Open-Vision 4.0

Management Utility

User's Manual

Version 1.0

August, 2019

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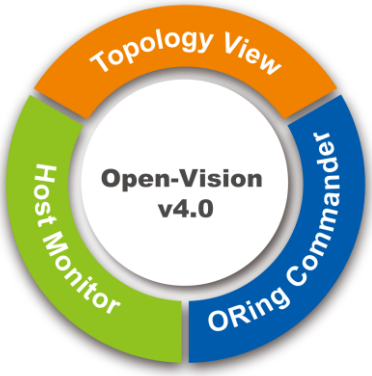
Getting to Know Your Switch

1.1 About the Open-Vision 4.0



A powerful management utility is necessary for administrators to monitor and maintain all devices in a local network. ORing is proud to announce Open-Vision 4.0, which is a powerful industrial network management windows utility suit, including three different programs, ORing Commander, Topology View, and Host Monitor that make central network management easily.

Open-Vision 4.0 provides various tools that enhance the convenience, comprehensibility, reliability, and stability in four ways – Centralized management / Visualized management / Completed monitor / Early system. ORing's Open-Vision 4.0 is designed to meet various industrial network management demands. Only through the advanced monitoring features and smart alert systems, the administrators can be informed even in an unstable network environment so issues can be solved and recovery can be done immediately, to maintain the management quality assured.

1.2 System requirements

Minimum System Requirements

- Intel Core i5 (or above)
- VGA Monitor with 1024 x 768 resolution
- 4 GB RAM (recommended 8GB and above)
- Java Runtime Environment 8 32bit (note : not support 64bit version)
- Internet Explorer 8.0 or higher
- WinPcap 4.1.3 (or above)

Supported Network Protocols

- TCP / IP
- UDP
- SNMP

Operating System

- Windows 10
- Windows 7
- Vista
- Windows XP/2000
- Windows Server 2008
- Windows Server 2003

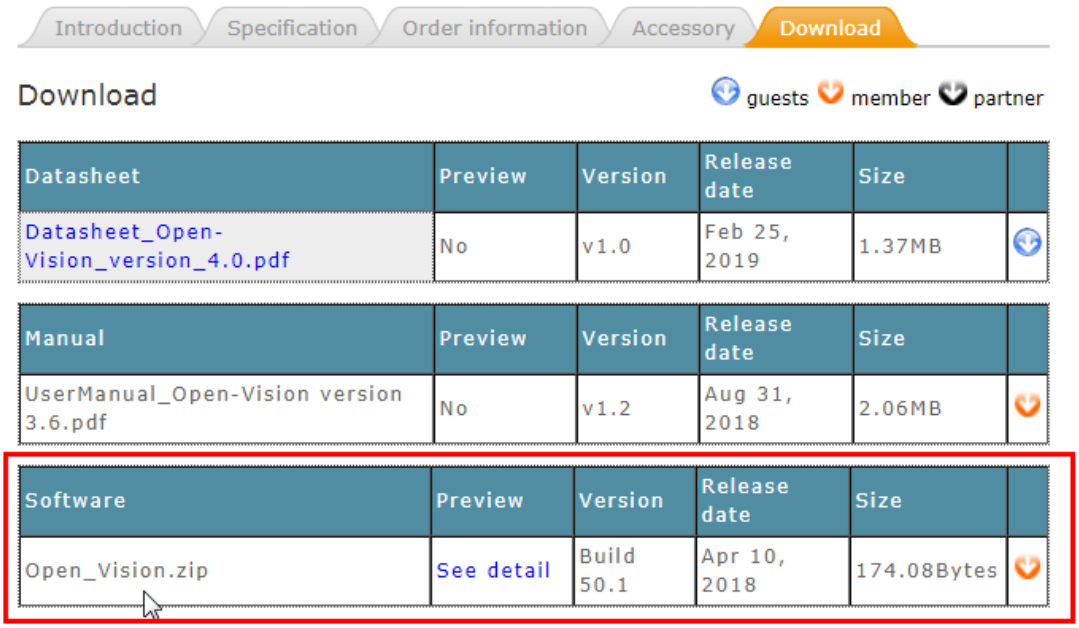
PS: Please make sure you have Java Runtime Environment installed on your computer. If not, Please download the latest Java Runtime Environment (JRE) from http://java.com/en/download/

1.3 Install Open-Vision

Please see the following instruction to install the Open-Vison

Step 1

User can get OPEN VISION from CD or ORING Web site.
https://www.oringnet.com/en-global/products/detail/P0000000918



Introduction | Specification | Order information | Accessory | Download

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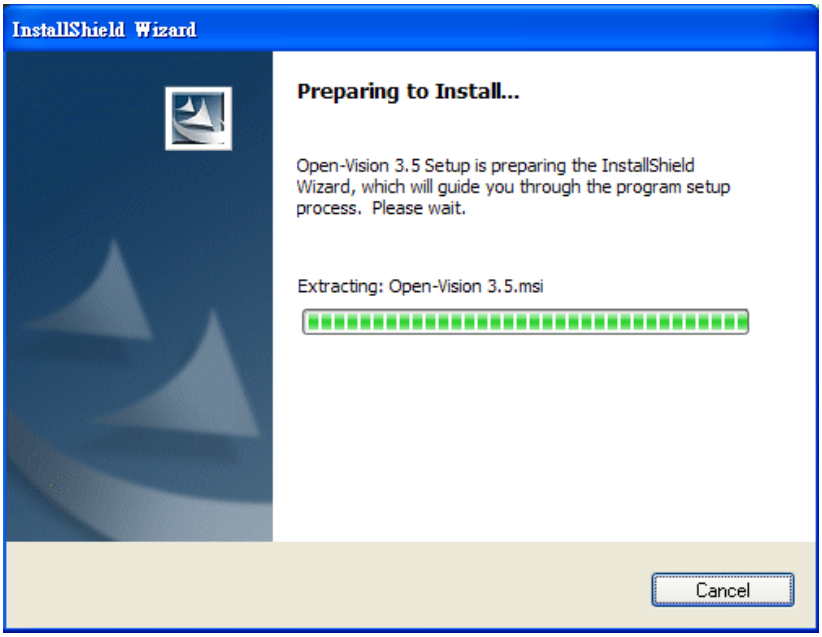
Datasheet	Preview	Version	Release date	Size	
Datasheet_Open-Vision_version_4.0.pdf	No	v1.0	Feb 25, 2019	1.37MB	

Manual	Preview	Version	Release date	Size	
UserManual_Open-Vision version 3.6.pdf	No	v1.2	Aug 31, 2018	2.06MB	

Software	Preview	Version	Release date	Size	
Open_Vision.zip	See detail	Build 50.1	Apr 10, 2018	174.08Bytes	

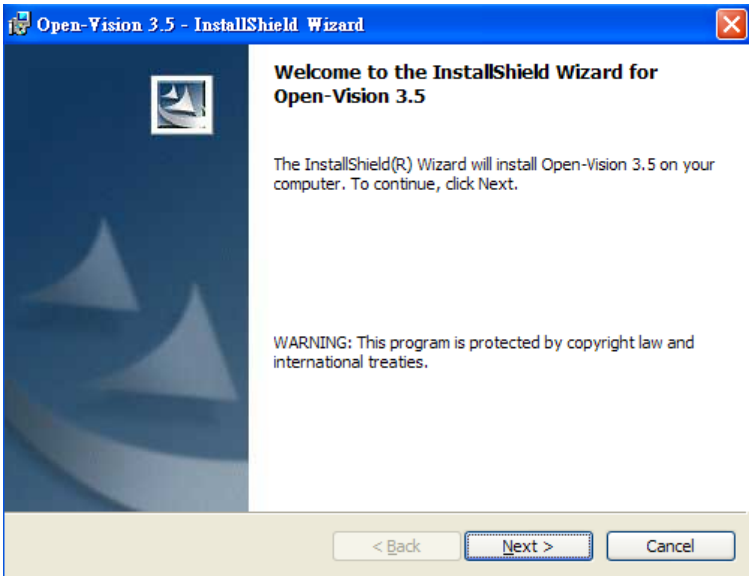
Step 2

Download and Click on the Open-Vision install file , and then execute the Open-Vision3.6 EXE file to start the installation



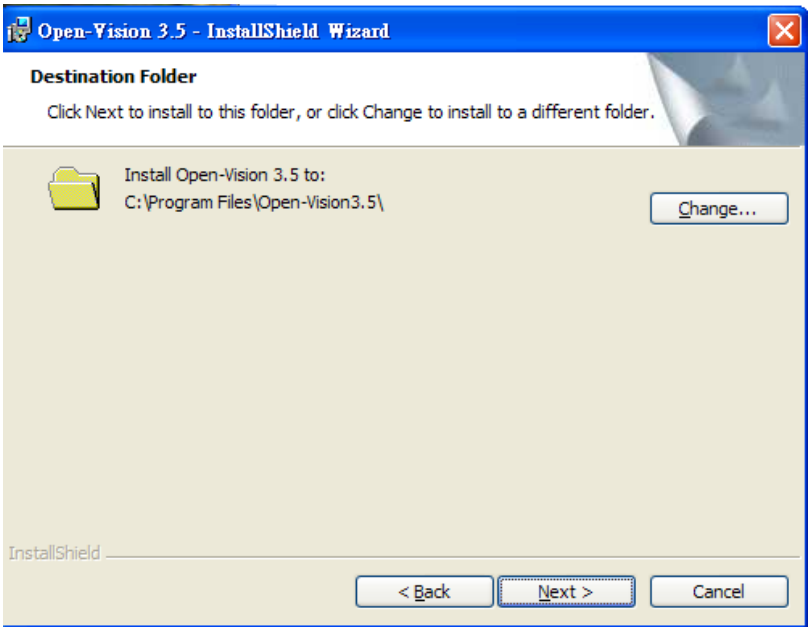
Step 3

Click [Next] to continue setup process.



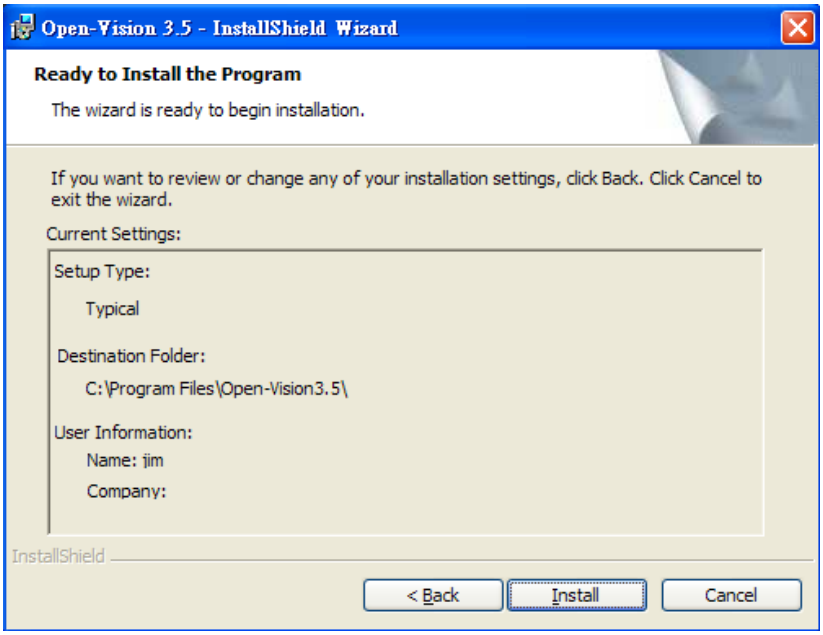
Step 4

Click on [Next] to install the Open-Vision on default directory or click on [Change] to change the path of installation. Then click on next to continue.



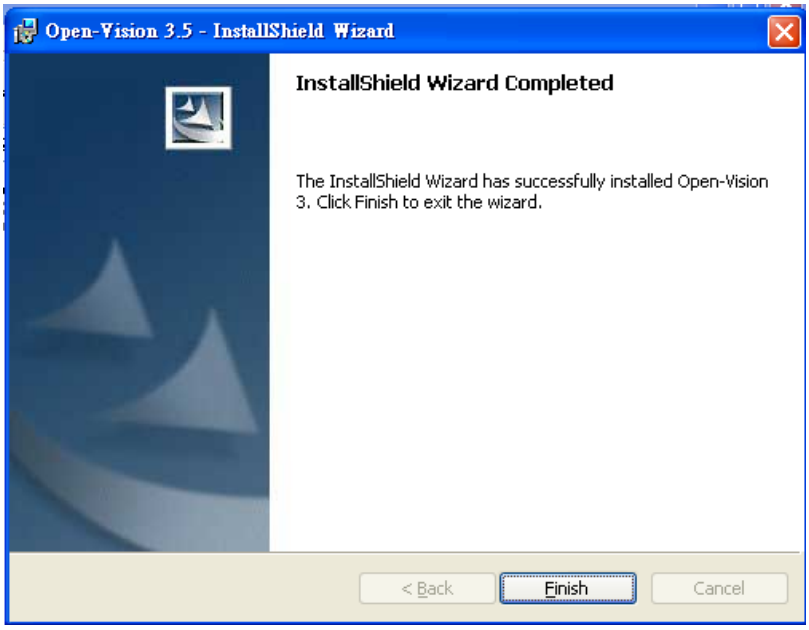
Step 5

Click on [Install] to start the installation.



Step 6

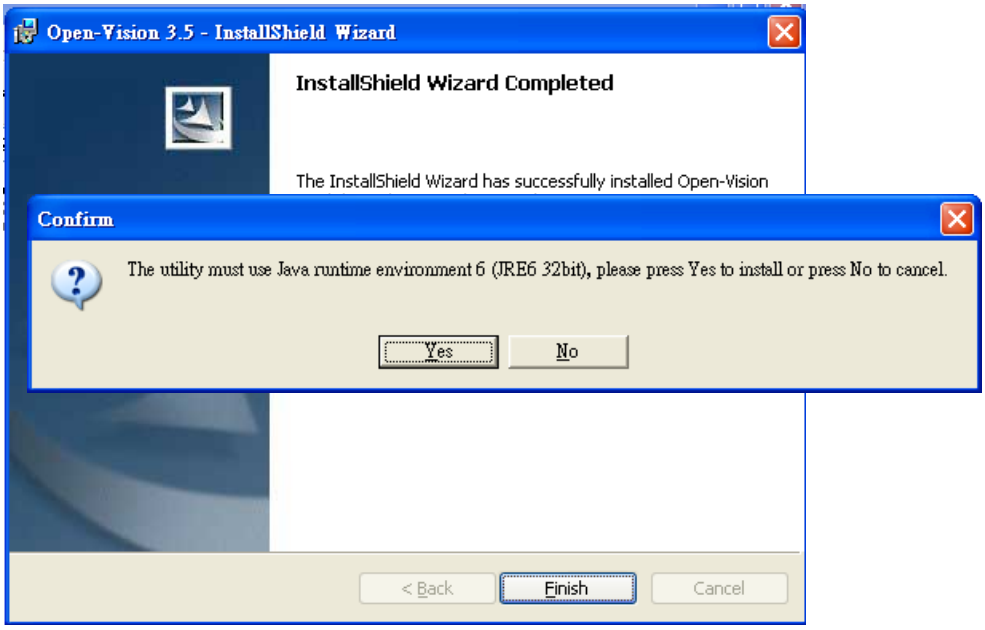
When the Installation process is finished, click "Finish" to complete the Installing process.



After [Finish] is clicked, a new windows will pop up and asking for install Java runtime environment 8 (32bit) and WinPcap 4.1.3 which is a must for Open-Vision to run properly. And can be skip if both software are already been installed.

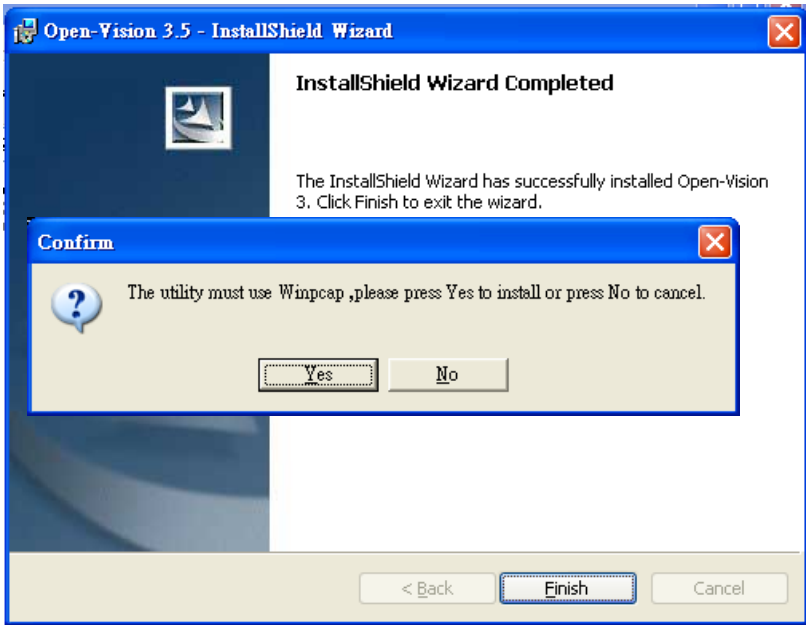
Step 7

Click on [Yes] to start the Java runtime environment installation. Please follow the guide to finish the installation

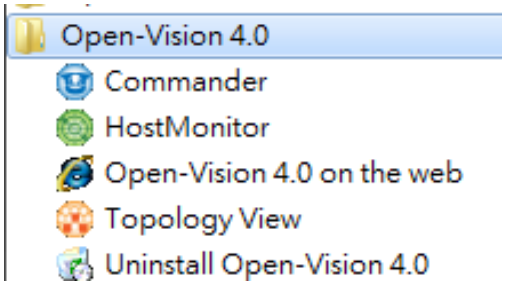


Step 8.

Continue to install WinPcap after choosing the option of Java runtime environment. Please follow the guide to finish the installation.

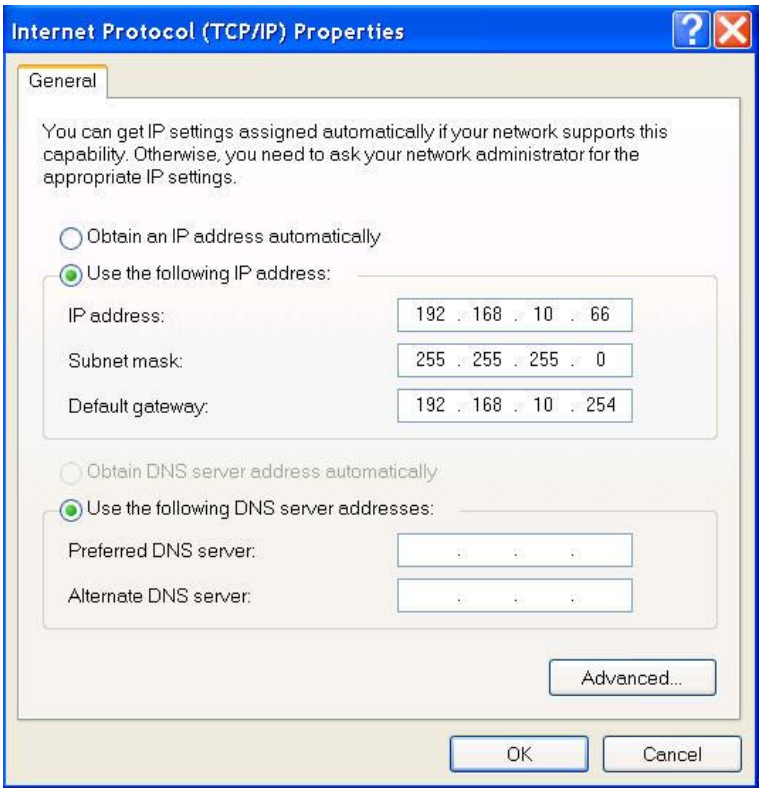


After installation is done, a shortcut will be build in the 「**Start**」→「**All Programs**」→「**Open-Vision 4.0**」.



1.4 Configuring PC network interface card

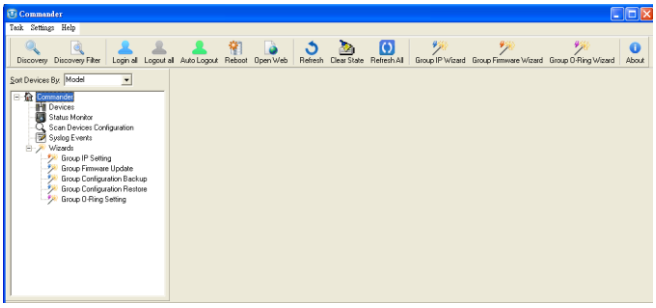
Please set the PC's IP address and subnet mask as the switch you wish to connect.



If there's two swich in different subnet, user will need to add in both subnets into the NIC.

Commander

Command can be use to discover and configuration to all Oring's switches. It also include some useful wizard for fast configuration



1.1 Discovery

User can discover the entire switch within the NIC subnet by simply clicking on the "Discovery" button.

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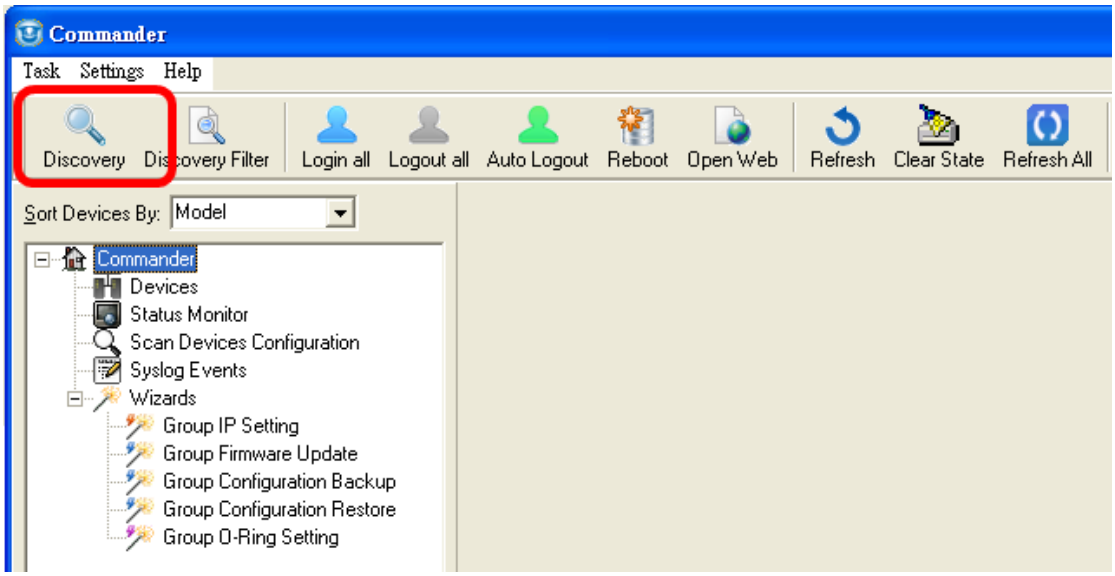


Figure 1-1

1.2 Discover Filter

In order to manage the switch in different domain (figure 2-2), user can use the "Discover Filter" to search and add the switch.

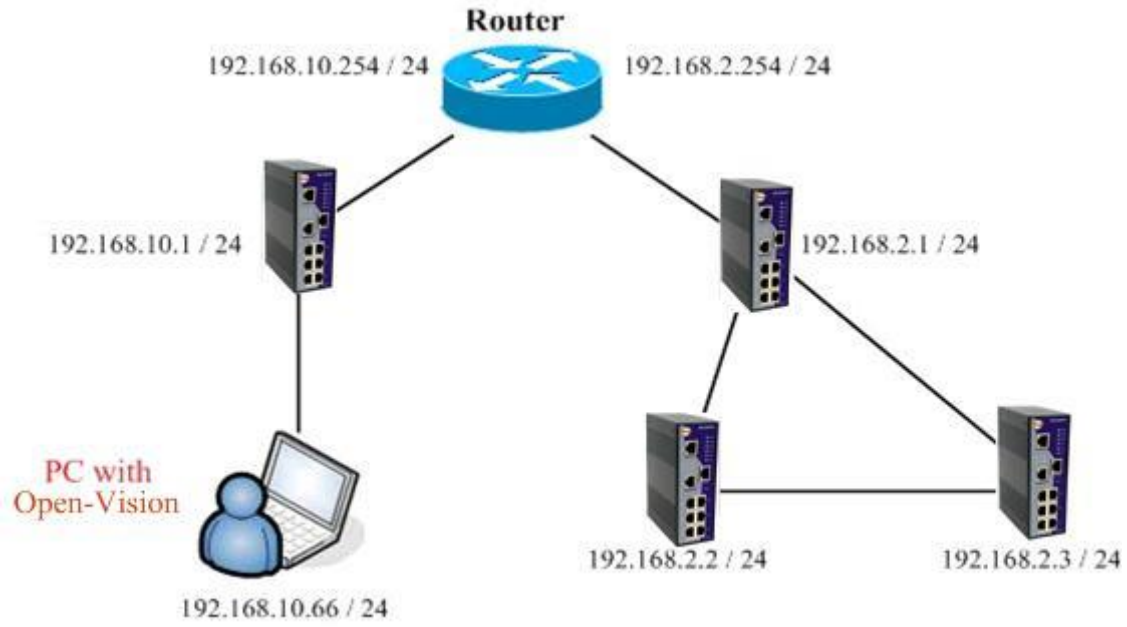
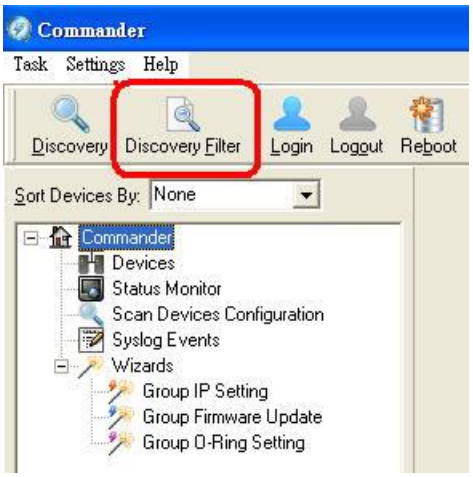


Figure 1-2

PS: The gateway of the PC must be the Router.

Step 1

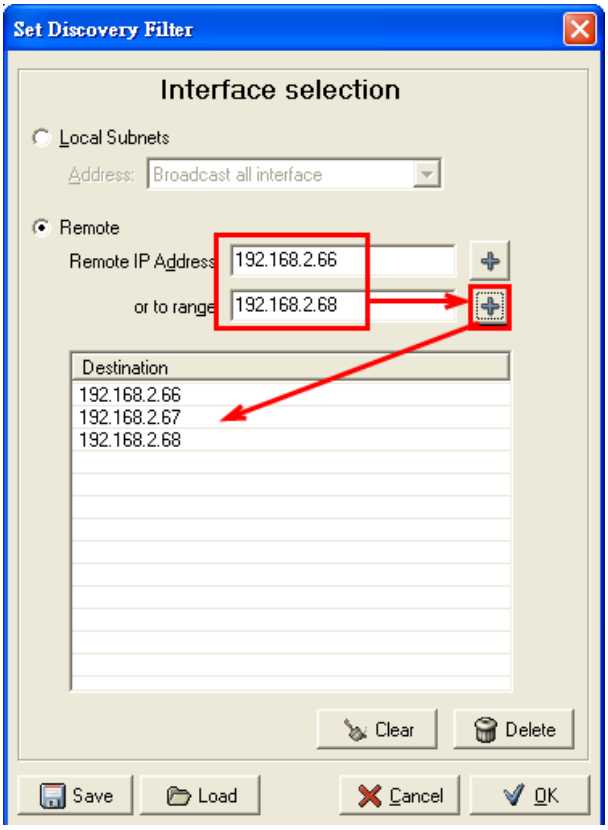
Click on the Discovery Filter button



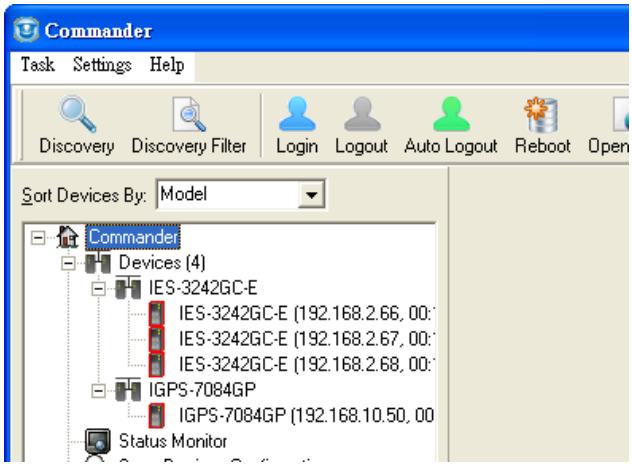
Step 2

In the "Remote", enter the first remote IP and end remote IP range you need.

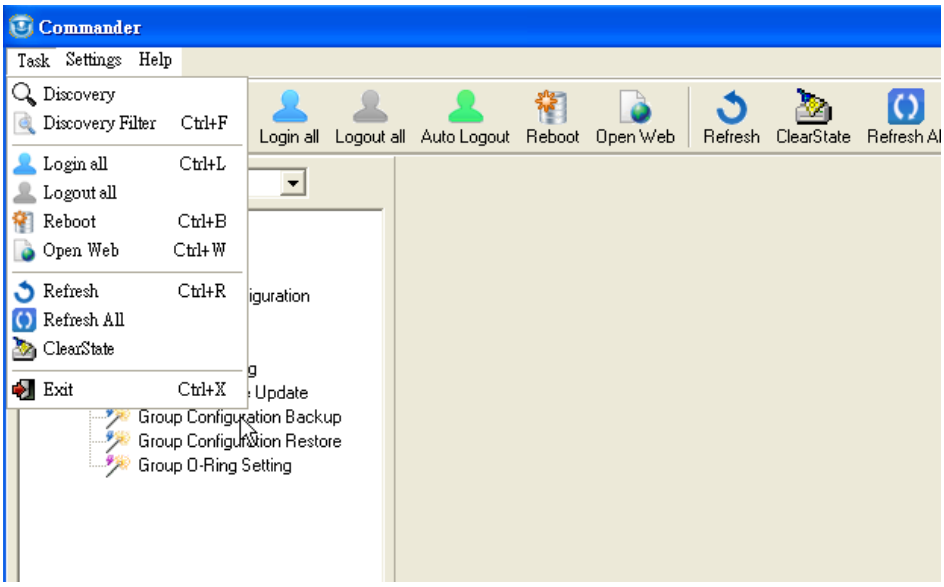
Click on the  button to add in the IP. A different subnet can also be add if need. Then click on "OK" button.



And the switches will be found and add into list of the Commander.



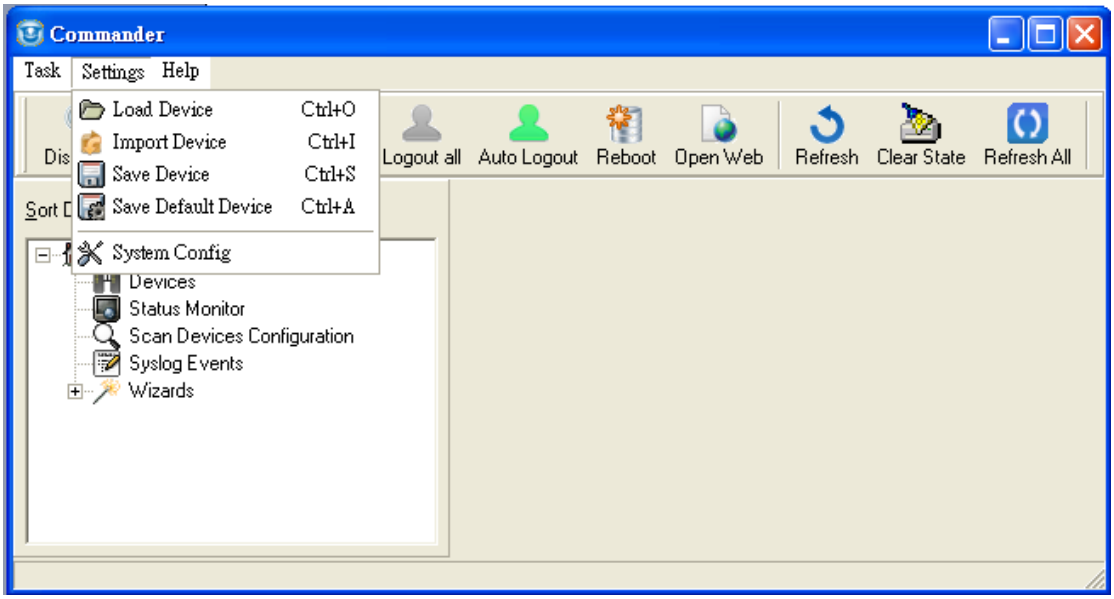
1.3 Task tab



Label	Description
Discovery	Click Discovery 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.
Discovery Filter	Local : Open-Vision will only discover all switches connect to the specific IP of NIC that user select Remote : users are able to use specific IP addresses to discover switches.
Login all	Select switch to login to configure. Open-Vision can login to multiple switches that user selected. After login, the switch icon will change from  to  Note: In default, Open vision will logout automatically after idle for 300 seconds.

Logout all	Select switch to logout. Open-Vision can logout from multiple switches that user selected. After logout success, the switch icon will change from  to  .
Reboot	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.
Open Web	Select switch to open web UI management. Open-Vision will open browser of your OS automatically.
Refresh	Refresh the specific switch function management interface and switch configuration interface.
Refresh All	Refresh all switch function management interfaces and switch configuration interfaces
Clear state	User can clear device icon status

1.4 Settings



Label	Description
Load Device	Users are able to re-load the IP address list (The old list will be cleared).
Import Device	Users are able to re-load the IP address list (Will increase after the old 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)
System Config	**Auto Logout time :** Change the timer of the Auto logout. **UDP Port :** Open use this UDP Port scan device , default vale = 1638 .

	Syslog server : Enable or disable Commander build-in syslog server. **Load default device when start commander :** Commander starts, automatically read the last used device information (required the first use of setting → save default device save using configuration.) **Start minimize to system tray:** Minimize the commander to windows taskbar when the commander start. **Run at Windows startup:** Enable to run Commander at WINDOWS startup. **Discover new devices without clearing device list:** Enable to discover a new devices without clearing previous device in device list. **State Banner:** Enable to display the switch's port state.

1.5 Help

Label	Description
About	Display Open-Vision version information.

1.6 Icons Introduction

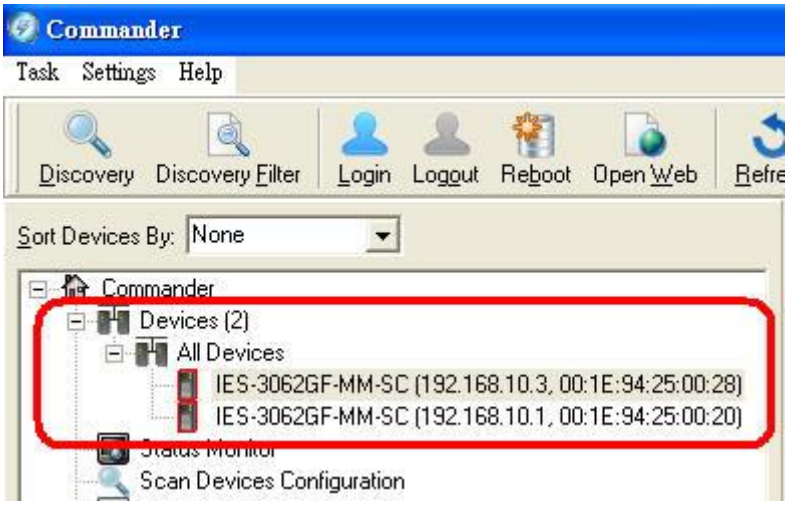
The most common use function has been fixed in this bar so user can use these function directly and no need to find it in tab.

Icon	Description
	Please refer to page 14
	Please refer to page 14
	Please refer to page 14
	Please refer to page 14
	Commander will logout device automatically after enabled.
	Please refer to page 14
	Please refer to page 14
	Please refer to page 14
	Please refer to page 14
	Please refer to page 14
	Open-Vision Group IP Wizard can configure multiple switches' IP Address. The function will be introduced more detail in Switch Management Interface chapter.

	Open-Vision Group IP Wizard can update multiple switches' firmware. The function will be introduced more detail in Switch Management Interface chapter.
	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.
	Please refer to page 17

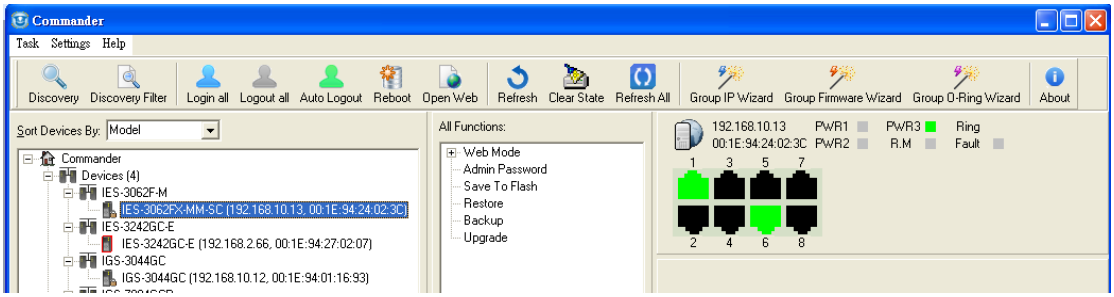
1.7 Devices list

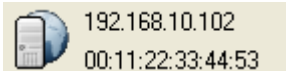
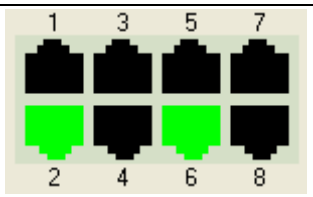
Switch discovered will be added into device list and also the total devices searched. User can start managing the switch by clicking on the switch and login.



1.8 LED and port status

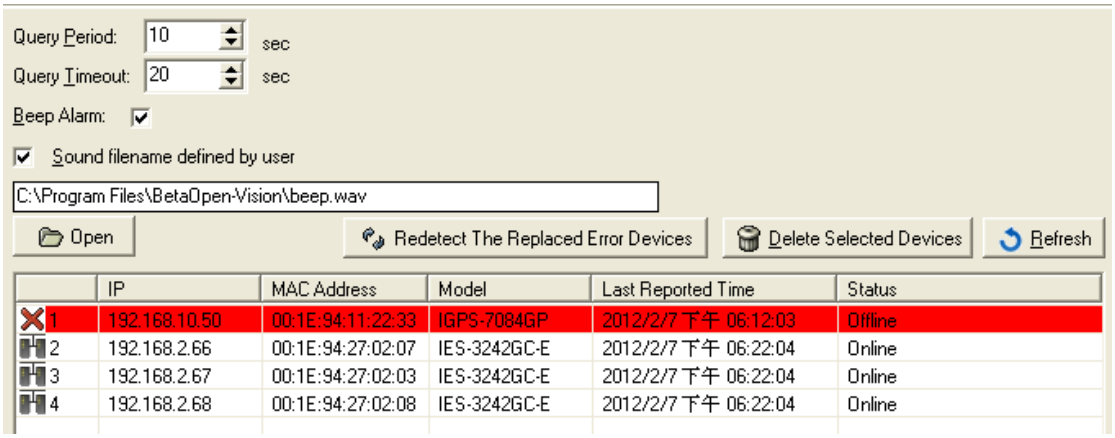
Users are able to get switches information by the simple interface.



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

1.9 Status Monitor

Status Monitor provides user to monitor switches. The disconnect switch will be mark and also the alarm



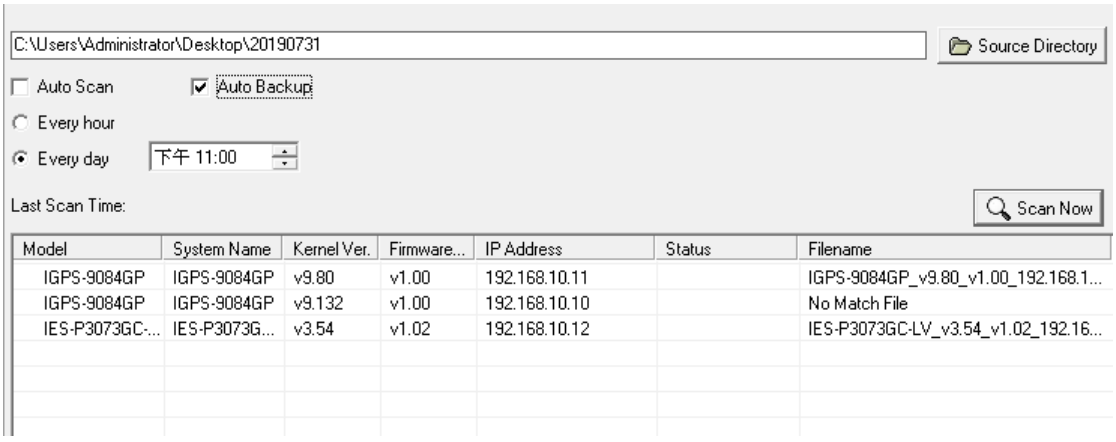
Label	Description
Query Period	Timer to query for switch status.
Query Timeout	Device will be consider as error after query timeout
Beep Alarm	Enable/disable the beep alarm after the devices fail

Sound filename defile by user	Enable to customize the alarm sound.
Redetect the replaced error devices	Redetect the error device without waiting for query period timer
Delete Selected Devices	Remove select device from list
Refresh	Refresh the devicestatus.

1.10 Scan Devices Configuration

The Scan Devices Configuration will be able to scan and compare the configuration on device and backup configuration on PC to check whether the configuration on device is different.

PS: The naming format of the backup configuration must be (Model)_(kernel Ver)_(Firmware Ver)_(IP). For example IGPS-7084GP_v7.11_v1.00_192.168.10.50.xml. Or user can use the Group Configuration backup to save the file in default file name.

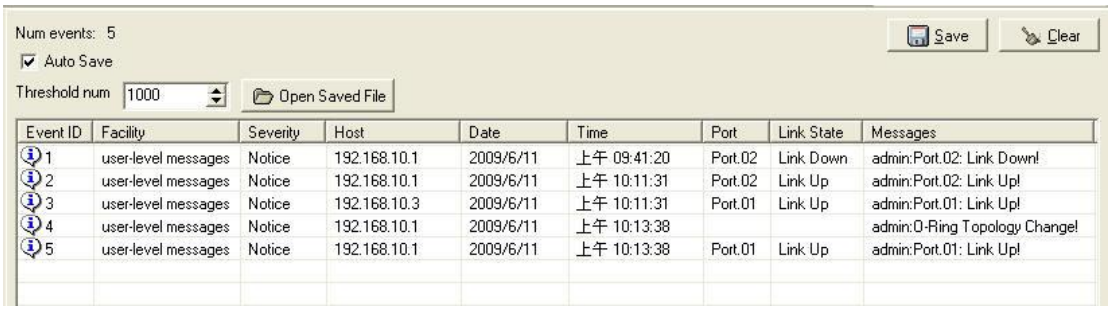


Label	Description
Source Directory	Select the directory of backup configuration
Auto Scan	Enable Auto Scan
Auto Backup	User can define hour or day , auto backup config

Every hour	Scan every hour(only work in auto backup enable)
Every day	Scan everyday on certain time(only work in auto backup enable)
Scan Now	Scan configuration immediately

1.11 Syslog Events

The build in Syslog server allow user to check and save the event of the switches.automatically.



Label	Description
Save	Save system log info to excel file
clear	Clear exist system log
Auto Save	Enable to auto save the event.
Threshold num	Save the events when the number of message reach
Open saved file	Open saved log.

1.12 Wizards

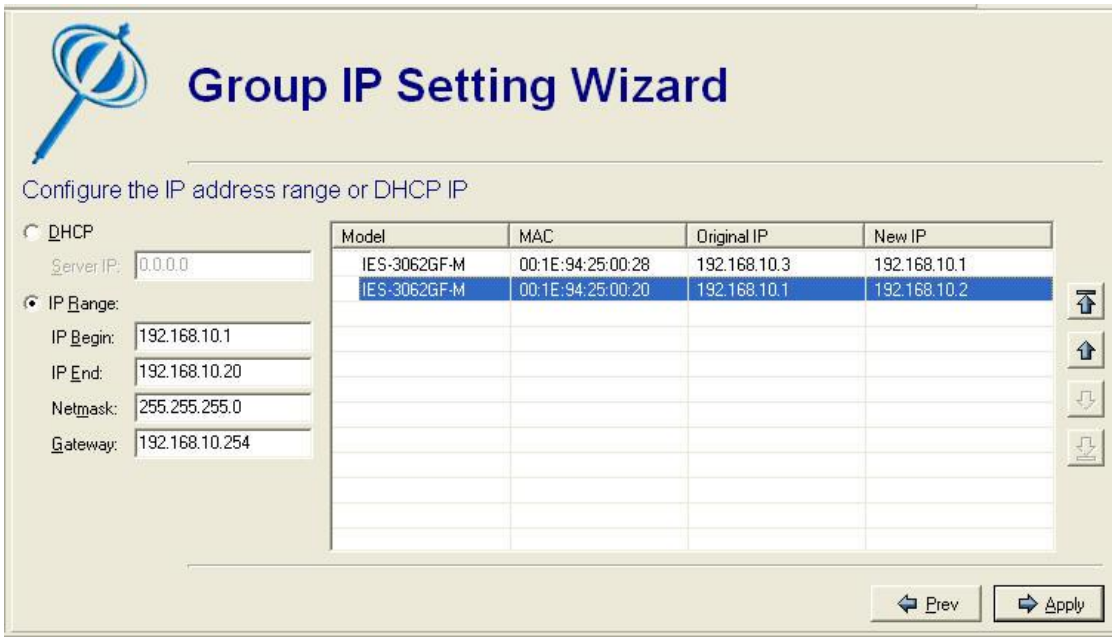
The wizard allow user to do some basic setting on multi devices in one times e.g. IP, O-ring setting... etc.

1.13 Group IP Setting Wizard

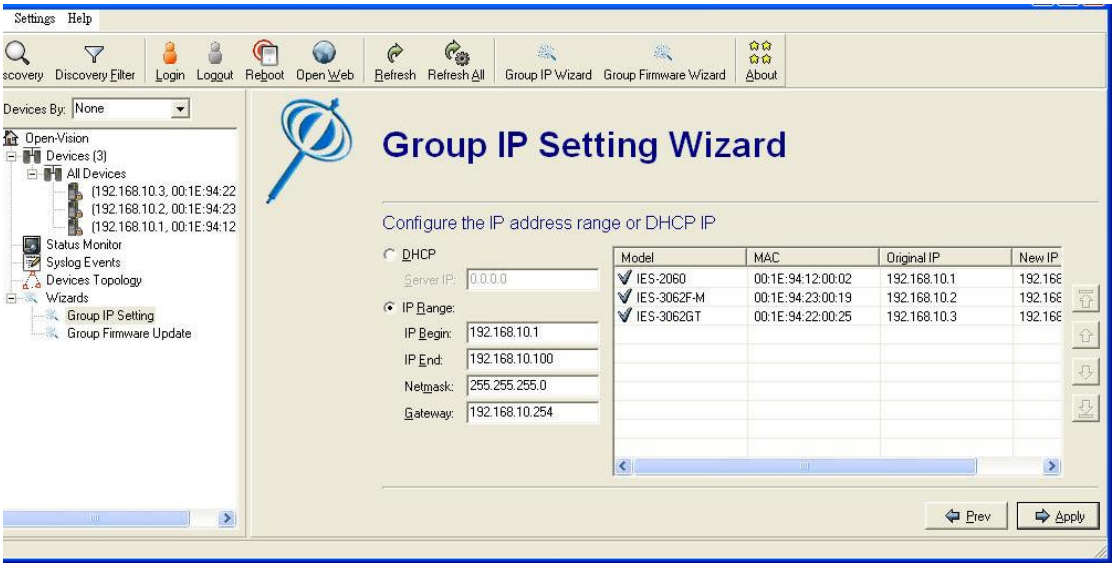
The Group IP Setting Wizard allow user to set all device in the list in just a few steps. (Note: The function only for 3000 series device)

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

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



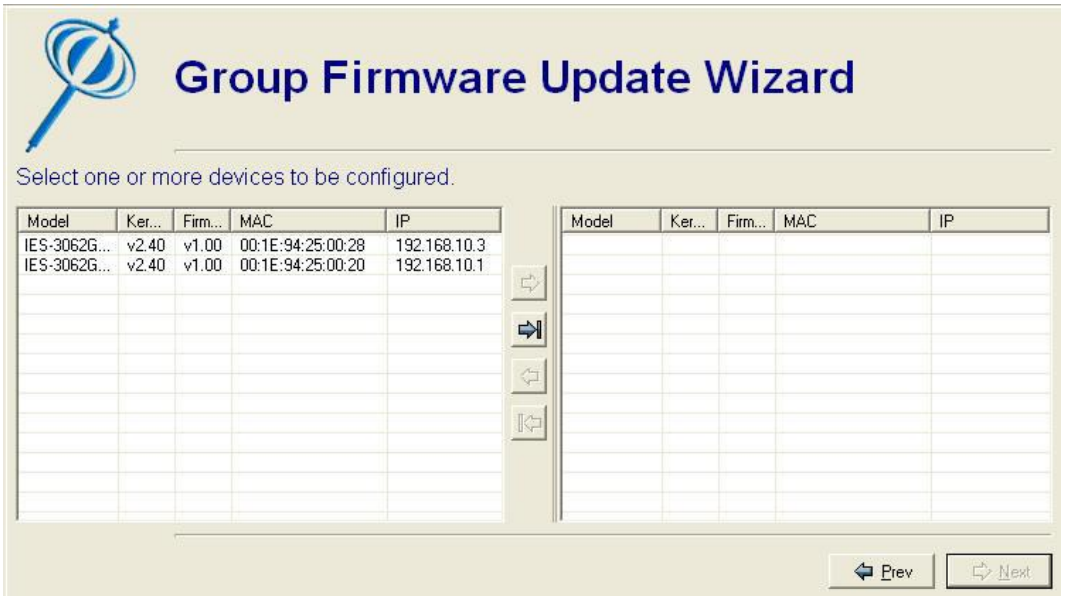
STEP: 3. Apply to finish the configuration.



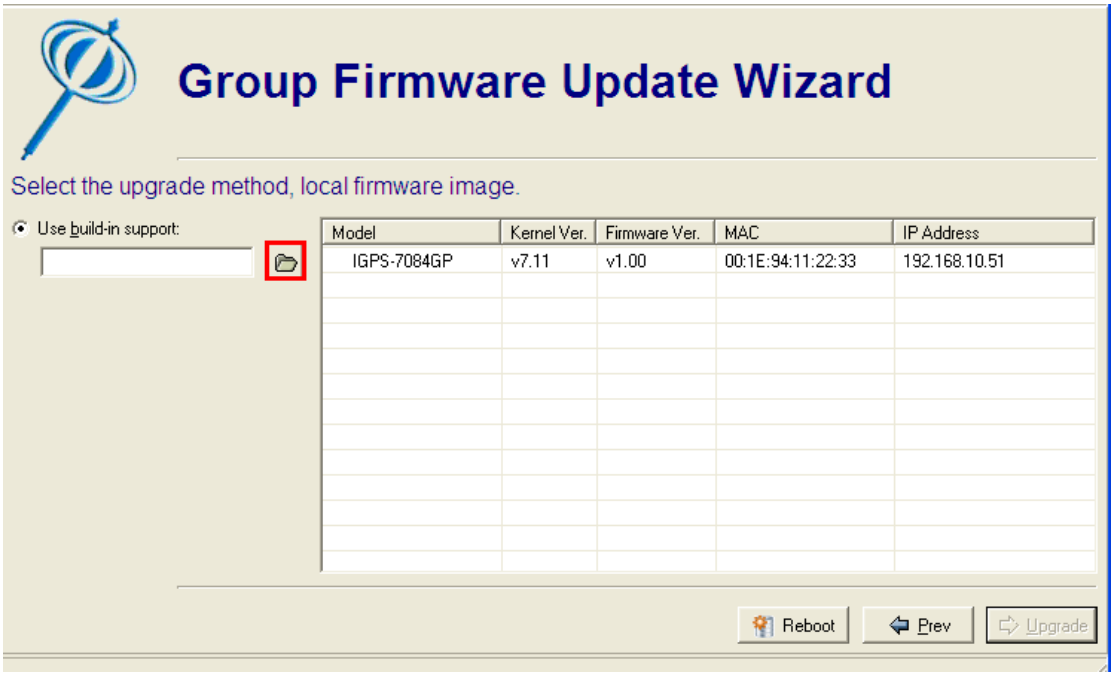
1.13.1 Group Firmware Update Wizard

This Group Firmware update allow user to update a group of switch (with same model only) .in one times. So user can save the time to do the update one by one.

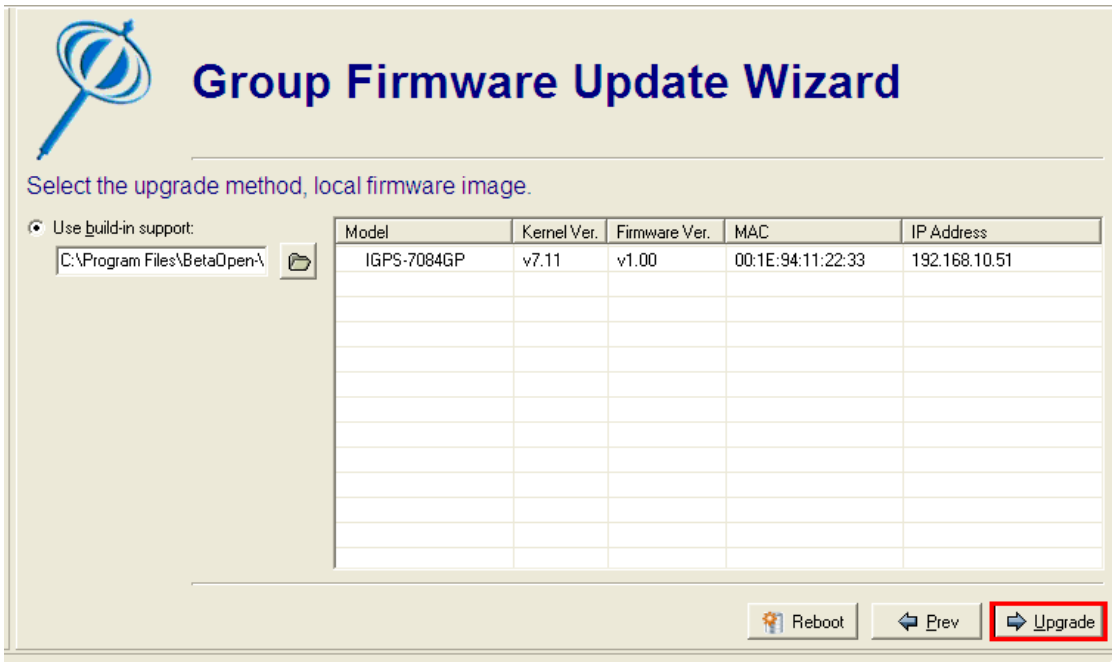
STEP: 1. Select one or more devices (same model one) to be configured.



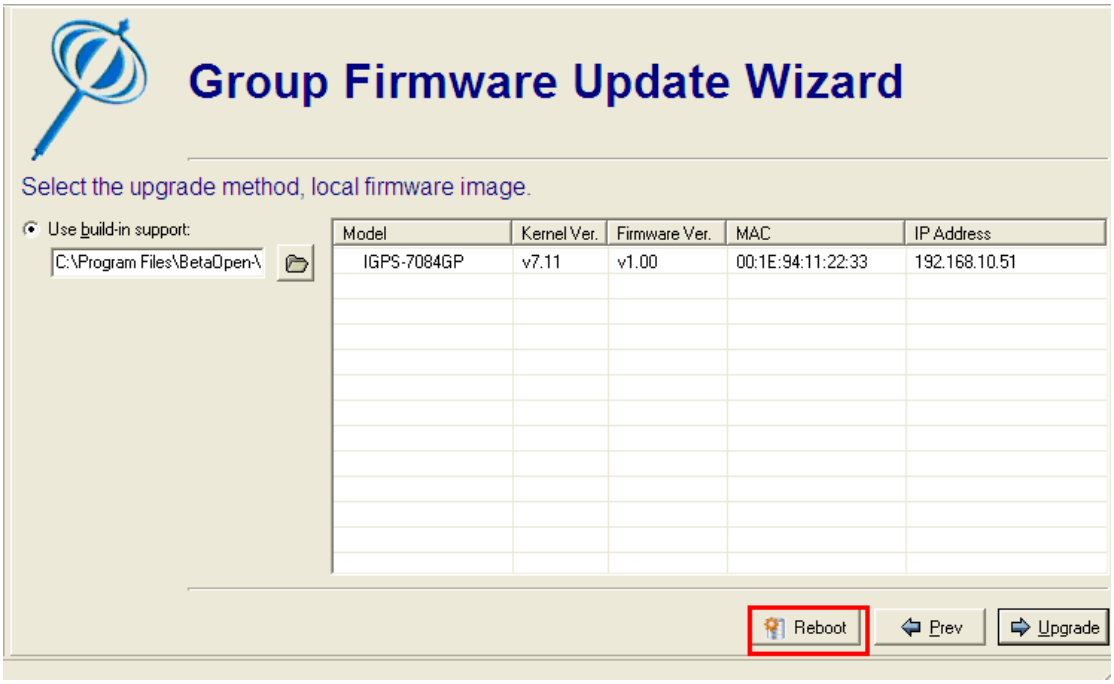
STEP: 2. Browse to select the Firmware to be upgrade.



STEP: 3. Press "Upgrade" to start the firmware upgrade.



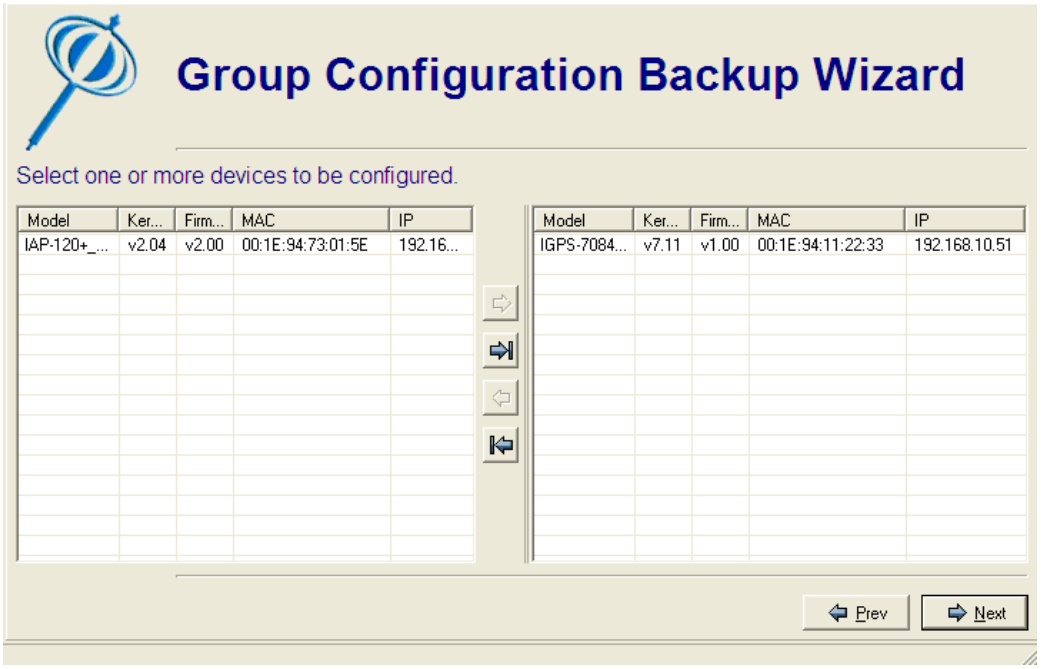
STEP: 4. After finish upgrading, press on "Reboot" to reboot all upgraded devices.



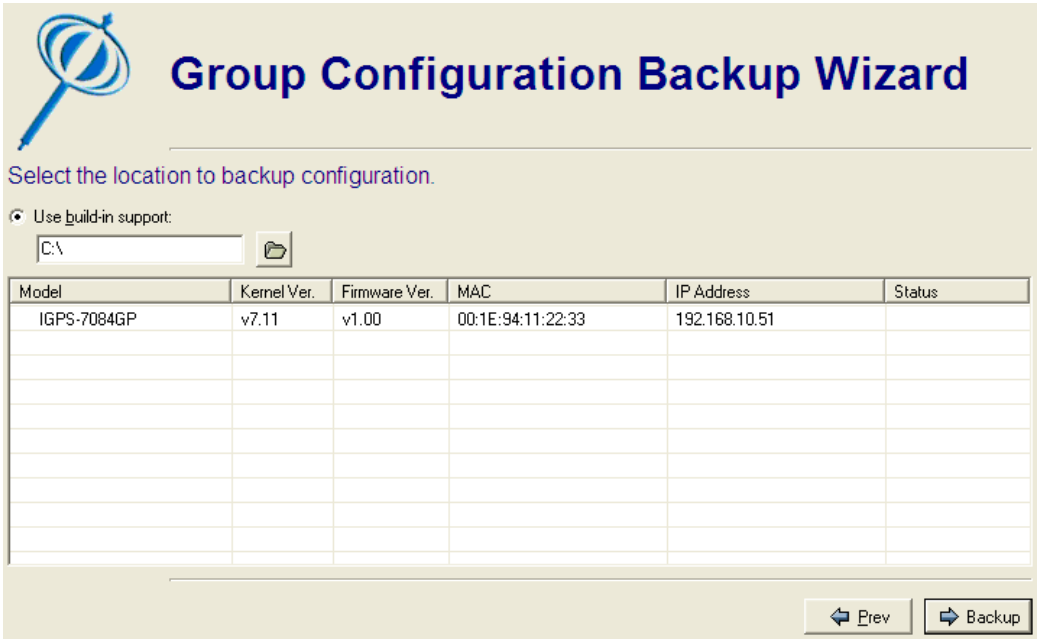
1.13.2 Group Configuration Backup

This Group Configuration Backup allow user to backup configuration of multiple devices (same model only).

STEP: 1. Select one or multiple devices to be backup.



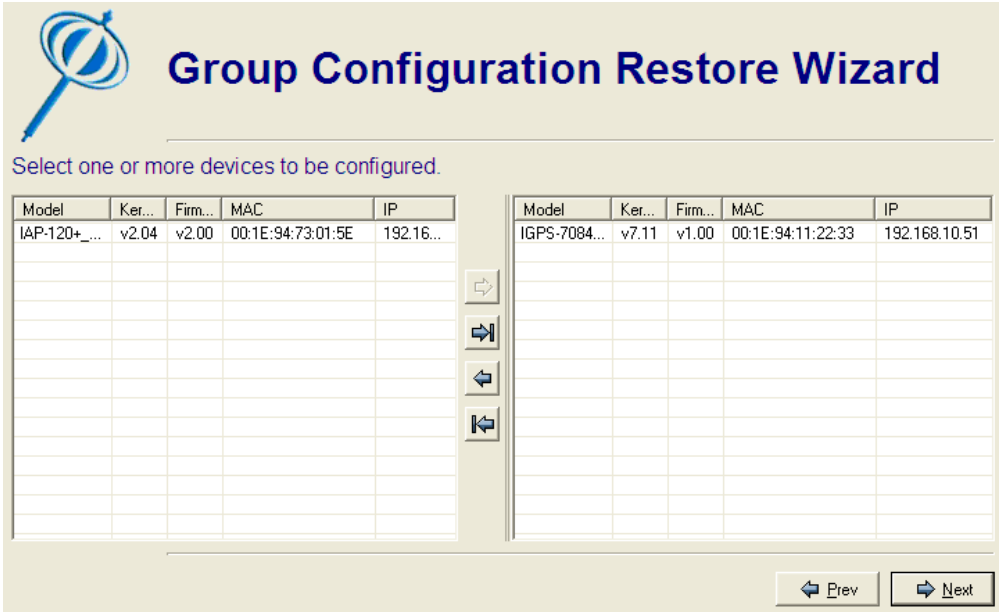
STEP: 2. Browse the directory to save the configuration and click on "backup" to start the backup.



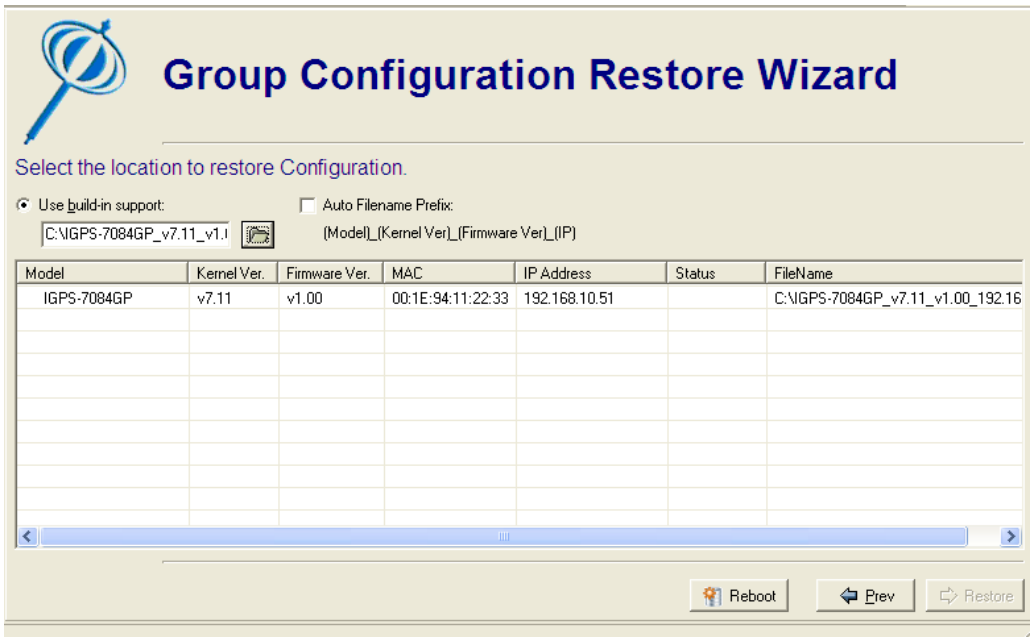
1.13.3 Group Configuration Restore

This Group Configuration Restore allow user to restore configuration of multiple devices (same model only).

STEP: 1. Select one or multiple devices to be backup.



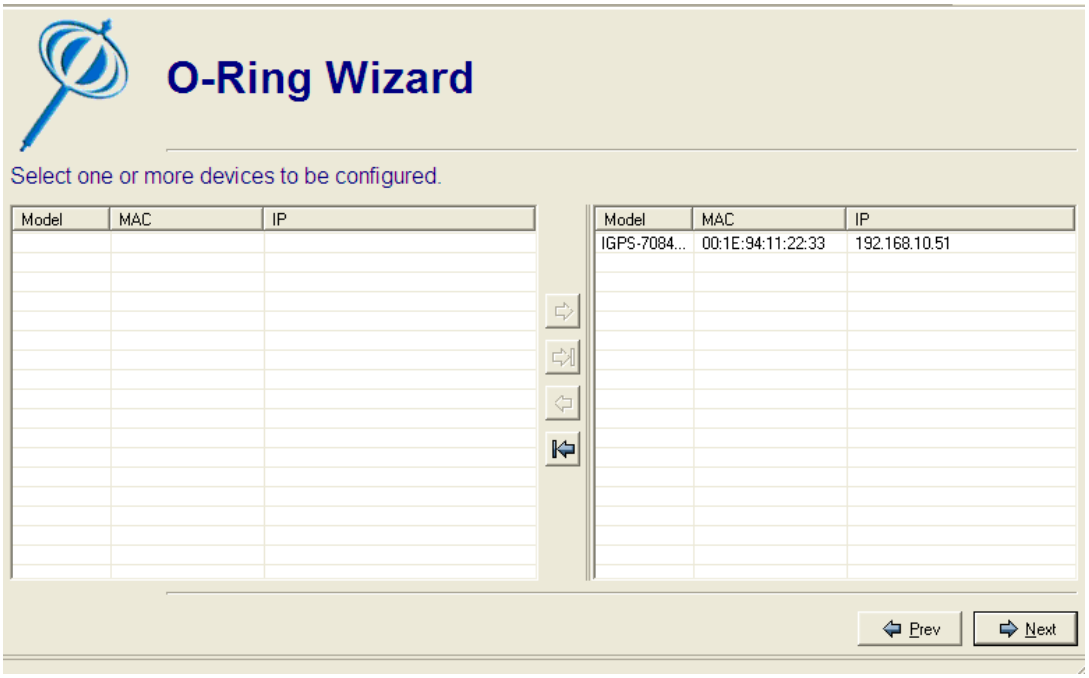
STEP: 2. Browse the configuration file to be restore or checked the "Auto Filename Prefix" box to let the wizard detect the configuration file in the directory.



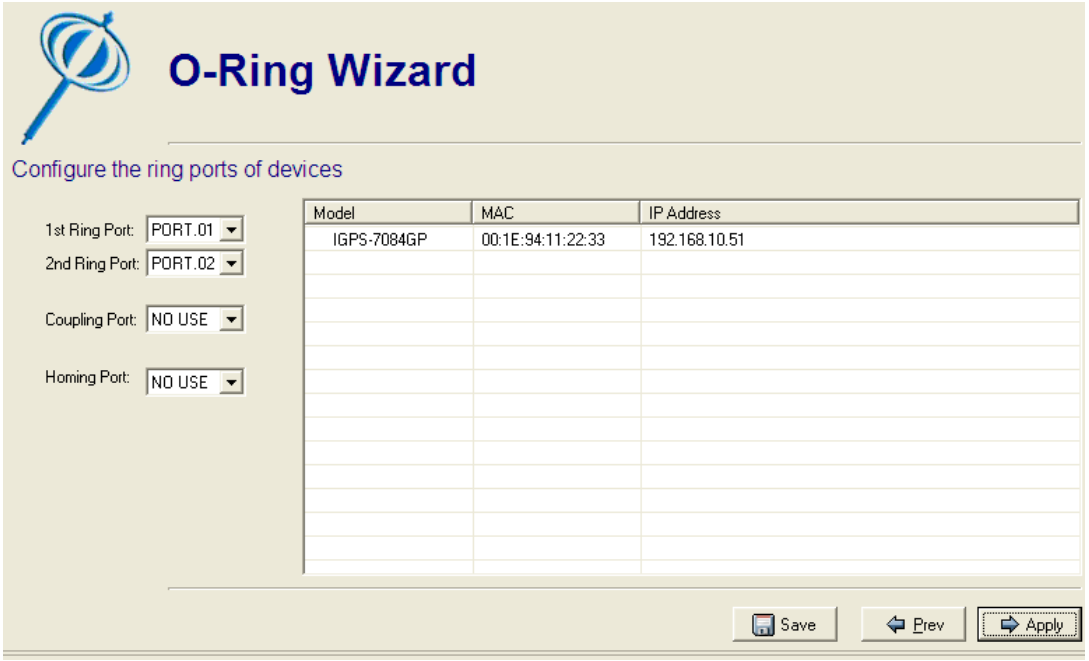
1.13.4 Group O-Ring Setting

This Group O-ring Setting allow user to configure O-Ring in multiple switches in one time.

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



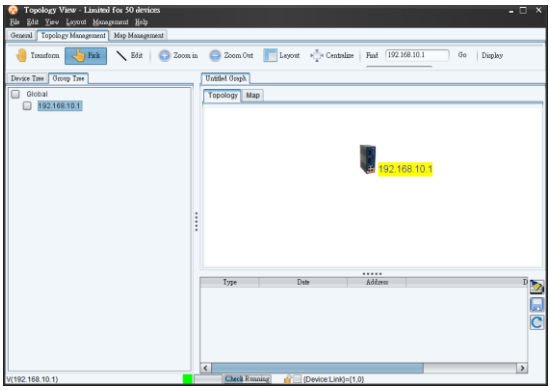
STEP: 2. Select port need to set as ring port and client on "Apply".



Topology View

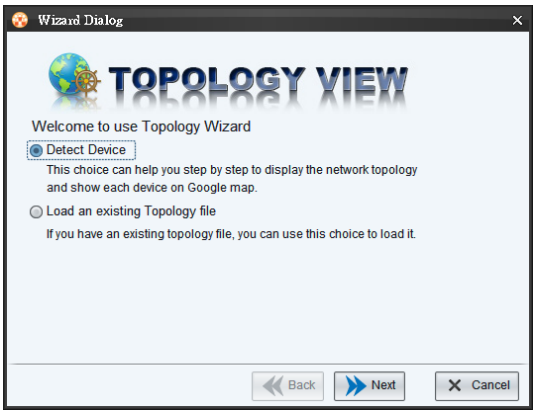
2.1 About the Topology View

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.



2.2 Topology Wizard

In default, the Topology wizard will pop up when the Topology is open. So user can start to discover devices and group settings etc. The wizard startup can also be enable/disable from the "Edit" → "System Config" →"Initial Conf" → "Launch Wizard when system start".

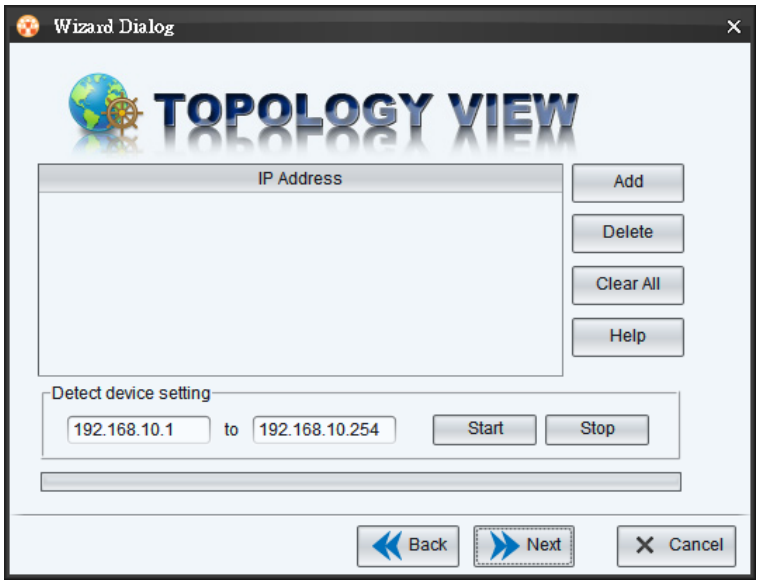


There are three options in wizard, which are

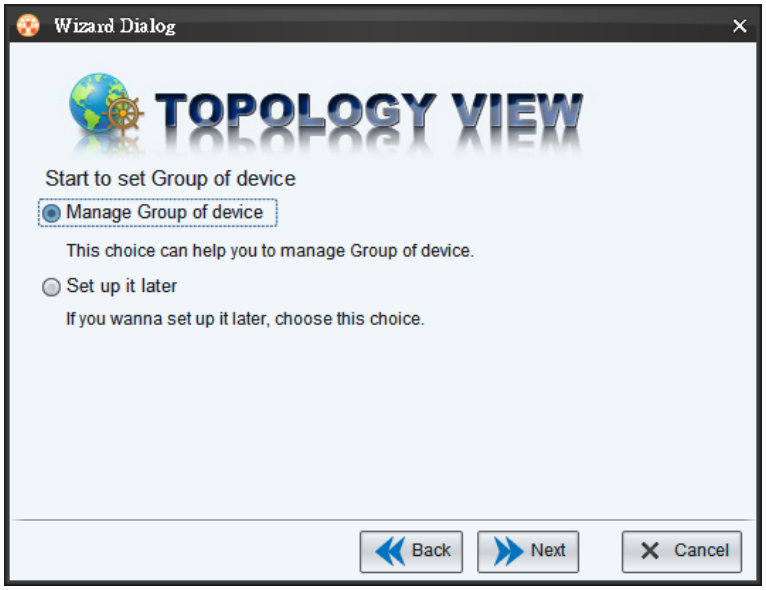
Label	Description
Detect device	Start the steps to discovery device and group setting
Load an Existing Topology File	Load a backup Topology configuration file.
Customized	To skip and close the wizard.

Please see the following steps of the Topology Wizard –Detect device.

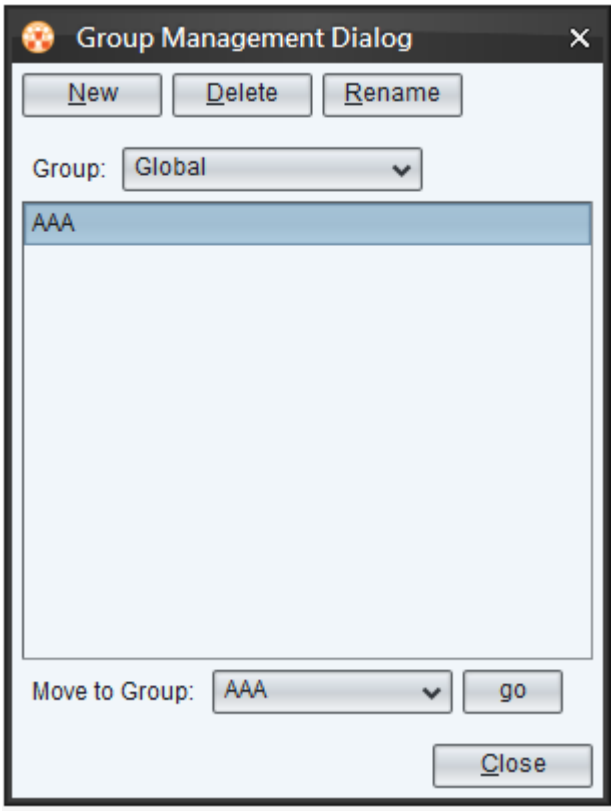
Step 1 User can enter an IP range which allow it to scan the device automatically, or user can also add a device manually by using IP.



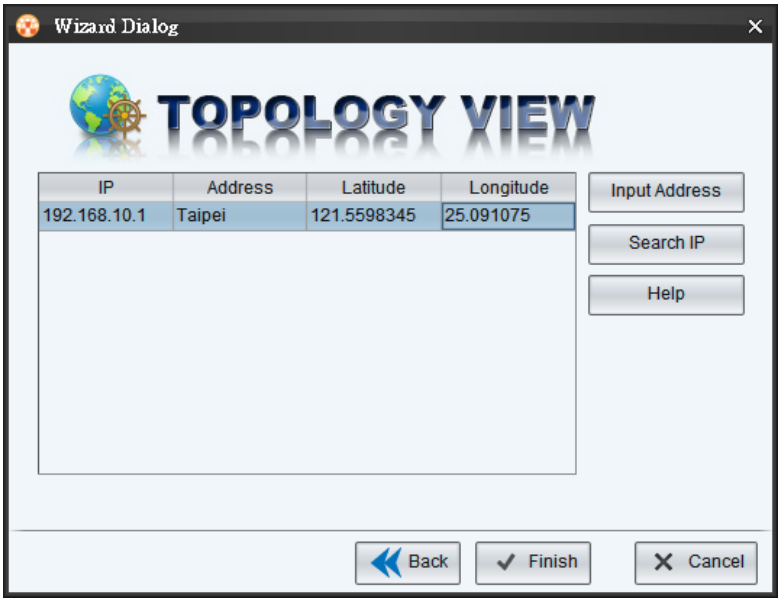
Step 2 Select "Manage group of device" for the Group setting or skip by select "Set it up later" (please move to step 4)



Step 3 In the group management, user can add a new group and move the device into the group you want.

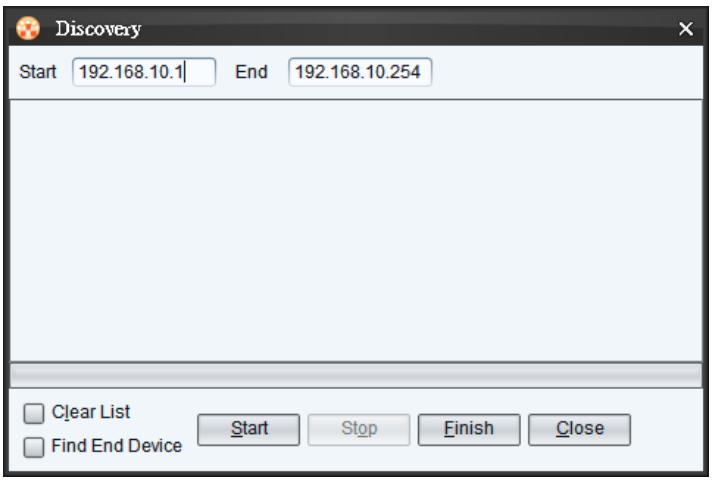


Step 4 User can setup the GPS position of the device by simply enter an address (internet need), and click Finish to close the wizard.



2.3 Device discovery

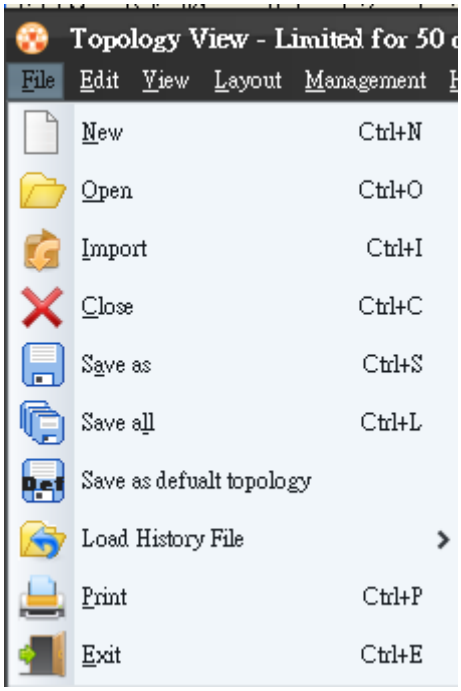
User can add in the Oring switch by using the Discovery functions.



Label	Description
Clear list	Enable to clear previous discovery device list
Find End Device	Find end device connected on switch (7000 series only and device binding must be enable)

2.4 System Bar

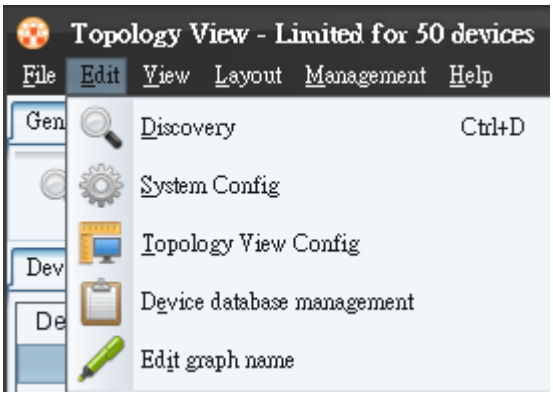
2.4.1 File



Label	Hotkey	Description
New	Ctrl + N	Open a new Topology graph.
Open	Ctrl + O	Load saved topology
Import	Ctrl + I	Import a saved topology into current graph
Close	Ctrl + C	Close current topology graph
Save as	Ctrl + S	Save current topology graph
Save all	Ctrl + L	Save all topology graph
Save as defualt topology	N/A	Save current topology as default graph.

Load History File	N/A	Open saved configuration.
Print	Ctril + P	Print current Topology
Exit	Ctrl + E	Quit Topology View.

2.4.2 Edit

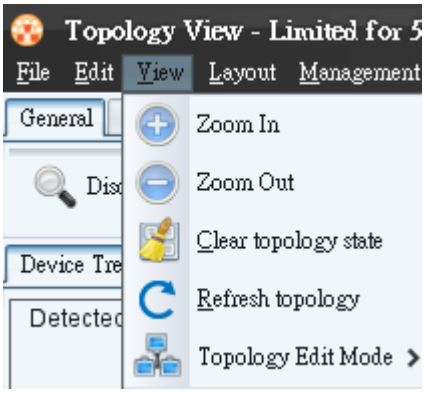


Label	Hotkey	Description
Discovery	Ctrl + D	Discover the Oring switches
System Config	N/A	**Auto Polling:** Enable or disable Auto Polling function. **Polling Time(s)me:** Polling interval timer. **Device(s)/Interval**： How many devices to polling at one time. Set to zero as all devices. **Alive Threshold(1-100):**device alive recheck , Increase this value to avoid disconnection misjudgment when the network is congested. **Retry :** Link check retry

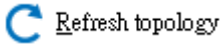
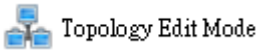
		-Trap Agent- **Trap Agent Alive:** Enable trap agent can receive SNMP trap. **Trap Port:** Specifies the port used by the Trap **Topology agent:** Enable / Disable topology agent function ***-SNMP Parameter-*** **SNMP Community:** SNMP community read and write setting. **Version:** SNMP version V1 and V2 **Time out:** SNMP timeout interval. ***-Report Manageter-*** **Entry:** Auto save the log while it reach this number set. **Daily**：Auto save the log at certain time everyday ***-Initial Conf-*** **Load Topology :** Load default topology when the Topology view is open **Startup :** Open Topology View in windows startup. **Minimize :** Minimize the Topology View after startup **Discovery new device without cleaning:** Discovery new device without clearing current discovered devices.

		Launch wizard when system starts: Launch wizard every time when the Topology view is open.
TopoView Config	N/A	**View Option:** Setting path size & font size and whether to show the device icon or not. **Link Option:** Setting Link status color. **Background Option:**User can define topology view desktop image.
Device database management	N/A	In the Device database management user can modify or add a new device OID, link up, link down, trap and locate icon.
Edit graph name	N/A	Edit current graph name.

2.4.3 View

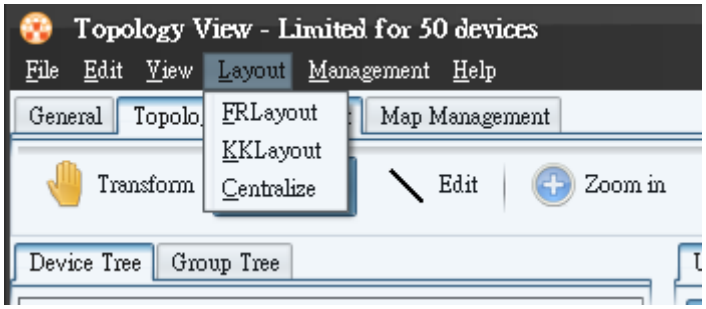


Icon	Hotkey	Description
Zoom In	Ctrl + up	Zoom in the topology.
Zoom Out	Ctril + down	Zoom out the topology.
Clear topology state	N/A	Clear topology state of current graph

	N/A	**Recheck device:** Check whether the device is still exist or not. Device will be remove device if it doesn't exist. **Recheck link:** Check the link, the line will be remove if the connection has broken. **Recheck state:** Check current state, wouldn't not remove any devices or line if it doesn't exist**.** **Recheck type: Check** device model, will change the icon when replacing the device with a same IP but different model's device.
	N/A	**Transform:** To move the topology. **Pick:** To select and drag a device. **Line:** To edit a line manually.

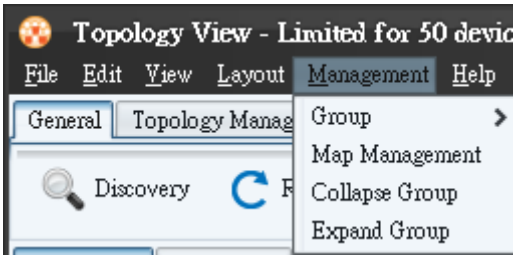
2.4.4 Layout

In the Topology View, it provide 2 kind of layout which can arrange the device topology in automatic, so user can save times to drag every device manually.



2.4.5 Management

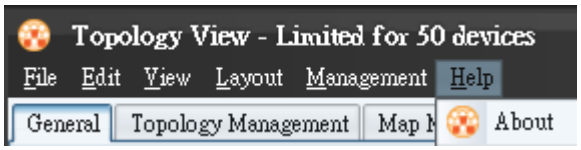
Select Management to show Management menu.



Label	Hotkey	Description
Group	N/A	**Add:** Add a new group.in group tree **Edit:** Edit selected group **Delete:** Delete selected group. **Manage Group :** Group management New: Add a new group. Delete: Delete selected group Rename: Rename selected group : Add/remove group or device from selected group

Map Management	N/A	Edit the device's map related information e.g. latitude and longitude. And to enable or disable devices whether to be display on map or not.
Collapse Group	N/A	Collapse selected groups
Expand Group	N/A	Expand selected group

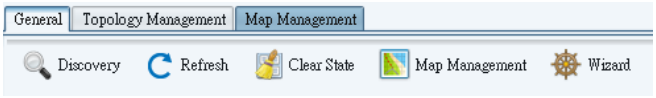
2.4.6 Help



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

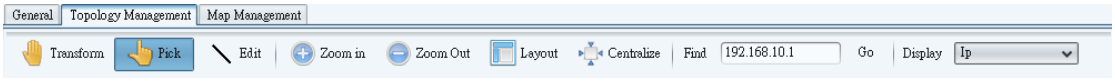
2.5 Tool Bar

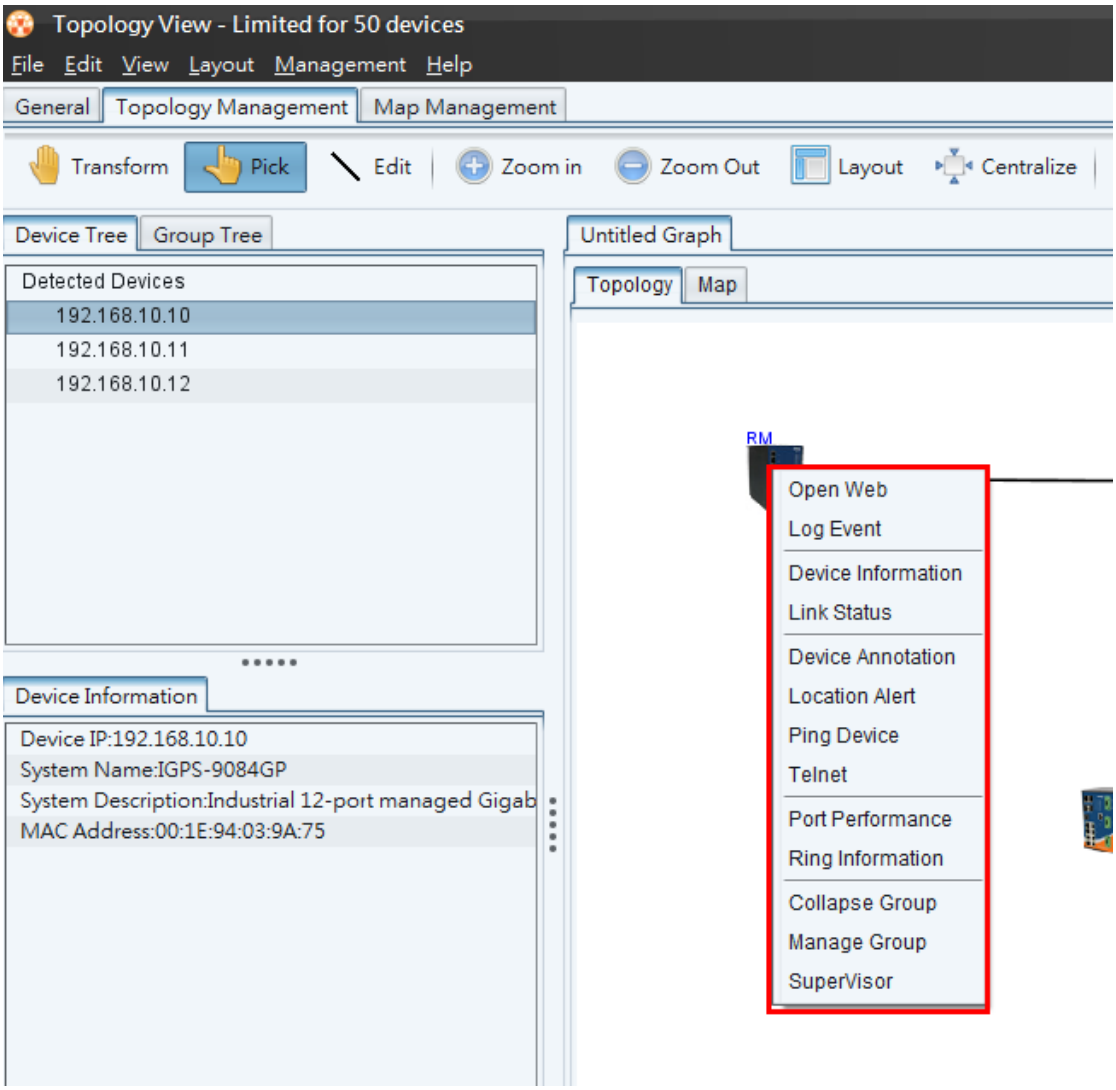
2.5.1 General



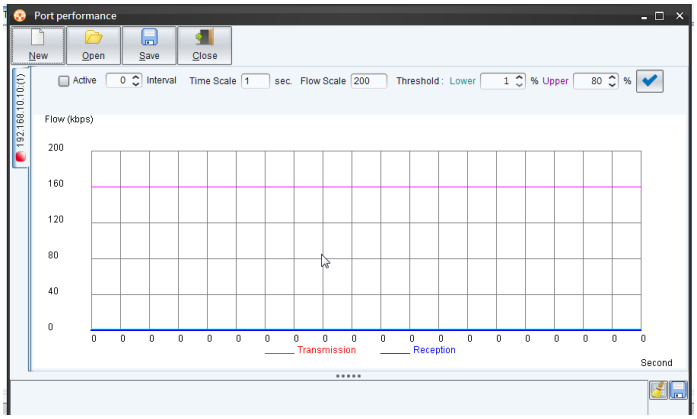
Icon	Description
Discovery	Please refer to page 35
Refresh	Please refer to page 38
Clear State	Please refer to page 37
Map Management	Please refer to page 40
Wizard	Open the wizard

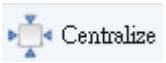
2.5.2 Topology Management



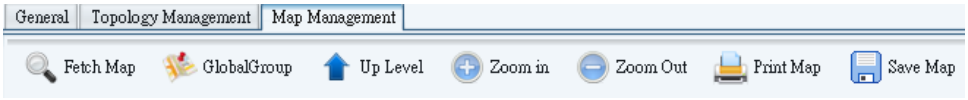


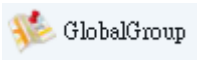
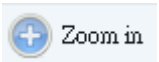
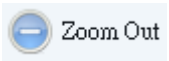
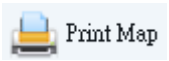
Icon	Description
Transform	This mode , allow use move all topology
Pick	This mode , use can config or move single device **Open web :** open the device WEB GUI **Log Event :** open the device Event log WEB GUI. **Device Information:** in this page , use can check device IP , Neighbor Device IP, system name , device MAC Address , OID.

	Link Status: show the device port link info . **Device Annotation :** use can add annotation in switch . **Location Alert :** enable location alert function **Ping Device :** ping this device **Telnet :** open telnet CLI(windows need install Telnet service first) **Port Performance :** show traffic info by graphic  **Ring Information:** show all redundant ring info (O-Ring / O-Chain) **Collapse Group:** collapse topology vioew icon to group mode **Manage Group:** open Group mode management window **Supervisor :** If use enable switch device binding function , can show 3 party device in topology view .
Edit	This mode allow user create / remote device or path .
Zoom in	Please refer to page 37
Zoom Out	Please refer to page 37

	Layout devices automatically(KK Layout)
	Centralize on devices
	Find a specific device in IP.
	Display devices information in IP, System name, annotation, disable display or show / hide supervisor.

2.5.3 Map Management

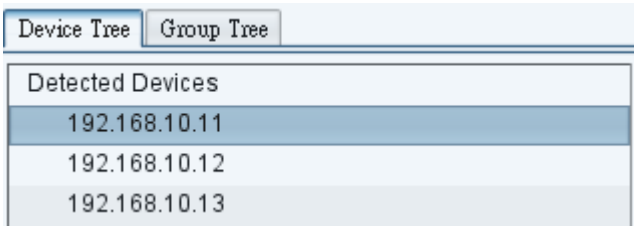


Task	Description
	Refresh the map
	Back to GlobalGroup
	Go to upper group.
	Maps zoom in
	Maps zoom out
	Map printing
	Save map

2.6 Device Tree & Group tree

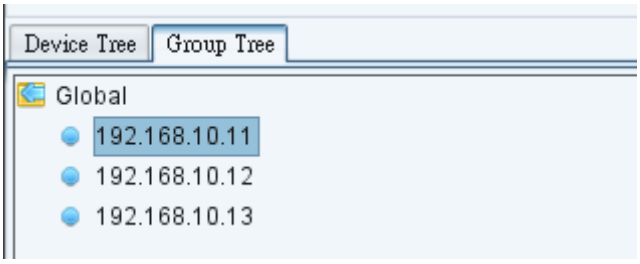
Detected devices will be display in the Device Tree and group tree

In the device tree we can double click on the devices to search the devices, and we can also right click on the devices for the device setting options.



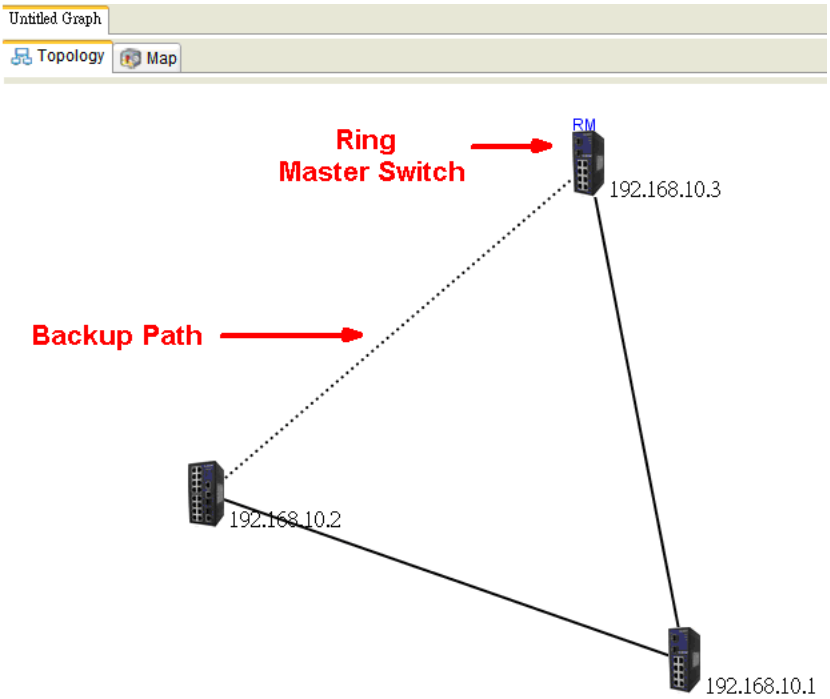
In Group Tree, in default all devices will be place under the GlobalGroup. And Device with Map active will have a tick on it.

We can also right click on the group for the group management options or right click on device for device setting options



2.7 Topology

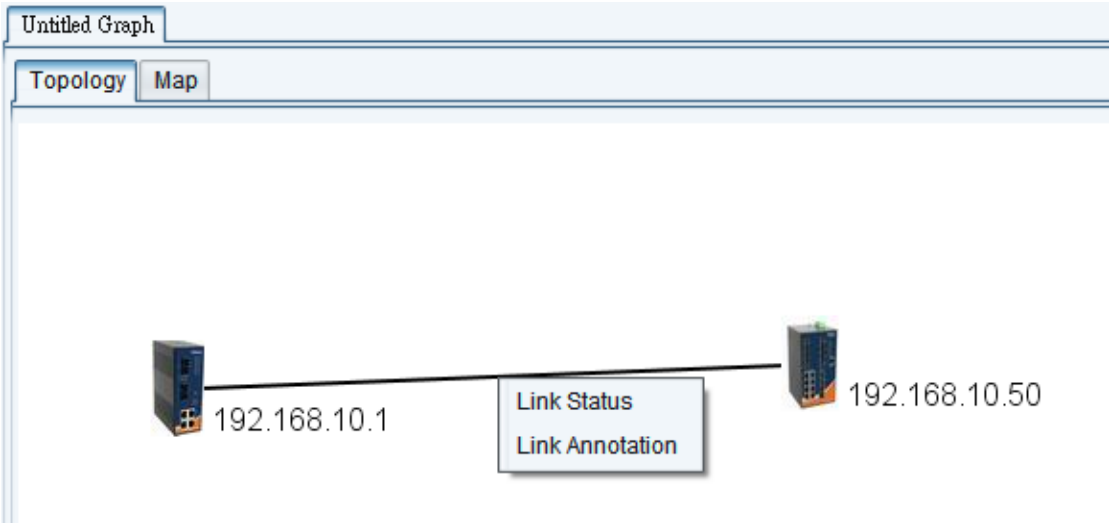
Device's network topology will be show in the Topology area automatically on the topology area.



Note:

The SNMP Read Community between Topology View and devices must be the same to work properly. Default value=public. And the LLDP of the devices must also be enable.

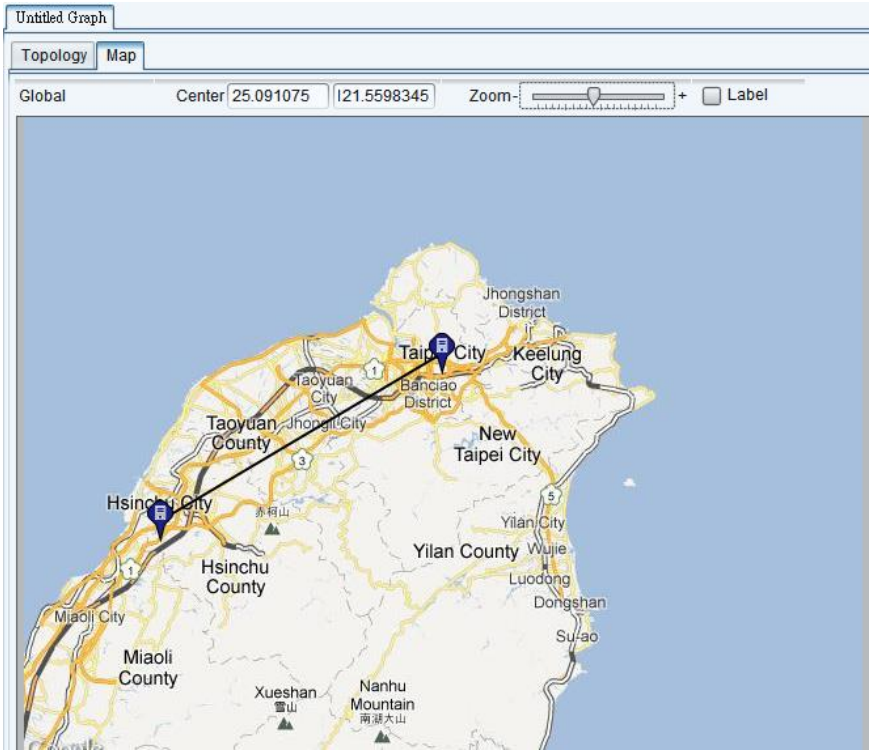
In the topology, we can right click on the device for the device settings options or right click on the line for the Link Status or Link Annotation (Path Option in Edit→ TopoView Config will need to be enable to display annotation on the line)



ICON	Description
	Device ICON
	Device link down
	Device back online
	Locating device (flashing)
	Maps zoom out
	Link down
	Backup link
	Link back online.

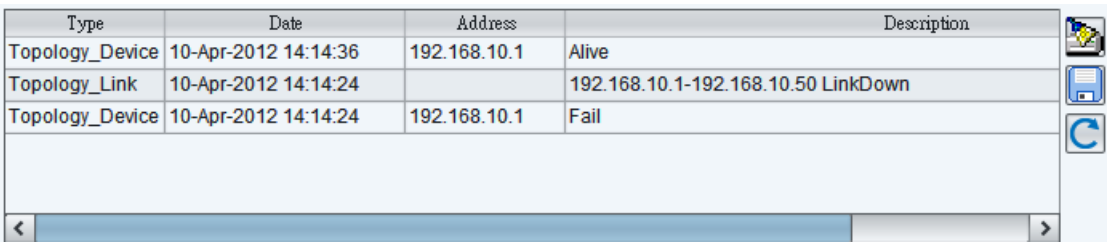
2.8 Map

The devices with Map Active enable will be show in the map. With the help of this map, user can see where these devices installed.



2.9 System Log Area

The Topology View also build in a system log which .will record the link down event etc..



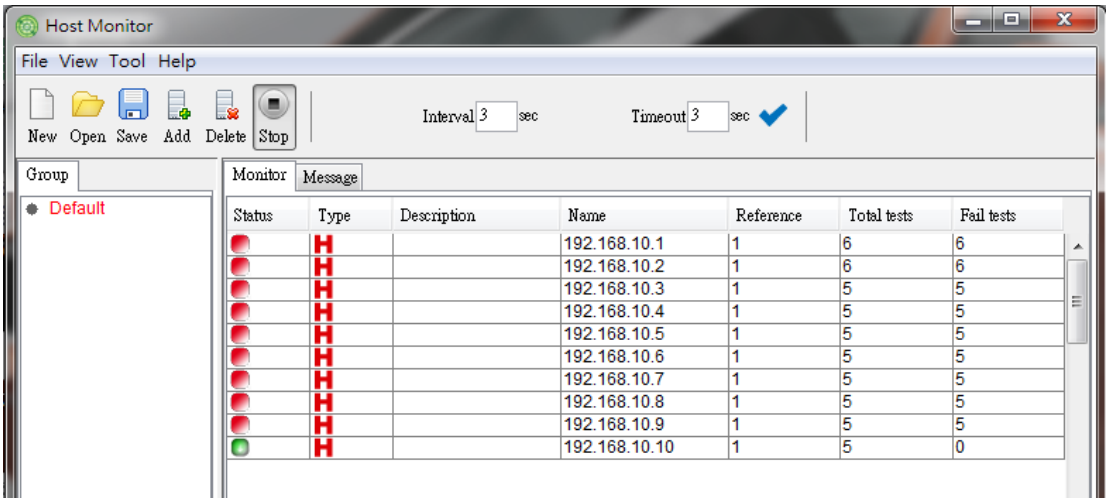
Type	Date	Address	Description
Topology_Device	10-Apr-2012 14:14:36	192.168.10.1	Alive
Topology_Link	10-Apr-2012 14:14:24		192.168.10.1-192.168.10.50 LinkDown
Topology_Device	10-Apr-2012 14:14:24	192.168.10.1	Fail

Task	Description
	Clear log

	Save log to file.
	Refresh log.

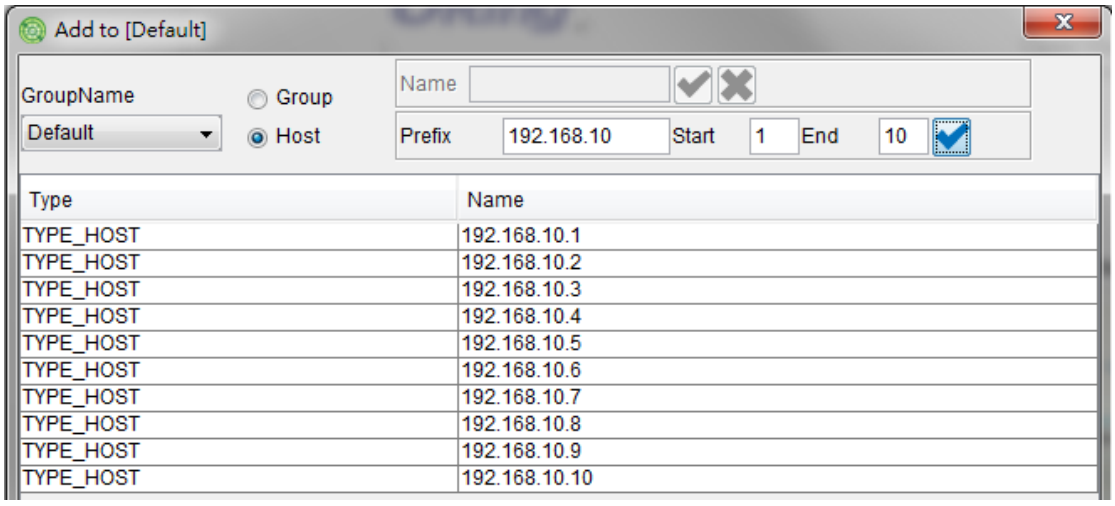
Host Monitor

By using the Host monitor, user can monitor the alive time of all IP devices.



3.1 Add device

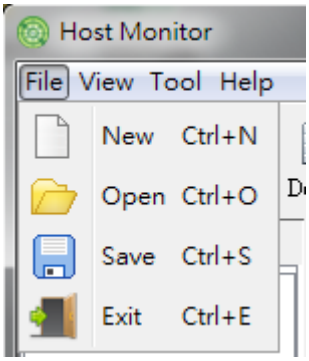
First, user can add in a device by using the Add button.



Label	Description
Group	Add a new Group
Host	Enter the subnet and a range to be add.

3.2 System Bar

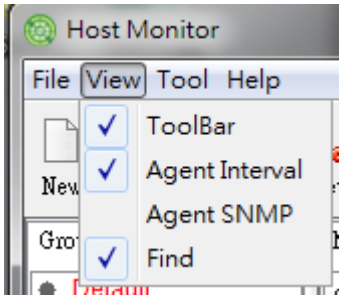
3.2.1 File

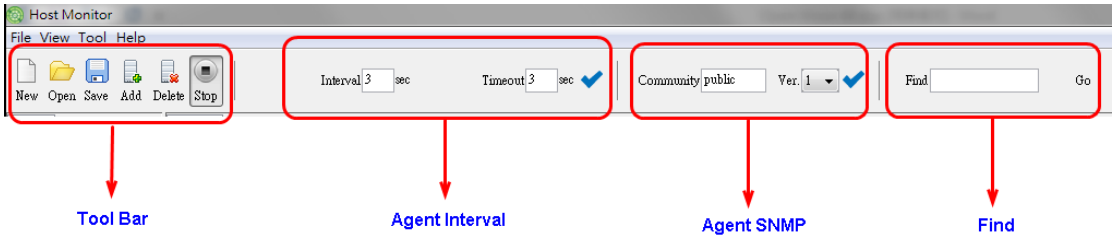


Label	Hotkey	Description
New	Ctrl + N	Stat new host monitor.
Open	Ctrl + O	Open previous saved host monitor
Save	Ctrl + S	Save current host monitor.
Exit	Ctrl + E	Quit Host Monitor

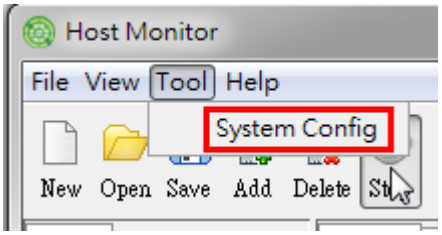
3.2.2 View

User can define each control bar display or close.





3.2.3 Tool

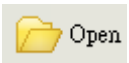
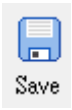
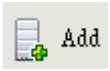
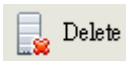


Label	Description
System Config	Report: Enable / Disable the report. Agent: Enable / Disable the checking agent. And timer of the time interval and timeout.

3.2.4 About

Host monitor version

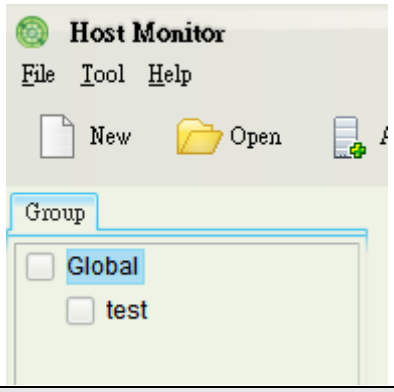
3.3 Function Bar

Label	Description
	Start a new monitor
	Load saved file
	Save the scan list to file .
	Add device
	Remove select device / group
	Start or Stop monitor
Interval	Checking interval timer
Timeout	Time out timer

SNMP Community	Setting SNMP read Community
SNMP Version	Select SNMP Version
Find	Find specific device by using IP

3.4 Group tree

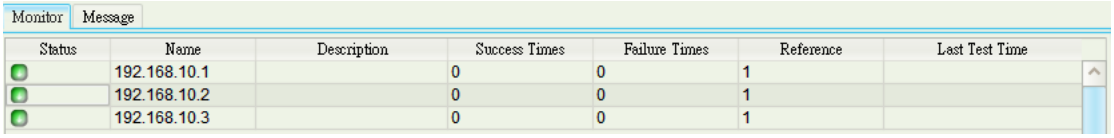
Device add will be show in the Group tree.



Label	Description
Add	Add device.
Delete	Remove select device / group.
Edit	Edit select device / group and description.

3.5 Monitor Area

Current devices state will be show in the Monitor table. The status will be show in green icon and timeout devices will be show in red icon.



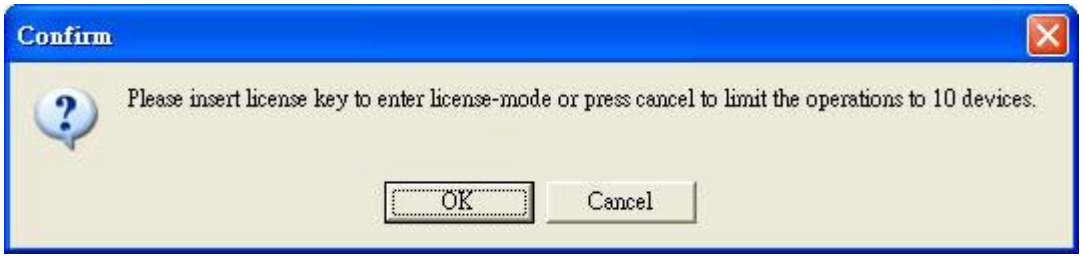
TroubleShooting

4.1 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) 8 - 32bits from java website.

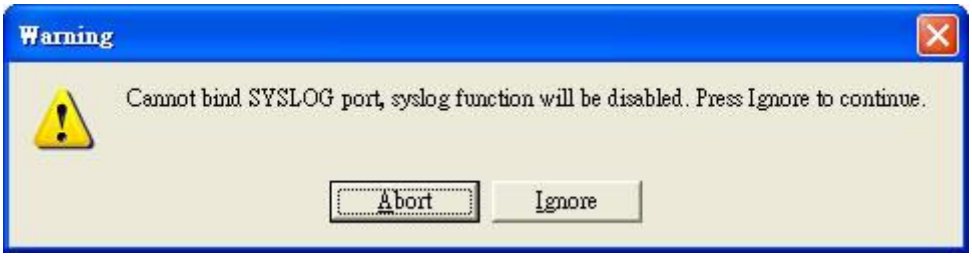
4.2 License key warning message

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.



4.3 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.



4.4 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.