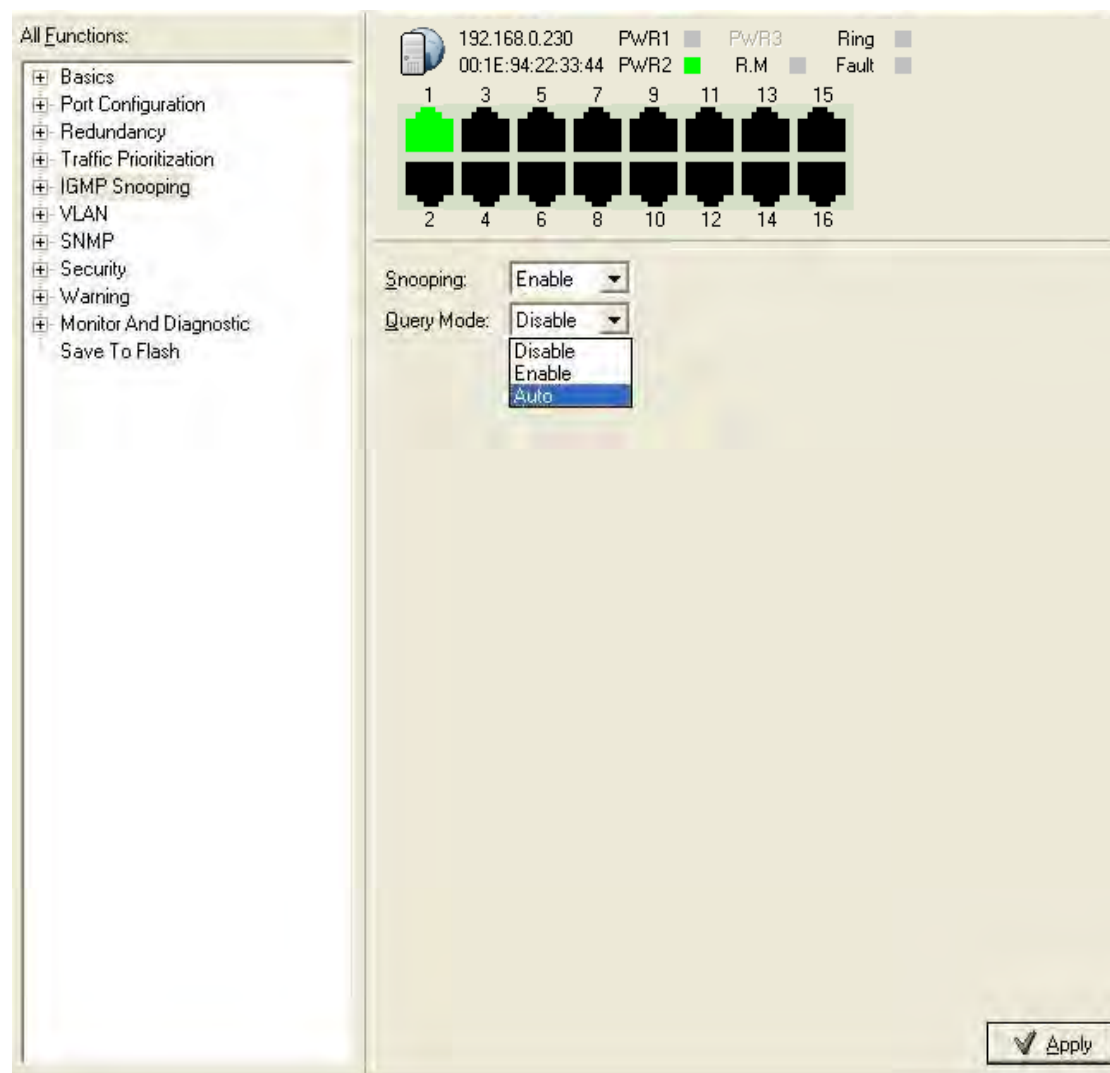
The following table describes the labels in this screen.

Label	Description
QOS policy	<ul style="list-style-type: none"> ■ Using the 8,4,2,1 weight fair queue scheme: the output queues will follow 8:4:2:1 ratio to transmit packets from the highest to lowest queue. For example: 8 high queue packets, 4 middle queue packets, 2 low queue packets, and the one lowest queue packets are transmitted in one turn.

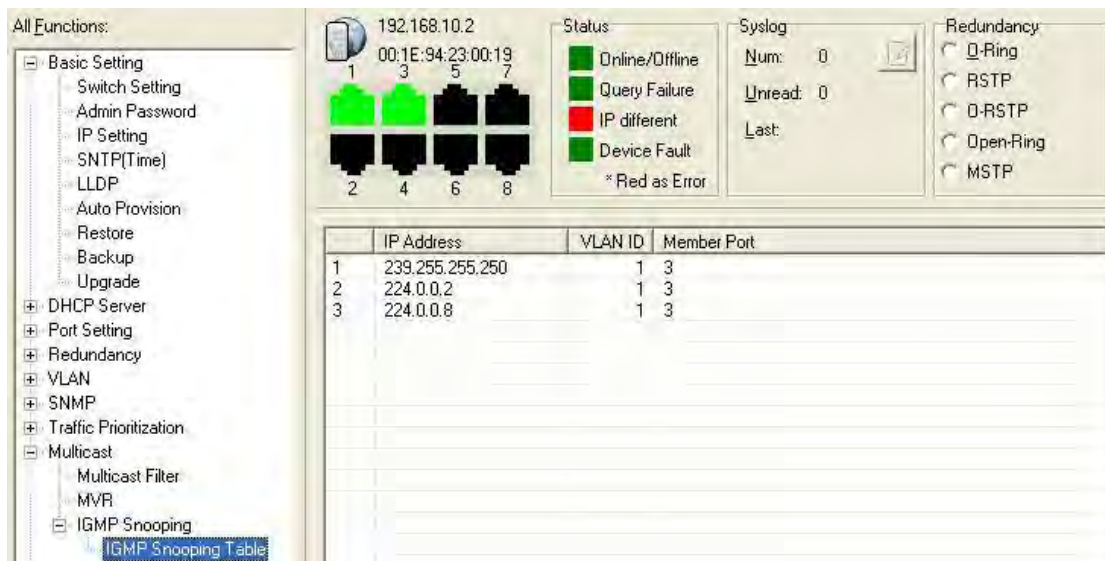
	<ul style="list-style-type: none"> ■ Use the strict priority scheme: always the packets in higher queue will be transmitted first until higher queue is empty.
Priority Type	<ul style="list-style-type: none"> ■ Port-base: the output priority is determined by ingress port. ■ COS only: the output priority is determined by COS only. ■ TOS only: the output priority is determined by TOS only. ■ COS first: the output priority is determined by COS and TOS, but COS first. ■ TOS first: the output priority is determined by COS and TOS, but TOS first.
Port base Priority	Assign Port with a priority queue. 4 priority queues can be assigned: High, Middle, Low, and Lowest.
COS/802.1p	COS (Class Of Service) is well known as 802.1p. It describes that the output priority of a packet is determined by user priority field in 802.1Q VLAN tag. The priority value is supported 0to7. COS value map to 4 priority queues: High, Middle, Low, and Lowest.
COS Port Default	When an ingress packet has not VLAN tag, a default priority value is considered and determined by ingress port.
TOS/DSCP	TOS (Type of Service) is a field in IP header of a packet. This TOS field is also used by Differentiated Services and is called the Differentiated Services Code Point (DSCP). The output priority of a packet can be determined by this field and the priority value is supported 0to63. DSCP value map to 4 priority queues: High, Middle, Low, and Lowest.
Apply	Click " Apply " to set the configurations.
Help	Show help file.

6.8 IGMP Snooping

Internet Group Management Protocol (IGMP) is used by IP hosts to register their dynamic multicast group membership. IGMP has 3 versions, IGMP v1, v2 and v3. Please refer to RFC 1112, 2236 and 3376. IGMP Snooping improves the performance of networks that carry multicast traffic. It provides the ability to prune multicast traffic so that it travels only to those end destinations that require that traffic and reduces the amount of traffic on the Ethernet LAN.



IGMP Snooping interface



IGMP Snooping Table Interface

The following table describes the labels in this screen.

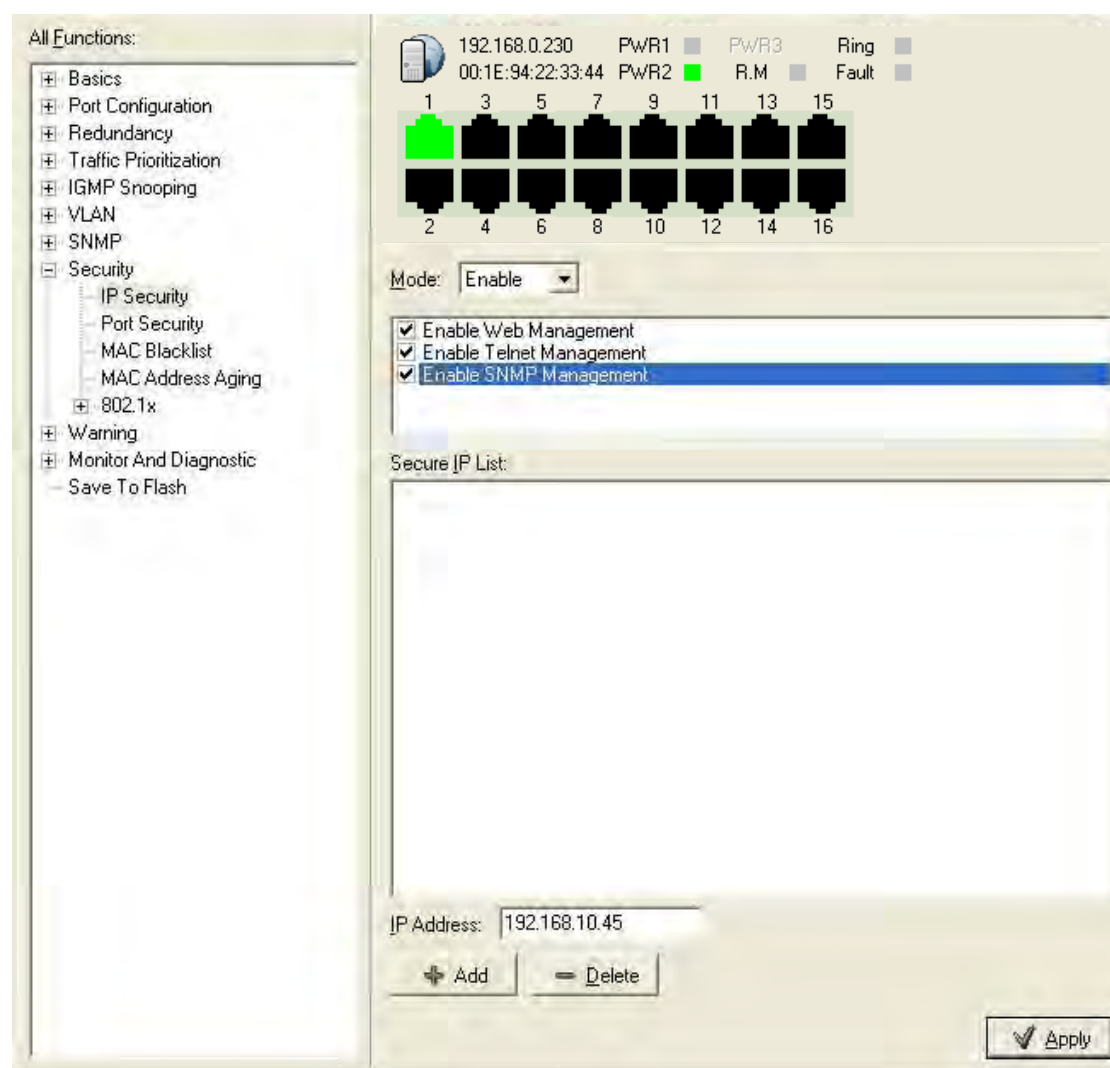
Label	Description
IGMP Snooping	Enable/Disable IGMP snooping.
IGMP Query Mode	Switch will be IGMP querier or not. There should exist one and only one IGMP querier in an IGMP application. The "Auto" mode means that the querier is the one with lower IP address.
IGMP Snooping Table	Show current IP multicast list
Apply	Click "Apply" to set the configurations.
Help	Show help file.

6.9 Security

Five useful functions can enhance security of switch: IP Security, Port Security, MAC Blacklist, and MAC address Aging and 802.1x protocol.

IP Security

Only IP in the Secure IP List can manage the switch through your defined management mode. (WEB, Telnet, SNMP)



IP Security interface

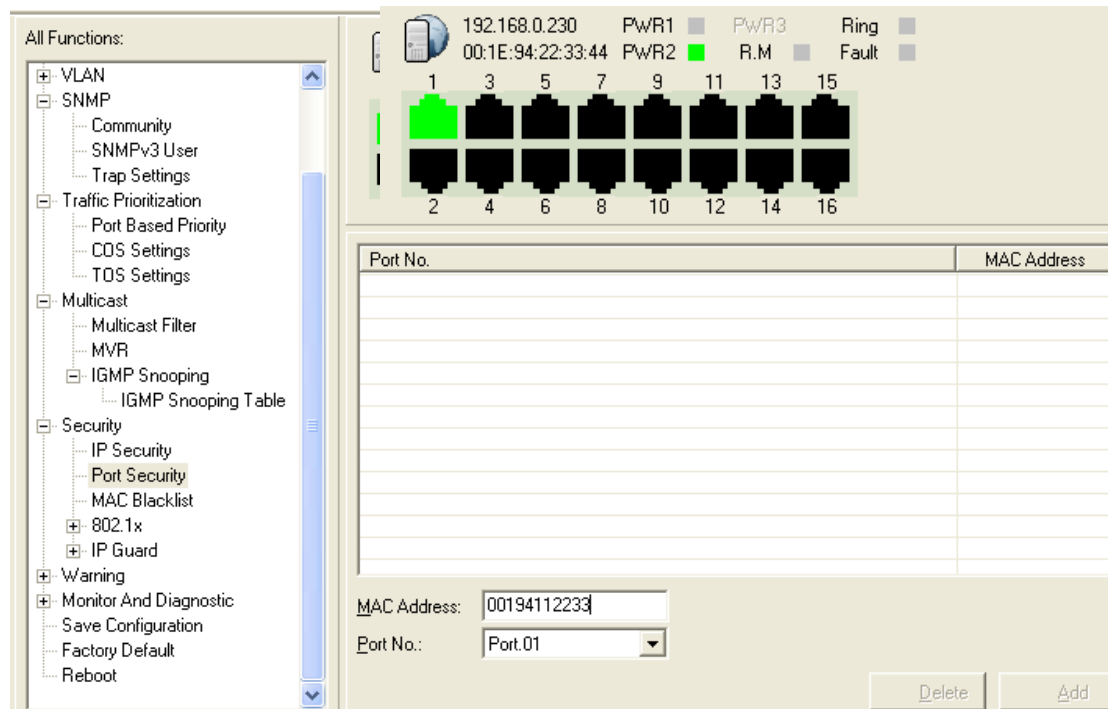


The following table describes the labels in this screen.

Label	Description
IP security MODE	Enable/Disable the IP security function.
Enable WEB Management	Mark the blank to enable WEB Management.
Enable Telnet Management	Mark the blank to enable Telnet Management.
Enable SNMP Management	Mark the blank to enable MPSN Management.
Apply	Click " Apply " to set the configurations.
Help	Show help file.

Port Security

Port security is to add static MAC addresses to hardware forwarding database. If port security is enabled at **Port Control** page, only the frames with MAC addresses in this list will be forwarded, otherwise will be discarded.



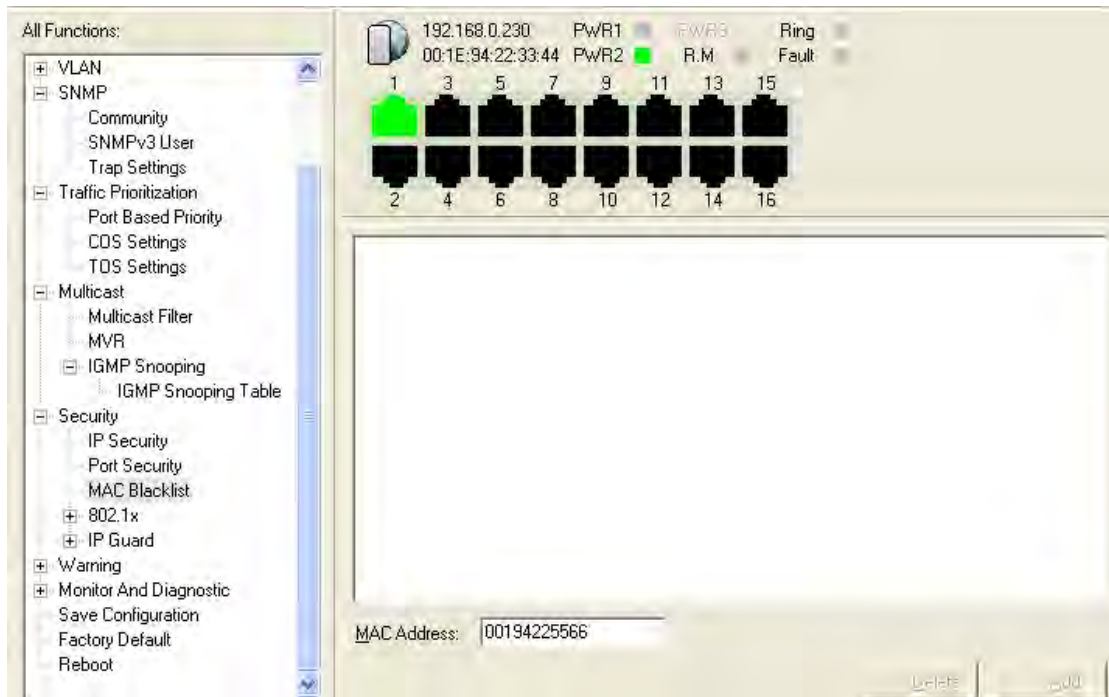
Port Security interface

The following table describes the labels in this screen.

Label	Description
MAC Address	Input MAC Address to a specific port.
Port NO.	Select port of switch.
Add	Add an entry of MAC and port information.
Delete	Delete the entry.
Help	Show help file.

MAC Blacklist

MAC Blacklist can eliminate the traffic forwarding to specific MAC addresses in list. Any frames forwarding to MAC addresses in this list will be discarded. Thus the target device will never receive any frame.



MAC Blacklist interface

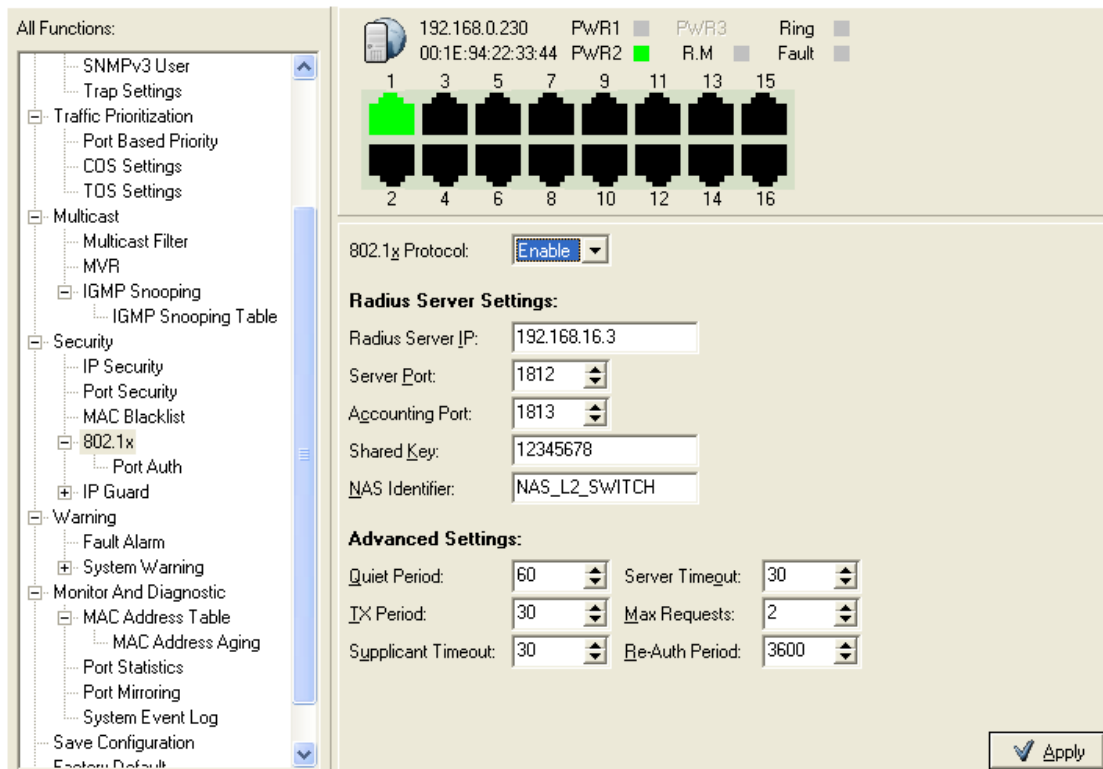
The following table describes the labels in this screen.

Label	Description
MAC Address	Input MAC Address to add to MAC Blacklist.
Port NO.	Select port of switch.
Add	Add an entry to Blacklist table.
Delete	Delete the entry.
Help	Show help file.

802.1x

802.1x - Radius Server

802.1x makes the use of the physical access characteristics of IEEE802 LAN infrastructures in order to provide a authenticated and authorized devices attached to a LAN port. Please refer to IEEE 802.1X - Port Based Network Access Control.



802.1x Radius Server interface

The following table describes the labels in this screen.

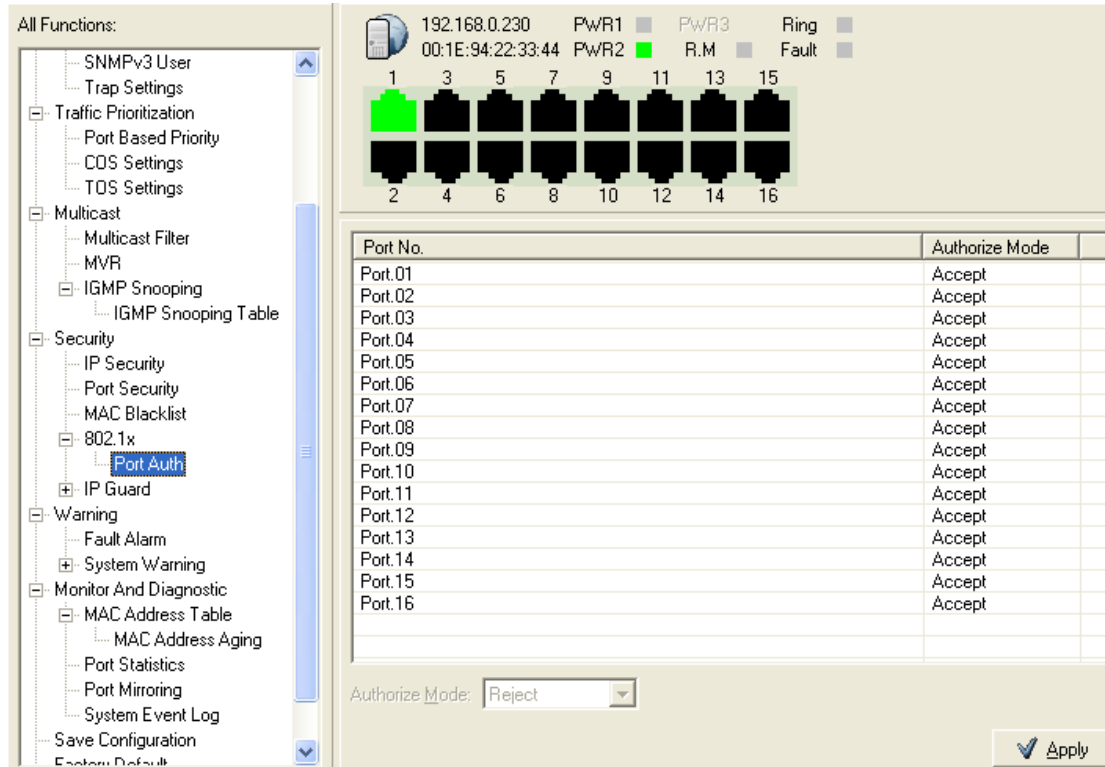
Label	Description
Radius Server Setting	
Radius Server IP	The IP address of the authentication server.
Server port	Set the UDP port number used by the authentication server to authenticate.
Account port	Set the UDP destination port for accounting requests to the specified Radius Server.



Shared Key	A key shared between this switch and authentication server.
NAS, Identifier	A string used to identify this switch.
Advanced Setting	
Quiet Period	Set the time interval between authentication failure and the start of a new authentication attempt.
Tx Period	Set the time that the switch can wait for response to an EAP request/identity frame from the client before resending the request.
Supplicant Timeout	Set the period of time the switch waits for a supplicant response to an EAP request.
Server Timeout	Set the period of time the switch waits for a Radius server response to an authentication request.
Max Requests	Set the maximum number of times to retry sending packets to the supplicant.
Re-Auth Period	Set the period of time after which clients connected must be re-authenticated.
Apply	Click " Apply " to set the configurations.
Help	Show help file.

802.1x-Port Authorized Mode

Set the 802.1x authorized mode of each port.



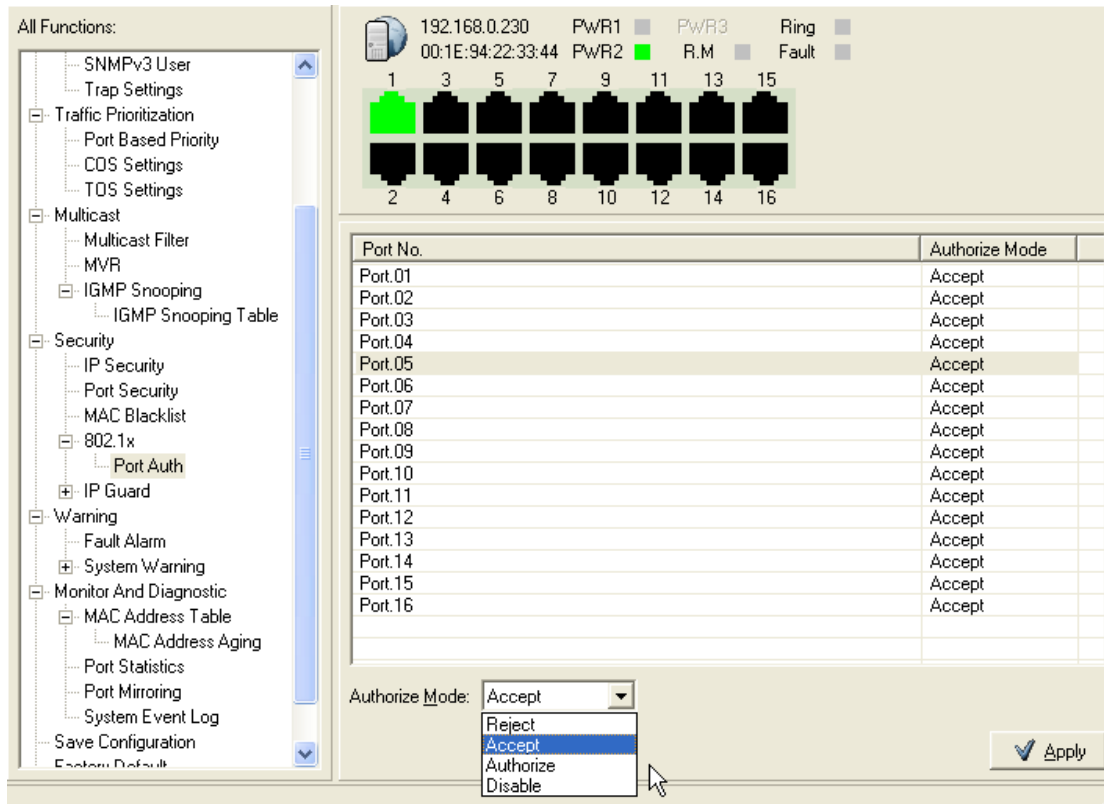
802.1x Port Authorize interface

The following table describes the labels in this screen.

Label	Description
Port Authorized Mode	<ul style="list-style-type: none"> ■ Reject: force this port to be unauthorized. ■ Accept: force this port to be authorized. ■ Authorize: the state of this port was determined by the outcome of the 802.1x authentication. ■ Disable: this port will not participate in 802.1x.
Apply	Click "Apply" to set the configurations.
Help	Show help file.

802.1x-Port Authorized Mode

Show 802.1x port authorized state.



All Functions:

- SNMPv3 User
- Trap Settings
- Traffic Prioritization
 - Port Based Priority
 - COS Settings
 - TOS Settings
- Multicast
 - Multicast Filter
 - MVR
 - IGMP Snooping
 - IGMP Snooping Table
- Security
 - IP Security
 - Port Security
 - MAC Blacklist
 - 802.1x
 - Port Auth
 - IP Guard
- Warning
 - Fault Alarm
 - System Warning
- Monitor And Diagnostic
 - MAC Address Table
 - MAC Address Aging
 - Port Statistics
 - Port Mirroring
 - System Event Log
- Save Configuration
- Factory Default

192.168.0.230 PWR1 PWR3 Ring
00:1E:94:22:33:44 PWR2 R.M Fault

Port No.	Authorize Mode
Port.01	Accept
Port.02	Accept
Port.03	Accept
Port.04	Accept
Port.05	Accept
Port.06	Accept
Port.07	Accept
Port.08	Accept
Port.09	Accept
Port.10	Accept
Port.11	Accept
Port.12	Accept
Port.13	Accept
Port.14	Accept
Port.15	Accept
Port.16	Accept

Authorize Mode: Accept
Reject
Accept
Authorize
Disable

Apply

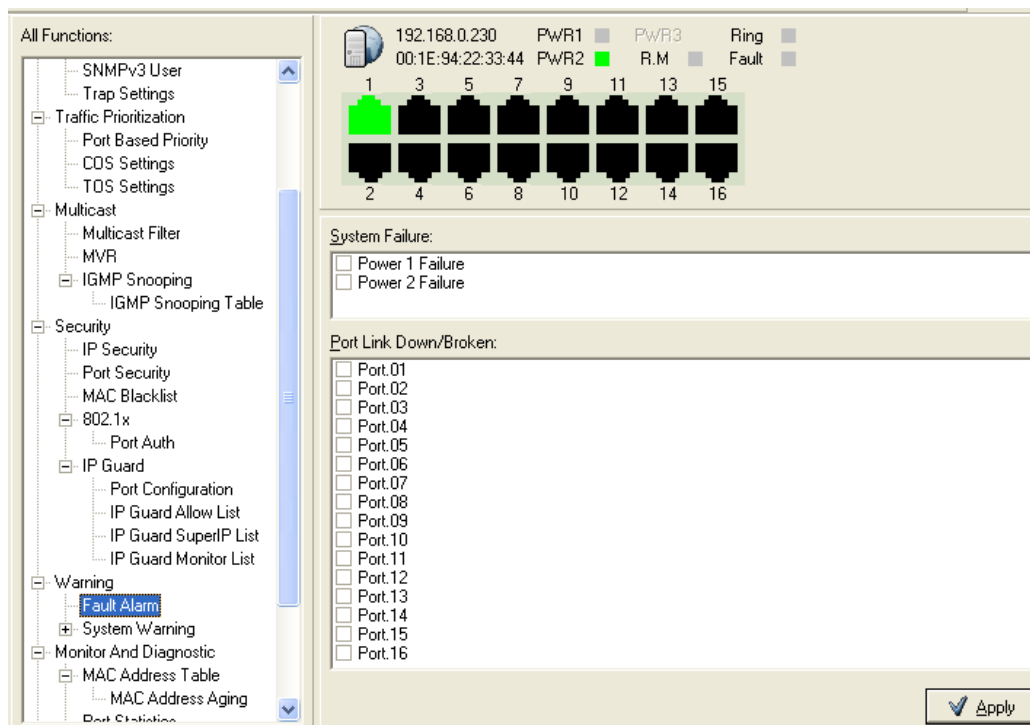
802.1x Port Authorize State interface

6.10 Warning

Warning function is very important for managing switch. You can manage switch by SYSLOG, E-MAIL, and Fault Relay. It helps you to monitor the switch status on remote site. When events occurred, the warning message will send to your appointed server, E-MAIL, or relay fault to switch panel.

Fault Alarm

When any selected fault event is happened, the Fault LED in switch panel will light up and the electric relay will signal at the same time.



Fault Alarm interface

The following table describes the labels in this screen.

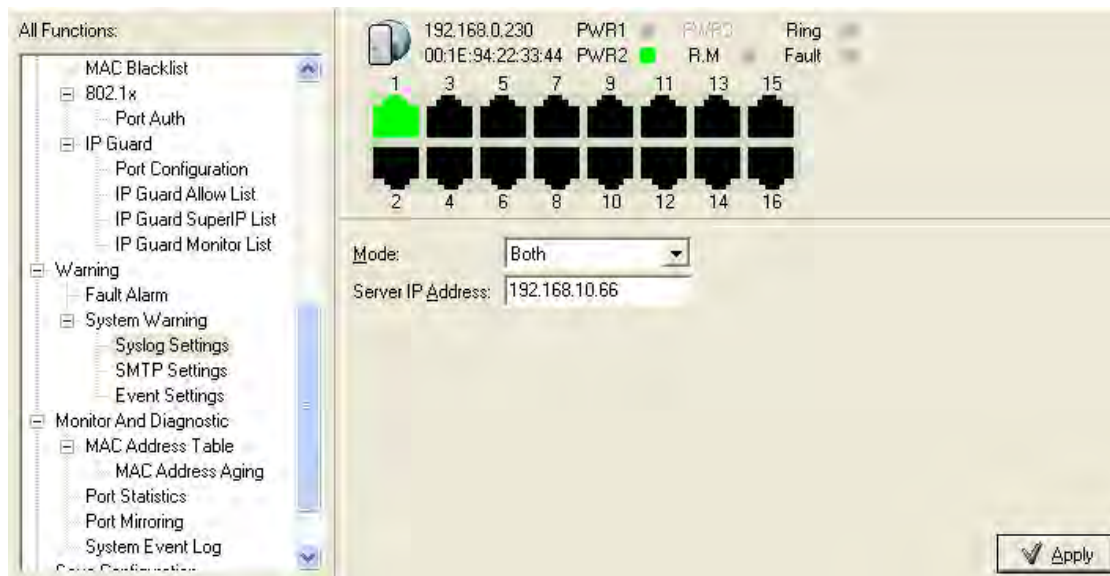
Label	Description
Power Failure	Mark the blank of PWR 1 or PWR 2 to monitor.
Port Link Down/Broken	Mark the blank of port 1 to port 8 to monitor.
Apply	Click " Apply " to set the configurations.
Help	Show help file.

System Warning

System alarm support two warning mode: 1. SYSLOG. 2. E-MAIL. You can monitor switch through selected system events.

System Warning – SYSLOG Setting

The SYSLOG is a protocol to transmit event notification messages across networks. Please refer to RFC 3164 - The BSD SYSLOG Protocol



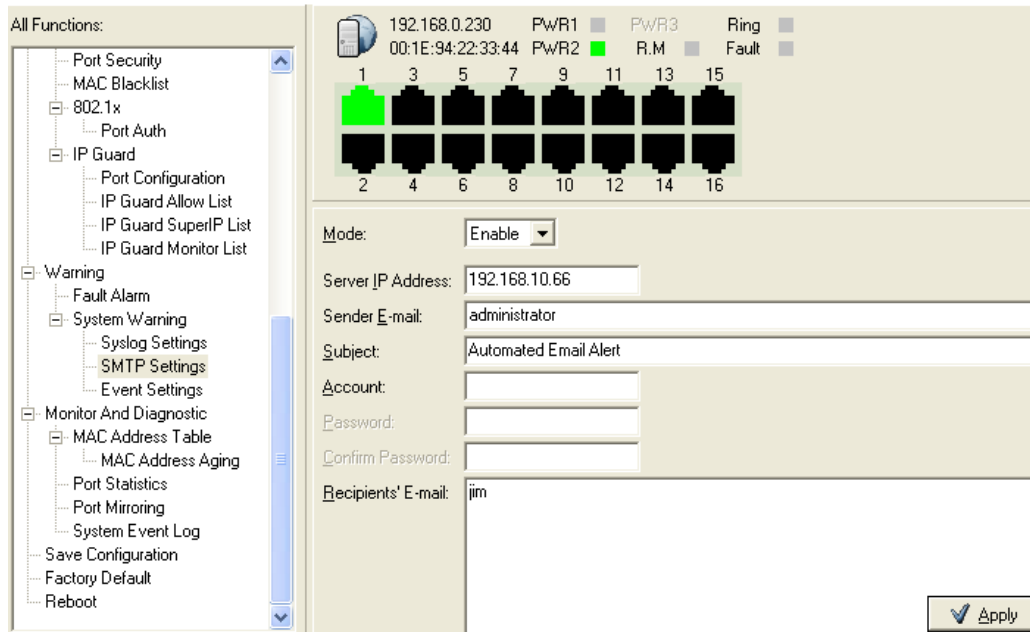
System Warning – SYSLOG Setting interface

The following table describes the labels in this screen.

Label	Description
SYSLOG Mode	<ul style="list-style-type: none"> ■ Disable: disable SYSLOG. ■ Client Only: log to local system. ■ Server Only: log to a remote SYSLOG server. ■ Both: log to both of local and remote server.
SYSLOG Server IP Address	The remote SYSLOG Server IP address.
Apply	Click " Apply " to set the configurations.
Help	Show help file.

System Warning – SMTP Setting.

The SMTP is Short for Simple Mail Transfer Protocol. It is a protocol for e-mail transmission across the Internet. Please refer to RFC 821 - Simple Mail Transfer Protocol.



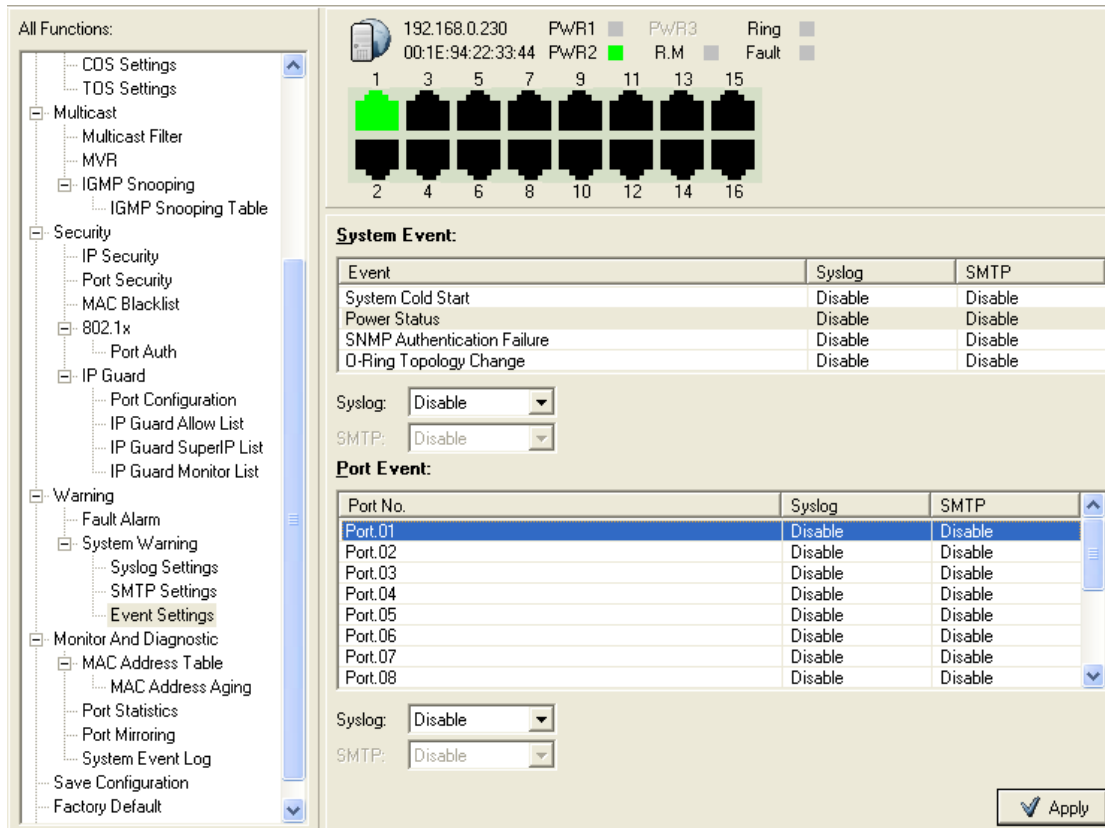
System Warning – SMTP Setting interface

The following table describes the labels in this screen.

Label	Description
E-mail Alarm	Enable/Disable transmission system warning events by e-mail.
Sender E-mail Address	The SMTP server IP address
Mail Subject	The Subject of the mail
Authentication	<ul style="list-style-type: none"> ■ Username: the authentication username. ■ Password: the authentication password. ■ Confirm Password: re-enter password.
Recipient E-mail Address	The recipient's E-mail address. It supports 6 recipients for a mail.
Apply	Click " Apply " to set the configurations.
Help	Show help file.

System Warning – Event Selection

SYSLOG and SMTP are the two warning methods that supported by the system. Check the corresponding box to enable system event warning method you wish to choose. Please note that the checkbox can not be checked when SYSLOG or SMTP is disabled.



All Functions:

- COS Settings
- TOS Settings
- Multicast
 - Multicast Filter
 - MVR
- IGMP Snooping
 - IGMP Snooping Table
- Security
 - IP Security
 - Port Security
 - MAC Blacklist
 - 802.1x
 - Port Auth
 - IP Guard
 - Port Configuration
 - IP Guard Allow List
 - IP Guard SuperIP List
 - IP Guard Monitor List
- Warning
 - Fault Alarm
 - System Warning
 - Syslog Settings
 - SMTP Settings
 - Event Settings
 - Monitor And Diagnostic
 - MAC Address Table
 - MAC Address Aging
 - Port Statistics
 - Port Mirroring
 - System Event Log
 - Save Configuration
 - Factory Default

192.168.0.230 PWR1 PWR3 Ring
00:1E:94:22:33:44 PWR2 R.M Fault

1 3 5 7 9 11 13 15
2 4 6 8 10 12 14 16

System Event:

Event	Syslog	SMTP
System Cold Start	Disable	Disable
Power Status	Disable	Disable
SNMP Authentication Failure	Disable	Disable
O-Ring Topology Change	Disable	Disable

Syslog:

SMTP:

Port Event:

Port No.	Syslog	SMTP
Port.01	Disable	Disable
Port.02	Disable	Disable
Port.03	Disable	Disable
Port.04	Disable	Disable
Port.05	Disable	Disable
Port.06	Disable	Disable
Port.07	Disable	Disable
Port.08	Disable	Disable

Syslog:

SMTP:

Apply

System Warning – Event Selection interface

The following table describes the labels in this screen.

Label	Description
System Event	
System Cold Start	Alert when system restart
Power Status	Alert when a power up or down
SNMP Authentication Failure	Alert when SNMP authentication failure.
O-Ring Topology Change	Alert when O-Ring topology changes.
Port Event	■ Disable

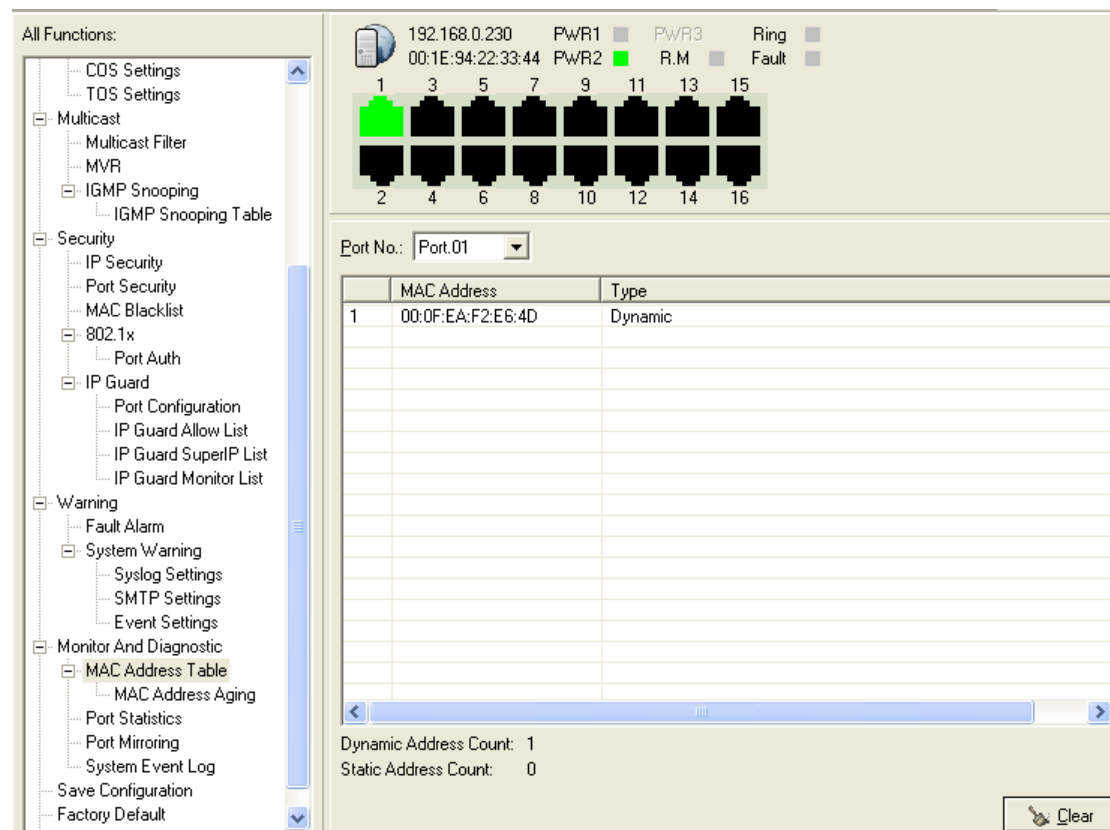


	<ul style="list-style-type: none">■ Link Up■ Link Down■ Link Up & Link Down
Apply	Click " Apply " to set the configurations.
Help	Show help file.

6.11 Monitor and Diag

MAC Address Table

Refer to IEEE 802.1 D Sections 7.9. The MAC Address Table, that is Filtering Database, supports queries by the Forwarding Process, as to whether a frame received by a given port with a given destination MAC address is to be forwarded through a given potential transmission port.



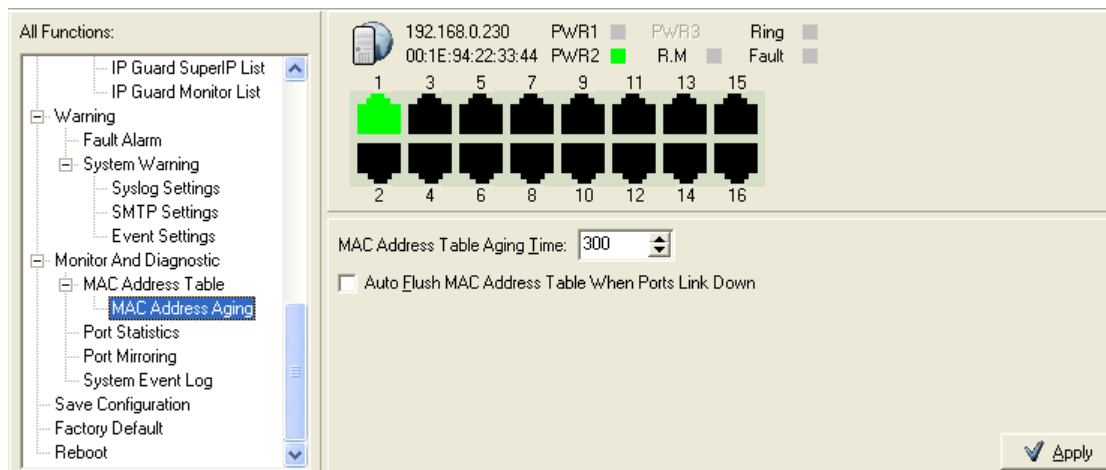
MAC Address Table interface

The following table describes the labels in this screen.

Label	Description
Port NO. :	Show all MAC addresses mapping to a selected port in table.
Clear MAC Table	Clear all MAC addresses in table
Help	Show help file.

MAC Address Aging

You can set MAC Address aging timer, as time expired, the unused MAC will be cleared from MAC table. SW-M series also support Auto Flush MAC Address Table When ports Link Down.



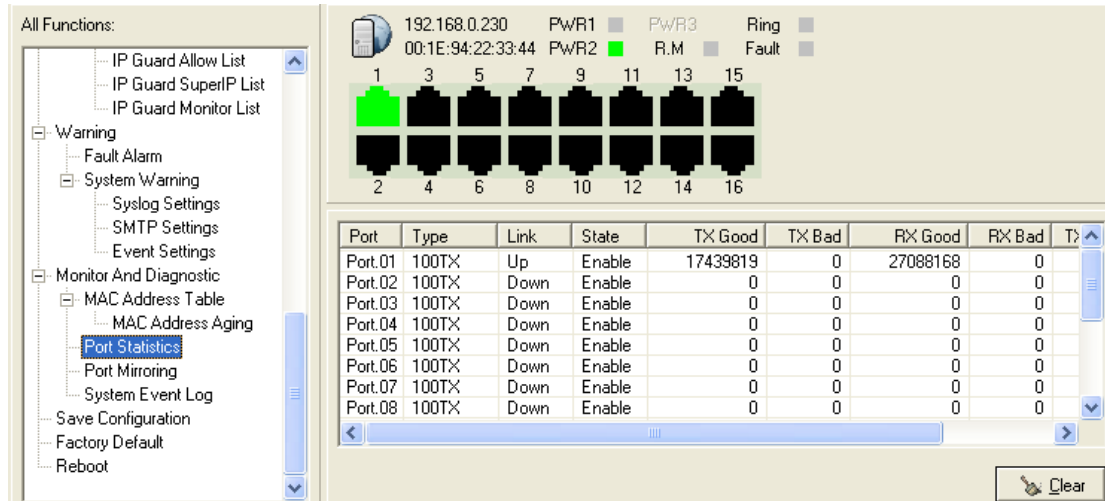
MAC Address Aging interface

The following table describes the labels in this screen.

Label	Description
MAC Address Table Aging Time: (0to3825)	Set the timer.
Auto Flush MAC Address Table When ports Link Down.	Mark the blank to enable the function,
Apply	Click “ Apply ” to set the configurations.
Help	Show help file.

Port Statistics

Port statistics show several statistics counters for all ports



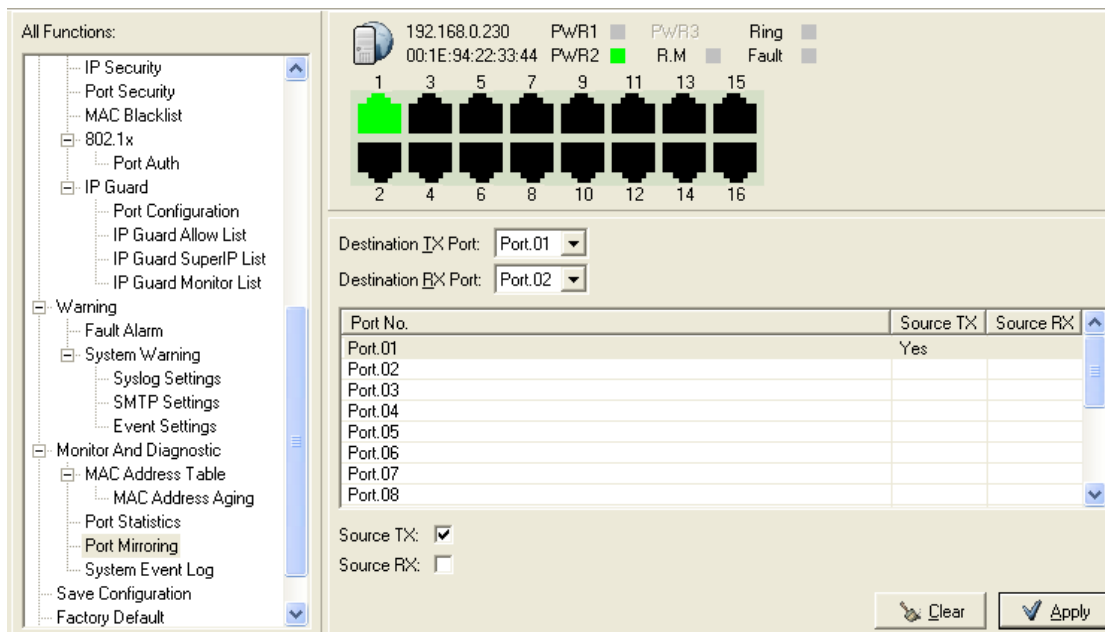
Port Statistics interface

The following table describes the labels in this screen.

Label	Description
Type	Show port speed and media type.
Link	Show port link status.
State	Show ports enable or disable.
TX GOOD Packet	The number of good packets sent by this port.
TX Bad Packet	The number of bad packets sent by this port.
RX GOOD Packet	The number of good packets received by this port.
RX Bad Packet	The number of bad packets received by this port.
TX Abort Packet	The number of packets aborted by this port.
Packet Collision	The number of times a collision detected by this port.
Clear	Clear all counters.
Help	Show help file.

Port Monitoring

Port monitoring supports TX (egress) only, RX (ingress) only, and TX/RX monitoring. TX monitoring sends any data that egress out checked TX source ports to a selected TX destination port as well. RX monitoring sends any data that ingress in checked RX source ports out to a selected RX destination port as well as sending the frame where it normally would have gone. Note that keep all source ports unchecked in order to disable port monitoring.



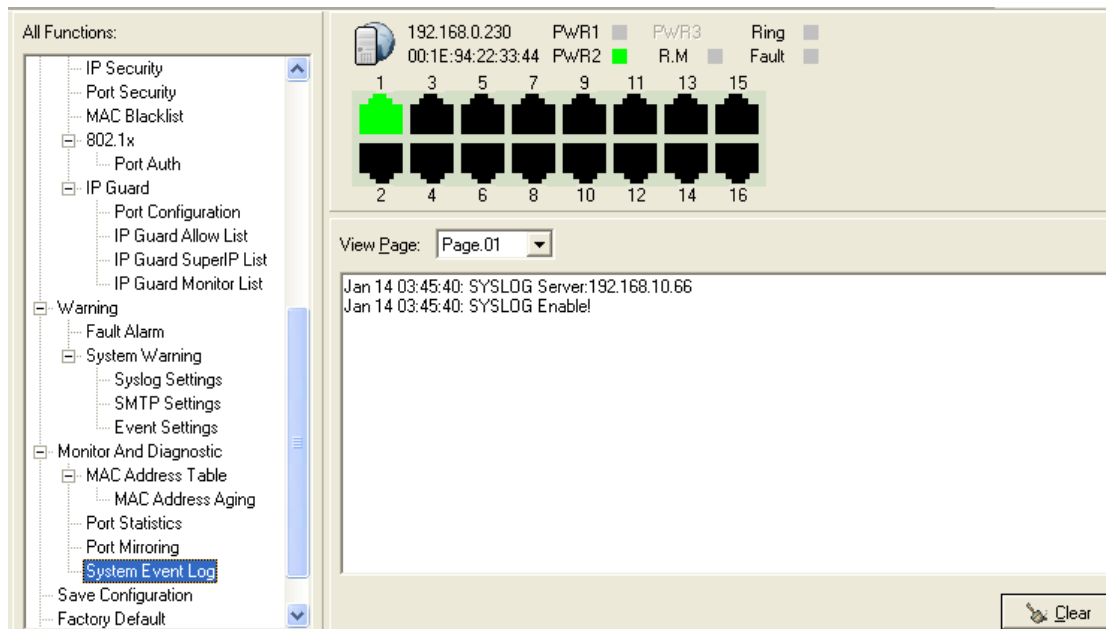
Port monitoring interface

The following table describes the labels in this screen.

Label	Description
Destination Port	The port will receive a copied frame from source port for monitoring purpose.
Source Port	The port will be monitored. Mark the blank of TX or RX to be monitored.
TX	The frames come into switch port.
RX	The frames receive by switch port.
Apply	Click " Apply " to set the configurations.
Clear	Clear all marked blank.(disable the function)
Help	Show help file.

System Event Log

If system log client is enabled, the system event logs will show in this table.



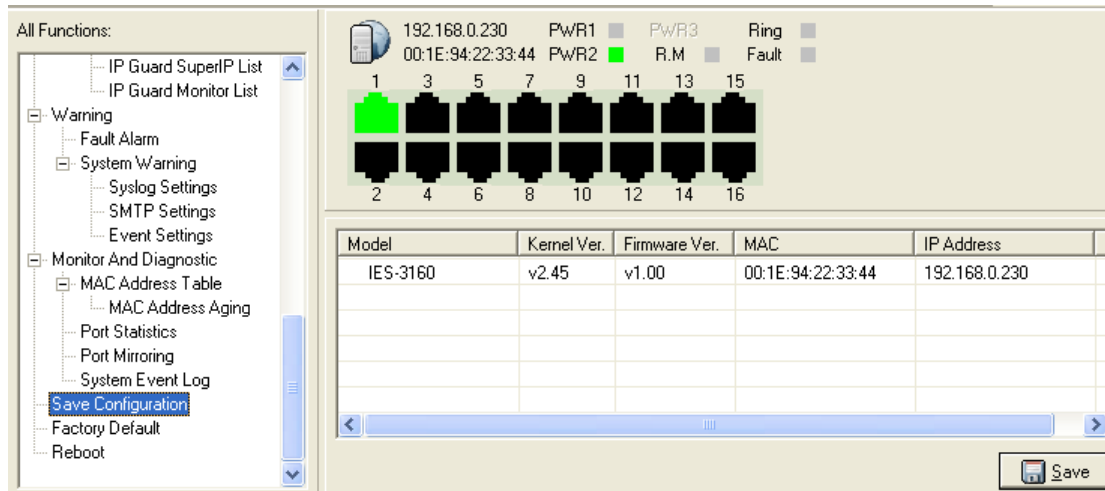
System event log interface

The following table describes the labels in this screen.

Label	Description
Page	Select LOG page.
Reload	To get the newest event logs and refresh this page.
Clear	Clear log.
Help	Show help file.

6.12 Save Configuration

If any configuration changed, “**Save Configuration**” should be clicked to save current configuration data to the permanent flash memory. Otherwise, the current configuration will be lost when power off or system reset.

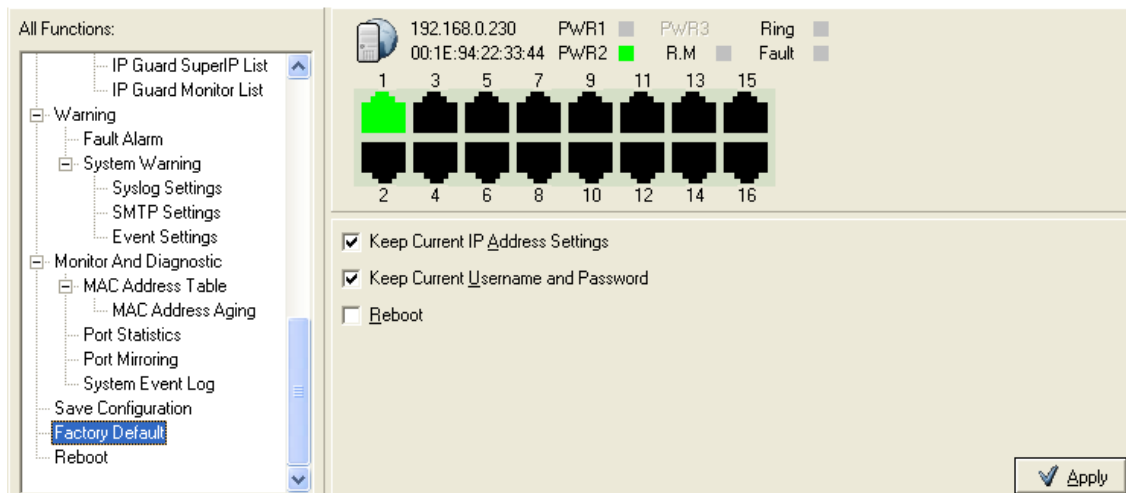


System Configuration interface

The following table describes the labels in this screen.

Label	Description
Save	Save all configurations.
Help	Show help file.

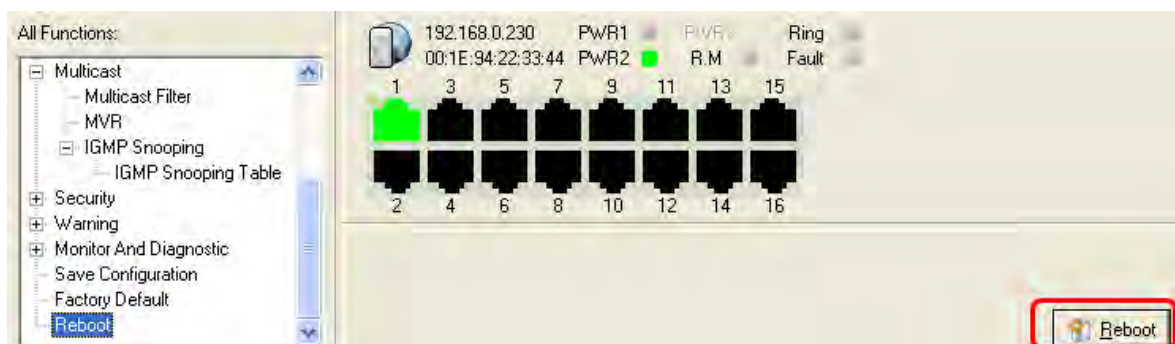
6.13 Factory Default



Factory Default interface

Reset switch to default configuration. Click “Apply” to reset all configurations to the default value. You can select “Keep current IP address setting” and “Keep current username & password” to prevent IP and username and password from default.

6.14 System Reboot

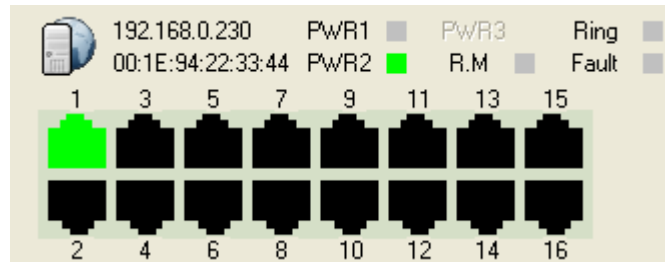


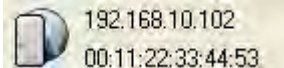


System Reboot interface

Switch Status Interface

7.1 The GUI for users to get switch status

Users are able to get switches information by the simple interface.

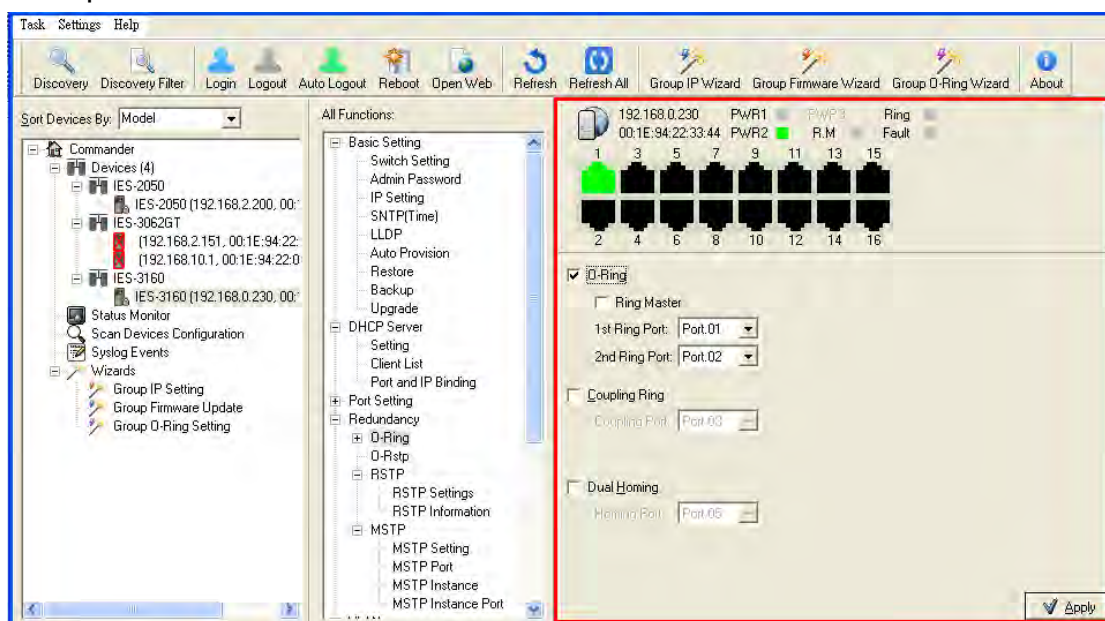


Icon	Description
	Show the IP and MAC Address of the switch.
	Show the port link status of the switch.
	Switch Status LED .

Switch Configuration Interface

8.1 The relationship of function interface and the configuration interfaces

When user selects the function to configure, the related parameters will be displayed on configuration interface for user to set detail configurations. An example as below:



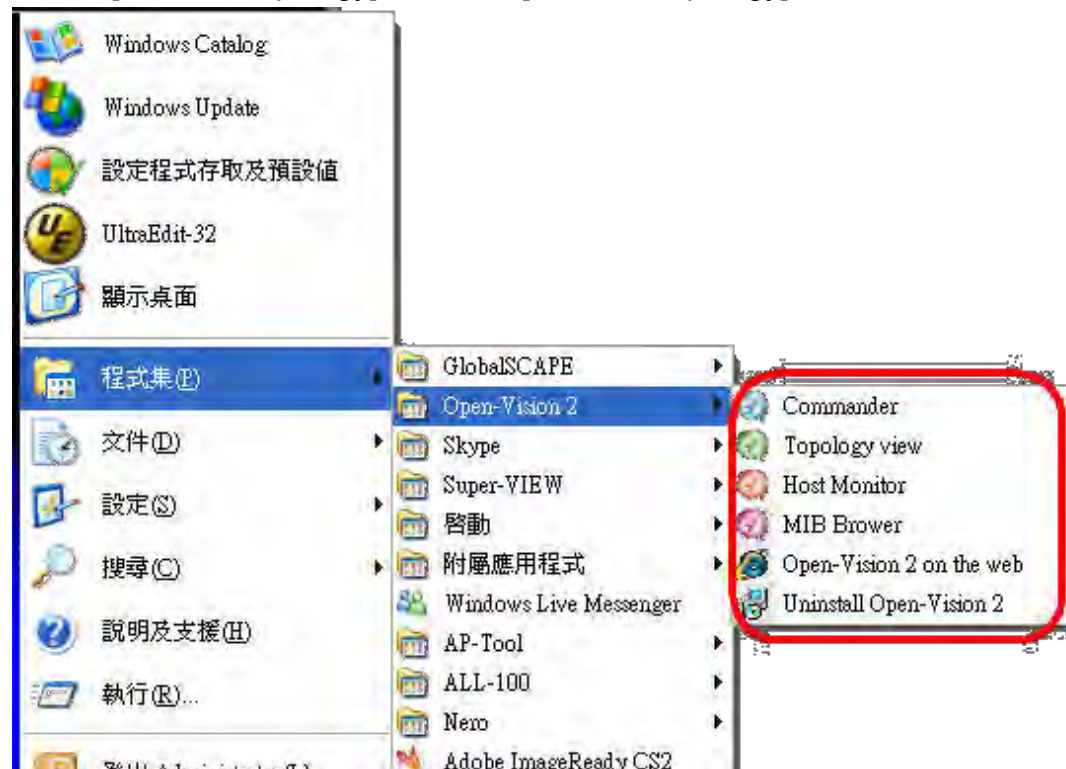
Topology View

9.1 About the Topology View

Topology View is a useful and powerful network topology utility. It is able to display the network topology automatically. The network administrators are able to monitor the network devices and links status via Topology View immediately.

9.2 Start to use Topology View

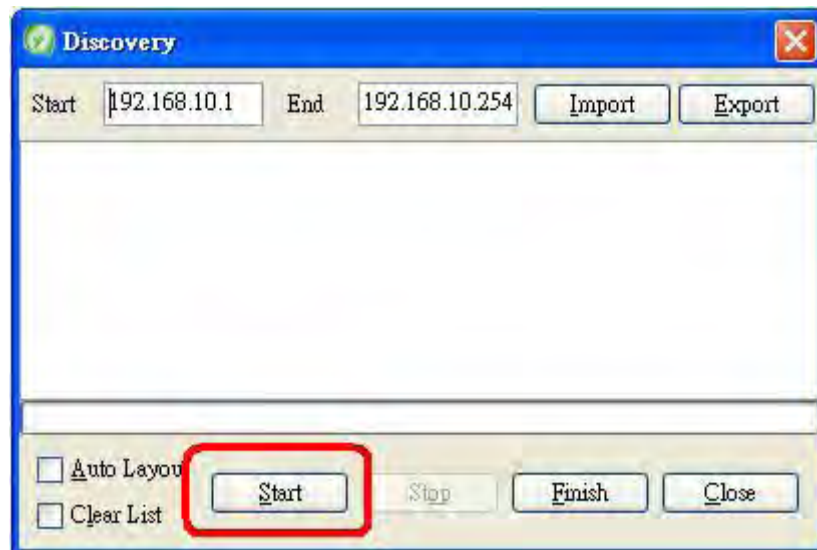
Select [Devices Topology] and click [Devices Topology]



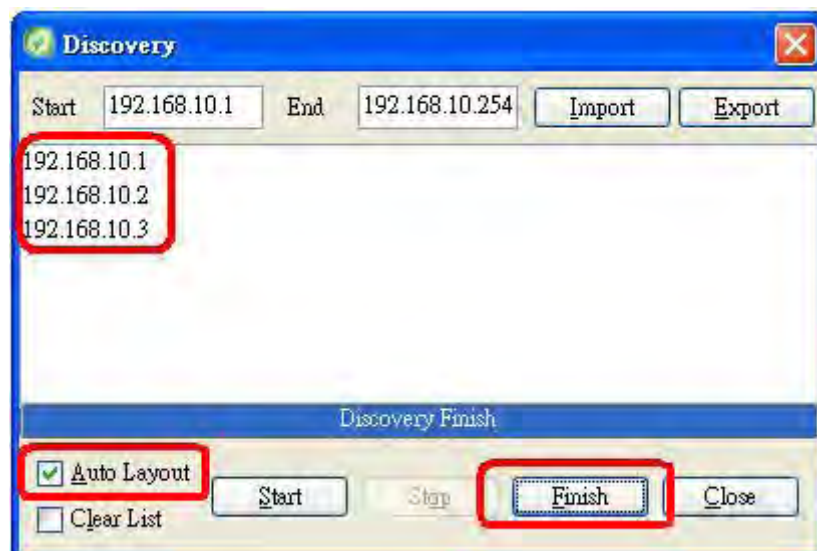
9.3 Topology View Main Interface

First use, needs user's input devices IP range , after pushes "Star", topology view begins scan devices , scan finishes, push "finish", finishes topology to plan.

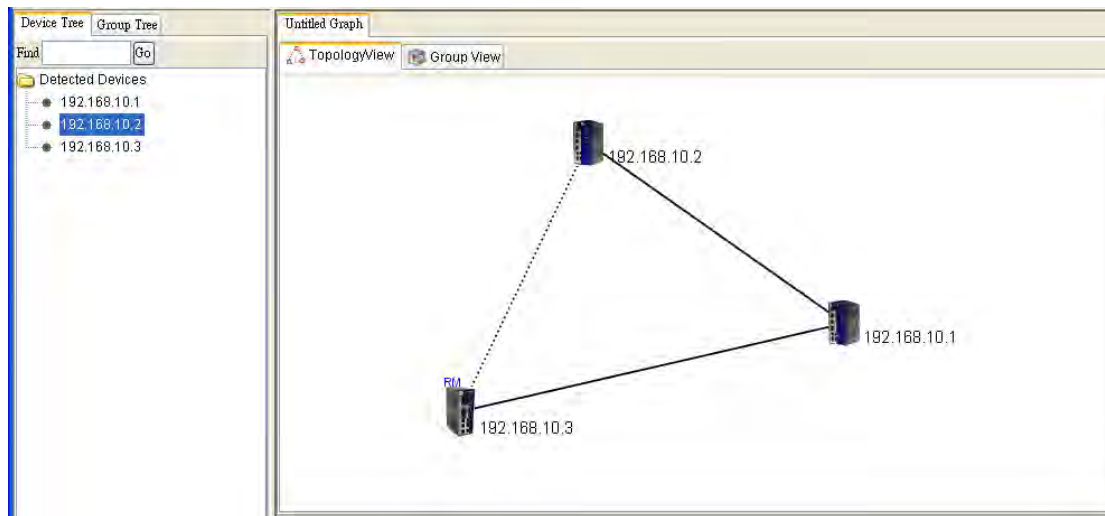
1 、 Click Star Scan device



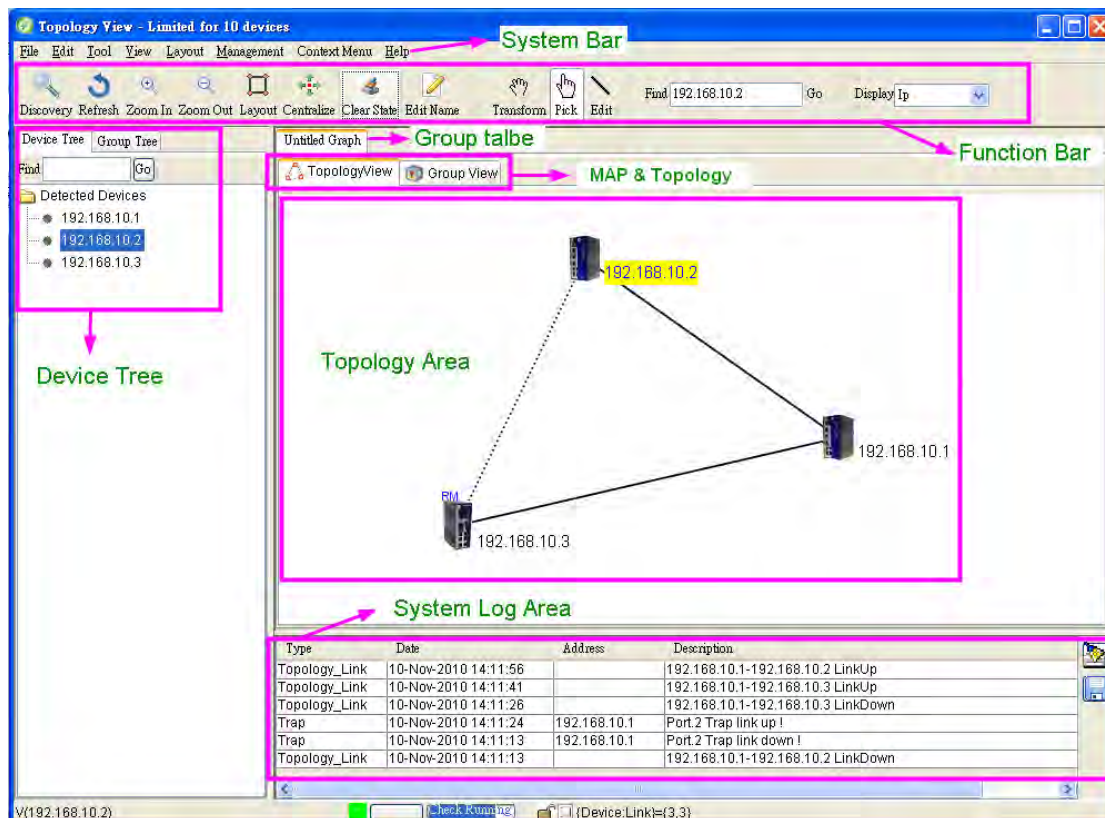
2 、 Scan succeeds, click finish, finishes planning



3 、 Auto Finish topology plan



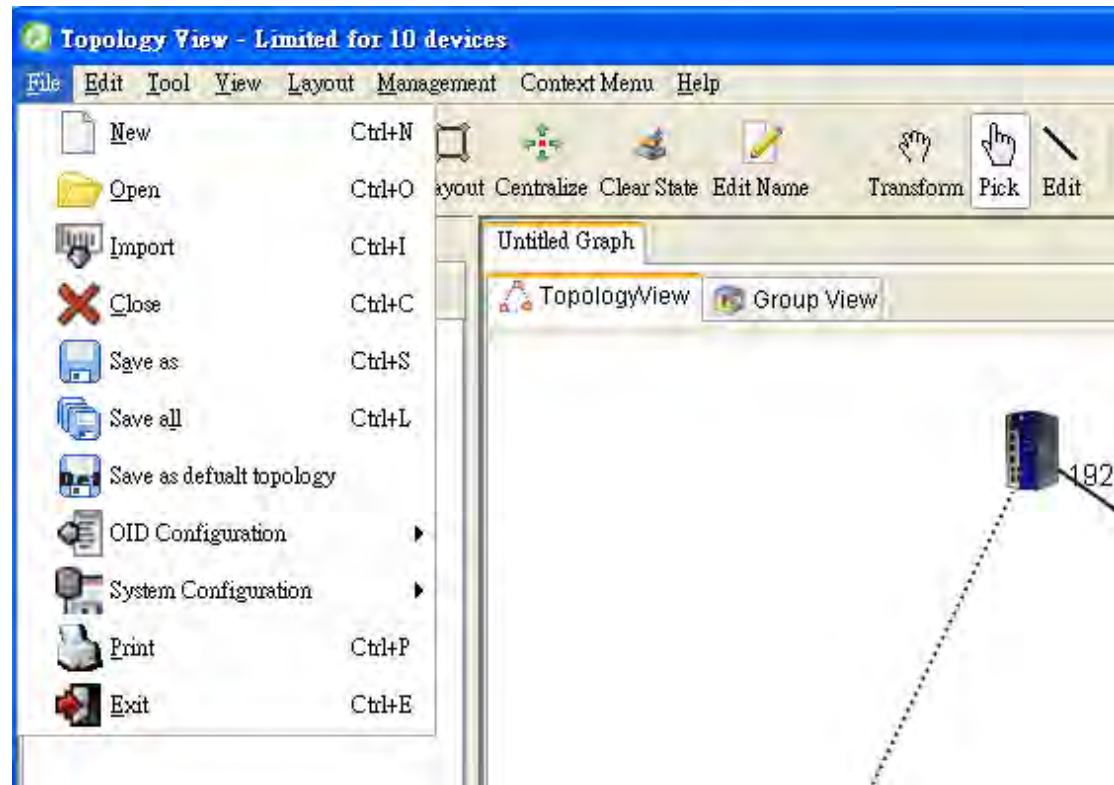
Topology interface can be divided into 6 parts, it is " System Bar ", " Function Bar ", " Device Tree ", " Topology Area " respectively, " System Log Area ", Group Table
















9.4 System Bar

File

Select File to show the File menu.

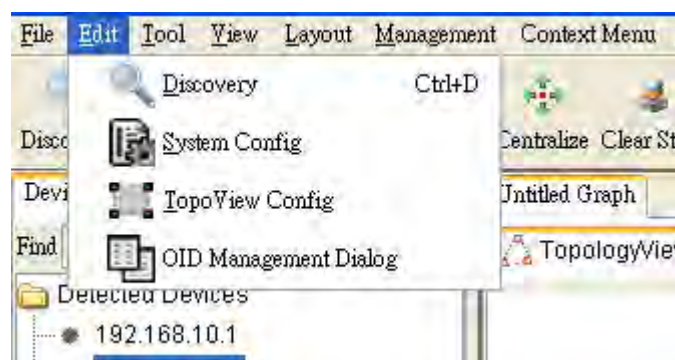



Label	Hotkey	Description
 <u>N</u> ew	Ctrl + N	Reopen a new Topology View program.
 <u>O</u> pen	Ctrl + O	Load the configuration that you saved before.
 <u>I</u> mport	Ctrl + I	Loaded different Topology save config, amalgamate in the same Group Table
 <u>C</u> lose	Ctrl + C	Close Topology Group Table
 <u>S</u> ave as	Ctrl + S	Save the current configuration as a *.GML file.
 <u>S</u> ave all	Ctrl + L	Save the ALL configuration as a *.GML file.

 Save as default topology	N/A	Save device topology info to Default value, If you restart the "Topology view", will directly show our save devices topology
 Load OID Config File	N/A	Load OID Config File(Need to set up OI DMandialog first)
 Save OID Config File	N/A	SAVE OID Config File(Need to set up OI DMandialog first)
 Save Current Setting	N/A	Save topology view utility "system config" configuration, If does not save, after restarting the software, "system config" will turn into the default value.
 Default System Configuration	N/A	Topology view config estore to factory defaults
 Print	Ctrl + P	Print Topology
 Exit	Ctrl + E	Terminate Topology View program

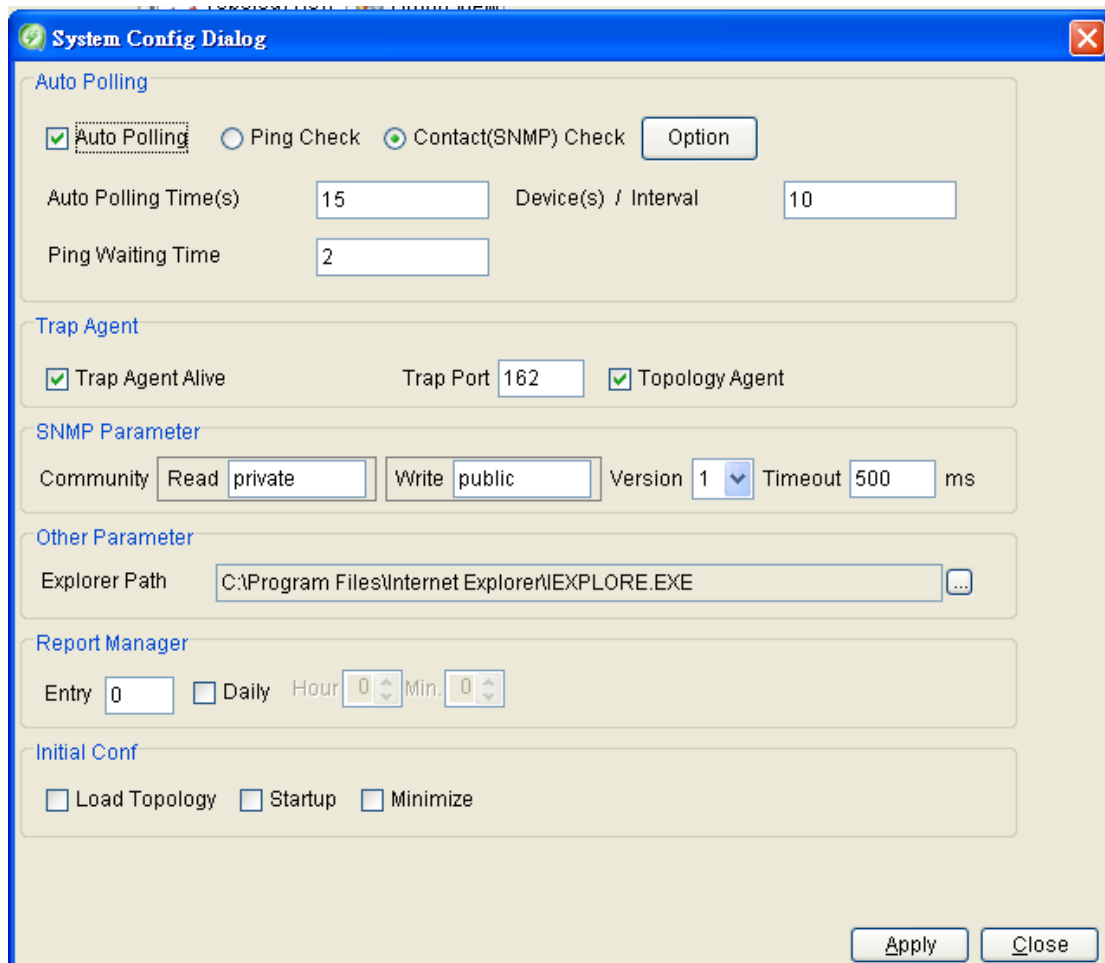
Edit

Select Edit to show Task menu.



Label	Hotkey	Description
 Discovery	Ctrl + D	Discover the switches on the same subnet. Topology View will display all discovered switches on the device list, and display the whole network topology

		<p>automatically on the topology area. Topology View discovers switches depend on LLDP and SNMP (Read community is public).</p>
--	--	---



System Config Dialog

Auto Polling

☒ Auto Polling ☐ Ping Check ☒ Contact(SNMP) Check Option

Auto Polling Time(s) Device(s) / Interval

Ping Waiting Time

Trap Agent

☒ Trap Agent Alive Trap Port ☒ Topology Agent

SNMP Parameter

Community Read Write Version Timeout ms

Other Parameter

Explorer Path ...


Report Manager

Entry ☐ Daily Hour Min.



Initial Conf

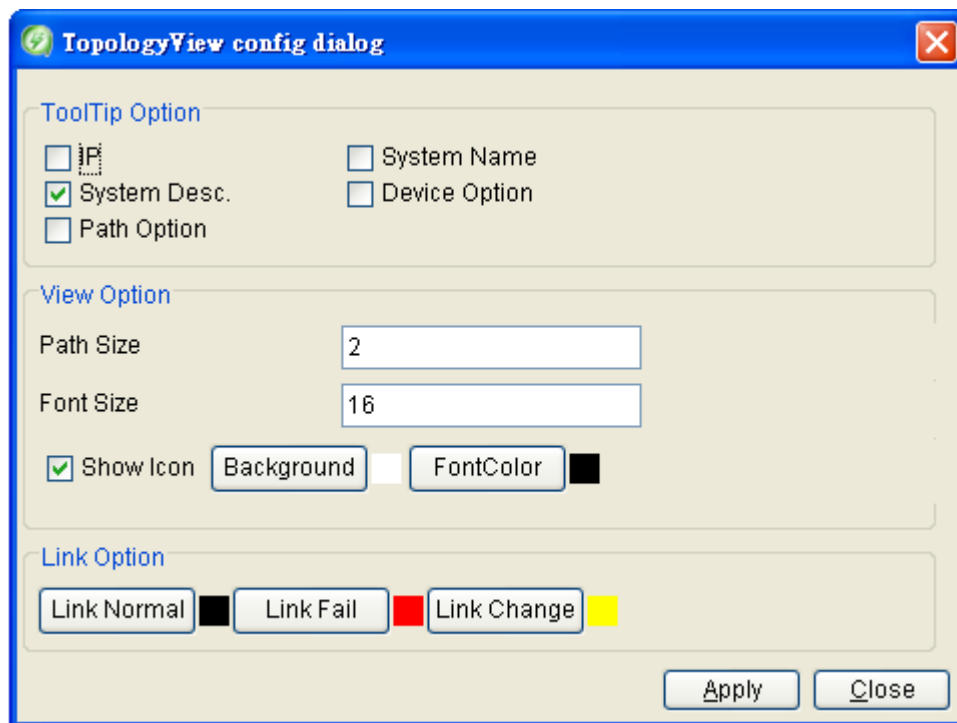
☐ Load Topology ☐ Startup ☐ Minimize


Apply Close

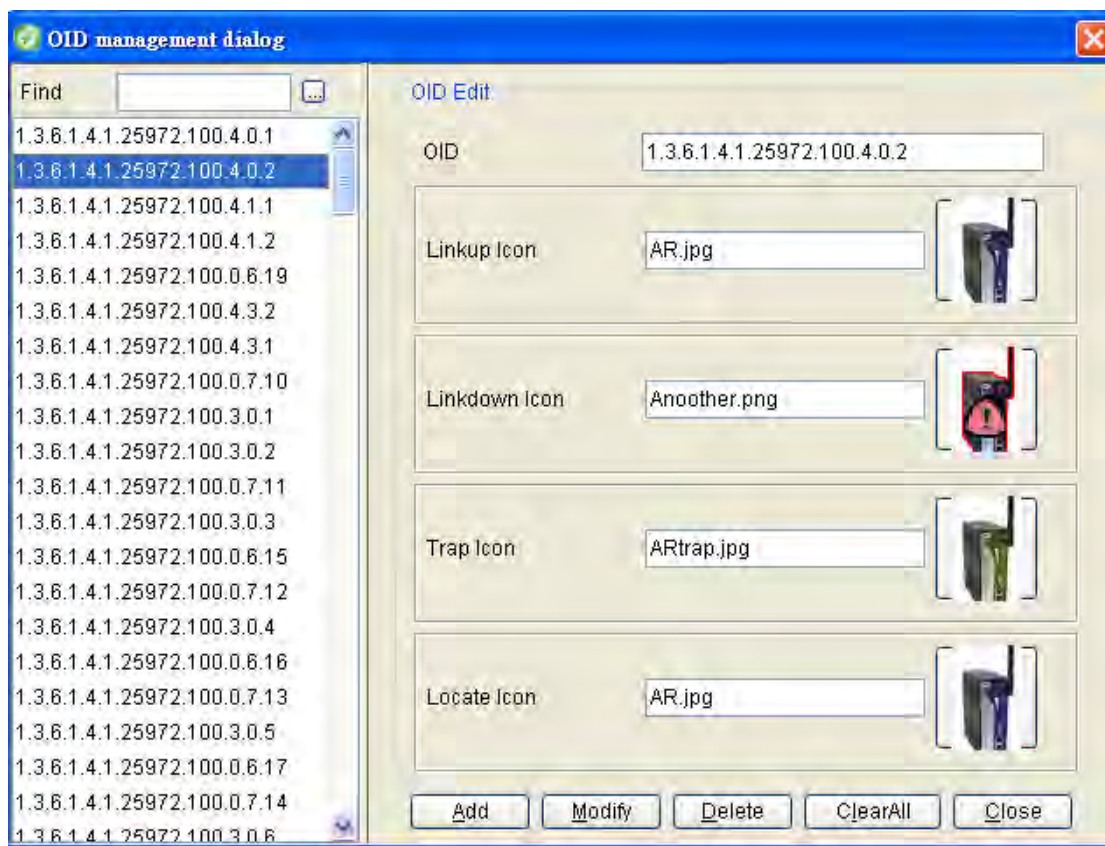
Label	Hotkey	Description
 System Config	N/A	<p>Auto Polling : Enable or disable Auto Polling function.</p> <p>Ping Check : Use ping to auto polling.</p> <p>Contact(SNMP) Check : Use Snmp packet to auto polling.</p>

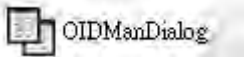
		<p>Auto Polling Time : The auto polling timer configuration.</p> <p>Device(s)/Interval : Topology view system each time enforce auto polling quantity , set zero as, each time polling all devices.</p> <p>Ping Waiting Time : When use ping to auto polling, this parameter is the timer that wait for ICMP reply packets.</p> <p>Trap Agent Alive : Enable trap agent can receive SNMP trap.</p> <p>Trap Port : Specifies the port used by the Trap</p> <p>Topology agent : Enable / Disable topology agent function</p> <p>SNMP Community : Configure SNMP's Community and Version. Topology View will use these parameters to discover the devices in the same network.</p> <p>Version : select SNMP version(V1, V2)</p> <p>Time out : SNMP wait time, if the device does not respond than to determine the lost contact (For SNMP check)</p> <p>Explorer Path : Specify the Internet Explorer path in the OS.</p> <p>Report Manage : Auto save system log area info to excel file.</p> <p>Entry : System log reaches the designated</p>
--	--	---

		<p>quantity, auto save to Excel file.</p>  <p>Daily : Reach designated o'clock, auto save to Excel file.</p>  <p>Load Topology : Start reading the default topology information (to be with the Save as default topology)</p> <p>Startup : Start the "WINDOWS" at the same time automatically start TOPOLOGY VIEW</p> <p>Minimize : Start TOPOLOGY VIEW, automatically minimized to the lower right tool cases</p>
--	--	---



Label	Hotkey	Description
 TopoView Config	N/A	<p>ToolTip Option : Enable or disable to display the switches certain information.</p> <p>View Option: Setting path size & font size and Icon color..</p> <p>Link Option : Setting Link status color.</p>

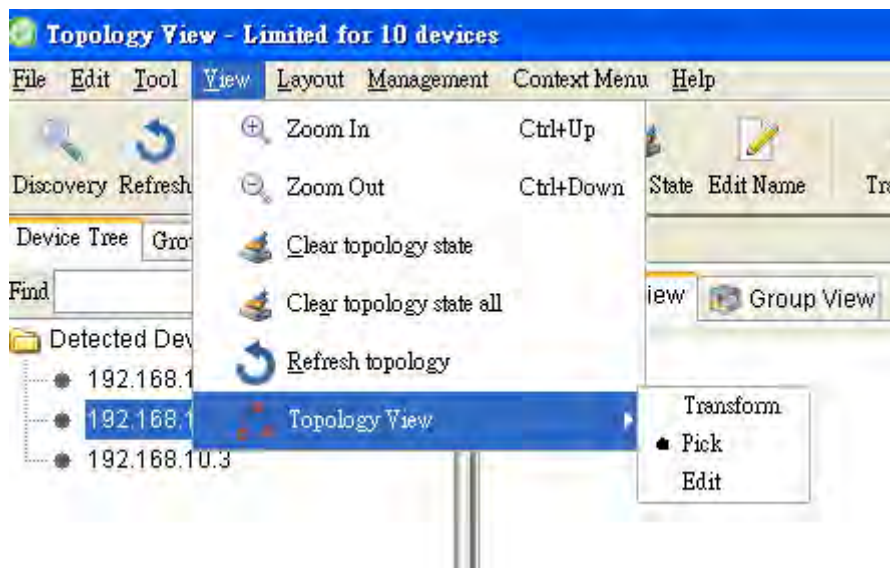








Label	Hotkey	Description
	N/A	<p>This function, can let us oneself define device Icon. Only need to put the designated picture to c: \Program Files\Open-Vision \rec\device, Appoint the corresponding file name, can finish the ICON configuration.</p> <p>Select Left interface OID : Select to want oneself to define Icon device the OID.</p> <p>OID: Input want oneself to define Icon device the OID.</p> <p>Linkup Icon : Appoint corresponding "Linkup Icon" icon name.</p> <p>Linkdown Icon : Appoint corresponding "Linkdown Icon" icon name.</p>

		<p>Trap Icon : Appoint corresponding "Trap Icon" icon name.</p> <p>Locate Icon : Appoint corresponding "Locate Icon" icon name.</p>
--	--	---

View

Can define the project that Function Bar reveals by oneself.

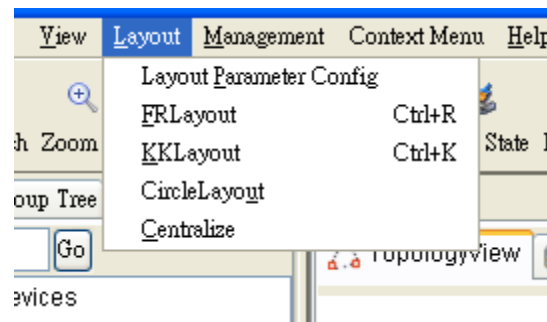


Icon	Hotkey	Description
 Zoom In	Ctrl + up	Zoom in the topology.
 Zoom Out	Ctrl + down	Zoom out the topology.
 Clear topology state	N/A	User can clear Topology Area status
 Clear topology state all	N/A	User can clear Topology Area status by all group.
 Refresh topology	N/A	Refresh the topology
 Topology View	N/A	Select control mode

Layout

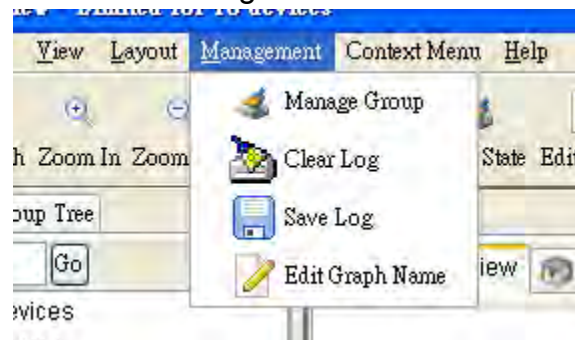
Topology view has provide three Layout algorithms,He can help users, faster automatic planning topology.


(About the information of various Layout, can consult <http://jung.sourceforge.net/site/apidocs/index.html>)

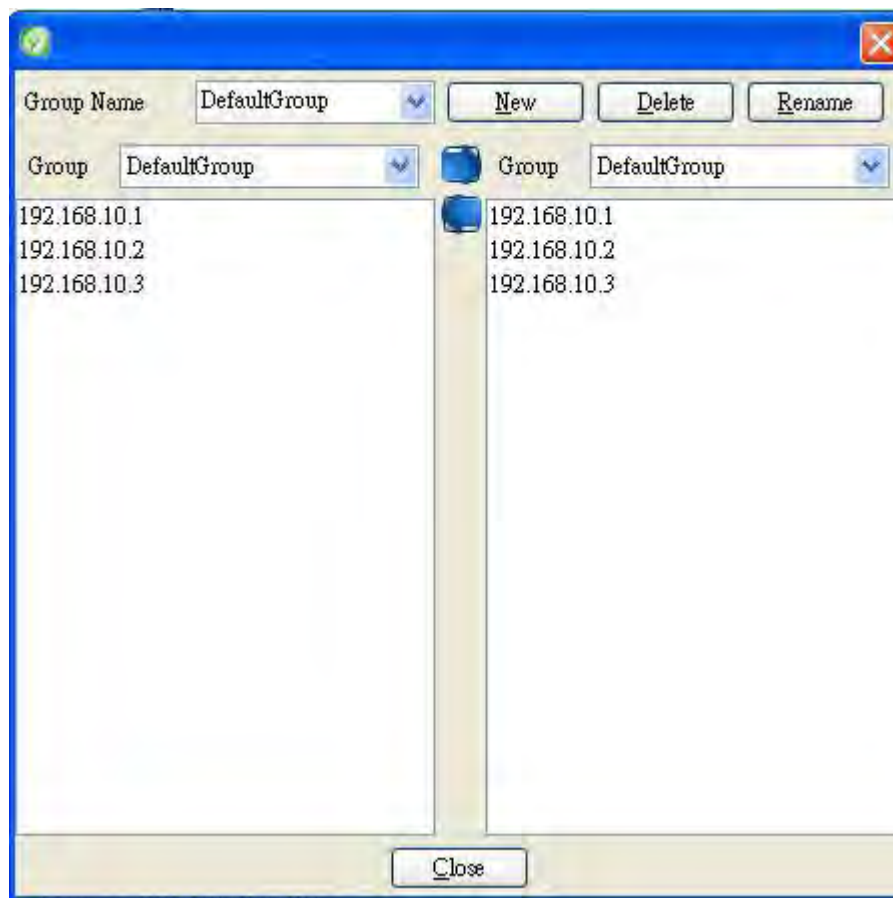


Management

Select Management to show Management menu.




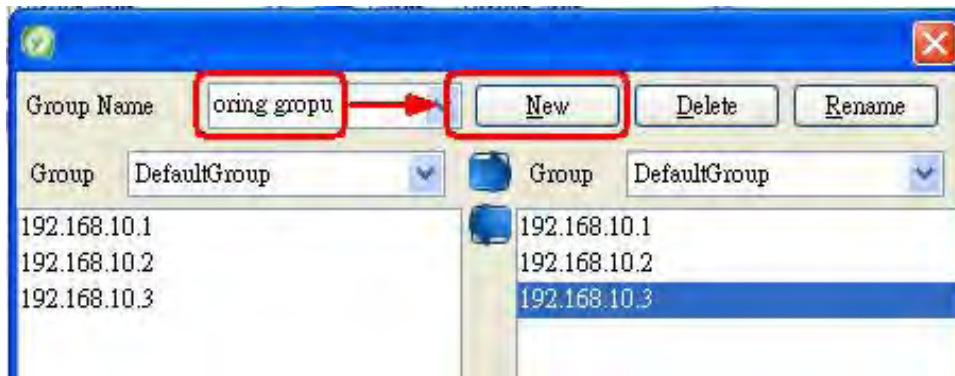
Label	Hotkey	Description
 Manage Group	N/A	Manage topology group. Group Name : Define group name New : Add new group. Delete : Delete group. Rename : Group Rename. Group : show select group device ip list



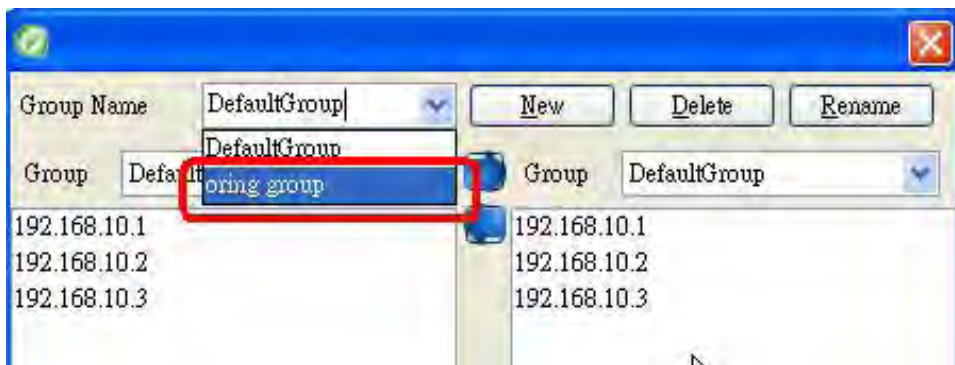
Group setting method

1、Add new group

Input Group name, then click “”

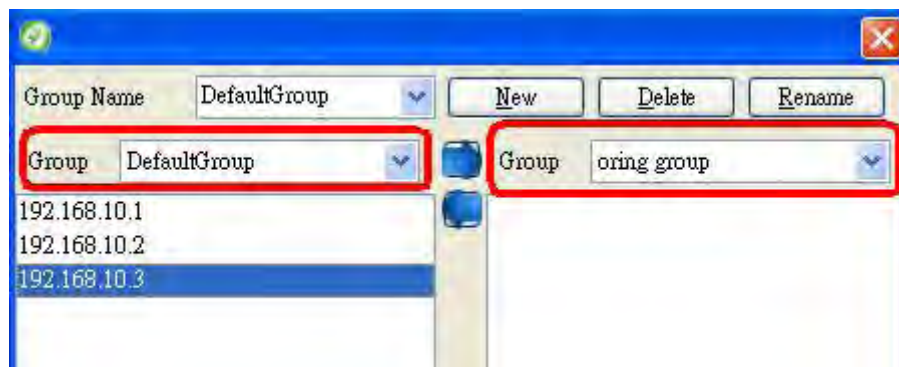




We can find that here " Group Name" Project among,increase **oring group**

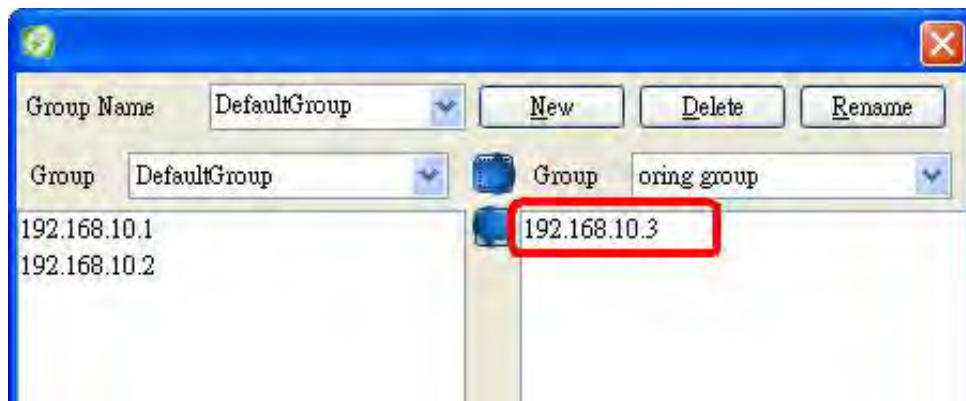
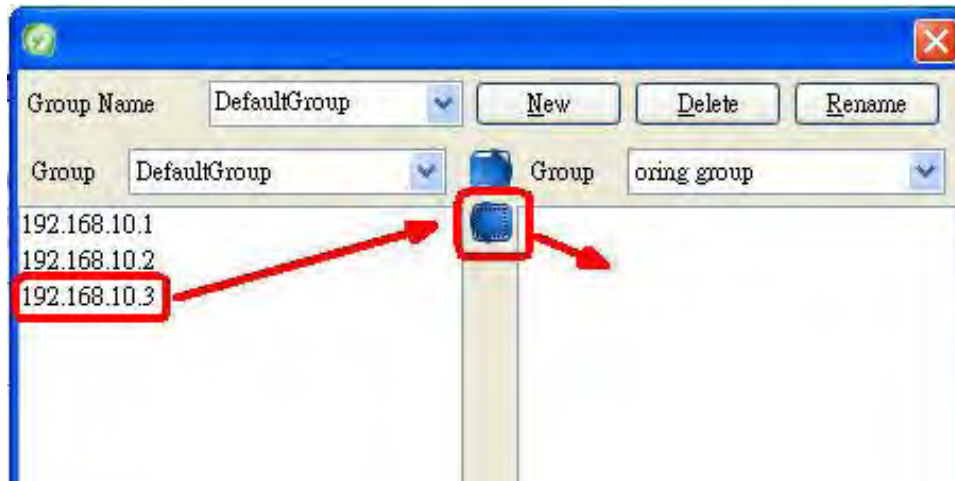





2、Appoint device

Select group project to defaultGroup and oring group

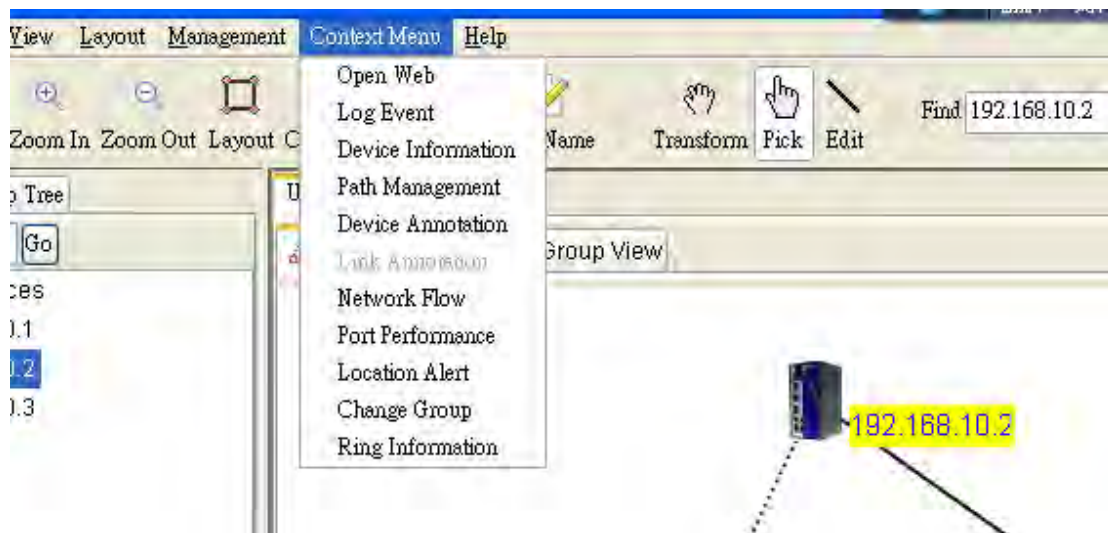


Utilize  and  to move device ip to designated group

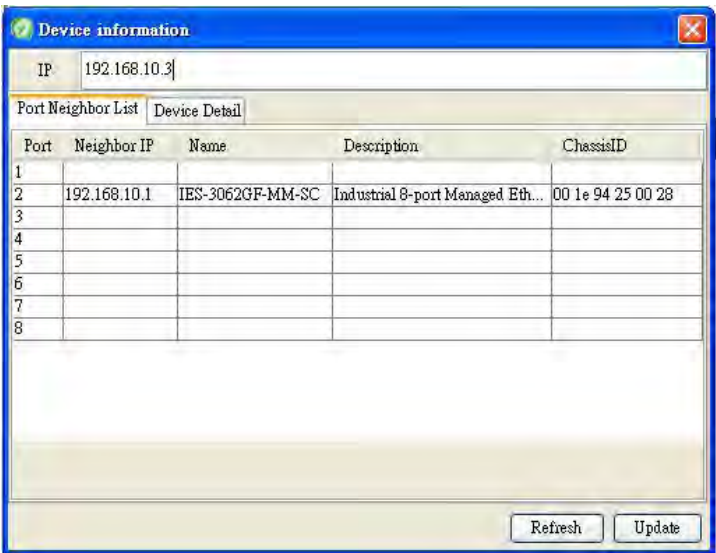
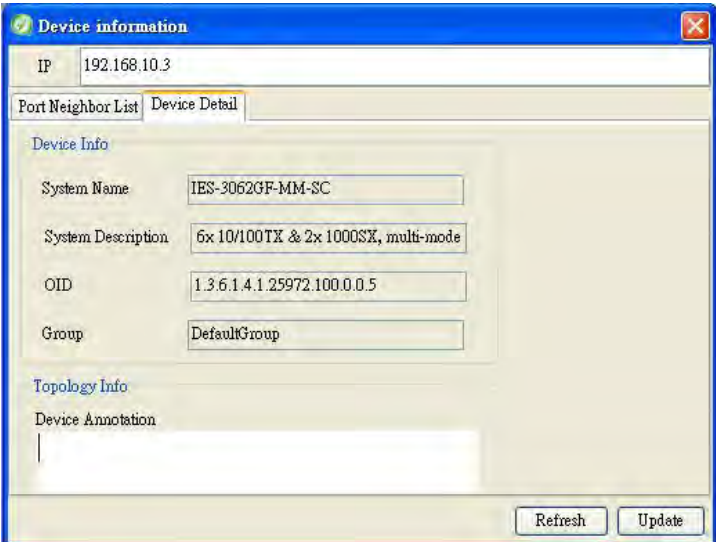


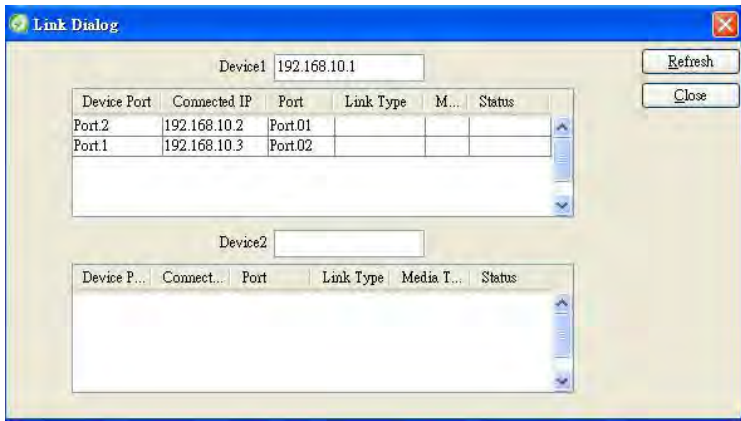
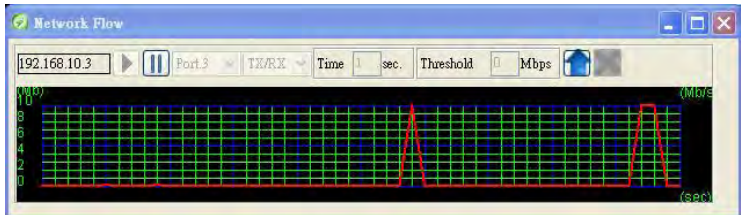
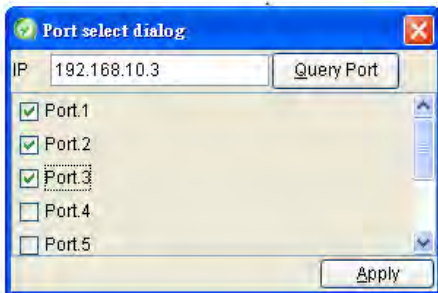
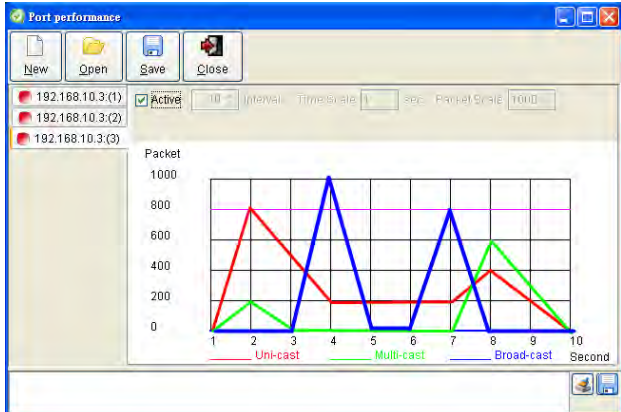
Label	Hotkey	Description
 Clear Log	N/A	User can clear trap log area
 Save Log	N/A	Save system log area info to Excel file.
 Edit Graph Name	N/A	User can define Group table the name by oneself.

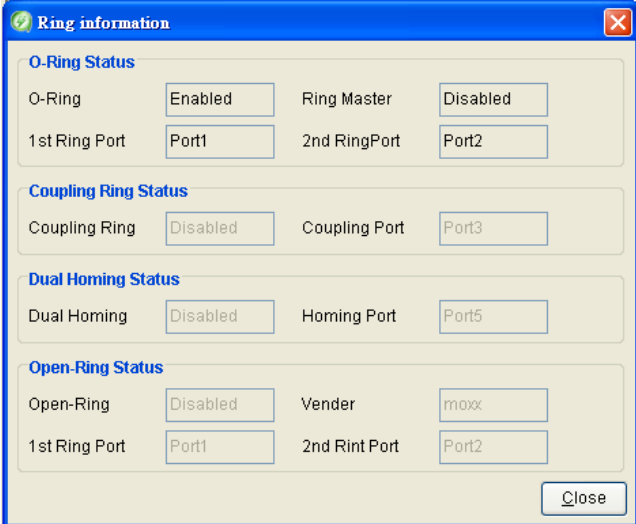
Context Menu



Task	Hotkey	Description
Open Web	N/A	Open Switch Web Page
Log Event	N/A	Open Switch Log Event Table.
Device Information	N/A	Show Device Information 1、Port Neighbor List

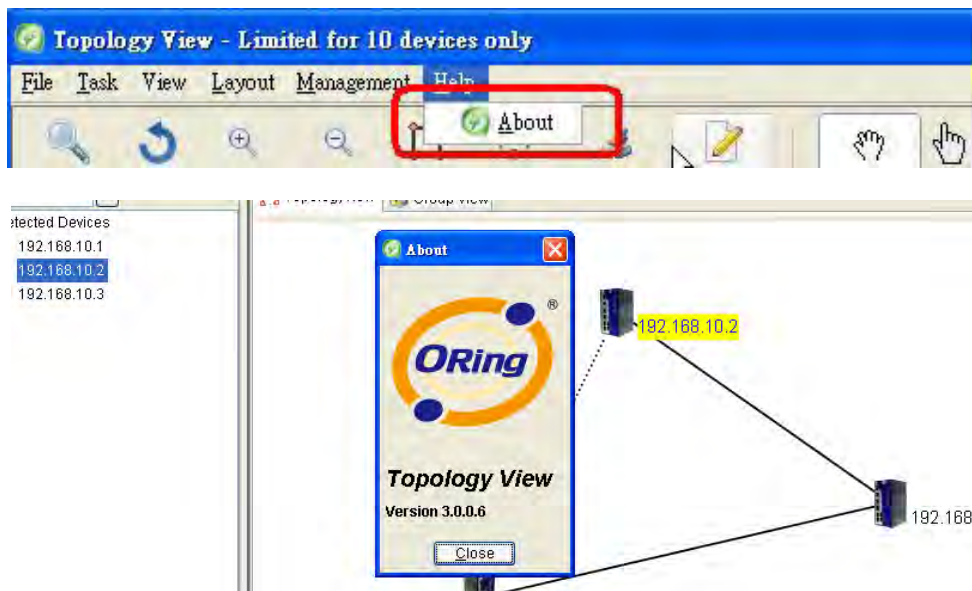
		 <p>Neighbor IP : Show Neighbor Device IP. Name : Show Switch model name. Description : Show device Description. ChassisID : Show device MAC.</p> <p>2、Device Detail</p>  <p>Device Annotation : Can accord with user's demand, increase notes</p>
Path Management	N/A	Can reveal the information of the adjoint devices.

		
Device Annotation	N/A	Can accord with user's demand, increase switch notes.
Network Flow	N/A	<p>Start " Network Flow" Function, the user can control Network Flow which appoints port.</p> 
Port Performance	N/A	<p>User can select want to monitor port</p>  <p>User can monitor uni-cast multicast & broadcast packet.</p> 

Location alert	N/A	"Enable" or "Disable" location alert.
Change Group	N/A	The user can choose designated device, changes him group disposes
Ring Information	N/A	<p>User can check Ring port and master information.</p> 

Help








Select **Help** to show Help menu.



Label	Hotkey	Description
About	N/A	Show the version information of Topology View.

9.5 Function Bar

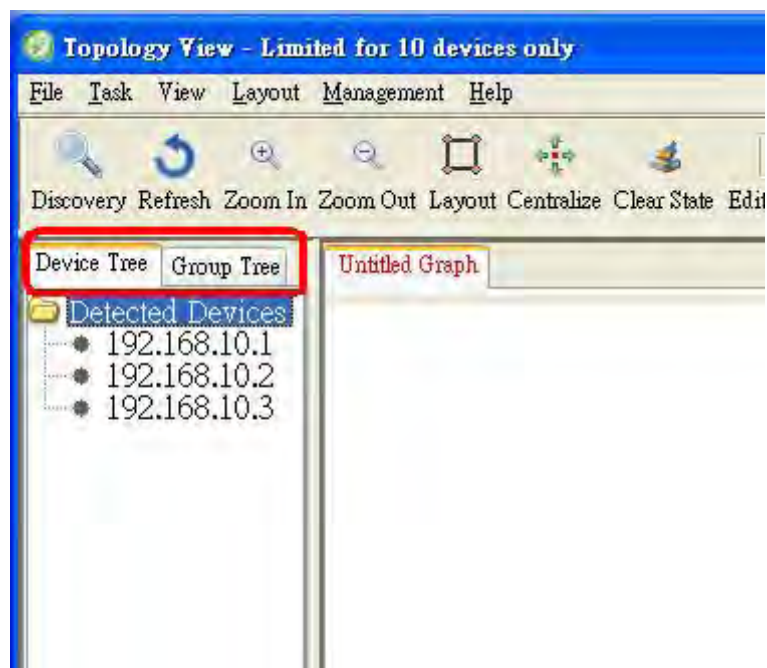


Icon	Description
	The same with task "Discovery".
	Refresh the host
	Zoom in the topology.
	Zoom out the topology.
	Auto Layout
	Centralize
	User can clear Topology Area status
	User can oneself define group name
	Transforming : Move all switches at the same time.
	Picking : Pick one switch to move.
	Editing : When Topology Area into editing mode, users are able to add or delete switches and links.

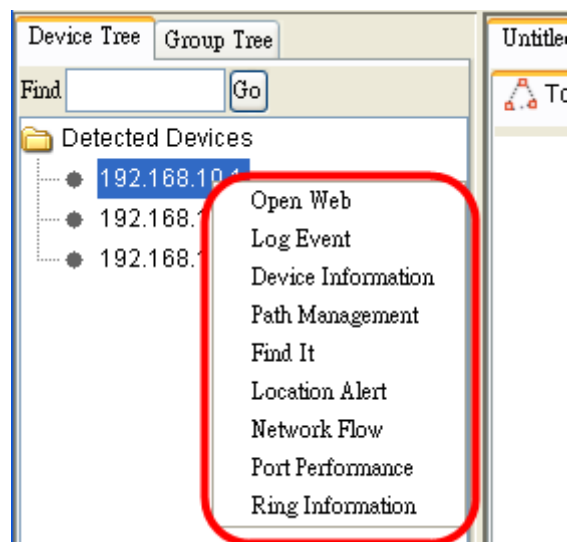
Find <input type="text"/> Go	Find the specific host in the topology.
Device Label <input type="text"/> Ip <input type="text"/>	Show Designated Device info

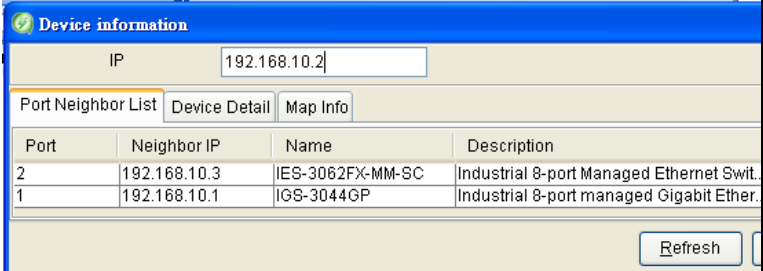
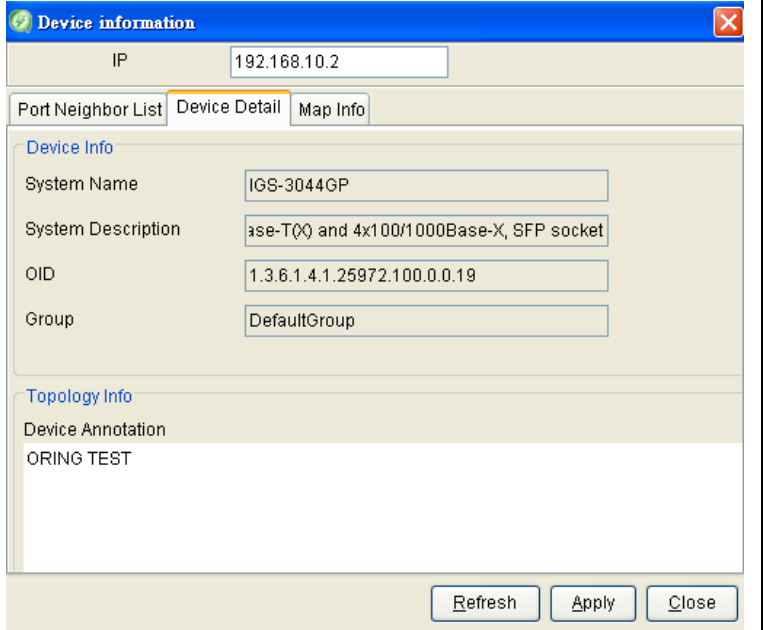
9.6 Device Tree


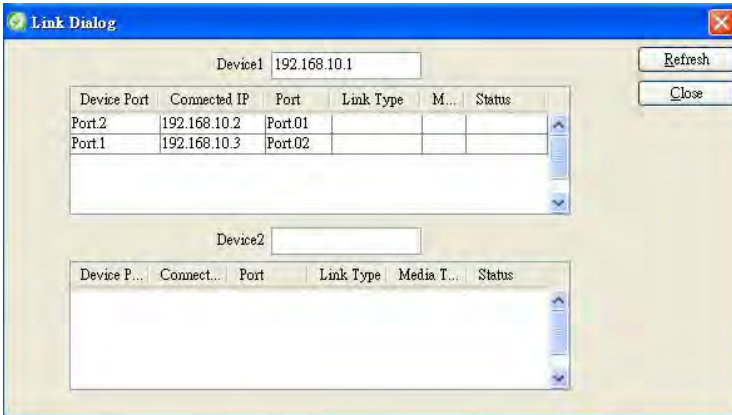
After execute Discovery, Topology View will list the discovered devices on the Device Tree.

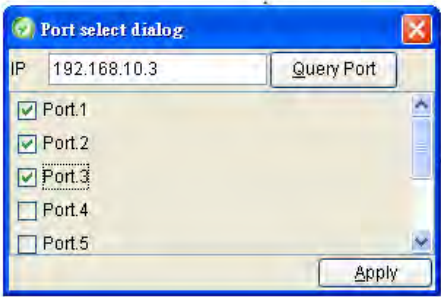
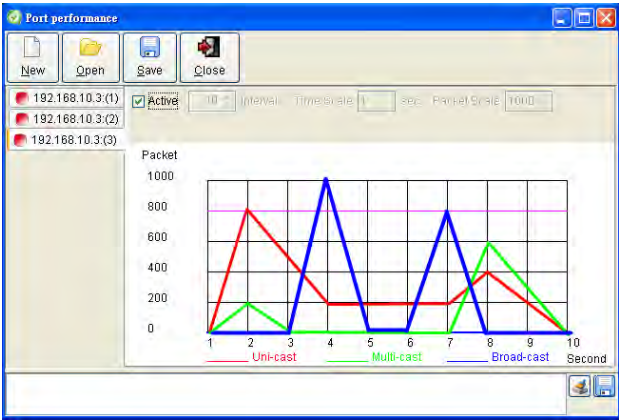
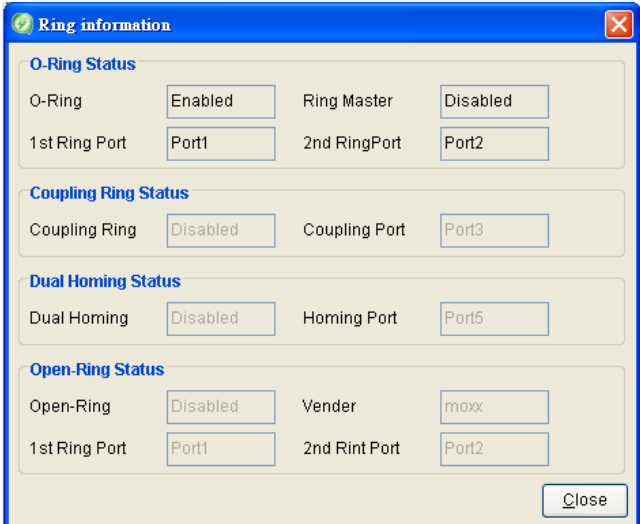


Select certain node, and right-click the mouse, will show the menu.



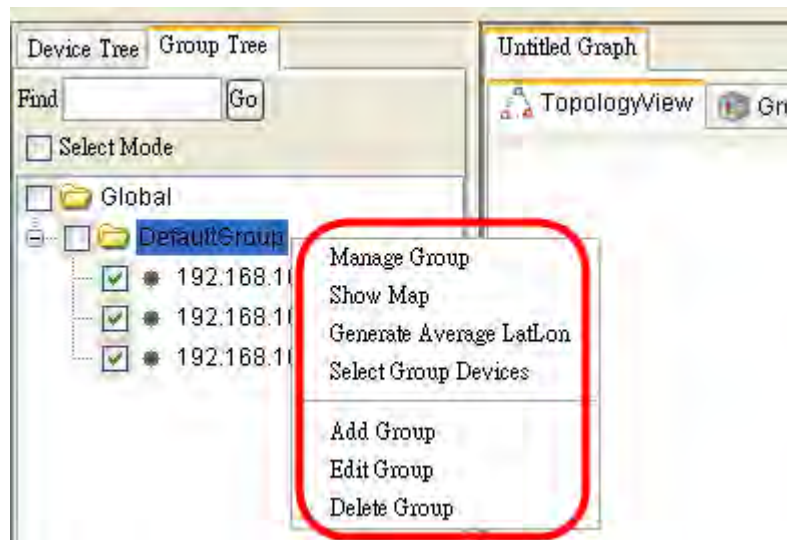
Task	Hotkey	Description
Open Web	N/A	Open Switch Web Page
Log Event	N/A	Open Switch Log Event Table.
Device Information	N/A	<p>Show Device Information</p> <p>1、Port Neighbor List</p>  <p>Neighbor IP : Show Neighbor Device IP. Name : Show Switch model name. Description : Show device Description. ChassisID : Show device MAC.</p> <p>2、Device Detail</p>  <p>Device Annotation : Can accord with user's demand, increase notes</p> <p>3、Map Info</p> <p>This feature is to use google map, users can "Map</p>


		<p>info" page, enter the address, topology view will follow the address, calculate the coordinates and follow the coordinates, the device will be shown on the google map. (Use this feature, it is necessary to connect internet.)</p>  <p>Map Active : enable check box , device will show to google map. Disable this check box , device will not show .</p> <p>Default : Clear address info.</p> <p>Address : user can input any address.</p> <p>Query : auto scan address coordinate.</p> <p>Latitude : input Latitude</p> <p>Longitude : input Longitude</p>
Path management	N/A	<p>Can reveal the information of the adjoint devices.</p> 
Find It	N/A	Look for the position that appoints the device.
Location Alert	N/A	“Enable” or ”Disable” location alert.

<p>Port Performance</p>	<p>N/A</p>	<p>User can select want to monitor port</p>  <p>User can monitor uni-cast multicast & broadcast packet.</p> 
<p>Ring Information</p>	<p>N/A</p>	<p>User can check Ring port and master information.</p> 

9.7 Group Tree

"Group View" function of the settings page, users can set the device as a Group, to google map in the Group's display device.



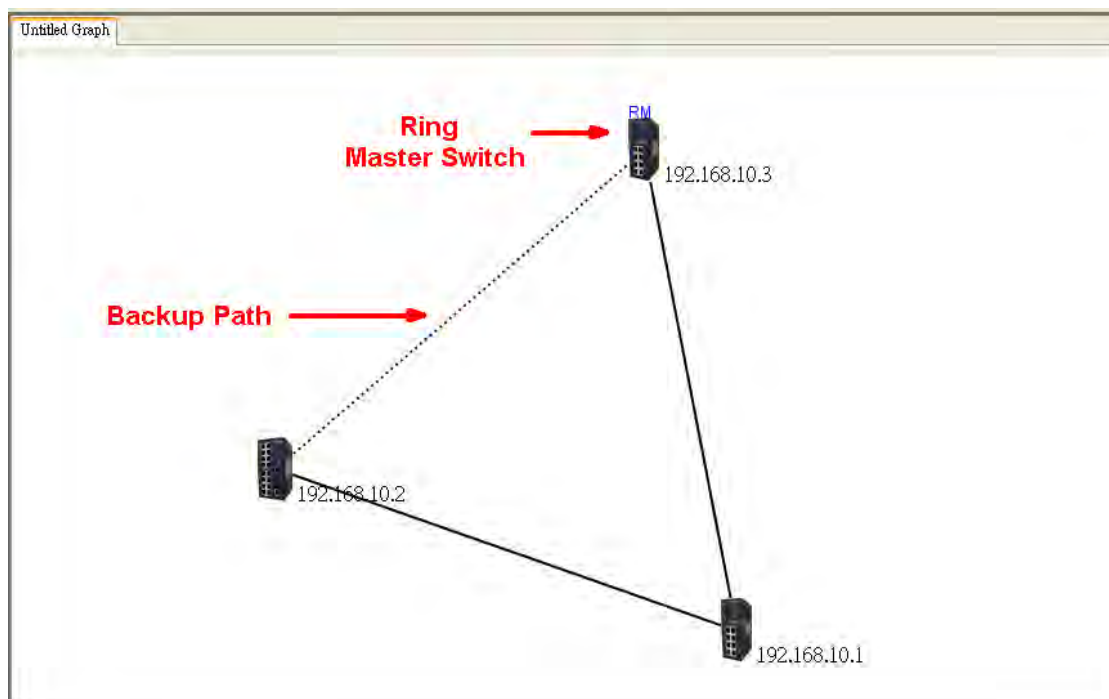
Task	Hotkey	Description
Manage Group	N/A	Group setting, (Same Page 121)
Show Map	N/A	Show device in google map.  <p>The screenshot shows the 'Group View' tab in the software interface. It displays a Google Map of East Asia, with several device locations marked by blue icons. The map includes labels for countries like China, Korea, and Japan, as well as bodies of water like the Sea of Okhotsk and the East China Sea. The 'DefaultGroup' folder is selected in the left sidebar, and the 'Show Map' checkbox is checked.</p>
Generate Average LatLon	N/A	Calculate the center coordinates of all devices.
Add Group	N/A	Increase a new group.

Edit Group	N/A	Edit Group info.
Delete Group	N/A	Delete you select group.

9.8 Topology Area

Topology View


After execute "Discovery", Topology View will display the network topology automatically on the topology area.



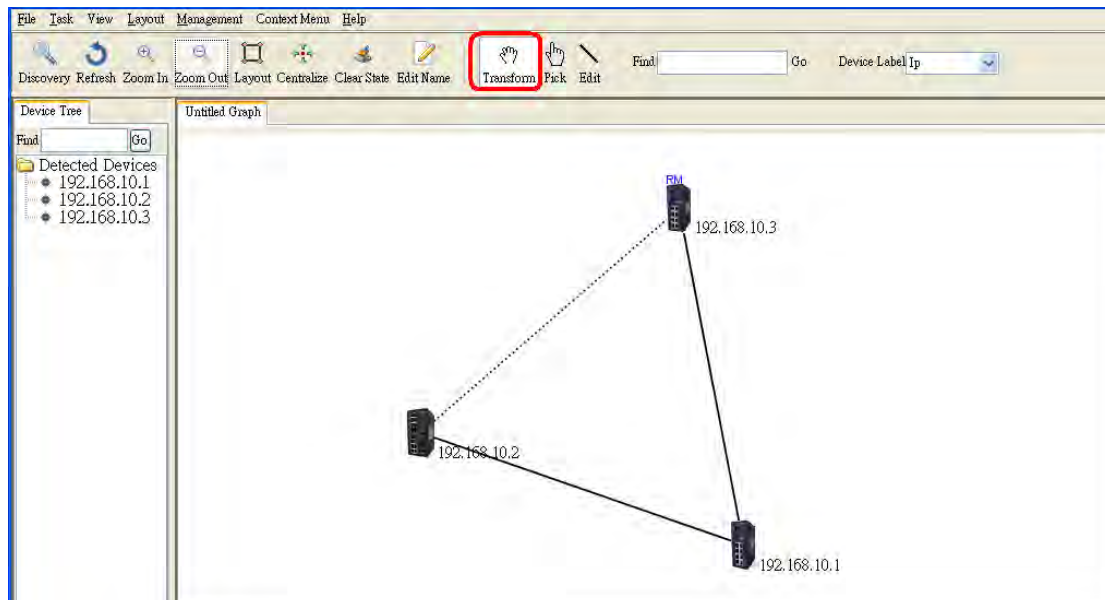
Note:

Topology View is able to discover the device when set SNMP Read Community to „public‘.

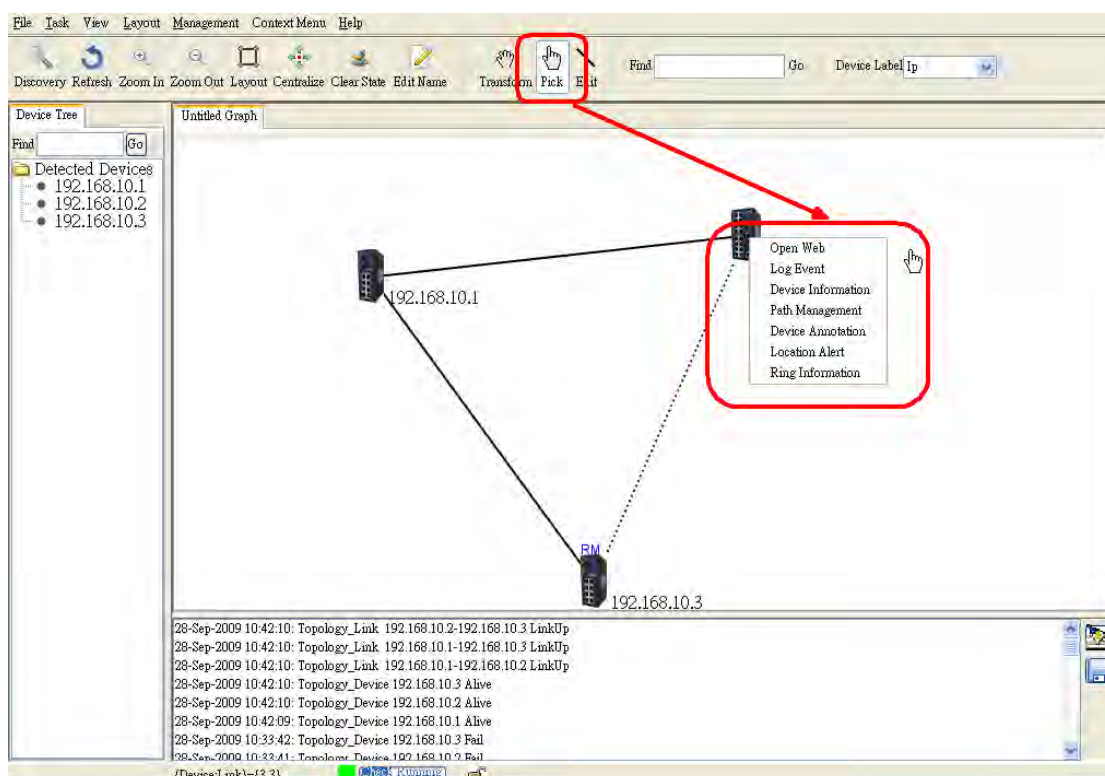
Topology View is able to show the connection of link through LLDP Packets from device.

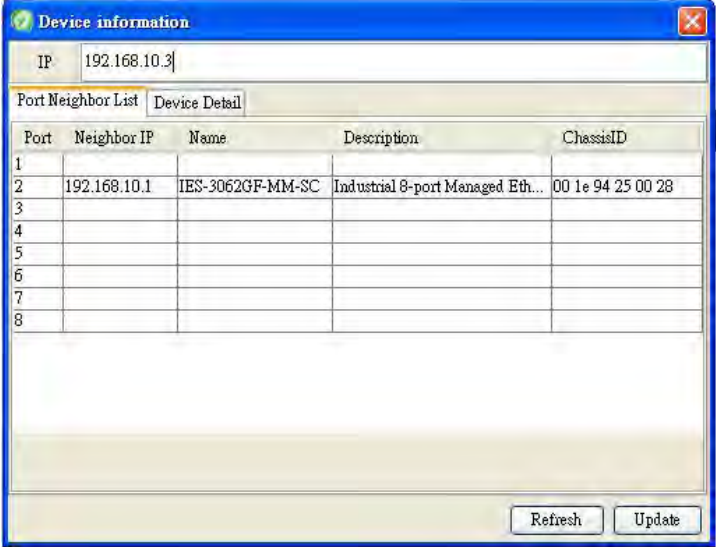
Label	Hotkey	Description
	N/A	O-Ring Ring Master
*****	N/A	O-Ring Backup Path

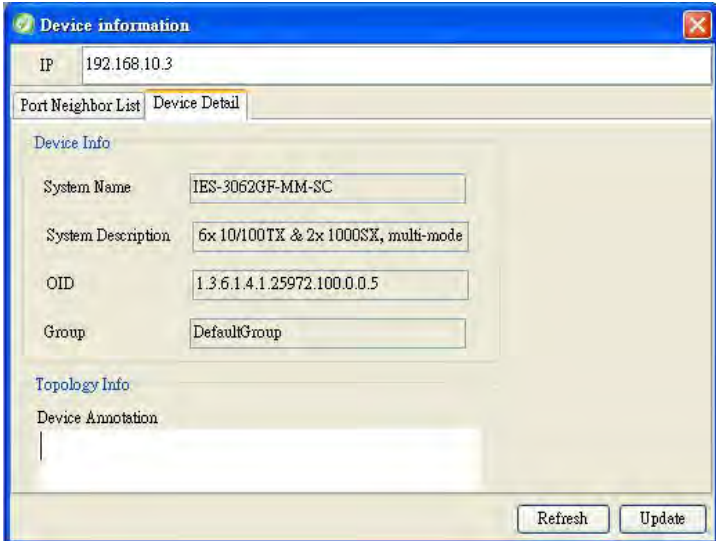
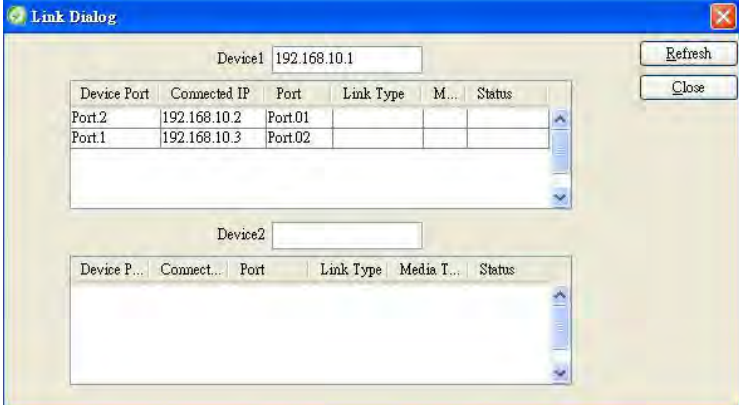
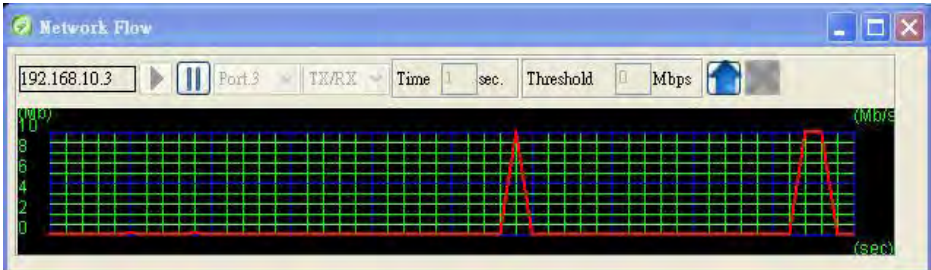
When choose “**Transforming**”, users are able to move all devices on the topology area at the same time.



When choose “**Picking**”, users are able to move the specific switch or right-click the mouse to show the menu.

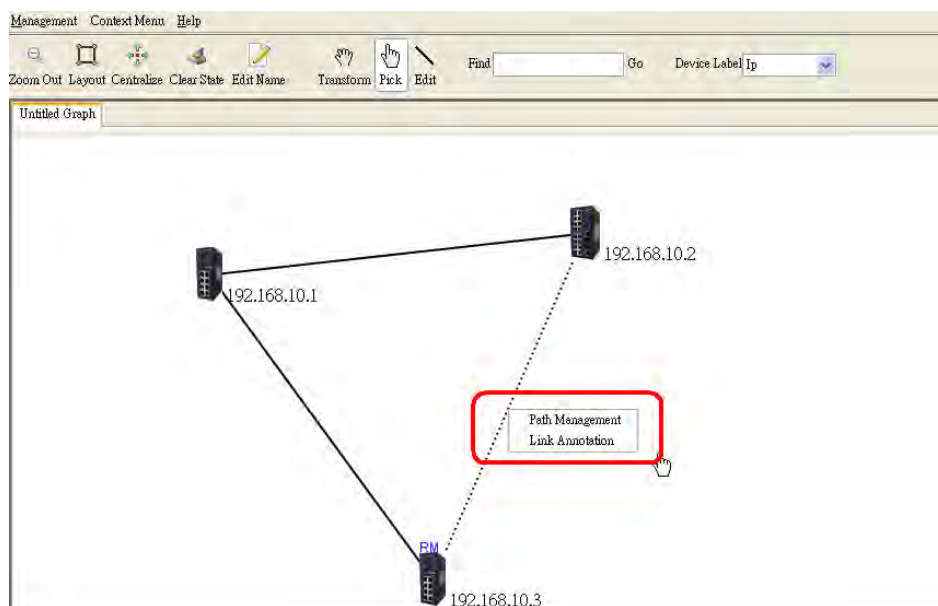


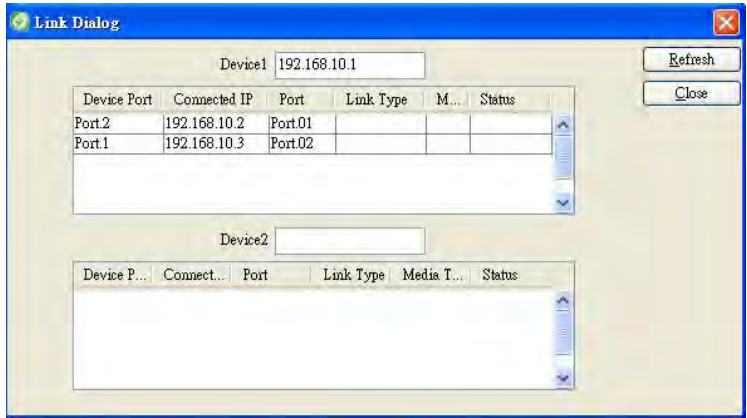
Task	Hotkey	Description
Open Web	N/A	Open Switch Web Page
Log Event	N/A	Open Switch Log Event Table.
Device Information	N/A	<p>Show Device Information</p> <p>1、Port Neighbor List</p>  <p>Neighbor IP : Show Neighbor Device IP. Name : Show Switch model name. Description : Show device Description. ChassisID : Show device MAC.</p> <p>2、Device Detail</p>

		 <p>Device Annotation : Can accord with user's demand, increase notes</p>
Path Management	N/A	<p>Can reveal the information of the adjoint devices.</p> 
Topology Management	N/A	
Device Annotation	N/A	<p>Can accord with user's demand, increase switch notes.</p>
Network Flow	N/A	<p>Start " Network Flow" Function, the user can control Network Flow which appoints port.</p> 

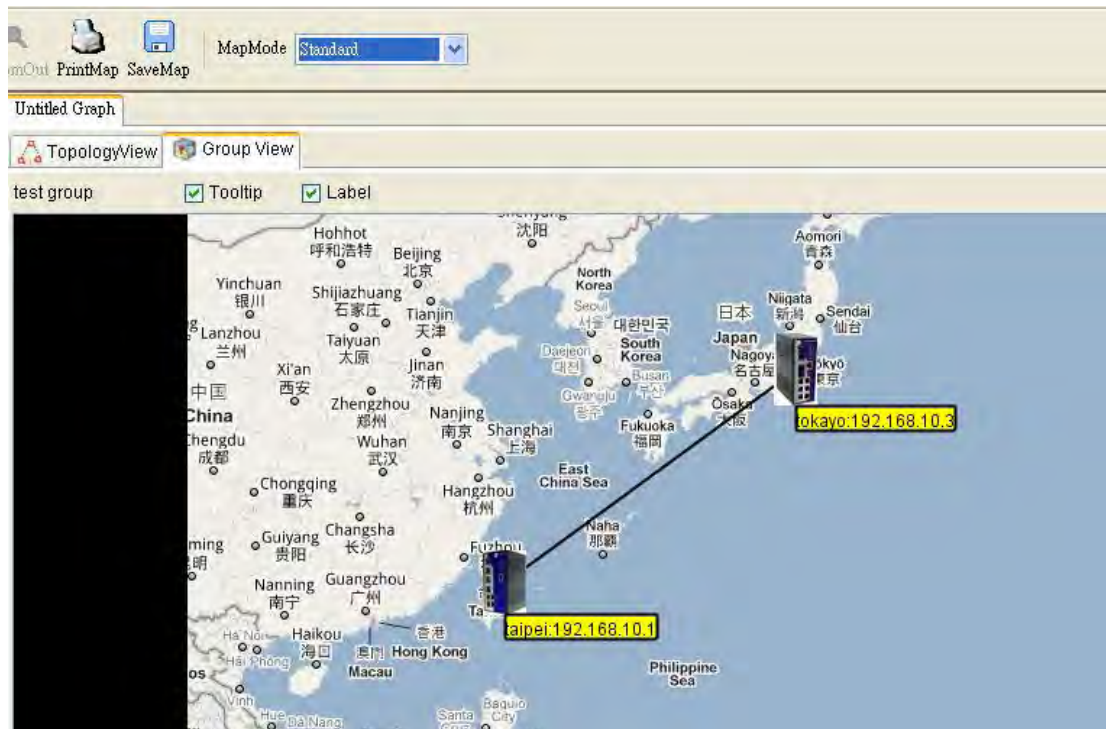
Enable Location alert	N/A	"Enable" or "Disable" location alert.
Change Group	N/A	The user can choose designated device, changes him group disposes


When the cursor points to the link you want to select. Right click the mouse to show the menu.



Task	Hotkey	Description
Path Management	N/A	<p>Can reveal the information of the adjoint devices.</p> 
Link Annotation	N/A	Can accord with user's demand, increase Link notes.

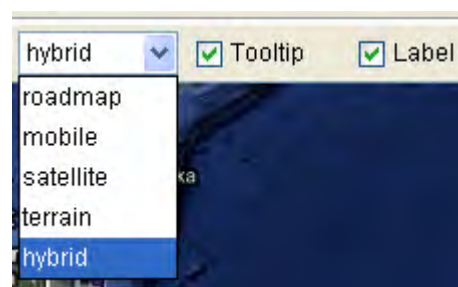
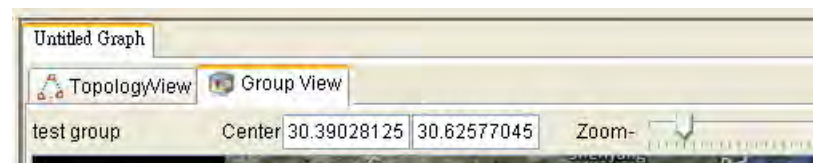
Group View



Task	Hotkey	Description
Print Map	N/A	Print this Map.
Save Map	N/A	Save this Map to JPEG/GIF File.
Map Mode	N/A	<p>Standard Mode : User only can control Tooltip & Label</p>  <p>Tooltip : Checked, move the mouse on the device will display IP information.</p> <p>Label : Checked, the location name and IP directly displayed in the MAP.</p>

Control Mode :

User can control FetchMap 、DefaultMap 、UpLevel 、Map Zoom+ / Zoom- and Choose the type of map display(have five type).



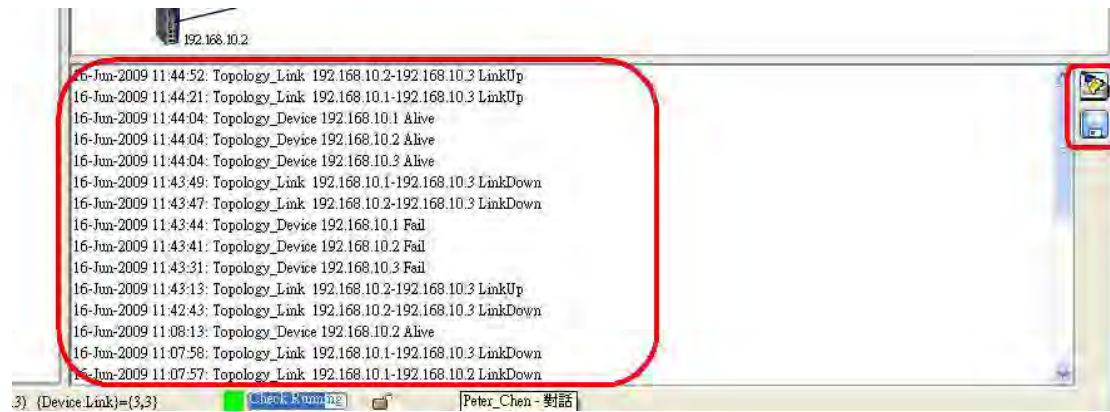
FetchMap : Refresh the MAP page.

DefaultMap : MAP page will return to the default location planning.

UPLevel : Return to the previous group.

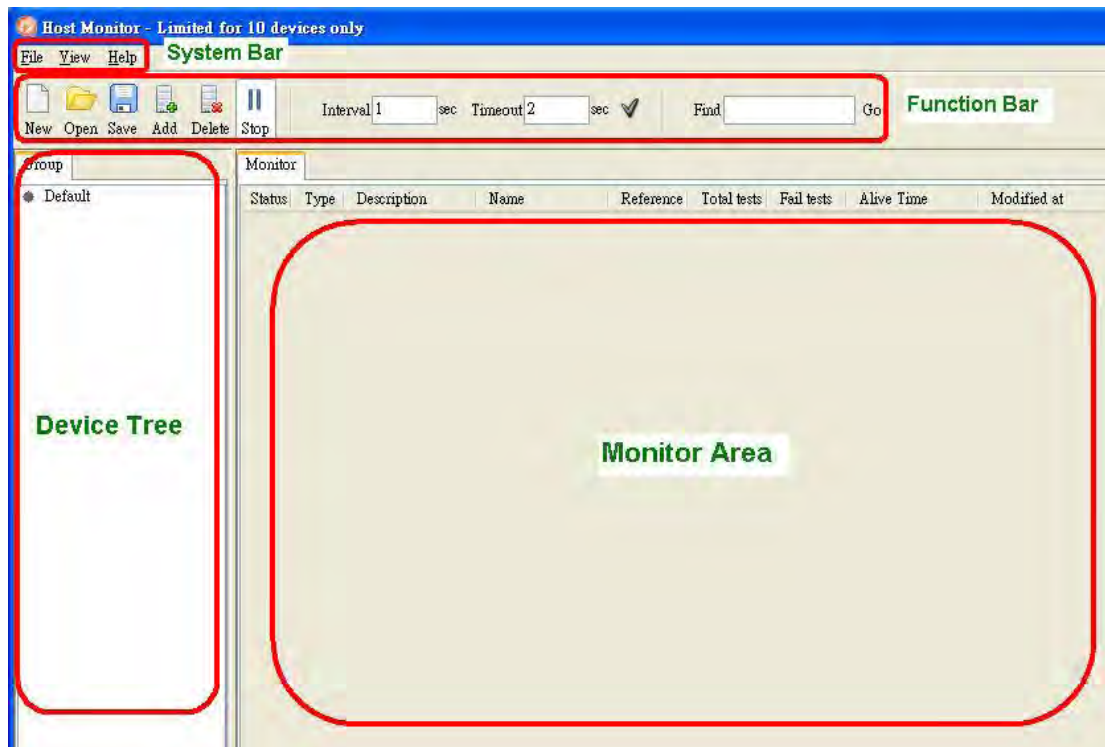
9.9 System Log Area

Reveal port, power, topology change.various states. And can save for excel file.
Help users carry on the mistake to manage.



Host Monitor

"Host monitor" It is a Device control software, He can be via group or device IP range control any contains IP a device, Do not restrict the brand or device kind, enable users to control all device on the network, reach omni-directional control.







10.1 System Bar

File

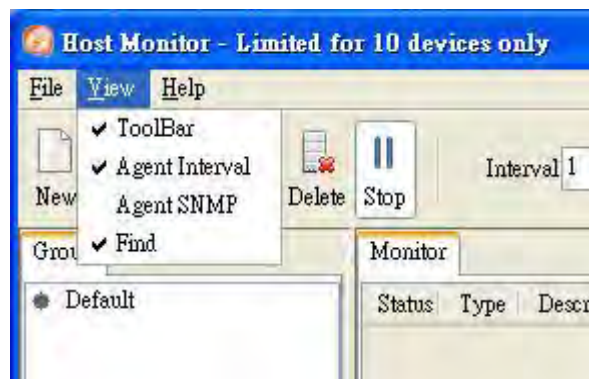
Select File to show the File menu.



Label	Hotkey	Description
 New	Ctrl + N	Stat new host monitor work
 Open	Ctrl + O	Load the configuration that you saved before.
 Save	Ctrl + S	Save the current configuration as a *.mnt file.
 Exit	Ctrl + E	Terminate Host monitor program

View

Show / Hide Various system bar



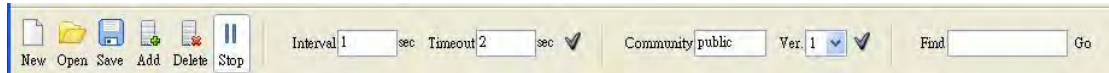
Label	Hotkey	Description
ToolBar	N/A	Show / Hide ToolBar
Agent Interval	N/A	Show / Hide Agent Interval
Agent SNMP	N/A	Show / Hide Agent SNMP
Find	N/A	Show / Hide Find



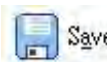



About

Show Host monitor version.



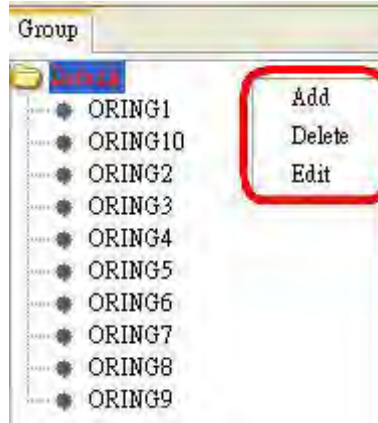
10.2 Function Bar

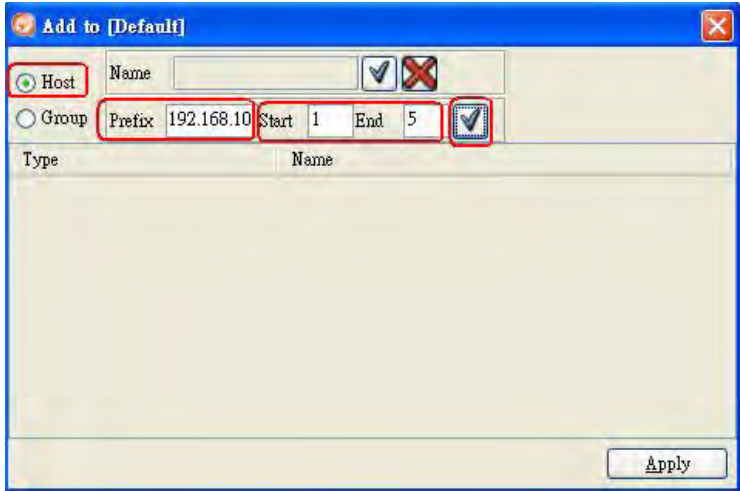


Label	Hotkey	Description
 New	Ctrl + N	Stat new host monitor work
 Open	Ctrl + O	Load the configuration that you saved before.
 Save	Ctrl + S	Save the current configuration as a *.mnt file.
 Add	N/A	Increase a host monitor job.
 Delete	N/A	Delete a host monitor job.
 Start Stop	N/A	Start or Stop monitor
Interval	N/A	Monitor devices Interval
Timeout	N/A	" Timeout" : " Host monitor" Check the number of times of devices, if exceed, does not connect to the devices yet, judge for link down
Community	N/A	SNMP Community String
Ver	N/A	SNMP Agent Version
Find	N/A	Look for designated device

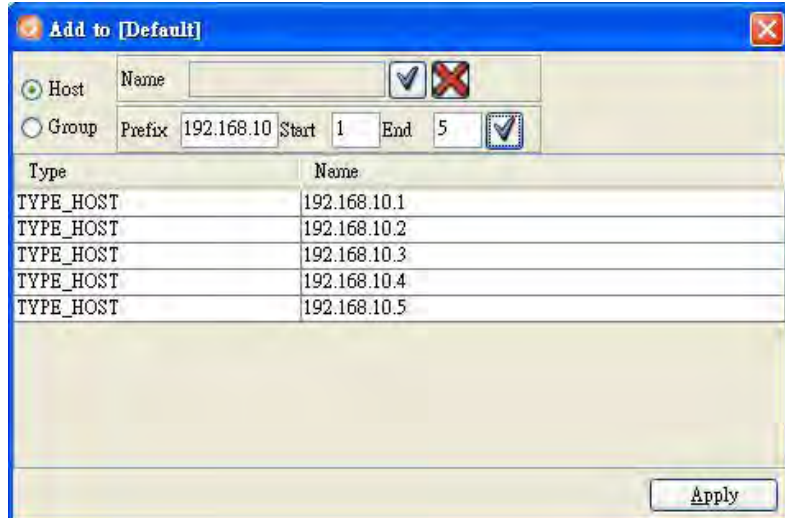
10.3 Devices Tree

Show host monitor group.Tree.



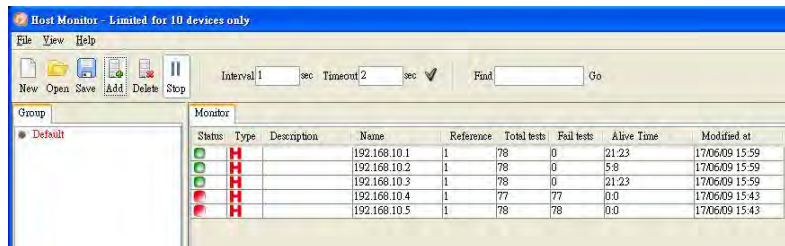
Label	Hotkey	Description
Add	N/A	<p>Increase a host monitor job.</p> <p>Add Host :</p> <p>1 、config monitor Rang</p>  <p>Host : add single device Prefix : IP Prefix Start : IP Rang start value End : IP Rang end value.</p> <p><input checked="" type="checkbox"/> : Confirm buttons</p>

2、confirm rang and apply



Type	Name
TYPE_HOST	192.168.10.1
TYPE_HOST	192.168.10.2
TYPE_HOST	192.168.10.3
TYPE_HOST	192.168.10.4
TYPE_HOST	192.168.10.5

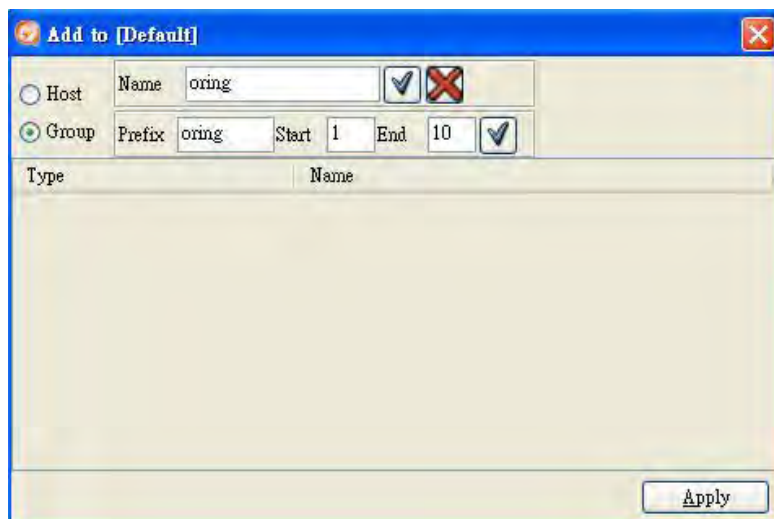
3、Start monitor



Status	Type	Description	Name	Reference	Total tests	Fail tests	Alive Time	Modified at
	H		192.168.10.1	1	78	0	21:23	170609 15:59
	H		192.168.10.2	1	78	0	5:8	170609 15:59
	H		192.168.10.3	1	78	0	21:23	170609 15:59
	H		192.168.10.4	1	77	77	0:0	170609 15:43
	H		192.168.10.5	1	78	78	0:0	170609 15:43

Add Group :

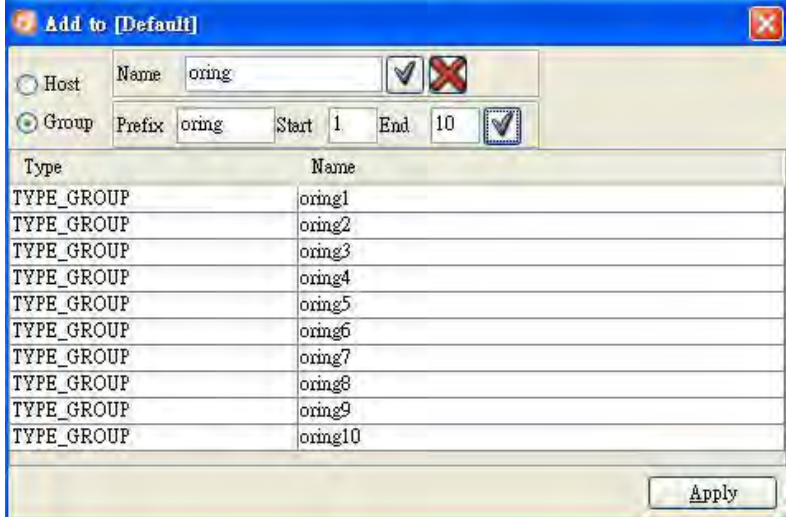
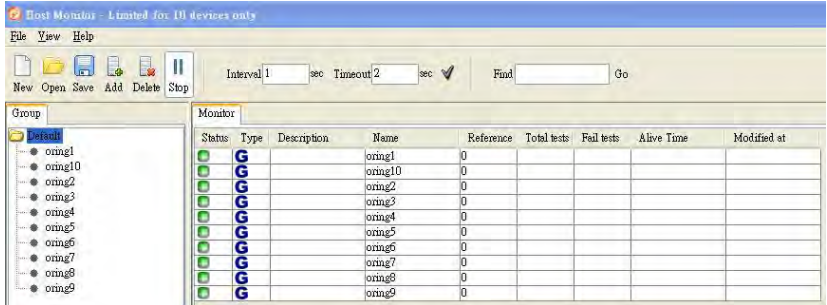
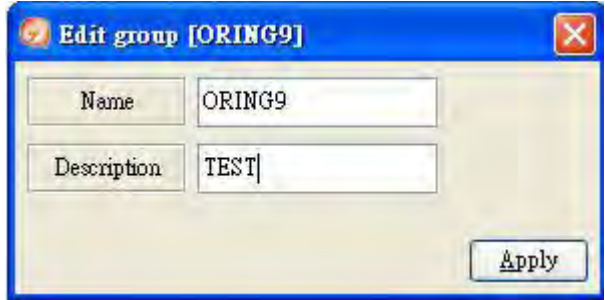
1、config monitor group Rang(single or a lot of)



Type	Name
------	------








Group : add single or a lot of device

Prefix : IP Prefix

		<p>Start : IP Rang start value End : IP Rang end value.</p> <p><input checked="" type="checkbox"/> : Confirm buttons</p> <p>2 、confirm rang and apply</p>  <p>3 、Start monitor</p> 
Delete	N/A	Delete a host monitor job.
Edit	N/A	<p>Edit group info.</p>  <p>Name : Define group name Description : Define Description</p>

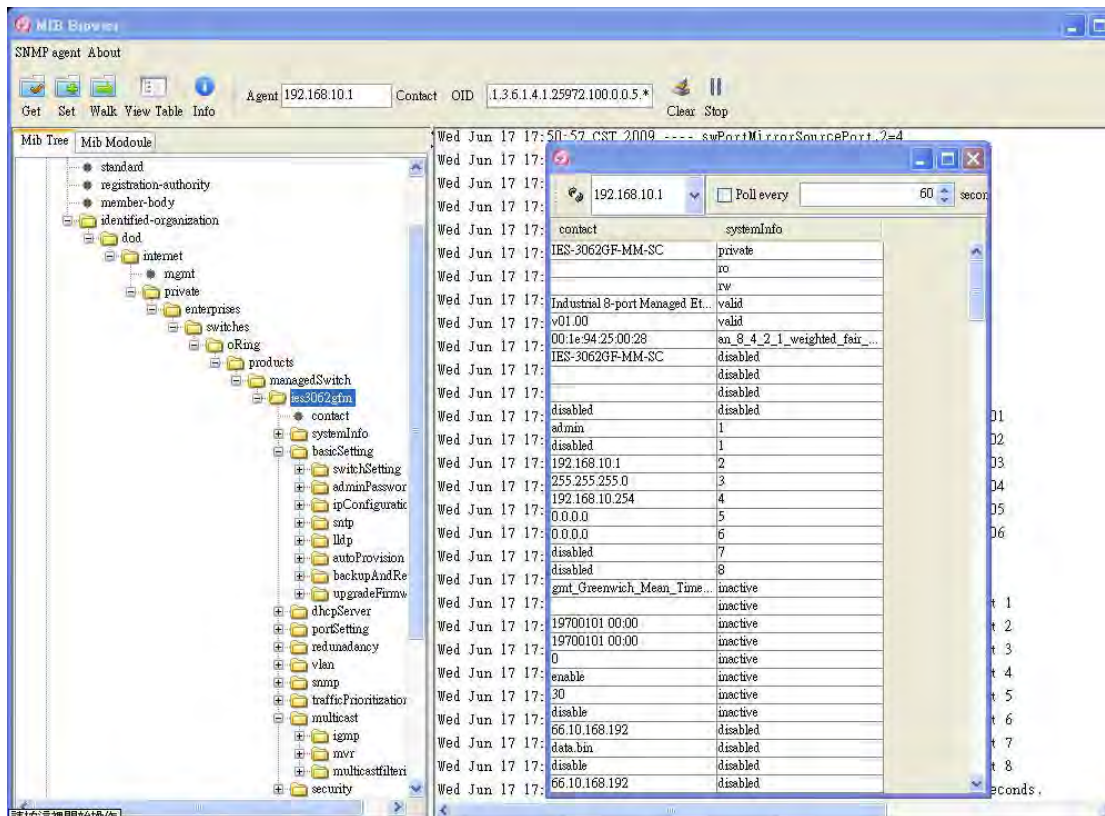
10.4 Monitor Area

User can by " HOST Monitor" Information intact control in network state of apparatus.

Status	Type	Description	Name	Reference	Total tests	Fail tests	Alive Time	Modified at
	G		ORING1	0				
	G		ORING2	0				
	G		ORING3	0				
	G		ORING4	0				
	H		192.168.10.1	1	3	0	21:49	17/06/09 16:24
	H		192.168.10.2	1	2	0	5:33	17/06/09 16:24
	H		192.168.10.3	1	2	0	21:49	17/06/09 16:24

MIB Browser

It is a Standard SNMP MIB Browser, the user does not need to buy MIB Browser in addition, OPEN-VISION V3.0 offers intact MIB Browser, users can to utilize SNMP MIB File, manage the apparatus of different brands at the same time,reach omni-directional management.



OID	Value
1.3.6.1.4.1.25972.100.0.0.5.1	private
1.3.6.1.4.1.25972.100.0.0.5.2	ro
1.3.6.1.4.1.25972.100.0.0.5.3	rw
1.3.6.1.4.1.25972.100.0.0.5.4	valid
1.3.6.1.4.1.25972.100.0.0.5.5	valid
1.3.6.1.4.1.25972.100.0.0.5.6	00:1e:94:25:00:28
1.3.6.1.4.1.25972.100.0.0.5.7	en_8_4_2_1_weighted_fair...
1.3.6.1.4.1.25972.100.0.0.5.8	disabled
1.3.6.1.4.1.25972.100.0.0.5.9	disabled
1.3.6.1.4.1.25972.100.0.0.5.10	disabled
1.3.6.1.4.1.25972.100.0.0.5.11	disabled
1.3.6.1.4.1.25972.100.0.0.5.12	admin
1.3.6.1.4.1.25972.100.0.0.5.13	disabled
1.3.6.1.4.1.25972.100.0.0.5.14	1
1.3.6.1.4.1.25972.100.0.0.5.15	1
1.3.6.1.4.1.25972.100.0.0.5.16	192.168.10.1
1.3.6.1.4.1.25972.100.0.0.5.17	255.255.255.0
1.3.6.1.4.1.25972.100.0.0.5.18	192.168.10.254
1.3.6.1.4.1.25972.100.0.0.5.19	4
1.3.6.1.4.1.25972.100.0.0.5.20	0.0.0.0
1.3.6.1.4.1.25972.100.0.0.5.21	0.0.0.0
1.3.6.1.4.1.25972.100.0.0.5.22	0.0.0.0
1.3.6.1.4.1.25972.100.0.0.5.23	disabled
1.3.6.1.4.1.25972.100.0.0.5.24	disabled
1.3.6.1.4.1.25972.100.0.0.5.25	disabled
1.3.6.1.4.1.25972.100.0.0.5.26	gmt.Greenwich.Mean.Time...
1.3.6.1.4.1.25972.100.0.0.5.27	inactive
1.3.6.1.4.1.25972.100.0.0.5.28	inactive
1.3.6.1.4.1.25972.100.0.0.5.29	19700101 00:00
1.3.6.1.4.1.25972.100.0.0.5.30	19700101 00:00
1.3.6.1.4.1.25972.100.0.0.5.31	0
1.3.6.1.4.1.25972.100.0.0.5.32	enable
1.3.6.1.4.1.25972.100.0.0.5.33	30
1.3.6.1.4.1.25972.100.0.0.5.34	disable
1.3.6.1.4.1.25972.100.0.0.5.35	66.10.168.192
1.3.6.1.4.1.25972.100.0.0.5.36	data.bin
1.3.6.1.4.1.25972.100.0.0.5.37	disable
1.3.6.1.4.1.25972.100.0.0.5.38	disable
1.3.6.1.4.1.25972.100.0.0.5.39	66.10.168.192

TroubleShooting

11.1 Why Topology View can not run in our computer?

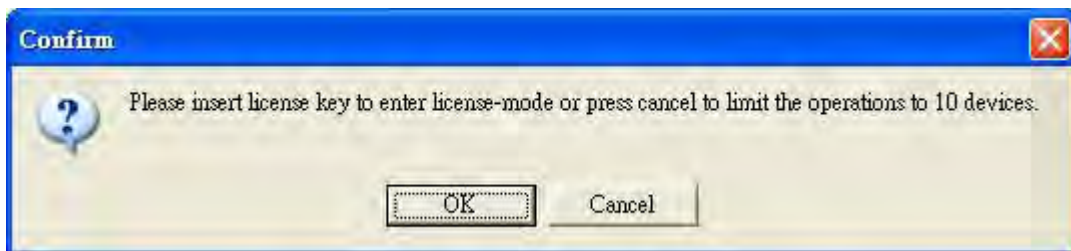
Please make sure your computer has installed JRE, if not, please install Java Runtime Environment (JRE) 6 Update 3 from SUN's website.

<http://java.sun.com/javase/downloads/index.jsp>

11.2 License key warning message

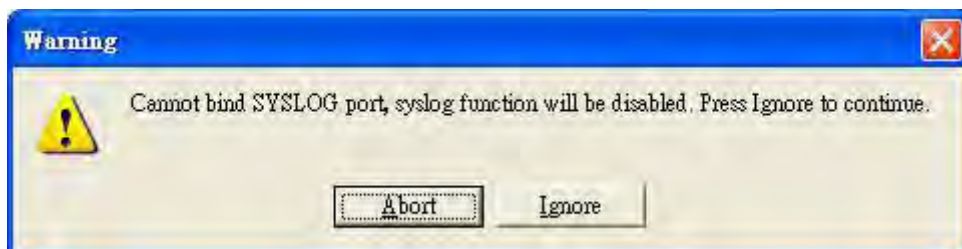
When implement Open-Vision, the computer pop-up the warning message as below. It's meaning that the computer didn't insert the USB license key.

Please insert license key to enter license mode and then press ok or press cancel to limit the operations to 10 devices.



11.3 SYSLOG warning message

When implement Open-Vision, the computer pop-up the warning message as below. You can check is there any third party **System Log Server** (ex : tftpd or ORing's DS-Tool) running on the computer. If you do not care about the system log function, press 「Ignore」 to continue.



11.4 Why Topology View can not receive SNMP trap?

When open Topology VIEW, if the computer pop-up the warning message as below. You can check is there any running third party **SNMP software** (ex : MG-Soft or SNMPc) on the computer. Please stop these applications, because these applications will occupy SNMP port.

